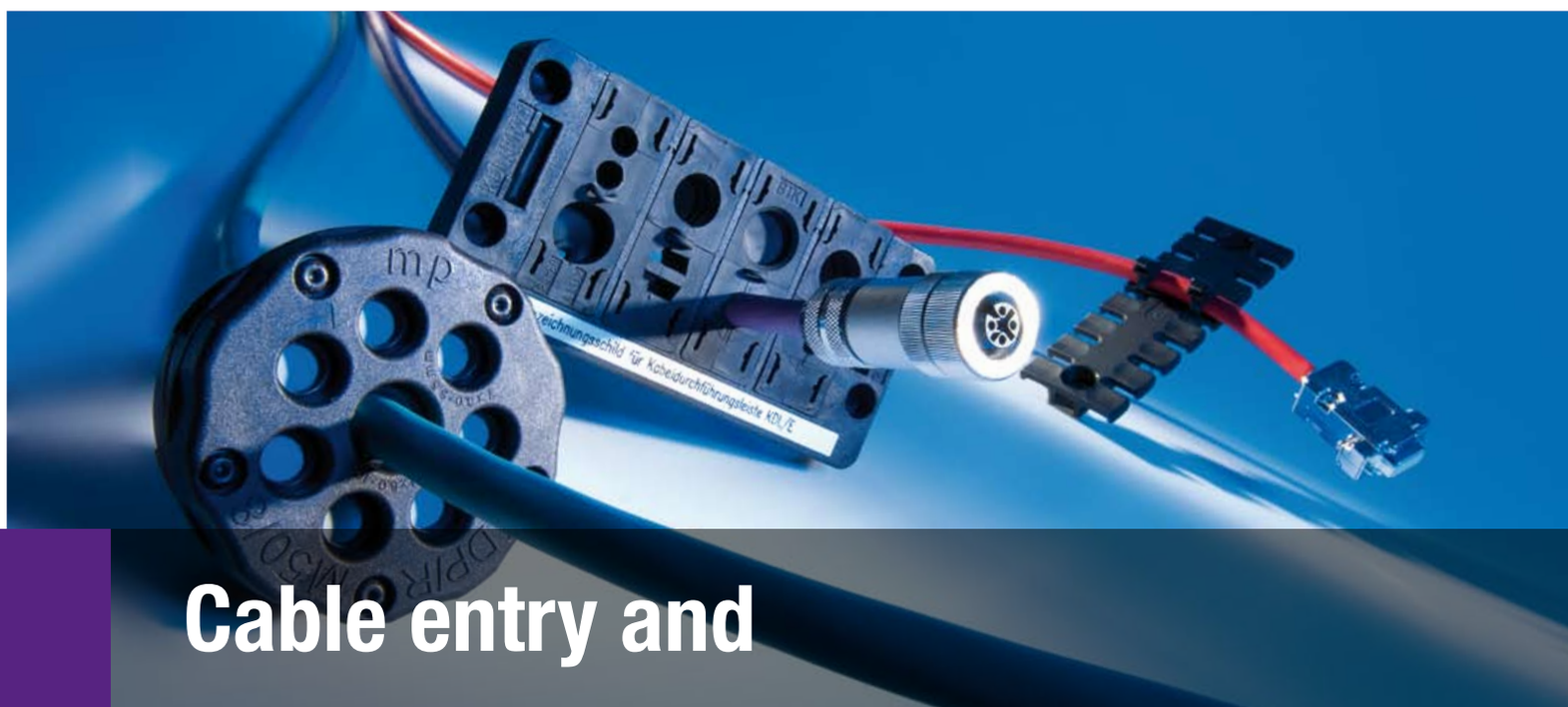


Cable entry and

Cable holding systems

Cable entry plates for pre-assembled cables

The cable entry panel system is a split system that solves problems like introducing pre-assembled cables into enclosures, for example.

Page 10

Cable entry plates for cables without plugs

A real alternative to cable fittings. With this system cables made of plastic, aluminium or stainless steel can be installed in a flash.

Page 58

Accessories for cable entry systems/panels KDL/KDP

Under accessories you will find various blanking plates, floor sheeting, adapter plates for cut-out reduction and discharge plates for EMC applications.

Page 129

Strain relief / cable fixing plate

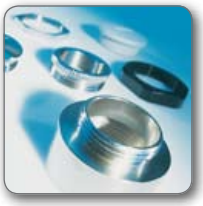
Strain relief options in various variations and models. To screw on, snap in or press on. In plastic or metal.

Page 145

Cable fitting

Plastic and metal cable fittings. For EMC applications and for explosive areas. Multi-inserts make the fittings even more versatile. With metric, Pg and NPT threads.

Page 173



Accessories

Lock nuts, dummy plugs, thread reducers or extenders, O-rings, angle brackets, conduit clips, spiral strips, fixing rivets, cable ties, screw-down and adhesive holders and cable tie rails.

Page 187

Tools

In this section you will find tools for a safe, streamlined electrical installation including cable stripping knife, wire stripper and cable tie tools etc.

Page 215

Punching tools

Punching tools for steel sheets and stainless steel sheets. To produce exact cut-outs. Round cut-outs for metric or Pg threads. Rectangular cut-outs or cut-outs for SUB-MIN-D plugs.

Page 221

Appendix

Protection classes, fire classifications, guidelines, chemical resistance, type index and other information.

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Cable entry and cable holding systems

KDL – for pre-assembled cables

Our cable entry systems are designed for inserting pre-assembled cables and electrical conduits in divider walls, junction boxes, control cabinets and much more.
Example applications: interior use, driver's cabs, in control cabinet, plant or machine construction.

type KDL

KDP – for cables without plugs

The cable insertion panel is a routing and fastening system for cables without connectors and pneumatic hoses.
Example applications: interior use, driver's cabs, in control cabinet, plant or machine construction. Everywhere where quick, cable-protecting assembly with a high packing density is required.

type KDP

Accessories for cable entry systems

Blanking plate with different properties for closing non-used cut-outs. Adapter plates and floor sheeting for control cabinets from various manufacturers. Easy-to-handle EMC discharge plates for cable entry systems.

Accessories

ZL/KAF strain relief

Strain relief options in various variations and models. To screw on, snap in or press on. In plastic or metal. Cable ties are used to provide simple strain relief to cables of all kinds.

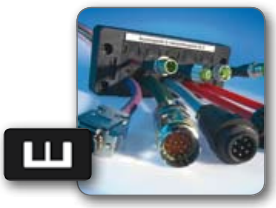
Strain relief

For years, Murrplastik Systemtechnik GmbH has provided cable entry systems, cable entry panel systems, strain relief plates and cable holding systems.
Right from the beginning priority was given to a systematic approach. The priority has always been to design "products which provide definite application advantages to the customer".
The KDL cable entry system has been developed to make it much easier for end customers to route pre-assembled cables e.g. measurement, servo cables, computer cables and bus systems.
During the design process, considerable emphasis was given to the need for a simple and trouble free application. The KDL product range thereby serves the need for a simple and trouble free application.
The potential for strain relief and discharge of sheath currents has also been integrated into the cable fixing plate.
A further innovation is the KDP cable entry plate, which offers a real alternative to cable fittings.
The KDP boasts enormous savings potential through rapid installation. A lower footprint and user-friendly assembly are two of the major advantages that this product offers.
However, these are just some of the outstanding innovations from Murrplastik Systemtechnik GmbH. The selected materials ensure that the user is always offered a product that matches his particular application. Official approvals such as EN, DIN, BS, NFF and UL and grades of fire protection from HB to V0, together with an IP rating appropriate for the specific application, guarantee a high degree of security and productivity.
All Murrplastik products are developed and manufactured according to the very latest criteria. Even during the development process, environmentally friendly production and the use of environmentally compatible materials are key considerations.
The products and systems undergo a wide range of tests in our own laboratory. If available, we utilise German DIN, European, or UL standards. Our engineers can, on request, create specific test criteria in collaboration with the customer. Ongoing tests ensure a high level of quality.

Our cable entry and strain relief systems are largely marketed worldwide through our own sales network.
Additional sales are handled by a qualified network of dealers. Both sales organisations have competent staff on hand to assist you.
All sales organisations have their own warehouse, enabling rapid delivery periods (just in time).

Cable entry plates for pre-assembled cables

System overview



KDL / E cable entry system

The KDL/E cable entry system represents further development of the third KDL generation. The advantage here is quicker assembly at double the capacity. Optionally, the KDL/E can additionally be snapped in.

Page 13

KDL cable entry system

The KDL cable entry system is a split system that allows pre-assembled cables to be routed into an enclosure without disassembling the connectors.

Page 23

KDL / EMC cable entry system

The KDL/EMC is the metal version of the KDL. Sheath currents of shielded cables can be simply discharged in several different ways here.

Page 39

Cable entry system KDL / S

The cable entry system type KDL/S is a special custom-prepared plate. It fits into cut-outs for 16-pole connectors.

Page 49

Accessories for cable entry systems/ panels KDL / KDP

Under accessories you will find various blanking plates, floor sheeting, adapter plates for cut-out reduction and discharge plates for EMC applications.

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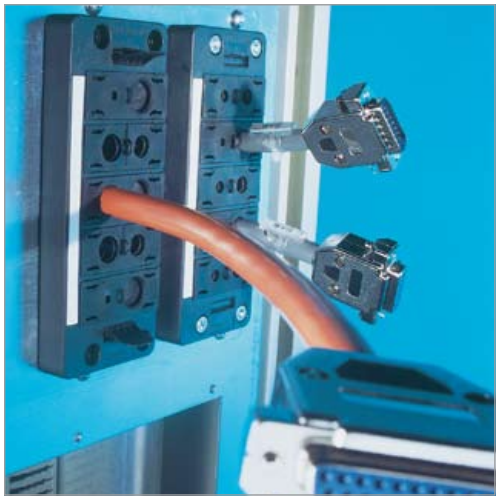
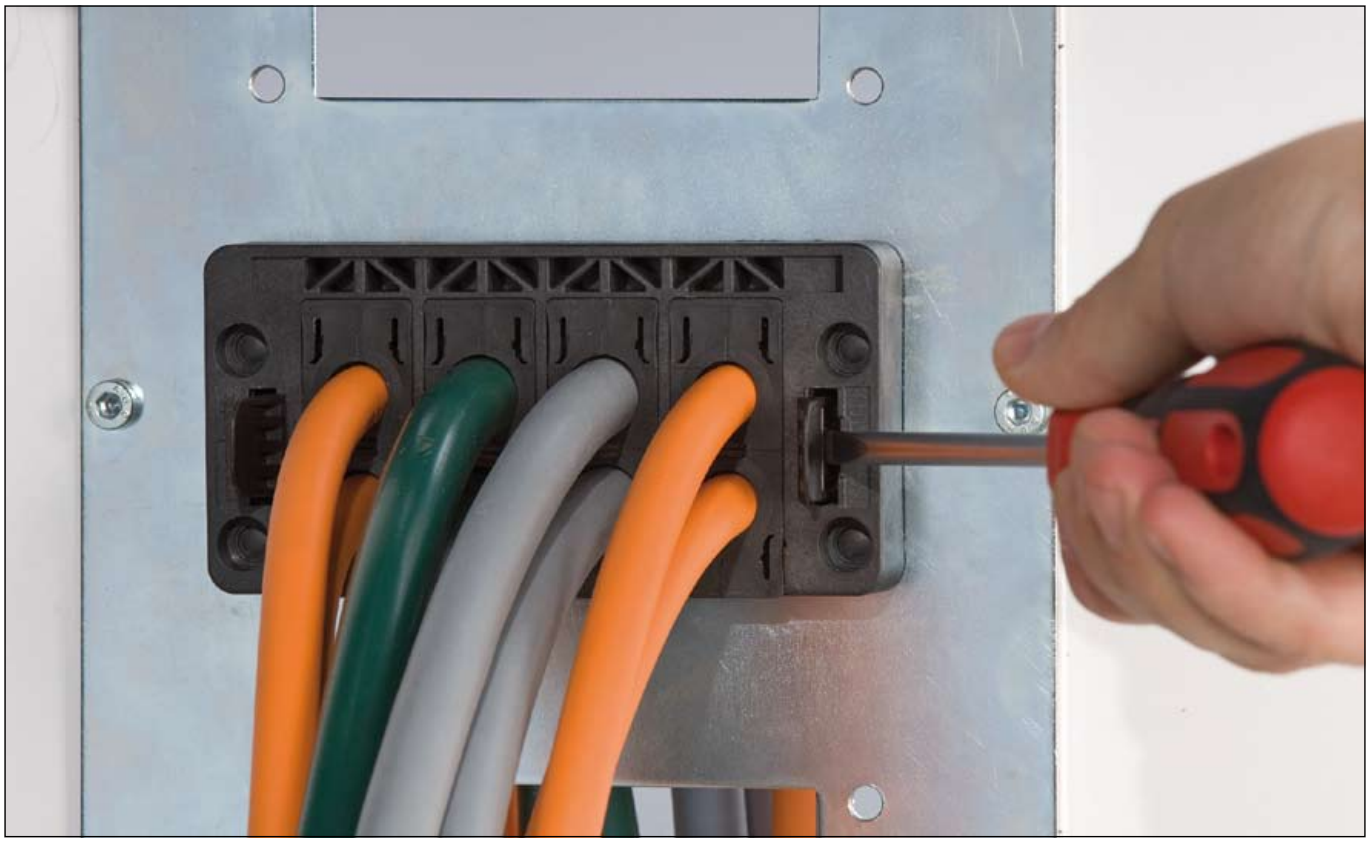
KDL/E cable entry system



Advantages



We go at everything head first

Even faster and simpler assembly of pre-fabricated conduits.

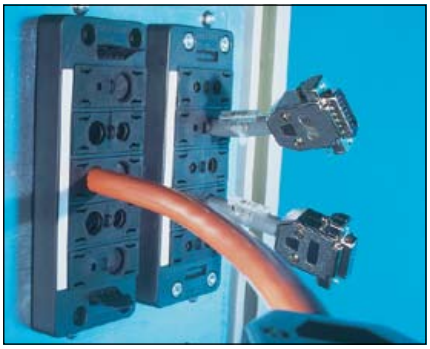
The KDL/E replaces the well established KDL/N model.

The single-piece frame no longer needs to be joined together.

The provided catch hooks significantly speed up mounting of the entire plate, e.g. on the control cabinet.

Vario grommets reduce the need for grommets with different diameters.

This ultimately means significantly simpler and quicker assembly in general.



- ✔ Cable insertion without interruption
- ✔ Simple mounting
- ✔ Single-piece frame
- ✔ Snap-in from 1.5 – 4.1 mm
- ✔ No need to screw on
- ✔ Strain relief
- ✔ Protection class IP 54

Overview

Cable entry system, type KDL / E

The KDL / E cable entry system represents further development of the third KDL generation. The advantage here is quicker assembly at double the capacity. Optionally, the KDL/E can additionally be snapped in.

Page 17

Cable entry grommets, type KDT/xE

In conjunction with the KDL / E cable entry system, the KDT/xE cable entry grommet can be used to easily route pre-assembled cables e.g. in control cabinets.

Page 18

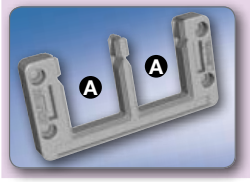
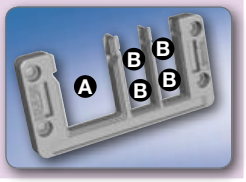
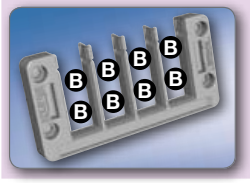
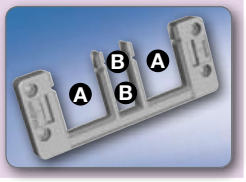
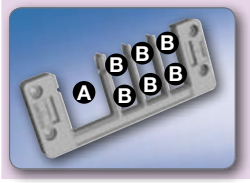
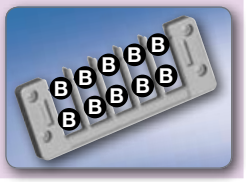
Snap-on mounting
Screw-on mounting

Detailed construction and assembly instructions for the snap-on/screw-on fittings.

Page 20

Selection table (possible combinations of cable entry systems and grommets)

Matching cable entry grommets:
Typs • KDT/ZE • KDT/VE • ATG/E • SDT/ZE • BTK/E • BTG/E

	Grommet, large Ⓐ for cables 16–31 mm in diameter	Grommet, small Ⓑ for cables 3–16 mm in diameter
 KDL/E 16/2 Item no. 87121010	2	0
KDL/E 16/5 Item no. 87121012 	1	4
 KDL/E 16/8 Item no. 87121014	0	8
KDL/E 24/4 Item no. 87121016 	2	2
 KDL/E 24/7 Item no. 87121018	1	6
KDL/E 24/10 Item no. 87121020 	0	10

Material data for the entire system (cable entry systems with grommets)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

All components of the entire grommet-configured system KDL/E conform with ROHS and are characterised by the IP class 54 (except for double cable grommets).
Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
The entire system can be used within temperature range of -40°C to 80°C (transient to 100°C) and features the fire classification HB.
All system components feature an UR approval.
The cable entry systems type KDL/E are made of polyamide 6.6, the corresponding grommets care made of thermoplastic rubber.

Cable entry system, type KDL / E

System
-40 – 80 °C, transient 100 °C

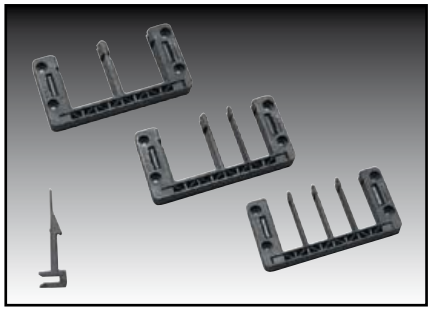
Polyamide 6.6

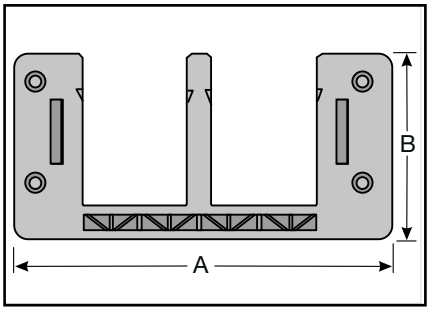
V0

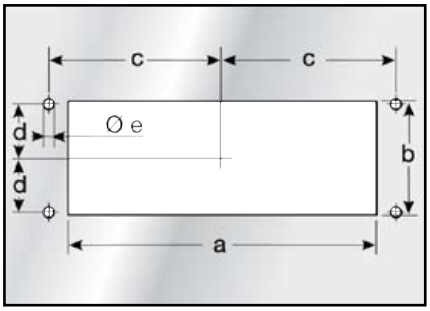
IP 54
(with suitable grommets and cables)

The KDL/E represents the 3rd generation of Murrplastik cable entry system.

- Even quicker mounting of pre-assembled cables
- Snap in, meaning screwing on is no longer absolutely necessary
- Catch hook for 1.5 – 2.0 mm plate thickness included with delivery, additional catch hooks for up to 4.1 mm plate thickness available.
- Fits standard cut-outs for connectors (e.g. Harting, Wieland and Rittal).
- Simple realization of EMC solution with discharge plate







KDL/E...

Type	Order no.	Colour	No. openings small / large	Installation height mm	For plate thickness mm	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
for standard cut-outs, size 16													
KDL/E 16/2	87121010	black	- / 2	15.5	-	116.0	58.0	86.0	36.0	51.5	16.0	5.5	1
KDL/E 16/5	87121012	black	4 / 1	15.5	-	116.0	58.0	86.0	36.0	51.5	16.0	5.5	1
KDL/E 16/8	87121014	black	8 / -	15.5	-	116.0	58.0	86.0	36.0	51.5	16.0	5.5	1
If catch hooks are used, then the width of the cut-out must be enlarged by 91 mm.													
for standard cut-outs, size 24													
KDL/E 24/4	87121016	black	2 / 2	15.5	-	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
KDL/E 24/7	87121018	black	6 / 1	15.5	-	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
KDL/E 24/10	87121020	black	10 / -	15.5	-	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
Matching adapter plates or floor sheeting													
See chapter "Accessories for cable entry systems and plates"													
Replacement parts:													
Catch hooks 1.5 – 2.0 mm	8712102000	black	-		1.5 – 2.0								10
Catch hooks 2.1 – 2.7 mm	8712101800	black	-		2.1 – 2.7								10
Catch hooks 2.8 – 3.4 mm	8712101600	black	-		2.8 – 3.4								10
Catch hooks 3.5 – 4.1 mm	8712101400	black	-		3.5 – 4.1								10
Matching grommets KDT/ZE; KDT/VE; ATG/E; SDT/ZE; BTK/E; BTG/E													
Matching EMC discharge plate, type KDL/N-AB... in chapter "Accessories for cables entry systems and plates"													
Matching label plate, type KS KDL/E, see catalogue ACS.													
The correct tool for completing the cutaway can be found in the chapter on "Punching tools".													

Cable entry grommets, type KDT/xE

Made in Germany | RoHS compliant

-40 – 80 °C, transient 100 °C

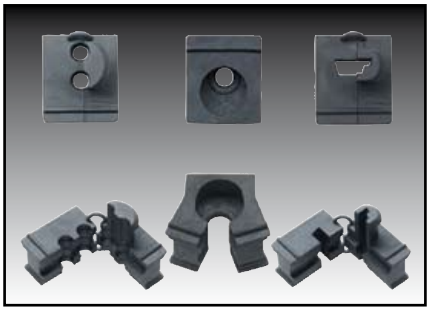
Thermoplastic rubber

HB

IP 54
(with matching cables)

In conjunction with the KDL/E cable entry system, the KDT/xE cable entry grommet can be used to easily route pre-assembled cables e.g. in control cabinets. The grommet is 2-pce. and is positioned around the cable. The grommets are equipped with catch hooks that anchor themselves in the KDL/E when positioning. Strain relief for type KDT/ZE is achieved using a simple cable tie. Type KDT/VE is a vario grommet without strain relief which covers a larger clamping range.

Standard grommets



Special grommets

Type	Order no.	Colour	For Ø mm	For entry small / large	No. Openings	Suitable for conduit	Pack qty.
Grommet, small							
KDT/ZE 03	87121210	black	3 – 4	● / -	1		10
KDT/ZE 04	87121212	black	4 – 5	● / -	1		10
KDT/ZE 05	87121214	black	5 – 6	● / -	1		10
KDT/ZE 06	87121216	black	6 – 7	● / -	1		10
KDT/ZE 07	87121218	black	7 – 8	● / -	1		10
KDT/ZE 08	87121220	black	8 – 9	● / -	1		10
KDT/ZE 09	87121222	black	9 – 10	● / -	1		10
KDT/ZE 10	87121224	black	10 – 11	● / -	1		10
KDT/ZE 11	87121226	black	11 – 12	● / -	1		10
KDT/ZE 12	87121228	black	12 – 13	● / -	1		10
KDT/ZE 13	87121230	black	13 – 14	● / -	1		10
KDT/ZE 14	87121232	black	14 – 15	● / -	1		10
KDT/ZE 15	87121234	black	15 – 16	● / -	1		10
Grommet, large							
KDT/ZE 16	87121236	black	16 – 17	- / ●	1		10
KDT/ZE 17	87121238	black	17 – 18	- / ●	1		10
KDT/ZE 18	87121240	black	18 – 19	- / ●	1		10
KDT/ZE 19	87121242	black	19 – 20	- / ●	1		10
KDT/ZE 20	87121244	black	20 – 21	- / ●	1		10
KDT/ZE 21	87121246	black	21 – 22	- / ●	1		10
KDT/ZE 22	87121248	black	22 – 23	- / ●	1		10
KDT/ZE 23	87121250	black	23 – 24	- / ●	1		10
KDT/ZE 24	87121252	black	24 – 25	- / ●	1		10
KDT/ZE 25	87121254	black	25 – 26	- / ●	1		10
KDT/ZE 26	87121256	black	26 – 27	- / ●	1		10
KDT/ZE 27	87121258	black	27 – 28	- / ●	1		10

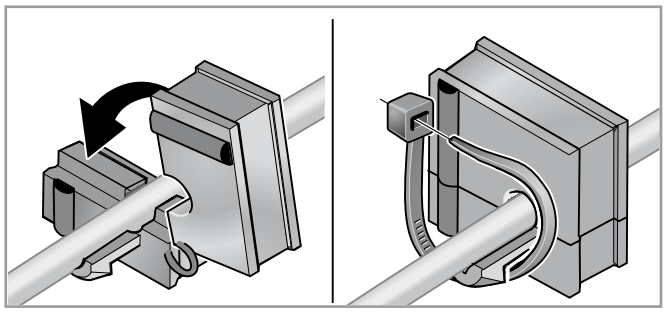
Cable entry grommets, type KDT/xE

Type	Order no.	Colour	For Ø mm	For entry small / large	No. Openings	Suitable for conduit	Pack qty.
KDT/ZE 28	87121260	black	28 – 29	- / ●	1		10
KDT/ZE 29	87121262	black	29 – 30	- / ●	1		10
KDT/ZE 30	87121264	black	30 – 31	- / ●	1		10
Variable cable grommet (Protection class IP 42)							
KDT/VE 3-7 *	87121272	black	3 – 7	● / -	1		10
KDT/VE 7 – 10 *	87121274	black	7 – 10	● / -	1		10
Double cable grommet							
KDT/ZE 2x4 *	87121284	black	4 – 4.5	● / -	2		10
KDT/ZE 2x5 *	87121286	black	5 – 5.5	● / -	2		10
KDT/ZE 2x6 *	87121288	black	6 – 6.5	● / -	2		10
ASI grommet							
KDT/ZE 2xASI *	87121280	black	ASI cable	● / -	2		10
KDT/ZE ASI *	87121282	black	ASI cable	● / -	1		10
Adapter grommet							
ATG/E *	87121268	black	Adapter for small grommet	- / ●	1		10
Conduit grommet							
SDT/ZE 07 *	87174250	black		● / -	1	EW-M10/P7	10
SDT/ZE 09 *	87174252	black		● / -	1	EW-M12/P9	10
SDT/ZE 11 *	87174254	black		● / -	1	EW-M16/P11	10
SDT/ZE 16 *	87174256	black		- / ●	1	EW-M20/P16	10
SDT/ZE 21 *	87174258	black		- / ●	1	EW-M25/P21	10
						xx = PA or PP	
Dummy grommet							
BTK/E *	87121266	black	Dummy grommet, small	● / -	0		10
BTG/E *	87121270	black	Dummy grommet, large	- / ●	0		10

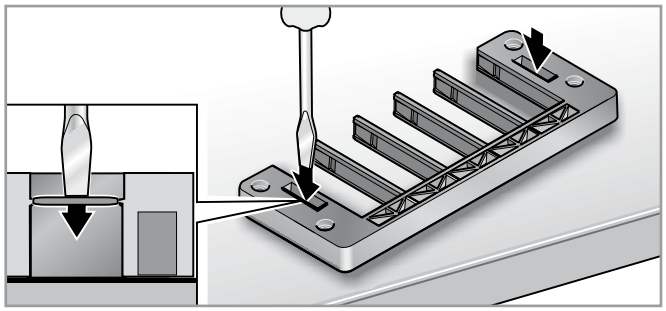
* no UR authorisation

Grommets match: KDL/E 16; KDL/E 24

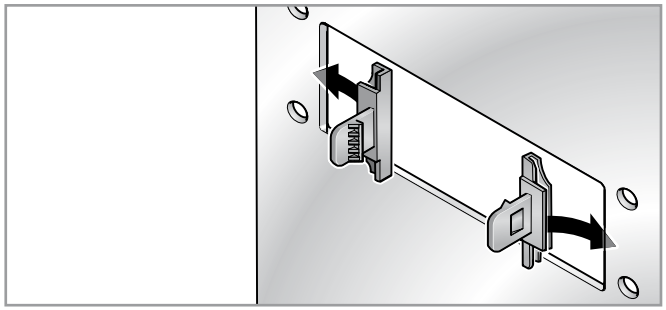
Snap-on mounting



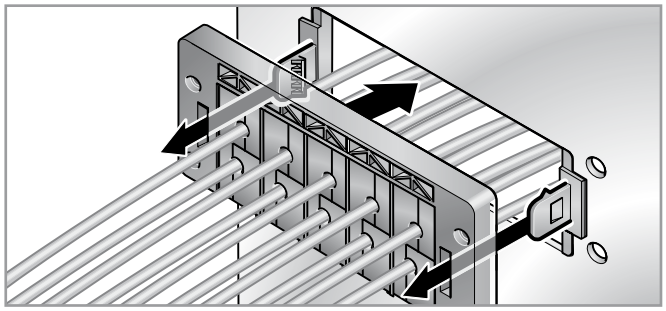
Lay the cable into an appropriate grommet and provide strain relief where necessary using cable ties.



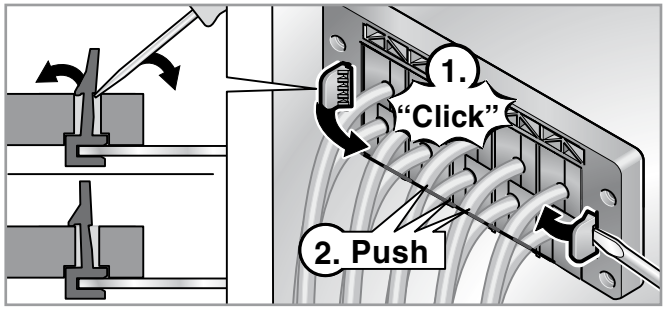
Use appropriate tool to punch through cover on base frame.



Set catch hooks into the sides of the cut-out.
Mind the plate thickness.

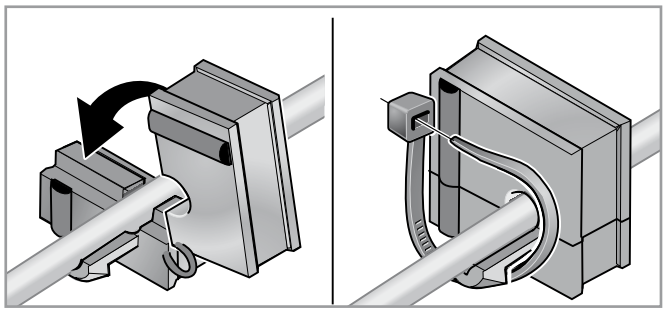


Insert rail completely. The grommet must produce a continuous seal on the back side. Set the rail onto the catch hooks and press on.

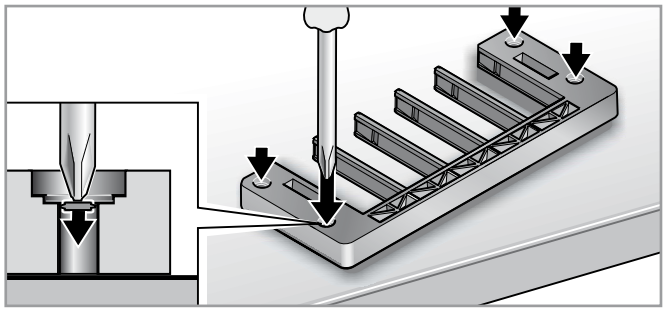


Lock the catch hooks with the rail.
Press gently on the grommets one more time.

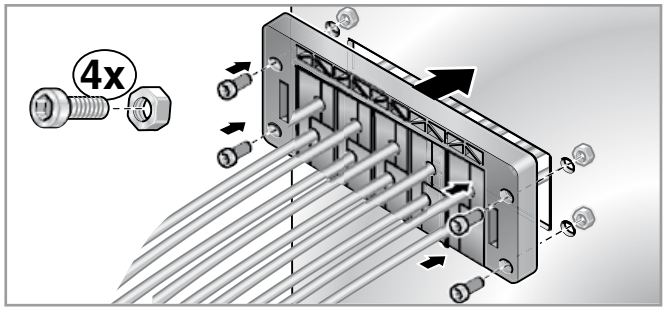
Screw-on mounting



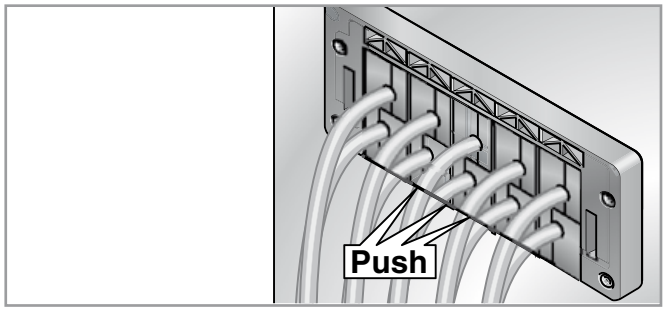
Lay the cable into an appropriate grommet and provide strain relief where necessary using cable ties.



Use appropriate tool to punch through cover on base frame.



Insert rail completely. The grommet must produce a continuous seal on the back side. Fix rail with 4 screws. Do not exceed the maximum torque.

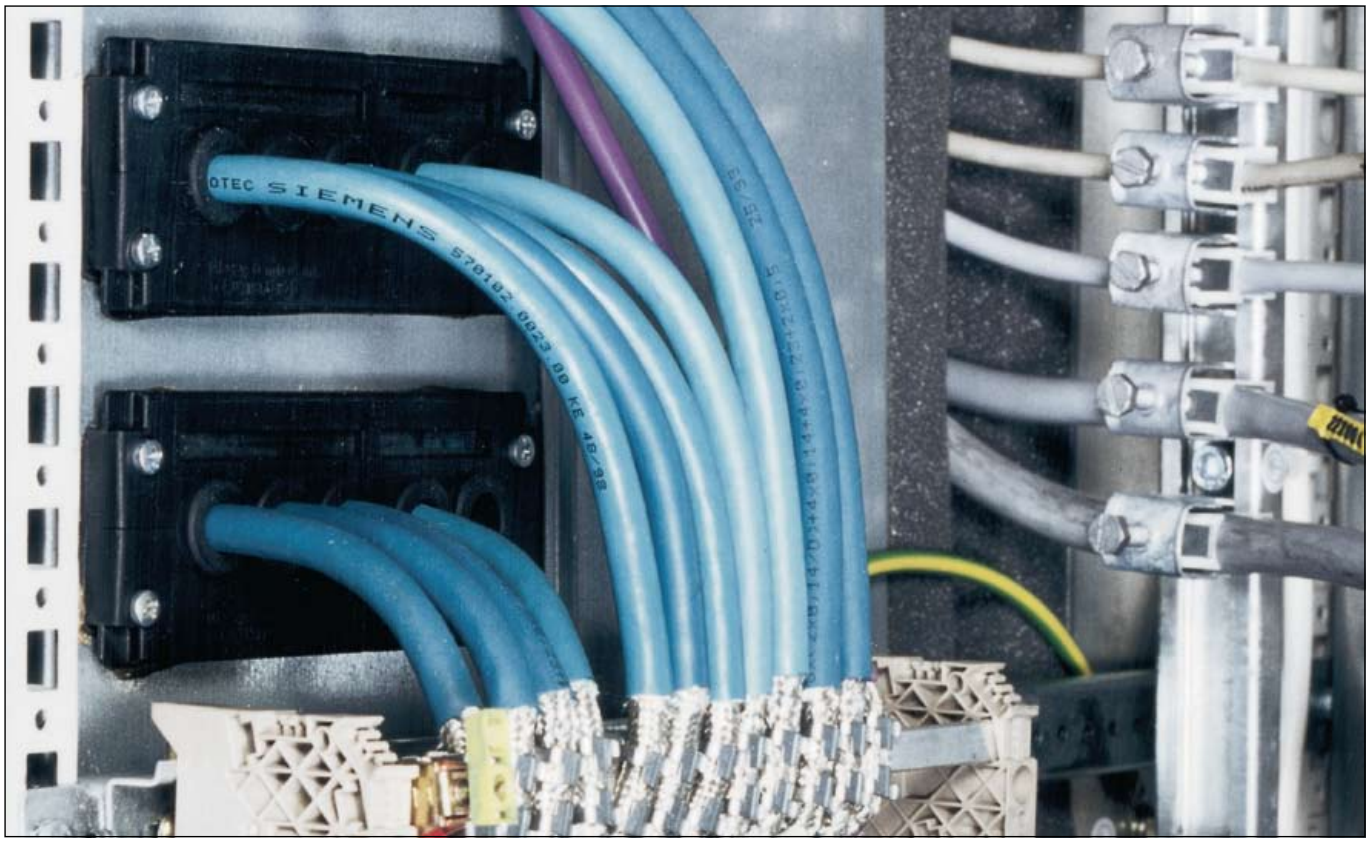


Press gently on the grommets one more time.

KDH

KDL cable entry system

Advantages



Assembling high-tech plugs securely in the control cabinet

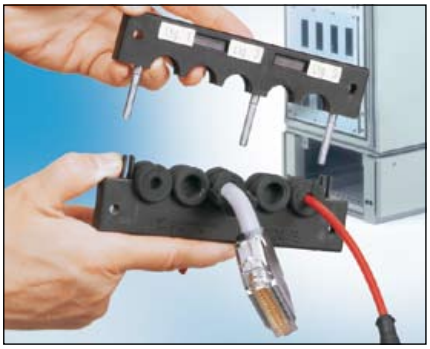
No need to keep cutting the plug off your cable!

It is so easy to introduce preassembled plugs into the control cabinet. Cables with attached plugs are often high-tech products which cannot be cut without invalidating the guarantee for the system.

Thanks to the split rail and the split grommets, the cable with plug can be easily mounted in the cable entry system.

As the saying goes:
it's an open and shut case!

The KDL can quickly and simply insert up to 30 conduits the control cabinet.



- ✔ **Cable insertion without interruption**
- ✔ **Simple mounting**
- ✔ **Strain relief**
- ✔ **Protection class IP 54**
- ✔ **High packing density**
- ✔ **Cable & plug manufacturer's system guarantee remains valid**

Overview

Cable entry system KDL (KDL 16, KDL 24, KDL 2/10, KDL 3/15)

The KDL is a cable entry system for inserting pre-assembled cables. Suitable for cut-outs for 16-pole and 24-pole Harting and Wieland connectors.

Page 28

Cable entry connector housing, type KD/SG

The KD/SG connector housing can be adapted using the mounting enclosure from Harting or Wieland. Mounting and/or unmounting is simple and requires no tools.

Page 29

Cable entry mounting enclosure, type KD/AG

The mounting enclosure is able to accommodate the split connector housing which allows you to easily introduce pre-assembled cables into the control cabinet.

Page 30

Cable entry grommets, type KDT/Z (standard)

The cable entry grommet KDT/Z allows the fitting of cables from 3 – 29 mm in size in the cable entry system KDL.

Page 31

Cable entry grommets, type KDT/Z-L (paint spraying sector)

The grommet was specially conceived for use in the paint spraying sector. The material contains no wet paint impairment substances.

Page 33

Cable entry grommets, type KDT/Z-V0 (fire classification V0)

These cable entry grommets are self-extinguishing (V0) based on UL 94. With this, cables of 3–29 mm can be fitted into the cable entry system KDL.

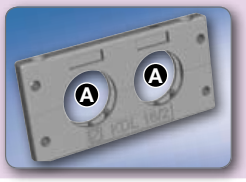
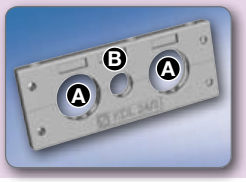
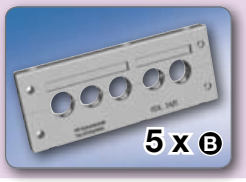
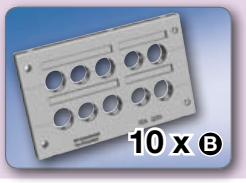
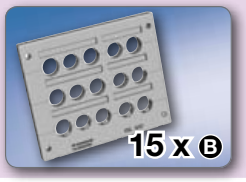
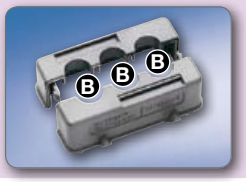
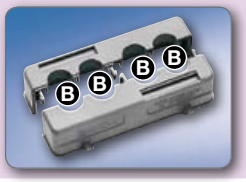
Page 35

Configuration and mounting of the cable entry system KDL

Detailed construction and assembly instructions for the screw fittings.

Page 37

Selection table (possible combinations of cable entry systems and grommets)

		Matching cable entry grommets: Types • KDT/Z • BTK 17 • BTG 32 • ATG • KDT/ASI • SDT/Z	
		Grommet, large Ⓐ for cables 16–29 mm in diameter	Grommet, small Ⓑ for cables 3–16 mm in diameter
	**KDL 16/2** Black: Item no. 87171010 Grey: Item no. 87171050	2	0
	KDL 16/4 Black: Item no. 87171012 Grey: Item no. 87171052	0	4
	**KDL 24/3** Black: Item no. 87171014 Grey: Item no. 87171054	2	1
	**KDL 24/5** Black: Item no. 87171016 Grey: Item no. 87171056	0	5
	**KDL 2/10** Black: Item no. 87171017 Grey: Item no. 87171057	0	10
	**KDL 3/15** Black: Item no. 87171018	0	15
	**KD/SG 16/3** Grey: Item no. 87171032	0	3
	**KD/SG 24/4** Grey: Item no. 87171034	0	4

Material data for the entire system (cable entry systems with grommets)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

All components of the entire grommet-configured system KDL conform with ROHS and are characterised by the IP class 54 (except for double cable grommets).
Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.

The entire system can be used within temperature range of -40°C to 80°C (transient 100°C)
The cable entry systems type KDL are made of polyamide 6.6, the corresponding grommets care made of thermoplastic rubber.

Material data for individual components

Type	Material	Fire classification according to UL 94	Railway approvals	
			DB Germany	SNCF France
KDL 16/x	Polyamide 6.6	V0	✔	✔
KDL 24/x	Polyamide 6.6	V0	✔	✔
KDL 2/10	Polyamide 6.6	V0	✔	✔
KDL 3/15	Polyamide 6.6	V0	✔	✔
KD/SG	Polycarbonate	V0		
KD/AG	Polycarbonate/Steel Aluminium/Steel	–		
KDT/Z	Thermoplastic rubber	HB		
KDT/Z-L	Thermoplastic rubber	HB		
KDT/Z-V0	Thermoplastic rubber	V0		

Cable entry system, type KDL

Made in Germany RoHS compliant

System
-40 – 80 °C, transient 100 °C

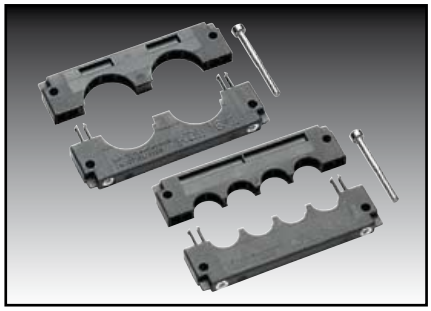
Polyamide 6.6

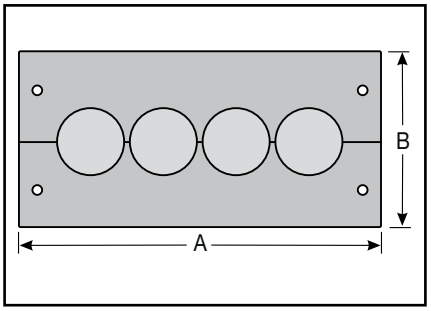
V0

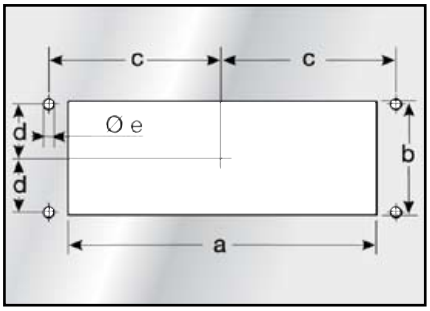
IP 54
(with suitable grommets and cables)

The KDL is a cable entry system for inserting pre-assembled cables. The types KDL 16 /xx fit on cut-puts for 16-pin connectors, the types KDL 24 /xx fit on cut-outs for 24-pin connectors, from Harting or Wieland.

- Simple mounting of pre-assembled cables
- Fits standard cut-outs
- Simple strain relief for cables using cable ties
- Simple realization of EMC solution with discharge plate







KDL...

Type	Order no.	Colour	No. of openings small / large	A mm	B mm	Installation height mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
for standard cut-outs, size 16												
KDL 16/2	87171010	black	- / 2	116.0	58.0	10.0	86.0	36.0	51.5	16.0	5.5	1
KDL 16/4	87171012	black	4 / -	116.0	58.0	10.0	86.0	36.0	51.5	16.0	5.5	1
KDL 16/2	87171050	grey	- / 2	116.0	58.0	10.0	86.0	36.0	51.5	16.0	5.5	1
KDL 16/4	87171052	grey	4 / -	116.0	58.0	10.0	86.0	36.0	51.5	16.0	5.5	1
Replacement parts:												
Replacement seal KDL16	87980005											1
for standard cut-outs, size 24												
KDL 24/3	87171014	black	1 / 2	146.0	58.0	10.0	112.0	36.0	65.0	16.0	5.5	1
KDL 24/5	87171016	black	5 / -	146.0	58.0	10.0	112.0	36.0	65.0	16.0	5.5	1
KDL 24/3	87171054	grey	1 / 2	146.0	58.0	10.0	112.0	36.0	65.0	16.0	5.5	1
KDL 24/5	87171056	grey	5 / -	146.0	58.0	10.0	112.0	36.0	65.0	16.0	5.5	1
Replacement parts:												
Replacement seal KDL24	87980004											1
Enlarged cut-out for 10 – 30 cables												
KDL 2/10	87171017	black	10 / -	146.0	90.0	10.0	120.0	60.0	65.0	32.0	5.5	1
KDL 2/10	87171057	grey	10 / -	146.0	90.0	10.0	120.0	60.0	65.0	32.0	5.5	1
KDL 3/15	87171018	black	15 / -	146.0	122.0	10.0	120.0	96.0	65.0	48.0	5.5	1
Matching grommets KDT/Z; BTK 17; BTG 32; ATG; KDT/ASI; SDT/Z												
Matching EMC discharge plate, type KDL-AB... in chapter "Accessories for cables entry systems and plates"												
Matching label plate (See ACS catalogue): Type KSS 20 x 9 or KSS 10 x 8												
The correct tool for completing the cutaway can be found in the chapter on "Punching tools".												

Cable entry connector housing, type KD/SG

Made in Germany | RoHS compliant

System
-40 – 80 °C, transient 100 °C

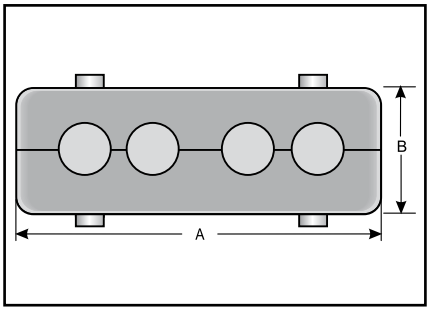
Polycarbonate

V0

IP 54
(with suitable grommets and cables)

The KD/SG connector housing is another option for inserting pre-assembled wiring into an enclosure. The KD/SG connector housing can be adapted using the mounting enclosure from Harting or Wieland. Mounting and/or unmounting of the KD/SG is simple and requires no tools.

- Simple mounting of pre-assembled cables
- Simple strain relief for cables using cable ties
- No tools required to separate connector housing from mounting enclosure



KD/SG...

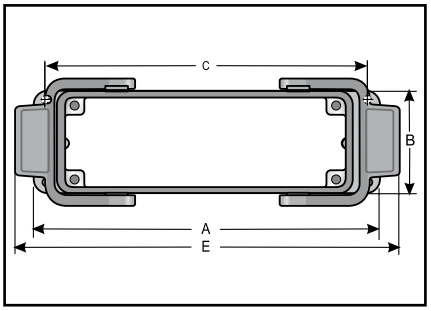
Type	Order no.	Colour	No. of openings small / large	Suitable for	A mm	B mm	Pack qty.
KD/SG-16/3	87171032	grey	3 / -	KD/AG-16H	94	43	1
KD/SG-24/4	87171034	grey	4 / -	KD/AG-24...	120	43	1
Matching grommets							
KDT/Z; BTK 17; KDT/ASI; SDT/Z							
Matching label plate (See ACS catalogue):							
Type KSS 20 x 9 or KSS 10 x 8							

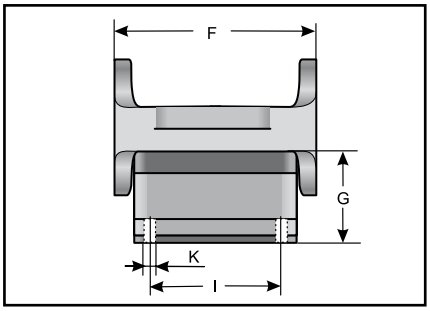
Mounting enclosure type KD/AG

System
-40 – 80 °C, transient 100 °C
Polycarbonate/Steel
Aluminium die-casting/Steel
IP 54

The mounting enclosure is able to accommodate the split connector housing which allows you to easily introduce pre-assembled cables into the control cabinet. Version H in aluminium die-casting with steel catches.

- Simple mounting of pre-assembled cables
- Fits standard cut-outs from Harting and Wieland
- No tools required to separate connector housing from mounting enclosure





KD/AG...

Type	Order no.	Colour	Suitable for	A mm	B mm	C mm	E mm	F mm	G mm	I mm	K mm	Pack qty.
KD/AG-16H *	87191132	grey	KD/SG-16/3	113	44	103	137	55	27	32	4.5	1
KD/AG-24H	87191134	grey	KD/SG-24/4	140	44	130	155	55	27	32	4.5	1
KD/AG-24	87171144	grey	KD/SG-24/4	140	44	130	155	55	27	32	4.5	1

* Reduction of cut-out from 24-pole connector to
16-pole connector is possible through the AP 24/16 adapter plate.

The right tool for cut-out production
can be found in the chapter "Punching tools"

Cable entry grommets, type KDT/Z (standard)

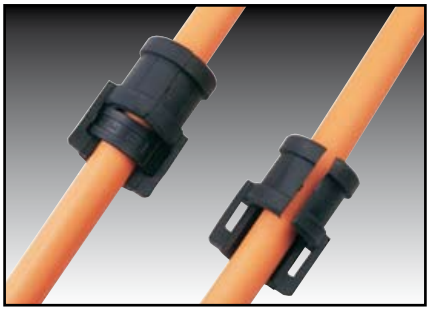
-40 – 80 °C, transient 100 °C

Thermoplastic rubber

HB

IP 54
(with matching cables)

The cable entry grommet KDT/Z allows the fitting of cables from 3 – 29 mm in size in the cable entry system KDL. Strain relief can be provided quickly and easily for cables using cable ties.



KDT/Z...

Type	Order no.	Colour	For Ø mm	For entry small / large	No. openings	Suitable for conduit	Pack qty.
Grommet, small							
KDT/Z 03	87171212	black	3 – 4	● / -	1		10
KDT/Z 04	87171214	black	4 – 5	● / -	1		10
KDT/Z 05	87171216	black	5 – 6	● / -	1		10
KDT/Z 06	87171218	black	6 – 7	● / -	1		10
KDT/Z 07	87171220	black	7 – 8	● / -	1		10
KDT/Z 08	87171222	black	8 – 9	● / -	1		10
KDT/Z 09	87171224	black	9 – 10	● / -	1		10
KDT/Z 10	87171226	black	10 – 11	● / -	1		10
KDT/Z 11	87171228	black	11 – 12	● / -	1		10
KDT/Z 12	87171230	black	12 – 13	● / -	1		10
KDT/Z 13	87171232	black	13 – 14	● / -	1		10
KDT/Z 14	87171234	black	14 – 15	● / -	1		10
KDT/Z 15	87171236	black	15 – 16	● / -	1		10
Grommet, large							
KDT/Z 16	87171412	black	16 – 17	- / ●	1		10
KDT/Z 17	87171414	black	17 – 18	- / ●	1		10
KDT/Z 18	87171416	black	18 – 19	- / ●	1		10
KDT/Z 19	87171418	black	19 – 20	- / ●	1		10
KDT/Z 20	87171420	black	20 – 21	- / ●	1		10
KDT/Z 21	87171422	black	21 – 22	- / ●	1		10
KDT/Z 22	87171424	black	22 – 23	- / ●	1		10
KDT/Z 23	87171426	black	23 – 24	- / ●	1		10
KDT/Z 24	87171428	black	24 – 25	- / ●	1		10
KDT/Z 25	87171430	black	25 – 26	- / ●	1		10
KDT/Z 26	87171432	black	26 – 27	- / ●	1		10
KDT/Z 27	87171434	black	27 – 28	- / ●	1		10
KDT/Z 28	87171436	black	28 – 29	- / ●	1		10

Cable entry grommets, type KDT/Z (standard)

Made in Germany RoHS compliant

Type	Order no.	Colour	For Ø mm	For entry small / large	No. openings	Suitable for conduit	Pack qty.
Double cable grommet (IP 20)							
KDT/Z 2x4	87175214	black	3.5 – 4	● / -	2		10
KDT/Z 2x6	87175218	black	5.5 – 6	● / -	2		10
Dummy grommet							
BTK 17 (dummy grommet)	87171210	black		● / -	0		10
BTG 32 (dummy grommet)	87171410	black		- / ●	0		10
Adapter grommet							
ATG (adapter grommet)	87171610	black		- / ●	1		10
ASI grommet							
KDT/ASI	87171238	black		● / -	1	ASI cable	10
Cable protection conduit- grommet							
SDT/Z 07	87172210	black		● / -	1	EW-M10/P7	10
SDT/Z 09	87172212	black		● / -	1	EW-M12/P9	10
SDT/Z 11	87172214	black		● / -	1	EW-M16/P11	10
SDT/Z 16	87172216	black		- / ●	1	EW-M20/P16	10
SDT/Z 21	87172218	black		- / ●	1	EW-M25/P21	10
Grommets match: KDL 16; KDL 24; KDL 2/10; KDL 3/15; KD/SG							

Cable entry grommets, type KDT/Z-L (paint spraying sector)

Made in Germany RoHS compliant

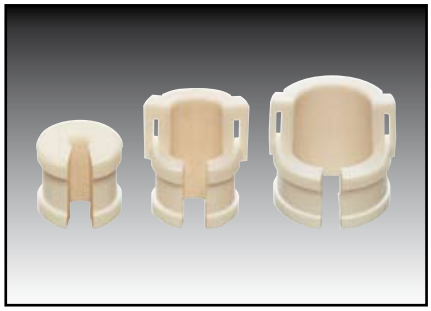
-40 – 80 °C, transient 100 °C

Thermoplastic rubber

HB

Free of LABS substances

The KDT/Z-L cable insertion grommet is a cable insertion grommet for wires from 3 to 29 mm. The grommet was specially conceived for use in the paint spraying sector.
The material contains no wet paint impairment substances. Strain relief can be provided quickly and easily for cables using cable ties.



KDT/Z-L...

Type	Order no.	Colour	For Ø mm	For entry small / large	No. openings	Suitable for conduit	Pack qty.
Grommet, small							
KDT/Z-L 03	87173212	white	3 – 4	● / -	1		10
KDT/Z-L 04	87173214	white	4 – 5	● / -	1		10
KDT/Z-L 05	87173216	white	5 – 6	● / -	1		10
KDT/Z-L 06	87173218	white	6 – 7	● / -	1		10
KDT/Z-L 07	87173220	white	7 – 8	● / -	1		10
KDT/Z-L 08	87173222	white	8 – 9	● / -	1		10
KDT/Z-L 09	87173224	white	9 – 10	● / -	1		10
KDT/Z-L 10	87173226	white	10 – 11	● / -	1		10
KDT/Z-L 11	87173228	white	11 – 12	● / -	1		10
KDT/Z-L 12	87173230	white	12 – 13	● / -	1		10
KDT/Z-L 13	87173232	white	13 – 14	● / -	1		10
KDT/Z-L 14	87173234	white	14 – 15	● / -	1		10
KDT/Z-L 15	87173236	white	15 – 16	● / -	1		10
Grommet, large							
KDT/Z-L 16	87173412	white	16 – 17	- / ●	1		10
KDT/Z-L 17	87173414	white	17 – 18	- / ●	1		10
KDT/Z-L 18	87173416	white	18 – 19	- / ●	1		10
KDT/Z-L 19	87173418	white	19 – 20	- / ●	1		10
KDT/Z-L 20	87173420	white	20 – 21	- / ●	1		10
KDT/Z-L 21	87173422	white	21 – 22	- / ●	1		10
KDT/Z-L 22	87173424	white	22 – 23	- / ●	1		10
KDT/Z-L 23	87173426	white	23 – 24	- / ●	1		10
KDT/Z-L 24	87173428	white	24 – 25	- / ●	1		10
KDT/Z-L 25	87173430	white	25 – 26	- / ●	1		10
KDT/Z-L 26	87173432	white	26 – 27	- / ●	1		10
KDT/Z-L 27	87173434	white	27 – 28	- / ●	1		10
KDT/Z-L 28	87173436	white	28 – 29	- / ●	1		10

Cable entry grommets, type KDT/Z-L (paint spraying sector)

Made in Germany | RoHS compliant

Type	Order no.	Colour	For Ø mm	For entry small / large	No. openings	Suitable for conduit	Pack qty.
Dummy grommet							
BTK-L 17 (dummy grommet)	87173210	white		● / -	0		10
BTG-L 32 (dummy grommet)	87173410	white		- / ●	0		10
Adapter grommet							
ATG (adapter grommet)	87173610	white		- / ●	1		10
Cable protection conduit/grommet							
SDT/Z-L 07	87174210	white		● / -	1	EW-M10/P7	10
SDT/Z-L 09	87174212	white		● / -	1	EW-M12/P9	10
SDT/Z-L 11	87174214	white		● / -	1	EW-M16/P11	10
SDT/Z-L 16	87174216	white		- / ●	1	EW-M20/P16	10
SDT/Z-L 21	87174218	white		- / ●	1	EW-M25/P21	10
Grommets match: KDL 16; KDL 24; KDL 2/10; KDL 3/15; KD/SG							

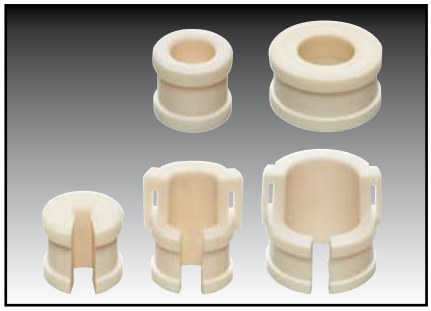
Cable entry grommets, type KDT/Z-V0 (fire classification)

-40 – 80 °C, transient 100 °C

Thermoplastic rubber

V0

The cable entry grommet KDT/Z-V0 allows the fitting of cables from 3 – 29 mm in size in the cable entry system KDL. These cable entry grommets are self-extinguishing (V0) based on UL 94. Strain relief can be provided quickly and easily for cables using cable ties.



KDT/Z-V0...

Type	Order no.	Colour	For Ø mm	For entry small / large	No. openings	Pack qty.
Grommet, small						
KDT/Z-V0 03	87171512	white	3.0 – 4.0	● / -	1	10
KDT/Z-V0 04	87171514	white	4.0 – 5.0	● / -	1	10
KDT/Z-V0 05	87171516	white	5.0 – 6.0	● / -	1	10
KDT/Z-V0 06	87171518	white	6.0 – 7.0	● / -	1	10
KDT/Z-V0 07	87171520	white	7.0 – 8.0	● / -	1	10
KDT/Z-V0 08	87171522	white	8.0 – 9.0	● / -	1	10
KDT/Z-V0 09	87171524	white	9.0 – 10.0	● / -	1	10
KDT/Z-V0 10	87171526	white	10.0 – 11.0	● / -	1	10
KDT/Z-V0 11	87171528	white	11.0 – 12.0	● / -	1	10
KDT/Z-V0 12	87171530	white	12.0 – 13.0	● / -	1	10
KDT/Z-V0 13	87171532	white	13.0 – 14.0	● / -	1	10
KDT/Z-V0 14	87171534	white	14.0 – 15.0	● / -	1	10
KDT/Z-V0 15	87171536	white	15.0 – 16.0	● / -	1	10
Grommet, large						
KDT/Z-V0 16	87171712	white	16.0 – 17.0	- / ●	1	10
KDT/Z-V0 17	87171714	white	17.0 – 18.0	- / ●	1	10
KDT/Z-V0 18	87171716	white	18.0 – 19.0	- / ●	1	10
KDT/Z-V0 19	87171718	white	19.0 – 20.0	- / ●	1	10
KDT/Z-V0 20	87171720	white	20.0 – 21.0	- / ●	1	10
KDT/Z-V0 21	87171722	white	21.0 – 22.0	- / ●	1	10
KDT/Z-V0 22	87171724	white	22.0 – 23.0	- / ●	1	10
KDT/Z-V0 23	87171726	white	23.0 – 24.0	- / ●	1	10
KDT/Z-V0 24	87171728	white	24.0 – 25.0	- / ●	1	10
KDT/Z-V0 25	87171730	white	25.0 – 26.0	- / ●	1	10
KDT/Z-V0 26	87171732	white	26.0 – 27.0	- / ●	1	10
KDT/Z-V0 27	87171734	white	27.0 – 28.0	- / ●	1	10
KDT/Z-V0 28	87171736	white	28.0 – 29.0	- / ●	1	10

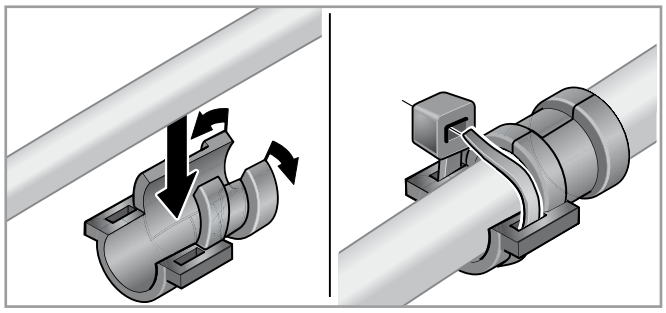
Cable entry grommets, type KDT/Z-V0 (fire classification)

Made in Germany | RoHS compliant

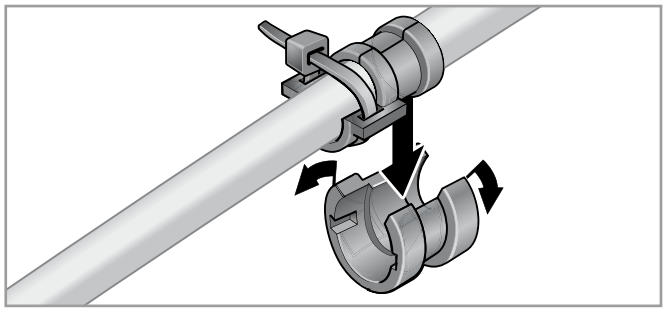
Type	Order no.	Colour	For Ø mm	For entry small / large	No. openings	Pack qty.
Dummy grommet						
BTK-V0 17 (dummy grommet)	87171510	white		● / -	0	10
BTG-V0 32 (dummy grommet)	87171710	white		- / ●	0	10

Grommets match: KDL 16; KDL 24; KDL 2/10; KDL 3/15; KD/SG

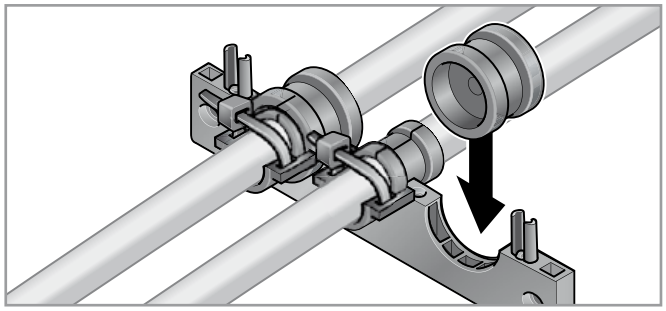
Assembly



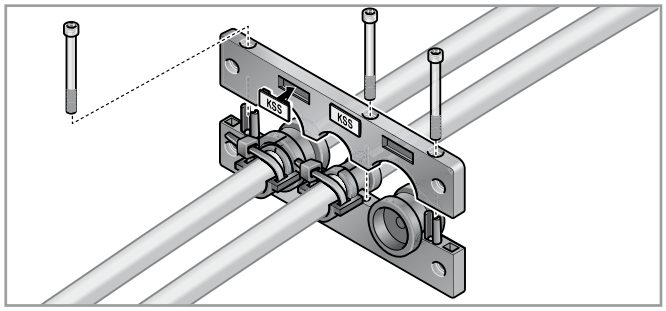
Lay cable into appropriate grommet and provide strain relief where necessary using cable ties.



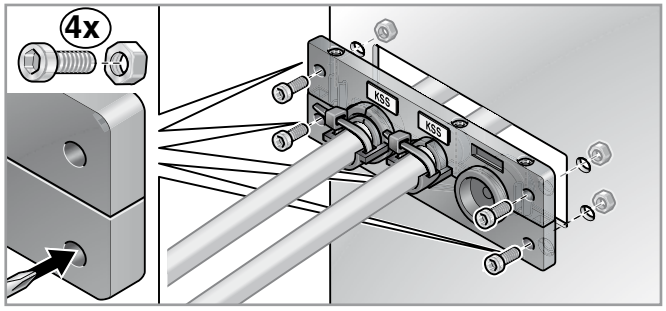
Where required, install small sleeves into the adapter grommet.



Insert rail completely. Fill in empty spaces with dummy grommets.



Join upper and lower part of bar. Fasten rail with the side screws.



Position rail on the cut-out and fasten.

KDH

KDL / EMC cable entry system

Advantages

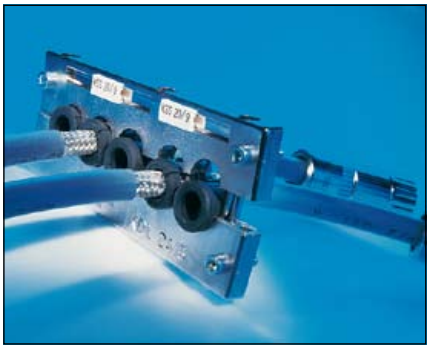
Discharge sheath currents

The KDL / EMC is a cable entry system made of plastic with a metallised surface.

This plate can be used as a trouble-free way to discharge sheath currents from electro-magnetic shielding.

The KDT/Z-EMC cable entry grommet uses a fitted metal braiding to achieve the connection between the conduit shielding and the cable entry system.

An alternative opportunity to discharge sheath currents comes through an additional discharge plate that can mounted onto the existing drilling pattern.



- ✔ Simple mounting
- ✔ Large cut-out
- ✔ Variable
- ✔ No additional parts required
- ✔ No extra mounting effort required

Overview

KDL / EMC cable entry system
(KDL 16/x, KDL 24/x, KDL 2/10, KDL 3/15)

The KDL / EMC is the metal version of the KDL. Sheath currents of shielded cables can be simply discharged in several different ways here.

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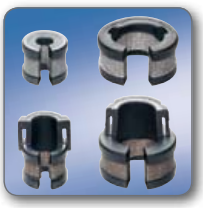

Cable entry grommets, type KDT/Z-EMC

The cable entry grommet is a grommet adapted to the sheath diameter with a conductive textile tape to discharge interferences to the control cabinet.

Page 45

Configuration and mounting of the cable entry system KDL / EMC

Detailed construction and assembly instructions for the snap-on/screw-on fittings.

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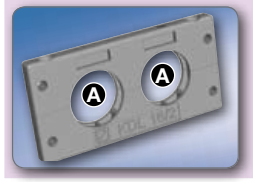
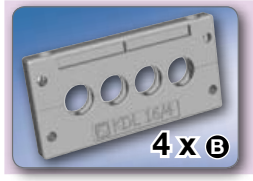
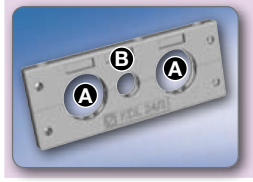
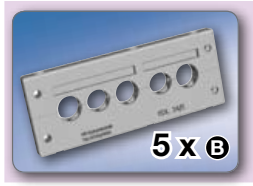
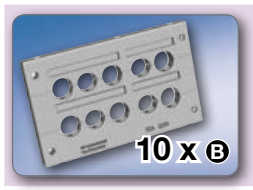
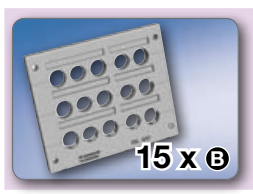
Selection table (possible combinations of cable entry grommets and systems)

The cable entry system KDL / EMC is based on the cable entry system KDL. A conductive surface allows cable sheath interference to be discharged onto the control cabinet simply and without additional aids. Field-related interferences are discharged by the metallisation. Fits cut-outs for 16-pole and 24-pole connectors.

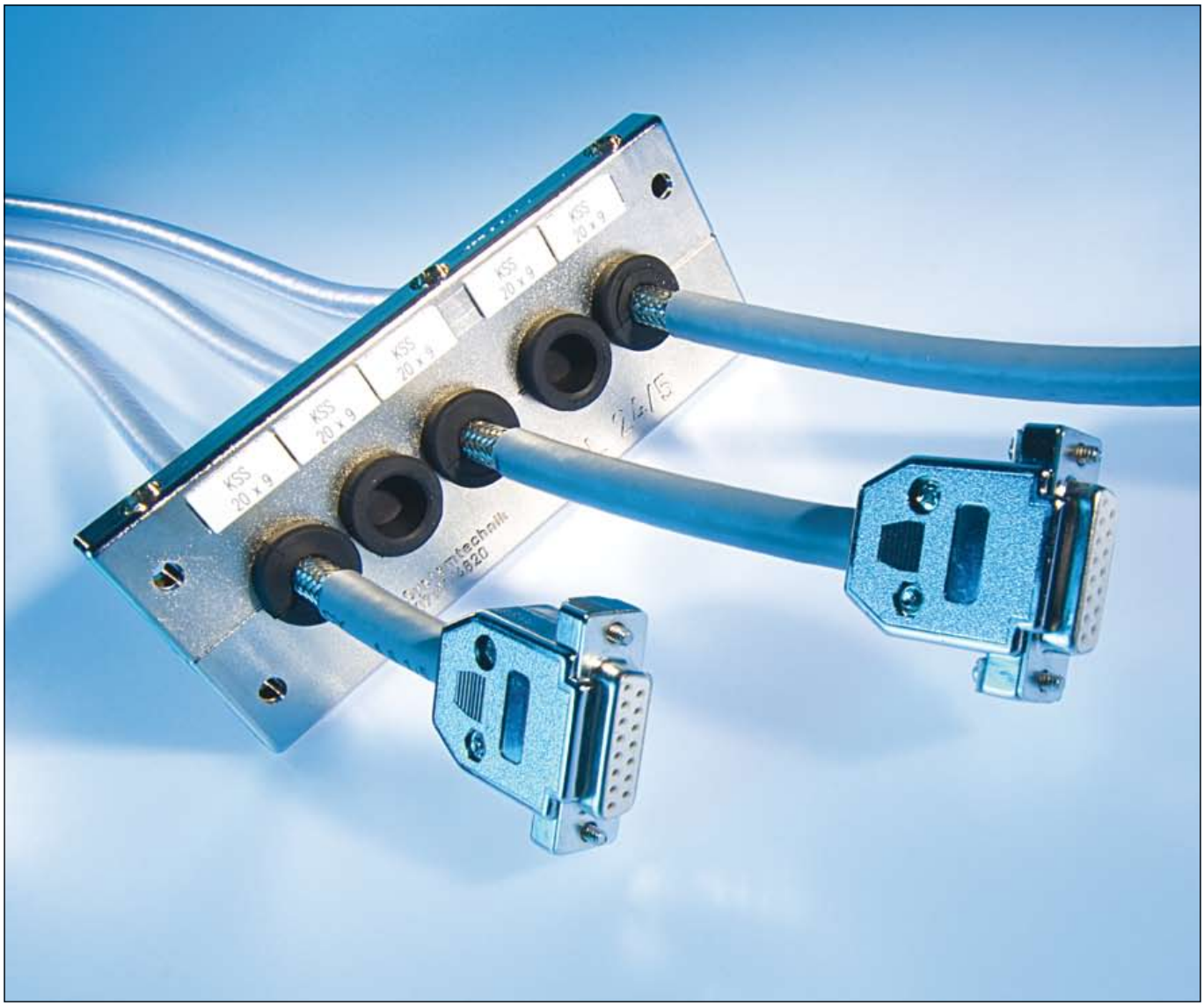
Matching cable entry grommets:
Types • KDT/Z-EMC • ATG-EMC • BTK 17 • BTG 32

	Grommet, large Ⓐ for cables 16–29 mm in diameter	Grommet, small Ⓑ for cables 3–16 mm in diameter
 **KDL 16/2-EMC** Item no. 87171020	2	0
 **KDL 16/4-EMC** Item no. 87171022	0	4
 **KDL 24/3-EMC** Item no. 87171024	2	1
 **KDL 24/5-EMC** Item no. 87171026	0	5
 **KDL 2/10-EMC** Item no. 87171027	0	10
 **KDL 3/15-EMC** Item no. 87980021	0	15

Material data for the entire system (cable entry systems with grommets)

- **Halogen-free**
- **Phosphorous-free**
- **Cadmium-free**
- **Asbestos-free**
- **Lead-free**
- **Silicone-free**

All components of the entire grommet-configured system KDL/EMC conform with ROHS and are characterised by at least fire classification HB.
Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
The entire system can be used within temperature range of -40°C to 80°C (transient to 100°C).
The cable entry systems type KDL/EMC are made of polyamide with a conductive surface. The corresponding grommet are made of thermoplastic rubber and are covered with conductive fabric tape.



Cable entry system, type KDL xx/xx-EMC

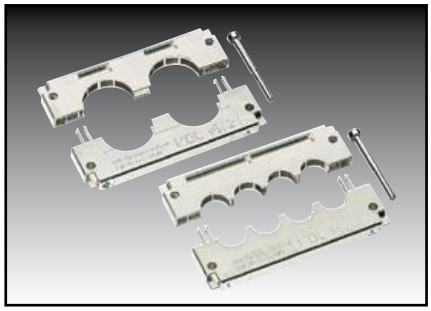
Made in Germany RoHS compliant

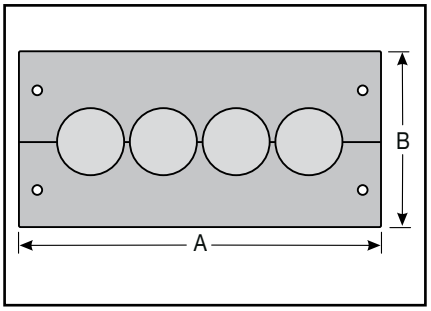
System
-40 – 80 °C, transient 100 °C

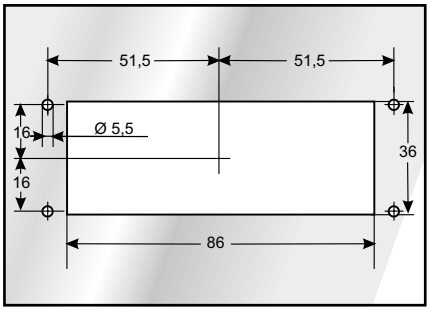
Polyamide 6.6
with conductive coating

V0

The cable entry system KDL / EMC is based on the cable entry system KDL. A conductive surface allows cable sheath interference to be discharged onto the control cabinet simply and without additional aids.
Field-related interferences are discharged by the metallisation.
The types KDL 16 /xx-EMC fit on cut-puts for 16-pin connectors, the types KDL 24 /xx-EMC fit on cut-outs for 24-pin connectors, from Harting or Wieland.







KDL xx/xx-EMC

Type	Order no.	Colour	No. of openings small / large	A mm	B mm	Installation height mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
for standard cut-outs, size 16												
KDL 16/2-EMC	87171020	chrome	- / 2	116.0	58.0	10.0	86.0	36.0	51.5	16.0	5.5	1
KDL 16/4-EMC	87171022	chrome	4 / -	116.0	58.0	10.0	86.0	36.0	51.5	16.0	5.5	1
for standard cut-outs, size 24												
KDL 24/3-EMC	87171024	chrome	1 / 2	146.0	58.0	10.0	112.0	36.0	65.0	16.0	5.5	1
KDL 24/5-EMC	87171026	chrome	5 / -	146.0	58.0	10.0	112.0	36.0	65.0	16.0	5.5	1
Enlarged cut-out for up to 15 pre-assembled cables												
KDL 2/10-EMC	87171027	chrome	10 / -	146.0	90.0	10.0	120.0	60.0	65.0	32.0	5.5	1
KDL 3/15-EMC	87980021	chrome	15 / -	146.0	122.0	10.0	120.0	96.0	65.0	48.0	5.5	1
Replacement parts:												
Replacement seal KDL16-EMC	8717102100											1
Replacement seal KDL 24-EMC	8717102500											1
Replacement seal KDL 2/10-EMC	87980020											1
Matching grommets KDT/Z-EMC; ATG-EMC; BTK 17; BTG 32												
Matching label plate (See ACS catalogue): Type KSS 20 x 9 or KSS 10 x 8												
The correct tool for completing the cutaway can be found in the chapter on "Punching tools".												

Cable entry grommets, type KDT/Z-EMC

-40 – 80 °C, transient 100 °C

Thermoplastic rubber
with conductive textile tape

HB

The cable entry grommet KDT/Z-EMC is a grommet adapted to the sheath diameter and fitted with a conductive textile tape to discharge interferences to the control cabinet. Strain relief can be provided quickly and easily for cables using cable ties.

KDT/Z-EMC...

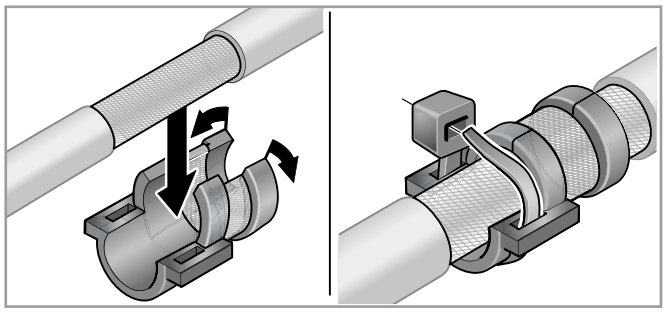
Type	Order no.	Colour	For sheath of Ø mm	For entry small / large	No. Openings	Pack qty.
Grommet, small						
KDT/Z-EMC 03	87171812	black	3 – 4	● / -	1	10
KDT/Z-EMC 04	87171814	black	4 – 5	● / -	1	10
KDT/Z-EMC 05	87171816	black	5 – 6	● / -	1	10
KDT/Z-EMC 06	87171818	black	6 – 7	● / -	1	10
KDT/Z-EMC 07	87171820	black	7 – 8	● / -	1	10
KDT/Z-EMC 08	87171822	black	8 – 9	● / -	1	10
KDT/Z-EMC 09	87171824	black	9 – 10	● / -	1	10
KDT/Z-EMC 10	87171826	black	10 – 11	● / -	1	10
KDT/Z-EMC 11	87171828	black	11 – 12	● / -	1	10
KDT/Z-EMC 12	87171830	black	12 – 13	● / -	1	10
KDT/Z-EMC 13	87171832	black	13 – 14	● / -	1	10
KDT/Z-EMC 14	87171834	black	14 – 15	● / -	1	10
KDT/Z-EMC 15	87171836	black	15 – 16	● / -	1	10
Grommet, large						
KDT/Z-EMC 16	87172012	black	16 – 17	- / ●	1	10
KDT/Z-EMC 17	87172014	black	17 – 18	- / ●	1	10
KDT/Z-EMC 18	87172016	black	18 – 19	- / ●	1	10
KDT/Z-EMC 19	87172018	black	19 – 20	- / ●	1	10
KDT/Z-EMC 20	87172020	black	20 – 21	- / ●	1	10
KDT/Z-EMC 21	87172022	black	21 – 22	- / ●	1	10
KDT/Z-EMC 22	87172024	black	22 – 23	- / ●	1	10
KDT/Z-EMC 23	87172026	black	23 – 24	- / ●	1	10
KDT/Z-EMC 24	87172028	black	24 – 25	- / ●	1	10
KDT/Z-EMC 25	87172030	black	25 – 26	- / ●	1	10
KDT/Z-EMC 26	87172032	black	26 – 27	- / ●	1	10
KDT/Z-EMC 27	87172034	black	27 – 28	- / ●	1	10
KDT/Z-EMC 28	87172036	black	28 – 29	- / ●	1	10

Cable entry grommets, type KDT/Z-EMC

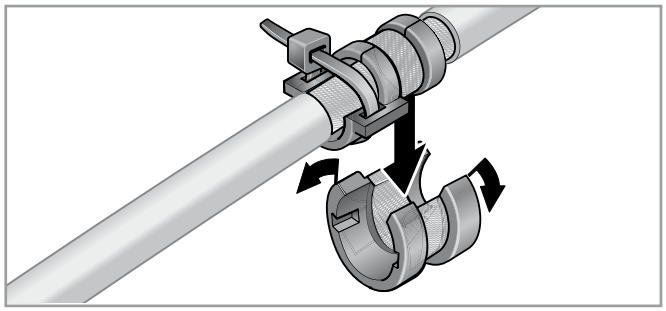
Made in Germany RoHS compliant

Type	Order no.	Colour	For sheath of Ø mm	For entry small / large	No. Openings	Pack qty.
Adapter grommet						
ATG-EMC (adapter grommet)	87172040	black		- / ●	1	10
Dummy grommet						
BTK 17 (dummy grommet)	87171210	black		● / -	0	10
BTG 32 (dummy grommet)	87171410	black		- / ●	0	10
Grommets match: KDL 16/xx-EMC; KDL 24/xx-EMC; KDL 2/10-EMC; KDL 3/15-EMC						

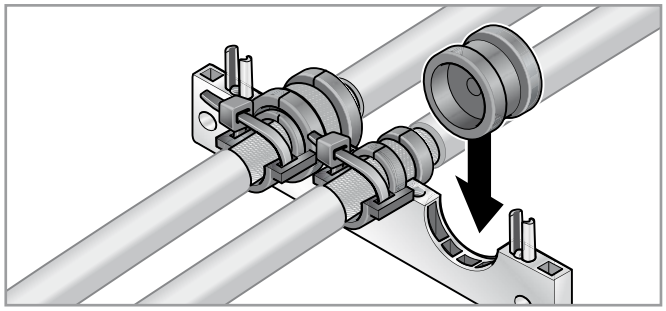
Configuration and mounting of the cable entry system KDL / EMC



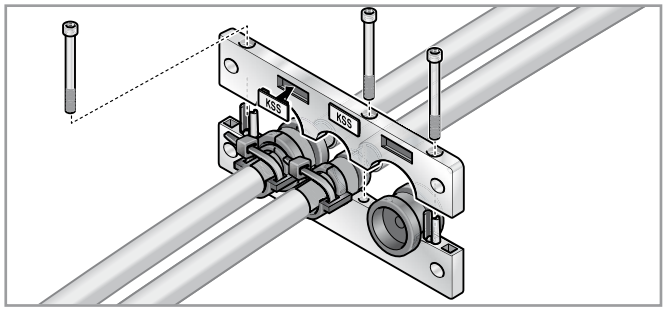
Strip wire at the insertion point and lay into grommet (suitable for diameter at the shielding braid).
Use a cable tie for strain relief where necessary.



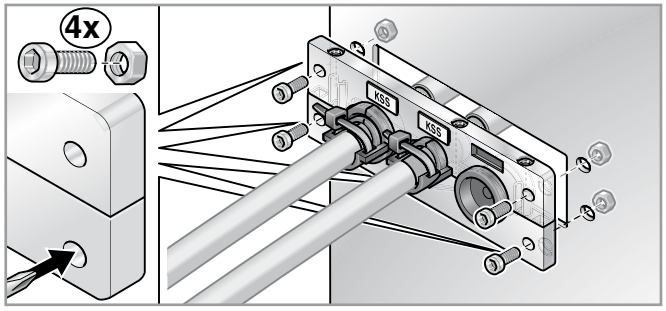
Where required, install small sleeves into the adapter grommet.



Insert rail completely. Fill in empty spaces with dummy grommets.



Join upper and lower part of bar. Fasten rail with the side screws.



Position rail on the cut-out and fasten. Ensure good contact between rail and control cabinet panel.

KDH

Cable entry system KDL / S

KDH

Advantages

Cable entry if desired

The KDL/S is a cable entry system for which grommets can be manufactured to meet the customer's specifications.

The cut-out size for the cable entry system corresponds to the cut-out for 16-pole connectors.

Various conduit entries can be created, e.g. multi-inserts, custom shapes or different combinations.

- ✔ Individual solution
- ✔ Simple mounting
- ✔ Large cut-out

Overview

Cable entry system KDL / S

The KDL/S is a cable entry system for which grommets can be manufactured to meet the customer's specifications. It fits into cut-outs for 16-pole connectors.

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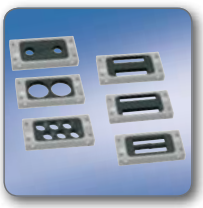

Cable entry grommets, type KDT/S

The cable entry grommets type KDT/S can be manufactured to meet the customer's specifications. For example for entering specially shaped cables.

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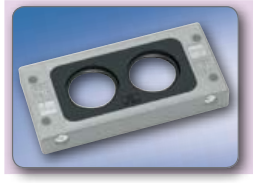
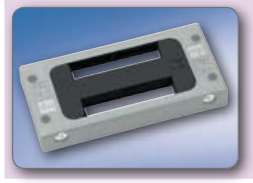
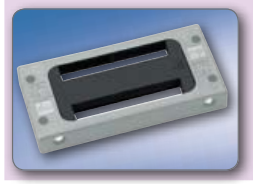
Selection table (cable entry grommets KDT/S for cable entry system KDL / S)

The cable entry system type KDL / S is a custom cable entry system that allows various kinds of cables to be inserted to meet the customer's requirements and then for the opening to be closed off. The internal KDT/S grommet can be custom designed based on the customer's requirements . Fits standard cut-outs for 16-pole connectors (e.g. Harting, Wieland and Rittal).

Grommets for cable entry system KDL / S corresponds to cable diameter/cross section	Ø mm 2 x 15.0	Ø mm 2 x 24.0–28.0	Ø mm 2 x 28.0–32.0	Ø mm 2 x 35.0
KDT/S 2x15 Item no. 87175444	2			
		2		
 KDT/S 2x28-32 Item no. 87175443			2	
				2
 KDT/S 56x13 B Item no. 87175448				
 KDT/S 67x12 B Item no. 87175446				
KDT/S 6x17.5 Item no. 87175441				

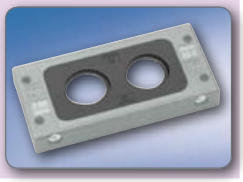
The cable entry grommets type KDT/S can be manufactured to meet the customer's specifications. It can provide solutions for the most varied of applications, e.g. insertion of cables a wide varitety of shapes or sealing of openings for pass-through metal wiring that must be sealed off.

Grommets for cable entry system KDL/S

corresponds to cable diameter/cross section

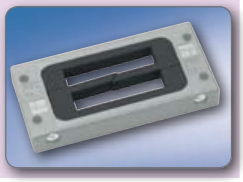
B x H mm 2 x 56.0 x 13.0	B x H mm 2 x 67.0 x 12.0	Ø mm 6 x 17.5
2		
2		
	2	
	2	
		6

KDT/S 2x24–28
Item no. 87175447

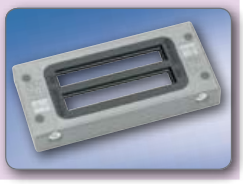


KDT/S 2x35
Item no. 87175440

KDT/S 56x13
Item no. 87175442



KDT/S 67x12 C
Item no. 87175449



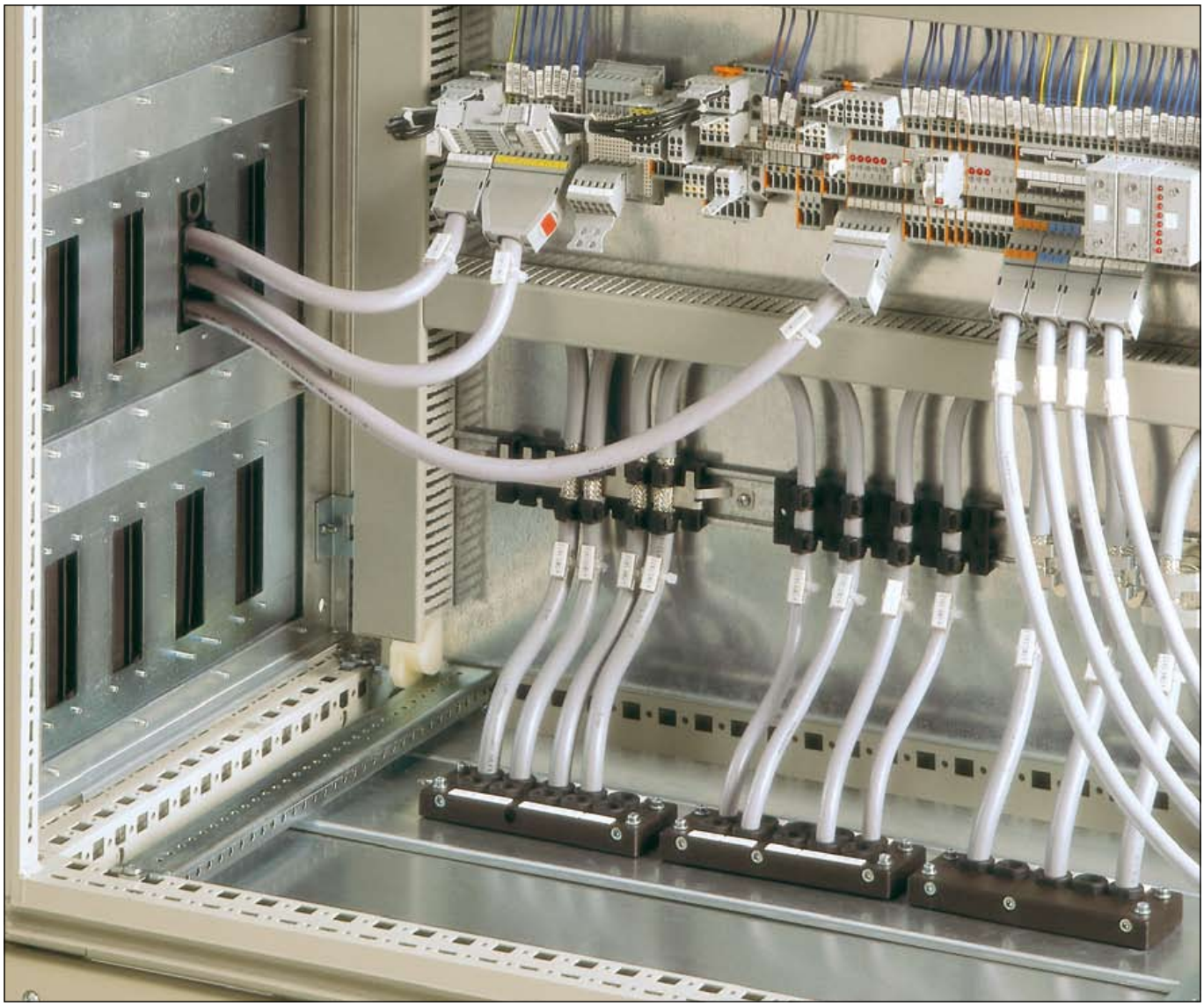
Material data for the entire system (cable entry systems with grommets)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

All components of the entire grommet-configured system KDL/S conform with ROHS and are characterised by at least fire classification HB.
Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone. The entire system can be used within temperature range of -40°C to 80°C (transient to 100°C).

The cable entry systems type KDL/S are made of polyamide 6.6 and are approved for use on German and French railways. The corresponding grommets are made of thermoplastic rubber.

Applications



Cable entry system, type KDL/S

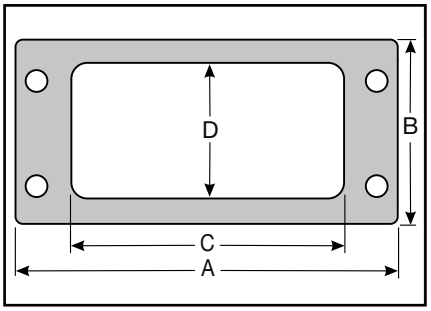
System
-40 – 80 °C, transient 100 °C

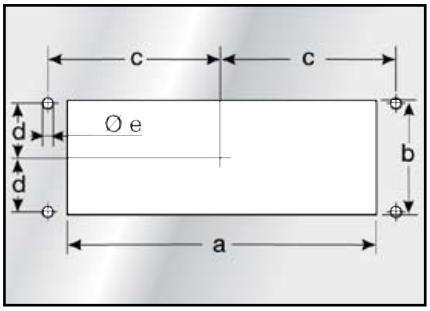
Polyamide 6.6

V0

The cable entry system type KDL/S is a custom plate that allows various kinds of cables to be inserted to meet the customer's desires and then for the opening to be closed off. The internal KDT/S grommet can be custom designed based on the customer's requirements.

- Fits standard cut-outs for 16-pole connectors (e.g. Harting, Wieland and Rittal).
- Individual solutions





KDL/S 16

Type	Order no.	Colour	A mm	B mm	C mm	D mm	Installation height mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDL/S 16	87173004	Black	116.0	58.0	82.0	43.0	15.0	86.0	36.0	51.5	16.0	5.5	1

Matching grommets
KDT/S

The right tool for cut-out production
can be found in the chapter "Punching tools"

Cable entry grommet, type KDL / S

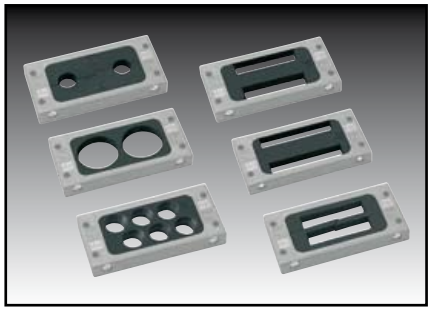
-40 – 80 °C, transient 100 °C

Thermoplastic rubber

HB

The cable entry grommets type KDL / S can be manufactured to meet the customer's specifications. It can provide solutions for a wide veriey of applications, e.g. insertion of cables in arange of shapes or sealing openings for metal wiring.

- Individual solutions



KDL / S

Type	Order no.	Colour	No. of openings	For Ø mm	For ribbon cable mm	Version	Pack qty.
KDT/S 2x15	87175444	black	2	15		two-part	1
KDT/S 2x24–28	87175447	black	2	24 – 28		two-part	1
KDT/S 2x28–32	87175443	black	2	28 – 32		two-part	1
KDT/S 2x35	87175440	black	2	35		two-part	1
KDT/S 56x13	87175442	black	2		56x13	two-part	1
KDT/S 56x13 B	87175448	black	2		56x13	one-piece	1
KDT/S 67x12 B	87175446	black	2		67x12	one-piece	1
KDT/S 67x12 C	87175449	black	2		67x12	two-part	1
KDT/S 6x17.5	87175441	black	6	17.5		one-piece	1
Grommets match: KDL/S 16							

Cable entry plates for cables without plugs

Overview

Cable entry plate KDP plastic, rectangular

The rectangular cable entry plate type KDP 24 for cut-outs with 24-pole connectors is a real alternative to cable fitting.

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Cable entry plate KDP plastic, round

The round cable entry plate type KDP/R for direct assembly in housing cut-outs is a real alternative to cable fitting.

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Cable entry plate KDP metal, rectangular

The metal KDP is another version of the KDP series. The stainless steel version is particularly suitable for application in the food and chemical areas.

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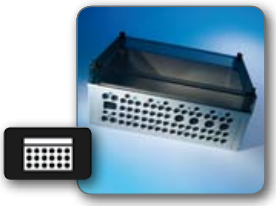

Cable entry plate KDP/BG-FB plastic bus enclosure

Complete bus enclosure with integrated cable entry plate, pre-installed top hat rail and transparent cover.

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Cable entry plate KDP/BG plastic Rose enclosure

The cable entry plates type KDP/BG have been specially developed for Rose enclosures. Extremely quick and easy assembly.

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Accessories for cable entry systems/ panels KDL/KDP

Under accessories you will find various blanking plates, adapter plates for cut-out reduction and discharge plates for EMC applications.

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KDP/R
M63
MURRPLA
KDP

Cable entry plate KDP
plastic rectangular

KDH

Cable entry plate KDP plastic rectangular

Advantages

Straight in! 22 cables installed in approx. 2 minutes

10 times faster and with a simultaneous space saving of up to 50 % compared with conventional cable fittings.

Take advantage of these huge potential savings. The plastic KDP/N 24 is simply clicked into the cut-outs for 24-pole connectors and the cable is then pushed through – and the cable insertion is already done!

The cable entry plate is an entry and fastening system for electric conduits and pneumatic hoses such as those used in control cabinet, plant or machine construction. Wherever quick assembly, cable-protecting and high packing density are required, the cable insertion system is used.

- ✔ **Enormous time savings during assembly**
- ✔ **Extremely low space requirement**
- ✔ **High packing density**
- ✔ **Assembly without tools**
- ✔ **High protection class**
- ✔ **No kinks in cables and tubes**

Overview

Cable entry plate KDP/N 24

The square cable entry plates KDP/N 24 are a second generation extension of the square cable entry plate KDP 24. The advantage lies in the simple assembly with fastening by means of catch hooks.

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Cable entry plate KDP 24-Multi

The cable entry plates, type KDP 24-Multi are a combination of our KDP system and our cable entry strips KDL/E. They take up to four preassembled cables in two grommets.

Page 70

Snap-on mounting
Screw-on mounting

Detailed construction and assembly instructions for the snap-on/screw-on fittings.

Page 72

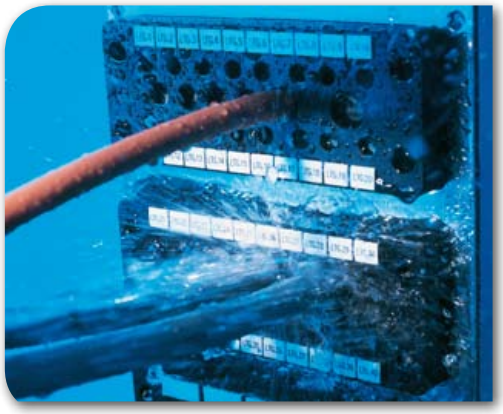
Cable entry plate KDP plastic rectangular

Selection table KDP/N (possible combinations of cable entries)

The plastic cable entry plates type KDP/N 24 are the further developed, second generation of our successful cable entry plates with improved clip-in function.
It enables tool-less, rational connection technology for the wiring of machines and equipment with the high IP class 65. It is used wherever the rapid and economical introduction of a large number cables and/or pneumatic hoses is necessary.

	Number of openings on the cable entry plate corresponds to cable diameter					
	Ø mm 1.5–2.6	Ø mm 2.5–5.0	Ø mm 3.0–5.5	Ø mm 3.0–6.5	Ø mm 4.1–8.1	Ø mm 5.0–9.2
KDP/N 24/11 Item no. 87301110				4		4
KDP/N 24/13 Item no. 87301130			2		6	
				6		4
KDP/N 24/17 Item no. 87301150						17
				11	1	
KDP/N 24/22 Item no. 87301160				16		4
					23	
KDP/N 24/29 Item no. 87301180				29		
	78	2				

They are a real alternative to standard cable fittings. The sizes correspond to standard cut-outs of 24-pole connectors from Harting and Wieland. Assembly at the cut-out due to easy clip-in action thanks to catch hooks or screws.



Number of openings on the cable entry plate
corresponds to cable diameter

Ø mm 8.0–12.0	Ø mm 8.0–12.5	Ø mm 9.0–14.0	Ø mm 9.6–15.9	Ø mm 14.0–20.0
				3
12				
		4		1
			4	
	5			
	2			

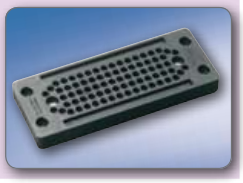
KDP/N 24/12
Item no. 87301120

KDP/N 24/14
Item no. 87301140

KDP/N 24/17-1
Item no. 87301151

KDP/N 24/23
Item no. 87301170

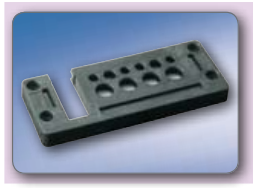
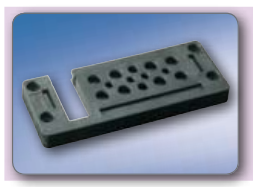
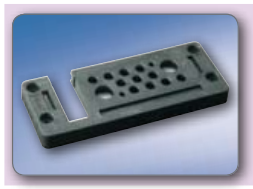
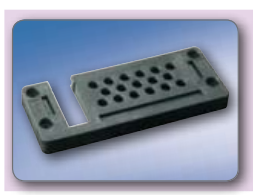
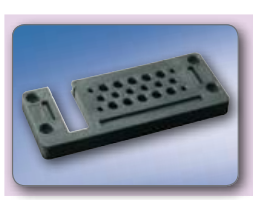
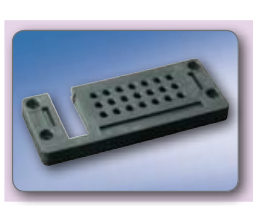
KDP/N 24/80
Item no. 87301190



Cable entry plate KDP plastic rectangular

Selection table KDP-Multi (possible combinations of cable entries)

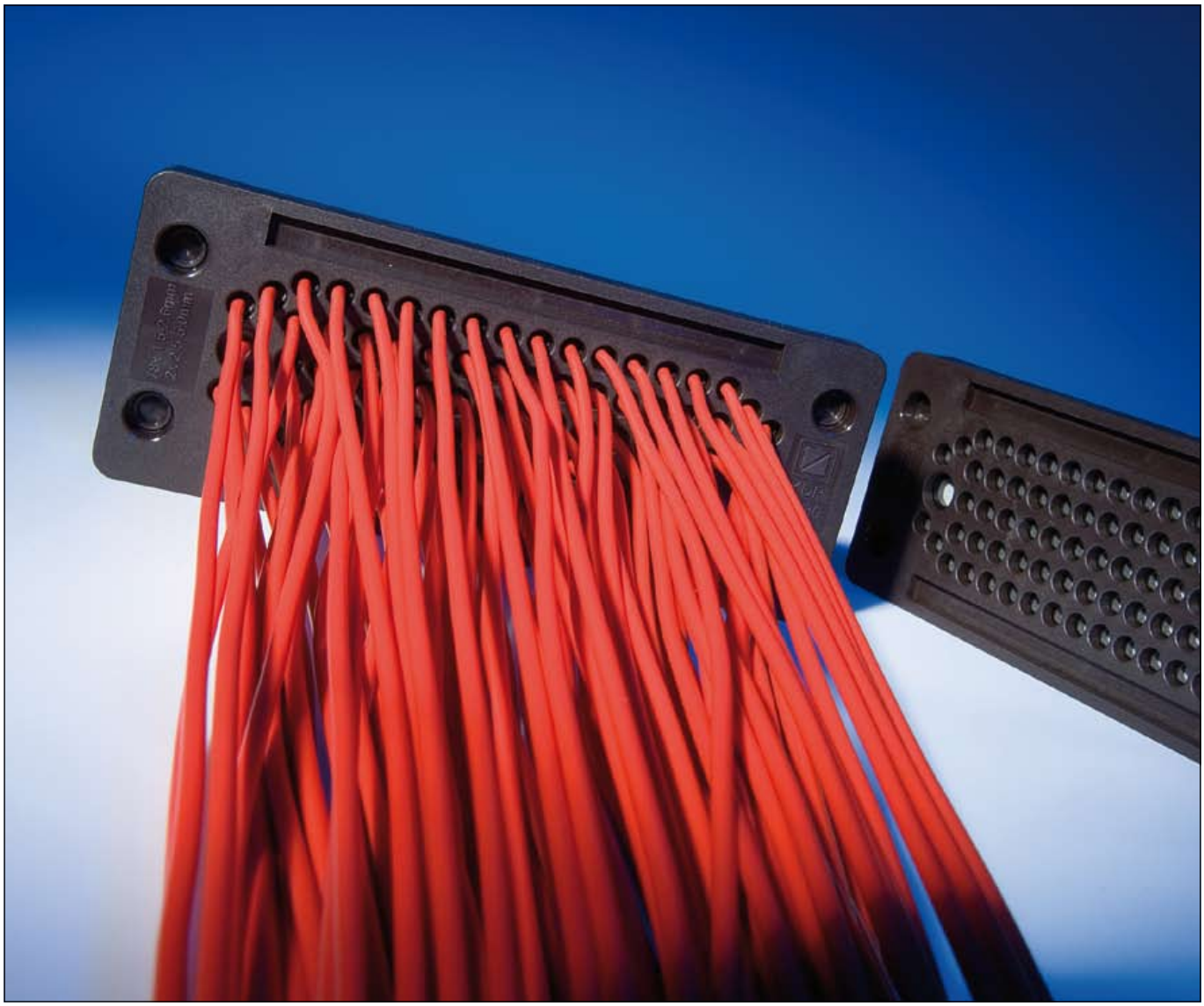
The cable entry plates, type KDP 24-Multi are a combination of our KDP/N system and our cable entry strips KDL/E. They are ideal for situations where a few cables with plugs have to be entered into the switch cabinet next to cables without plugs. These cable entry plates take up to four pre-assembled cables with diameters of 3.0 to 16.0 in two grommets.

	Number of openings on the cable entry plate corresponds to cable diameter					
	Ø mm 1.5–3.5	Ø mm 2.5–5.0	Ø mm 3.0–5.0	Ø mm 3.0–6.5	Ø mm 4.5–8.5	Ø mm 8.0–12.5
 KDP 24/10/02 Item no. 87301076				4	2	4
 KDP 24/14/02 Item no. 87301078		4		2	8	
 KDP 24/15/02 Item no. 87301080	2			11		2
 KDP 24/17/02 Item no. 87301082				17		
 KDP 24/20/02 Item no. 87301084	4		6	10		
 KDP 24/21/02 Item no. 87301086		21				

Material data KDP/N and KDP-Multi

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

The cable entry plates types KDP/N and KDP-Multi comply with ROHS and feature IP class 65 (KDP-Multi: IP 54).
Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
It can be used within a temperature range of -30 to 70 °C.
The frames of KDP/N and KDP-Multi are inspected according to fire classification V0.
They are made of polyamide 6.6, the sealant plates used are made of TPU/NBR/EPDM.
UR approvals as well as approvals for the German and French railways exist for KDP/N.



Cable entry plate KDP plastic, rectangular

Cable entry plate plastic type KDP/N 24

-30 – 70 °C

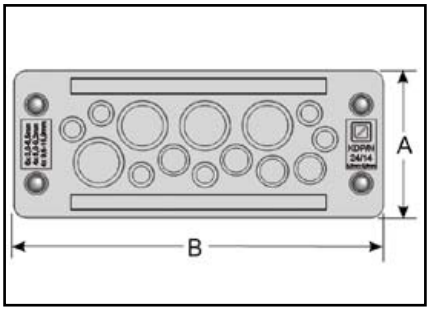
Enclosure: Polyamide 6.6
Seal: TPU/NBR/EPDM

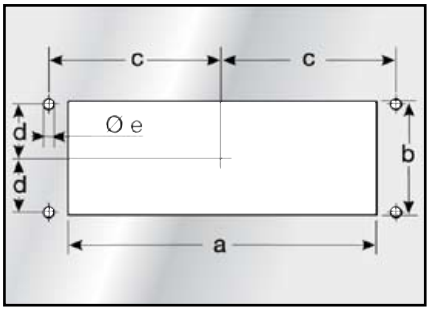
Enclosure: V0

IP 65

The plastic cable entry plate type KDP/N 24 is the second generation of our square, plastic cable entry plates with improved clip-in function.
Economical connection technology for tool-free wiring of equipment and machinery. Wherever the rapid and economical introduction of cables and/or pneumatic hoses in confined spaces is essential. The alternative to cable fittings. Suitable for standard cut-outs for 24-pin Harting and Wieland connectors. For snap-in fastening and/or screwing in place.

- Snap-in at plate thicknesses of 1.5 – 2.0 mm





KDP/N 24

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Installation height mm	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP/N 24/11	87301110	black	11	4 / 3.0 – 6.5 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
				4 / 5.0 – 9.2 mm									
				3 / 14.0 – 20.0 mm									
KDP/N 24/12	87301120	black	12	12 / 8.0 – 12.0 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
KDP/N 24/13	87301130	black	13	2 / 3.0 – 5.5 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
				6 / 4.1 – 8.1 mm									
				4 / 9.0 – 14.0 mm									
				1 / 14.0 – 20.0 mm									
KDP/N 24/14	87301140	black	14	6 / 3.0 – 6.5 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
				4 / 5.0 – 9.2 mm									
				4 / 9.6 – 15.9 mm									
KDP/N 24/17	87301150	black	17	17 / 5.0 – 9.2 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
KDP/N 24/17-1	87301151	black	17	11 / 3.0 – 6.5 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
				1 / 4.1 – 8.1 mm									
				5 / 8.0 – 12.5 mm									
KDP/N 24/22	87301160	black	22	16 / 3.0 – 6.5 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
				4 / 5.0 – 9.2 mm									
				2 / 8.0 – 12.5 mm									
KDP/N 24/23	87301170	black	23	23 / 4.1 – 8.1 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1

Cable entry plate plastic type KDP/N 24

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Installation height mm	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP/N 24/29	87301180	black	29	29 / 3.0 – 6.5 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1
KDP/N 24/80	87301190	black	80	78 / 1.5 – 2.6 mm 2 / 2.5 – 5.0 mm	15.0	59.0	147.0	112.0	36.0	65.0	16.0	5.5	1

Other variants on request. Ask your Murrplastik team.

Matching label plate, type KSS 20x9 or KSS 10x8 – see catalogue ACS.

The correct tool for completing the cutaway can be found in the chapter on "Punching tools".

Cable entry plate KDP plastic, rectangular

Cable entry plate KDP 24-Multi

Made in Germany | RoHS compliant

-30 – 70 °C

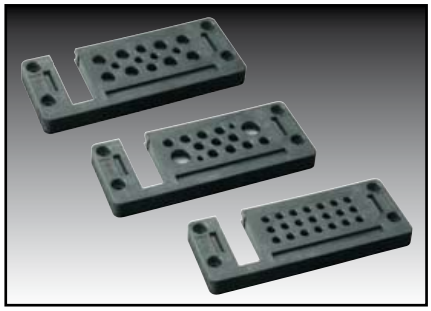
Enclosure: Polyamide
Seal: TPU/NBR/EPDM

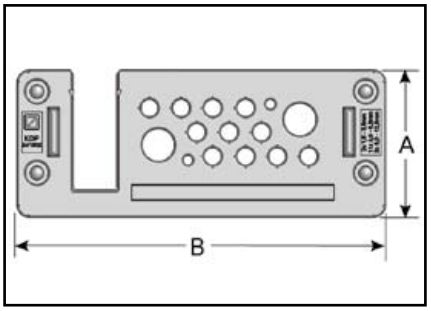
Enclosure: V0

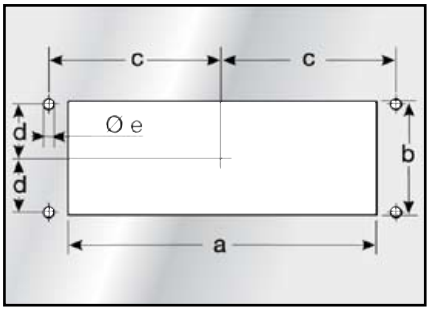
IP 54

The cable entry plates, type KDP 24-Multi are a combination of our KDP system and our cable entry strips KDL/E. They are ideal for situations where a few cables with plugs have to be brought into the switch cabinet next to cables without plugs. The cable entry plates take up to four preassembled cables in two grommets.

- Catch hook for 1.5 – 2.0 mm plate thickness included with delivery, additional catch hooks for up to 4.1 mm plate thickness available.







KDP 24/xx/02

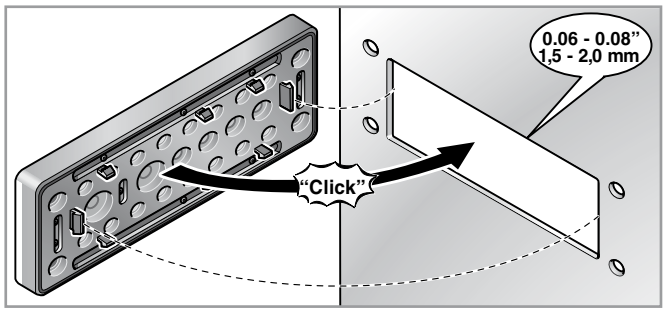
Type	Order no.	Colour	Openings total	Openings quantity / Ø	Grommets No.	Installation height mm	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP 24/10/02	87301076	black	10	4 / 3.0 – 6.5	2	15.5	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
				2 / 4.5 – 8.5										
				4 / 8.0 – 12.5										
KDP 24/14/02	87301078	black	14	4 / 2.5 – 5.0	2	15.5	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
				2 / 3.0 – 6.5										
				8 / 4.5 – 8.5										
KDP 24/15/02	87301080	black	15	2 / 1.5 – 3.5	2	15.5	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
				11 / 3.0 – 6.5										
				2 / 8.5 – 12.5										
KDP 24/17/02	87301082	black	17	17 / 3.0 – 6.5	2	15.5	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
KDP 24/20/02	87301084	black	20	4 / 1.5 – 3.5	2	15.5	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1
				6 / 3.0 – 5.0										
				10 / 3.0 – 6.5										
KDP 24/21/02	87301086	black	21	21 / 2.5 – 5.0	2	15.5	146.0	58.0	112.0	36.0	65.0	16.0	5.5	1

Cable entry plate KDP 24-Multi

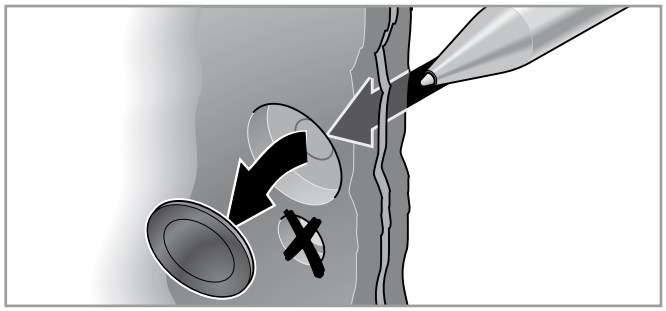
Type	Order no.	Colour	Openings total	Openings quantity / Ø	Grom-mets No.	Installation height mm	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
Replacement parts														
Catch hooks 1.5 – 2.0 mm	8712102000	black	-	-										10
Catch hooks 2.1 – 2.7 mm	8712101800	black	-	-										10
Catch hooks 2.8 – 3.4 mm	8712101600	black	-	-										10
Catch hooks 3.5 – 4.1 mm	8712101400	black	-	-										10
Matching grommets KDT/ZE; KDT/VE; SDT/ZE; BTK/E														
Matching label plate, type KSS 20x9 or KSS 10x8 – see catalogue ACS.														
Matching adapter plates type KDP 24/AP/xx for the assembly of multiple 24/xx/xx in standardised cut-outs (Rittal/Lohmeier/Ensto) see chapter "Cable entry plate KDP plastic"														
The correct tool for completing the cutaway can be found in the chapter on "Punching tools".														

Cable entry plate KDP plastic, rectangular

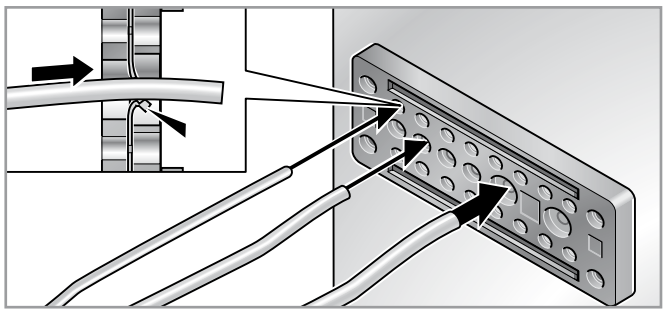
Mounting KDP/N Snap-on mounting



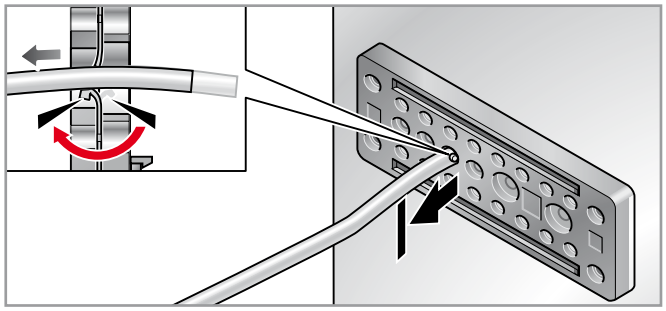
Create cut out (112 x 36 mm) for the KDP/N 24/x as shown in the illustration. Insert cable insertion plate and press on until it clicks into place.



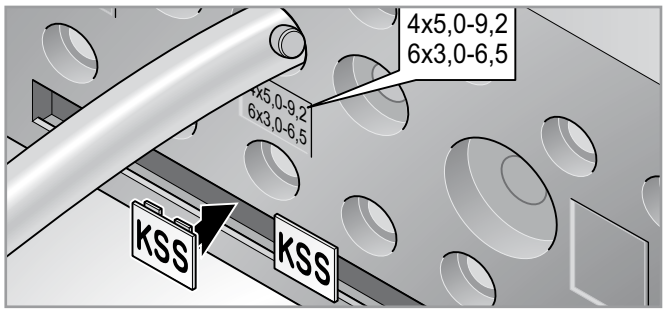
Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out.



Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear of the KDP/N 24/x. Pull cable through to desired length.

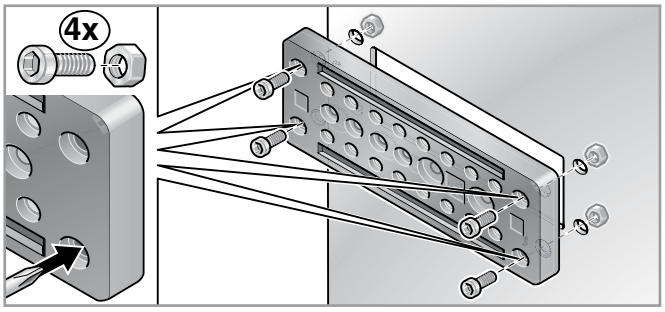


Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

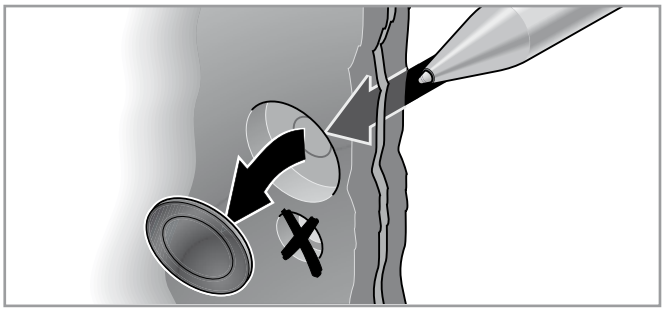


Position optional label plate (type KSS...) and click in. The clamping range for the openings (e.g. 4x5.0 – 9.2) are visible on the front of the insertion plate.

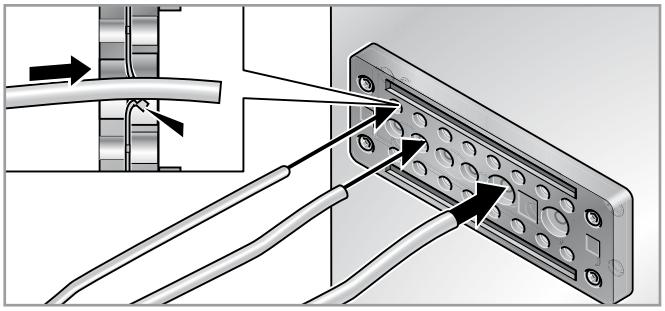
Mounting KDP/N Screw-on mounting



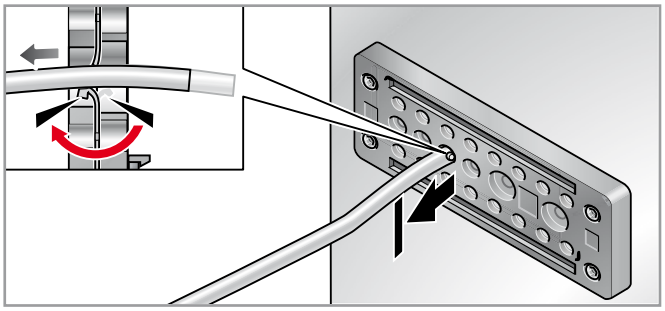
Create cut out (112 x 36 mm) and mounting holes for the KDP/N 24/x as shown in the illustration. Press through the membrane on the mounting holes on the cable entry plate. Set plate onto the cut-out and screw down.



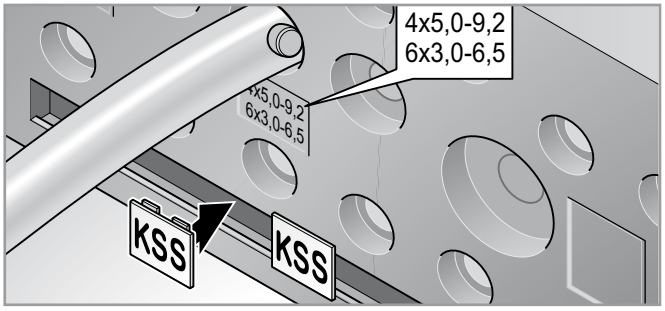
Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out.



Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear of the KDP/N 24/x. Pull cable through to desired length.



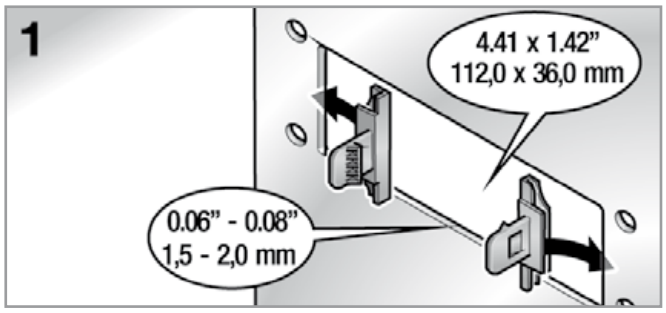
Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.



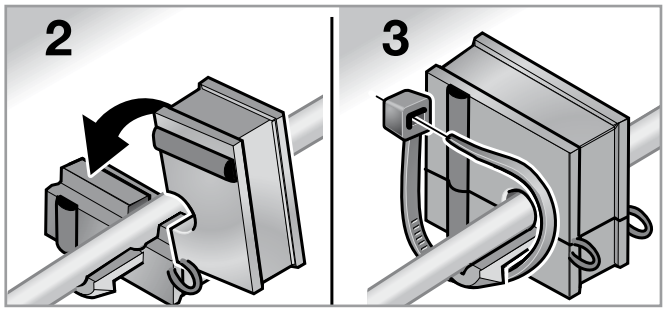
Position optional label plate (type KSS...) and click in. The clamping range for the openings (e.g. 4x5.0 – 9.2) are visible on the front of the insertion plate.

Cable entry plate KDP plastic, rectangular

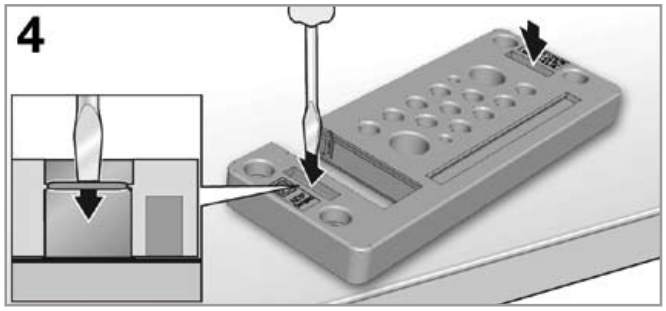
Mounting KDP-Multi snap-on mounting



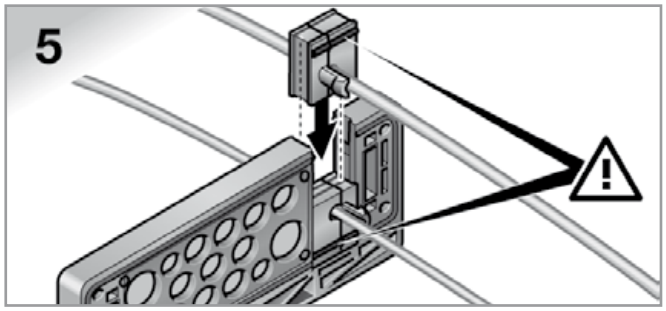
Create a cut-out (112 x 36 mm) for the cable entry plate. Set catch hooks into the sides of the cut-out.



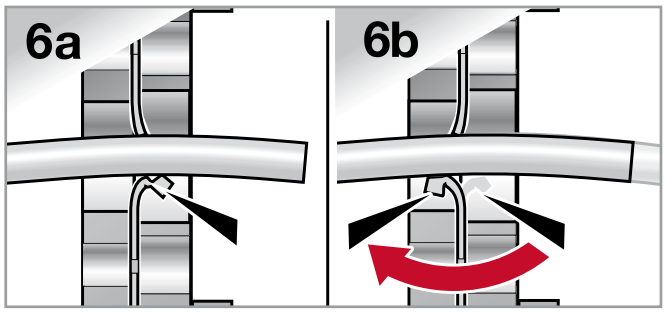
Lay cable into an appropriate grommet and provide strain relief where necessary using cable ties.



Use appropriate tool to punch through cover on base frame.

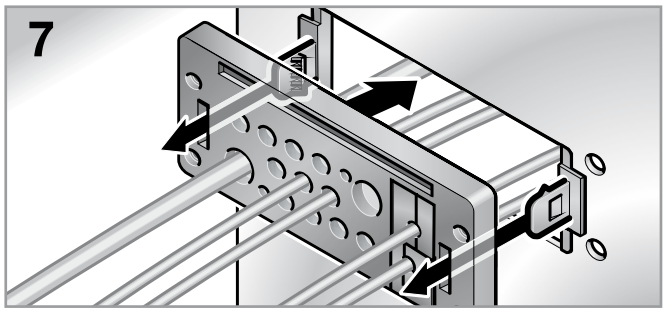


Select a sleeve suitable for the diameter of the cable and place the cable in the sleeve. Make sure there is enough cable length. Close grommets if necessary pull through the cable with a strain-relief cable tie to the desired length. Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

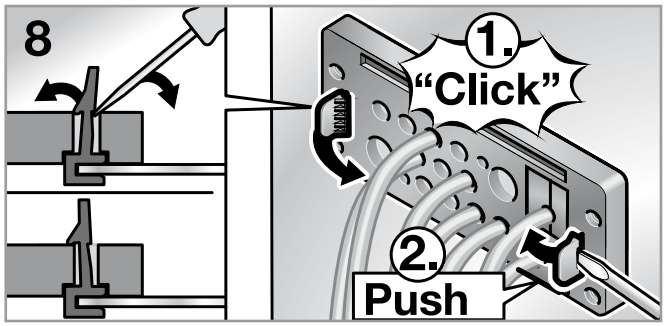


Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear side. Pull cable through to desired length. Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

Mounting KDP-Multi snap-on mounting



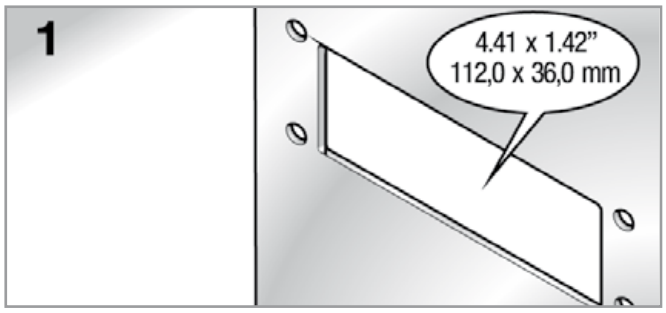
Push the cable entry plate over the set catch and lock in place.



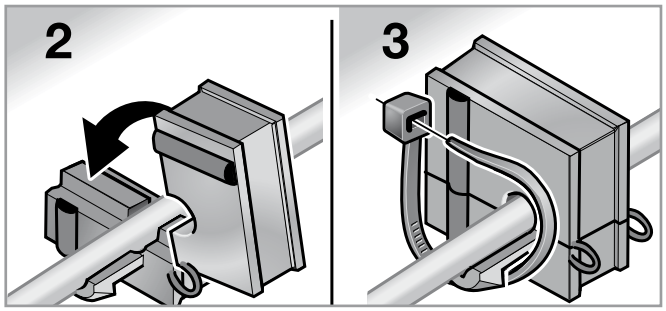
Lock the set catch and press down the cable entry plate again at the edges.

Cable entry plate KDP
plastic, rectangular

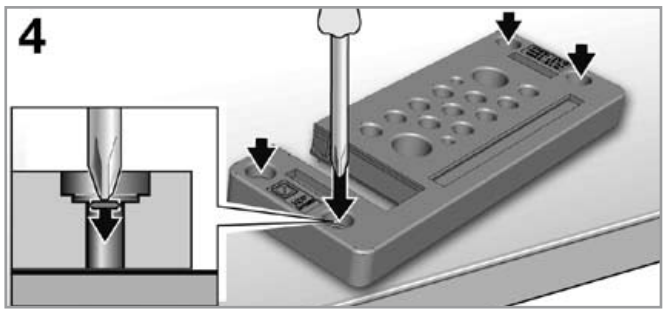
Mounting KDP-Multi screw-on mounting



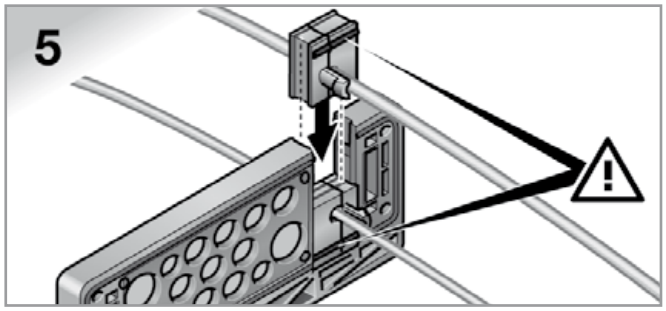
Create a cut-out and drill holes (112 x 36 mm) for the cable entry plate.



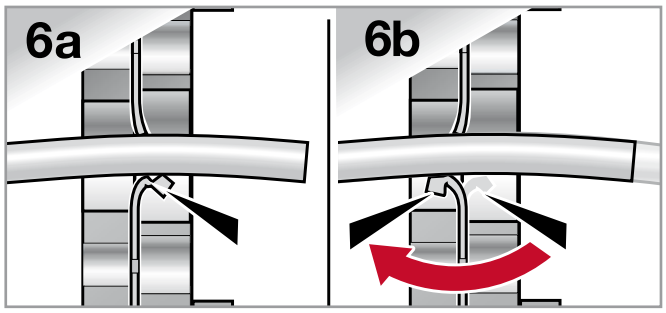
Lay cable into appropriate grommet and provide strain relief where necessary using cable ties.



Use appropriate tool to punch through cover on base frame.

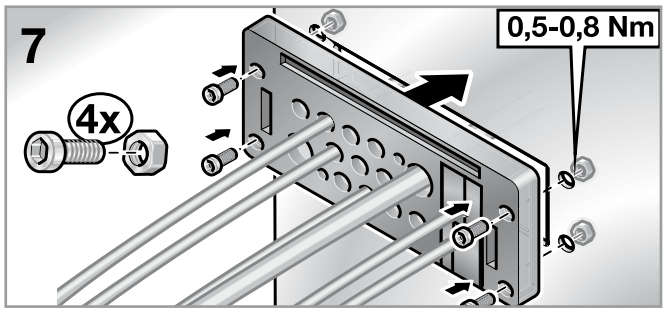


Select a sleeve suitable for the diameter of the cable and place the cable in the sleeve. Make sure there is enough cable length. Close the sleeve and if necessary relieve strain on the cable using a cable tie. Position the sleeve in the cable entry system.

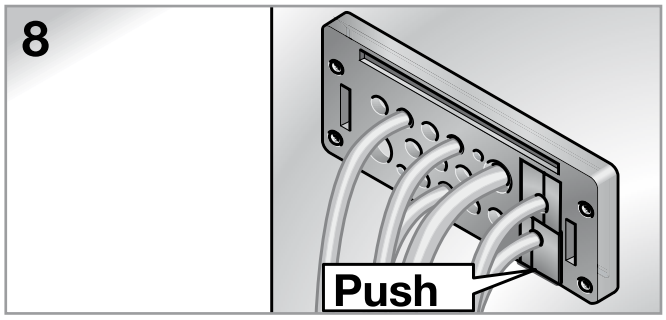


Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear side. Pull cable through to desired length. Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

Mounting KDP-Multi screw-on mounting



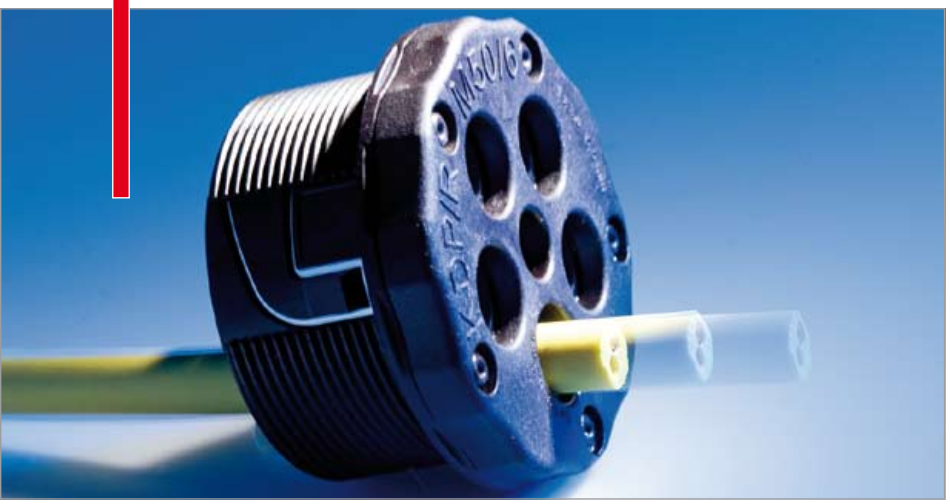
Position and affix the cable entry plate above the cut-out.



Press down the cable entry system at the edges again.

KDH

Cable entry plate KDP plastic round



KDH

Cable entry plate KDP plastic round

Advantages

Straight in! Now also for round cut-outs

Install electric cable and pneumatic hoses with minimal effort, saving time and money.

The KDP cable entry system is ideal if space is at a premium. Simply snap-in the KDP/R or screw in with a locking nut.

Push cable through in a few seconds. That's all there is to it!

The round version of the cable entry plates allows for work with round cut-outs.

The principle is identical to our tried-and-tested KDP/N 24 (rectangular).

Custom solutions with other hole patterns are available by request.

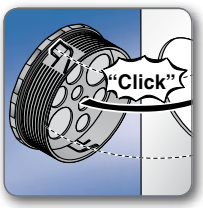
- ✔ **Enormous time savings during assembly**
- ✔ **High packing density hence minimal space requirements**
- ✔ **Assembly without tools**
- ✔ **High protection class IP 65**
- ✔ **Protects the hoses & cables**
- ✔ **Can simply be locked in**

Overview

Cable entry plate, round, type KDP/R

Economical connection technology for tool-free wiring of equipment and machinery.
Extremely quick mounting of cables and pneumatic conduits.

Page 84



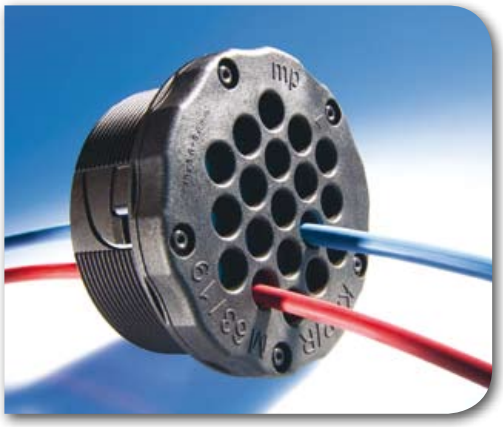
Snap-on mounting
Screw-on mounting

Detailed construction and assembly instructions for the snap-on/screw-on fittings.

Page 85

Cable entry plate KDP plastic round

Selection table (possible combinations of cable entries)



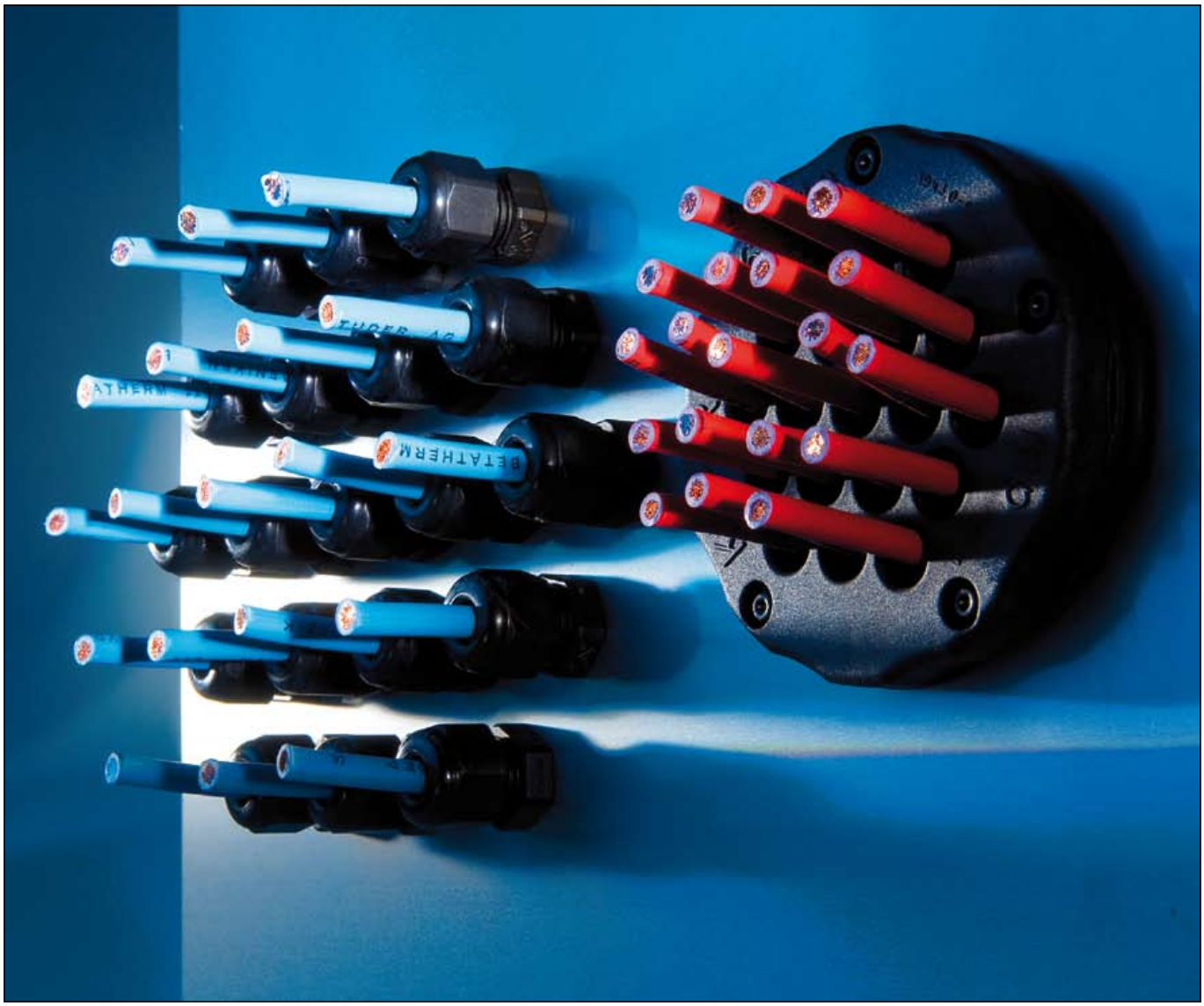
The round cable entry plates type KDP/R are a real alternative to cable fitting. The KDP/R metal can be fitted directly, or using adapter plates, into prefabricated housing cut-outs. For a tool-less, rational connection technology for wiring machines and equipment. Extremely quick mounting of cables and pneumatic conduits. For snap-in fastening or screwing in place with a lock nut.

	Number of openings on the cable entry plate corresponds to cable diameter						
	Ø mm 3.0–5.0	Ø mm 3.0–5.5	Ø mm 3.0–6.5	Ø mm 3.5–6.5	Ø mm 5.0–9.2	Ø mm 6.0–10.0	Ø mm 9.6–15.9
KDP/R M50/04 Item no. 87301030						3	1
KDP/R M50/06 Item no. 87301032		1			5		
KDP/R M50/08 Item no. 87301034				7		1	
KDP/R M63/08 Item no. 87301040			2		4		2
KDP/R M63/13 Item no. 87301042		6		6		1	
KDP/R M63/19 Item no. 87301044	19						

Material data KDP plastic, round

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

The cable entry plates types KDP/R M50 and KDP/R M63 comply with ROHS and feature IP class 65.
Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
It can be used within a temperature range of -30 to 90 °C. The housing of types KDP/R M50 and KDP/R M63 are inspection according to fire classification V0
They are made of polyamide 6.6, the sealant plates used are made of TPU/NBR/EPDM.
UR approvals as well as approvals for the German and French railways exist for the housing.



Cable entry plate KDP
Plastic/round

Cable entry plate, round, type KDP/R

Made in Germany | RoHS compliant

-30 – 90 °C

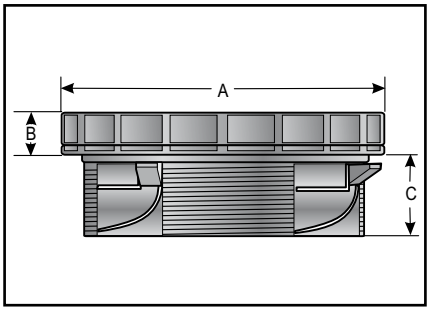
Enclosure: Polyamide 6.6
Seal: NBR/EPDM

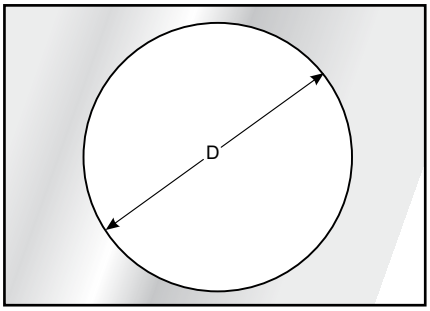
Enclosure: V0

IP 65

Economical connection technology for tool-free wiring of equipment and machinery. Extremely quick mounting of cables and pneumatic hoses. The real alternative to cable fittings. For snap-in fastening or screwing in place with a lock nut. Casing not included with delivery!

- For snapping in plates of 1.5 – 2.0 mm
- Integrated seal
- Compact design
- High protection class





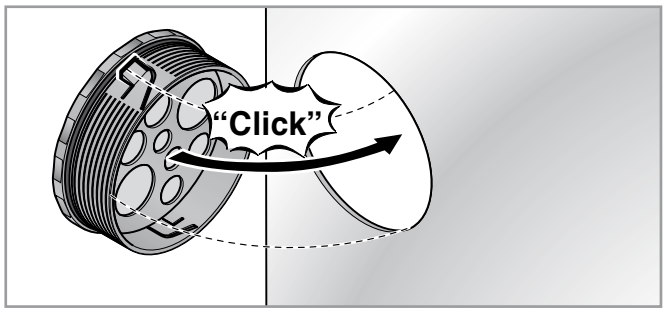
KDP/R...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Thread metric	A mm	B mm	C mm	D mm	Pack qty.
KDP/R M50/04	87301030	black	4	3 / 6.0 – 10.0 mm	M50x1.5	58	9	24	50.5	1
				1 / 9.6 – 15.9 mm						
KDP/R M50/06	87301032	black	6	1 / 3.0 – 5.5 mm	M50x1.5	58	9	24	50.5	1
				5 / 5.0 – 9.2 mm						
KDP/R M50/08	87301034	black	8	7 / 3.5 – 6.5 mm	M50x1.5	58	9	24	50.5	1
				1 / 6.0 – 10.0 mm						
KDP/R M63/08	87301040	black	8	2 / 3.0 – 6.5 mm	M63x1.5	71	9	25	63.5	1
				4 / 5.0 – 9.2 mm						
				2 / 9.6 – 15.9 mm						
KDP/R M63/13	87301042	black	13	6 / 3.0 – 5.5 mm	M63x1.5	71	9	25	63.5	1
				6 / 3.5 – 6.5 mm						
				1 / 6.0 – 10.0 mm						
KDP/R M63/19	87301044	black	19	19 / 3.0 – 5.0 mm	M63x1.5	71	9	25	63.5	1

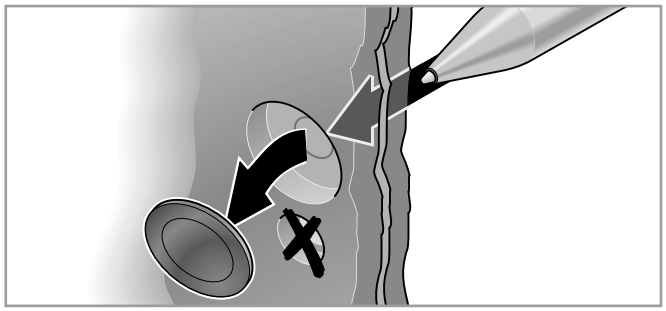
The right tool for cut-out production
can be found in the chapter "Punching tools"

The right locknut can be found in the "Accessories" chapter

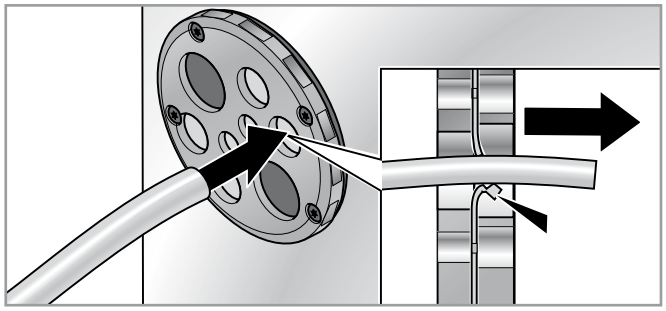
Snap-on mounting



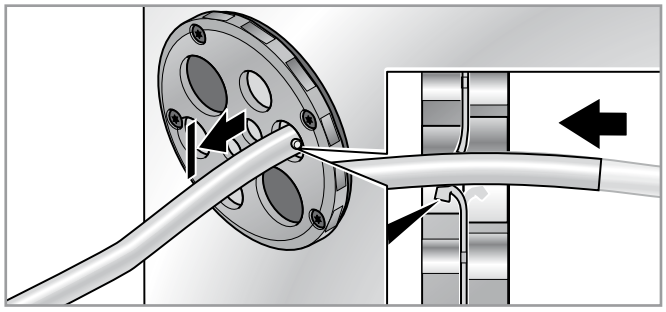
Create circular cut-out dimensioned for the KDP/R. Insert cable insertion plate and press on until it clicks into place.



Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out.



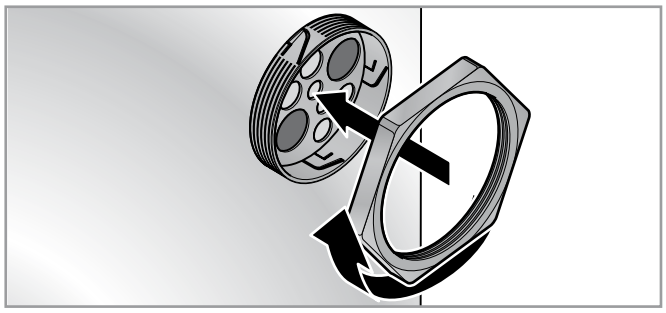
Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear of the KDP/R. Pull cable through to desired length.



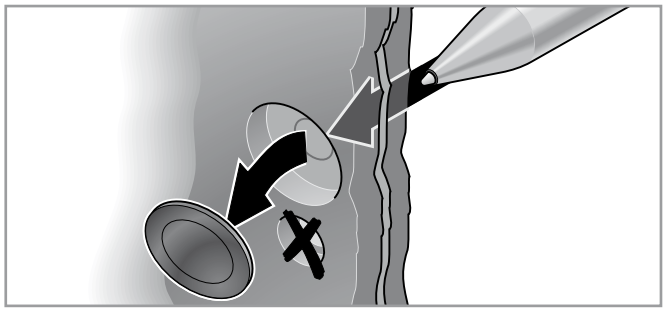
Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

Cable entry plate KDP
Plastic/round

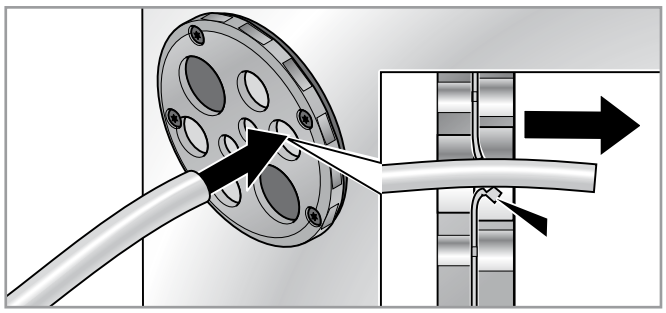
Screw-on mounting



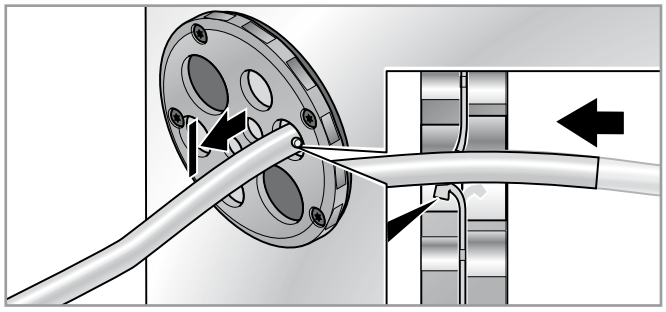
Create circular cut-out dimensioned for the KDP/R. Place cable insertion plate and press on. Fasten KDP/R with lock nut.



Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out.

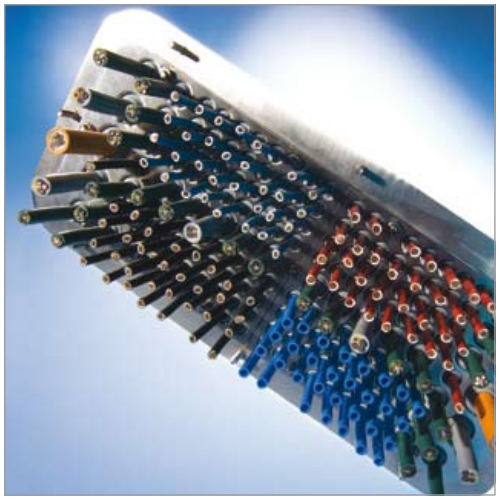


Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear of the KDP/R. Pull cable through to desired length.



Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

Cable entry plate KDP
Metal



Cable entry plate, type KDP metal rectangular

Advantages

Fits in even confined spaces

The metal cable entry plate is, like the plastic version, an ideal alternative to cable fittings.

Cabels and hoses can be installed in seconds, even in highly confined spaces.

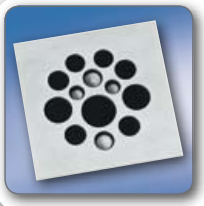
Aluminium and stainless steel versions offer a broad range of applications.

Stainless steel version particularly suited for foodstuffs and chemical industries.

Quick installation of up to 292 services even while saving up to 50% of space thereby reducing costs as well.

- ✔ High packing density
- ✔ Quick installation
- ✔ High IP protection class
- ✔ Low installation height
- ✔ Fits in Rittal enclosure

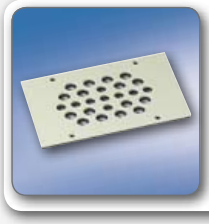
Overview



Cable entry plate metal KDP 90 (90x90 mm)

The KDP metal cable entry plates with external dimensions 90x90mm can be mounted in cut-outs with Ø 75 mm.

Page 101



Cable entry plate metal KDP 90 (90x144 mm)

The KDP metal cable entry plates with external dimensions 90x144 mm can be mounted in cut-outs measuring 71x109 mm.

Page 102

Cable entry plate metal KDP 90 (90x221 mm)

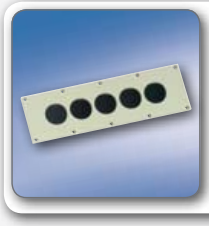
The KDP metal cable entry plates with external dimensions 90x221 mm can be mounted in cut-outs measuring 62x192 mm.

Page 103

Cable entry plate metal KDP 90+3 (90x221 mm)

The KDP metal cable entry plates with external dimensions 90x221 mm can be mounted in cut-outs measuring 62x192 mm. Additionally, up to three pre-assembled cables can be inserted.

Page 104



Cable entry plate metal KDP 90 (90x294 mm)

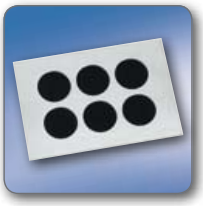
The KDP metal cable entry plates with external dimensions 90x294 mm can be mounted in cut-outs measuring 71x271 mm.

Page 105

Cable entry plate metal KDP 90 (90x394 mm)

The KDP metal cable entry plates with external dimensions 90x394 mm can be mounted in cut-outs measuring 71x371 mm.

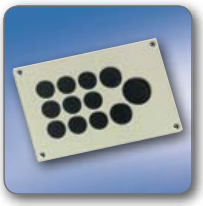
Page 106



Cable entry plate metal KDP 100 (100x145 mm)

The KDP metal cable entry plates with external dimensions 100x145 mm can be mounted in cut-outs measuring 82x132 mm.

Page 107



Cable entry plate metal KDP 105 (100x155 mm)

The KDP metal cable entry plates with external dimensions 105x155 mm can be mounted in cut-outs measuring 82x132 mm.

Page 109

Cable entry plate metal KDP 120 (120x190 mm)

The KDP metal cable entry plates with external dimensions 120x190 mm can be mounted in cut-outs measuring 94x164 mm.

Page 110

Cable entry plate metal KDP 134 (134x254 mm)

The KDP metal cable entry plates with external dimensions 134x254 mm can be mounted in cut-outs measuring 111x231 mm.

Page 111

Cable entry plate metal KDP 149 (149x339 mm)

The KDP metal cable entry plates with external dimensions 149x339 mm can be mounted in cut-outs measuring 115x303 mm.

Page 112

Cable entry plate metal KDP 149 (149x534 mm)

The KDP metal cable entry plates with external dimensions 149x534 mm can be mounted in cut-outs measuring 115x500 mm.

Page 113

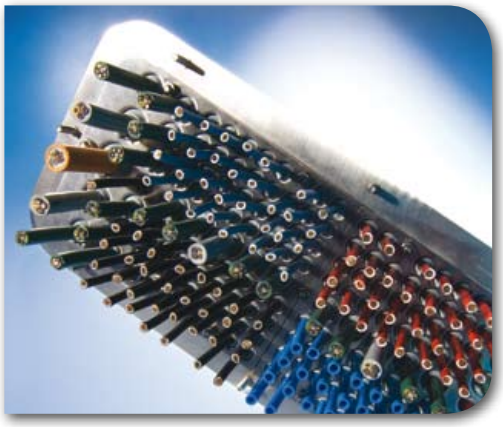
Assembly design ALU
Assembly design V4A

Detailed configuration and assembly instruction for design in aluminium/stainless steel.

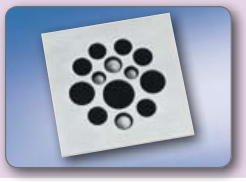
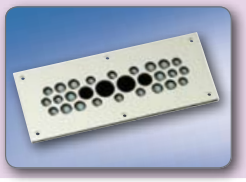
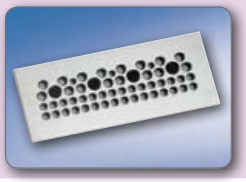
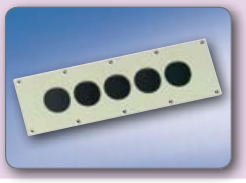
Page 114

Cable entry plate, type KDP metal rectangular

Selection table KDP 90 (possible combinations of cable entries)



The KDP metal with installation height 90 mm is one of the many products from the KDP metal range. It can be fitted directly, or using adapter plates, into prefabricated housing cut-outs.
The technical advantage here is linked to the enormous time savings with cable assembly. IP class 65 is achieved without additional time or material.
The cable entry plates from the KDP metal enable tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology e.g. into a control housing.

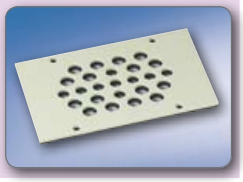
	Number of openings on the cable entry plate corresponds to cable diameter							
	Ø mm 3.0–5.0	Ø mm 3.0–6.0	Ø mm 3.0–6.2	Ø mm 3.5–6.5	Ø mm 4.0–8.0	Ø mm 4.5–8.5	Ø mm 6.0–10.0	Ø mm 6.0+8.5
 **KDP 90/13** V4A: Item no. 87663118			2			4	4	
	9				16			
 **KDP 90/28** ALU: Item no. 87663032 V4A: Item no. 87663034					14		10	
				14		28		
 **KDP 90/55** V4A: Item no. 87663058	3		32		16			
		24			12			1+2
 **KDP 90/5** ALU: Item no. 87663029								

The stainless steel version is particularly suitable for application in the food and chemical industries. Integrated threaded bolts mean that no screws are visible from outside.
The cut-out of the KDP 90/39+3 enables up to three pre-assembled cables with a maximum connector size of 48 x 24 mm to be introduced.

Number of openings on the cable entry plate
corresponds to cable diameter

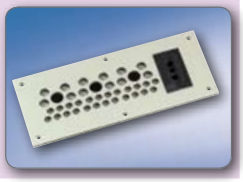
Ø mm 7.0–11.0	Ø mm 8.0–12.0	Ø mm 9.0–14.0	Ø mm 11.0–16.0	Ø mm 12.0–18.0	Ø mm 14.0–18.0	Ø mm 16.0–28.0
		2			1	
		2		2		
4			1			
	4					
	3					
						5
						8

KDP 90/25
ALU: Item no. 87663022



KDP 90/47
ALU: Item no. 87663037
V4A: Item no. 87663039

KDP 90/39+3
ALU: Item no. 87663036
V4A: Item no. 87663038

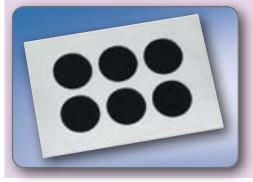
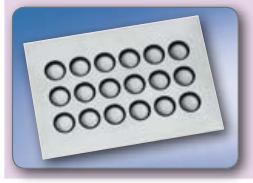
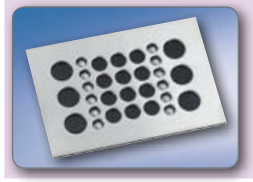
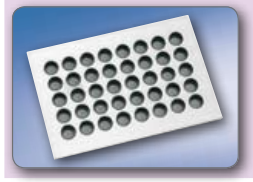
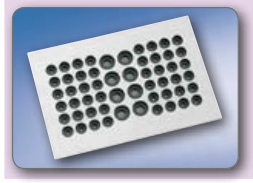


KDP 90/8
ALU: Item no. 87663026

Cable entry plate, type KDP metal rectangular

Selection table KDP 100 (possible combinations of cable entries)

The KDP metal with installation height 100 mm is one of the many products from the KDP metal range. Cable entry plates of the 100 series fit into standard cut-outs for Rittal or Sarel cabinets when combined with adapter plates KDP AP 149/100/... The technical advantage here is linked to the enormous time savings wit cable assembly. IP class 65 is achieved without additional time or material.

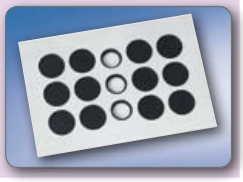
	Number of openings on the cable entry plate corresponds to cable diameter					
	Ø mm 1.0–3.5	Ø mm 3.5–6.2	Ø mm 3.5–6.5	Ø mm 4.5–8.5	Ø mm 6.0–10.0	Ø mm 6.0–10.5
 **KDP 100/6** V4A: Item no. 87663116						
 **KDP 100/18** V4A: Item no. 87663122						24
 **KDP 100/30** V4A: Item no. 87663062		12			12	
		12			12	
 **KDP 100/40** V4A: Item no. 87663061				40		
		48			8	
 **KDP 100/56B** V4A: Item no. 87663065	48		8			
	48		4		4	

The cable entry plates from the KDP metal enable tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology e.g. into a control housing.
The stainless steel version is particularly suitable for application in the food and chemical industries. Integrated threaded bolts mean that no screws are visible from outside.

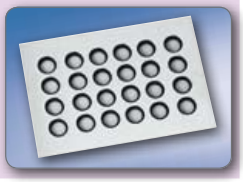
Number of openings on the cable entry plate
corresponds to cable diameter

Ø mm 8.0–12.0	Ø mm 9.0–14.0	Ø mm 11.0–16.0	Ø mm 12.0–18.0	Ø mm 16.0–24.0
				6
3		12		
18				
	6			
	4		2	

KDP 100/15
V4A: Item no. 87663120

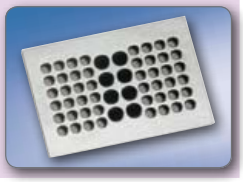


KDP 100/24
V4A: Item no. 87663124

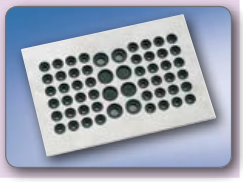


KDP 100/30B
V4A: Item no. 87663063

KDP 100/56
V4A: Item no. 87663060



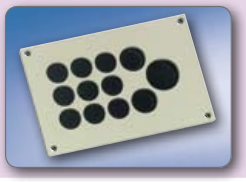
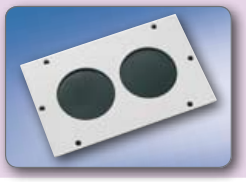
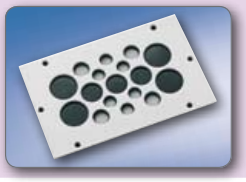
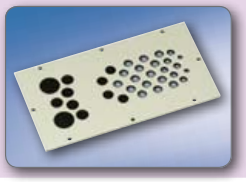
KDP 100/56C
V4A: Item no. 87663067



Cable entry plate, type KDP metal rectangular

Selection table KDP 105/120/134 (possible combinations of cable entries)

The KDP metal with installation heights 100, 105 and 134 mm are further products from the KDP metal range. The 120 series is ideally suited for the electric power area. Performance cables and sercices are sealed and fed into control cabinets or junction boxes and are supported stabley. The technical advantage here is linked to the enormous time savings wit cable assembly. IP class 65 is achieved without additional time or material.

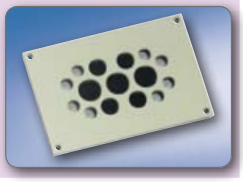
	Number of openings on the cable entry plate corresponds to cable diameter					
	Ø mm 3.0–5.0	Ø mm 3.5–6.5	Ø mm 4.0–8.0	Ø mm 6.0–10.0	Ø mm 8.0–12.0	Ø mm 9.0–14.0
 **KDP 105/12** ALU: Item no. 87663056 V4A: Item no. 87663057						9
				8		4
KDP 105/32 ALU: Item no. 87663010 V4A: Item no. 87663012	16		12	4		
 **KDP 120/2B** ALU: Item no. 87663002						
 **KDP 120/17** ALU: Item no. 87663004				6		4
		8		18		
 **KDP 134/34** ALU: Item no. 87663024	2		6	15	4	5

The cable entry plates from the KDP metal enable tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology e.g. into a control panel.
The stainless steel version is particularly suitable for application in the food and chemical industries. Integrated threaded bolts mean that no screws are visible from outside.

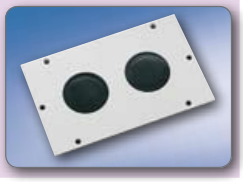
Number of openings on the cable entry plate
corresponds to cable diameter

Ø mm 9.6–15.9	Ø mm 12.0–18.0	Ø mm 14.0–20.0	Ø mm 18.0–25.0	Ø mm 18.0–36.0	Ø mm 36.0–49.0
	2		1		
	3				
				2	
					2
				1	1
	3		4		
7		2			
		2			

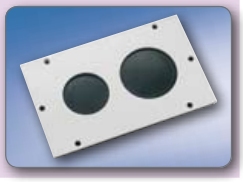
KDP 105/15
ALU: Item no. 87663014
V4A: Item no. 87663016



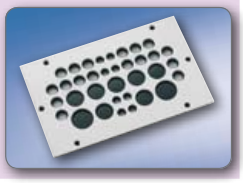
KDP 120/2
ALU: Item no. 87663001



KDP 120/2C
ALU: Item no. 87663003



KDP 120/35
ALU: Item no. 87663005



Cable entry plate, type KDP metal rectangular

Selection table KDP 149 (possible combinations of cable entries)

The KDP metal with installation height 149 mm is one of the many products from the KDP metal range. KDPs of product group 149 can be fitted directly into the standard cut-outs of Rittal or Sarel cabinets.
The technical advantage here is linked to the enormous time savings with cable assembly. IP class 65 is achieved without additional time or material.

	Number of openings on the cable entry plate corresponds to cable diameter				
	Ø mm 3.5–6.2	Ø mm 4.5–8.5	Ø mm 6.0–10.0	Ø mm 6.0–12.0	Ø mm 8.0–12.0
KDP 149/56 V4A: Item no. 87663086			36		
	126		24		6
KDP 149/46 ALU: Item no. 87663064			8		
	16	64	36		4
KDP 149/292 V4A: Item no. 87663066	250		32		8

Material data for all KDP metal

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

All types of KDP metal comply with ROHS and feature the high IP class 65. Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone. KDP metal also have CSA approval.
It can be used within a temperature range of -30 to 90 °C. Aluminium designs, recognisable by the additional type ALU, are made of high quality AlMg3 (3.3535). Stainless steel designs, recognisable by the additional type V4A, are made of stainless steel of quality category V4A (1.4571).
The sealant on all KDP metal type is made of NBR/EPDM.

The cable entry plates from the KDP metal enable tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology e.g. into a control panel.
The stainless steel version is particularly suitable for application in the food and chemical industries. Integrated threaded bolts mean that no screws are visible from outside.

Number of openings on the cable entry plate
corresponds to cable diameter

Ø mm 9.0–14.0	Ø mm 10.0–14.0	Ø mm 12.0–18.0	Ø mm 14.0–18.0	Ø mm 18.0–25.0
8			8	4
		2		
	16	18		4
8			8	4
		2		

KDP 149/158
V4A: Item no. 87663068

KDP 149/140
V4A: Item no. 87663088

Cable entry plate, type KDP metal rectangular

Assigning cut-out codes / KDP types / adapter plates

Cut-out codes for direct assembly of the KDP in the control cabinet

Code **90A**

KDP 90/13
Page 101

Code **90B**

KDP 90/25
Page 102

Code **90C**

KDP 90/28
Page 103

KDP 90/47
Page 103

KDP 90/55
Page 103

KDP 90/90+3
Page 104

Code **90E**

KDP 90/5
Page 105

Code **90F**

KDP 90/8
Page 106

Code **100A**

KDP 100/6
Page 107

KDP 100/15
Page 107

KDP 100/18
Page 107

KDP 100/24
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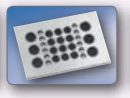
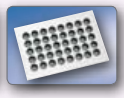
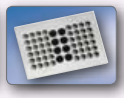


KDP 100/30
Page 107

KDP 100/30B
Page 107

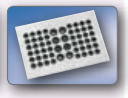


KDP 100/40
Page 107



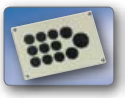
KDP 100/56
Page 107

KDP 100/56B
Page 107

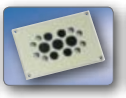


KDP 100/56C
Page 108

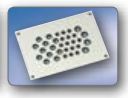
Code **105A**



KDP 105/12
Page 109

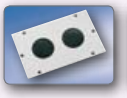


KDP 105/15
Page 109

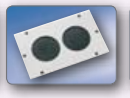


KDP 105/32
Page 109

Code **120A**



KDP 120/2
Page 110



KDP 120/2B
Page 110

KDP 120/2C
Page 110

KDP 120/17
Page 110

KDP 120/35
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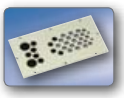
Code **134A**



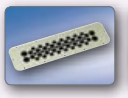
KDP 134/34
Page 111

Code **149A**

KDP 149/56
Page 112

KDP 149/158
Page 112

Code **149B**



KDP 149/46
Page 113

KDP 149/140
Page 113

KDP 149/292
Page 113

Cut-out codes for indirect assembly of the KDP in the control cabinet using the adapter plate

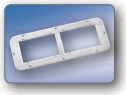
Code **AP130A**

KDP AP/SA/130/100/3+2
for 3x KDP 100/xx + 2x M32
Page 142

Code **AP130B**

KDP AP/SA/130/100/2+4
for 2x KDP 100/xx + 4x M32
Page 142

Code **AP130C**



KDP AP/SA/130/100/2
for 2x KDP 100/xx
Page 142

Code **AP149A**

KDP AP 149/100/2
for 2x KDP 100/xx
Page 141

Code **AP149B**

KDP AP 149/100/3
for 3x KDP 100/xx
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KDP AP 149/105/3
for 3x KDP 105/xx
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Selection table Rittal Housing (Murrplastik cut-out codes)

Rittal		Murrplastik	
Order no.	Type	Cut-out code for direct assembly	Cut-out code for adapter plate.
1039.500	AE	149B	AP149B
1045.500	AE	149A	AP149A
1050.500	AE	149A	AP149A
1057.500	AE	149A	AP149A
1058.500	AE	149B	AP149B
1060.500	AE	149B	AP149B
1073.500	AE	149B	AP149B
1076.290	AE	149B	AP149B
1076.500	IN	149B	AP149B
1077.500	AE	149B	AP149B
1090.500	AE	149B	AP149B
1100.500	AE	149A	AP149A
1110.500	AE	149A	AP149A
1114.500	AE	149A	AP149A
1130.500	AE	149A	AP149A
1180.500	AE	149B	AP149B
1213.500	AE	149A	AP149A
1260.500	AE	149B	AP149B
1280.500	AE	149B	AP149B
1338.500	AE	149A	AP149A
1339.500	AE	149B	AP149B
1350.500	AE	149A	AP149A
1360.500	AE	149B	AP149B
1376.500	AE	149B	AP149B
1530.510	KL	90C	
1531.510	KL	90C	
1532.510	KL	90C	
1533.510	KL	90C	
1534.510	KL	90C	
1535.510	KL	90C	
1536.510	KL	90C	
1537.510	KL	90C	
1538.510	KL	90C	
1539.510	KL	90C	
1540.510	KL	90C	
1541.510	KL	90C	
1542.510	KL	90C	
1919.500	EL	149B	AP149B
1920.500	EL	149B	AP149B
1926.500	EL	149B	AP149B
6214.xx0	CP	90C	
6220.xx0	CP	90C	
6900.xxx	IW	90C	
6901.xxx	IW	90C	

Rittal		Murrplastik	
Order no.	Type	Cut-out code for direct assembly	Cut-out code for adapter plate.
7011.535	DK	149B	AP149B
7012.535	DK	149B	AP149B
7013.535	DK	149B	AP149B
7014.535	DK	149B	AP149B
7454.xxx	DK	90C	
7641.000	DK	149B	AP149B
7643.000	DK	149B	AP149B
7644.000	DK	149B	AP149B
7645.000	DK	149B	AP149B
9665.815	SV	149A	AP149A
9665.825	SV	149B	AP149B
9665.835	SV	149B	AP149B
9665.845	SV	149B	AP149B
9665.855	SV	149A	AP149A
9751.125	CS	149A	AP149A
9751.145	CS	149A	AP149A
9751.165	CS	149A	AP149A
9752.125	CS	149A	AP149A
9771.110	CS	149A	AP149A
9771.115	CS	149A	AP149A
9772.110	CS	149B	AP149B
9772.115	CS	149B	AP149B
9774.200	CS	149A	AP149A
9774.210	CS	149A	AP149A
9774.250	CS	149A	AP149A
9774.400	CS	149A	AP149A
9774.410	CS	149A	AP149A
9774.450	CS	149A	AP149A
9775.100	CS	149A	AP149A
9775.200	CS	149A	AP149A
9775.300	CS	149A	AP149A
9775.400	CS	149A	AP149A

Selection table Sarel Housing (Murrplastik cut-out codes)

Sarel	Murrplastik	
Order no.	Cut-out code for direct assembly	Cut-out code for adapter plate.
87019 (83019)	–	AP130C
87319 (83319)	–	AP130C
87519 (83519)	–	AP130C
87022 (83022)	–	AP130B
87322 (83322)	–	AP130B
87522 (83522)	–	AP130B
87023 (83023)	–	AP130C
87323 (83323)	–	AP130C
87523 (83523)	–	AP130C
87024 (83024)	–	AP130C
87324 (83324)	–	AP130C
87524 (83524)	–	AP130C
87025 (83025)	–	AP130B
87325 (83325)	–	AP130B
87525 (83525)	–	AP130B
87026 (83026)	–	AP130C
87326 (83026)	–	AP130C
87526 (83526)	–	AP130C
87027 (83027)	–	AP130C
87327 (83327)	–	AP130C
87527 (83527)	–	AP130C
87028 (83028)	–	AP130A
87328 (83328)	–	AP130A
87528 (83528)	–	AP130A
87029 (83029)	–	AP130A
87329 (83329)	–	AP130A
87529 (83529)	–	AP130A
87031 (83031)	–	AP130A
87331 (83331)	–	AP130A
87531 (83531)	–	AP130A
87032 (83032)	–	AP130A
87332 (83332)	–	AP130A
87532 (83532)	–	AP130A
87035 (83035)	–	AP130B
87335 (83335)	–	AP130B
87535 (83535)	–	AP130B
87037 (83037)	–	AP130C
87337 (83337)	–	AP130C
87537 (83537)	–	AP130C
87043 (83043)	–	AP130A
87543 (83343)	–	AP130A
87543 (83543)	–	AP130A
87045 (83045)	–	AP130C
87345 (83345)	–	AP130C

Sarel	Murrplastik	
Order no.	Cut-out code for direct assembly	Cut-out code for adapter plate.
87545 (83545)	–	AP130C
87046 (83046)	–	AP130C
87346 (83346)	–	AP130C
87546 (83546)	–	AP130C
87047 (83047)	–	AP130B
87347 (83347)	–	AP130B
87054 (83054)	–	AP130A
87354 (83354)	–	AP130A
87554 (83554)	–	AP130A
87056 (83056)	–	AP130A
87356 (83356)	–	AP130A
87556 (83556)	–	AP130A
87060 (83060)	–	AP130C
87360 (83360)	–	AP130C
87560 (83560)	–	AP130C
87061 (83061)	–	AP130C
87361 (83361)	–	AP130C
87561 (83561)	–	AP130C
87062 (83062)	–	AP130C
87362 (83362)	–	AP130C
87562 (83562)	–	AP130C
87063 (83063)	–	AP130B
87363 (83363)	–	AP130B
87563 (83563)	–	AP130B
87064 (83064)	–	AP130C
87364 (83364)	–	AP130C
87564 (83564)	–	AP130C
87065 (83065)		AP130B
87365 (83365)		AP130B
87565 (83565)		AP130B
87066 (83066)	–	AP130B
87366 (83366)	–	AP130B
87067 (83067)	–	AP130C
87367 (83367)	–	AP130C
87567 (83567)	–	AP130C
87070 (83070)	–	AP130B
87370 (83370)	–	AP130B
87570 (83570)	–	AP130B
87071 (83071)	–	AP130B
87371 (83371)	–	AP130B
87571 (83571)	–	AP130B

Cable entry plate Metal Type 90 (90x90 mm)

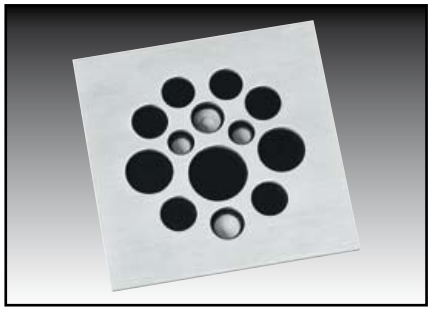
-30 – 90 °C

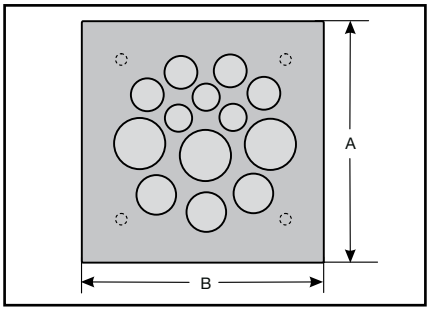
Plate: see article
Seal: NBR/EPDM

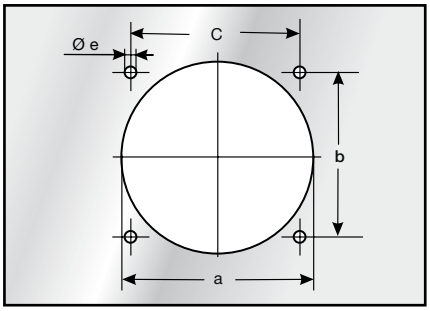
IP 65

Cut-out code:
90A

Efficient connection technology for terminal boxes and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control panel. The stainless steel version is particularly suitable for application in the food and chemical areas. Integrated threaded bolts mean that no screws are visible from outside. Mounting set included in delivery.







KDP 90/13...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	e mm	Pack qty.
KDP 90/13 V4A	87663118	smoothed	13	2 / 3.0 – 6.2 mm	V4A (1.4571)	90.0	90.0	75.0	64.0	64.0	4.5	1
				4 / 4.5 – 8.5 mm								
				4 / 6.0 – 10.0 mm								
				2 / 9.0 – 14.0 mm								
				1 / 14.0 – 18.0 mm								

Cable entry plate KDP Metal

Cable entry plate Metal Type 90 (90x144 mm)

RoHS compliant

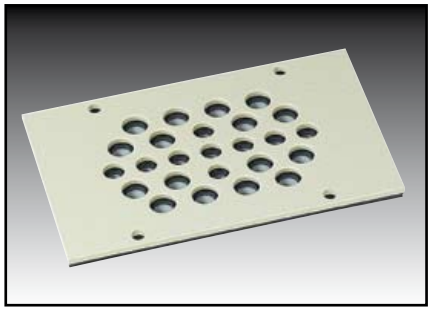
-30 – 90 °C

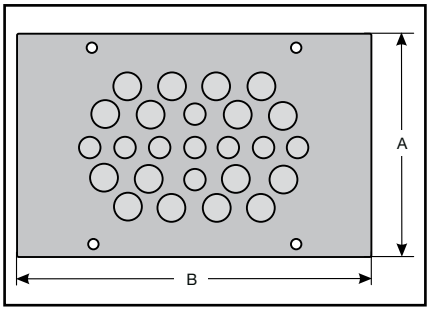
Plate: see article
Seal: NBR/EPDM

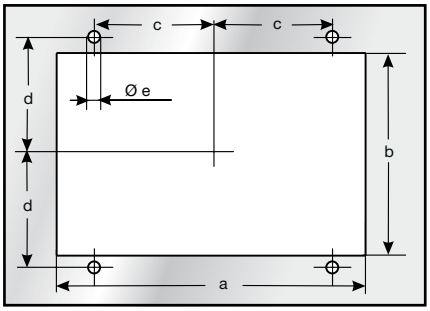
IP 65

Cut-out code:
90B

Efficient connection technology for terminal housings and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control panel.







KDP 90/25...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP 90/25 ALU	87663022	RAL 7035	25	9 / 3.0 – 5.0 mm	AlMg3 (3.3535)	90.0	144.0	109.0	71.0	41.0	39.5	5.5	1
				16 / 4.0 – 8.0 mm									

Cable entry plate Metal Type 90 (90x221 mm)

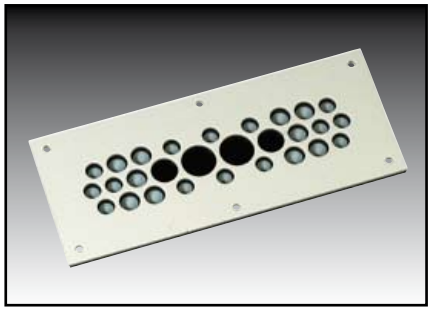
-30 – 90 °C

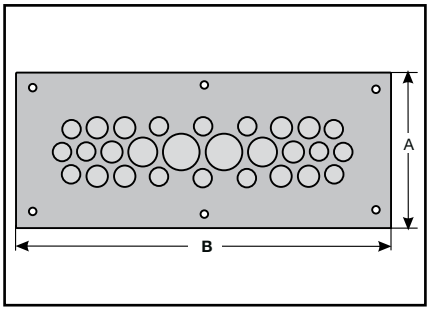
Plate: see article
Seal: NBR/EPDM

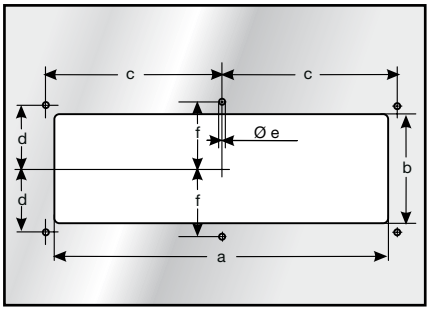
IP 65

Cut-out code:
90C

Efficient connection technology for terminal housings and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control panel. The stainless steel version is particularly suitable for application in the food and chemical areas. Integrated threaded bolts mean that no screws are visible from outside. Mounting set included in delivery.







KDP 90/28...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	f mm	Pack qty.
KDP 90/28 ALU	87663032	RAL 7035	28	14 / 4.0 – 8.0 mm	AlMg3 (3.3535)	90.0	221.0	192.0	62.0	101.0	36.0	4.5	38.0	1
KDP 90/28 V4A	87663034	smoothed	28	10 / 6.0 – 10.0 mm	V4A (1.4571)	90.0	221.0	192.0	62.0	101.0	36.0	4.5	38.0	1
				2 / 9.0 – 14.0 mm										
				2 / 12.0 – 18.0 mm										
KDP 90/47 ALU*	87663037	RAL 7035	47	14 / 3.5 – 6.5 mm	AlMg3 (3.3535)	90.0	221.0	192.0	62.0	101.0	36.0	4.5	38.0	1
KDP 90/47 V4A*	87663039	smoothed	47	28 / 4.5 – 8.5 mm	V4A (1.4571)	90.0	221.0	192.0	62.0	101.0	36.0	4.5	38.0	1
				4 / 7.0 – 11.0 mm										
				1 / 11.0 – 16.0 mm										
KDP 90/55 V4A	87663058	smoothed	55	3 / 3.0 – 5.0 mm	V4A (1.4571)	90.0	221.0	192.0	62.0	101.0	36.0	4.5	38.0	1
				32 / 3.0 – 6.2 mm										
				16 / 4.0 – 8.0 mm										
				4 / 8.0 – 12.0 mm										

* No UR authorisation

Cable entry plate KDP Metal

Cable entry plate Metal Type 90+3 (90x221 mm)

RoHS compliant

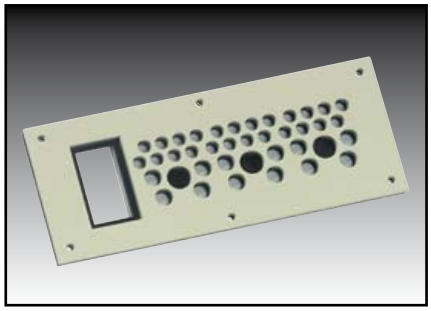
-30 – 90 °C

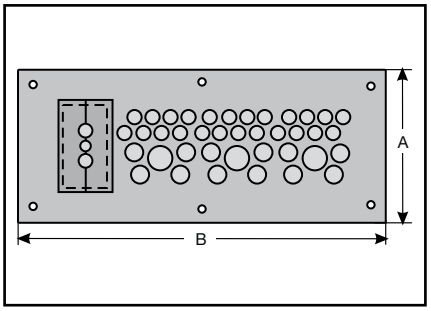
Plate: see article
Seal: NBR/EPDM

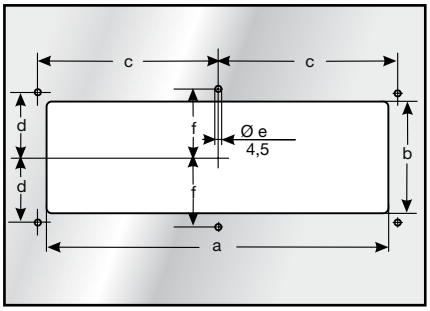
IP 65

Cut-out code:
90C

Efficient connection technology for terminal boxes and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control panel. The cut-out of the KDP 90/39+3 enables up to three pre-assembled cables with a maximum connector size of 48 x 24 mm to be introduced. The connector grommet is simply inserted into the plate and locked from behind by means of a quick-release lock.
The stainless steel version is particularly suitable for application in the food and chemical areas. Integrated threaded bolts mean that no screws are visible from outside. Mounting set included in delivery.







KDP 90/39+3...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	f mm	Pack qty.
KDP 90/39+3 ALU	87663036	RAL 7035	42	24 / 3.0 – 6.0 mm	AlMg3 (3.3535)	90.0	221.0	192.0	62.0	101.0	36.0	4.5	38.0	1
KDP 90/39+3 V4A	87663038	smoothed	42	12 / 4.0 – 8.0 mm	V4A (1.4571)	90.0	221.0	192.0	62.0	101.0	36.0	4.5	38.0	1
				3 / 8.0 – 12.0 mm										
For pre-assembled cables														
3 additional entries are														
available as well as the 39 standard entries. 1x 6,0 mm and 2x 8,5 mm														
The maximum connector size is 48 x 24 mm.														

Cable entry plate Metal Type 90 (90x294 mm)

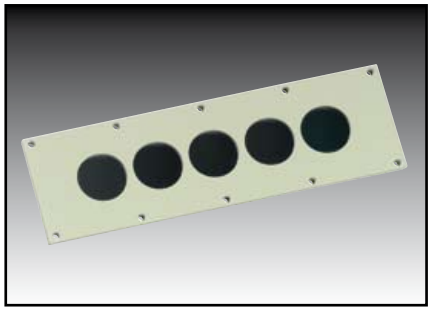
-30 – 90 °C

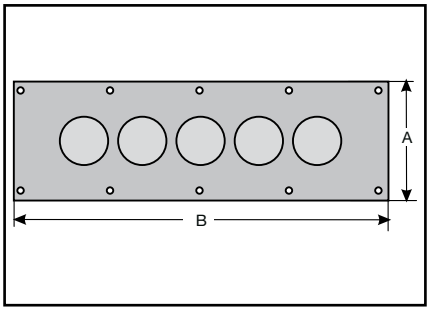
Plate: see article
Seal: NBR/EPDM

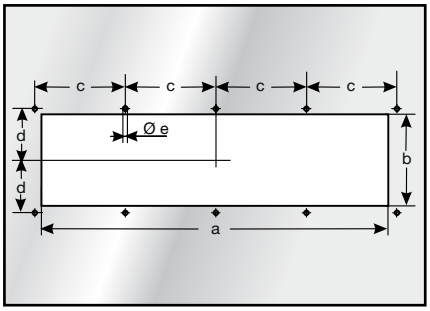
IP 65

Cut-out code:
90E

Cable entry plate for insertion of power cables. Ideally suited for roof or floor openings at switch cabinets.







KDP 90/5...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP 90/5 ALU	87663029	RAL 7035	5	5 / 16.0 – 28.0 mm *	AlMg3 (3.3535)	90.0	294.0	271.0	71.0	70.0	39.5	5.5	1

* The maximum cable lug width of power cables is 32.0 mm

Cable entry plate KDP Metal

Cable entry plate Metal Type 90 (90x394 mm)

RoHS compliant

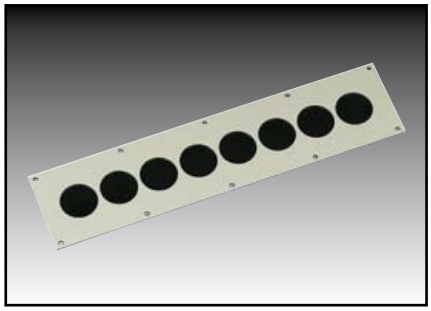
-30 – 90 °C

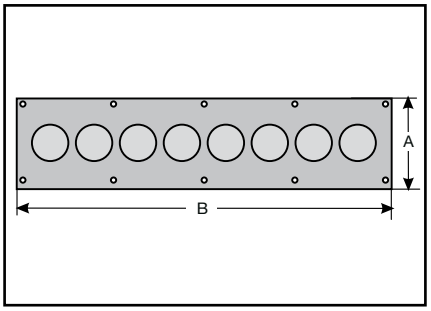
Plate: see article
Seal: NBR/EPDM

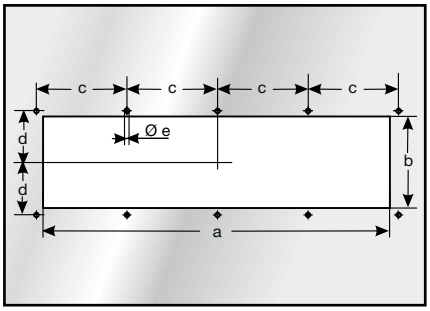
IP 65

Cut-out code:
90F

Cable entry plate for insertion of power cables. Ideally suited for roof or floor openings at switch cabinets.







KDP 90/8...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP 90/8 ALU	87663026	RAL 7035	8	8 / 16,0 – 28,0 mm *	AlMg3 (3.3535)	90.0	394.0	371.0	71.0	95.0	39.5	5.5	1

* The maximum cable lug width of power cables is 32.0 mm

Cable entry plate Metal Type 100 (105x145 mm)

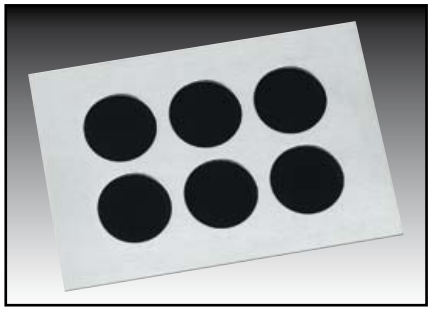
-30 – 90 °C

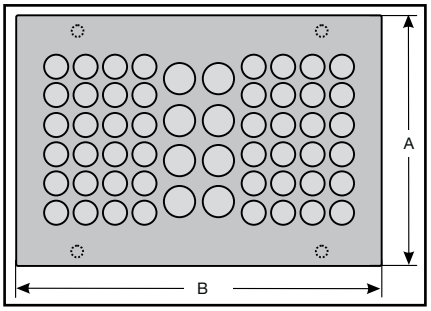
Plate: see article
Seal: NBR/EPDM

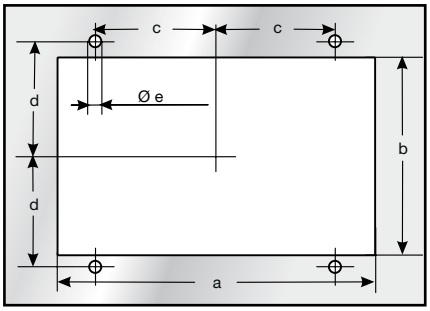
IP 65

Cut-out code:
100A

Efficient connection technology for terminal boxes and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control panel. KDPs of the product group 100 fits into standard cut-outs for Rittal and Sarel cabinets when combined with adapter plates. These adapter plates can be configured individually.
The stainless steel version is particularly suitable for application in the food and chemical areas. Integrated threaded bolts mean that no screws are visible from outside. Mounting set included in delivery.







KDP 100/6...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP 100/6 V4A	87663116	smoothed	6	6 / 16.0 – 24.0 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
KDP 100/15 V4A	87663120	smoothed	15	3 / 8.0 – 12.0 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
				12 / 11.0 – 16.0 mm									
KDP 100/18 V4A	87663122	smoothed	18	18 / 8.0 – 12.0 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
KDP 100/24 V4A	87663124	smoothed	24	24 / 6.0 – 10.5 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
KDP 100/30 V4A	87663062	smoothed	30	12 / 3.5 – 6.2 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
				12 / 6.0 – 10.0 mm									
				6 / 9.0 – 14.0 mm									
KDP 100/30B V4A	87663063	smoothed	30	12 / 3.5 – 6.2 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
				12 / 6.0 – 10.0 mm									
				4 / 9.0 – 14.0 mm									
				2 / 12.0 – 18.0 mm									
KDP 100/40 V4A	87663061	smoothed	40	40 / 4.5 – 8.5 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
KDP 100/56 V4A	87663060	smoothed	56	48 / 3.5 – 6.2 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
				8 / 6.0 – 10.0 mm									
KDP 100/56B V4A	87663065	smoothed	56	48 / 1.0 – 3.5 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
				8 / 3.5 – 6.5 mm									

Cable entry plate Metal Type 100 (105x145 mm)

RoHS compliant

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP 100/56C V4A	87663067	smoothed	56	48 / 1.0 – 3.5 mm	V4A (1.4571)	100.0	145.0	132.0	82.0	50.0	45.0	4.5	1
				4 / 3.5 – 6.5 mm									
				4 / 6.0 – 10.0 mm									

Cable entry plate Metal Type 105 (105x155 mm)

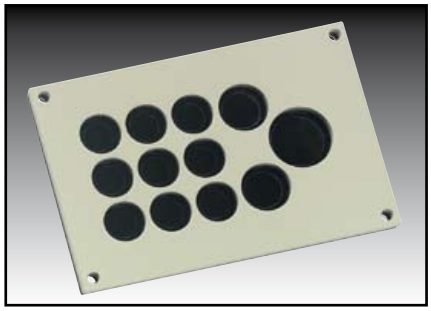
-30 – 90 °C

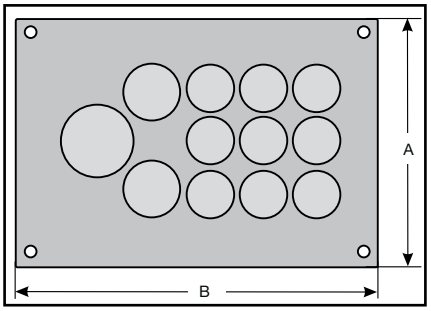
Plate: see article
Seal: NBR/EPDM

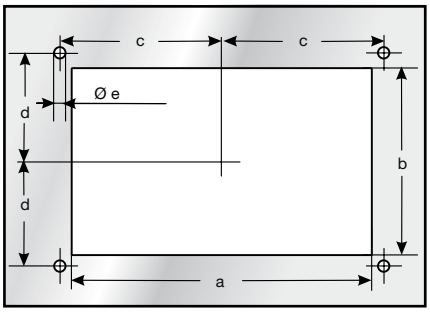
IP 65

Cut-out code:
105A

Efficient connection technology for terminal boxes and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control panel. KDPs of the product group 105 fits into standard cut-outs for Rittal and Sarel cabinets when combined with . These adapter plates can be configured individually.
The stainless steel version is particularly suitable for application in the food and chemical areas.







KDP 105/12...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
KDP 105/12 ALU	87663056	RAL 7035	12	9 / 9.0 – 14.0 mm	AlMg3 (3.3535)	105.0	155.0	132.0	82.0	71.5	46.5	5.5	1
KDP 105/12 V4A	87663057	smoothed	12	2 / 12.0 – 18.0 mm	V4A (1.4571)	105.0	155.0	132.0	82.0	71.5	46.5	5.5	1
				1 / 18.0 – 25.0 mm									
KDP 105/15 ALU	87663014	RAL 7035	15	8 / 6.0 – 10.0 mm	AlMg3 (3.3535)	105.0	155.0	132.0	82.0	71.5	46.5	5.5	1
KDP 105/15 V4A	87663016	smoothed	15	4 / 9.0 – 14.0 mm	V4A (1.4571)	105.0	155.0	132.0	82.0	71.5	46.5	5.5	1
				3 / 12.0 – 18.0 mm									
KDP 105/32 ALU	87663010	RAL 7035	32	16 / 3.0 – 5.0 mm	AlMg3 (3.3535)	105.0	155.0	132.0	82.0	71.5	46.5	5.5	1
KDP 105/32 V4A	87663012	smoothed	32	12 / 4.0 – 8.0 mm	V4A (1.4571)	105.0	155.0	132.0	82.0	71.5	46.5	5.5	1
				4 / 6.0 – 10.0 mm									

Cable entry plate Metal Type 120 (120x190 mm)

RoHS compliant

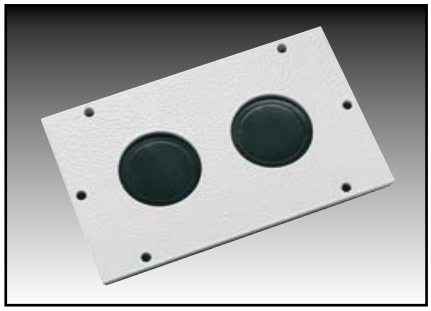
-30 – 90 °C

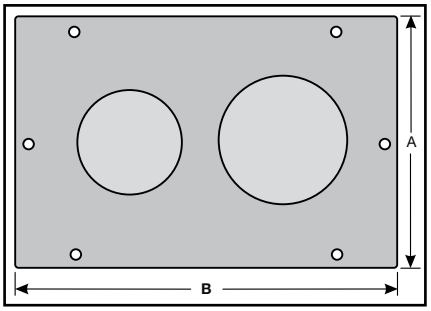
Plate: see article
Seal: NBR/EPDM

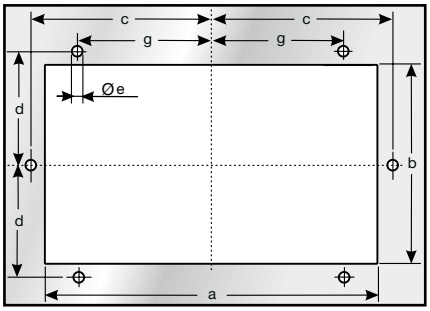
IP 65

Cut-out code:
120A

Tool-less, rational connection technology for the electrical power sector. Performance cables and services are sealed and fed into control cabinets or terminal boxes and are supported stabley.







KDP 120/2...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	g mm	Pack qty.
KDP 120/2 ALU	87663001	RAL 7035	2	2 / 18.0 – 36.0 mm	AlMg3 (3.3535)	120.0	190.0	164.0	94.0	88.0	53.0	5.5	65.0	1
KDP 120/2 B ALU	87663002	RAL 7035	2	2 / 36.0 – 49.0 mm	AlMg3 (3.3535)	120.0	190.0	164.0	94.0	88.0	53.0	5.5	65.0	1
KDP 120/2 C ALU	87663003	RAL 7035	2	1 / 18.0 – 36.0 mm	AlMg3 (3.3535)	120.0	190.0	164.0	94.0	88.0	53.0	5.5	65.0	1
				1 / 36.0 – 49.0 mm										
KDP 120/17 ALU	87663004	RAL 7035	17	6 / 6.0 – 10.0 mm	AlMg3 (3.3535)	120.0	190.0	164.0	94.0	88.0	53.0	5.5	65.0	1
				4 / 9.0 – 14.0 mm										
				3 / 12.0 – 18.0 mm										
				4 / 18.0 – 25.0 mm										
KDP 120/35 ALU	87663005	RAL 7035	35	8 / 3.5 – 6.5 mm	AlMg3 (3.3535)	120.0	190.0	164.0	94.0	88.0	53.0	5.5	65.0	1
				18 / 6.0 – 10.0 mm										
				7 / 9.6 – 15.9 mm										
				2 / 14.0 – 20.0 mm										

Cable entry plate Metal Type 134 (134x254 mm)

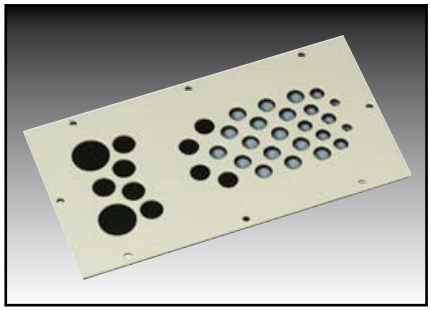
-30 – 90 °C

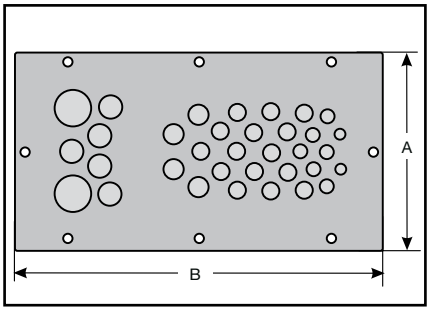
Plate: see article
Seal: NBR/EPDM

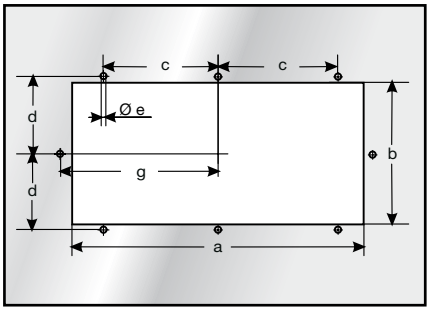
IP 65

Cut-out code:
134A

Efficient connection technology for terminal housings and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control housing.







KDP 134/34...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	g mm	Pack qty.
KDP 134/34 ALU	87663024	RAL 7035	34	2 / 3.0 – 5.0 mm	AlMg3 (3.3535)	134.0	254.0	231.0	111.0	90.5	61.0	5.5	121.0	1
				6 / 4.0 – 8.0 mm										
				15 / 6.0 – 10.0 mm										
				4 / 8.0 – 12.0 mm										
				5 / 9.0 – 14.0 mm										
				2 / 14.0 – 20.0 mm										

Cable entry plate KDP Metal

Cable entry plate Metal Type 149 (149x339 mm)

RoHS compliant

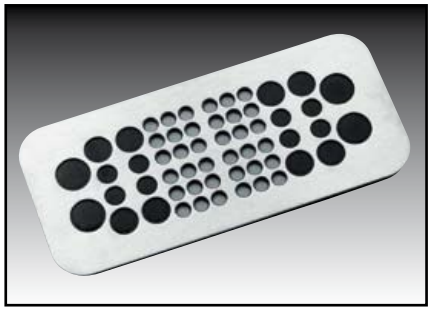
-30 – 90 °C

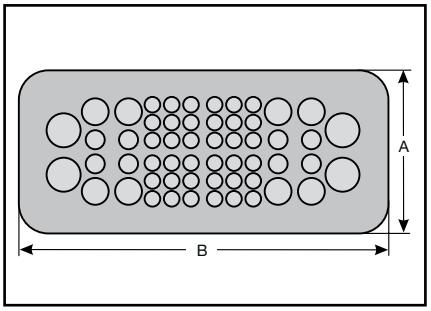
Plate: see article
Seal: NBR/EPDM

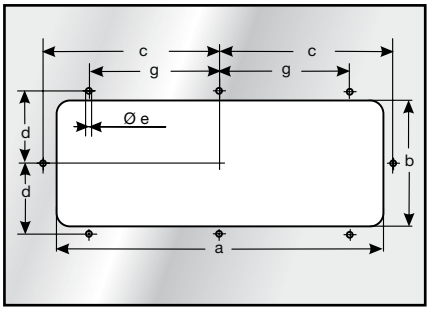
IP 65

Cut-out code:
149A

Efficient connection technology for terminal housings and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control housing. KDPs of product group 149 can be fitted directly into the standard cut-outs of Rittal cabinets.
The stainless steel version is particularly suitable for application in the food and chemical areas. Integrated threaded bolts mean that no screws are visible from outside. Mounting set included in delivery.







KDP 149/56...

Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	g mm	Pack qty.
KDP 149/56 V4A	87663086	smoothed	56	36 / 6.0 – 10.0 mm	V4A (1.4571)	149.0	339.0	303.0	115.0	161.5	66.5	5.0	120.0	1
				8 / 9.0 – 14.0 mm										
				8 / 14.0 – 18.0 mm										
				4 / 18.0 – 25.0 mm										
KDP 149/158 V4A	87663068	smoothed	158	126 / 3.5 – 6.2 mm	V4A (1.4571)	149.0	339.0	303.0	115.0	161.5	66.5	5.0	120.0	1
				24 / 6.0 – 10.0 mm										
				6 / 8.0 – 12.0 mm										
				2 / 12.0 – 18.0 mm										

Cable entry plate Metal Type 149 (149x534 mm)

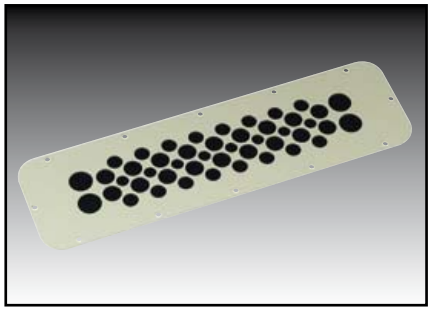
-30 – 90 °C

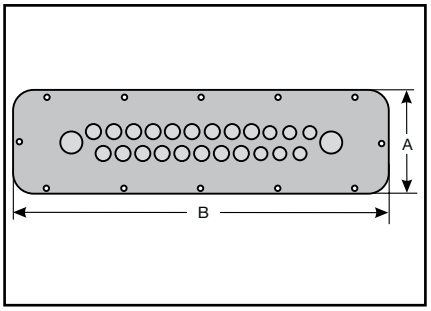
Plate: see article
Seal: NBR/EPDM

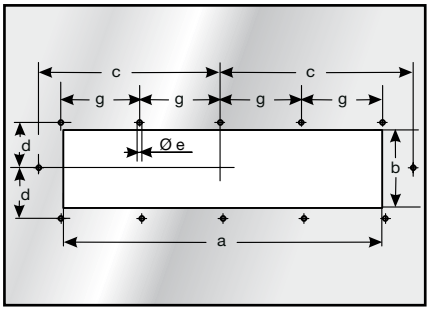
IP 65

Cut-out code:
149B

Efficient connection technology for terminal housings and control cabinets for tool-free introduction of actuators, sensors, measuring and control instrumentation, optoelectronics, pneumatic lines and drive technology into a control housing. KDPs of product group 149 can be fitted directly into the standard cut-outs of Rittal cabinets.





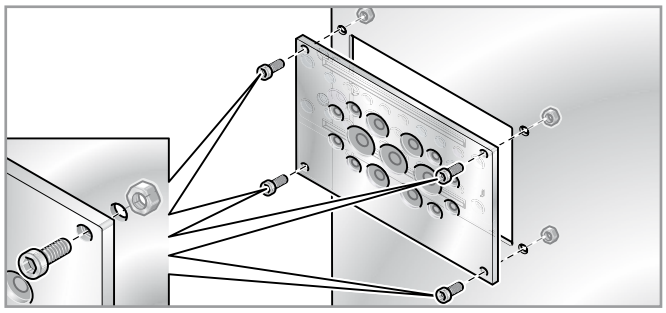


KDP 149/46...

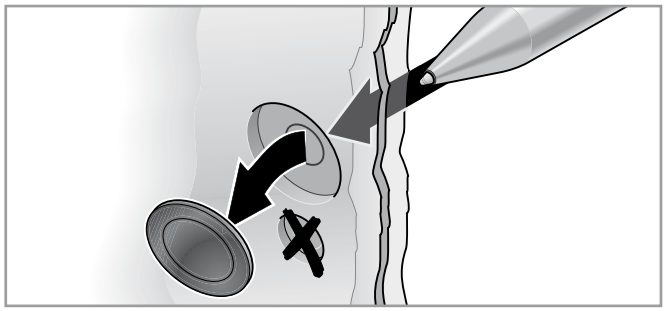
Type	Order no.	Colour	Openings total	Openings quantity / Ø	Material Plate	A mm	B mm	a mm	b mm	c mm	d mm	e mm	g mm	Pack qty.
KDP 149/46 ALU	87663064	RAL 7035	46	8 / 6.0 – 10.0 mm	AlMg3 (3.3535)	149.0	534.0	432.0	102.0	259.0	66.5	4.0	110.0	1
				16 / 10.0 – 14.0 mm										
				18 / 12.0 – 18.0 mm										
				4 / 18.0 – 25.0 mm										
KDP 149/140 V4A	87663088	smoothed	140	16 / 3.5 – 6.2 mm	V4A (1.4571)	149.0	534.0	500	115	259.0	66.5	5.0	110.0	1
				64 / 4.5 – 8.5 mm										
				36 / 6.0 – 10.0 mm										
				4 / 8.0 – 12.0 mm										
				8 / 9.0 – 14.0 mm										
				8 / 14.0 – 18.0 mm										
				4 / 18.0 – 25.0 mm										
KDP 149/292 V4A	87663066	smoothed	292	250 / 3.5 – 6.2 mm	V4A (1.4571)	149.0	534.0	500	115	259.0	66.5	5.0	110.0	1
				32 / 6.0 – 10.0 mm										
				8 / 8.0 – 12.0 mm										
				2 / 12.0 – 18.0 mm										

Cable entry plate KDP Metal

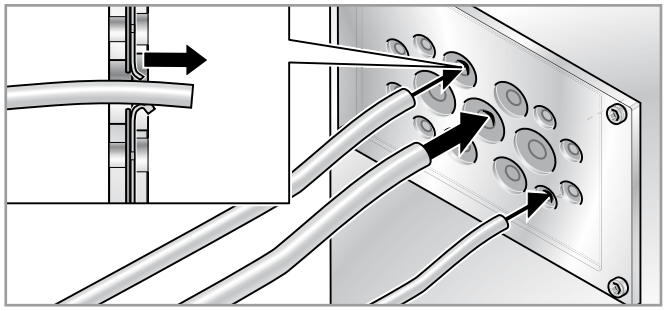
Mounting screw-on mounting type KDP x/x ALU



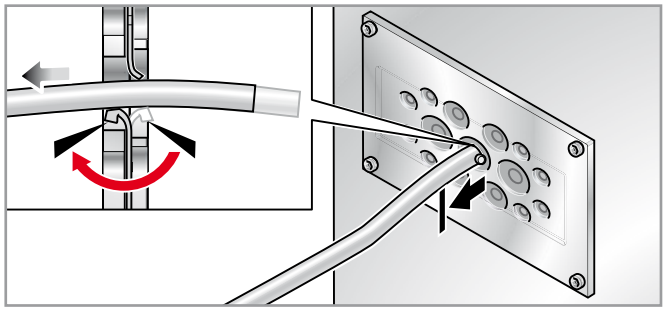
Set cable entry plate onto the cut-out and screw down.



Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out.

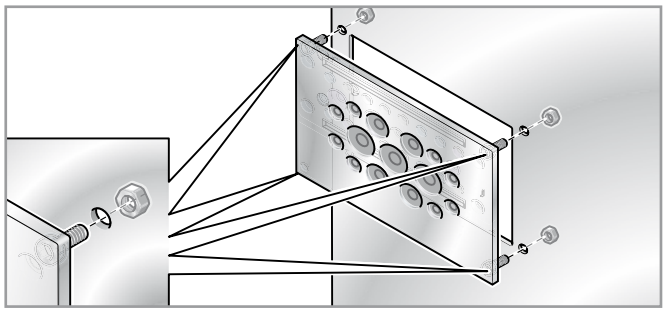


Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear side. Pull cable through to desired length.

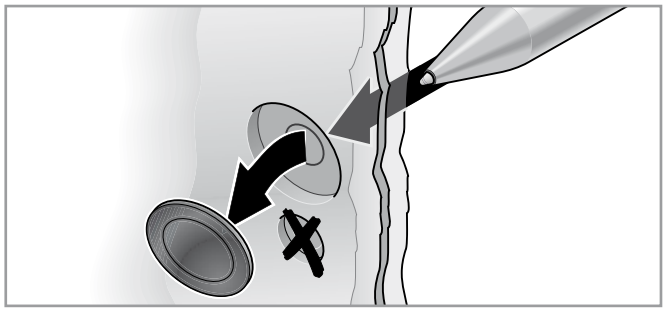


Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

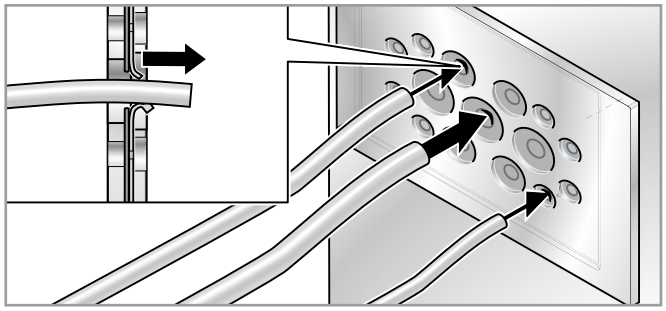
Mounting screw-on mounting type KDP x/x V4A



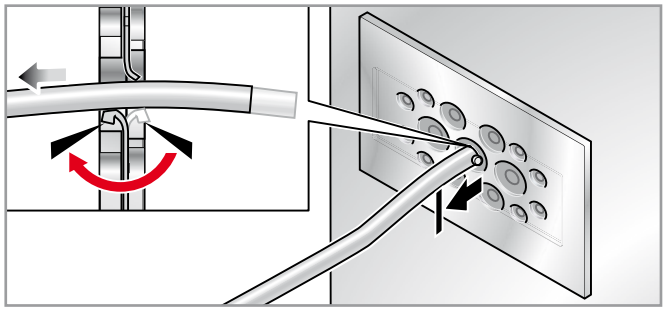
Set cable entry plate onto the cut-out and screw down from the rear.



Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out.



Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear side. Pull cable through to desired length.



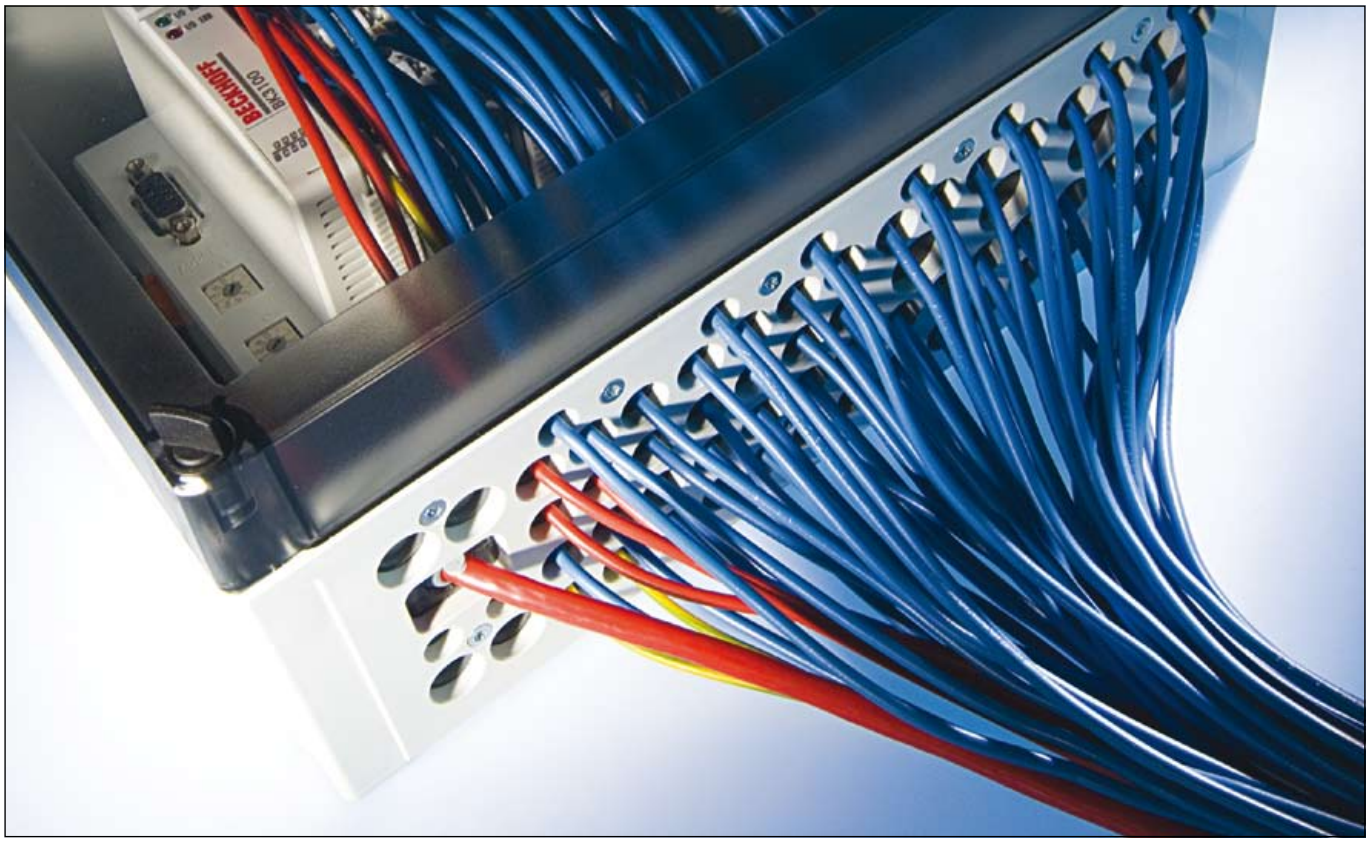
Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

KDH

Cable entry plate KDP/BG-FB
plastic bus enclosure

Cable entry plate KDP/BG-FB plastic bus enclosure

Advantages



All inclusive

This fully integrated enclosure has everything you'll need.

Self-extinguishing enclosure with integrated cable entry system and pre-mounted top hat rail.

Ideal for installation of bus terminal block.

Indicator lights remain visible from outside even when cover is closed. This enables disruptions to be recognised quickly.

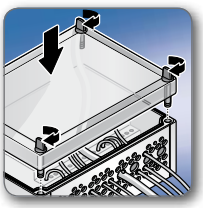
- ✔ Fully integrated enclosure
- ✔ Integrated cable entry plate
- ✔ Integrated top hat rail
- ✔ High protection class
- ✔ Transparent cover
- ✔ Quick installation

Overview

Cable entry plate KDP plastic bus enclosure

Bus enclosure with integrated cable entry plate. Ideal for applications with WAGO or Beckhoff I/O clamps. With an integrated top hat rail and cable entry plate.

Page 121



Assembly and configuration of the KDP plastic bus enclosure

Detailed configuration and assembly instructions on cable entry plates and bus enclosures.

Page 122

Cable entry plate KDP/BG-FB plastic bus enclosure

Selection table KDP/BG-FB (possible combinations of cable entries)

The cable entry plate KDP plastic bus enclosure is a complete bus enclosure with an integrated cable entry plate, preinstalled support bar TS 35x15 (EN 50022-35) and transparent cover.
The bus enclosure is supplied ready for installation, thereby effectively reducing costs. Ideal for applications with WAGO, Murrelektronik or Beckhoff I/O modules. Indicator lights remain visible even when cover is closed. Protection class IP 65.

BG-FB KDP 70
Item no. 87663008

Number of openings on the cable entry plate corresponds to cable diameter				
Ø mm 3.0–5.0	Ø mm 3.0–6.2	Ø mm 4.0–8.0	Ø mm 7.0–11.5	Ethernet RJ45
9	52	4	4	1

Material data for the cable entry plate plastic bus enclosure

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

The type BG-FB KDP 70 complies with ROHS and features IP class 65. It is also free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
It can be used within a temperature range of -30 to 90 °C.

The cable entry plate plastic bus enclosure is inspected according to fire protection V0. It is made of polycarbonate and the sealant is made of NBR/EPDM.

Bus enclosure

-30 – 90 °C

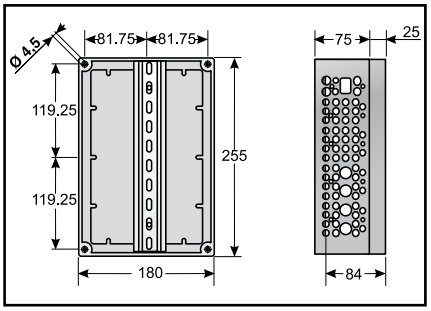
PC polycarbonate
NBR/EPDM

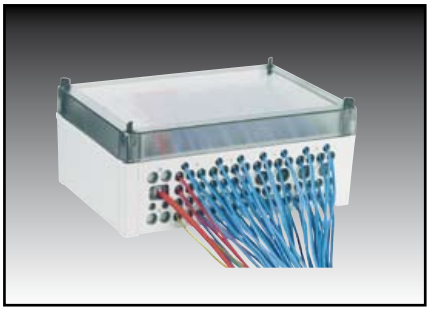
Enclosure: V0

IP 65

Bus enclosure with integrated cable entry plate. Ideal for applications with WAGO, Murrelektronik or Beckhoff I/O modules. Simple and quick mounting, since all required pieces like top hat rail and cable entry plate are already integrated.

- Transparent cover Indicator lights remain visible even when cover is closed
- High protection class IP65
- Integrated cable entry system
- Premounted mounting plate with support bar TS 35x15 (EN 50022-35)

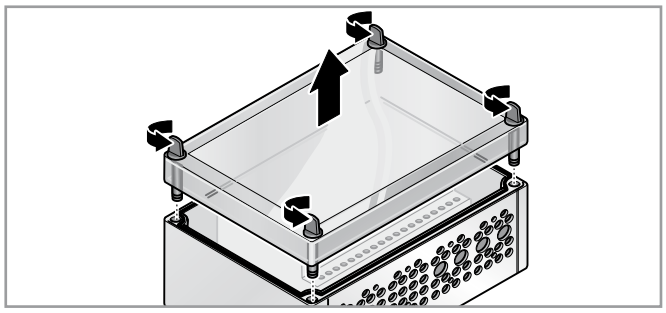




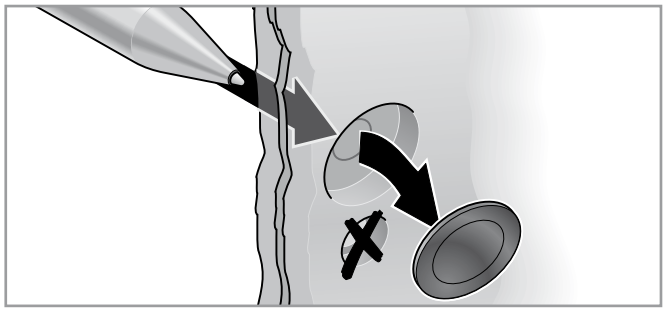
Type	Order no.	Colour	Openings total	Openings Quantity / Ø	Pack qty.
BG-FB KDP 70	87663008	grey / transparent	70	9 / 3.0 – 5.0 mm	1
				52 / 3.0 – 6.2 mm	
				4 / 4.0 – 8.0 mm	
				4 / 7.0 – 11.5 mm	
				1 / Ethernet RJ45	

Cable entry plate KDP/BG-FB plastic bus enclosure

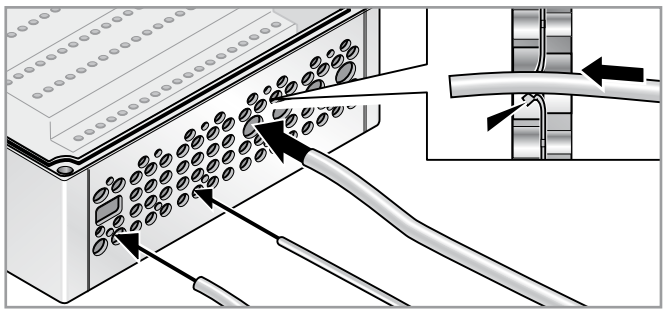
Configuration and mounting of cable entry plate KDP/BG-FB



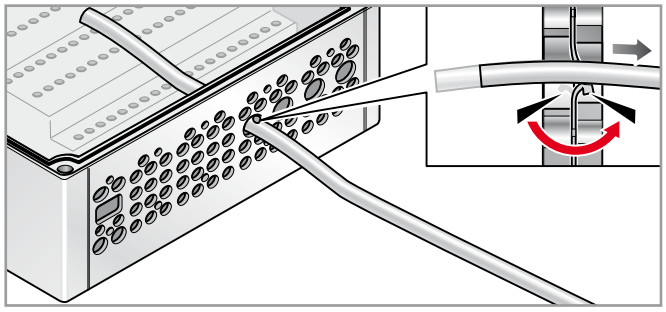
Release cover seals and lift housing cover.



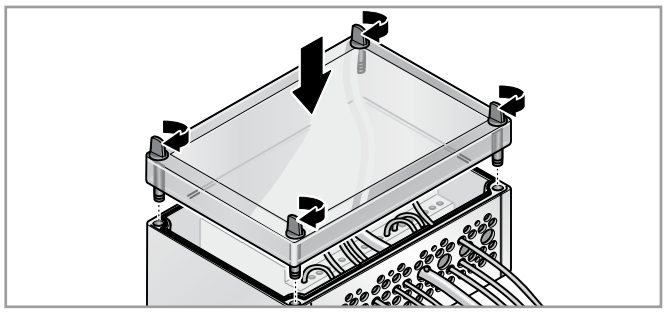
Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out.



Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear side. Pull cable through to desired length.

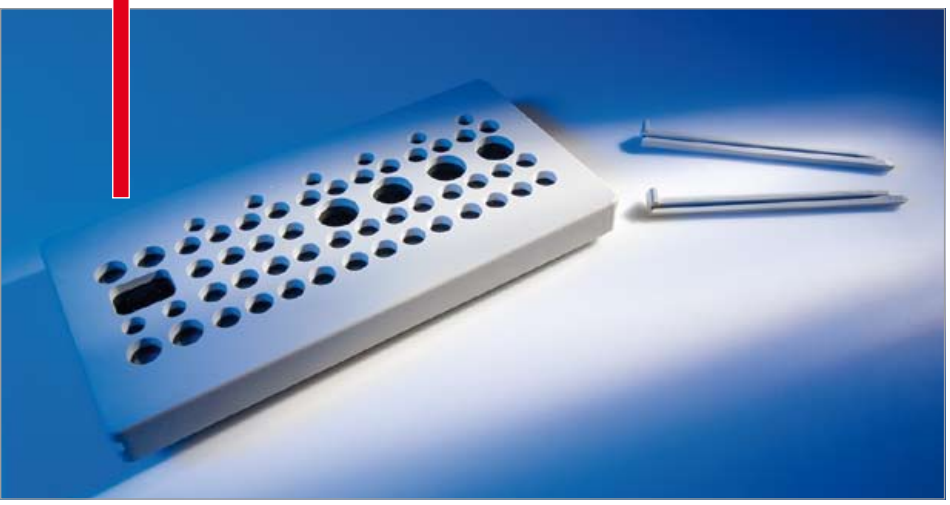


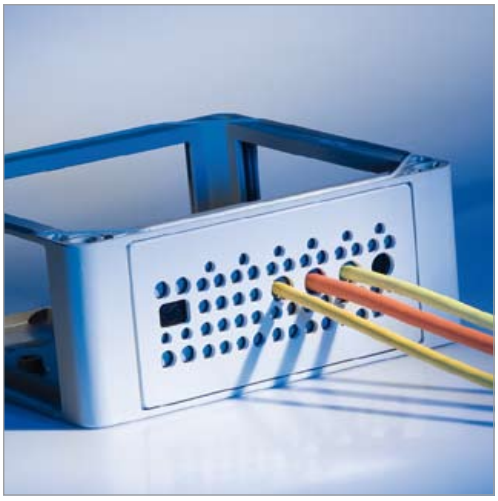
Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.



Following successful installation of all elements, replace cover on top and latch down.

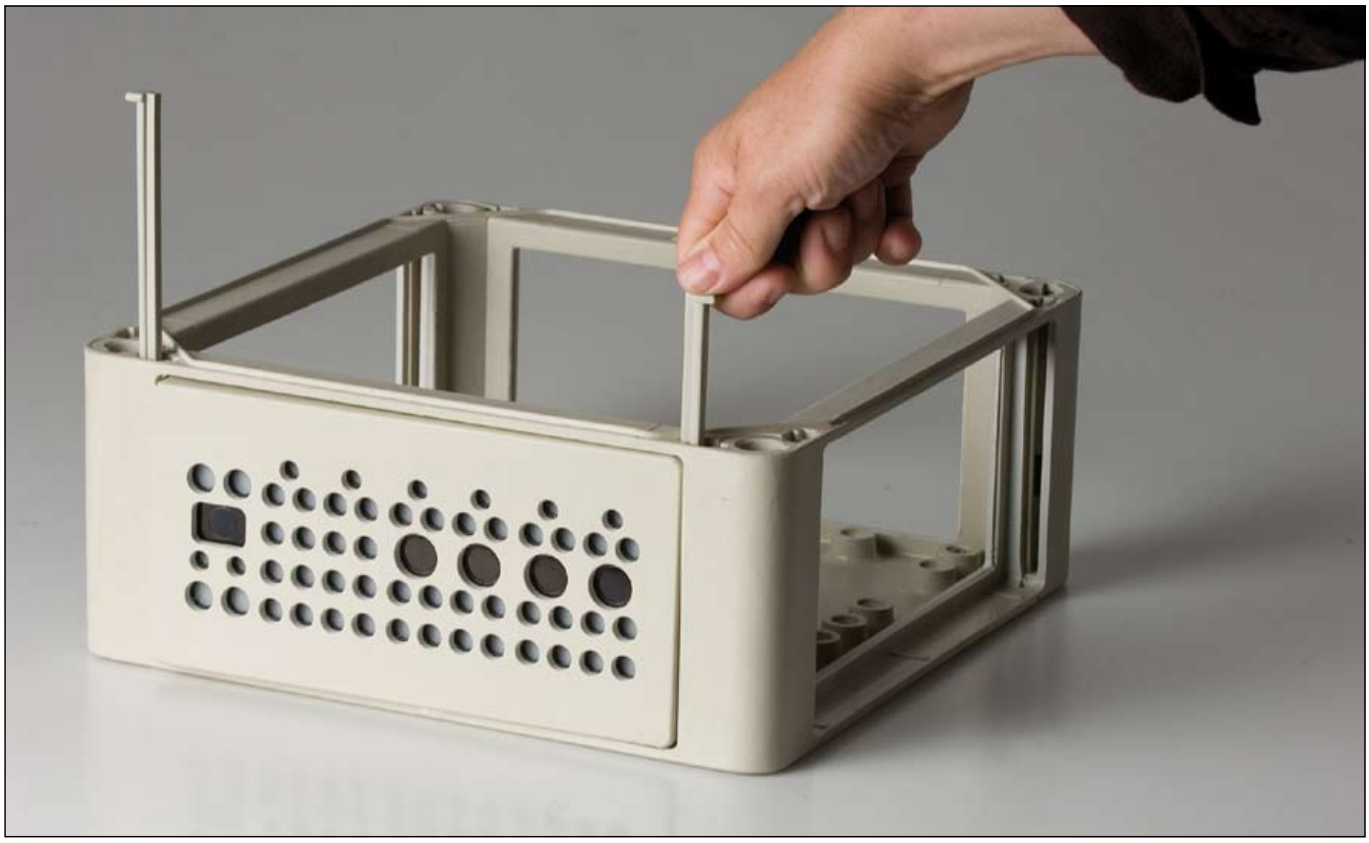
Cable entry plate KDP plastic for Rose enclosure





Cable entry plate KDP plastic, Rose enclosure

Advantages



Straight in! Even in Rose enclosure!

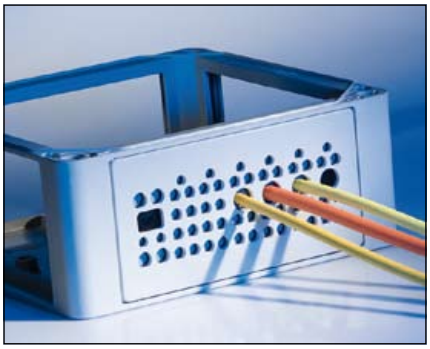
Install electric cable and pneumatic conduits with minimal effort, saving time and money.

The KDP cable entry system is ideal if space is at a premium.

The cable entry plate KDP-BG for Rose enclosure can be fixed directly onto the housing with the two supplied flange wedges.

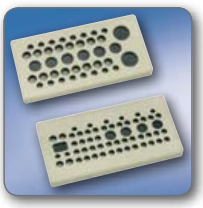
The pre-fabricated cut-outs are easy to insert individually, even without tools.

The principle is absolutely identical to our tried-and-true plastic KDP/N 24 (rectangular).



- ✔ **Assembly without tools**
- ✔ **Huge time savings**
- ✔ **Cost reductions**
- ✔ **High protection class**
- ✔ **Variable**
- ✔ **Designed for Rose enclosure**

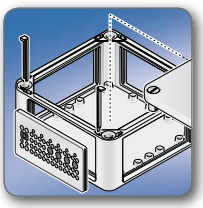
Overview



Cable entry plate KDP type rose

Cable entry plate for installation in Rose polyester flange housing PG14. Very quick, tool-free mounting with 2 flange wedges.

Page 127



Configuration and assembly of the KDP type Rose

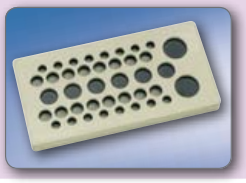
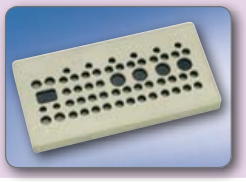
Detailed configuration and assembly instructions on cable entry plates and bus enclosures.

Page 128

Cable entry plate KDP plastic Rose enclosure

Selection table KDP/BG Rose (possible combinations of cable entries)

The cable entry plates type KDP/BG have been specially developed for Rose polyester flange enclosures PG14. With 2 flange wedges included in delivery, the KDP/BG is simply affixed to the enclosure.
The type KDP/BG is suited for electro and pneumatic installation. Extremely quick and easy, tool-free assembly. Protection class IP 65.

	Number of openings on the cable entry plate corresponds to cable diameter							
	Ø mm 3.0–5.0	Ø mm 3.5–6.5	Ø mm 4.5–8.5	Ø mm 6.0–10.0	Ø mm 8.0–12.0	Ø mm 9.0–14.0	Ø mm 14.0–20.0	Ethernet RJ45
 KDP-BG 40 Rose Item no. 87663098		16		16		6	2	
 KDP-BG 56+1 Rose Item no. 87663099	8	40	4		4			1

Material data for the plastic cable entry plate Rose enclosure

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

The plastic cable entry plate Rose enclosure complies with ROHS and features IP class 65.
It is also free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
It can be used within a temperature range of -30 to 90 °C.

The cable entry plate plastic Rose enclosure is inspected according to fire protection V0.
It is made of GFK polyester and the sealant is made of NBR/EPDM.

Cable entry plate Metal, type KDP/BG Rose

-30 – 90 °C

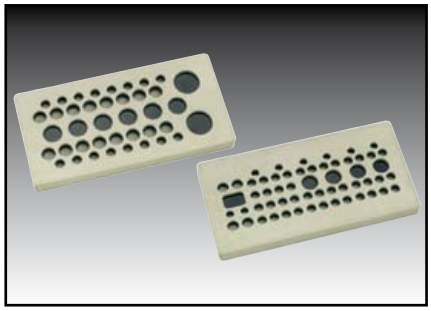
GFK Polyester
NBR/EPDM

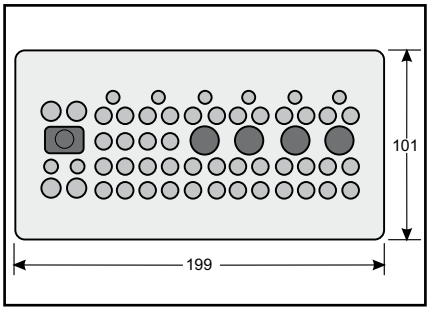
Enclosure: V0

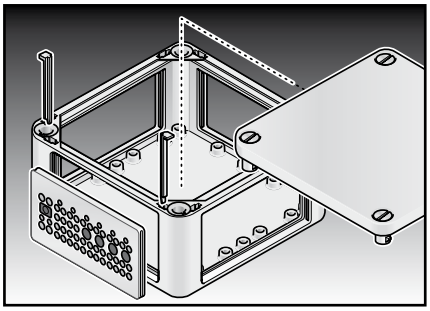
IP 65

Cable entry plate for installation in Rose polyester flange housing PG14.
Very quick, tool free mounting with 2 flange wedges.

- Tool-free assembly
- High protection class IP65
- Flange wedges (2 pieces) included with delivery
- Suited for electric and pneumatic installations
- Casing not included with delivery



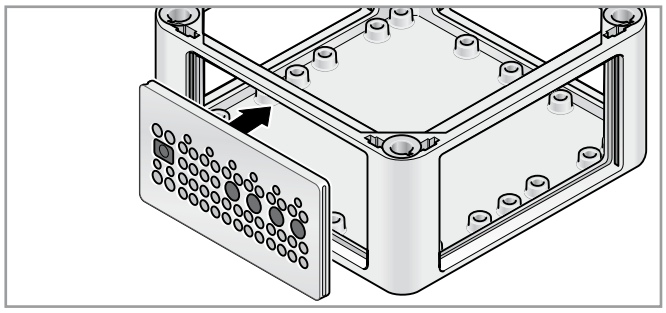




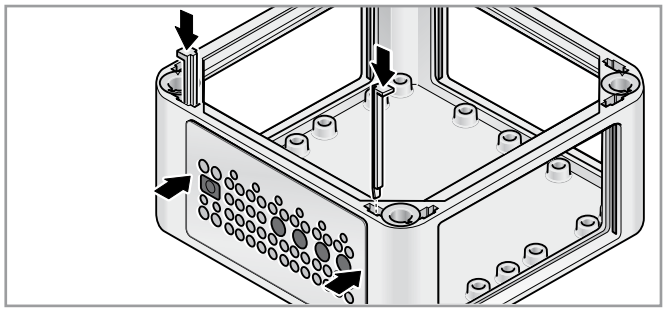
Type	Order no.	Colour	Openings total	Openings quantity / Ø	Pack qty.
KDP-BG 40 Rose	87663098	grey	40	16 / 3.5 – 6.5 mm	1
				16 / 6.0 – 10.0 mm	
				6 / 9.0 – 14.0 mm	
				2 / 14.0 – 20.0 mm	
KDP-BG 56+1 Rose	87663099	grey	57	8 / 3.0 – 5.0 mm	1
				40 / 3.5 – 6.5 mm	
				4 / 4.5 – 8.5 mm	
				4 / 8.0 – 12.0 mm	
				1 / Ethernet RJ45	
Matches polyester flange housing from Rose Systemtechnik					
Version with polyester cover					
170 x 270 x 135 with 2 flange openings	14.010000				
270 x 270 x 135 with 4 flange openings	14.020000				
270 x 540 x 135 with 6 flange openings	14.030000				
Version with clear polycarbonate cover					
170 x 270 x 150 with 2 flange openings	14.010001				
270 x 270 x 150 with 4 flange openings	14.020001				
270 x 540 x 150 with 6 flange openings	14.030001				

Cable entry plate KDP
Rose enclosure, plastic

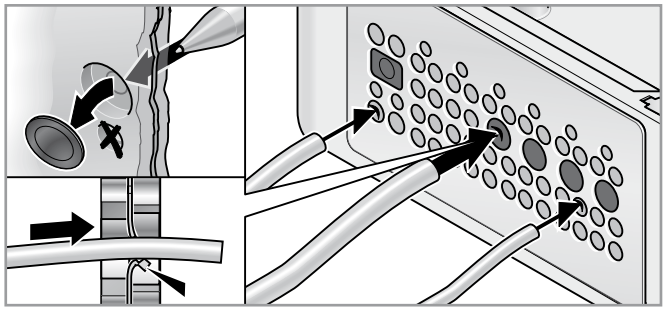
Configuration and mounting of cable entry plate KDP/BG Rose



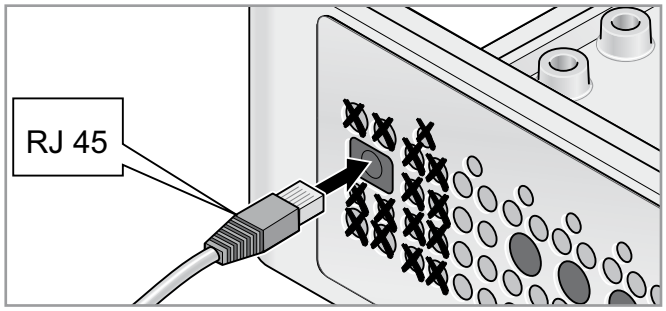
Set cable entry plate into the enclosure.



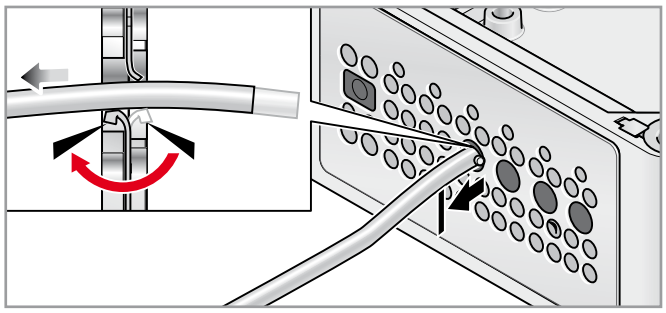
Press on the cable entry plate and press the flange wedges in until stopping point.



Where necessary, remove the optional black cover from the locking plate. To do so, press the opening through from the rear until the cover falls out. Select an opening appropriate for the cable diameter and push the cable through the opening from the front. The indicator becomes visible on the rear side. Pull cable through to desired length.

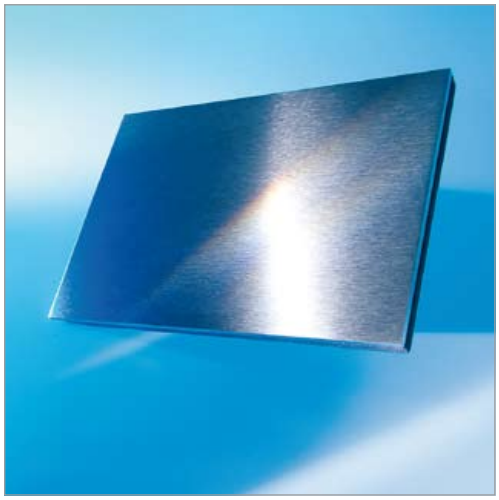


Insertion of a cable with a RJ45 plug is only possible at one position. Push cable with plug through the entry from the front. The indicator becomes visible on the rear side. Pull cable through to desired length.



Retract cable approx. 10 – 15 mm until the indicator on the rear is no longer visible. Depending on cable diameter and insertion size, the indicator may well become visible on the front side again.

Accessories for cable entry systems and plates



Accessories for cable entry systems and cable entry plates

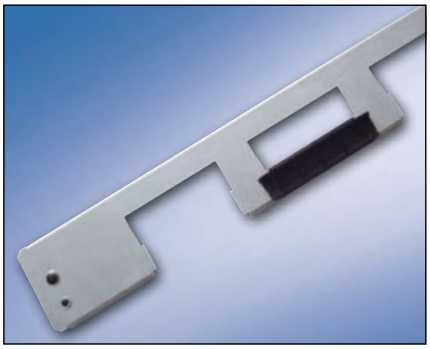
Advantages

If it doesn't fit it will be made to fit.

To make the large range of Murrplastik cable entry systems compatible for use in various control cabinets and housings made by different manufacturers, we keep a large selection of adapters on hand.

For example the control cabinet floor plate type SBB enables direct installation of our cable entry systems KDL/E into TS8 Rittal control cabinets.

Do you want combine various sizes of cable entry plates or insert both round and square components at the same time? Then you're in the right place!



- ✔ **Blanking and adapter plates for standard cut-outs**
- ✔ **Numerous versions**
- ✔ **Simple mounting**
- ✔ **For cable entry systems made of plastic and metal**
- ✔ **For EMC applications**

Overview

Control cabinet floor sheeting, type SBB

The control cabinet floor sheeting can be installed in Rittal (type TS8) control cabinets. Delivery includes locking plates type VP24.

Page 137

Blanking plate plastic, type BP

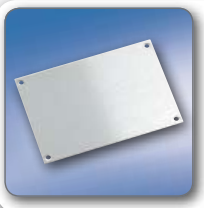
The BP blanking plates are suited for sealing non-used cut-outs for 16- or 24-pole connectors.

Page 138

Discharge plate, type KDL-AB and KDL/N-AB

The KDL and KDL/E discharge plates are suited for discharging interference which may occur on cable sheaths.

Page 139



Blanking plate type BP xx ALU / V4A (metal design)

Blanking plate for closing off unused adapter positions and cut-outs. The stainless steel version is particularly suitable for application in the food and chemical areas.

Page 140

Adapter plate Rittal

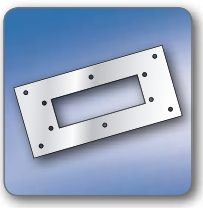
The Rittal adapter plates can be directly mounted into the prefabricated cut-outs from Rittal casings. They serve to retain various Murrplastik cable entry systems.

Page 141

Adapter plate Sarel

Adapter plate can be fitted directly into the standard cut-outs of Sarel cabinets. They serve to retain various Murrplastik cable entry systems.

Page 142



Adapter plate Lohmeier

The Lohmeier adapter plates can be directly mounted into the prefabricated cut-outs from Lohmeier casings. They serve to retain various Murrplastik cable entry systems.

Page 143

Adapter plate Ensto

The Ensto adapter plates can be directly mounted into the prefabricated cut-outs from Ensto casings. They serve to retain various Murrplastik cable entry systems.

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Accessories for cable entry systems and cable entry plates

Material data type SBB (control cabinet sheet flooring)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

The control cabinet floor sheeting type SBB is made of galvanised sheet steel. The included locking plates type VP are made of polyamide 6.6, conform with ROHS and are free of halogen, phosphorous, cadmium, asbestos, lead and silicone. If the control cabinet, floor sheeting and locking plates are installed correctly IP class 54 is achieved.

The control cabinet floor sheeting type SBB can be used in a temperature range of -40 to 125 °C (transient to 140 °C) and is inspected according to fire classification V0.

Material data type BP and BP/N (Blanking plate plastic design)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

The blanking plates types BP and BP/N comply with ROHS. The type BP/N features the higher protection class IP 65, type BP features protection class IP 54.
Additionally all components are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
They can be used within a temperature range of -40 to 125 °C (transient 140 °C). The blanking plates are inspected according to fire classification V0.
They are made of polyamide 6.6, the sealant is made of NBR.
UR approvals as well as approvals for the German and French railways exist.

Material data type BP/H (Blanking plate plastic designs)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

The blanking plate type BP/H complies with ROHS and features protection class IP 42.
Additionally this type is free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
The blanking plate can be used within a temperature range of -40 to 60 °C.

An inspection according to fire classification HB exists.
It is made of TPE and features UR approval.

Material data type BP (Metal), KDL/AB, KDL/N-AB, AP/xx (Adapter plates, metal)

- RoHS Compliant
- V4A/ALU/NBR

The named types comply with ROHS. Aluminium designs (additional type ALU) made of high quality AlMg3 (3.3535). Stainless steel versions (additional type V4A) made of stainless steel of the quality category V4A (1.4571).
Supplied sealants are made of NBR.

Assigning cut-out codes / KDP types / adapter plates

Cut-out codes for direct assembly of the KDP in the control cabinet

Code **90C**

KDP 90/28
Page 103

KDP 90/47
Page 103

KDP 90/55
Page 103

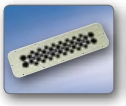
KDP 90/90+3
Page 104

Code **149A**

KDP 149/56
Page 112

KDP 149/158
Page 112

Code **149B**


KDP 149/46
Page 113

KDP 149/140
Page 113

KDP 149/292
Page 113

Cut-out codes for indirect assembly of the KDP in the control cabinet using the adapter plate

Code **AP85A**
Page 144

KDP 24/AP/EN-KG/1
for 1x 24-pin

Code **AP90C**
Page 141

KDP 24/AP/RI-KL/1
for 1x 24-pin

Code **AP90D**
Page 141

KDP 24/AP/RI-AE/2
for 2x 24-pin

Code **AP92A**
Page 141

KDP 24/AP/RI-BG/2
2x 24-pin

Code **AP92B**
Page 141

KDP 24/AP/RI-BG/3+4
3x 24-pin + 2x M20 + 2x M25

Code **AP92C**
Page 143

KDP 24/AP/LO-BG/1
for 1x 24-pin

Code **AP92D**
Page 143

KDP 24/AP/LO-BG/2
for 2x 24-pin

Code **AP130A**

KDP 24/AP/SA/3+2
for 3x 24-pin + 2x M32
Page 142

KDP AP/SA/130/100/3+2
3x KDP 100/xx + 2x M32
Page 142

KDP/R AP/SA-1
for 6x M63
Page 142

Code **AP130D**

KDP/R AP/SA-4
for 2x M32 + 2x M63
Page 142

Code **AP130B**

KDP 24/AP/SA/2+4
for 2x 24-pin + 4x M32
Page 142

KDP AP/SA/130/100/2+4
2x KDP 100/xx + 4x M32
Page 142

KDP/R AP/SA-2
for 5x M63
Page 142

Code **AP130C**

KDP 24/AP/SA/2+0
for 2x 24-pin
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KDP AP/SA/130/100/2
for 2x KDP 100/xx
Page 142

KDP/R AP/SA-3
for 3x M63
Page 142

Code **AP220A**

KDP 24/AP/SA/5+4
5x 24-pin + 2x M25 + 2x M50
Page 142

Code **AP149A**

KDP 24/AP/RI-AE/4
4x 24-pin
Page 141

KDP AP 149/100/2
for 2x KDP 100/xx
Page 141

Code **AP149B**

KDP 24/AP/RI-AE/6+2
6x 24-pin + 2x M32
Page 141

KDP AP 149/100/3
for 3x KDP 100/xx
Page 141

KDP AP 149/105/3
for 3x KDP 105/xx
Page 141

Accessories for cable entry systems and cable entry plates

Selection table Rittal Housing (Murrplastik cut-out codes)

Rittal		Murrplastik	
Order no.	Type	Cut-out code for direct assembly	Cut-out code for adapter plate.
1030.500	AE		AP90D
1031.500	AE		AP90D
1038.500	AE		AP90D
1039.500	AE	149B	AP149B
1045.500	AE	149A	AP149A
1050.500	AE	149A	AP149A
1057.500	AE	149A	AP149A
1058.500	AE	149B	AP149B
1060.500	AE	149B	AP149B
1073.500	AE	149B	AP149B
1076.290	AE	149B	AP149B
1076.500	IN	149B	AP149B
1077.500	AE	149B	AP149B
1090.500	AE	149B	AP149B
1100.500	AE	149A	AP149A
1110.500	AE	149A	AP149A
1114.500	AE	149A	AP149A
1130.500	AE	149A	AP149A
1180.500	AE	149B	AP149B
1213.500	AE	149A	AP149A
1260.500	AE	149B	AP149B
1280.500	AE	149B	AP149B
1338.500	AE	149A	AP149A
1339.500	AE	149B	AP149B
1350.500	AE	149A	AP149A
1360.500	AE	149B	AP149B
1376.500	AE	149B	AP149B
1380.500	AE		AP90D
1530.510	KL	90C	AP90C
1531.510	KL	90C	AP90C
1532.510	KL	90C	AP90C
1533.510	KL	90C	AP90C
1534.510	KL	90C	AP90C
1535.510	KL	90C	AP90C
1536.510	KL	90C	AP90C
1537.510	KL	90C	AP90C
1538.510	KL	90C	AP90C
1539.510	KL	90C	AP90C
1540.510	KL	90C	AP90C
1541.510	KL	90C	AP90C
1542.510	KL	90C	AP90C
1558.510	BG		AP92A
1559.510	BG		AP92B
1919.500	EL	149B	AP149B

Rittal		Murrplastik	
Order no.	Type	Cut-out code for direct assembly	Cut-out code for adapter plate.
1920.500	EL	149B	AP149B
1926.500	EL	149B	AP149B
6214.xx0	CP	90C	AP90C
6220.xx0	CP	90C	AP90C
6900.xxx	IW	90C	AP90C
6901.xxx	IW	90C	AP90C
7011.535	DK	149B	AP149B
7012.535	DK	149B	AP149B
7013.535	DK	149B	AP149B
7014.535	DK	149B	AP149B
7454.xxx	DK	90C	AP90C
7641.000	DK	149B	AP149B
7643.000	DK	149B	AP149B
7644.000	DK	149B	AP149B
7645.000	DK	149B	AP149B
9665.805	SV		AP90D
9665.815	SV	149A	AP149A
9665.825	SV	149B	AP149B
9665.835	SV	149B	AP149B
9665.845	SV	149B	AP149B
9665.855	SV	149A	AP149A
9751.125	CS	149A	AP149A
9751.145	CS	149A	AP149A
9751.165	CS	149A	AP149A
9752.125	CS	149A	AP149A
9771.110	CS	149A	AP149A
9771.115	CS	149A	AP149A
9772.110	CS	149B	AP149B
9772.115	CS	149B	AP149B
9774.200	CS	149A	AP149A
9774.210	CS	149A	AP149A
9774.250	CS	149A	AP149A
9774.400	CS	149A	AP149A
9774.410	CS	149A	AP149A
9774.450	CS	149A	AP149A
9775.100	CS	149A	AP149A
9775.200	CS	149A	AP149A
9775.300	CS	149A	AP149A
9775.400	CS	149A	AP149A

Selection table Sarel Housing (Murrplastik cut-out codes)

Sarel	Murrplastik	
Order no.	Cut-out code for direct assembly	Cut-out code for adapter plate.
87003 (83003)	–	AP130D
87303 (83303)	–	AP130D
87503 (83503)	–	AP130D
87018 (83018)	–	AP130D
87318 (83318)	–	AP130D
87518 (83518)	–	AP130D
87019 (83019)	–	AP130C
87319 (83319)	–	AP130C
87519 (83519)	–	AP130C
87021 (83021)	–	AP130D
87321 (83321)	–	AP130D
87521 (83521)	–	AP130D
87022 (83022)	–	AP130B
87322 (83322)	–	AP130B
87522 (83522)	–	AP130B
87023 (83023)	–	AP130C
87323 (83323)	–	AP130C
87523 (83523)	–	AP130C
87024 (83024)	–	AP130C
87324 (83324)	–	AP130C
87524 (83524)	–	AP130C
87025 (83025)	–	AP130B
87325 (83325)	–	AP130B
87525 (83525)	–	AP130B
87026 (83026)	–	AP130C
87326 (83026)	–	AP130C
87526 (83526)	–	AP130C
87027 (83027)	–	AP130C
87327 (83327)	–	AP130C
87527 (83527)	–	AP130C
87028 (83028)	–	AP130A
87328 (83328)	–	AP130A
87528 (83528)	–	AP130A
87029 (83029)	–	AP130A
87329 (83329)	–	AP130A
87529 (83529)	–	AP130A
87030 (83030)	–	AP220A
87330 (83330)	–	AP220A
87530 (83530)	–	AP220A
87031 (83031)	–	AP130A
87331 (83331)	–	AP130A
87531 (83531)	–	AP130A
87032 (83032)	–	AP130A
87332 (83332)	–	AP130A

Sarel	Murrplastik	
Order no.	Cut-out code for direct assembly	Cut-out code for adapter plate.
87532 (83532)	–	AP130A
87035 (83035)	–	AP130B
87335 (83335)	–	AP130B
87535 (83535)	–	AP130B
87037 (83037)	–	AP130C
87337 (83337)	–	AP130C
87537 (83537)	–	AP130C
87039 (83039)	–	AP220A
87339 (83339)	–	AP220A
87539 (83539)	–	AP220A
87043 (83043)	–	AP130A
87543 (83343)	–	AP130A
87543 (83543)	–	AP130A
87044 (83044)	–	AP220A
87344 (83344)	–	AP220A
87544 (83544)	–	AP220A
87045 (83045)	–	AP130C
87345 (83345)	–	AP130C
87545 (83545)	–	AP130C
87046 (83046)	–	AP130C
87346 (83346)	–	AP130C
87546 (83546)	–	AP130C
87047 (83047)	–	AP130B
87347 (83347)	–	AP130B
87054 (83054)	–	AP130A
87354 (83354)	–	AP130A
87554 (83554)	–	AP130A
87056 (83056)	–	AP130A
87356 (83356)	–	AP130A
87556 (83556)	–	AP130A
87057 (83057)	–	AP220A
87357 (83357)	–	AP220A
87557 (83557)	–	AP220A
87059 (83059)		AP220A
87359 (83359)		AP220A
87559 (83559)		AP220A
87060 (83060)	–	AP130C
87360 (83360)	–	AP130C
87560 (83560)	–	AP130C
87061 (83061)	–	AP130C
87361 (83361)	–	AP130C
87561 (83561)	–	AP130C
87062 (83062)	–	AP130C

(Continued on the next page)

Selection table Sarel/Ensto/Lohmeier Housing (Murrplastik cut-out codes)

Sarel	Murrplastik	
Order no.	Cut-out code for direct assembly	Cut-out code for adapter plate.
	(Continued...)	
87362 (83362)	–	AP130C
87562 (83562)	–	AP130C
87063 (83063)	–	AP130B
87363 (83363)	–	AP130B
87563 (83563)	–	AP130B
87066 (83066)	–	AP130B
87366 (83366)	–	AP130B
87064 (83064)	–	AP130C
87364 (83364)	–	AP130C
87564 (83564)	–	AP130C
87065 (83065)	–	AP130B
87365 (83365)	–	AP130B
87565 (83565)	–	AP130B
87067 (83067)	–	AP130C
87367 (83367)	–	AP130C
87567 (83567)	–	AP130C
87070 (83070)	–	AP130B
87370 (83370)	–	AP130B
87570 (83570)	–	AP130B
87071 (83071)	–	AP130B
87371 (83371)	–	AP130B
87571 (83571)	–	AP130B

Ensto	Murrplastik	
Order no.	Cut-out code for direct assembly	Cut-out code for adapter plate.
FFUF153012G Cubo F X	–	AP85A
FFUF203012G Cubo F X	–	AP85A
FFUF204012G Cubo F X	–	AP85A
FFUF205012G Cubo F X	–	AP85A
FFUF206012G Cubo F X	–	AP85A
FFUF208012G Cubo F X	–	AP85A
FFUF302012 Cubo F X	–	AP85A
FFUF303012G Cubo F X	–	AP85A
FFUF304012G Cubo F X	–	AP85A
FFUF305012G Cubo F X	–	AP85A
FFUF306012G Cubo F X	–	AP85A
FFUF404012G Cubo F X	–	AP85A
FFUF406012G Cubo F X	–	AP85A
FFUF408012G Cubo F X	–	AP85A
FFUF406012G Cubo F X	–	AP85A
FFUF408012G Cubo F X	–	AP85A
FFUF502012 Cubo F X	–	AP85A
FFUF602012 Cubo F X	–	AP85A
FFUF802012 Cubo F X	–	AP85A

Lohmeier		Murrplastik	
Order no.	Type	Cut-out code for direct assembly	Cut-out code for adapter plate.
BG-122020	F-200	–	AP92C
BG-123020	F-300	–	AP92D
BG-123030	F-300	–	AP92D
BG-124020	F-200	–	AP92C
BG-124030	F-200	–	AP92C
BG-125030	F-200	–	AP92C
BG-125030	F-300	–	AP92D
BG-126020	F-300	–	AP92D
BG-126030	F-300	–	AP92D

Control cabinet floor sheeting, type SBB

Made in Germany

Locking plates: -40 – 125 °C, transient 140 °C

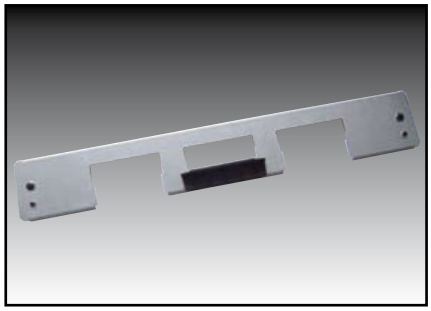
Floor sheeting: Sheet steel, galvanised
Locking plates: Polyamide 6.6

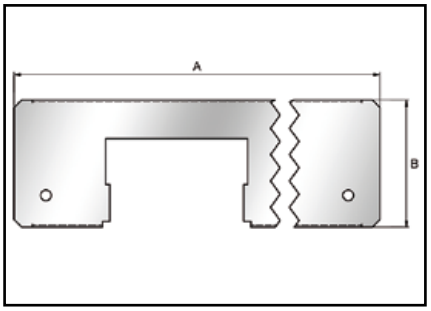
V0

IP 54
when installed correctly

The control cabinet floor sheeting can be installed in Rittal (type TS8) control cabinets. Up to 5 cable entry systems, type KDL/E 24 can be installed.
Locking plates, type VP24, are included with the control cabinet floor plates. These are required to lock the floor plates into place.
Non-required cut-outs can be closed with the BP/H 24 blanking plate.

- IP 54 when assembled correctly as a system (control cabinet + floor plates)
- Can be installed entirely retrospectively
- Earthing points (M6 and M8) available on both side





SBB...

Type	Order no.	For control cabinet width mm	Location spaces	Plate thickness mm	A mm	B mm	Pack qty.
SBB 460 - 2000	87821020	600	2x KDL/E 24 / BP/H	1.5	464.0	100.0	1
SBB 660 - 3000	87821040	800	3x KDL/E 24 / BP/H	1.5	664.0	100.0	1
SBB 860 - 5000	87821050	1000 (without central strut)	5x KDL/E 24 / BP/H	1.5	864.0	100.0	1
SBB 420 - 2000	87821010	1000 (with central strut)	2x KDL/E 24 / BP/H	1.5	424.0	100.0	1
SBB 520 - 3000	87821030	1200 (with central strut)	3x KDL/E 24 / BP/H	1.5	524.0	100.0	1
Replacement part: Locking plates							
VP24	87821090						5

Blanking plate plastic, type BP

Made in Germany | RoHS compliant

BP, BP/N:-40 – 125 °C, transient 140 °C
BP/H:-40 – 60 °C

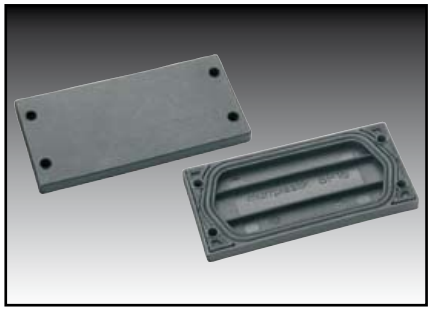
BP, BP/N: Polyamide 6.6; BP/H: TPE;
NBR sealant

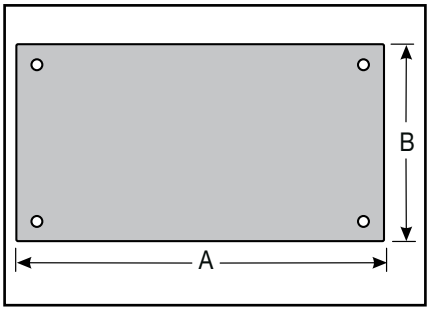
BP, BP/N: V0
BP/H: HB

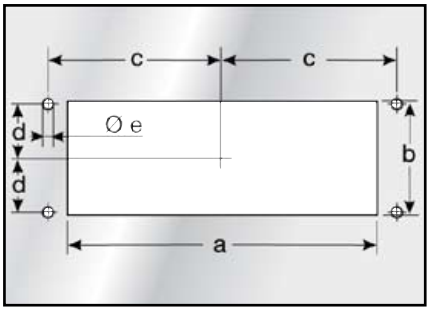
IP BP: IP 54; BP/N: IP 65;
BP/H: IP 42

The BP blanking plates are suited for sealing cut-outs for 16- or 24-pole connectors. Unused cut-outs in areas like control cabinets or a KDP 24 AP/xx adapter plate can be closed off simply with the blanking plate.

- Integrated seal







BP

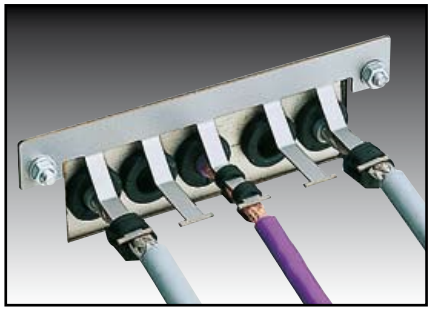
Type	Order no.	Colour	A mm	B mm	Installation height mm	a mm	b mm	c mm	d mm	e mm	Pack qty.
Reinforced version											
BP 16	87171620	black	116.0	58.0	8.0	86.0	36.0	51.5	16.0	5.5	10
BP 24	87171622	black	146.0	58.0	8.0	112.0	36.0	65.0	16.0	5.5	10
High model											
BP/N 24	87171624	black	146.0	58.0	15.5	112.0	36.0	65.0	16.0	5.5	1
Flexible version											
BP/H 24 *	87171626	black	146.0	48.0	4.5	112.0	36.0	65.0	16.0	5.5	1

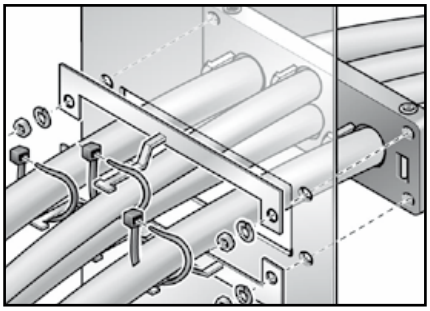
* no authorisation for railways

Discharge plate, type KDL-AB and KDL/N-AB

Stainless steel 1.4310

The KDL and KDL/E discharge plates are suited for discharging interference which may occur on cable sheaths.
The discharge plate should be installed on the inside of the control cabinet, directly at the fixing points of the KDL or KDL/E cable entry system.





KDL/AB...

Type	Order no.	No. Discharges	Suitable for	Pack qty.
KDL/AB 16/2-EMC	87252410	2	KDL 16/2; KDL/E 16/2	1
KDL/AB 16/4-EMC	87252412	4	KDL 16/4	1
KDL/AB 24/3-EMC	87252414	3	KDL 24/3	1
KDL/AB 24/5-EMC	87252416	5	KDL 24/5; KDL 2/10; KDL 3/15	1
KDL/N-AB 16/5-EMC OT	87252420	3	KDL/E 16/5 upper part	1
KDL/N-AB 16/5-EMC UT	87252422	2	KDL/E 16/5 lower part	1
KDL/N-AB 16/8-EMC	87252424	4	KDL/E 16/8 upper and lower part	1
KDL/N-AB 24/4-EMC OT	87252426	3	KDL/E 24/4 upper part	1
KDL/N-AB 24/4-EMC UT	87252428	1	KDL/E 24/4 lower part	1
KDL/N-AB 24/7-EMC OT	87252430	4	KDL/E 24/7 upper part	1
KDL/N-AB 24/7-EMC UT	87252432	3	KDL/E 24/7 lower part	1
KDL/N-AB 24/10-EMC OT	87252434	5	KDL/E 24/10 upper part	1
KDL/N-AB 24/10-EMC UT	87252436	5	KDL/E 24/10 lower part	1

Blanking plate (metal version)

RoHS compliant

Plate: see article
NBR sealant

Blanking plate for closing off unused adapter positions and cut-outs.
The stainless steel version is particularly suitable for application in the food and chemical areas. Integrated threaded bolts mean that no screws are visible from outside.
Mounting set included in delivery.

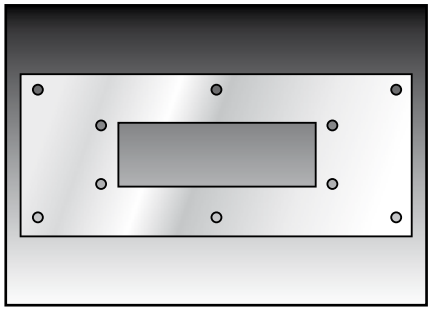
KDP BP 90/144...

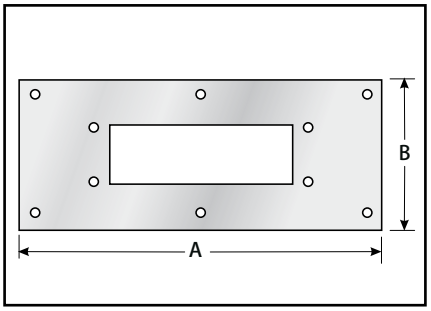
Type	Order no.	Colour	Plate material	Pack qty.
KDP BP 90/144 ALU	87663091	RAL 7035	AlMg3 (3.3535)	1
KDP BP 120/190 ALU	87663096	RAL 7035	AlMg3 (3.3535)	1
KDP BP 90/221 ALU	87663093	RAL 7035	AlMg3 (3.3535)	1
KDP BP 100/145 V4A	87663090	smoothed	V4A (1.4571)	1
KDP BP 105/155 ALU	87663092	RAL 7035	AlMg3 (3.3535)	1
KDP BP 105/155 V4A	87663094	smoothed	V4A (1.4571)	1

Adapter plate Rittal

Stainless steel V2A (1.4301) and V4A (1.4571)

The Rittal adapter plates can be directly mounted into the prefabricated cut-outs from Rittal casings. They serve to retain various Murrplastik cable entry systems. Unused adapter spaces can be closed off using blanking plates. A blade terminal L6.3 is available for earthing the adapter plate. Adapter plate without sealing. The seal is part of the cabinet accessories.





KDP 24/AP/RI-KL/1

Type	Order no.	Colour	Location spaces	Rittal cutting	Cut outs code	Plate thickness mm	A mm	B mm	Pack qty.
with cut-outs 24-pin									
KDP 24/AP/RI-KL/1	87663073	smoothed	1x 24-pin	2	AP90C	2.0	90.0	221.0	1
KDP 24/AP/RI-BG/2	87663074	smoothed	2x 24-pin	BG 1558.510	AP92A	2.0	92.0	355.0	1
KDP 24/AP/RI-AE/2	87663072	smoothed	2x 24-pin	3	AP90D	2.0	90.0	330.0	1
KDP 24/AP/RI-BG/3+4	87663075	smoothed	2x 24-pin + 2x M20 + 2x M25	BG 1559.510	AP92B	2.0	92.0	555.0	1
KDP 24/AP/RI-AE/4	87663070	smoothed	4x 24-pin	4	AP149A	2.0	149.0	339.0	1
KDP 24/AP/RI-AE/6+2	87663071	smoothed	6x 24-pin + 2x M32	5	AP149B	2.0	149.0	534.0	1
for KDP metal									
KDP AP 149/100/2 V4A	87663080	smoothed	2x KDP 100/xx	4	AP149A	2.5	149.0	339.0	1
KDP AP 149/100/3 V4A	87663082	smoothed	3x KDP 100/xx	5	AP149B	2.5	149.0	534.0	1
KDP AP 149/105/3 St*	87663084	RAL 7035	3x KDP 105/xx	5	AP149B	2.5	149.0	534.0	1

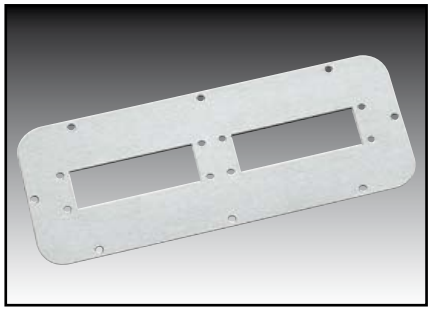
*Material steel (1.1203)

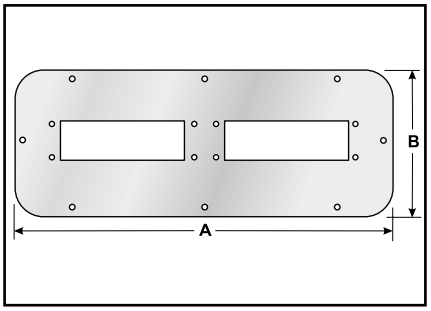
Adapter plate Sarel

RoHS compliant

Stainless steel 1.4301
(V2A)

Adapter plate can be fitted directly into the standard cut-outs of Sarel cabinets. They serve to retain various Murrplastik cable entry systems. Unused adapter positions can be closed off using blanking plates of type BP. A blade terminal L6.3 is available for earthing the adapter plate. Adapter plate without sealing. The seal is part of the cabinet accessories.





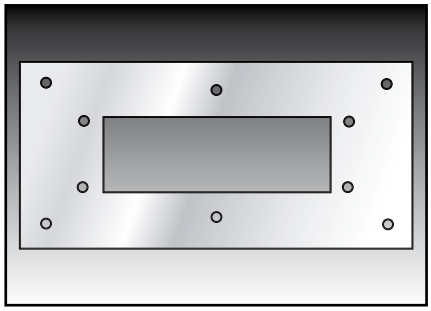
KDP 24/AP/SA/2+0

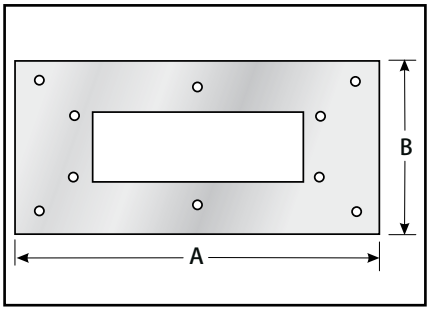
Type	Order no.	Colour	Location spaces	Sarel cutting	Cut outs code	Plate thickness mm	A mm	B mm	Pack qty.
with cut-outs 24-pin									
KDP 24/AP/SA/2+0	87663102	smoothed	2x 24-pin	515X4	AP130C	2.0	130.0	345.0	1
KDP 24/AP/SA/2+4	87663112	smoothed	2x 24-pin + 4x M32	515X5	AP130B	2.0	130.0	445.0	1
KDP 24/AP/SA/3+2	87663108	smoothed	2x 24-pin + 2x M32	515X6	AP130A	2.0	130.0	545.0	1
KDP 24/AP/SA/5+4	87663100	smoothed	5x 24-pin + 2x M25 + 2x M50	515X7	AP220A	2.0	220.0	495.0	1
for KDP metal									
KDP AP/SA/130/100/2	87663130	smoothed	2x KDP 100/xx	515X4	AP130C	2.5	130.0	345.0	1
KDP AP/SA/130/100/2+4	87663128	smoothed	2x KDP 100/xx + 4x M32	515X5	AP130B	2.5	130.0	445.0	1
KDP AP/SA/130/100/3+2	87663126	smoothed	3x KDP 100/xx + 2x M32	515X6	AP130A	2.5	130.0	545.0	1
for KDP/R									
KDP/R AP/SA-1	87663106	smoothed	6x M63	515X6	AP130A	2.0	130.0	545.0	1
KDP/R AP/SA-2	87663110	smoothed	5x M63	515X5	AP130B	2.0	130.0	445.0	1
KDP/R AP/SA-3	87663114	smoothed	3x M63	515X4	AP130C	2.0	130.0	345.0	1
KDP/R AP/SA-4	87663104	smoothed	2x M32 + 2x M63	515X3	AP130D	2.0	130.0	245.0	1

Adapter plate Lohmeier

Stainless steel 1.4301
(V2A)

The Lohmeier adapter plates can be directly mounted into the prefabricated cut-outs from Lohmeier casings. They serve to retain various Murrplastik cable entry systems. Unused adapter spaces can be closed off using blanking plates. A blade terminal L6.3 is available for earthing the adapter plate. Adapter plate comes with seal included.





KDP 24/AP/LO-BG/1

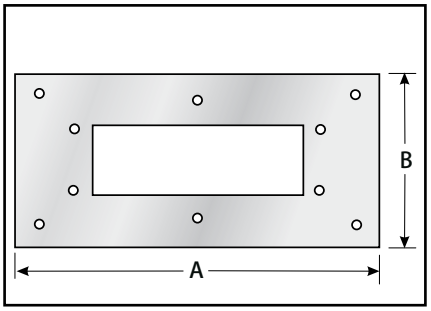
Type	Order no.	Colour	Location spaces	Lohmeier Cutting	Cut outs Code	Plate thickness mm	A mm	B mm	Pack qty.
with cut-outs 24-pin									
KDP 24/AP/LO-BG/1	87663078	smoothed	1x 24-pin	F200 Typ BG	AP92C	2.0	92.0	194.0	1
KDP 24/AP/LO-BG/2	87663077	smoothed	2x 24-pin	F300 Typ BG	AP92D	2.0	92.0	294.0	1

Adapter plate Ensto

RoHS compliant

Stainless steel 1.4301
(V2A)

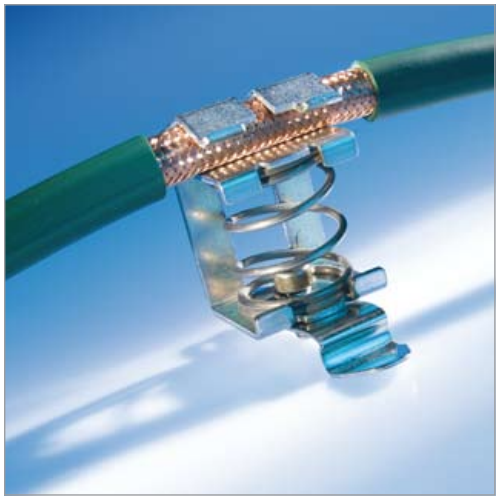
The Ensto adapter plates can be directly mounted into the prefabricated cut-outs from Ensto casings. They serve to retain various Murrplastik cable entry systems. Unused adapter spaces can be closed off using blanking plates. A blade terminal L6.3 is available for earthing the adapter plate. Adapter plate without sealing. The seal is part of the cabinet accessories.



KDP 24/AP/EN-KG/1

Type	Order no.	Colour	Location spaces	Ensto cutting	Cut outs code	Plate thickness mm	A mm	B mm	Pack qty.
with cut-outs 24-pin									
KDP 24/AP/EN-KG/1	87663076	smoothed	1	Cubo Typ FFUF	AP85A	2.0	85.0	215.0	1

Strain relief
cable fixing plate



Strain relief cable fixing plate

Overview strain relief plates

Strain relief, type ZL-fix

The strain relief ZL-fix may be used wherever cables, cords, wires or conduits must be relieved or routed in a way that is secure, easy and cost-effective.

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Strain relief, type ZL

Guaranteed strain relief easily and affordably. The insertion of the ELB bush stops the cold extrusion characteristic of plastic from affecting the secure fixing of the plate. The DH spacer sleeve is needed for two-tier mounting.

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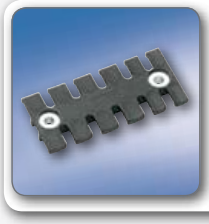

Strain relief, type ZL-AH / ZL-MH

The strain relief plates ZL-AH and ZL-MH are based on the ZL strain relief plate. By inserting the aluminium or brass grommets the ZL strain relief plate is free of fastening forces.

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Strain relief, type ZL-AM / ZL-SW / ZL-C

The embedded brass discs hinder the screwed connection from loosening by itself under heavy vibrations. Assembly on C-rails with slot nuts/ screws.

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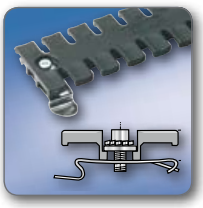


Strain relief, type ZL-MF

The strain relief plate ZL-MF is based on the strain relief plate ZL. The preassembled feet enable simple, tool-free assembly on a 35mm top hat rail (EN 50022).

Page 156

Strain relief, type ZLF

The type ZLF is based on the strain relief plate ZL. The fastening clips that are used allow for simply mounting on c-rails with 10 mm slot and a plate thickness of max 2.0 mm.

Page 157

Strain relief, type ZL xx-AB

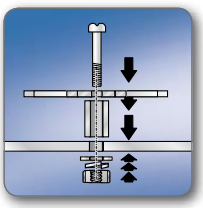
In conjunction with the ZL strain relief rail, the ZL-AB discharge plate is suitable for discharging interferences which may occur on cable sheaths.

Page 158

Strain relief accessories

The DH spacer sleeve is required for stacking the ZL strain relief plate. The insert bushing ELB prevents cold flow of the plastic at the fixing point during heavy strain or permanent movement.

Page 159



Assembly instruction for strain relief and cable fixing plates

Detailed assembly instruction for the different configuration and fixing methods.

Page 168

Material data for all components (strain relief)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

All components in our strain relief range are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
They can be used within a temperature range of -40 to 125 °C (transient to 140 °C).
Exception type ZL-fix: of -30°C to 80 °C (transient -40 to 100 °C)

Material data for individual components (strain relief)

Type	Material	RoHS compliant	Fire classification	Railway approvals	
		RoHS compliant		DB Germany	SNCF France
ZL-fix	Tape: Coated polyamide Base: Polyamide 6.6	✔			
ZL	Plate: Polyamide 6.6	✔	V0	✔	✔
ZL-AH	Plate: Polyamide 6.6 Insert bushing: Aluminium		V0	✔	✔
ZL-MH	Plate: Polyamide 6.6 Insert bushing: Brass		V0	✔	✔
ZL-AM ZL-SW	Plate: Polyamide 6.6 Disc: Brass Tenon block: Stainless steel Screw: Stainless steel		V0	✔	✔
ZL-C	Plate: Polyamide 6.6 Disc: Brass Tenon block: Steel Screw: Steel		V0	✔	✔
ZL-MF	Plate: Polyamide 6.6 Clamping base: galv. sheet steel		V0	✔	✔
ZLF	Plate: Polyamide 6.6 Screw: Steel		V0	✔	✔
ZL xx-AB	Discharge plate: Stainless steel	✔			
DH ELB	Pillar: Brass Insert bushing: Brass				

Strain relief cable fixing plate

Overview cable fixing plates

Cable fixing plate, type KAF

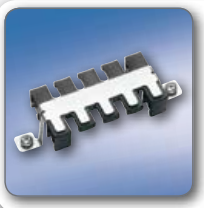
The cable fixing plate KAF is suitable for simultaneously holding and relieving the strain of cables in the control cabinet. The plate may be fixed on to a 35 mm standard top hat or C-rail.

Page 160

Cable fixing plate, type KAF/NI

The cable fixing plate KAF is suitable for simultaneously holding and relieving the strain of cables in the control cabinet. Mounted using Niedax model 2910 C-rail. Securing via pre-mounted lock screw.

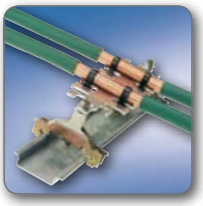
Page 161



Cable fixing plate, type KAF/K

The cable fixing plate KAF/K-EMC consists of a plastic carrier with a fitted V2A discharge plate. Quick and safe fastening, both on the top hat or C-rail due to integrated clamping bases.

Page 162



Cable fixing plate, type KAF/EK

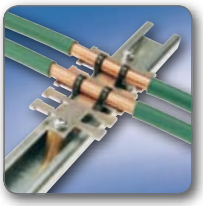
The cable fixing plate KAF/K-EMC consists of a V2A (1.4301) plate for the direct discharge of any interference on the cable sheaths. The ground contact is provided through a special screw stand for the 35 mm hat rail (EN50022).

Page 163

Cable fixing plate, type KAF/SF

The cable fixing plate KAF/SF is suitable for discharging interferences which may occur on cable sheaths. The ground contact is provided through a special screw stand for the 35 mm hat rail (EN50022).

Page 164



Cable fixing plate, type KAF/DC

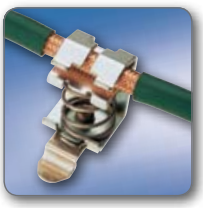
The cable fixing plate KAF/DC is suitable for discharging interferences which may occur on cable sheaths. The version DC is only suitable for direct installation on a conductive background.

Page 165

Cable tie rail, type KBL

Quick and easy fitting of cables. Cable ties may be pushed on if a rail is already fitted.

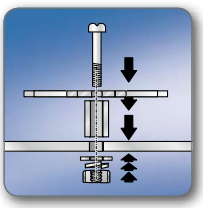
Page 166



Shielding clamp, type SK

The shielding clamp may be used where the shield of individual cables must be connected with the earth potential. Assembly using screws or mounting foot.

Page 167



Assembly instruction for strain relief and cable fixing plates

Detailed assembly instruction for the different configuration and fixing methods.

Page 169

Material data for all components (cable fixing plates)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

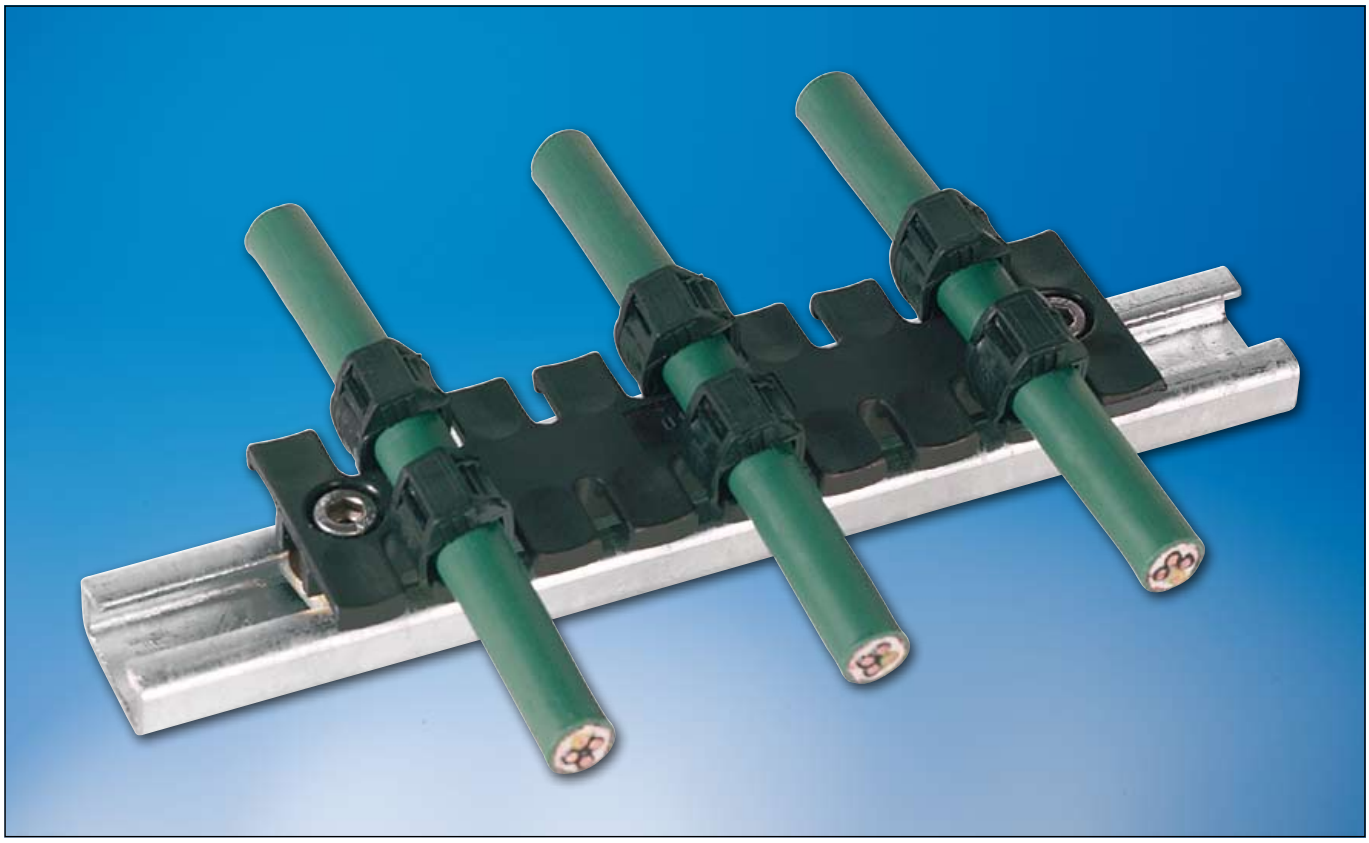
All components in our cable fixing plates range are free of halogen, phosphorous, cadmium, asbestos, lead and silicone.
They can be used within a temperature range of -40 to 125 °C (transient to 140 °C).
Exception type KBL: of -40 to 80 °C (transient -40 °C to 100 °C)

Material data for individual components (cable fixing plates)

Type	Material	RoHS compliant	Fire classification	Railway approvals	
		RoHS compliant		DB Germany	SNCF France
KAF	Plate: Polyamide 6.6	✔	V0	✔	✔
KAF/NI	Plate: Polyamide 6.6		V0		
KAF/K	Plate: Polyamide 6.6 Discharge plate: Stainl. steel V2A		V0	✔	✔
KAF/EK	Plate: Stainless steel V2A				
KAF/SF	Plate: Stainless steel V2A				
KAF/DC	Plate: Stainless steel V2A Stand: Brass				
KBL	Plate: Polyamide 6	✔	V0		
SK	Sheet steel, galvanised	✔			

Strain relief cable fixing plate

Advantages



Quick and reliable strain relief

Strain relief, organisation and attachment of services – quickly, simply, safely.

A large selection of strain relief plates covers a variety of potential uses.

Various types are available for screw on, snapping in or sliding in.

Whether in plastic or metal versions, or as EMC solutions. Anything is possible.

The services are simply affixed to the strain relief using standard cable ties.

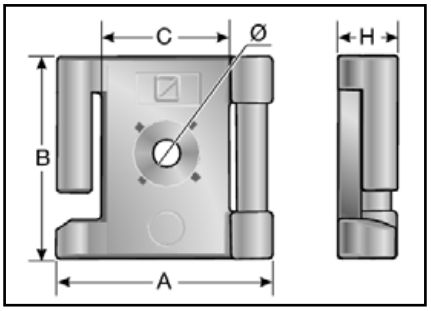
- ✔ Simple
- ✔ Cost-effective
- ✔ Wide variety of types
- ✔ Quick assembly
- ✔ High tensile forces
- ✔ EMC variants

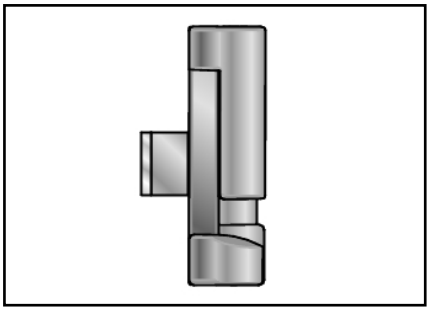
Strain relief, type ZL-fix

-30 – 80 °C
transient -40 – 100 °C
Tape: Coated polyamide
Base: Polyamide 6.6

The strain relief ZL-fix may be used wherever cables, cords, wires or conduits must be relieved or routed in a way that is secure, easy and cost-effective. The strain relief ZL-fix is available in two versions, either for direct screw fastening (flat-head screw M5, not included in delivery) or for fastening on a profile with 10 mm groove width (integrated nut strap).

- Do not constrict sensitive cables such as fibre optic cables or pneumatic hoses
- Tool-less Velcro(R) fastening can be opened and closed infinitely
- Easy handling
- Variable installation position





ZL-fix

Type	Order no.	Colour	Bundle range Ø min – max mm	A mm	B mm	C mm	H mm	Ø mm	Profile nut min – max mm	Pack qty.
Screw assembly										
ZL-fix W-15	87705008	black	6.0 – 20.0	39.0	34.0	15.0	10.7	5.0	-	10
ZL-fix W-25	87705010	black	6.0 – 35.0	37.0	34.0	25.0	10.7	5.0	-	10
ZL-fix W-35	87705012	black	6.0 – 60.0	45.0	34.0	35.0	10.7	5.0	-	10
Profile assembly										
ZL-fix P-15	87705018	black	6.0 – 20.0	30.0	34.0	15.0	10.7	-	9,9 – 10,8	10
ZL-fix P-25	87705020	black	6.0 – 35.0	37.0	34.0	25.0	10.7	-	9,9 – 10,8	10
ZL-fix P-35	87705022	black	6.0 – 60.0	45.0	34.0	35.0	10.7	-	9,9 – 10,8	10

Strain relief
Cable fixing plate

Strain relief, type ZL

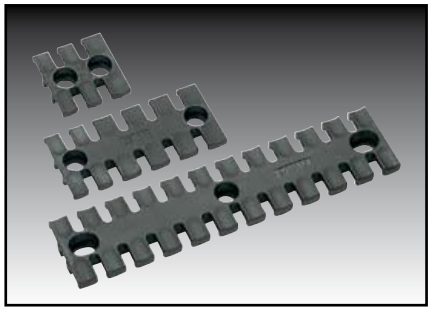
Made in Germany | RoHS compliant

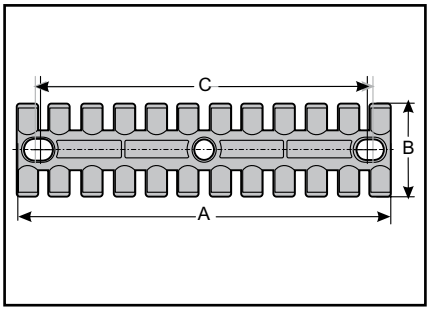
-40 – 125 °C, transient 140 °C

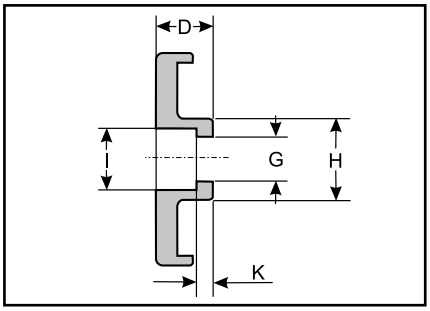
Plate: Polyamide 6.6

V0

The strain relief plate ZL may be used wherever cables, cords, wires or conduits must be relieved or routed in a way that is secure, easy and cost-effective. The insertion of the ELB bush stops the cold extrusion characteristic of plastic from affecting the secure fixing of the plate. The DH spacer sleeve is needed for two-tier mounting.







ZL...

Type	Order no.	Colour	Max. number of Cables	A	B	C	D	G	H	I	K	Pack qty.
ZL 04	87701010	black	12	95.0	35.0	74.5	9.2	5.5	-	8.5	3.1	1
ZL 05	87701012	black	15	119.0	35.0	108.0	9.2	5.5	-	8.5	3.1	1
ZL 39	87701014	black	3	38.5	40.0	19.5	10.0	9.0	14.0	12.0	3.1	1
ZL 60	87701016	black	4	59.5	40.0	43.5	10.0	9.0	14.0	12.0	3.1	1
ZL 70	87701017	black	5	69.5	40.0	43.5	10.0	9.0	14.0	12.0	3.1	1
ZL 80	87701015	black	6	79.5	40.0	68.0	10.0	9.0	14.0	12.0	3.1	1
ZL 87/68	87701018	black	6	86.5	40.0	68.0	10.0	9.0	14.0	12.0	3.1	1
ZL 87/50	87701019	black	6	86.5	40.0	50.0	10.0	9.0	14.0	12.0	3.1	1
ZL 103	87701020	black	7	102.5	40.0	84.0	10.0	9.0	14.0	12.0	3.1	1
ZL 121	87701022	black	8	121.0	40.0	102.5	10.0	9.0	14.0	12.0	3.1	1
ZL 140	87701024	black	9	139.5	40.0	121.0	10.0	9.0	14.0	12.0	3.1	1
ZL 180/6	87701026	black	12	180.0	42.0	154.0 – 160.0	11.5	9.0	16.0	12.0	3.1	1
ZL 180/8	87701027	black	12	180.0	42.0	154.0 – 160.0	11.5	11.0	16.0	13.4	3.1	1
Accessories ZL 04 and ZL 05												
DH 30/8	87701054											
Accessories ZL39 – 180/8												
ELB / 6	87701050											1
ELB/8 *	87701060											1
DH 32/6	87701052											1
DH 32/8 *	87701062											1
* for ZL 180/8 only												

Strain relief, type ZL-AH / ZL-MH

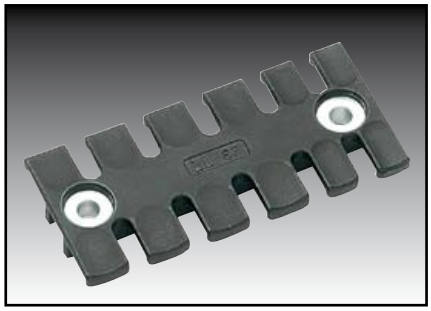
Made in Germany

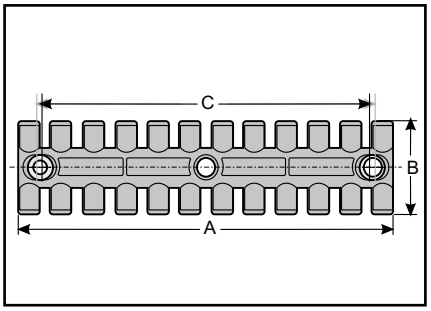
-40 – 125 °C, transient 140 °C

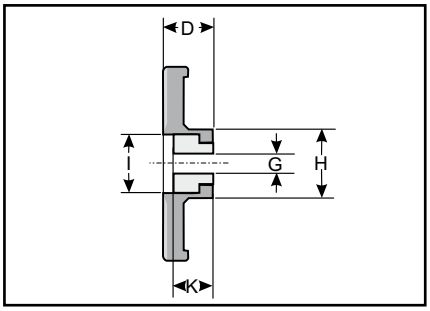
Plate: Polyamide 6.6
Insert bushing: Aluminium / Messing

V0

The strain relief plates ZL-AH and ZL-MH are based on the ZL strain relief plate. By inserting the aluminium or brass grommets the ZL strain relief plate is free of fastening forces.







ZL-...

Type	Order no.	Colour	Max. number of Cables	A	B	C	D	G	H	I	K	Pack qty.
With aluminium grommets, assembly with M5 screws												
ZL-AH 39	87701230	black	3	38.5	40.0	19.5	10.0	5.5	14.0	12.0	7.0	1
ZL-AH 60	87701232	black	4	59.5	40.0	43.5	10.0	5.5	14.0	12.0	7.0	1
ZL-AH 87	87701234	black	6	86.5	40.0	68.0	10.0	5.5	14.0	12.0	7.0	1
ZL-AH 103	87701236	black	7	102.5	40.0	84.0	10.0	5.5	14.0	12.0	7.0	1
ZL-AH 121	87701238	black	8	121.0	40.0	102.5	10.0	5.5	14.0	12.0	7.0	1
ZL-AH 140	87701240	black	9	139.5	40.0	121.0	10.0	5.5	14.0	12.0	7.0	1
ZL-AH 180	87701242	black	12	180.0	42.0	154.0 – 160.0	11.5	5.5	16.0	12.0	7.0	1
With brass grommets, assembly with M5 screws												
ZL-AH 39	87701210	black	3	38.5	40.0	19.5	10.0	5.5	14.0	12.0	3.9	1
ZL-AH 60	87701212	black	4	59.5	40.0	43.5	10.0	5.5	14.0	12.0	3.9	1
ZL-AH 87	87701214	black	6	86.5	40.0	68.0	10.0	5.5	14.0	12.0	3.9	1
ZL-AH 103	87701216	black	7	102.5	40.0	84.0	10.0	5.5	14.0	12.0	3.9	1
ZL-AH 121	87701218	black	8	121.0	40.0	102.5	10.0	5.5	14.0	12.0	3.9	1
ZL-AH 140	87701220	black	9	139.5	40.0	121.0	10.0	5.5	14.0	12.0	3.9	1
ZL-AH 180	87701222	black	12	180.0	42.0	154.0 – 160.0	11.5	5.5	16.0	12.0	3.9	1
with brass grommets, assembly with M6 screws												
ZL-MH 39/6	87701270	black	3	38.5	40.0	19.5	10.0	6.5	14.0	12.0	3.9	1
ZL-MH 60/6	87701272	black	4	59.5	40.0	43.5	10.0	6.5	14.0	12.0	3.9	1
ZL-MH 70/6	87701274	black	5	69.5	40.0	43.5	10.0	6.5	14.0	12.0	3.9	1
ZL-MH 87/6	87701278	black	6	86.5	40.0	68.0	10.0	6.5	14.0	12.0	3.9	1
ZL-MH 103/6	87701282	black	7	102.5	40.0	84.0	10.0	6.5	14.0	12.0	3.9	1
ZL-MH 121/6	87701284	black	8	121.0	40.0	102.5	10.0	6.5	14.0	12.0	3.9	1
ZL-MH 140/6	87701286	black	9	139.5	40.0	121.0	10.0	6.5	14.0	12.0	3.9	1
ZL-MH 180/6	87701288	black	12	180.0	42.0	154.0 – 160.0	11.5	6.5	16.0	12.0	3.9	1
Accessories ZL-AH 39 – 180												
DH 32/6	87701052											1

Strain relief
Cable fixing plate

Strain relief, type ZL-AM / ZL-SW / ZL-C

Made in Germany

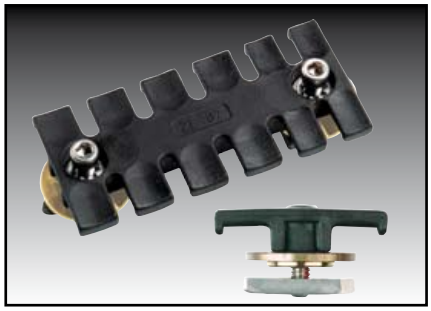
-40 – 125 °C, transient 140 °C

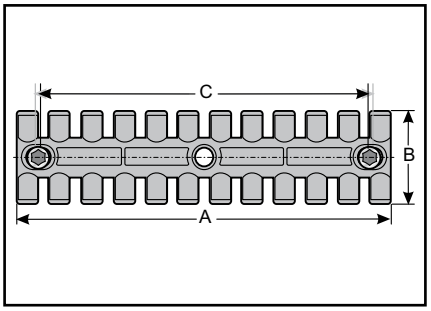
Polyamide 6.6

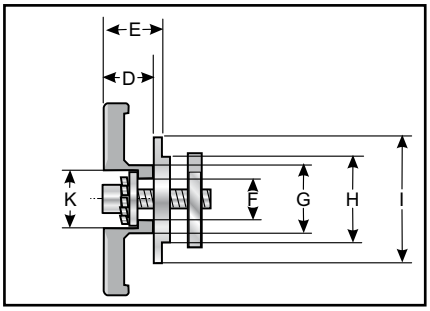
V0

The strain relief plates ZL-AM, ZL-SW and ZL-C are based on the ZL strain relief plate. The embedded brass discs hinder the cold flow deformation properties of the plastic under heavy and permanent vibration, thereby preventing the screwed connection from loosening by itself. Slot nuts and screws enable simple assembly on C-rails.

- Very quick assembly
- Orderly routing of the cable
- Simple and effective strain relief through cable ties







ZL-AM...

Type	Order no.	Colour	Max. number of Cables	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	K mm	Pack qty.
For C-rails 16 mm slit / interior width 22 – 27 mm														
Brass disc														
Stainless steel screw 1.4301 with UNC thread														
Stainless steel slot nut 1.4301														
ZL-AM 39	87702210	black	3	38.5	40.0	19.5	10.0	12.0	5.0	14.0	16.0	26.0	12.0	1
ZL-AM 60	87702212	black	4	59.5	40.0	43.5	10.0	12.0	5.0	14.0	16.0	26.0	12.0	1
ZL-AM 87	87702214	black	6	86.5	40.0	68.0	10.0	12.0	5.0	14.0	16.0	26.0	12.0	1
ZL-AM 103	87702216	black	7	102.5	40.0	84.0	10.0	12.0	5.0	14.0	16.0	26.0	12.0	1
ZL-AM 121	87702218	black	8	121.0	40.0	102.5	10.0	12.0	5.0	14.0	16.0	26.0	12.0	1
ZL-AM 140	87702220	black	9	139.5	40.0	121.0	10.0	12.0	5.0	14.0	16.0	26.0	12.0	1
ZL-AM 180	87702222	black	12	180.0	42.0	154.0 – 160.0	11.5	13.5	5.0	16.0	16.0	26.0	12.0	1
For C-rails 12 mm slit / interior width 27 mm														
Brass disc														
Stainless steel screw 1.4301 with metric thread														
Stainless steel slot nut 1.4301														
ZL-SW 39	87702410	black	3	38.5	40.0	19.5	10.0	12.0	6.2	14.0	11.6	18.0	12.0	1
ZL-SW 60	87702412	black	4	59.5	40.0	43.5	10.0	12.0	6.2	14.0	11.6	18.0	12.0	1
ZL-SW 87	87702414	black	6	86.5	40.0	68.0	10.0	12.0	6.2	14.0	11.6	18.0	12.0	1
ZL-SW 103	87702416	black	7	102.5	40.0	84.0	10.0	12.0	6.2	14.0	11.6	18.0	12.0	1
ZL-SW 121	87702418	black	8	121.0	40.0	102.5	10.0	12.0	6.2	14.0	11.6	18.0	12.0	1
ZL-SW 140	87702420	black	9	139.5	40.0	121.0	10.0	12.0	6.2	14.0	11.6	18.0	12.0	1
ZL-SW 180/6	87702422	black	12	180.0	42.0	154.0 – 160.0	11.5	13.5	6.2	16.0	11.6	18.0	12.0	1

Strain relief, type ZL-AM / ZL-SW / ZL-C

Made in Germany

Type	Order no.	Colour	Max. number of cables	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	K mm	Pack qty.
For C-rails 11 mm slit / interior width 21 mm														
Brass disc														
Steel screw with metric thread														
Steel slot nut														
ZL-C 39	87702810	black	3	38.5	40.0	19.5	10.0	12.0	9.0	14.0	10.6	18.0	12.0	1
ZL-C 60	87702812	black	4	59.5	40.0	43.5	10.0	12.0	9.0	14.0	10.6	18.0	12.0	1
ZL-C 80	87702814	black	6	79.5	40.0	68.0	10.0	12.0	9.0	14.0	10.6	18.0	12.0	1
ZL-C 87	87702816	black	6	86.5	40.0	68.0	10.0	12.0	9.0	14.0	10.6	18.0	12.0	1
ZL-C 103	87702818	black	7	102.5	40.0	84.0	10.0	12.0	9.0	14.0	10.6	18.0	12.0	1
ZL-C 121	87702820	black	8	121.0	40.0	102.5	10.0	12.0	9.0	14.0	10.6	18.0	12.0	1
ZL-C 140	87702822	black	9	139.5	40.0	121.0	10.0	12.0	9.0	14.0	10.6	18.0	12.0	1
ZL-C 180/6	87702824	black	12	180.0	42.0	154.0 – 160.0	11.5	13.5	9.0	16.0	10.6	18.0	12.0	1

Strain relief
Cable fixing plate

Strain relief, type ZL-MF

Made in Germany

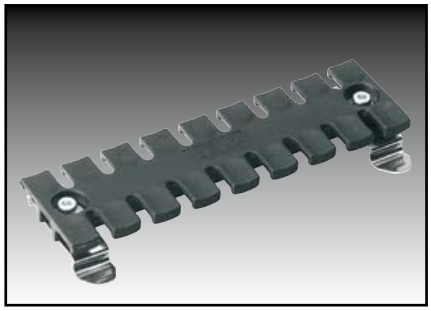
-40 – 125 °C, transient 140 °C

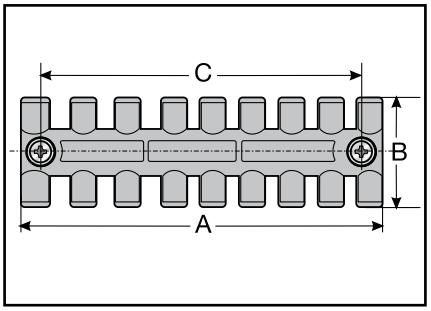
Polyamide 6.6

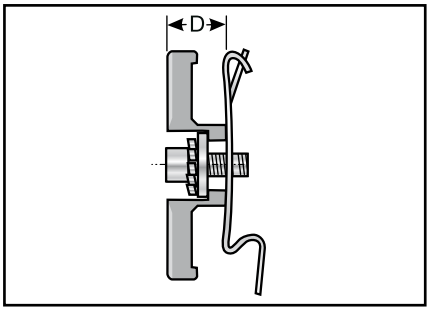
V0

The strain relief plate ZL-MF is based on the strain relief plate ZL. The preassembled feet enable simple, tool-free assembly on a 35mm top hat rail (EN 50022). The feet are made of galvanised steel plate.

- Quick and easy to assemble and disassemble without the need for tools.
- Orderly routing of the cable
- Simple and effective strain relief through cable ties







ZL-MF

Type	Order no.	Colour	Max. number of cables	A mm	B mm	C mm	D mm	Pack qty.
ZL-MF 39	87702610	black	3	38.5	40.0	19.5	10.0	1
ZL-MF 70	87702614	black	5	69.5	40.0	43.5	10.0	1
ZL-MF 140	87702622	black	9	139.5	40.0	121.0	10.0	1

Strain relief, type ZLF

Made in Germany

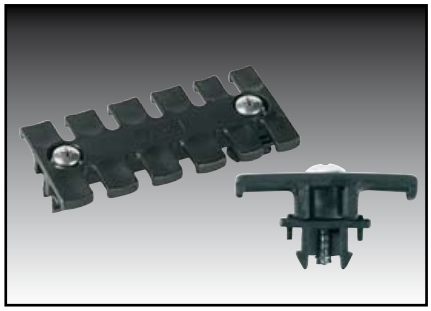
-40 – 125 °C, transient 140 °C

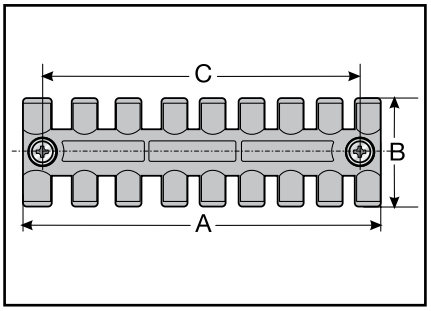
Polyamide 6.6

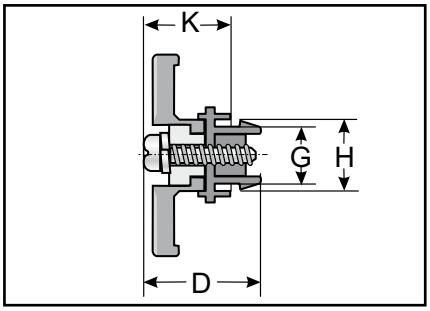
V0

The strain relief plate ZLF is based on the strain relief plate ZL. The fastening clips that are used allow for simply mounting on c-rails with 10 mm slot and a plate thickness of max 2.0 mm. The premounted screw in the fastening clip allows the snap-on stand to be splayed and locked.

- Very quick assembly
- Orderly routing of the cable
- Simple and effective strain relief through cable ties







ZLF..

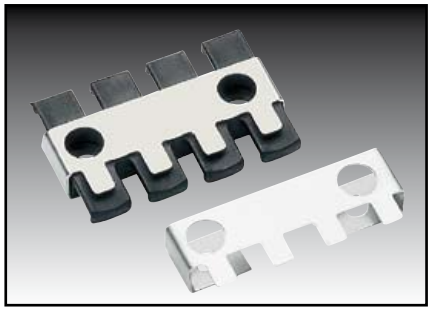
Type	Order no.	Colour	Max. number of cables	A mm	B mm	C mm	D mm	G mm	H mm	K mm	Pack qty.
ZLF 39	87701410	black	3	38.5	40.0	19.5	24.0	8.0	12.0	17.0	1
ZLF 60	87701412	black	4	59.5	40.0	43.5	24.0	8.0	12.0	17.0	1
ZLF 87	87701414	black	6	86.5	40.0	68.0	24.0	8.0	12.0	17.0	1
ZLF 103	87701416	black	7	102.5	40.0	84.0	24.0	8.0	12.0	17.0	1
ZLF 121	87701418	black	8	121.0	40.0	102.5	24.0	8.0	12.0	17.0	1
ZLF 140	87701420	black	9	139.5	40.0	121.0	24.0	8.0	12.0	17.0	1

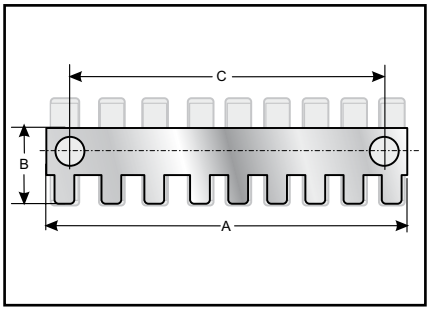
Strain relief, type ZL xx-AB

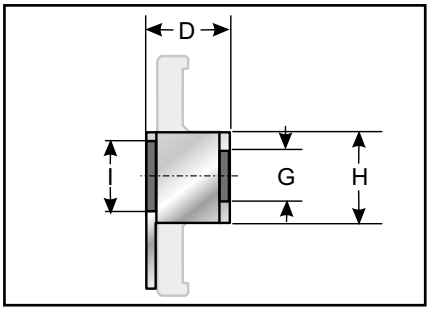
Made in Germany RoHS compliant

Stainless steel 1.4301

In conjunction with the ZL strain relief rail, the ZL-AB discharge plate is suitable for discharging interferences which may occur on cable sheaths.
ZL strain relief not included in delivery. Please order separately.







ZL...-AB/EMC

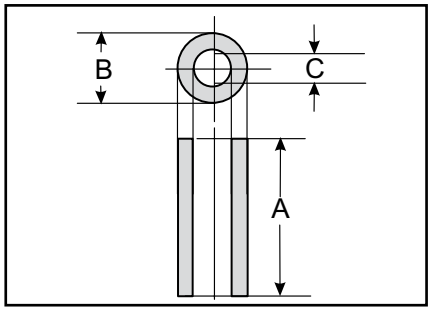
Type	Order no.	Suited for	Max. number of Cables	A mm	B mm	C mm	D mm	G mm	H mm	I mm	Pack qty.
ZL 39-AB/EMC	87701034	ZL 39	3	41.0	25.0	19.5	12.0	6.5	16.0	10.0	1
ZL 60-AB/EMC	87701036	ZL 60	4	62.5	25.0	43.5	12.0	6.5	16.0	10.0	1
ZL 87-AB/EMC	87701040	ZL 87/68	6	89.0	25.0	68.0	12.0	6.5	16.0	10.0	1
ZL 140-AB/EMC	87701046	ZL 140	9	142.5	25.0	121.0	12.0	6.5	16.0	10.0	1

The corresponding ZL strain relief plate is required for the discharge plate.

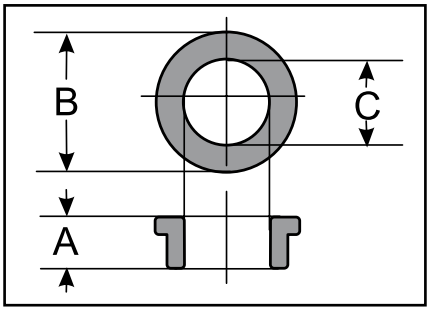
Strain relief accessories

Brass

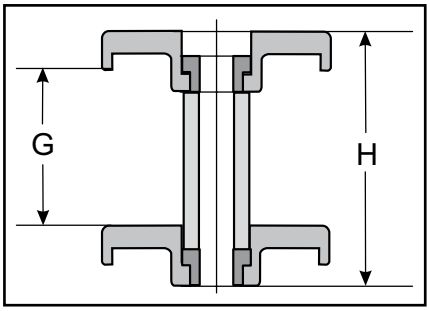
The DH spacer sleeve is required for stacking the ZL strain relief plate. This allows for cables to be stacked, thereby saving space.
The ELB insert bushing can be laid into the strain relief plate type ZL. It prevents cold flow of the plastic at the fixing point during heavy strain or permanent movement.



DH...



ELB...



Two-tier assembly

Type	Order no.	A mm	B mm	C mm	G mm	H mm	Pack qty.
For ZL 04 and ZL 05							
DH 30/8	87701054	30.0	8.5	5.2	26.0	44.0	1
For ZL39 – 180/8							
ELB / 6	87701050	6.5	12.0	6.2	-	-	1
ELB/8 *	87701060	6.5	13.4	8.2	-	-	1
DH 32/6	87701052	32.0	12.0	6.3	28.0	46.0	1
DH 32/8 *	87701062	32.0	13.0	8.3	28.0	46.0	1
* for ZL 180/8 only							

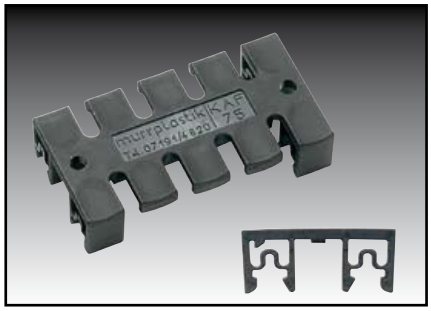
Cable fixing plate, type KAF

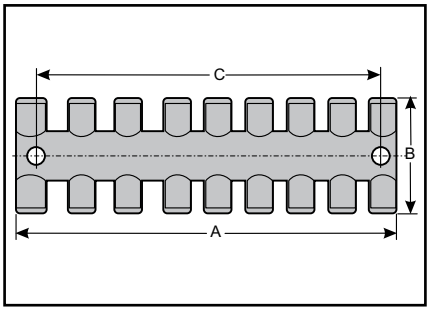
-40 – 125 °C, transient 140 °C

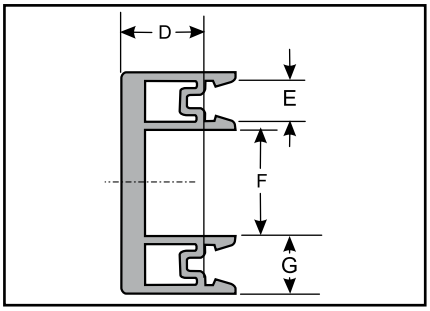
Polyamide 6.6

V0

The cable fixing plate KAF is suitable for simultaneously holding and relieving the strain of cables in the control cabinet. Mounting is performed on a 35 mm top hat rail (EN 50022; Niedax 2934;2936) or on a C-rail (Niedax 2970;2971). The Installation becomes a simple snap-in process.







KAF...

Type	Order no.	Colour	Max. number of cables	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Pack qty.
KAF 11	87201010	black	1	11.5	40.0	-	11.0	9.3	12.0	13.5	1
KAF 75	87201014	black	5	75.0	40.0	63.0	11.0	9.3	12.0	13.5	1
KAF 140	87201018	black	9	139.5	40.0	127.8	11.0	9.3	12.0	13.5	1

Cable fixing plate, type KAF/NI

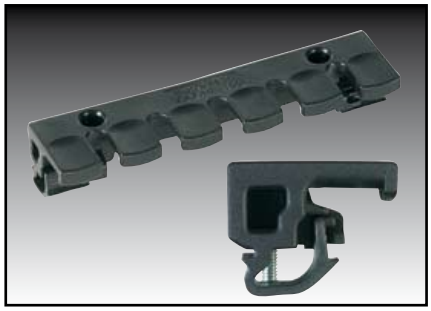
Made in Germany

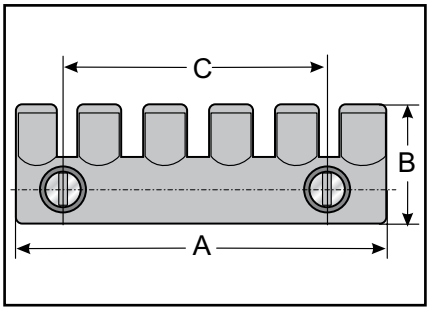
-40 – 125 °C, transient 140 °C

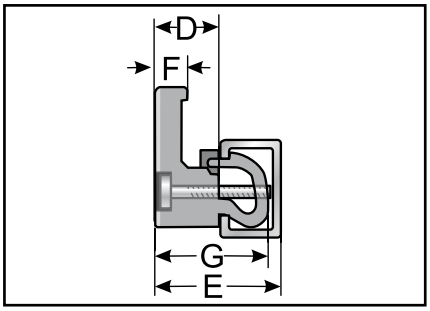
Polyamide 6.6

V0

The cable fixing plate KAF is suitable for simultaneously holding and relieving the strain of cables in the control cabinet. Mounted using Niedax model 2910 C-rail. Installation is a simple snap-in process. Additional securing through lock screw.







KAF/NI

Type	Order no.	Colour	Max. number of cables	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Pack qty.
KAF/NI 100	87201006	black	6	100.0	24.0	67.0	12.0	20.0	5.6	19.0	1

Cable fixing plate, type KAF/K

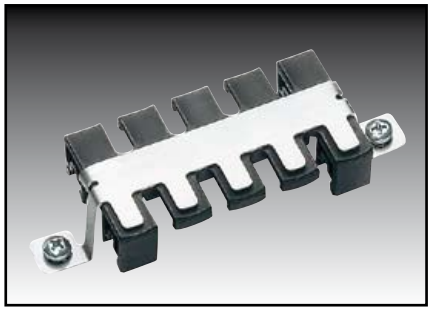
Made in Germany

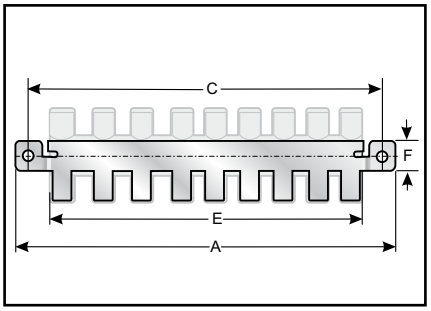
-40 – 125 °C, transient 140 °C

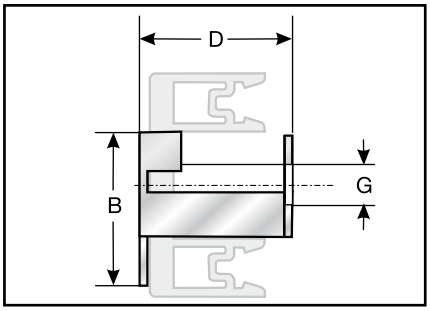
Plate: Polyamide 6.6
Discharge plate: V2A (1.4301)

V0

The cable fixing plate KAF/K-EMC consists of a plastic carrier with a fitted V2A discharge plate. Integrated clamps ensure quick and safe fastening, both on the top hat- or C-rail. The ground contact occurs through the lateral brackets. The use of two connecting points ensures a good discharge.







KAF/K...

Type	Order no.	Max. number of cables	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Pack qty.
KAF/K-75-EMC	87201414	5	109.0	23.0	96.5	26.6	75.0	12.4	4.5	1
KAF/K-140-EMC	87201418	9	173.0	23.0	157.0	26.6	139.5	12.4	4.5	1

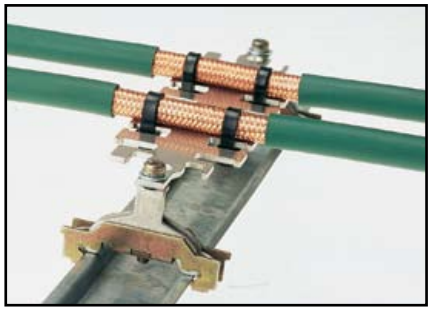
Cable fixing plate, type KAF/EK

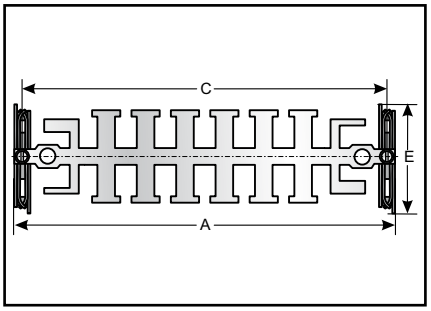
Made in Germany

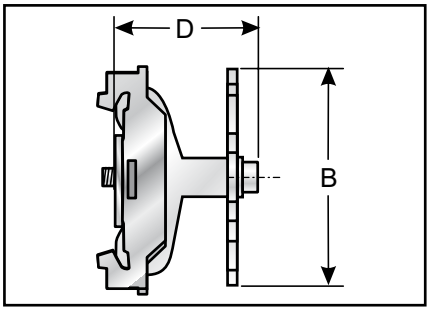
Plate: V2A (1.4301)

The cable fixing plate KAF/K-EMC consists of a V2A plate for the direct discharge of any interference on the cable sheaths. Stripping the cable in the area of the cable fixing plate and fastening by means of cable ties ensures contact to the cable fixing plate. The ground contact is provided through a special screw stand for the 35 mm hat rail (EN50022). The KAF/EK is characterised by its extremely fast and easy assembly.

- Fits on 35 mm top hat rail (EN50022)







KAF/EK...

Type	Order no.	A mm	B mm	C mm	D mm	E mm	Pack qty.
KAF/EK-EMC 140	87201228	155.0	41.5	146.0	29.0	51.0	1
KAF/EK-EMC 165	87201230	179.0	171.0	169.0	29.0	51.0	1

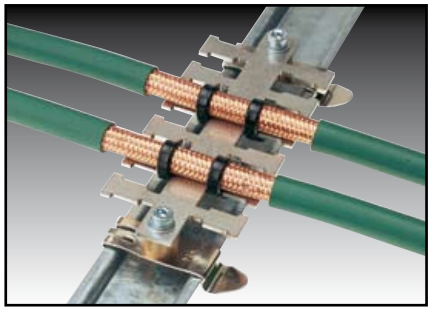
Cable fixing plate, type KAF/SF

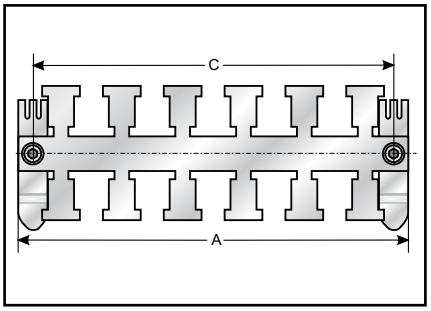
Made in Germany

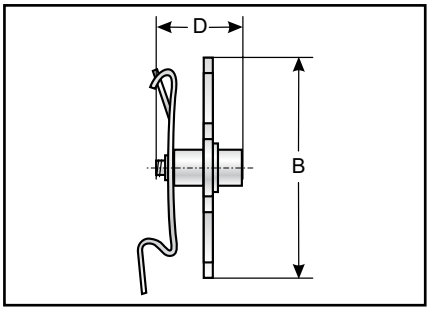
Plate: V2A (1.4301)

The cable fixing plate KAF/SF is suitable for discharging interferences which may occur on cable sheaths. The ground contact is provided through a special snap-on stand for the 35 mm hat rail (EN50022). Stripping the cable in the area of the KAF/SF and clamping in the KAF/SF achieves a contact to the KAF/SF. The snap-on clip of the KAF/SF produces a low-resistance ground contact. The use of two connecting points ensures a good discharge regardless of the position of the cable on the KAF/SF.

- Fits on 35 mm top hat rail (EN50022)
- Simply snapped on







KAF/SF..

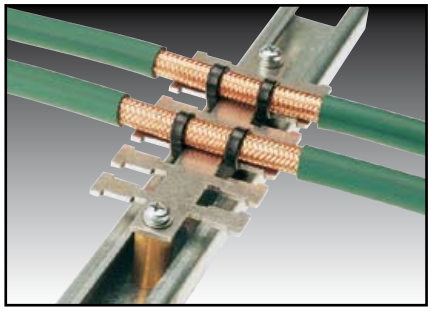
Type	Order no.	Max. number of cables	A mm	B mm	C mm	D mm	Pack qty.
KAF/SF-50 EMC	87201240	2	50.0	49.0	37.5	20.0	1
KAF/SF-83 EMC	87201242	4	83.0	49.0	71.0	20.0	1
KAF/SF-116 EMC	87201244	6	116.0	49.0	103.0	20.0	1
KAF/SF-180 EMC	87201248	10	185.0	49.0	171.0	20.0	1

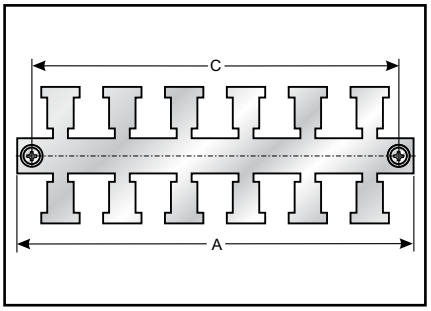
Cable fixing plate, type KAF/DC

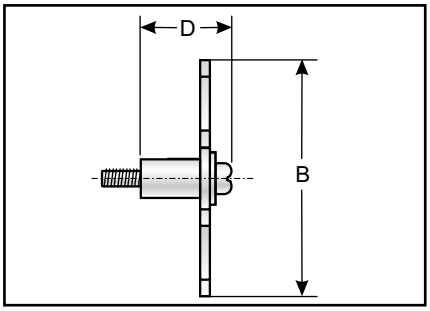
Made in Germany

Plate: V2A (1.4301)
Stand: Brass

The cable fixing plate KAF/DC is suitable for discharging interferences which may occur on cable sheaths. The ground connection occurs via the fixing screws.
The version DC is only suitable for direct installation on a conductive background.
Stripping the cable in the area of the cable fixing plate and fastening by means of cable ties ensures contact to the cable fixing plate.
A low-resistance ground contact is achieved by mounting the KAF on the mounting plate.
The use of two connecting points ensures a good discharge regardless of the position of the cable on the KAF.







KAF/DC...

Type	Order no.	Max. number of cables	A mm	B mm	C mm	D mm	Pack qty.
KAF/DC-50 EMC	87201250	2	50	49	37.5	26.5	1
KAF/DC-83 EMC	87201252	4	83	49	70.0	26.5	1
KAF/DC-116 EMC	87201254	6	116	49	103.0	26.5	1
KAF/DC-180 EMC	87201258	10	180	49	170.0	26.5	1

Cable tie rail, type KBL

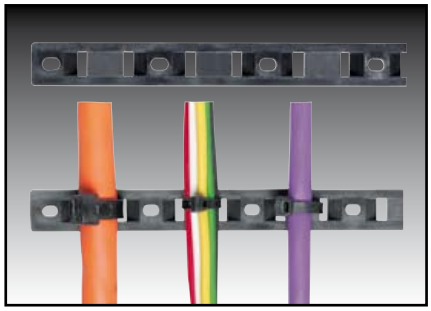
Made in Germany | RoHS compliant

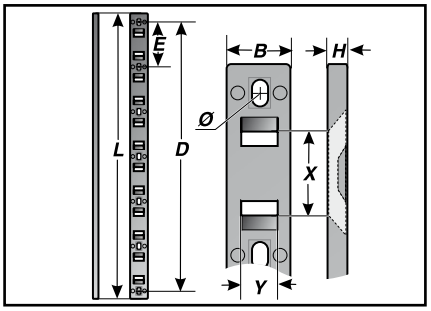
-40 – 80 °C, transient 100 °C

Polyamide 6

V0

Quick and easy fitting of cables.
Cable ties may be pushed on if a rail is already fitted.





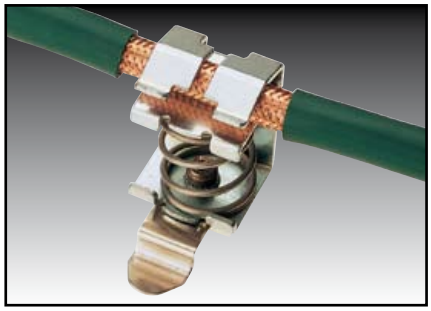
KBL...

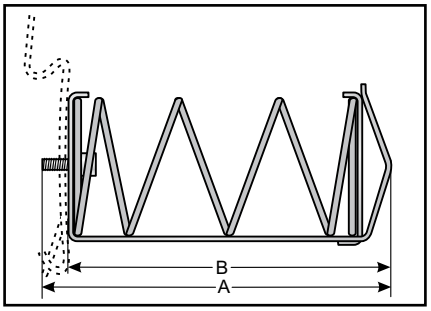
Type	Order no.	Colour	No. cable ties	L mm	B mm	H mm	D mm	E mm	X mm	Y mm	Ø mm	Pack qty.
KBL 245 x 15	87702120	black	6	245.0	15.6	5.1	23.0	38.5	24.0	8.6	4.0	1

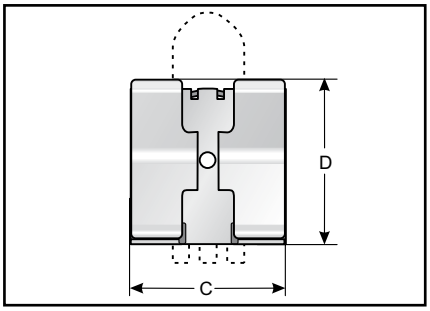
Shielding clamp, type SK

Galvanised sheet steel

The shielding clamp may be used where the shield of individual cables must be connected with earth potential. The SK can be either screwed down on the mounting plate or snapped on to the 35 mm top hat rail (EN 50022) by means of a mounting foot.
SK mounting foot not included in delivery. Please order separately.



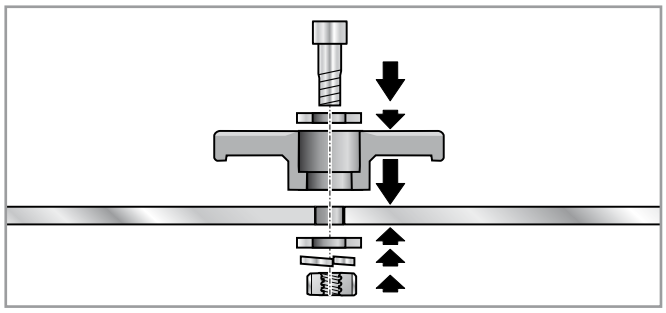




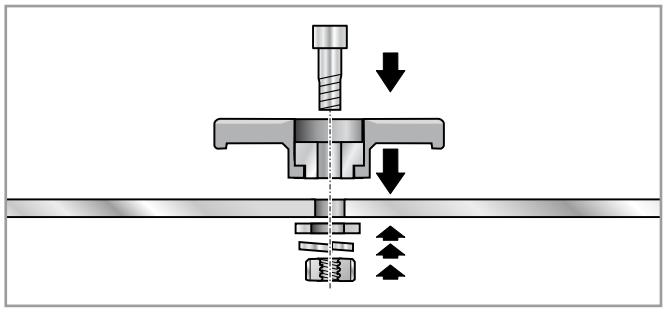
SK...

Type	Order no.	Fastening	For sheath of Ø mm	A mm	B mm	C mm	D mm	Pack qty.
SK 3 – 8	87201060	M4	3 – 8	32.0	26.0	18.0	13.5	10
SK 4 – 13.5	87201062	M4	4 – 13.5	38.5	32.5	20.0	20.0	10
SK 10 – 20	87201064	M4	10 – 20	46.0	40.0	26.0	25.0	10
SK 15 – 32	87201066	M4	15 – 32	70.0	64.0	32.5	33.5	10
SK mounting foot	87201070	Snap-on clip				13.0	50.0	10

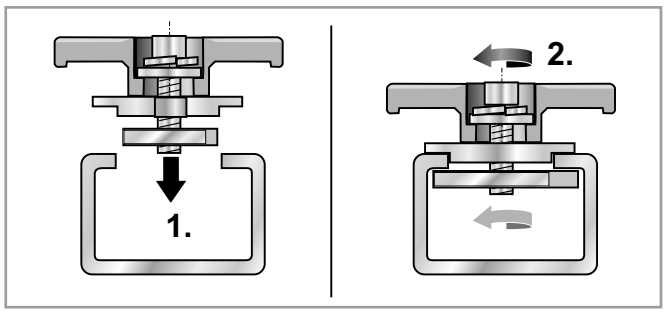
Mounting (ZL; ZL-AH; ZL-MH; ZL-AM; ZL-SW; ZLF)



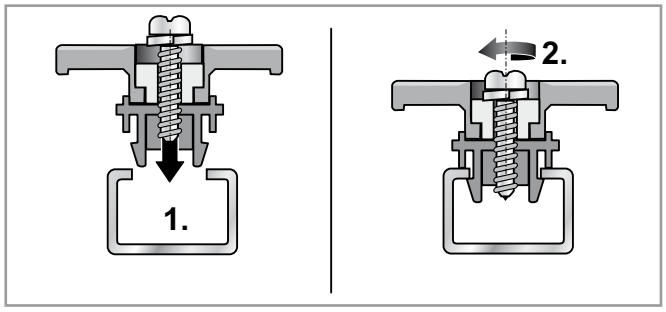
Mounting strain relief type ZL: Set plate onto level surface and affix with suitable mounting material.



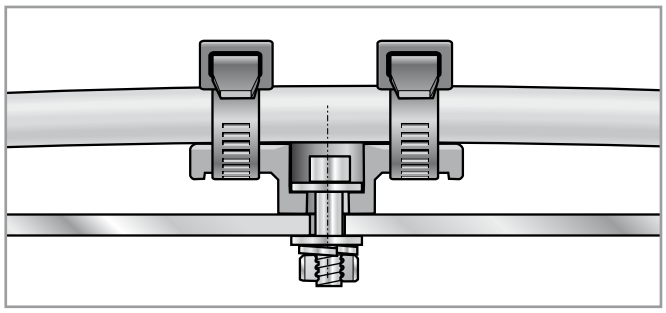
Mounting strain relief type ZL-AH or ZL-MH: Set plate onto level surface and affix with suitable mounting material.



Mounting strain relief type ZL-AM or ZL-SW: Set plate into suitable rail. Turn slot nut into rail using fastening screw. Ensure proper positioning of the slot nut. Screw down the fastening screw until the plate is clamped.

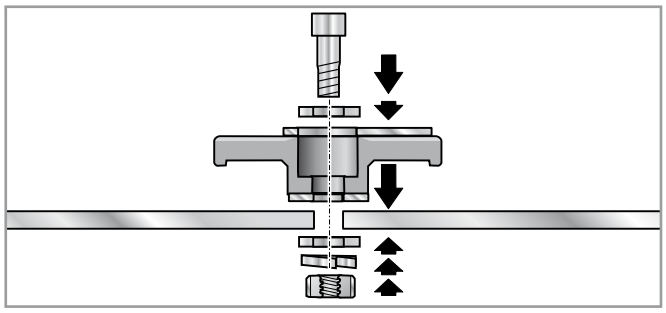


Mounting strain relief type ZLF: Set plate into suitable rail. Screw down the fastening screw until the plate is clamped.

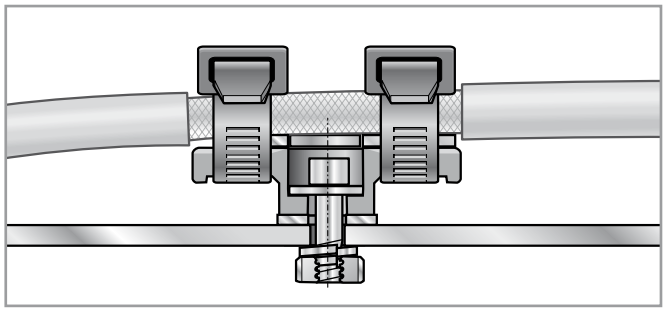


Wire mounting on ZL, ZL-AH, ZL-MH, ZL-AM, ZL-SW and ZLF: Lay cables perpendicular to plate and affix on both sides with cable ties. For larger cable diameters, secure the cable through at least 2 retainers.

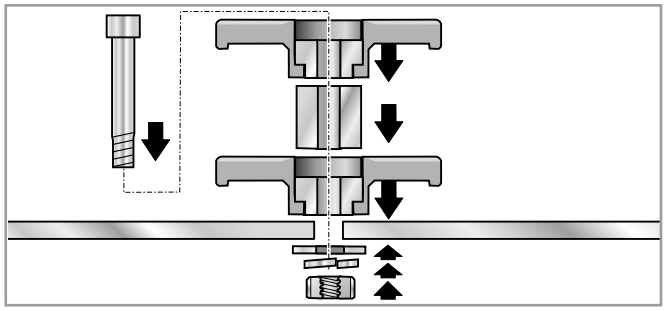
Mounting (ZL xx-AB; doubled; KAF)



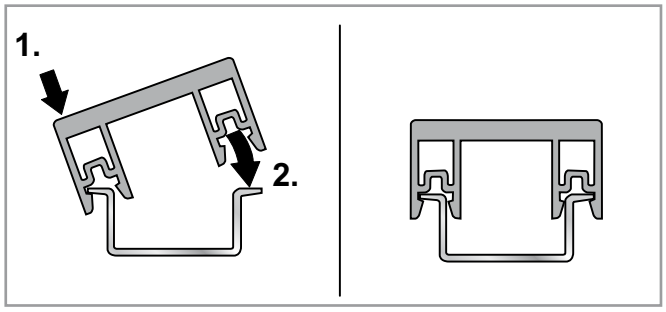
Mounting strain relief, type ZL xx-AB: Set plate with attached discharge plate onto level surface and affix with suitable mounting material. Ensure good contact.



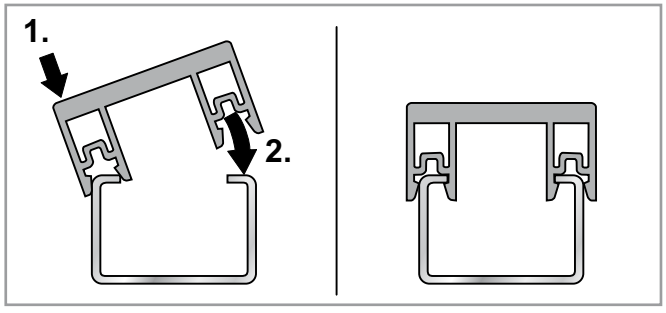
Cable mounting on ZL xx-AB: Lay stripped cables perpendicular to plate and affix on both sides with cable ties. For larger cable diameters, secure the cable through at least 2 retainers.



Strain relief for 2-tier installation: Provide metal inserts for upper and lower ZL. Install DH spacing sleeve between the plates. Affix with a suitable mounting material.

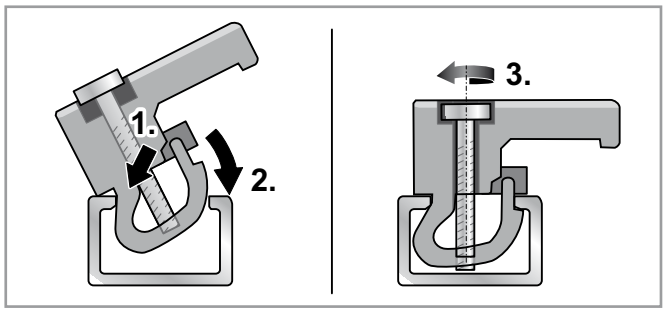


Mounting strain relief type KAF on top hat rail: Set plate lengthwise to the rail. Press plate into the side opposite it until it clicks into the rail.

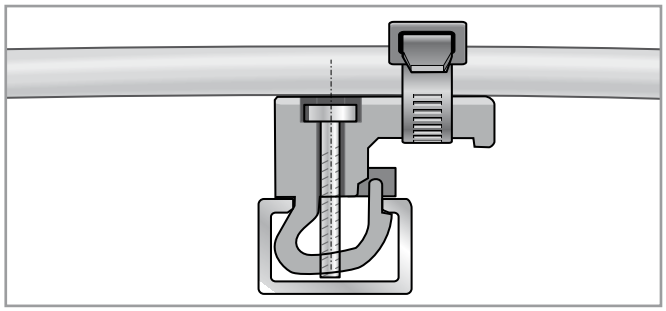


Mounting strain relief type KAF on C-rail: Set plate lengthwise on the lower side of the rail. Press plate into the side opposite it until it clicks into the rail.

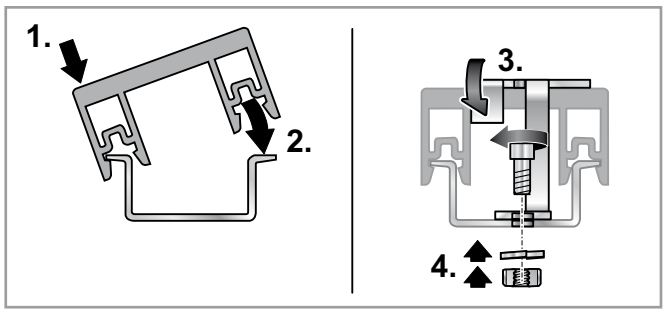
Mounting (KAF; KAF/NI; KAF/K; KAF/EK)



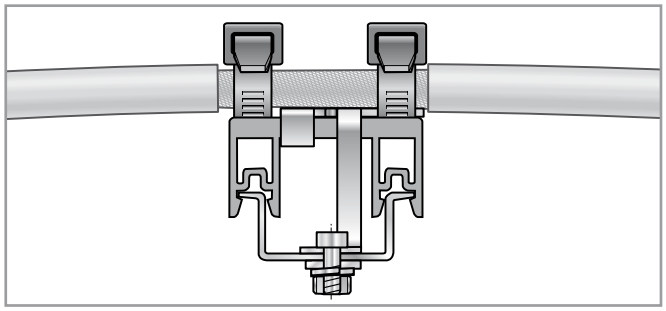
Mounting strain relief type KAF/NI on Nidax C-rail: Set plate lengthwise to the rail and press in. Affix with the lock screw.



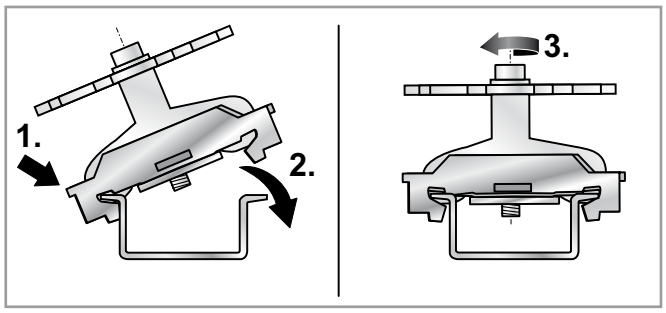
Cable mounting on the KAF or KAF/NI: Lay cables perpendicular to plate and affix on both sides with cable ties. For larger cable diameters, secure the cable through at least 2 retainers.



Mounting strain relief type KAF/K: Set plate lengthwise to the rail. Press plate into the side opposite it until it clicks into the rail. Place the discharge plate. Affix with a suitable mounting material. Ensure good contact.

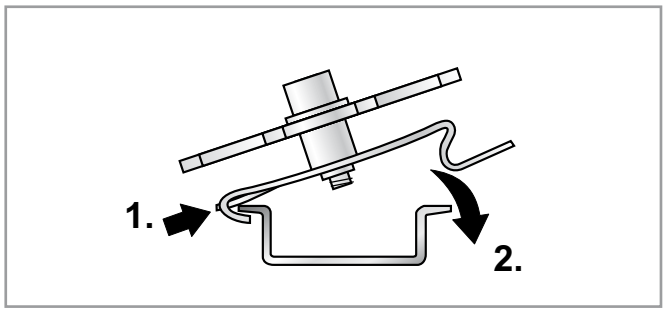


Cable mounting onto KAF/K: Lay stripped cables perpendicular to plate and affix on both sides with cable ties. For larger cable diameters, secure the cable through at least 2 retainers.

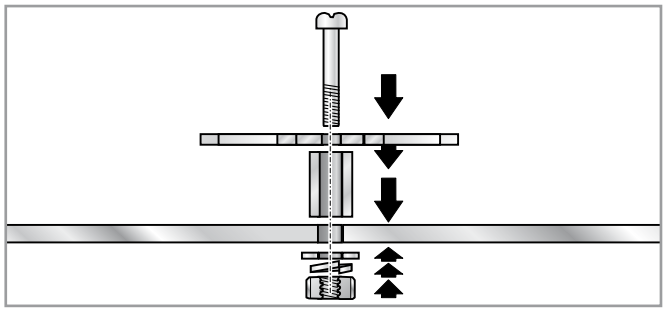


Mounting strain relief type KAF/EK: Set plate lengthwise atop the rail. Screw down the fastening screw until the plate is clamped.

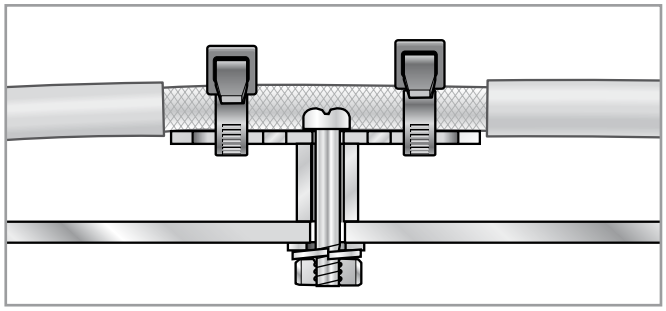
Mounting (KAF/SF; KAF/DC; SK)



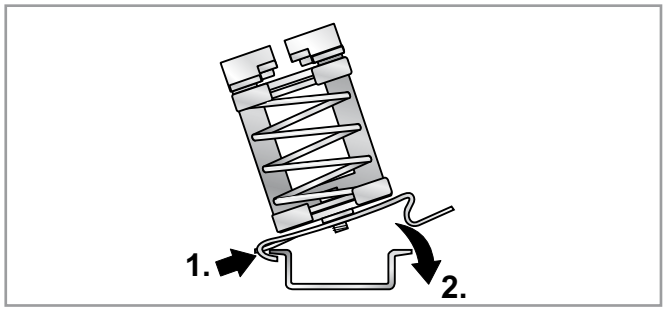
Mounting strain relief type KAF/SF: Set snap-on foot into the top hat rail and press down until the foot clicks in.



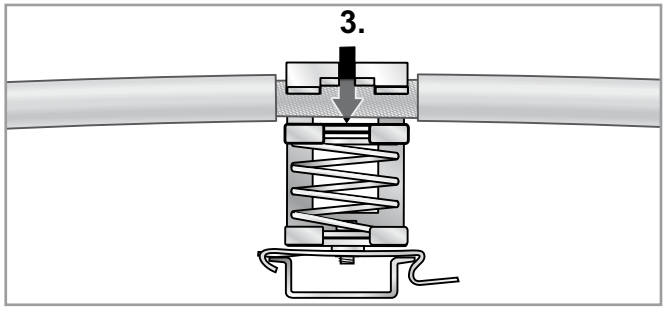
Mounting strain relief type KAF/DC: Position plate using spacer sleeves on the flat space and affix with a suitable mounting material.



Cable mounting on KAF/EK, KAF/SF or KAF/DC: Lay stripped cables perpendicular to plate and affix on both sides with cable ties. For larger cable diameters, secure the cable through at least 2 retainers.



Mounting shielding clamp SK: Mount shielding clamp with the fastening screw or set the snap-on foot into the top hat rail and press down until the foot clicks in. Ensure good contact.



Cable mounting for the SK shielding clamp: Press down on pressure plate and insert stripped cable. Release pressure plate and check contact.

KDH

Cable fitting

Advantages

Tried-and-true

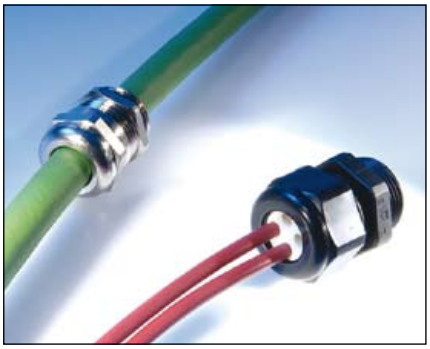
Traditional cable fittings are required in all installations.

Known for excellent strain relief even while providing higher protection class.

They are available in a wide variety of models, such as plastic or metal.

Other types are available for EMC applications or in areas at risk of explosion.

Multi-inserts add more capacity.



- ✔ High protection class
- ✔ Good strain relief
- ✔ Simple mounting
- ✔ Wide variety of types

Overview cable fittings

Plastic cable fitting, type WKK

The cable fitting WKK offers excellent strain relief and has a vibration-resistant cap nut. Can be combined with the multi-insert KV-ME.

Page 177

Plastic cable fitting, type WKK-Ex

Cable fitting with high protection class for areas at risk of explosion. The cable fitting offers excellent strain relief and has a vibration-resistant cap nut.

Page 180

Metal cable fitting, type WKM

The cable fitting WKM offers excellent strain relief and has a vibration-resistant cap nut. Can be combined with the multi.insert KV-ME.

Page 181

Metal cable fitting with a multi-insert, type MWKM

The MWKM is a metal cable fitting with multi-insert that enables several cables to be routed through one cable fitting.

Page 183

Metal cable fitting, type WKM-EMC

Shielded cables can be connected to earth potential using this cable fitting. The cable's braiding makes contact with the metal body.

Page 184

Multi-insert, type KV-ME

The multi-insert type KV-ME can be used in the cable fittings WKK and WKM. This enables several cables to be routed through one fitting.

Page 185

Material data for all fittings /multi-inserts

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

RoHS compliant

All components in our fittings range are free of halogen, phosphorous, cadmium, asbestos, lead and silicone. The range also complies with the RoHS guidelines. The IP class entered can be increased with a few fittings and an additional O-ring.

Material data for all individual components (fittings, multi-inserts)

Type	Material	Approvals	Fire classification	Protection class	Use in temperature areas		
				IP	from ° C	to °C	transient °C
WKK	Polyamide Moulded seal: NBR	UR CSA VDE	V0	IP 54 IP 68* (to 10 bar) IP 69K*	-40	100	120
WKK-Ex	Polyamide Moulded seal: NBR	Ex-class: EEx e II PTB EEx e II KEMA	V0	IP 54 IP 68* (to 10 bar)	-20	105	–
WKM	Brass, nickel-plated Polyamide, NBR	UR CSA VDE	–	IP 68 (to 10 bar)	-40	100	120
MWKM	Brass, nickel-plated Polyamide, NBR Moulded seal: Elastomer O-Ring: NBR	–	–	IP 65	-40	100	120
WKM-EMC	Brass, nickel-plated Polyamide, NBR Moulded seal: NBR	–	–	IP 68 (to 10 bar)	-40	100	120
KV-ME	Elastomer	UR	–	IP 65	-40	100	120

* with additional O-ring, type OR

Plastic cable fitting, type WKK

-40 – 100 °C, transient 120 °C

Polyamide
Moulded seal: NBR

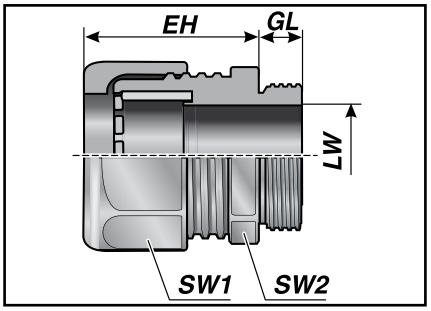
V0

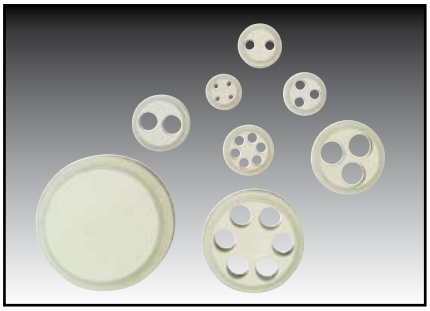
IP 54, with additional O-ring type OR
IP 68 to 10 bar / IP 69K

The cable fitting offers excellent strain relief and has a vibration-resistant cap nut.
The multi-insert KV-ME enables several cables to be routed through one cable fitting.

- Very high protection class
- Easy to assemble
- Large clamping range

An additional O-ring (type OR) is required in order to assure a protection rating of IP 68 / IP 69K.





WKK

Type	Order no.	Colour	Connecting thread	LW mm	EH mm	GL mm	SW 1 / 2 mm	Pack qty.
Metric version								
WKK-M12x1.5	84105050	black	M12x1.5	3.0 – 6.5	21.0	8.0	15 / 15	50
WKK-M16x1.5	84105056	black	M16x1.5	4.0 – 8.0	22.0	8.0	19 / 19	50
WKK-M20x1.5	84105062	black	M20x1.5	6.0 – 12.0	27.0	9.0	24 / 24	50
WKK-M25x1.5	84105068	black	M25x1.5	13.0 – 18.0	31.0	11.0	33 / 33	50
WKK-M32x1.5	84105074	black	M32x1.5	18.0 – 25.0	39.0	11.0	42 / 42	25
WKK-M40x1.5	84105080	black	M40x1.5	22.0 – 32.0	48.0	13.0	53 / 53	10
WKK-M50x1.5	84105086	black	M50x1.5	32.0 – 38.0	49.0	13.0	60 / 60	5
WKK-M63x1.5	84105092	black	M63x1.5	37.0 – 44.0	49.0	14.0	65 / 68	5
WKK-M12x1.5	84105000	grey	M12x1.5	3.0 – 6.5	21.0	8.0	15 / 15	50
WKK-M16x1.5	84105006	grey	M16x1.5	4.0 – 8.0	22.0	8.0	19 / 19	50
WKK-M20x1.5	84105012	grey	M20x1.5	6.0 – 12.0	27.0	9.0	24 / 24	50
WKK-M25x1.5	84105018	grey	M25x1.5	13.0 – 18.0	31.0	11.0	33 / 33	50
WKK-M32x1.5	84105024	grey	M32x1.5	18.0 – 25.0	39.0	11.0	42 / 42	25
WKK-M40x1.5	84105030	grey	M40x1.5	22.0 – 32.0	48.0	13.0	53 / 53	10
WKK-M50x1.5	84105036	grey	M50x1.5	32.0 – 38.0	49.0	13.0	60 / 60	5
WKK-M63x1.5	84105042	grey	M63x1.5	37.0 – 44.0	49.0	14.0	65 / 68	5
Metric version with extended thread								
WKK/L-M12x1.5	84105650	black	M12x1.5	3.0 – 6.5	21.0	15.0	15 / 15	50
WKK/L-M16x1.5	84105652	black	M16x1.5	4.0 – 8.0	22.0	15.0	19 / 19	50
WKK/L-M20x1.5	84105654	black	M20x1.5	6.0 – 12.0	27.0	15.0	24 / 24	50
WKK/L-M25x1.5	84105656	black	M25x1.5	13.0 – 18.0	31.0	15.0	33 / 33	50

Plastic cable fitting, type WKK

RoHS compliant

Type	Order no.	Colour	Connecting thread	LW mm	EH mm	GL mm	SW 1 / 2 mm	Pack qty.
Pg version								
WKK-Pg07	84101050	black	Pg07	3.0 – 6.5	21.0	8.0	15 / 15	50
WKK-Pg09	84101052	black	Pg09	4.0 – 8.0	22.0	8.0	19 / 19	50
WKK-Pg11	84101054	black	Pg11	5.0 – 10.0	25.0	8.0	22 / 22	50
WKK-Pg13.5	84101056	black	Pg13.5	6.0 – 12.0	27.0	9.0	24 / 24	50
WKK-Pg16	84101058	black	Pg16	10.0 – 14.0	28.0	10.0	27 / 27	50
WKK-Pg21	84101060	black	Pg21	13.0 – 18.0	31.0	11.0	33 / 33	50
WKK-Pg29	84101062	black	Pg29	18.0 – 25.0	39.0	11.0	42 / 42	25
WKK-Pg36	84101064	black	Pg36	22.0 – 32.0	48.0	13.0	53 / 53	10
WKK-Pg42	84101066	black	Pg42	32.0 – 38.0	49.0	13.0	60 / 60	5
WKK-Pg48	84101068	black	Pg48	37.0 – 44.0	49.0	13.0	65 / 65	5
WKK-Pg07	84101010	grey	Pg07	3.0 – 6.5	21.0	8.0	15 / 15	50
WKK-Pg09	84101012	grey	Pg09	4.0 – 8.0	22.0	8.0	19 / 19	50
WKK-Pg11	84101014	grey	Pg11	5.0 – 10.0	25.0	8.0	22 / 22	50
WKK-Pg13.5	84101016	grey	Pg13.5	6.0 – 12.0	27.0	9.0	24 / 24	50
WKK-Pg16	84101018	grey	Pg16	10.0 – 14.0	28.0	10.0	27 / 27	50
WKK-Pg21	84101020	grey	Pg21	13.0 – 18.0	31.0	11.0	33 / 33	50
WKK-Pg29	84101022	grey	Pg29	18.0 – 25.0	39.0	11.0	42 / 42	25
WKK-Pg36	84101024	grey	Pg36	22.0 – 32.0	48.0	13.0	53 / 53	10
WKK-Pg42	84101026	grey	Pg42	32.0 – 38.0	49.0	13.0	60 / 60	5
WKK-Pg48	84101028	grey	Pg48	37.0 – 44.0	49.0	13.0	65 / 65	5
Pg version with extended thread								
WKK/L-Pg07	84101650	black	Pg07	3.0 – 6.5	21.0	15.0	15 / 15	50
WKK/L-Pg09	84101652	black	Pg09	4.0 – 8.0	22.0	15.0	19 / 19	50
WKK/L-Pg11	84101654	black	Pg11	5.0 – 10.0	25.0	15.0	22 / 22	50
WKK/L-Pg13.5	84101656	black	Pg13.5	6.0 – 12.0	27.0	15.0	24 / 24	50
WKK/L-Pg16	84101658	black	Pg16	10.0 – 14.0	28.0	15.0	27 / 27	50
WKK/L-Pg21	84101660	black	Pg21	13.0 – 18.0	31.0	15.0	33 / 33	50
WKK/L-Pg29	84101662	black	Pg29	18.0 – 25.0	39.0	15.0	42 / 42	25
WKK/L-Pg36	84101664	black	Pg36	22.0 – 32.0	48.0	18.0	53 / 53	10
WKK/L-Pg42	84101666	black	Pg42	32.0 – 38.0	49.0	18.0	60 / 60	5
WKK/L-Pg48	84101668	black	Pg48	37.0 – 44.0	49.0	18.0	65 / 65	5
WKK/L-Pg07	84101610	grey	Pg07	3.0 – 6.5	21.0	15.0	15 / 15	50
WKK/L-Pg09	84101612	grey	Pg09	4.0 – 8.0	22.0	15.0	19 / 19	50
WKK/L-Pg11	84101614	grey	Pg11	5.0 – 10.0	25.0	15.0	22 / 22	50
WKK/L-Pg13.5	84101616	grey	Pg13.5	6.0 – 12.0	27.0	15.0	24 / 24	50
WKK/L-Pg16	84101618	grey	Pg16	10.0 – 14.0	28.0	15.0	27 / 27	50
WKK/L-Pg21	84101620	grey	Pg21	13.0 – 18.0	31.0	15.0	33 / 33	50
WKK/L-Pg29	84101622	grey	Pg29	18.0 – 25.0	39.0	15.0	42 / 42	25
WKK/L-Pg36	84101624	grey	Pg36	22.0 – 32.0	48.0	18.0	53 / 53	10
WKK/L-Pg42	84101626	grey	Pg42	32.0 – 38.0	49.0	18.0	60 / 60	5
WKK/L-Pg48	84101628	grey	Pg48	37.0 – 44.0	49.0	18.0	65 / 65	5

Plastic cable fitting, type WKK

Type	Order no.	Colour	Connecting thread	LW mm	EH mm	GL mm	SW 1 / 2 mm	Pack qty.
NPT version								
WKK/NPT 3/8"	84102050	black	3/8"	2.0 – 6.0	22	15.0	19 / 22	50
WKK/NPT 3/8"	84102052	black	3/8"	4.0 – 8.0	22	15.0	19 / 22	50
WKK/NPT 1/2"	84102054	black	1/2"	5.0 – 9.0	27	13.0	24 / 24	50
WKK/NPT 1/2"	84102056	black	1/2"	9.0 – 12.0	28	13.0	24 / 24	50
WKK/NPT 3/4"	84102058	black	3/4"	9.0 – 16.0	32	13.0	33 / 33	50
WKK/NPT 3/4"	84102060	black	3/4"	13.0 – 18.0	32	13.0	33 / 33	50
WKK/NPT 3/8"	84102010	grey	3/8"	2.0 – 6.0	22	15.0	19 / 22	50
WKK/NPT 3/8"	84102012	grey	3/8"	4.0 – 8.0	22	15.0	19 / 22	50
WKK/NPT 1/2"	84102014	grey	1/2"	5.0 – 9.0	27	13.0	24 / 24	50
WKK/NPT 1/2"	84102016	grey	1/2"	9.0 – 12.0	28	13.0	24 / 24	50
WKK/NPT 3/4"	84102018	grey	3/4"	9.0 – 16.0	32	13.0	33 / 33	50
WKK/NPT 3/4"	84102020	grey	3/4"	13.0 – 18.0	32	13.0	33 / 33	50

O-ring type OR-NBR for protection rating IP 68, see "Accessories" chapter

Plastic cable fitting, type WKK-Ex

RoHS compliant

-20 – 105 °C

Polyamide
Moulded seal: NBR

V0

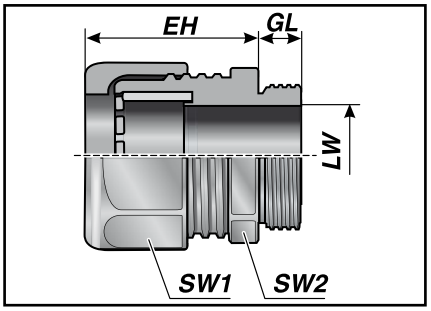
IP 54, with additional O-ring type OR
IP 68 up to 10 bar

Ex-Klasse EEx e II PTB
Ex-Klasse EEx e II KEMA

Cable fitting with high protection class for areas at risk of explosion.
The cable fitting offers excellent strain relief and has a vibration-resistant cap nut.

- Very high protection class
- Approved for areas at risk of explosion
- Large clamping range

An additional O-ring (type OR) is required in order to reach a protection rating of IP68.



WKK-EX

Type	Order no.	Colour	Connecting thread	LW mm	EH mm	GL mm	SW 1 / 2 mm	Pack qty.
Pg version								
WKK / Ex-Pg07	84101250	black	Pg07	3.0 – 6.5	21.0	8.0	15 / 15	50
WKK/Ex-Pg09	84101252	black	Pg09	4.0 – 8.0	22.0	8.0	19 / 19	50
WKK/Ex-Pg11	84101254	black	Pg11	5.0 – 10.0	25.0	8.0	22 / 22	50
WKK/Ex-Pg13.5	84101256	black	Pg13.5	6.0 – 12.0	27.0	9.0	24 / 24	50
WKK/Ex-Pg16	84101258	black	Pg16	10.0 – 14.0	28.0	10.0	27 / 27	50
WKK/Ex-Pg21	84101260	black	Pg21	13.0 – 18.0	31.0	11.0	33 / 33	50
WKK/Ex-Pg29	84101262	black	Pg29	18.0 – 25.0	39.0	11.0	42 / 42	25
WKK/Ex-Pg36	84101264	black	Pg36	22.0 – 32.0	48.0	13.0	53 / 53	10
WKK/Ex-Pg42	84101266	black	Pg42	32.0 – 38.0	49.0	13.0	60 / 60	5
WKK/Ex-Pg48	84101268	black	Pg48	37.0 – 44.0	49.0	14.0	65 / 65	5
WKK / Ex-Pg07	84101210	grey	Pg07	3.0 – 6.5	21.0	8.0	15 / 15	50
WKK/Ex-Pg09	84101212	grey	Pg09	4.0 – 8.0	22.0	8.0	19 / 11	50
WKK/Ex-Pg11	84101214	grey	Pg11	5.0 – 10.0	25.0	8.0	22 / 22	50
WKK/Ex-Pg13.5	84101216	grey	Pg13.5	6.0 – 12.0	27.0	9.0	24 / 24	50
WKK/Ex-Pg16	84101218	grey	Pg16	10.0 – 14.0	28.0	10.0	27 / 27	50
WKK/Ex-Pg21	84101220	grey	Pg21	13.0 – 18.0	31.0	11.0	33 / 33	50
WKK/Ex-Pg29	84101222	grey	Pg29	18.0 – 25.0	39.0	11.0	42 / 42	25
WKK/Ex-Pg36	84101224	grey	Pg36	22.0 – 32.0	48.0	13.0	53 / 53	10
WKK/Ex-Pg42	84101226	grey	Pg42	32.0 – 38.0	49.0	13.0	60 / 60	5
WKK/Ex-Pg48	84101228	grey	Pg48	37.0 – 44.0	49.0	14.0	65 / 65	5

Metal cable fitting, type WKM

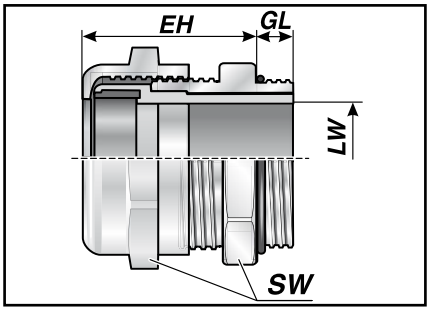
-40 – 100 °C transient 120 °C

Brass, nickel-plated; Polyamide; NBR

IP 68 up to 10 bar

The cable fitting offers excellent strain relief and has a vibration-resistant cap nut. The multi-insert KV-ME enables several cables to be routed through one cable fitting.

- Very high protection class
- Easy to assemble
- Large clamping range
- Includes sealing ring on connecting thread



WKM

Type	Order no.	Connecting thread	LW mm	EH mm	GL mm	SW mm	Pack qty.
Metric version							
WKM-M12x1.5	84125010	M12x1.5	3.0 – 6.5	19.0	5.0	14	50
WKM-M16x1.5	84125014	M16x1.5	4.0 – 8.0	20.0	6.0	17	50
WKM-M20x1.5	84125018	M20x1.5	6.0 – 12.0	22.0	6.0	22	50
WKM-M25x1.5	84125022	M25x1.5	13.0 – 18.0	25.0	7.0	27	25
WKM-M32x1.5	84125026	M32x1.5	18.0 – 25.0	29.0	8.0	40	25
WKM-M40x1.5	84125030	M40x1.5	22.0 – 32.0	35.0	8.0	50	10
WKM-M50x1.5	84125034	M50x1.5	32.0 – 38.0	37.0	9.0	57	10
WKM-M63x1.5	84125038	M63x1.5	37.0 – 44.0	38.0	10.0	64 / 68	10
Pg version							
WKM-Pg07	84121010	Pg07	3.0 – 6.5	19.0	5.0	14	50
WKM-Pg09	84121012	Pg09	4.0 – 8.0	20.0	6.0	17	50
WKM-Pg11	84121014	Pg11	5.0 – 10.0	21.0	6.0	20	50
WKM-Pg13.5	84121016	Pg13.5	6.0 – 12.0	22.0	6.5	22	50
WKM-Pg16	84121018	Pg16	10.0 – 14.0	23.0	6.5	24	50
WKM-Pg21	84121020	Pg21	13.0 – 18.0	25.0	7.0	30	25
WKM-Pg29	84121022	Pg29	18.0 – 25.0	29.0	8.0	40	25
WKM-Pg36	84121024	Pg36	22.0 – 32.0	35.0	8.0	40	10
WKM-Pg42	84121026	Pg42	32.0 – 38.0	37.0	9.0	57	5
WKM-Pg48	84121028	Pg48	37.0 – 44.0	38.0	10.0	64	5

Metal cable fitting, type WKM

Type	Order no.	Connecting thread	LW mm	EH mm	GL mm	SW mm	Pack qty.
Pg version with extended thread							
WKM/L-Pg07	84121210	Pg07	3.0 – 6.5	19.0	10.0	14	50
WKM/L-Pg09	84121212	Pg09	4.0 – 8.0	20.0	10.0	17	50
WKM/L-Pg11	84121214	Pg11	5.0 – 10.0	21.0	10.0	20	50
WKM/L-Pg13.5	84121216	Pg13.5	6.0 – 12.0	22.0	10.0	22	50
WKM/L-Pg16	84121218	Pg16	10.0 – 14.0	23.0	10.0	24	50
WKM/L-Pg21	84121220	Pg21	13.0 – 18.0	25.0	12.0	30	25
WKM/L-Pg29	84121222	Pg29	18.0 – 25.0	29.0	12.0	40	25
WKM/L-Pg36	84121224	Pg36	22.0 – 32.0	35.0	15.0	40	10
WKM/L-Pg42	84121226	Pg42	32.0 – 38.0	37.0	15.0	57	5
WKM/L-Pg48	84121228	Pg48	37.0 – 44.0	38.0	15.0	64	5
NPT version							
WKM-NPT 3/8"	84122212	3/8"	2.0 – 6.0	21.0	15.0	17 / 19	50
WKM-NPT 3/8"	84122210	3/8"	4.0 – 8.0	21.0	15.0	17 / 19	50
WKM-NPT 1/2"	84122216	1/2"	5.0 – 9.0	24.0	13.0	22 / 24	50
WKM-NPT 1/2"	84122214	1/2"	6.0 – 12.0	24.0	13.0	22 / 24	50
WKM-NPT 3/4"	84122220	3/4"	9.0 – 16.0	25.0	13.0	30	25
WKM-NPT 3/4"	84122218	3/4"	13.0 – 18.0	25.0	13.0	30	25

Metal cable fitting with a multi-insert, type MWKM

-40 – 100 °C, transient 120 °C

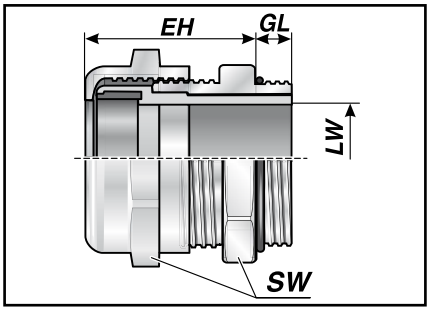
Brass, nickel-plated; Polyamide; NBR

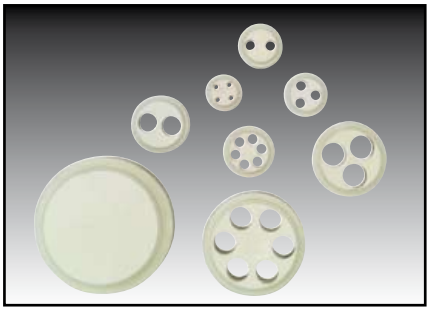
IP 65

Moulded seal: elastomer; O-ring: NBR

The MWKM is a metal cable fitting with multi-insert that enables several cables to be routed through one cable fitting.

- Integrated multi-insert
- High tightness
- Easy to assemble
- Includes sealing ring on connecting thread





MWKM

Type	Order no.	Connecting thread	LW mm	EH mm	GL mm	SW mm	Pack qty.
MWKM-Pg09-2x3	84121810	Pg09	2 x 3.0	21.0	6.0	17	50
MWKM-Pg09-4x1.4	84121812	Pg09	4 x 1.4	21.0	6.0	17	50
MWKM-Pg11-2x3	84121814	Pg11	2 x 3.0	22.0	6.0	20	50
MWKM-Pg11-2x4	84121816	Pg11	2 x 4.0	22.0	6.0	20	50
MWKM-Pg11-2x4	84121818	Pg11	3 x 3.0	22.0	6.0	20	50
MWKM-Pg13.5-2x5	84121820	Pg13.5	2 x 5.0	24.0	6.5	22	50
MWKM-Pg13.5-3x2	84121822	Pg13.5	3 x 2.0	24.0	6.5	22	50
MWKM-Pg13.5-3x4	84121824	Pg13.5	3 x 4.0	24.0	6.5	22	50
MWKM-Pg13.5-6x3	84121826	Pg13.5	6 x 3.0	22.0	6.5	22	50
MWKM-Pg16-2x6	84121828	Pg16	2 x 6.0	23.0	6.5	24	50
MWKM-Pg16-3x3	84121830	Pg16	3 x 3.0	23.0	6.5	24	50
MWKM-Pg16-3x4	84121832	Pg16	3 x 3.0	23.0	6.5	24	50
MWKM-Pg16-3x6	84121834	Pg16	3 x 6.0	23.0	6.5	24	50
MWKM-Pg16-4x4	84121836	Pg16	4 x 4.0	23.0	6.5	24	50
MWKM-Pg16-5x4	84121838	Pg16	5 x 4.0	23.0	6.5	24	50
MWKM-Pg16-6x4	84121840	Pg16	6 x 4.0	23.0	6.5	24	50
MWKM-Pg21-2x8	84121842	Pg21	2 x 8.0	24.0	7.0	30	25
MWKM-Pg21-3x7	84121844	Pg21	3 x 7.0	24.0	7.0	30	25
MWKM-Pg21-4x6	84121846	Pg21	4 x 6.0	24.0	7.0	30	25

Metal cable fitting, type WKM-EMC

RoHS compliant

-40 – 100 °C, transient 120 °C

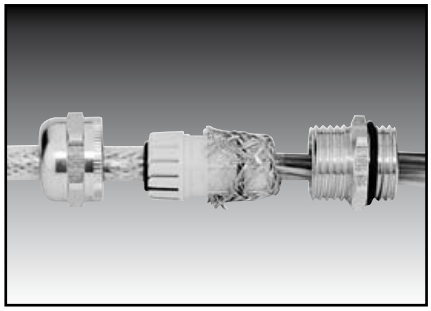
Brass, nickel-plated; Polyamide; NBR

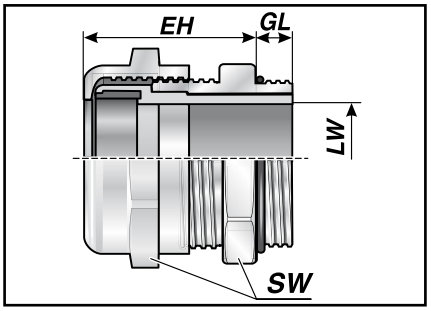
IP 68 up to 10 bar

Moulded seal and O-ring: NBR

Shielded cables can be connected to earth potential using this cable fitting. The cable's braiding makes contact with the metal body. This enables sheath currents to be discharged.

- Simple contacting
- Large clamping range
- Easy handling
- Includes sealing ring on connecting thread





WKM-EMC

Type	Order no.	Connecting thread	LW mm	EH mm	GL mm	SW mm	Pack qty.
Metric/EMC version							
WKM/EMC M12x1.5	84125210	M12x1.5	3.0 – 6.5	19.0	5.0	14	50
WKM/EMC M16x1.5	84125212	M16x1.5	6.0 – 10.0	22.0	6.0	20	50
WKM/EMC M20x1.5	84125214	M20x1.5	10.0 – 14.0	23.0	6.0	24	50
WKM/EMC M25x1.5	84125216	M25x1.5	14.0 – 18.0	24.0	7.0	30	25
WKM/EMC M32x1.5	84125218	M32x1.5	20.0 – 25.0	31.0	8.0	40	25
WKM/EMC M40x1.5	84125220	M40x1.5	22.0 – 32.0	37.0	8.0	50	25
WKM/EMC M63x1.5	84125224	M63x1.5	37.0 – 44.0	38.0	10.0	64 / 68	5
Pg/EMC version							
WKM/EMC Pg07	84122010	Pg07	3.0 – 6.5	19.0	5.0	14	50
WKM/EMC Pg09	84122012	Pg09	4.0 – 8.0	21.0	6.0	17	50
WKM/EMC Pg11	84122014	Pg11	6.0 – 10.0	22.0	6.0	20	50
WKM/EMC Pg13.5	84122016	Pg13.5	6.0 – 12.0	24.0	6.5	22	50
WKM/EMC Pg16	84122018	Pg16	10.0 – 14.0	23.0	6.5	24	50
WKM/EMC Pg21	84122020	Pg21	14.0 – 18.0	24.0	7.0	30	25
WKM/EMC Pg29	84122022	Pg29	20.0 – 25.0	29.0	8.0	40	25
WKM/EMC Pg36	84122024	Pg36	22.0 – 32.0	35.0	8.0	50	10
WKM/EMC Pg42	84122026	Pg42	32.0 – 38.0	37.0	9.0	57	5
WKM/EMC Pg48	84122028	Pg48	37.0 – 44.0	38.0	10.0	64	5

Multi-insert, type KV-ME

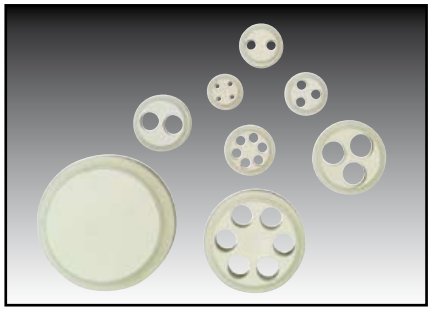
-40 – 100 °C, transient 120 °C

Elastomer

IP 65

The KV-ME multi-insert can be used both in WKK cable fittings and in WKM cable fittings. This enables several cables to be routed through one fitting. The fitted seal insert in the cable fitting is simply swapped for the KV-ME multi-insert.
The cable diameter may be up to 20 % less than the diameter of the hole, but must not undershoot the hole diameter by less than 1mm.

- Variable
- More cables through one fitting
- High protection class



KV-ME

Type	Order no.	Number x Ø mm	Fitting for metric	Fitting for Pg	Fitting for NPT	Pack qty.
KV-ME M16/Pg09-4x1.4	8358221000	4 x 1.4	M 16	Pg 09	NPT 3/8"	50
KV-ME M16/Pg09-2x3	8358221200	2 x 3	M 16	Pg 09	NPT 3/8"	50
KV-ME M20/Pg13.5-2x5	8358222000	2 x 5	M 20	Pg 13.5	NPT 1/2"	50
KV-ME M20/Pg13.5-3x2	8358222200	3 x 2	M 20	Pg 13.5	NPT 1/2"	50
KV-ME M20/Pg13.5-3x4	8358222400	3x4	M 20	Pg 13.5	NPT 1/2"	50
KV-ME M20/Pg13.5-6x3	8358222600	6 x 3	M 20	Pg 13.5	NPT 1/2"	50
KV-ME Pg11-2x3	8358221400	2 x 3	-	Pg 11	-	50
KV-ME Pg11-2x4	8358221600	2 x 4	-	Pg 11	-	50
KV-ME Pg11-3x3	8358221800	3 x 3	-	Pg 11	-	50
KV-ME Pg16-2x6	8358222800	2 x 6	-	Pg 16	-	50
KV-ME Pg16-3x3	8358223000	3 x 3	-	Pg 16	-	50
KV-ME Pg16-3x4	8358223200	3x4	-	Pg 16	-	50
KV-ME Pg16-3x5.6	8358223400	3 x 5.6	-	Pg 16	-	50
KV-ME Pg16-4x4	8358223600	4 x 4	-	Pg 16	-	50
KV-ME Pg16-5x4	8358223800	5 x 4	-	Pg 16	-	50
KV-ME Pg16-6x4	8358224000	6x4	-	Pg 16	-	50
KV-ME M25/Pg21-2x8	8358224200	2 x 8	M 25	Pg 21	NPT 3/4"	50
KV-ME M25/Pg21-3x7	8358224400	3 x 7	M 25	Pg 21	NPT 3/4"	50
KV-ME M25/Pg21-4x6	8358224600	4 x 6	M 25	Pg 21	NPT 3/4"	50
KV-ME M32/Pg29-6x6.5	8358224800	6 x 6.5	M 32	Pg 29	-	50
KV-ME M32/Pg29-4x9	8358225000	4 x 9	M 32	Pg 29	-	25
KV-ME M40/Pg36-blank	8358228400	-	M 40	Pg 36	NPT 1 1/2"	25

KDH

Accessories

Overview accessories (Part 1)

Type KRR (plastic reducing bush)

Thread reducing bush made of plastic with metric or Pg thread. O-ring not included in delivery.

Page 198

Type KGM (plastic lock nut)

Plastic lock nut made from self-extinguishing polyamide with metric or Pg thread.

Page 193

Type RR (metal reducing bush)

Thread reducing bush made of metal with metric or Pg thread. Knurled or hexagon version, depending on type.

Page 200

Type GM (metal lock nut)

Lock nut made of metal with metric or Pg thread.

Page 195

Type ER/EG (metal extension)

Thread extension made of metal with metric or Pg thread. Round or hexagon version, depending on type. Some with O-ring on external thread.

Page 202

Type BSTK (plastic dummy plug)

Dummy plug made of plastic with metric or Pg thread. IP 65 protection rating is achieved using additional O-ring type OR. (O-ring not included in delivery).

Page 196

Type OR-NBR (O-ring)

O-ring for sealing threaded connections resulting in higher protection ratings, e.g. on cable fittings.

Page 204

Type BST (metal dummy plug)

Dummy plug made of metal with metric or Pg thread. IP 65 protection rating is achieved using additional O-ring type OR. (O-ring not included in delivery)

Page 197

Angle bracket, type BWM

Universal holder for fastening fittings to equipment and machinery.

Page 205

Material data for the accessories programme (Part 1)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

RoHS compliant

All items on the opposite page are free of halogen, phosphorous, cadmium, asbestos, lead and silicone. The range also complies with the RoHS guidelines.
The IP class entered can be increased with a few items and an additional O-ring.

Material data for the individual components (Part 1)

Type	Material	Fire classification	Protection class	Use in temperature areas		
			IP	from °C	to °C	transient °C
KGM	Polyamide	V0	–	-30	100	130
GM	Brass, nickel-plated	–	–	–	–	–
BSTK	Polyamide	HB	IP 54 IP 65*	-30	100	130
BST	Brass, nickel-plated	–	IP 54 IP 65*	–	–	–
KRR	Polyamide	HB	–	-30	100	130
RR	Brass, nickel-plated	–	–	–	–	–
ER/EG	Brass, nickel-plated	–	–	–	–	–
OR-NBR	NBR			-25	120	
BWM	Sheet steel, galvanised	–	–	–	–	–

* with additional O-ring, type OR

Overview accessories (Part 2)

Conduit clamp, type SS

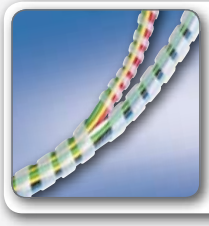
Conduit clamps for easy attachment of conduits from our conduit product range.

Page 206

Conduit clamp, type SSG

Metal conduit clamp with halogen-free elastomer coating.

Page 207



Spiral tape, type SB/SBF

Spiral tapes are used to bundle cable harnesses efficiently and simply. Bundling in the range from 2 – 100 mm is possible with just three sizes. The SBF consists of flame-retardant material.

Page 208

Fixing rivets, type BN
Assembly tool, type BNW

Plastic expansion rivets for the quick installation of components, e.g. cable ducts. Assembly tool BNW is optimally adjusted to the fixing rivets.

Page 209

Cable tie, type KB / KBM / KKB

Cable ties are a reliable method for the economic bundling and fastening of cables, cable harnesses, tubes, conduits and other components.

Page 210

Cable tie, type BF

Cable tie with title block. For use with ink pens or permanent waterproof markers. BF20 title block lengthways along cable, BF45 title block across cable.

Page 212

Screwed holder, type SH

The SH screw-down holder is used to fix individual cables cost-effectively. It can be screwed or riveted to any surface.

Page 213

Type KH (screwed and adhesive holders)

Adhesive holder, plastic. The retention force can be increased by additional fastening with a screw.

Page 214

Material data for the accessories programme (Part 2)

- Halogen-free
- Phosphorous-free
- Cadmium-free
- Asbestos-free
- Lead-free
- Silicone-free

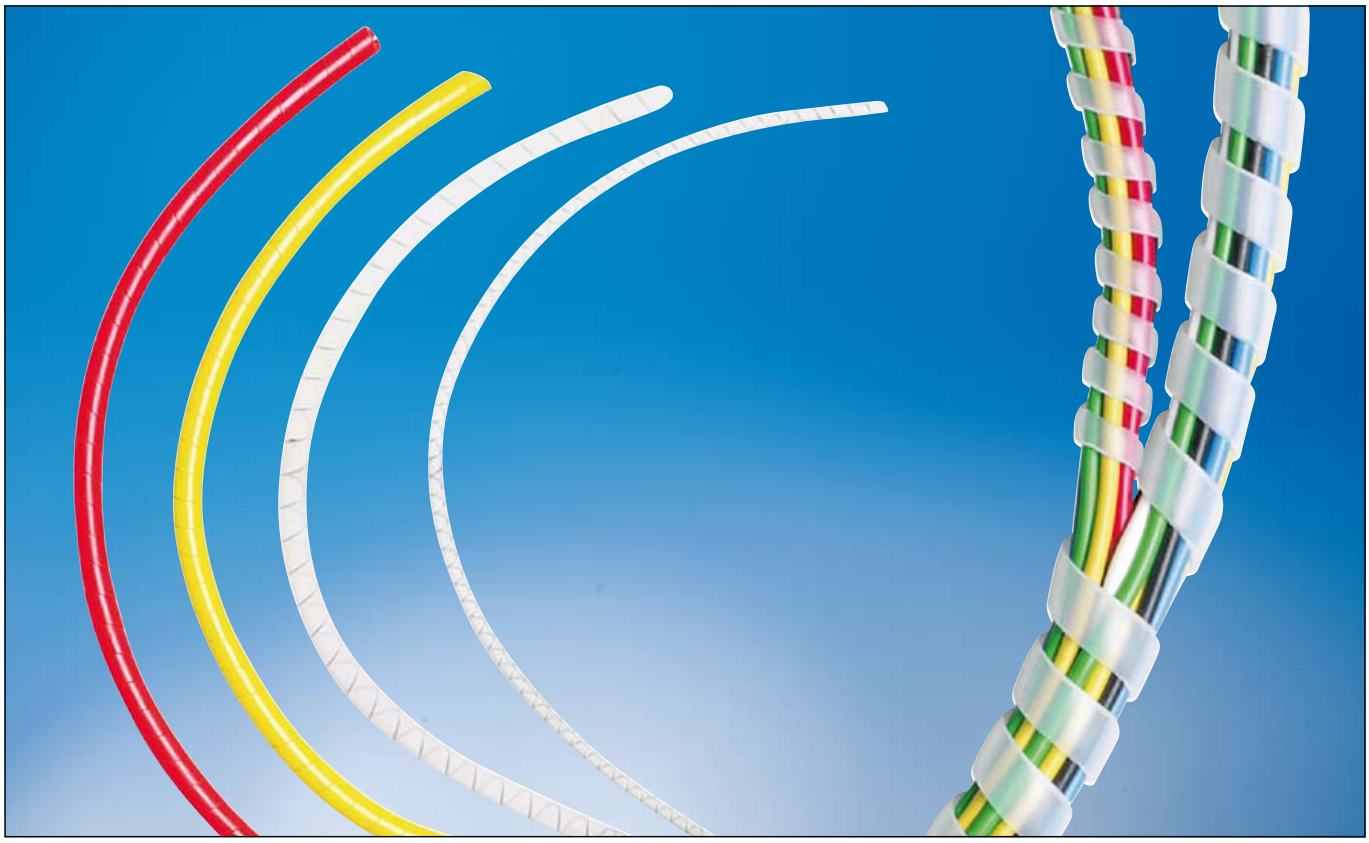
RoHS compliant

All items on the opposite page are free of halogen, phosphorous, cadmium, asbestos, lead and silicone. The range also complies with the RoHS guidelines.
The IP class entered can be increased with a few items and an additional O-ring.

Material data for the individual components (Part 2)

Type	Material	RoHS compliant	Fire classification	Use in temperature areas	
		RoHS compliant		from °C	to °C
SS	Sheet steel, galvanised	–	–	–	–
SSG	Sheet steel, galvanised, coating: EPDM	✔	–	–	–
SB	Polyethylene	✔	–	-60	85
SBF	Polyethylene	✔	V0	–	–
BN	Hostalene	✔	–	-60	80
KB	Polyamide 6.6	✔	V2	natural colours: -30 black: -40	natural colours: 100 black: 105
KKB	Polyamide 6.6	✔	V2	-40	105
KBM	Stainless steel 1.4301	–	–	–	–
BF	Polyamide 6.6	–	–	-25	85
SH	Polyamide	–	–	-40	85
KH	Polyamide	–	–	-40	85

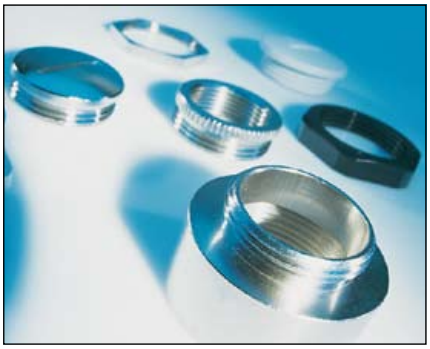
Advantages



You won't get far without accessories

A comprehensive range of accessories is available, including lock nuts, reducing bushes, various fasteners, cable ties and much more.

Different materials, thread types and thread sizes ensure a wide range of uses for many applications.



- ✔ Large range of accessories
- ✔ Different materials
- ✔ Various thread types and thread sizes
- ✔ Universal
- ✔ Easy handling

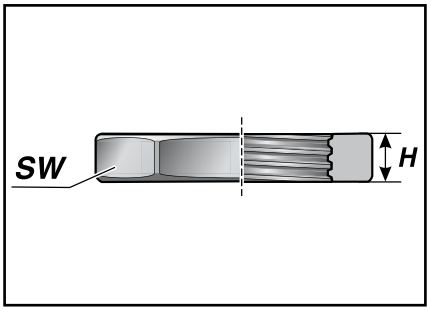
Type KGM (plastic lock nut)

-30 – 100 °C, transient 130 °C

Polyamide

V0

Plastic lock nut made from self-extinguishing polyamide with metric or Pg thread.



KGM

Type	Order no.	Colour	Internal thread	H mm	SW mm	Pack qty.
Metric version						
KGM-M12x1.5	83727250	black	M12x1.5	5.0	17	100
KGM-M16x1.5	83727252	black	M16x1.5	5.0	22	100
KGM-M20x1.5	83727254	black	M20x1.5	6.0	26	100
KGM-M25x1.5	83727256	black	M25x1.5	6.0	32	100
KGM-M32x1.5	83727258	black	M32x1.5	7.0	41	100
KGM-M40x1.5	83727260	black	M40x1.5	7.0	50	50
KGM-M50x1.5	83727262	black	M50x1.5	8.0	60	50
KGM-M63x1.5	83727264	black	M63x1.5	8.0	75	50
KGM-M12x1.5	83727210	grey	M12x1.5	5.0	17	100
KGM-M16x1.5	83727212	grey	M16x1.5	5.0	22	100
KGM-M20x1.5	83727214	grey	M20x1.5	6.0	26	100
KGM-M25x1.5	83727216	grey	M25x1.5	6.0	32	100
KGM-M32x1.5	83727218	grey	M32x1.5	7.0	41	100
KGM-M40x1.5	83727220	grey	M40x1.5	7.0	50	50
KGM-M50x1.5	83727222	grey	M50x1.5	8.0	60	50
KGM-M63x1.5	83727224	grey	M63x1.5	8.0	75	50
Pg version						
KGM-Pg07	83722250	black	Pg07	5.0	19	100
KGM-Pg09	83722252	black	Pg09	5.0	22	100
KGM-Pg11	83722254	black	Pg11	5.0	24	100
KGM-Pg13.5	83722256	black	Pg13.5	6.0	27	100
KGM-Pg16	83722258	black	Pg16	6.0	30	100
KGM-Pg21	83722260	black	Pg21	6.5	36	100
KGM-Pg29	83722262	black	Pg29	7.0	46	50
KGM-Pg36	83722264	black	Pg36	7.5	60	25
KGM-Pg42	83722266	black	Pg42	8.0	65	25

Type KGM (plastic lock nut)

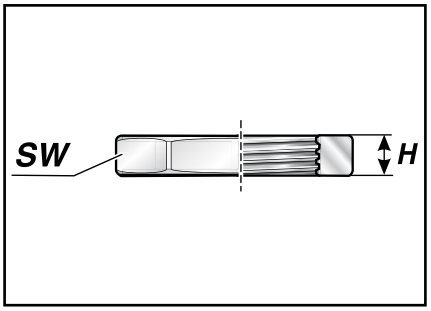
RoHS compliant

Type	Order no.	Colour	Internal thread	H mm	SW mm	Pack qty.
KGM-Pg48	83722268	black	Pg48	8.0	70	25
KGM-Pg07	83722210	grey	Pg07	5.0	19	100
KGM-Pg09	83722212	grey	Pg09	5.0	22	100
KGM-Pg11	83722214	grey	Pg11	5.0	24	100
KGM-Pg13.5	83722216	grey	Pg13.5	6.0	27	100
KGM-Pg16	83722218	grey	Pg16	6.0	30	100
KGM-Pg21	83722220	grey	Pg21	6.5	36	100
KGM-Pg29	83722222	grey	Pg29	7.0	46	50
KGM-Pg36	83722224	grey	Pg36	7.5	60	25
KGM-Pg42	83722226	grey	Pg42	8.0	65	25
KGM-Pg48	83722228	grey	Pg48	8.0	70	25

Type GM (metal lock nut)

Brass, nickel-plated

Lock nut made of metal with metric or Pg thread.



GM

Type	Order no.	Internal thread	H mm	SW mm	Pack qty.
Metric version					
GM-M12x1.5	83727010	M12x1.5	2.8	15	100
GM-M16x1.5	83727012	M16x1.5	2.8	19	100
GM-M20x1.5	83727014	M20x1.5	3.0	24	100
GM-M25x1.5	83727016	M25x1.5	3.5	30	100
GM-M32x1.5	83727018	M32x1.5	4.5	36	100
GM-M40x1.5	83727020	M40x1.5	5.0	46	50
GM-M50x1.5	83727022	M50x1.5	5.0	60	50
GM-M63x1.5	83727024	M63x1.5	6.0	70	50
Pg version					
GM-Pg07	83722010	Pg07	2.8	15	100
GM-Pg09	83722012	Pg09	2.8	18	100
GM-Pg11	83722014	Pg11	3.0	21	100
GM-Pg13.5	83722016	Pg13.5	3.0	23	100
GM-Pg16	83722018	Pg16	3.0	26	100
GM-Pg21	83722020	Pg21	3.5	32	100
GM-Pg29	83722022	Pg29	4.0	41	100
GM-Pg36	83722024	Pg36	5.0	51	50
GM-Pg42	83722026	Pg42	5.0	60	50
GM-Pg48	83722028	Pg48	5.5	64	50

Type BSTK (plastic dummy plug)

RoHS compliant

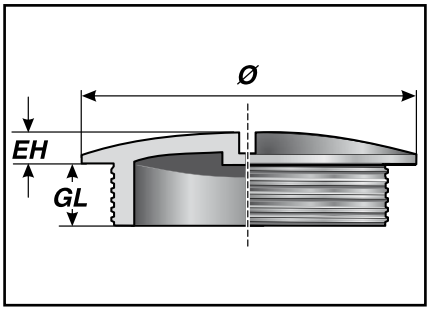
-30 – 100 °C, transient 130 °C

Polyamide

HB

IP 54, IP 65 with additional sealing ring type OR

Dummy plug made of plastic with metric or Pg thread.
IP 65 protection rating is achieved using additional O-ring type OR.
(O-ring not included in delivery)



BSTK

Type	Order no.	Colour	External thread	EH mm	GL mm	Ø mm	Pack qty.
Metric version							
BSTK-M12x1.5	83726450	black	M12x1.5	3.0	6.0	15.0	100
BSTK-M16x1.5	83726452	black	M16x1.5	3.5	6.0	20.0	100
BSTK-M20x1.5	83726454	black	M20x1.5	4.0	6.0	24.0	100
BSTK-M25x1.5	83726456	black	M25x1.5	4.5	8.0	30.0	100
BSTK-M32x1.5	83726458	black	M32x1.5	4.5	8.0	37.0	100
BSTK-M40x1.5	83726460	black	M40x1.5	5.5	8.0	46.0	50
BSTK-M50x1.5	83726462	black	M50x1.5	5.5	10.0	56.0	50
BSTK-M63x1.5	83726464	black	M63x1.5	4.5	12.0	70.0	50
BSTK-M12x1.5	83726410	grey	M12x1.5	3.0	6.0	15.0	100
BSTK-M16x1.5	83726412	grey	M16x1.5	3.5	6.0	20.0	100
BSTK-M20x1.5	83726414	grey	M20x1.5	4.0	6.0	24.0	100
BSTK-M25x1.5	83726416	grey	M25x1.5	4.5	8.0	30.0	100
BSTK-M32x1.5	83726418	grey	M32x1.5	4.5	8.0	37.0	100
BSTK-M40x1.5	83726420	grey	M40x1.5	5.5	8.0	46.0	50
BSTK-M50x1.5	83726422	grey	M50x1.5	5.5	10.0	56.0	50
BSTK-M63x1.5	83726424	grey	M63x1.5	4.5	12.0	70.0	50
Pg version							
BSTK-Pg07	83721410	grey	Pg07	1.5	6.0	15.0	100
BSTK-Pg09	83721412	grey	Pg09	2.5	6.0	19.0	100
BSTK-Pg11	83721414	grey	Pg11	3.0	6.0	22.0	100
BSTK-Pg13.5	83721416	grey	Pg13.5	3.5	6.0	25.0	100
BSTK-Pg16	83721418	grey	Pg16	3.5	6.0	27.0	100
BSTK-Pg21	83721420	grey	Pg21	3.5	8.0	33.0	100
BSTK-Pg29	83721422	grey	Pg29	3.5	8.0	44.0	100
BSTK-Pg36	83721424	grey	Pg36	5.0	10.0	55.0	50
BSTK-Pg42	83721426	grey	Pg42	6.0	10.0	62.0	50
BSTK-Pg48	83721428	grey	Pg48	5.0	12.0	69.0	50

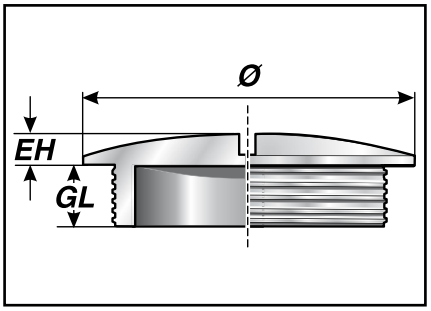
Type BST (metal dummy plug)

RoHS compliant

Brass, nickel-plated

IP 54 IP 65 with additional sealing ring type OR

Dummy plug made of metal with metric or Pg thread.
IP 65 protection rating is achieved using additional O-ring type OR.
(O-ring not included in delivery)



BST

Type	Order no.	External thread	EH mm	GL mm	Ø mm	Pack qty.
Metric version						
BST-M12x1.5	83726210	M12x1.5	3.0	5.0	16.0	100
BST-M16x1.5	83726212	M16x1.5	3.0	6.0	20.0	100
BST-M20x1.5	83726214	M20x1.5	3.0	6.5	24.0	100
BST-M25x1.5	83726216	M25x1.5	3.5	7.0	28.0	100
BST-M32x1.5	83726218	M32x1.5	4.0	8.0	35.0	50
BST-M40x1.5	83726220	M40x1.5	4.0	8.0	45.0	50
BST-M50x1.5	83726222	M50x1.5	5.0	9.0	55.0	25
BST-M63x1.5	83726224	M63x1.5	6.0	10.0	68.0	10
Pg version						
BST-Pg07	83721210	Pg07	3.0	5.0	14.0	100
BST-Pg09	83721212	Pg09	3.0	6.0	17.0	100
BST-Pg11	83721214	Pg11	3.0	6.0	20.0	100
BST-Pg13.5	83721216	Pg13.5	3.0	6.5	22.0	100
BST-Pg16	83721218	Pg16	3.5	6.5	24.0	100
BST-Pg21	83721220	Pg21	4.0	7.0	30.0	100
BST-Pg29	83721222	Pg29	4.0	8.0	39.0	50
BST-Pg36	83721224	Pg36	6.0	9.0	50.0	25
BST-Pg42	83721226	Pg42	6.0	10.0	57.0	25
BST-Pg48	83721228	Pg48	6.0	10.0	64.0	10

Type KRR (plastic reducing bush)

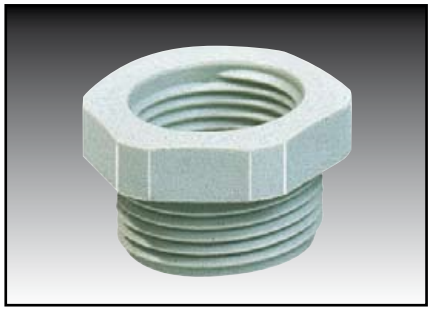
RoHS compliant

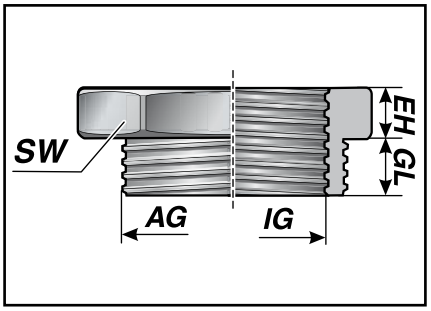
-30 – 100 °C transient 130 °C

Polyamide

HB

Thread reducing bush made of plastic with metric or Pg thread.
O-ring not included in delivery.





KRR

Type	Order no.	Colour	External thread AG	Internal thread IG	EH mm	GL mm	SW mm	Pack qty.
Metric/metric version								
KRR-M20/M12	83727450	black	M20x1.5	M12x1.5	4.0	8.0	24	100
KRR-M20/M16	83727452	black	M20x1.5	M16x1.5	4.0	8.0	24	100
KRR-M25/M12	83727454	black	M25x1.5	M12x1.5	6.0	8.0	30	100
KRR-M25/M16	83727456	black	M25x1.5	M16x1.5	6.0	8.0	30	100
KRR-M25/M20	83727458	black	M25x1.5	M20x1.5	6.0	8.0	30	100
KRR-M32/M12	83727460	black	M32x1.5	M12x1.5	6.0	10.0	36	50
KRR-M32/M16	83727462	black	M32x1.5	M16x1.5	6.0	10.0	36	50
KRR-M32/M20	83727464	black	M32x1.5	M20x1.5	6.0	10.0	36	50
KRR-M32/M25	83727466	black	M32x1.5	M25x1.5	6.0	10.0	36	50
KRR-M40/M16	83727468	black	M40x1.5	M16x1.5	6.0	10.0	46	50
KRR-M40/M20	83727470	black	M40x1.5	M20x1.5	6.0	10.0	46	50
KRR-M40/M25	83727472	black	M40x1.5	M25x1.5	6.0	10.0	46	50
KRR-M40/M32	83727474	black	M40x1.5	M32x1.5	6.0	10.0	46	50
KRR-M50/M20	83727476	black	M50x1.5	M20x1.5	6.0	12.0	55	25
KRR-M50/M25	83727478	black	M50x1.5	M25x1.5	6.0	12.0	55	25
KRR-M50/M32	83727480	black	M50x1.5	M32x1.5	6.0	12.0	55	25
KRR-M50/M40	83727482	black	M50x1.5	M40x1.5	6.0	12.0	55	25
KRR-M63/M25	83727484	black	M63x1.5	M25x1.5	6.0	12.0	68	25
KRR-M63/M32	83727486	black	M63x1.5	M32x1.5	6.0	12.0	68	25
KRR-M63/M40	83727488	black	M63x1.5	M40x1.5	6.0	12.0	68	25
KRR-M63/M50	83727490	black	M63x1.5	M50x1.5	6.0	12.0	68	25
KRR-M20/M12	83727400	grey	M20x1.5	M12x1.5	4.0	8.0	24	100
KRR-M20/M16	83727402	grey	M20x1.5	M16x1.5	4.0	8.0	24	100
KRR-M25/M12	83727404	grey	M25x1.5	M12x1.5	6.0	8.0	30	100
KRR-M25/M16	83727406	grey	M25x1.5	M16x1.5	6.0	8.0	30	100
KRR-M25/M20	83727408	grey	M25x1.5	M20x1.5	6.0	8.0	30	100
KRR-M32/M12	83727410	grey	M32x1.5	M12x1.5	6.0	10.0	36	50

Type KRR (plastic reducing bush)

Type	Order no.	Colour	External thread AG	Internal thread IG	EH mm	GL mm	SW mm	Pack qty.
KRR-M32/M16	83727412	grey	M32x1.5	M16x1.5	6.0	10.0	36	50
KRR-M32/M20	83727414	grey	M32x1.5	M20x1.5	6.0	10.0	36	50
KRR-M32/M25	83727416	grey	M32x1.5	M25x1.5	6.0	10.0	36	50
KRR-M40/M16	83727418	grey	M40x1.5	M16x1.5	6.0	10.0	46	50
KRR-M40/M20	83727420	grey	M40x1.5	M20x1.5	6.0	10.0	46	50
KRR-M40/M25	83727422	grey	M40x1.5	M25x1.5	6.0	10.0	46	50
KRR-M40/M32	83727424	grey	M40x1.5	M32x1.5	6.0	10.0	46	50
KRR-M50/M20	83727426	grey	M50x1.5	M20x1.5	6.0	12.0	55	25
KRR-M50/M25	83727428	grey	M50x1.5	M25x1.5	6.0	12.0	55	25
KRR-M50/M32	83727430	grey	M50x1.5	M32x1.5	6.0	12.0	55	25
KRR-M50/M40	83727432	grey	M50x1.5	M40x1.5	6.0	12.0	55	25
KRR-M63/M25	83727434	grey	M63x1.5	M25x1.5	6.0	12.0	68	25
KRR-M63/M32	83727436	grey	M63x1.5	M32x1.5	6.0	12.0	68	25
KRR-M63/M40	83727438	grey	M63x1.5	M40x1.5	6.0	12.0	68	25
KRR-M63/M50	83727440	grey	M63x1.5	M50x1.5	6.0	12.0	68	25
Pg/Pg version								
KRR-Pg11/07	83722410	grey	Pg11	Pg07	6.0	8.0	22	100
KRR-Pg11/09	83722412	grey	Pg11	Pg09	15.0	8.0	22	100
KRR-Pg13.5 / 07	83722414	grey	Pg13.5	Pg07	6.0	9.0	24	100
KRR-Pg13/09	83722416	grey	Pg13.5	Pg09	6.0	9.0	24	100
KRR-Pg13/11	83722420	grey	Pg13.5	Pg11	15.0	9.0	24	100
KRR-Pg16/09	83722418	grey	Pg16	Pg09	6.0	10.0	27	100
KRR-Pg16/11	83722422	grey	Pg16	Pg11	6.0	10.0	27	100
KRR-Pg16/13.5	83722424	grey	Pg16	Pg13.5	17.0	10.0	27	100
KRR-Pg21/11	83722426	grey	Pg21	Pg11	5.0	11.0	32	100
KRR-Pg21/13.5	83722428	grey	Pg21	Pg13.5	5.0	11.0	32	100
KRR-Pg21/16	83722430	grey	Pg21	Pg16	5.0	11.0	32	100
KRR-Pg29/13	83722432	grey	Pg29	Pg13	6.0	11.0	40	50
KRR-Pg29/16	83722434	grey	Pg29	Pg16	6.0	11.0	40	50
KRR-Pg29/21	83722436	grey	Pg29	Pg21	6.0	11.0	40	50
KRR-Pg36/16	83722438	grey	Pg36	Pg16	6.0	13.0	50	50
KRR-Pg36/21	83722440	grey	Pg36	Pg21	6.0	13.0	50	50
KRR-Pg36/29	83722442	grey	Pg36	Pg29	6.0	18.0	50	50
KRR-Pg42/21	83722444	grey	Pg42	Pg21	6.0	18.0	55	25
KRR-Pg42/29	83722446	grey	Pg42	Pg29	6.0	18.0	55	25
KRR-Pg42/36	83722448	grey	Pg42	Pg36	6.0	18.0	55	25
KRR-Pg48/29	83722450	grey	Pg48	Pg29	6.0	15.0	60	25
KRR-Pg48/36	83722452	grey	Pg48	Pg36	7.0	16.0	60	25

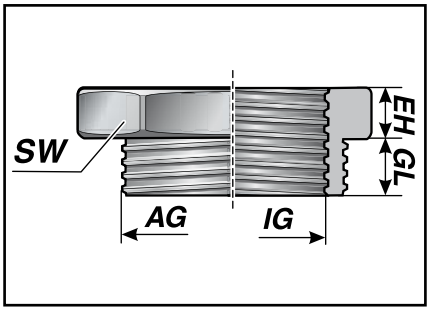
Type RR (metal reducing bush)

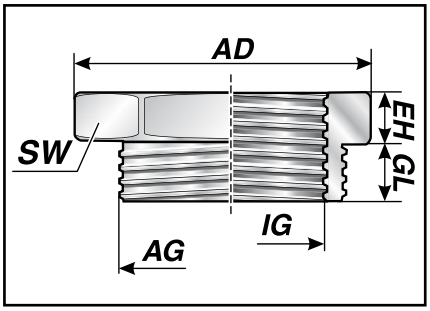
RoHS compliant

Brass, nickel-plated

Thread reducing bush made of metal with metric or Pg thread.
Knurled or hexagon version, depending on type.

- Metric/metric
- Metric/Pg
- Pg/Pg





RR

Type	Order no.	External thread AG	Internal thread IG	EH mm	GL mm	AD mm	SW mm	Pack qty.
Metric/metric version (without O-ring)								
RR-M16/M12	83727610	M16x1.5	M12x1.5	2.5	6.0	20.0	-	100
RR-M20/M12	83727612	M20x1.5	M12x1.5	2.5	6.5	24.0	-	100
RR-M20/M16	83727614	M20x1.5	M16x1.5	2.5	6.5	24.0	-	100
RR-M25/M16	83727616	M25x1.5	M16x1.5	3.0	7.0	30.0	-	100
RR-M25/M20	83727618	M25x1.5	M20x1.5	3.0	7.0	30.0	-	100
RR-M32/M20	83727620	M32x1.5	M20x1.5	3.5	8.0	39.0	-	50
RR-M32/M25	83727622	M32x1.5	M25x1.5	3.5	8.0	39.0	-	50
RR-M40/M25	83727624	M40x1.5	M25x1.5	3.5	9.0	50.0	-	25
RR-M40/M32	83727626	M40x1.5	M32x1.5	3.5	9.0	50.0	-	25
RR-M50/M32	83727628	M50x1.5	M32x1.5	4.0	10.0	57.0	-	25
RR-M50/M40	83727630	M50x1.5	M40x1.5	4.0	10.0	57.0	-	25
RR-M63/M40	83727632	M63x1.5	M40x1.5	4.0	10.0	64.0	-	10
RR-M63/M50	83727634	M63x1.5	M50x1.5	4.0	10.0	64.0	-	10
Metric/Pg version (with O-ring on external thread)								
RR-M16 / Pg07	83727810	M16x1.5	Pg07	3.0	5.0	-	17	100
RR-M20 / Pg09	83727812	M20x1.5	Pg09	3.0	6.0	-	22	100
RR-M25 / Pg09	83727814	M25x1.5	Pg09	3.0	7.0	-	27	100
RR-M25 / Pg11	83727816	M25x1.5	Pg11	3.0	7.0	-	27	100
RR-M25/Pg13.5	83727818	M25x1.5	Pg13.5	3.0	7.0	-	27	100
RR-M32/Pg13.5	83727820	M32x1.5	Pg13.5	3.0	8.0	-	34	50
RR-M32 / Pg16	83727822	M32x1.5	Pg16	3.0	8.0	-	34	50
RR-M32 / Pg21	83727824	M32x1.5	Pg21	3.0	8.0	-	34	50
RR-M40 / Pg16	83727826	M40x1.5	Pg16	4.0	8.0	-	43	25
RR-M40 / Pg21	83727828	M40x1.5	Pg21	4.0	8.0	-	43	25
RR-M40 / Pg29	83727830	M40x1.5	Pg29	4.0	8.0	-	43	25
RR-M50 / Pg21	83727832	M50x1.5	Pg21	4.0	9.0	-	55	25

Type RR (metal reducing bush)

Type	Order no.	External thread AG	Internal thread IG	EH mm	GL mm	AD mm	SW mm	Pack qty.
RR-M50 / Pg29	83727834	M50x1.5	Pg29	4.0	9.0	-	55	25
RR-M50 / Pg36	83727836	M50x1.5	Pg36	4.0	9.0	-	55	25
RR-M63 / Pg29	83727838	M63x1.5	Pg29	4.0	10.0	-	65	10
RR-M63 / Pg36	83727840	M63x1.5	Pg36	4.0	10.0	-	65	10
RR-M63 / Pg42	83727842	M63x1.5	Pg42	4.0	10.0	-	65	10
Pg/Pg version (without O-ring)								
RR-Pg09 / 07	83722610	Pg09	Pg07	2.5	6.0	17.0	-	100
RR-Pg11/07	83722612	Pg11	Pg07	2.5	6.0	-	20	100
RR-Pg11/09	83722614	Pg11	Pg09	2.5	6.0	20.0	-	100
RR-Pg13.5/09	83722616	Pg13.5	Pg09	2.5	6.5	22.0	-	100
RR-Pg13.5/11	83722618	Pg13.5	Pg11	2.5	6.5	22.0	-	100
RR-Pg16/09	83722620	Pg16	Pg09	3.0	6.5	24.0	-	100
RR-Pg16/11	83722622	Pg16	Pg11	3.0	6.5	24.0	-	100
RR-Pg16/13.5	83722624	Pg16	Pg13.5	3.0	6.5	24.0	-	100
RR-Pg21/11	83722626	Pg21	Pg11	3.0	7.0	30.0	-	50
RR-Pg21/13.5	83722628	Pg21	Pg13.5	3.0	7.0	30.0	-	50
RR-Pg21/16	83722630	Pg21	Pg16	3.0	7.0	30.0	-	50
RR-Pg29/21	83722632	Pg29	Pg21	3.5	8.0	39.0	-	25
RR-Pg36/29	83722634	Pg36	Pg29	3.5	9.0	50.0	-	25
RR-Pg42/36	83722636	Pg42	Pg36	4.0	10.0	57.0	-	25
RR-Pg48/36	83722638	Pg48	Pg36	4.0	10.0	64.0	-	25

Type ER/EG (metal extension)

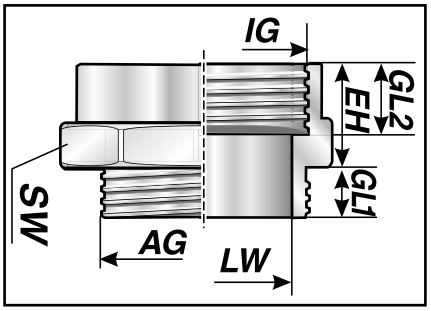
RoHS compliant

Brass, nickel-plated

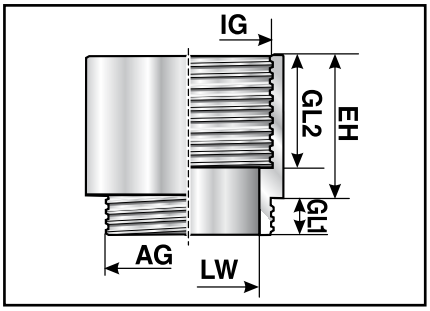
Thread extension made of metal with metric or Pg thread.
Round or hexagon version, depending on type.
Some with O-ring on external thread.

- Metric/metric
- Metric/Pg
- Pg/Pg

ER



ER



EG

Type	Order no.	External thread AG	Internal thread IG	EH mm	GL 1 mm	GL 2 mm	Ø mm	SW mm	Pack qty.
Metric/metric version									
ER-M12/M16	83728010	M12x1.5	M16x1.5	10.0	5.0	9.0	-	18	100
ER-M16/M20	83728012	M16x1.5	M20x1.5	10.5	5.0	9.5	-	22	100
ER-M20/M25	83728014	M20x1.5	M25x1.5	11.5	6.0	10.5	-	27	50
ER-M25/M32	83728016	M25x1.5	M32x1.5	12.5	7.0	11.0	-	34	50
ER-M32/M40	83728018	M32x1.5	M40x1.5	14.5	8.0	13.0	-	42	10
ER-M40/M50	83728020	M40x1.5	M50x1.5	19.5	8.0	18.0	-	52	10
ER-M50/M63	83728022	M50x1.5	M63x1.5	22.0	9.0	20.0	-	65	10
Pg/metric version									
ER-Pg07/M12	83728210	Pg07	M12x1.5	10.0	5.0	7.5	-	14	100
ER-Pg09/M16	83728212	Pg09	M16x1.5	10.0	6.0	7.5	-	19	100
ER-Pg11/M16	83728214	Pg11	M16x1.5	10.0	6.0	7.5	-	22	100
ER-Pg13.5 / M16	83728216	Pg13.5	M20x1.5	11.0	6.5	8.5	-	24	100
ER-Pg16/M20	83728218	Pg16	M20x1.5	11.0	6.5	8.5	-	27	100
ER-Pg16/M25	83728220	Pg16	M25x1.5	12.0	6.5	9.5	-	30	100
ER-Pg21/M25	83728222	Pg21	M25x1.5	12.0	7.0	9.5	-	32	100
ER-Pg21/M32	83728224	Pg21	M32x1.5	13.0	7.0	10.5	-	36	100
ER-Pg29/M40	83728226	Pg29	M40x1.5	13.0	8.0	11.0	-	43	50
ER-Pg36/M50	83728228	Pg36	M50x1.5	14.0	9.0	11.5	-	55	25

Type ER/EG (metal extension)

Type	Order no.	External thread AG	Internal thread IG	EH mm	GL 1 mm	GL 2 mm	Ø mm	SW mm	Pack qty.
Metric/Pg version									
EG-M12/Pg09	83726810	M12x1.5	Pg09	10.0	5.0	9.0	17.0	-	100
EG-M16/Pg11	83726812	M16x1.5	Pg11	10.5	5.0	9.5	20.0	-	100
EG-M20 / Pg16 *	83726814	M20x1.5	Pg16	12.5	6.0	10.5	24.0	-	100
EG-M25 / Pg21 *	83726816	M25x1.5	Pg21	14.5	7.0	11.0	30.0	-	100
EG-M32 / Pg29 *	83726818	M32x1.5	Pg29	22.0	8.0	13.0	39.0	-	50
EG-M40 / Pg36 *	83726820	M40x1.5	Pg36	19.5	8.0	18.0	50.0	-	50
EG-M50 / Pg42 *	83726822	M50x1.5	Pg42	22.0	9.0	20.0	57.0	-	25
EG-M50/Pg48 *	83726824	M50x1.5	Pg48	23.0	9.0	20.0	64.0	-	25
Pg/Pg version									
EG-Pg07 / 09	83721810	Pg07	Pg09	10.0	5.0	9.0	17.0	-	100
EG-Pg09/11	83721812	Pg09	Pg11	10.5	6.0	9.5	20.0	-	100
EG-Pg09/13.5	83721814	Pg09	Pg13.5	10.5	6.0	10.5	22.0	-	100
EG-Pg11/13,5	83721816	Pg11	Pg13.5	11.5	6.0	10.5	22.0	-	100
EG-Pg11/16	83721818	Pg11	Pg16	11.5	6.0	11.0	24.0	-	100
EG-Pg13.5/16	83721820	Pg13.5	Pg16	13.5	6.5	11.0	24.0	-	100
EG-Pg16/21	83721822	Pg16	Pg21	15.5	6.5	13.0	30.0	-	100
EG-Pg21/29	83721824	Pg21	Pg29	16.0	7.0	14.5	39.0	-	50
EG-Pg29/36	83721826	Pg29	Pg36	19.5	8.0	18.0	50.0	-	25
EG-Pg36/42	83721828	Pg36	Pg42	22.0	9.0	20.0	50.0	-	10
EG-Pg42/48	83721830	Pg42	Pg48	23.0	10.0	21.0	64.0	-	10
* with O-ring on external thread									

Type OR-NBR (O-ring)

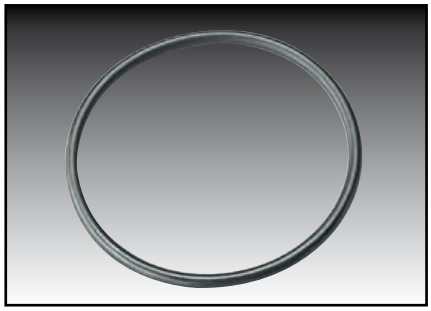
RoHS compliant

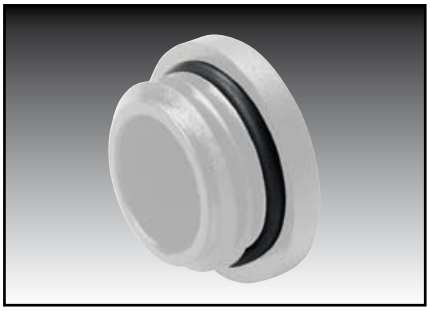
-25 – 120 °C

NBR

O-ring for sealing threaded connections resulting in higher protection ratings, e.g. on cable fittings.
For thread type:

- Metric
- Pg
- NPT





OR-NBR

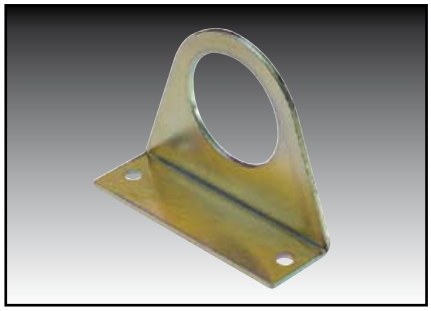
Type	Order no.	Suitable for metric	Suitable for Pg	Suitable for NPT	Pack qty.
OR-NBR 10x1.5	83481210	M12x1.5	Pg07	-	100
OR-NBR 12x1.5	83481212	M16x1.5	Pg09	-	100
OR-NBR 13x2	83481214	-	-	3/8" NPT	100
OR-NBR 16x1.5	83481216	-	Pg11	-	100
OR-NBR 17x1.8	83481218	M20x1.5	Pg13.5	-	100
OR-NBR 18x1.5	83481220	-	Pg16	-	100
OR-NBR 19x1.8	83481222	-	-	1/2" NPT	100
OR-NBR 22x2	83481224	M25x1.5	-	3/4" NPT	100
OR-NBR 26x2	83481226	-	Pg21	-	100
OR-NBR 29x2	83481228	M32x1.5	-	1" NPT	100
OR-NBR 33x2	83481230	-	Pg29	-	50
OR-NBR 35x2	83481232	M40x1.5	-	-	50
OR-NBR 43x2	83481234	M50x1.5	Pg36	-	50
OR-NBR 50x2	83481236	-	Pg42	-	50
OR-NBR 55x2	83481238	M63x1.5	Pg48	-	50

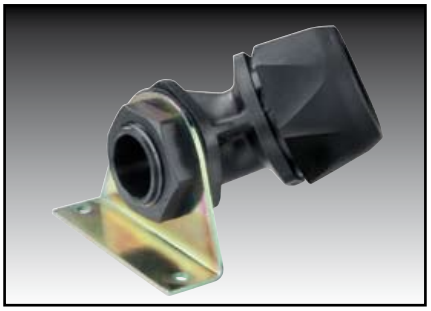
Angle bracket, type BWM

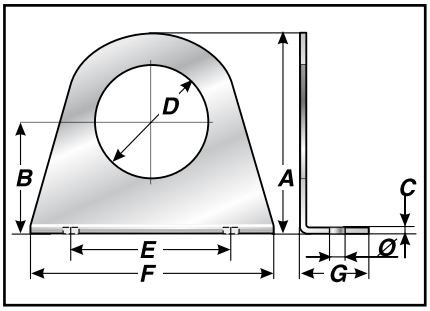
Galvanised sheet steel

Universal holder for fastening fittings to equipment and machinery.

- Quick and easy fastening
- For Pg and metric fittings
- Fittings secured with lock nut







BWM

Type	Order no.	Suitable for Thread	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Ø mm	Pack qty.
BWM-M12x1.5	83721660	M12x1.5	31.5	19.0	1.5	12.4	25.0	35.0	12.0	4.0	25
BWM-M16x1.5	83721662	M16x1.5	31.5	19.0	1.5	16.4	25.0	35.0	12.0	4.0	25
BWM-M20x1.5	83721664	M20x1.5	37.5	22.0	2.0	20.5	40.0	50.0	20.0	9.0	25
BWM-M25x1.5	83721666	M25x1.5	47.5	27.3	2.0	25.5	50.0	60.0	20.0	9.0	25
BWM-M32x1.5	83721668	M32x1.5	57.5	32.0	2.0	32.5	60.0	70.0	20.0	9.0	25
BWM-M40x1.5	83721670	M40x1.5	68.5	37.5	2.0	40.5	70.0	80.0	20.0	9.0	25
BWM-M50x1.5	83721672	M50x1.5	81.0	44.0	2.0	51.0	80.0	90.0	20.0	9.0	25
BWM 09	83721610	Pg09	31.5	22.0	1.5	15.3	25.0	35.0	12.0	4.0	25
BWM 11	83721612	Pg11	31.5	19.0	1.5	18.8	25.0	35.0	12.0	4.0	25
BWM 16	83721614	Pg16	38.0	22.0	2.0	23.0	40.0	50.0	20.0	9.0	25
BWM 21	83721616	Pg21	47.5	27.3	2.0	28.5	50.0	60.0	20.0	9.0	25
BWM 29	83721618	Pg29	57.3	32.0	2.0	37.5	60.0	70.0	20.0	9.0	25
BWM 36	83721620	Pg36	67.8	37.5	2.0	47.5	70.0	80.0	20.0	9.0	25
BWM 48	83721622	Pg48	80.5	44.0	2.0	60.0	80.0	90.0	20.0	9.0	25

Conduit clamp, type SS

Galvanised sheet steel

Conduit clamps for easy attachment of conduits from our conduit product range

SS...

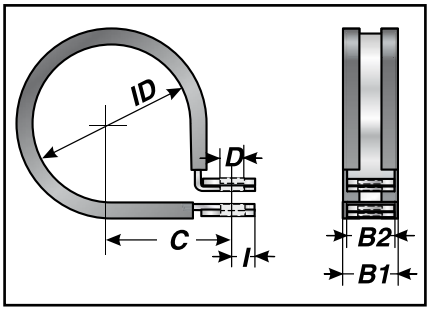
Type	Order no.	Clamping range mm	Width mm	Pack qty.
SS 15	83721010	8.0 – 16.0	9.0	100
SS 19	83721012	12.0 – 20.0	9.0	100
SS 26	83721014	16.0 – 27.0	9.0	100
SS 32	83721016	22.0 – 32.0	9.0	100
SS 38	83721018	25.0 – 40.0	9.0	50
SS 47	83721020	32.0 – 50.0	12.0	50
SS 57	83721022	40.0 – 60.0	12.0	50
SS 70	83721024	50.0 – 70.0	12.0	25
SS 78	83721026	78.0 – 85.0	17.0	25

Conduit clamp, type SSG

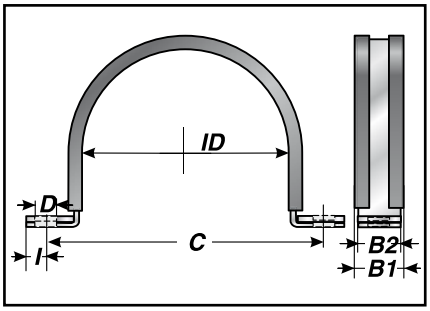
Galvanised sheet steel; EPDM

Metal conduit clamp with halogen-free elastomer coating
- Quick and easy assembly
- For all cable protection conduits

SSG



Up to SSG 48



From SSG 70

Type	Order no.	Suitable for Murrflex EW	B 1 mm	B 2 mm	C mm	D mm	I mm	ID mm	Pack qty.
SSG 06	83723210	06/07	15.0	12.0	13.0	5.3	5.0	10.0	25
SSG 07	83723212	07	15.0	12.0	14.0	5.3	5.0	12.0	25
SSG 09	83723214	09	15.0	12.0	14.5	5.3	5.0	13.0	25
SSG 11	83723216	11	15.0	12.0	15.5	5.3	5.0	15.0	25
SSG 16	83723218	16	15.0	12.0	19.0	5.3	5.0	22.0	25
SSG 21	83723222	21	18.5	15.0	22.0	6.4	6.0	28.0	25
SSG 29	83723224	29	18.5	15.0	28.2	6.4	6.0	34.0	25
SSG 36	83723226	29/36	25.0	20.0	31.2	8.4	8.5	40.0	10
SSG 48	83723228	48	18.5	15.0	38.2	6.4	6.0	54.0	10
SSG 70	83723230	70	25.0	20.0	108.0	8.4	8.5	79.0	10
SSG 95	83723232	95	25.0	20.0	134.0	8.4	8.5	105.0	10

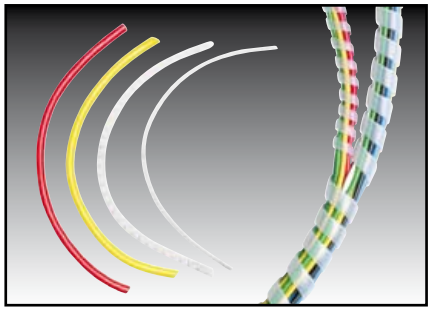
Spiral tape, type SB/SBF

-60 – 85 °C

SB: Polyethylene
SBF: Non-inflammable polyethylene

V0 only type SBF

Spiral tapes are used to bundle cable harnesses efficiently and simply. The spiral tapes also protect the insulation of the wires. Branches of single wires or looms of cables may be made at any place. Bundling in the range from 2 – 100 mm is possible with just three sizes. The SBF consists of flame-retardant material.



SB...

Type	Order no.	Colour	Bundle range mm	Inside mm	External mm	Weight kg/100m	Pack m
SB 12	87621010	Natural colour	2.0 – 12.0	1.5	3.0	0.5	50
SB 50	87621012	Natural colour	5.0 – 50.0	4.0	6.0	1.5	100
SB 50	87621210	yellow	5.0 – 50.0	4.0	6.0	1.5	100
SB 50	87621250	orange	5.0 – 50.0	4.0	6.0	1.5	100
SB 100	87621014	Natural colour	12.0 – 100.0	9.0	12.0	4.0	50
SB 100	87621212	yellow	12.0 – 100.0	9.0	12.0	4.0	50
SB 100	87621252	orange	12.0 – 100.0	9.0	12.0	4.0	50
SBF 12 *	87621050	white	2.0 – 12.0	1.5	3.0	0.5	50
SBF 50 *	87621052	white	5.0 – 50.0	4.0	6.0	1.5	100
SBF 100 *	87621054	white	12.0 – 100.0	9.0	12.0	4.0	50

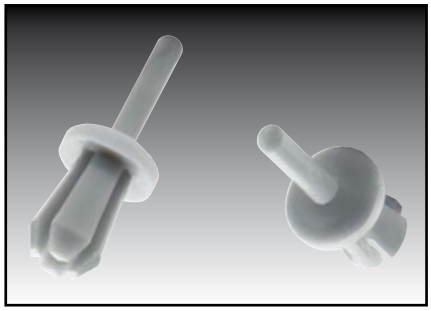
* not halogen-free

Fixing rivets, type BN / Assembly tool, type BN

-60 – 80 °C

Rivet: Hostalene
Tools: Steel

Plastic expansion rivets for the quick installation of components, e.g. cable ducts.
Assembly tool BNW is optimally adjusted to the fixing rivets. Only this tool brings out the full economical effect of the BN fixing rivet.



BN...

BNW tool...

Type	Order no.	Colour	For blind rivets	Drill hole mm	Shaft length mm	Fixing thickness min.	Fixing thickness max.	Length mm	Pack qty.
BN 1	87621410	grey		3.0	9.0	3.0	7.5		500
BNW 1	87641010		BN 1					130.0	1
BN 2	87621412	grey		4.5	10.0	3.0	8.0		500
BNW 2	87641012		BN 2					130.0	1
BN 3	87621414	grey		6.5	15.0	4.5	10.0		1000
BNW 3	87641014		BN 3					130.0	1

Cable tie, type KB / KBM / KKB

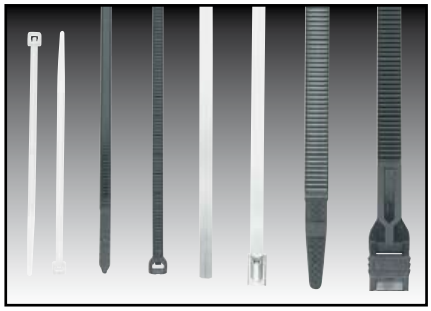
natural colours: -25 – 85 °C
black: -40 – 105 °C

KB: Polyamide 6.6
KBM: Stainless steel 1.4301

KB black: V2
KKB: V2

Cable ties in black are UV stabilised

Cable ties are a reliable method for the economic bundling and fastening of cables, cable harnesses, tubes, conduits and other components.
The black cable ties are suitable for outdoor applications.
The cable tie KKB 28 is equipped with a special locking mechanism and is especially suitable for heavy-duty applications.
The KBM metal cable tie is ideally used for EMC solutions. It creates greater contact surface area for discharging sheath currents.



KB...

Type	Order no.	Colour	Length mm	Width mm	Bundle range approx. mm	Tensile strength max. N	Pack qty.
Plastic cable ties							
KB 15	87661251	black	75.0	2.2	15.0	60.0	1000
KB 20	87661252	black	98.0	2.5	20.0	60.0	1000
KB 22	87661254	black	130.0	2.9	22.0	80.0	1000
KB 25	87661256	black	140.0	3.6	25.0	130.0	1000
KB 30	87661260	black	160.0	4.5	30.0	180.0	1000
KB 45	87661262	black	178.0	4.8	45.0	220.0	1000
KB 50	87661264	black	200.0	2.9	50.0	80.0	1000
KB 55	87661266	black	200.0	4.8	50.0	220.0	1000
KB 75	87661268	black	290.0	4.8	75.0	220.0	100
KB 100	87661270	black	360.0	4.8	100.0	220.0	100
KB 110	87661272	black	370.0	7.8	105.0	540.0	100
KB 15	87661210	Natural colour	75.0	2.2	15.0	60.0	1000
KB 20	87661214	Natural colour	98.0	2.5	20.0	60.0	1000
KB 22	87661218	Natural colour	130.0	2.9	22.0	80.0	1000
KB 25	87661222	Natural colour	140.0	3.6	25.0	130.0	1000
KB 30	87661226	Natural colour	160.0	4.5	30.0	180.0	1000
KB 45	87661230	Natural colour	178.0	4.8	45.0	220.0	1000
KB 50	87661234	Natural colour	200.0	2.9	50.0	80.0	1000
KB 55	87661238	Natural colour	200.0	4.8	50.0	220.0	1000
KB 75	87661242	Natural colour	290.0	4.8	75.0	220.0	100
KB 100	87661246	Natural colour	360.0	4.8	100.0	220.0	100
KB 110	87661248	Natural colour	370.0	7.8	105.0	540.0	100
Recommended assembly tool for cable ties up to 6 mm wide: KBW 1K							
Recommended assembly tool for cable ties up to 8 mm wide: KKBW							

Cable tie, type KB / KBM / KKB

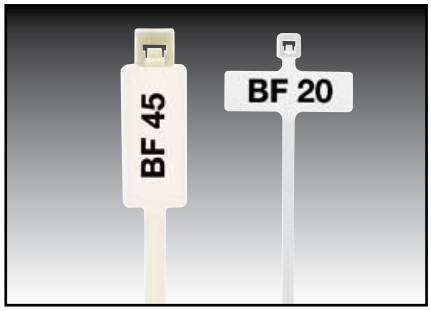
Type	Order no.	Colour	Length mm	Width mm	Bundle range approx. mm	Tensile strength max. N	Pack qty.
Metal cable tie							
KBM	87661014		200.0	4.3	50.0	445.0	100
Recommended assembly tool KBW/M							
Power cable tie with special lock							
KKB 28	87661258	black	180.0	8.0	40.0	360.0	100
Recommended assembly tool KKBW							

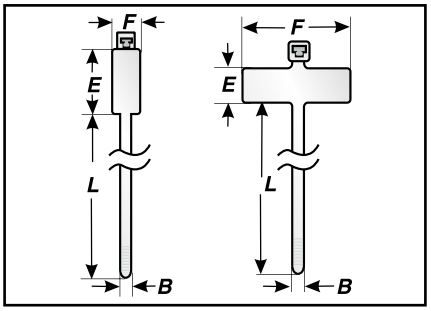
Cable tie, type BF

-25 – 85 °C

Polyamide 6.6

Cable tie with title block.
For use with ink pens or permanent waterproof markers.
BF20 (Fig., right) title block lengthways along cable
BF45 (Fig., left) title block across cable





BF...

Type	Order no.	Colour	L ca. mm	B approx. mm	E ca. mm	F approx. mm	Bundle range approx. mm	Tensile strength min. [N]	Pack qty.
BF 20	87681010	white	86.0	2.5	8.0	25.0	19.0	80.0	100
BF 45	87681012	natural	157.0	4.7	28.0	13.0	45.0	222.0	100

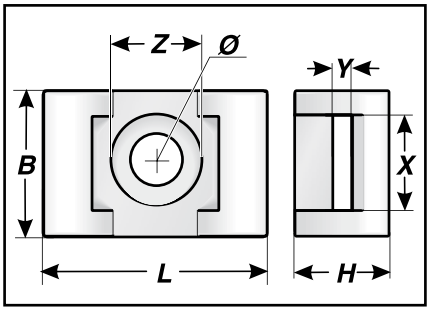
The dimensions may deviate for technical or production reasons.

Screwed holder, type SH

-40 – 85 °C

Polyamide

The SH screw-down holder is used to fix individual cables cost-effectively.
It can be screwed or riveted to any surface.



SH...

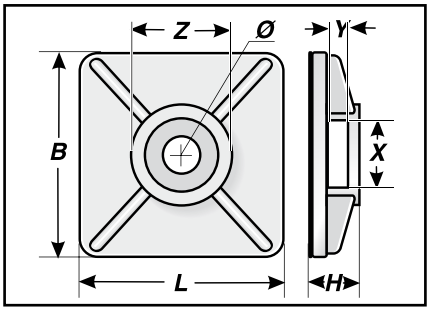
Type	Order no.	Colour	L mm	B mm	H mm	X mm	Y mm	Z mm	Ø mm	Pack qty.
SH 1	87681210	white	15.0	10.0	7.0	5.0	2.0	7.0	3.7	100
SH 2	87681212	white	22.5	15.0	11.0	9.2	2.8	10.0	5.0	100

Type KH (screwed and adhesive holders)

-40 – 85 °C

Polyamide

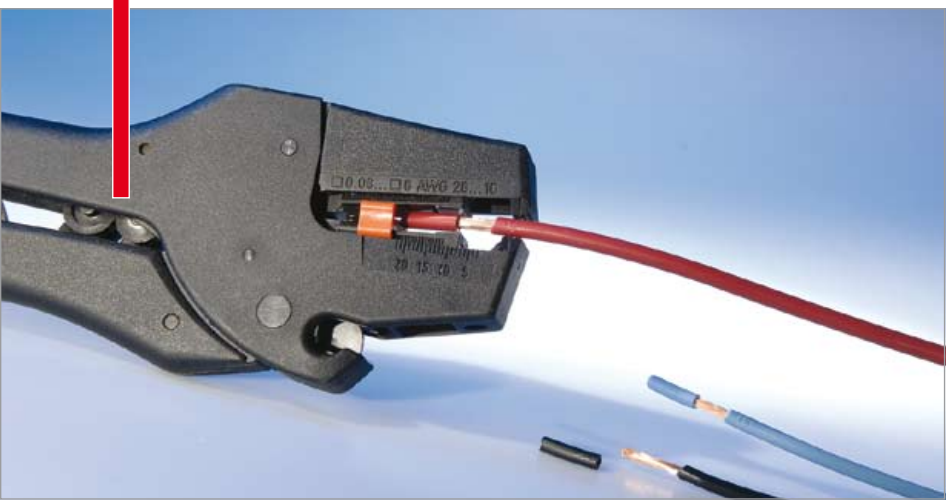
Adhesive holder, plastic. The retention force can be increased by additional fastening with a screw. If pressure sensitive adhesives are used, the surface must be smooth and free of dust and grease. Contaminated surfaces must be cleaned with proper cleaning agents.



KH...

Type	Order no.	Colour	L mm	B mm	H mm	X mm	Y mm	Z mm	Ø mm	Pack qty.
KH 1	87681220	white	19.0	19.0	6.0	4.0	1.8	7.7	4.3	100
KH 2	87681222	white	27.0	27.0	7.5	6.0	2.3	9.7	4.7	100

Tools



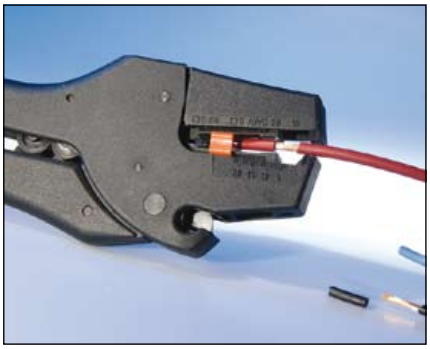
Advantages

They make your life easier

Tools that you need for your workshop and production halls.

To make work easier and increase productivity and quality.

You'll find cable stripping tools, cable shears and cable stripping knives. Plus tensioning gun for plastic and metal cable ties.



- ✔ Makes work easier
- ✔ Increased quality
- ✔ Increased productivity

Overview tools

Cable shears type KS / Cable stripping knife, type KM / Stripping tool, type UAZ

Sturdy cable shears KS1. Special cable stripping knife KM for stripping of wiring. Stripping tongs UAZ for single wires up to a diameter of 2.5 mm².

Page 218

Crimping Tool type CB2

Electromagnetic tool for crimping insulated cable end sleeves.

Page 219

Cable tie tool, types KBW / KKBW / KBW/M

Cable tie tools KBM and KKBW for mounting of plastic cable ties. Cable tie tool KBW/M adjusted to metal cable ties, type KBM.

Page 220

Cable shears, type KS / Cable stripping knife, type KM / Stripping tool, type UAZ

Sturdy cable shears KS1. Suitable for removing cable sheathing and braided shields.
EW-PAP cable protection conduit with metal braiding can be processed with these shears.
Special cable stripping knife KM for stripping of wiring.
Stripping tongs UAZ for single wires up to a diameter of 2.5 mm². A slider is used to adjust the stripping length. The stripping tongs posses an integrated cutting mechanism.

KS 1

KM

UAZ

Type	Order no.		Pack qty.
KS 1	87661016	Approx. length 175.0 mm	1
KM	87661018	Approx. length 170.0 mm	1
With adjustable internal blade.			
UAZ	87661020	Approx. length 190.0 mm	1
For wire cross sections from 0.5 – 2.5 mm²			
Adjustable stripping length.			
Can be adjusted to the thickness of the insulation.			
With integrated wire cutter for conductors up to 2.5 mm².			

Crimping Tool, type CB2

Plastic / Steel

Electromagnetic tool for crimping insulated cable end sleeves complete with accessories.

- The CrimmBoss CB2 crimping process is only activated by mechanical contactors when the cable end sleeves have been completely and correctly inserted.
- Contact tongue, small, for diameter range 0.14 – 1.0 mm²
- Contact tongue, small, for diameter range 0.5 – 2.5 mm²
- Contact tongues included with order

CrimmBoss CB2

Contact tongue

Type	Order no.	Pack qty.
CrimmBoss CB2	87661022	1
Supply voltage 230V / 50Hz		
Long mains cable: 2.8 m		
CrimmBoss CB2 110V	87661023	1
Supply voltage 110V / 50Hz		
Long mains cable: 2.8 m		
Replacement part		
Contact tongue, large	87980007	1
Diameter range: 0.5 – 2.5 mm²		
Contact tongue, small	87980006	1
Diameter range: 0.14 – 1.0 mm²		

Cable tie tool Typ KBW / KKBW / KBW/M

Plastic / Steel

Cable tie tool KBM and KKBW for mounting of plastic cable ties.
- KBW 1K with adjustable automated cutting mechanism, plastic casing, automated metal cutting mechanism
- KKBW is full metal with manual cutting mechanism

Cable tie tool KBW/ adjusted to metal cable ties, type KBM.
With manual cutting mechanism.
- Robust metal tool

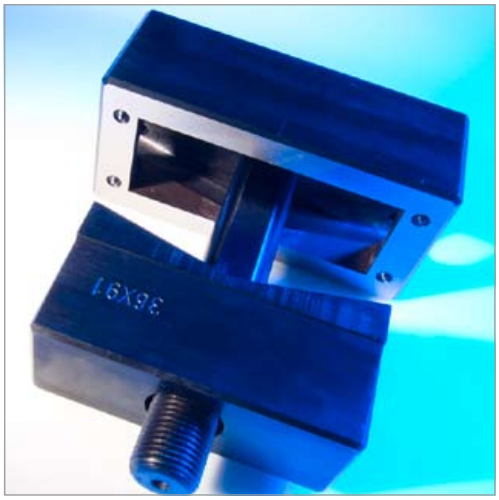
KBW 1K

KKBW

KBW/M

Type	Order no.		Pack qty.
Suitable for plastic cable ties:			
KBW 1K	87661012	Approx. length 170.0 mm	1
With adjustable automatic cutting device.			
Suitable for cable ties of up to 6 mm width.			
Suitable for plastic cable ties type KKB			
KKBW	87669094	Approx. length 190.0 mm	1
With manual cutting mechanism.			
Cable tie tool suitable for plastic cable ties KKB 28 / KB 110.			
Also suitable for plastic cable ties up to 8 mm wide.			
Suitable metal cable ties			
KBW/M	87669090	Approx. length 200,0 mm	1
Cable tie tool suitable for cable tie KBM.			
With manual cutting mechanism.			

Punching tools



KDH

Advantages

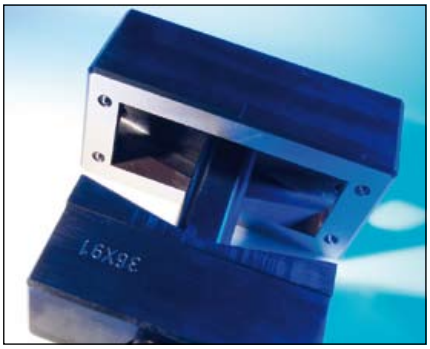
Now there are exact cut-outs

For years, Murrplastik Systemtechnik has been developing easy-to-assemble,maintenance-free connection systems for the routing of services and cable.

Thanks to our practical punching tools, you now have the option of quickly and easily realising the appropriate control cabinet cut-outs for our conduit and cable fittings, cable entry panels (KDP) and cable entry systems (KDL).

You can choose between three different hydraulic punches and a wide range of punching tools.

Punching tools are available for sheet steel and for stainless steel applications.



- ✔ **Compact design**
- ✔ **For workshop and assembly**
- ✔ **Long service life**
- ✔ **Easy handling**
- ✔ **Precise cut-outs**
- ✔ **Compatible with many other systems**

Overview punching tools

Hydraulic manual punch, types SW-HG / SW-HW

Practical manual punch without additional conduit and cylinder, ideal for workshop and assembly. SW-HW version: With 306° pivoting angled head.

Page 224

Hydraulic punch with foot pump, type SW-HF

Practical hydraulic punch with foot pump; ideal for use in the workshop. The foot pump does not require use of the hands, leaving both hands free for exact positioning and punching.

Page 225

Punching tools, types SW-WR / SW-WQ

Several punching tools for the creation of square or rectangular cut-outs. These hole punches are delivered a plastic transport case.

Page 226

Punching tool type SW-WE

Round hole punch, individual tools for steel or stainless steel plates. Versions for punching holes in metric or Pg threaded connections.

Page 228

Punching tool type SW-WS

Round hole perforator tool sets from M16 to M40 and/or to M63. For steel or stainless steel plates. These hole punches are delivered in a practical plastic transport case. Also ideal for assemly work.

Page 230

Punching tool type SW-WD

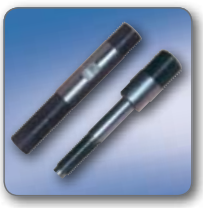
Punching tools for creation of SUB-MIN-D connector cut-outs (9 to 50 poles) for connecting to data transfer cables. Corresponding tension bolt is included in the delivery.

Page 231

Punching tool type SW-ASN

Universal punching tool for creation of various cut-out sizes and shapes. Tools with hole punch width 15 mm and 20 mm.

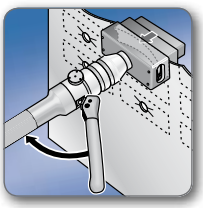
Page 232



Spare part list for punching tools

Replacement parts for the entire punching tool system.

Page 233



Working instructions: Punching cut-outs

Correctly carried out steps for the use of the punching tool for creating cut-outs.

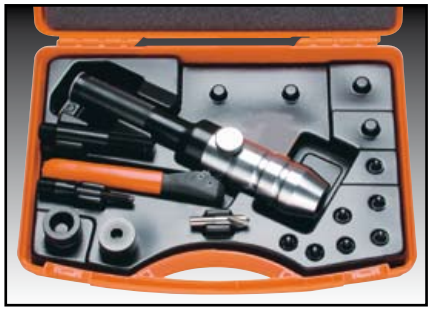
Page 234

Hydraulic manual punch, types SW-HG / SW-HW

Practical manual punch without additional conduit and cylinder, ideal for workshop and assembly.

- Hydraulic punch made of high-strength aluminium
- Overload protection via overpressure valve
- Ergonomic handle, springs back automatically

SW-HW version:
The angle head can be pivoted 360° for better handling.



SW-HG

SW-HW

Type	Order no.	Weight kg	Punching force kN	Operating pressure bar	Pack qty.
Compact hydraulic manual punch, straight					
SW-HG hydraulic manual punch	87801010	1.6	75.0	650.0	1
Compact hydraulic manual punch with pivoting head					
SW-HW hydraulic manual angle punch	87801012	1.9	75.0	650.0	1
Consisting of:					
1 pce. compact hydraulic manual punch					
1 each tension bolt version A					
1 pce. tension bolt version A					
1 pce. spacer bushing set (3-parts)					
1 pce. tap drill 11.0 mm					
1 pce. transport case					
Punching performance, round hole perforator:					
2.0 mm sheet steel (St37) max. Ø 84 mm					
3.0 mm sheet steel (St37) max. Ø 64 mm					
2.0 mm stainless steel (V2A) max. Ø 84 mm					
Punching performance, square hole perforator:					
2.0 mm sheet steel (St37) max. 36 x 112 mm					
Spare part see chapter "spare part for punching tool"					

Hydraulic punch with foot pump, type SW-HF

Practical hydraulic punch with foot pump; ideal for use in the workshop.
The foot pump does not require use of the hands, leaving both hands free for exact positioning and punching at the control cabinet. The support frame of the foot pump is splayed. This provides for stable, anti-tip working.

- Overload protection via installed pump safety valve
- Better punching performance then with a manual punch
- For larger punching tools

SW-HF

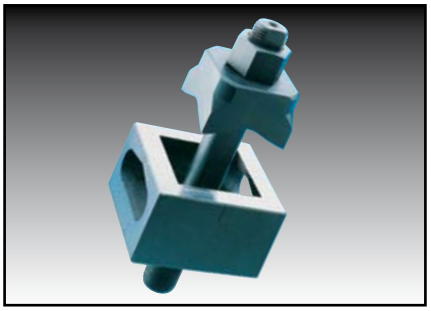
Type	Order no.	Weight kg	Punching force kN	Operating pressure bar	Pack qty.
Hydraulic punch with foot pump					
SW-HF Hydraulic punch with foot pump	87801014	13.9	100.0	700.0	1
Consisting of:					
1 pce. hydraulic cylinder with quick coupling					
1 pce. hydraulic conduit 2.8 m					
1 each tension bolt version A					
1 pce. tension bolt version A					
1 pce. spacer bushing set (5-parts)					
1 pce. tap drill 11.0 mm					
1 pce. sheet steel transport case					
Punching performance, round hole perforator:					
2.0 mm sheet steel (St37) max. Ø 150 mm					
3.0 mm sheet steel (St37) max. Ø 100 mm					
2.0 mm stainless steel (V2A) max. Ø 100 mm					
Punching performance, square hole perforator:					
2.0 mm sheet steel (St37) max. 138 x 138 mm					
2.0 mm stainless steel (V2A) max. 92 x 92 mm					
Spare part see chapter "spare part for punching tool"					

Punching tools type SW-WR / SW-WQ

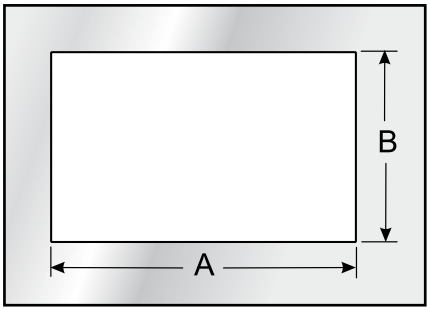
Steel

Several punching tools for the creation of square or rectangular cut-outs. These hole punches are delivered in a plastic transport case. Also ideal for mounting use. Corresponding tension bolt is included in the delivery. During the punching process, the attachment points for the screw holes are centred.

SW-WR...



SW-WQ...



Type	Order no.	Punching A mm	Punching B mm	Suitable for	Suitable tension bolt Version	Cut-out for	Corresponds to hydraulic punches SW-HG(HW) / SW-HF	Pack qty.
Hole perforator (rectangular) for sheet steel with centring tips								
SW-WR 17.0x19.0	87801330	17.0	19.0	Sheet steel ≤2 mm	G		● / ●	1
SW-WR 21.8x25.8	87801332	21.8	25.8	Sheet steel ≤2 mm	K		● / ●	1
SW-WR 22.0x30.0	87801334	22.0	30.0	Sheet steel ≤2 mm	K		● / ●	1
SW-WR 22.0x42.0	87801336	22.0	42.0	Sheet steel ≤2 mm	K		● / ●	1
SW-WR 25.0x30.0	87801340	25.0	50.0	Sheet steel ≤2 mm	K		● / ●	1
SW-WR 36.0x52.0	87801350	36.0	52.0	Sheet steel ≤2 mm	D *	Heavy connectors 6-pole	● / ●	1
SW-WR 36.0x65.0	87801352	36.0	65.0	Sheet steel ≤2 mm	D *	Heavy connectors 10-pole	● / ●	1
SW-WR 45.0x92.0	87801342	45.0	92.0	Sheet steel ≤2 mm	D *		● / ●	1
SW-WR 46.0x86.0	87801354	46.0	86.0	Sheet steel ≤2 mm	D *		● / ●	1
SW-WR 46.0x92.0	87801344	46.0	92.0	Sheet steel ≤2 mm	D *		● / ●	1
SW-WR 46.0x112.0	87801356	46.0	112.0	Sheet steel ≤2 mm	E		- / ●	1
SW-WR 68.0x138.0	87801346	68.0	138.0	Sheet steel ≤3 mm	E		- / ●	1
SW-WR 86.0x36.0	87801292	86.0	36.0	Sheet steel ≤2 mm	D *	KDL 16 KDL/E 16 (screwed) KDL/S 16, KD/AG 16	● / ●	1
SW-WR 91.0x36.0	87801294	91.0	36.0	Sheet steel ≤2 mm	D *	KDL/E 16 (snap in or screwed)	● / ●	1
SW-WR 112.0x36.0	87801290	112.0	36.0	Sheet steel ≤2 mm	D *	KDP/N 24, KDL 24 KDL/E 24, KD/AG 24	● / ●	1

Punching tools type SW-WR / SW-WQ

Type	Order no.	Punching A mm	Punching B mm	Suitable for	Suitable tension bolt Version	Corresponds to hydraulic punches SW-HG(HW) / SW-HF	Pack qty.
Hole perforator (rectangular) for sheet steel with centring tips							
SW-WQ 12.7x12.7	87801300	12.7	12.7	Sheet steel ≤1.75 mm	H	● / ●	1
SW-WQ 15.8x15.8	87801302	15.8	15.8	Sheet steel ≤1.75 mm	H	● / ●	1
SW-WQ 19.0x19.0	87801304	19.0	19.0	Sheet steel ≤2 mm	G	● / ●	1
SW-WQ 22.2x22.2	87801306	22.2	22.2	Sheet steel ≤2 mm	G	● / ●	1
SW-WQ 24.0x24.0	87801308	24.0	24.0	Sheet steel ≤2 mm	G	● / ●	1
SW-WQ 25.4x25.4	87801310	25.4	25.4	Sheet steel ≤2 mm	K	● / ●	1
SW-WQ 45.8x15.8	87801312	45.5	45.5	Sheet steel ≤3 mm	F	● / ●	1
SW-WQ 46.0x46.0	87801314	46.0	46.0	Sheet steel ≤3 mm	F	● / ●	1
SW-WQ 50.8x50.8	87801316	50.8	50.8	Sheet steel ≤3 mm	D *	● / ●	1
SW-WQ 68.0x68.0	87801318	68.0	68.0	Sheet steel ≤3 mm	D *	● / ●	1
SW-WQ 92.0x92.0	87801320	92.0	92.0	Sheet steel ≤3 mm	E	- / ●	1
SW-WQ 125.0x125.0	87801322	125.0	125.0	Sheet steel ≤3 mm	E	- / ●	1
SW-WQ 138.0x138.0	87801324	138.0	138.0	Sheet steel ≤3 mm	E	- / ●	1

* Suitable tool for forming the cut-out for the tension screw:
Round hole perforator SW-WE-NS Pg16

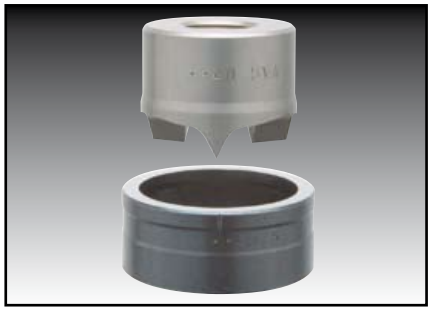
Spare part see chapter "spare part for punching tool"

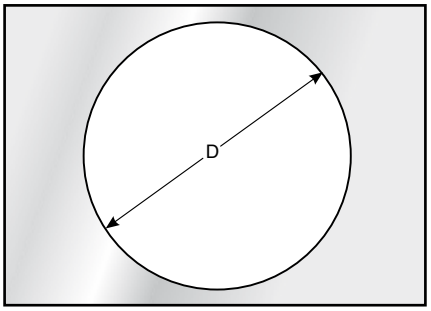
Punching tool type SW-WE

Steel

Round hole punch, individual tools for steel or stainless steel plates.
Versions for punching holes in metric or Pg threaded connections.

- Metric sizes from M16 to M63
- Pg sizes from Pg9 to Pg48





SW-WE...

Type	Order no.	Dimension	Punching D mm	Suitable for	Suitable tension bolt Version	Cut-out for	Pack qty.
Hole perforator (round) for steel sheets							
SW-WE-NS M16	87801210	M16	16.2	Sheet steel ≤2 mm	A		1
SW-WE-NS M20	87801212	M20	20.4	Sheet steel ≤2 mm	A		1
SW-WE-NS M25	87801214	M25	25.4	Sheet steel ≤2 mm	A		1
SW-WE-NS M32	87801216	M32	32.5	Sheet steel ≤3 mm	C		1
SW-WE-NS M40	87801218	M40	40.5	Sheet steel ≤3 mm	C		1
SW-WE-NS M50	87801220	M50	50.5	Sheet steel ≤3 mm	C	KDP/R M50/x	1
SW-WE-NS M63	87801222	M63	63.5	Sheet steel ≤3 mm	C	KDP/R M63/x	1
SW-WE-NS Pg09	87801238	Pg09	15.2	Sheet steel ≤2 mm	A		1
SW-WE-NS Pg11	87801240	Pg11	18.6	Sheet steel ≤2 mm	A		1
SW-WE-NS Pg13	87801242	Pg13	20.4	Sheet steel ≤2 mm	A		1
SW-WE-NS Pg16	87801244	Pg16	22.5	Sheet steel ≤2 mm	A		1
SW-WE-NS Pg21	87801246	Pg21	28.3	Sheet steel ≤2 mm	A		1
SW-WE-NS Pg29	87801248	Pg29	37.0	Sheet steel ≤3 mm	C		1
SW-WE-NS Pg36	87801250	Pg36	47.0	Sheet steel ≤3 mm	C		1
SW-WE-NS Pg42	87801252	Pg42	54.0	Sheet steel ≤3 mm	C		1
SW-WE-NS Pg48	87801254	Pg48	60.0	Sheet steel ≤3 mm	C		1

Punching tool type SW-WE

Type	Order no.	Dimension	Punching D mm	Suitable for	Suitable tension bolt Version	Cut-out for	Pack qty.
Hole perforator (round) for Steel and stainless steel sheets							
SW-WE-VA M16	87801224	M16	16.2	Steel and stainless steel sheets ≤2 mm	B		1
SW-WE-VA M20	87801226	M20	20.4	Steel and stainless steel sheets ≤2 mm	B		1
SW-WE-VA M25	87801228	M25	25.4	Steel and stainless steel sheets ≤2 mm	B		1
SW-WE-VA M32	87801230	M32	32.5	Steel and stainless steel sheets ≤2.5 mm	C		1
SW-WE-VA M40	87801232	M40	40.5	Steel and stainless steel sheets ≤2.5 mm	C		1
SW-WE-VA M50	87801234	M50	50.5	Steel and stainless steel sheets ≤2.5 mm	C	KDP/R M50/x	1
SW-WE-VA M63	87801236	M63	63.5	Steel and stainless steel sheets ≤2.5 mm	C	KDP/R M63/x	1
SW-WE-VA Pg09	87801256	Pg09	15.2	Steel and stainless steel sheets ≤2 mm	B		1
SW-WE-VA Pg11	87801258	Pg11	18.6	Steel and stainless steel sheets ≤2 mm	B		1
SW-WE-VA Pg13	87801260	Pg13	20.4	Steel and stainless steel sheets ≤2 mm	B		1
SW-WE-VA Pg16	87801262	Pg16	22.5	Steel and stainless steel sheets ≤2 mm	B		1
SW-WE-VA Pg21	87801264	Pg21	28.3	Steel and stainless steel sheets ≤2.5 mm	C		1
SW-WE-VA Pg29	87801266	Pg29	37.0	Steel and stainless steel sheets ≤2.5 mm	C		1
SW-WE-VA Pg36	87801268	Pg36	47.0	Steel and stainless steel sheets ≤2.5 mm	C		1
SW-WE-VA Pg42	87801270	Pg42	54.0	Steel and stainless steel sheets ≤2.5 mm	C		1
SW-WE-VA Pg48	87801272	Pg48	60.0	Steel and stainless steel sheets ≤2.5 mm	C		1
Spare part see chapter "spare part for punching tool"							

Punching tool type SW-WS

Steel

Round hole perforator tool sets from M16 to M40 and/or to M63.
For steel or stainless steel plates.
Punching tools are delivered in a handy plastic transport case.
Ideal for assembly work.

SW-WS-... M16-M40

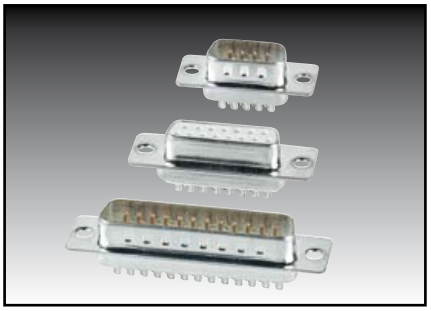
SW-WS-... M16-M63

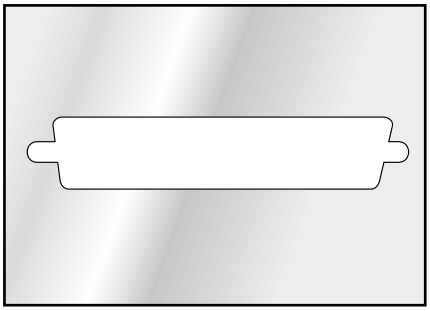
Type	Order no.	Suitable for	Suitable tension bolt Version	Pack qty.
Sheet metal perforator set for sheet steel				
SW-WS-NS M16-M40	87801280	Sheet steel	A & C	1
consisting of:				
1 each M16; M20; M25; M32; M40; transport case				
Sheet metal perforator set for sheet steel				
SW-WS-NS M16-M63	87801282	Sheet steel	A & C	1
consisting of:				
1 each M16; M20; M25; M32; M40; M50; M63; transport case				
Sheet metal perforator set for stainless sheet steel				
SW-WS-VA M16-M40	87801284	Sheet steel and stainless sheet steel	B & C	1
consisting of:				
1 each M16; M20; M25; M32; M40; transport case				
Sheet metal perforator set for stainless sheet steel				
SW-WS-VA M16-M63	87801286	Sheet steel and stainless sheet steel	B & C	1
consisting of:				
1 each M16; M20; M25; M32; M40; M50; M63; transport case				
Spare part see chapter "spare part for punching tool"				

Punching tool type SW-WD

Steel

Punching tool for creation of SUB-MIN-D plug cut-outs (9 to 50 poles). Simple and quick creation of these cut-outs, e.g. for connection of data transmission cables. Corresponding tension bolt is included in the delivery.





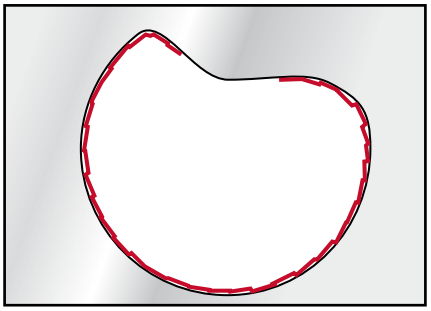
SW-WD...

Type	Order no.	Punching for	Suitable for	Suitable tension bolt Version	Pack qty.
Hole perforator for SUB-MIN-D plug					
SW-WD 9-pole	87801360	SUB-MIN-D 9-pole	Sheet steel ≤2 mm	L	1
SW-WD 15-pole	87801362	SUB-MIN-D 15-pole	Sheet steel ≤2 mm	L	1
SW-WD 25-pole	87801364	SUB-MIN-D 25-pole	Sheet steel ≤1.75 mm	L	1
SW-WD 37-pole	87801366	SUB-MIN-D 37-pole	Sheet steel ≤1.75 mm	L	1
SW-WD 50-pole	87801368	SUB-MIN-D 50-pole	Sheet steel ≤1.65 mm	L	1
Spare part see chapter "spare part for punching tool"					

Punching tool type SW-ASN

Steel

Universal punching tool for creation of various cut-out sizes and shapes.
Tools with hole punch width 15 mm and 20 mm.



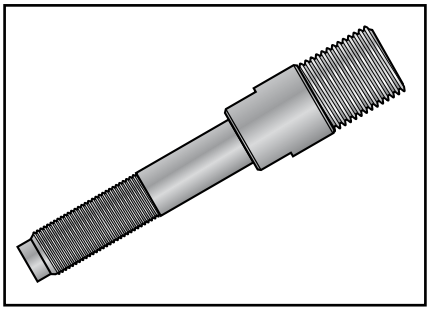
SW_ASN...

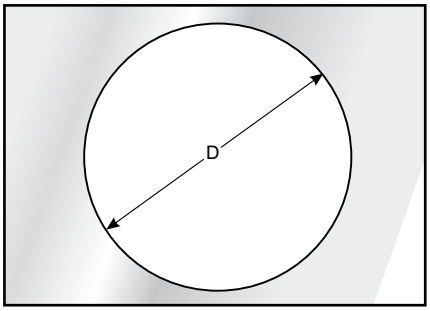
Type	Order no.	Hole punch width mm	Hole punch length mm	Hole diameter mm	Suitable for	Pack qty.
Special ASN nibbling tool						
SW-ASN 15	87801370	15.0	6.5	21.5	Sheet steel ≤2 mm	1
SW-ASN 20	87801372	20.0	9.0	28.5	Sheet steel ≤2 mm	1
Spare part see chapter "spare part for punching tool"						

Spare part list for punching tools

Steel

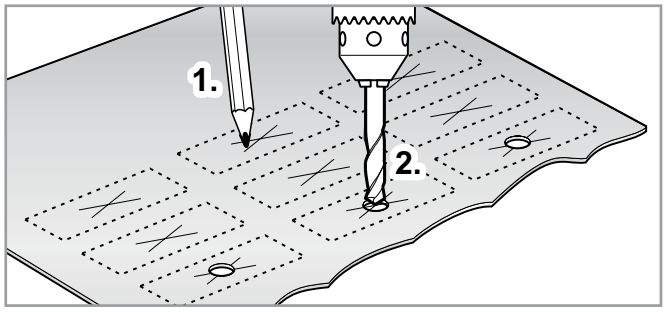
Replacement parts for the entire punching tool system.





Type	Order no.	Tensioning screw Version	Length mm	Pilot hole D mm	Pack qty.
Tensioning screw					
SW-WE-ZS Type A	87801410	A	100.0	10.0	1
SW-WE-ZS Type B	87801412	B	100.0	11.5	1
SW-WE-ZS Type C	87801414	C	120.0	20.0	1
SW-WE-ZS Type D	87801416	D	165.0	24.0	1
SW-WE-ZS Type E	87801434	E	173.0	30.0	1
SW-WE-ZS Type F	87801436	F	141.0	20.0	1
SW-WE-ZS Type G	87801438	G	106.0	14.0	1
SW-WE-ZS Type H	87801440	H	87.0	10.0	1
SW-WE-ZS Type K	87801442	K	106.0	17.0	1
SW-WE-ZS Type L	87801444	L	87.0	10.0	1
Spacer bushing set					
SW-WS-DS 3-pce.	87801430				1
SW-WS-DS 5-pce.	87801432				1
Predrill					
SW-WE-VB 10.0 mm	87801420				1
SW-WE-VB 11.0 mm	87801422				1
SW-WE-VB 11.5 mm	87801424				1
Replacement stamp for special nibbling tool					
SW-ASN 15 stamp	87801374				1
SW-ASN 20 stamp	87801376				1

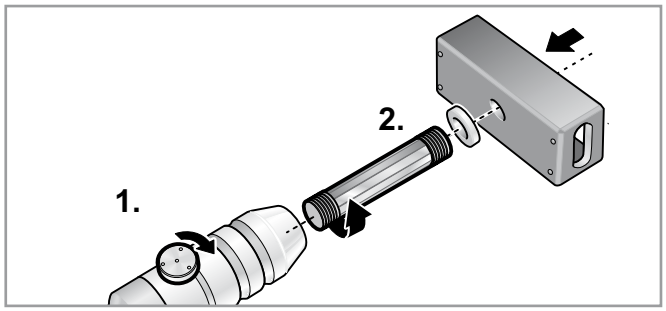
Assembly



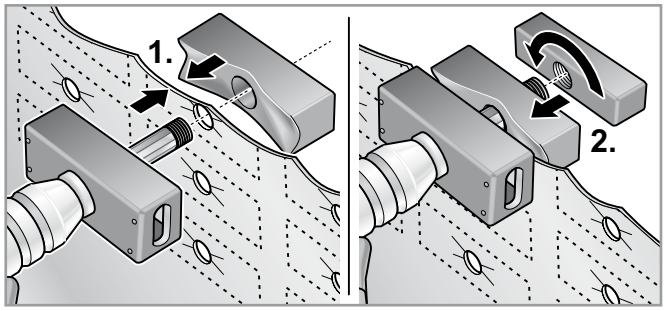
Establish and mark cut-outs.

Caution:
Ensure sufficient distance between the press cuts!

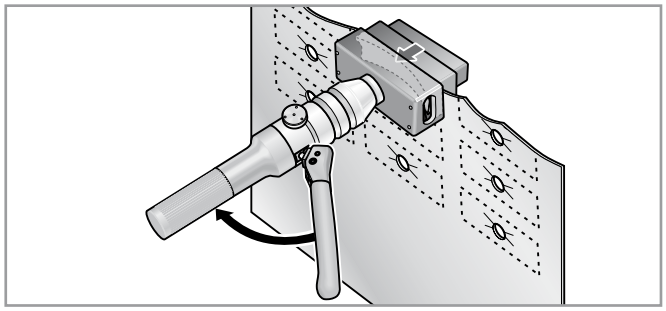
Mark drilling point for the pilot hole for the tension screw and punch out the pilot hole for the tension screw.



Screw in corresponding tension screw into the tool head and close the valve on the punching tool. Push on appropriate spacer and die.

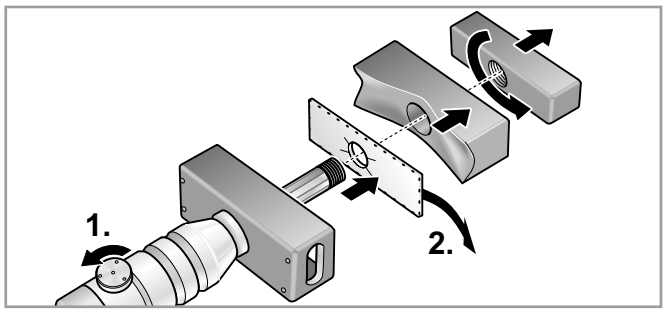


Insert tension screw into pilot hole. Stick or screw stamp onto tension bolt. Secure with lock nut where needed. Align die and draw in lock nut by hand.



Activate hydraulic mechanism until the press cut is completed. Then actuate 3 – 4 further strokes. This ensures an easier removal of the plate from the die.

Caution: If excessive force is required, inspect the hydraulic tool and punching tool! Observe the tool's operating instructions.



Remove hydraulic tool from the cut-out. Open valve and remove lock nut and stamp. Remove plate from the die.

Appendix

Appendix I
Protection Classes

Protection classes EN 60529

An important element for housings is protection of integrated elements against drilling, foreign particles and water. The various protection properties are divided into
IP classes (IP = international protection). The framework conditions that a protection class must guarantee are laid out in DIN 40050 and IEC-EN 60529.

IP protection classes are indicated through a two digit code (IPXX). The first digit indicates protection against contact and foreign particles, the second the water protection factor.
Accordingly the class IP 65 is completely protected against contacts, dustproof (1st digit = 6) and is protected against jets of water from a nozzle in all directions (2nd digit = 5).

First index number	Contact protection	Foreign particle protection	Second index number	Brief description	Water protection
0	No protection		**0**	No protection	
1	Protected against solid foreign objects of 50 mm and larger	The object probe, a sphere of 50 mm in diameter, must not fully penetrate.	**1**	Protected against vertical falling drops of water	Drops which fall vertically must not have any harmful effect.
2	Protected against solid foreign substances of 12.5 mm dia. and above.	The object probe, a sphere of 12.5 mm in diameter, must not fully penetrate.	**2**	Protected against diagonally falling (up to 15°) drops of water	Drops which fall vertically must not have any harmful effects if the housing is inclined at an angle of up to 15° at either side of the perpendicular.
3	Protected against solid foreign substances of 2.5 mm dia. and above.	The object probe of diameter 2.5 mm must not penetrate at all.	**3**	Protected against diagonally falling spray (up to 60°)	Water which is sprayed at an angle of up to 60° from either side of the perpendicular must not have any harmful effects.
4	Protected against solid foreign substances of 1.0 mm dia. and above.	The object probe of diameter 1.0 mm must not penetrate at all.	**4**	Protected against spray from all directions	Water splashing against the enclosure from one direction shall have no harmful effect.
5	Dustproof	The ingress of dust is not fully prevented; however, it must not penetrate to such an extent that satisfactory operation or safety are impaired.	**5**	Protected against jets of water (nozzle)	Water which is sprayed in a jet against the housing from any direction must not have any harmful effects.
6	dust-tight	No ingress of dust.	**6**	Protected against strong water jets (flooding)	Water projected in powerful jets from any direction against the housing shall have no harmful effects.
			7	Protected against the effect of temporary immersion in water	Water must not penetrate to an extent that will cause harmful effects if the housing is temporarily submerged in water under pressure and under time conditions.
			8	Protected against the effect of temporary submersion in water	Water must not penetrate to such an extent that it will cause harmful effects if the housing is permanently submerged in water.
			9k	Protection against highly pressurised water/steam jet cleaning	IP x9K according to DIN 40050 Water jet at 0°, 30°, 60° and 90° Cycle: 30 seconds each Distance: 10 - 15 cm Water volume: 14 - 16 litres per min. Water temperature: 80 °C +/- 5 °C Water pressure: 80 - 100 bar

Protective classes NEMA

In the US, protective classes are not organised by IP class, but rather according to the NEMA standard (National Electrical Manufacturers Association). The following table serves for conversion of NEMA classes into the corresponding IP class. This table may not be used to convert IP classes into NEMA classes, however!

IEC 529	NEMA Enclosure Type									
Enclosure Type	1	2	3	3R	3S	4	4X	6	12	13
IP10	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
IP20	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
IP21	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
IP22	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
IP23	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
IP30	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
IP31			✔	✔	✔	✔	✔	✔	✔	✔
IP32			✔	✔	✔	✔	✔	✔	✔	✔
IP33			✔		✔	✔	✔	✔	✔	✔
IP40			✔		✔	✔	✔	✔	✔	✔
IP41			✔		✔	✔	✔	✔	✔	✔
IP42			✔		✔	✔	✔	✔	✔	✔
IP43			✔		✔	✔	✔	✔	✔	✔
IP50			✔		✔	✔	✔	✔	✔	✔
IP51			✔		✔	✔	✔	✔	✔	✔
IP52			✔		✔	✔	✔	✔	✔	✔
IP53			✔		✔	✔	✔	✔	✔	✔
IP54			✔		✔	✔	✔	✔	✔	✔
IP55			✔		✔	✔	✔	✔	✔	✔
IP56			✔		✔	✔	✔	✔	✔	✔
IP60			✔		✔	✔	✔	✔	✔	✔
IP61			✔		✔	✔	✔	✔	✔	✔
IP62			✔		✔	✔	✔	✔	✔	✔
IP63			✔		✔	✔	✔	✔	✔	✔
IP64			✔		✔	✔	✔	✔	✔	✔
IP65			✔			✔	✔	✔	✔	✔
IP66						✔	✔	✔		
IP67								✔		

Appendix II
Fire classification / Guidelines

Description of fire classifications according to UL 94

Fire classification HB
The material burns slowly in the horizontal combustion test. The rate of combustion must not exceed 3 inches/min. for wall thicknesses of up to 3 mm, and 1.5 inches/min. for wall thicknesses over 3 mm. Any materials exceeding these combustion rate limits are not registered by UL.

Fire classification V2
In the vertical combustion test, self-extinguishing must occur after an average of 25 seconds (individual values not to exceed 30 seconds). Any dripping material may ignite cotton wool located underneath. However, any afterglow must not exceed 60 seconds.

Fire classification V1
In the vertical combustion test, self-extinguishing must also occur after an average of 25 seconds (individual values not to exceed 30 seconds). However, any possible dripping material must not ignite the cotton wool. Any afterglow must not exceed 30 seconds.

Fire classification V0
In the vertical combustion test, self-extinguishing must occur after an average of less than 5 seconds (individual values not to exceed 10 seconds). Any material dropping off must not ignite cotton wool placed underneath and any afterglow must not exceed 30 seconds.

Description of fire classification according to DIN 5510

Combustion class S4
Test procedure: acc. to DIN 54837

Requirements:
- Length of the destroyed area: ≤ 20 cm
- No afterburning

Products may also be assigned to combustion class S4 if afterburning occurs within the burnt testing area and the average duration of afterburning does not exceed 10 seconds. If afterburning occurs in the undamaged area of the test piece, the product must not be assigned to combustion class S4.

If the afterburning of a test object lasts longer 120 seconds, such products must not be assigned to combustion class S4 (note: according to DIN 5 4 837, a burning test piece must be extinguished immediately after an observation period of 120 seconds).

What's meant by these abbreviations?

The use of specific materials in automobiles as well as electric and electronic devices is restricted and/or forbidden by various European guidelines. Various associations and fabricators have published their own lists of materials considered undesirable.

RoHS-Directive 2002/95/EG
(RoHS = Restriction of the use of certain Hazardous Substances in electrical and electronic equipment)

The guidelines limiting specific hazardous materials in electric and electronic devices categorised the following materials and their compounds as dangerous:
lead, mercury, cadmium, chrome 6, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE).

VDA lists (VDA = Verband der Automobilindustrie in Deutschland)

Alongside the legal stipulations, there are also a variety of material and declaration lists prescribed by various associations and fabricators. They contain materials and material groups that are undesirable or forbidden from the corresponding processing branch for a variety of reasons. Several of the most well-known lists are shown in the following, their content drawn from other sources and in some cases expanded: VDA list 232-101 for notifiable materials; Bosch Standard N 2580.

The VDA list is part of the ILRS list ("List for materials in automobile manufacture requiring declaration--substances in components and raw materials") that is used in the IMDS (International Material Data System).

Directive 2000/53/EC (RoHS)
(ELV = End-of-Life vehicles)

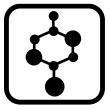
The heavy metals listed in the ordinance (ELV) are a portion of those named in the RoHS guidelines, including lead, mercury, cadmium, chrome 6.

WEEE guidelines 2002/96/EG
(WEEE = Waste from Electric and Electronic Equipment)

Goal of the guidelines is the avoidance of waste from electric and electronic devices, as well as their recovery and recycling. They require selective handling of used devices with specific critical materials, as named in the guideline appendices.

General information

To help you make better comparisons!



Materials

The use and combination of widely varied materials like plastics of all types, elastomeres or metals means that Murrplastik products can be used in a variety of situations.

Chemical Properties

Reactions with chemical substances differ according to the individual plastics and elastomers.

For more information, see "Chemical Resistance" in "Appendix IV".

A large database with more than 1600 substances can be accessed on the internet at www.murrplastik.de.

Fire behaviour

Self-extinguishing materials and material alloys allow for the use of plastics in critical areas.

The products or the raw material are normally certified and classified according to UL 94 or DIN 5510. See also "Fire Classifications" in "Appendix II".

Temperatures specifications

The temperature ranges quoted for the individual products must be noted in application.

"Short Periods" refers to a total duration of up to 500 hours. Thereafter, the properties of the plastics may change.

Approvals

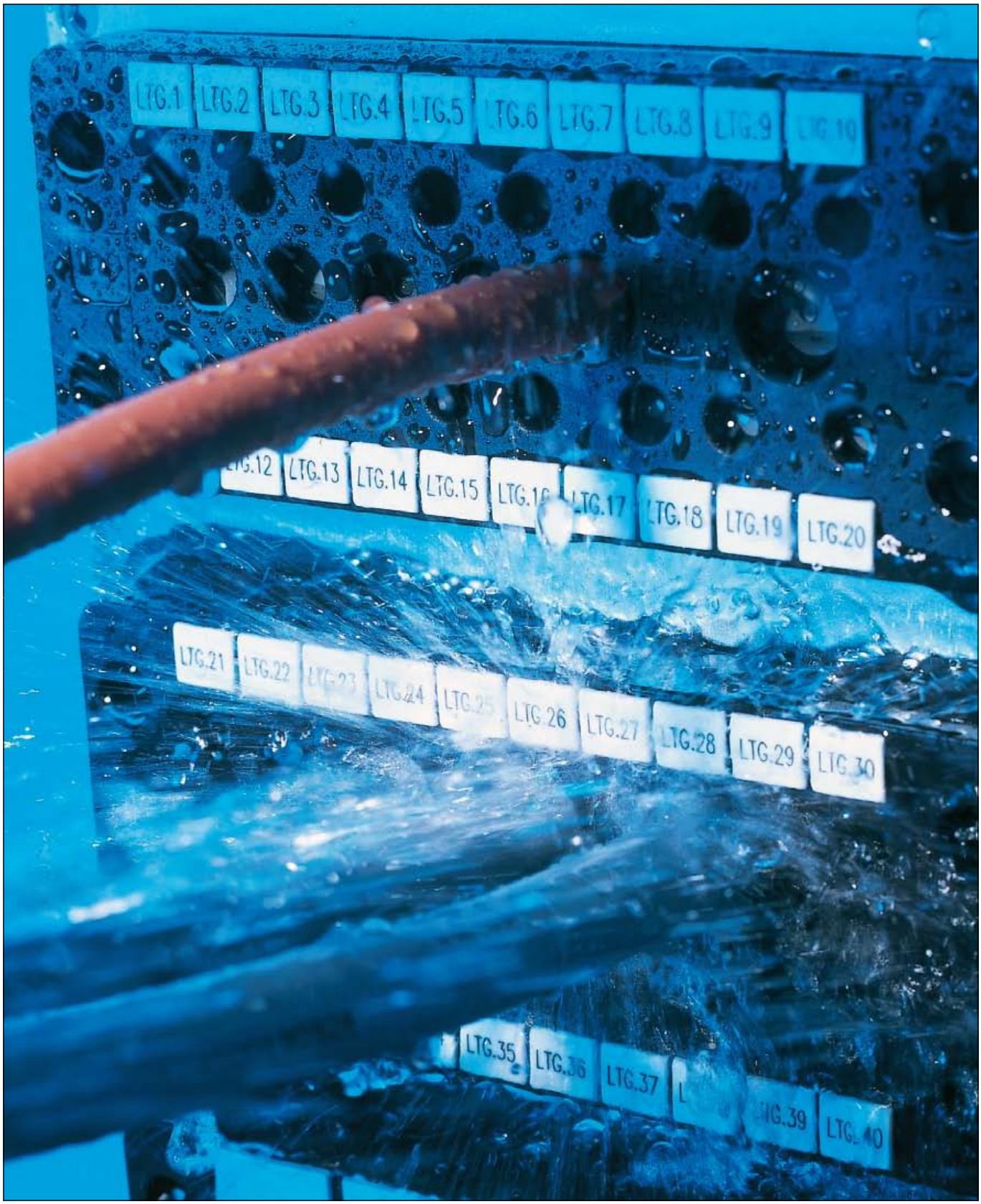
Our products boast a large number of approvals and certifications, e.g. VDE, UL/UR, CSA, DB, SNCF, BS,... Note the specifications in the catalogue and product data sheets.

IP protection class

The IP protection class indicates the tightness of products against solids and water.

The values are also related to static applications. With dynamic applications, the protection class may change.

For more information, see "Protection Classes" in "Appendix I".


LTG.1
LTG.2
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LTG.37
LTG.39

Appendix IV
Chemical Resistance of Plastics

Reagent	Concen-tration %	At + °C	Polyethylene PE	Polyamide PA6	Polyamide PA 12	Polypropylene PP	Polyurethane PU
Acetaldehyde	100	20	+	40 % o	+		+
Acetic acid	10	20	+	o	o	+	o
Acetone	100	20	+	+	+	+	-
Allyl alcohol	96	20		30 % o	o	+	-
Alum, aqueous	diluted	40			+	+	
Aluminium chloride, aqueous	diluted	40	+		+	+	+
Aluminium sulphate, aqueous	diluted	40	+			+	+
Ammonia, aqueous	any	20	+	20 % +		+	o
Ammonium chloride, aqueous	any	60	+		o	+	+
Ammonium nitrate, aqueous	diluted	40	+			+	+
Ammonium sulphate, aqueous	diluted	40	+			+	+
Aniline chlorohydrate, aqueous	saturated	20					
Aniline, pure	100	20	+	o	o	+	-
Benzahldehyde, aqueous	0,3	20	-	pure o	o	+	
Benzine	100	20	-	+	+	o	+
Benzoic acid	any	40	+		o	+	+
Benzol	100	20	-	+	+	o	-
Bleaching lye	12.5 Cl	20		-	o	o	
Boracic acid, aqueous	diluted	40	+	o	+	+	-
Borax, aqueous	diluted	40		o	+	+	
Boron	50	40		o			
Bromine, liquid	100	20	-	-	o	-	-
Butane diol	10	20		pure +		+	o
Butanol	100	20				+	+
Butyl acetate	100	20				o	-
Butyl alcohol	100	20	-			+	o
Calcium chloride, aqueous	any	40	+	+	o	+	+
Calcium nitrate, aqueous	50	40	+			+	+
Carbon bisulphide	100	20	-	o	+	+	+
Carbon dioxide	100	60	+			+	+
Carbon oxide	100	60	+			+	+
Carbon tetrachloride	100	20		+	o	o	+
Caustic potash solution	50	20		50 % +		+	o
Chlorine	any	20	-	-	-	-	-
Chromic alum, aqueous	diluted	40				+	
Citric acid	10	40	+			+	o
Copper chloride, aqueous	saturated	20	+			+	+
Copper sulphate, aqueous	any	40	+			+	+
Cresol, aqueous	90	20	-	pure -	-	+	-
Crystallisable acetic acid	100	20			o	+	
Cyclohexanol	100	20		+		+	-
Ethyl acrylate/acrylic resin enamel	100	20	-	30 % -	-		
Ethyl alcohol, aqueous	10	20		o		+	+
Ethyl ether	100	20		30 % +		o	-
Ethylene chloride	100	20				o	-
Ethylene oxide, liquid	100	20					
Exhaust gases containing carbon dioxide	any	60				+	+
Exhaust gases containing carbon oxide	any	60				+	+
Fluorine	50	40		-			
Formaldehyde, aqueous	diluted	40	+	pure +	o	+	o
Formic acid, aqueous	100	20		10 % o	-	+	-

The information provided above enables an initial choice to be made. However, it is not intended as a guarantee of particular properties of the products or their suitability for a particular application. It does not release the buyer from the duty of carrying out suitability checks.

+ means: resistant
o means: limited resistance
- means: not resistant

Reagent	Concentration %	At + °C	Polyethylene PE	Polyamide PA6	Polyamide PA 12	Polypropylene PP	Polyurethane PU
Glucose, aqueous	any	20	+			+	+
Hydrobromic acid, aqueous	10	40	+	-		+	-
Hydrochloric acid	10	30-40					
Hydrochloric acid, aqueous	10	20	+	20 % -	o	+	-
Hydrogen	100	60		+			+
Hydrosilicofluoric acid	30	20	-				
Hydroxylamine sulphate, aqueous	12	35					+
Iron chloride, aqueous	10	40	+	o	+	+	+
Lactic acid, aqueous	50	20	o	pure +	o	+	o
Magnesium carbonate	any	20					+
Magnesium chloride, aqueous	any	20	+	10 % o		+	+
Mercury		60	+	+	+	+	+
Methyl alcohol	100	20	+			+	o
Methyl chloride	100	20					
Methylene chloride	100	20		o	o	-	-
Nickel chloride, aqueous	any	20		10 % o		+	+
Nickel sulphate, aqueous	any	20	+	10 % o		+	+
Nitric acid, aqueous	6	20	+	50 % -	-	+	-
Nitroglycerine	diluted	20					
Oils and greases		20	o	+	+	+	+
Oleic acid	100	20		+		+	o
Oxalic acid	saturated	20	+	10 % o		+	o
Ozone	100	20	o	o	+	o	o
Petroleum							+
Phosgene, liquid	100	20					-
Phosphoric acid, aqueous	diluted	20	+	10 % -	o	+	o
Phosphorus pentoxide	100	20				+	
Photographic developer		40				+	
Potash, aqueous	saturated	40			+		+
Potassium bromide, aqueous	any	60	+	10 % +		+	o
Potassium chloride, aqueous	any	20	+	10 % +		+	+
Potassium dichromate, aqueous	40	20				+	+
Potassium ferrocyanide, aqueous	any	60	o			+	
Potassium nitrate	any	20	+	10 % +	+	+	+
Potassium permanganate, aqueous	6	20	+		o	+	-
Potassium persulphate, aqueous	verdünnt	40	-		+	+	+
Salt solution	any	40			+	+	+
Seawater		40	+	+	o	+	+
Soap solution, aqueous	concentrated	20		o		+	+
Soda lye, aqueous	10	20	+	+	+	+	o
Sodium chlorate, aqueous	any	20	+	10 % o		+	
Sodium sulphide, aqueous	diluted	40				+	
Sulphuric acid	10	20	+	40 - 80 % -	o	+	+
Tin chloride, aqueous	diluted	40			+	+	+
Toluene	100	20	-	+	+	o	+
Trichloroethylene	100	20	-	o		o	-
Urea, aqueous	10	40		20 % +		+	+
Vinyl acetate	100	20					-
Xylene	100	20		+	+	o	+
Zinc chloride, aqueous	diluted	60	+	10% o	o	+	+
Zinc sulphate, aqueous	diluted	60	+			+	+

Appendix V
Representatives

Distribution regions Germany

Postcode areas: 18000 – 20999, 22000 – 25999
Murrplastik Systemtechnik GmbH
Distribution region North 1
Phone: +497191 482-221
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 21000 – 21999, 26000 – 31999, 38000 – 38999
Murrplastik Systemtechnik GmbH
Distribution region North 2
Phone: +497191 482 -221
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 32000 – 32999, 46000 – 46999, 48000 – 49999
Murrplastik Systemtechnik GmbH
Distribution region North-West 1
Phone: +497191 482-227
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 40000 – 42999, 45000 – 45999, 47000 – 47999, 50000 – 53999, 58000 – 58999
Murrplastik Systemtechnik GmbH
Distribution region North-West 2
Phone: +497191 482-227
Fax: +497191 482-280
info@murrplastik.de
bestellung.sy@murrplastik.de

Postcode areas: 44000 – 44999
Murrplastik Systemtechnik GmbH
Distribution region North-West 3
Phone: +497191 482-221
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 33000 – 33999, 35000 – 35999, 57000 – 57999, 59000 – 59999
Murrplastik Systemtechnik GmbH
Distribution region Central Germany 1
Phone: +497191 482-239
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 34000 – 34999, 36000 – 37999
Murrplastik Systemtechnik GmbH
Distribution region Central Germany 2
Phone: +497191 482-239
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 01000 – 03999, 09000 – 17999
Murrplastik Systemtechnik GmbH
Distribution region East 1
Phone: +497191 482-256
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 04000 – 04999, 06000 – 08999, 39000 – 39999, 99000 – 99999
Murrplastik Systemtechnik GmbH
Distribution region East 2
Phone: +497191 482-256
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 54000 – 56999, 60000 – 69999
Murrplastik Systemtechnik GmbH
Distribution region South-West 1
Phone: +497191 482-216
Fax: +497191 482-280
info@murrplastik.de
bestellung.sy@murrplastik.de

Postcode areas: 75000 – 77999
Murrplastik Systemtechnik GmbH
Distribution region South-West 2
Phone: +497191 482-216
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 71000 – 71999, 74000 – 74999
Murrplastik Systemtechnik GmbH
Distribution region South 1
Phone: +497191 482-233
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 70000 – 70999, 73000 – 73999, 89000 – 89999
Murrplastik Systemtechnik GmbH
Distribution region South 2
Phone: +497191 482-233
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 72000 – 72999, 78000 – 79999, 88000 – 88999
Murrplastik Systemtechnik GmbH
Distribution region South 3
Phone: +497191 482-220
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 95000 – 98999
Murrplastik Systemtechnik GmbH
Distribution region Bavaria 1
Phone: +497191 482-226
Fax: +497191 482-280
info@murrplastik.de

Postcode areas: 90000 – 92999
Murrplastik Systemtechnik GmbH
Distribution region Bavaria 2
Phone: +497191 482-226
Fax: +497191 482-280
info@murrplastik.de
bestellung.sy@murrplastik.de

Postcode areas: 80000 – 87999, 93000 – 94999
Murrplastik Systemtechnik GmbH
Distribution region Bavaria 3
Phone: +497191 482-213
Fax: +497191 482-280
info@murrplastik.de

Branches and sales partners worldwide

Argentinien

Nakase SRL
Calle 49, Nr. 5764/66, B1653AOX
Villa Ballester, Provincia Buenos Aires
Phone: +5411 476 842 42
Fax: +5411 476 842 421 11
nakase@nakase.com;
ventas@nakase.com
www.nakase.com

Australien

N.L. Tucker & Associates
Pty. Ltd.
50 Marni Street
Dandenong South Victoria 3175
Phone: +6139 706 66 91
Fax: +6139 706 66 92
vicsales@nltucker.com.au

N.L. Tucker & Associates
Pty. Ltd.
12 b Pitt Way
Booragoon, Perth,
Western Australia 6154
Phone: +6189 330 79 11
Fax: +6189 317 15 44
sales@nltucker.com.au

Austria

Murrplastik Systemtechnik GmbH
Fabrikstraße 10
71570 Oppenweiler (Germany)
Phone: +43732 660 870
Fax: +43732 660 872
info@murrplastik.at
www.murrplastik.at

Belgien

ATEM NV/SA
Bedrijven Park De Veert 4
2830 Willebroek
Phone: +3238 661 800
Fax: +3238 661 828
info@atem.be

Brazil

Murrelektronik do Brasil Ltda.
Av. Interlagos 3493
04661-200 São Paulo
Phone: +5511 563 230 00
Fax: +5511 563 330 22
info@murrelekronik.com.br
www.murrelektronik.com.br

China

Murrplastik Asia Co., Ltd.
1802 Rm. No. 218
Hengfeng Rd.
200070 Shanghai
Phone: +8621 512 869 25
Fax: +8621 512 869 29
info@murrplastik.com.cn
www.murrplastik.com.cn

Czech Republic

Schmachtl CZ spol. s.r.o.
Elektrotechnika
Vestec 185
252 42 Jesenice
Phone: +4202 440 015 00
Fax: +4202 449 107 00
office@schmachtl.cz
www.schmachtl.cz

Denmark

Brødrene Eegholm A/S
Grundtvigs Allé 165-169
6400 Sønderborg
Phone: +4573 121 212
Fax: +4573 121 213
eegholm@eegholm.dk

Finland

Murri Oy
Koukkukatu 1
15700 Lahti
Phone: +358388 240 00
Fax: +358388 240 40
myynti@murri.fi
www.murri.fi

France

Murrtechnic S.à.r.l
Zone Industrielle Sud
6 rue Manurhin
B.P. 62, 68120 Richwiller
Phone: +33389 570 010
Fax: +33389 530 966
murrtechnic@murrtechnic.fr
www.murrtechnic.eu

Great Britain

Murrelektronik Ltd.
Albion Street
Pendlebury Industrial Estate, Swinton
Manchester M27 4FG
Phone: +44161 728 31 33
Fax: +44161 728 31 30
sales@murrelektronik.co.uk
www.murrelektronik.co.uk

Branches and sales partners worldwide

Greece

2 Kappa Ltd.
Stadiou 40
57009 Thessaloniki (Kalohori)
Phone: +302310 775 512
Fax: +302310 775 514
info@2kappa.gr

Hong Kong

Worldtex & Co. (HK) Ltd.
914A 9/F., Lai Sun Commercial Building
680 Cheung Sha Wan Rd., Kln.
Kowloon, Hong Kong
Phone: +8522781 18 60
Fax: +8522781 47 33
info@worldtex-co.com.hk
www.worldtex-co.com

Hungary

Technika G.K.M. Kft.
Csiki u. 1.
2040 Budaörs
Phone: +3623 424 888
Fax: +3623 424 858
wieland@technikagkm.hu
www.technikagkm.hu

India

Rajdeep Automation Pvt Ltd
G3A, Ground floor, Anand Complex
Sane Guruji Marg
Chinchpokli West
Phone: +91 22 2300 2837 / 8
Fax: +91 22 2300 2839
info@rajdeep.in
www.rajdeep.in

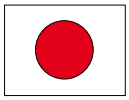
Israel

EL-KAM Agencies and Trading Ltd.
26, Ha'ta'as St.
44425 Kfar-Saba
Phone: +9729 765 88 08
Fax: +9729 765 85 45
el-kam@el-kam.com

Italy

Murrplastik Italia S.r.L.
Via Circo, 18
20123 - Milano
Phone: +3902 856 805 70
Fax: +3902 805 034 69
info@murrplastik.it
www.murrplastik.it

Japan



Kitagawa Industries Co. Ltd.
Sales Dept. attention: Mr. S. Nishikawa
Sengoku Bldg. 6F
2-4-15 Nihonbashi-Muromachi
Chuo-Ku, TOKYO 103-0022
Phone: +813 324 113 03
Fax: +813 525 564 35
nisikawa@kitagawa-ind.co.jp
www.kitagawa-ind.com

Lithuania

HIDROTEKA Engineering Services
Chemijos 29E
51333 Kaunas
Phone: +37037 352 195
Fax: +37037 760 500
arunas@hidroteka.lt
www.hidroteka.lt

Netherlands

Murrelektronik B.V.
Meerpaal 1
4904 SK Oosterhout (NB)
Phone: +31162 492 411
Fax: +31162 492 415
sales@murrelektronik.nl
www.murrelektronik.nl

Norway

Murrelektronik A/S
Kartverksveien 12
3504 Honefoss
Phone: +4732 179 080
Fax: +4732 179 090
post@murrelektronik.no
www.murrelektronik.no

Poland

POLTECHNIK Sp. z o.o.
ul. Trojkatna 1
54-414 Wroclaw
Phone: +4871 353 86 94
Fax: +4871 353 86 96
info@poltechnik.pl
www.poltechnik.pl

Portugal

F.Fonseca, S.A.
Rua João Francisco do Casal, 87/89
Apartado 3003 - Esgueira
3801-997 Aveiro
Phone: +351234 303 900
Fax: +351234 303 910
ffonseca@ffonseca.com

Singapore

Balluff Asia Pte. Ltd.
Blk 1004, Toa Payoh Industrial Park
Lorong 8, # 03 - 14 89
Singapore 31 90 76
Phone: +656 252 43 84
Fax: +656 252 90 60
balluff@balluff.com.sg

Slovakia

SCHMACHTL SK s.r.o.
Valchárska 3
821 09 Bratislava
Phone: +4212 582 756 11
Fax: +4212 582 756 01
office@schmachtl.sk

Slovenia

Senzorji SB d.o.o.
Ulica Kirbisevih 53a
2204 Miklavz na Dravskem polju
Phone: +3862 629 03 00
Fax: +3862 629 03 02
senzorji.sb@siol.net

South Africa

Innomatic (Pty) Ltd
32 Monte Carlo Crescent
Kyalami Park, Midrand 1684
Gauteng
Phone: +2711 466 01 74
Fax: +2711 466 02 23
sales@innomatic.co.za
www.innomatic.co.za

South Korea

Thomas Trading Co. Ltd.
Dong-IL Techno town C-3201
889-1 Kwanyang-2 Dong
431-716 Anyang-Si Kyunggi-Do
Phone: +82 31 424 3030
Fax: +82 31 421 7053
ryansung@thomas.co.kr
www.thomas.co.kr

South Korea

KPI Co. Ltd.
B-123 neo business center
14-7 Pal Yong-Dong
Kyung Sang Nam-Do
641-465 Chang Won City
Phone: +82551 284 88 25
Fax: +82551 287 79 54
kpi@kpikorea.com

Spain

Murrplastik S.L.
Paseo Ubarburu, 76
Pabellón 34, poligono 27
20014 San Sebastián
Phone: +34943 444 837
Fax: +34943 472 895
info@murrplastik.es
www.murrplastik.es

Sweden

Frenna AB
Florettgatan 29c
254 67 Helsingborg
Phone: +46(42) 25 34 00
Fax: +46(42) 25 34 01
info@frenna.se
www.frenna.se

Switzerland

Murrplastik AG
Ratihard 40
8253 Willisdorf
Phone: +4152 646 06 46
Fax: +4152 646 06 40
info@murrplastik.ch
www.murrplastik.ch

Taiwan

Lintronix Co., Ltd.
4F, No. 651-6, Chung Cheng Road, 242
Hsin Chuang
Taipei, Taiwan
Phone: +8862 290 816 66
Fax: +8862 290 816 78
info@.lintronix.com.tw
www.lintronix.com.tw

Autonix Co., Ltd.
3.FL. 124 Chung-Cheng Road, Shihlin 11145
Taipei, Taiwan
Phone: +8862 886 612 34
Fax: +8862 886 612 39
day111@ms23.hinet.net

Thailand

Compomax Company Ltd.
16 Soi Ekamai 4, Sukhumvit 63 Rd.
Prakanongnua, Vadhana
Bangkok, 10110
Phone: +662 726 95 95
Fax: +662 726 98 60
info@compomax.co.th

Turkey

Pinar Mühendislik LTD. STI.
Perpa Ticaret Merkezi
A Blok, Kat 11, No: 1477
80270 Okmeydani-Istanbul
Phone: +90212 220 02 77
Fax: +90212 220 13 16
info@pinarmuh.com
www.pinarmuh.com.tr

Ukraine

Ropla Elektronik
Solomenskaya Str. 1
Office No 205-209
03035 Kiev
Phone: +38044 248 80 48
Fax: +38044 248 81 17
info@ropla.kiew.ua

USA

Murrplastik Systems, Inc.
1175 US Highway 50
Milford, OH 45150
Phone: +1(513) 201-3069
Fax: +1(215) 822-7626
cablemgmt@murrplastik.com
www.murrplastik.com

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Our General Terms and Conditions apply.

Head Office

Germany

Murrplastik Systemtechnik GmbH
Postfach 1143
71567 Oppenweiler
Germany
☎ +49 7191 48 20
FAX +49 7191 482 280
www.murrplastik.de
info@murrplastik.de

Austria

Murrplastik Systemtechnik GmbH
☎ +43 732 660 870
FAX +43 732 660 872
www.murrplastik.at
info@murrplastik.at

China

Murrplastik Asia Co., Ltd.
1802 Rm. No. 218
Hengfeng Rd.
200070 Shanghai
☎ +86 21 512 869 25
FAX +86 21 512 869 29
www.murrplastik.com.cn
info@murrplastik.com.cn

France

Murrtechnic S.à.r.l
Zone industrielle Sud,
6 rue Manurhin
B.P. 62, 68120 Richwiller
☎ +33 389 570 010
FAX +33 389 530 966
www.murrtechnic.eu
murrtechnic@murrtechnic.fr

Italy

Murrplastik Italia S.r.L.
Via Circo, 18
20123 Milano
☎ +39 02 856 805 70
FAX +39 02 805 034 69
www.murrplastik.it
info@murrplastik.it

North America

(Canada, Mexico, USA)

Murrplastik Systems, Inc.
1175 US Highway 50
Milford, OH 45150
☎ +1 513 201 3069
FAX +1 215 822 7626
www.murrplastik.com
cablemgmt@murrplastik.com

Spain

Murrplastik S.L.
Paseo Ubarburu, 76
Pabellón 34, polígono 27
20014 San Sebastián
☎ +34 943 444 837
FAX +34 943 472 895
www.murrplastik.es
info@murrplastik.es

Switzerland

Murrplastik AG
Ratihard 40
8253 Willisdorf
☎ +41 52 646 06 46
FAX +41 52 646 06 40
www.murrplastik.ch
info@murrplastik.ch

0101HS
MP8902874000