1 Cable entry systems
for cables with connectors

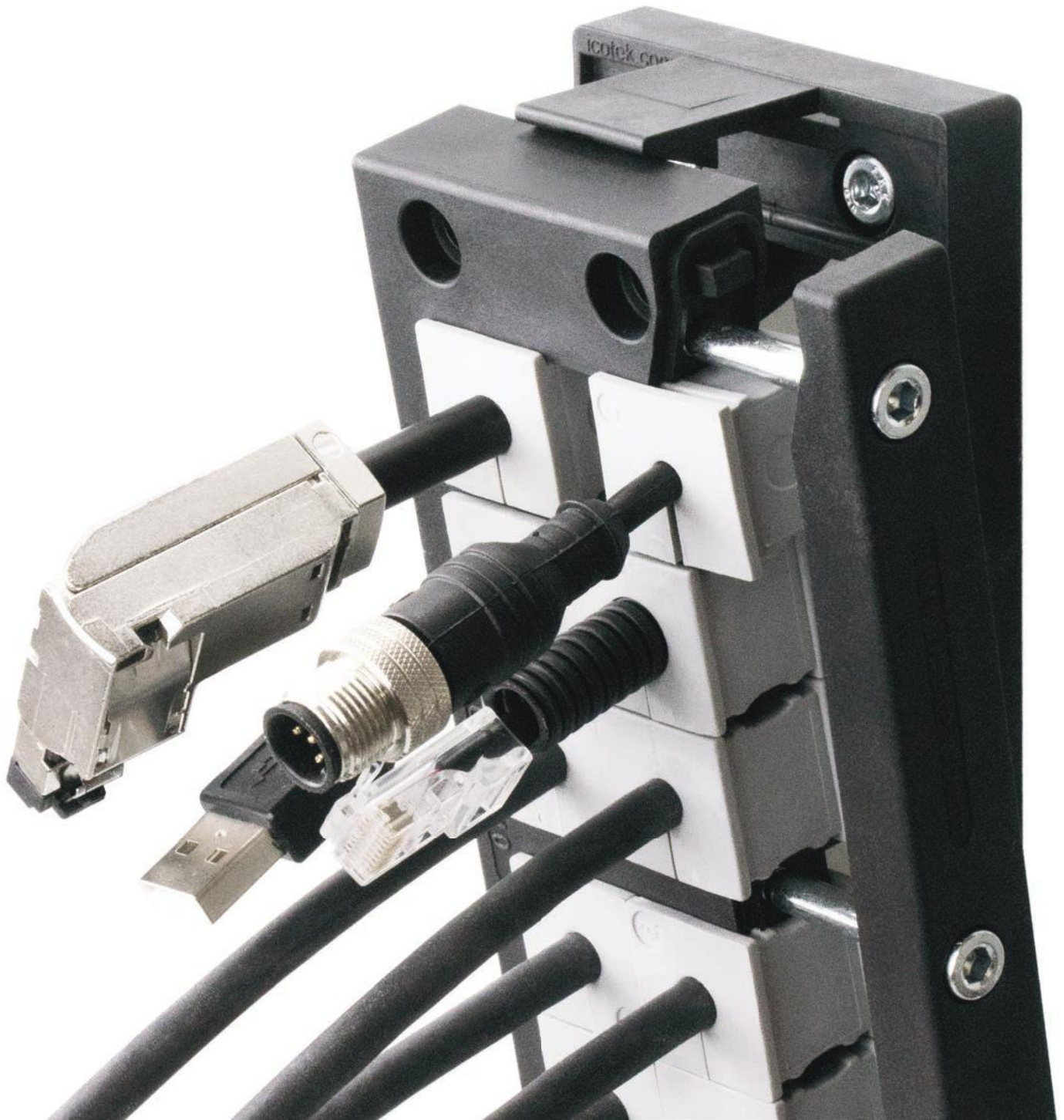| c**UL**us	up to **IP68**	up to **UL TYPE 4X** UL 50E	⟨Ex⟩	DNV·GL TYPE APPROVED PRODUCT DNVGL.COM/AF	**HL3** EN 45545-2	**E45 EI30** EN 45545-3 → 216	UV ISO 4892-2A	ECOLAB certified	**RoHS** compliant	Made in Germany	UL-94 V0	+140°C -40°C	1–75 mm

Product group 1 includes all split cable entry systems in round and rectangular versions. Cables with and without preassembled connectors with a maximum diameter of 75 mm can thus be inserted. The split frame and slit grommets alleviate the need to cut and re-wire pre-terminated cables. Therefore, cable warranties are unaffected.

By closing the upper and lower part of the frame a high contact pressure on the cable grommets and lines is achieved. In most cases, the lines are strain relieved according to EN 62444 and immediately sealed with IP54 to IP66 / IP68 / UL type 4X (depending on type).

icotek also offers split and non-split brush plates for cable pass-through, based on rectangular and round standard cut-outs – a very cost-effective solution if sealing with IP54 ist not required.

ProductFinder

Product	IP54	IP66	IP68	UL TYPE 12	UL TYPE 4X	Strain relief	Cable Ø mm min | max	Max. no. of cables	Page
KEL-ER	■	■		■	■	■	1 - 35	10	9−15
KEL-ER-E	■	■		■		■	1 - 16	5	17
KEL-U	■			■		■	1 - 35	40	8
KEL-E	■			■		■	1 - 16	20	16
KEL	■			■		■	1 - 35	48	18−27
KEL 16/24 Extensions	■					■	1 - 35	120	26−27
KEL-FG-A/B	■					■	1 -35	40	28−29
KEL-FG-E	■					■	1 - 16	20	30
KEL-FL	■					■	1 - 16 + flat cables	13	32
KEL 183	■			■		■	1 - 75	16	34
KEL-JUMBO	■			■		■	1 - 65	2	36
KVT-ER	■	■	■	■	■	■	1 - 35	4	40−41
KVT	■			■		■	1 - 35	16	42−44
KVT-SNAP	■					■	1 - 35	16	45
KVT-W90	■					■	1 - 35	16	46
KVT 80	■			■		■	1 - 35	24	44
KEL-QUICK	■			■			1 - 15	40	60−61
QVT	■						1 - 15	16	64
QVT-CLICK	■						1 - 15	8	65
KEL-QTA	■						1 - 15	18	68−69
KEL-QTE	■						1 - 15	2	69
KEL-BES / KEL-BES-S							max. 33		74−75

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Further details on certifications and technical specifications can be found on the product pages.

| cULus | up to **IP66** | up to **UL TYPE 4X** UL 50E | ‹Ex› | TYPE APPROVED PRODUCT DNV·GL DNVGL.COM/AF | **HL3** EN 45545-2 | **E45 EI30** EN 45545-3 —> 216 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany | UL-94 V0 | **+140°C -40°C** | 1–75 mm |

The patented cable entry system enables the user to enter, seal and provide strain relief for cables with and without connectors.

The key feature of icotek's patented system is the split frame and split grommets which provide quick, convenient and cost effective routing of pre-terminated and multi-conductor cables, hoses and conduits. The split frame and split grommets alleviate the need to cut and re-wire pre-terminated cables. Therefore, cable warranties are unaffected.

Cables, pipes and conduits with various diameters can be routed due to a large variety of split grommets. When assembled correctly, the split grommets are held tightly within the frame. Correctly sizing the grommet to the cable diameter ensures a high degree of protection (up to IP66 / UL type 4X) and provides strain relief.

NEW

New: configure your custom frames and grommets conveniently online with our new Module Configurator on www.icotek.com

Secure and tight connection

Split system

Maintain warranty on pre-terminated cables

Fast and easy assembly

Most sizes are industrial standard cut-outs. No need for additional tooling.

Integrated strain relief according to EN 62444

High cable density, wide variety in cable grommets and adapter grommets

KEL-U / KEL: IP54 rated protection KEL-ER: IP66 due to a high clamping pressure on the cover lid and injected sealing

Product range

KEL-ER / KEL-ER-E IP66	KEL-U / KEL-E IP54	KEL IP54	KEL Extensions IP54	KEL-FG IP54	KEL-FL IP54	KEL 183 IP54	KEL 183-E IP54	KEL-JUMBO IP54

Split cable entry frames
for cable diameters up to 35 mm

IP66

KEL-ER 24 / KEL-ER 16 / KEL-ER 10 / KEL-ER-B
KEL-ER-E5 / KEL-ER-E4 / KEL-ER-E3 / KEL-ER-E2

9 – 17

Split cable entry frames
for cable diameters up to 35 mm

IP54

KEL-U 24 / KEL-U 16 / KEL-U 10 / KEL-U-B
KEL-E5 / KEL-E4 / KEL-E3 / KEL-E2

8 – 16

Centrally split cable entry frames
for cable diameters up to 35 mm

IP54

KEL 24 / KEL 16 / KEL 10 / KEL-B

18 – 21

Extended split cable entry frames
for cable diameters up to 35 mm

IP54

KEL 24-E / KEL 24-MT / KEL 24-2MT
KEL 16-E / KEL 16-MT / KEL 16-2MT

22 – 27

Split flange enclosure
for cable diameters up to 35 mm

IP54

KEL-FG-A / KEL-FG-B /
KEL-FG-E5 / KEL-FG-E3 / KEL-FG-E2

28 – 30

Snap mounting frames
for installation of KEL-U / KEL frames

IP54

KEL-SNAP 24 / KEL-SNAP 16 / KEL-SNAP 10 /
KEL-SNAP-B / KEL-SNAP 24-E / KEL-SNAP 24-MT

31

Split cable entry frames for flat cables
& round cables up to 16 mm in diameter

IP54

KEL-FL / FT

32 – 33

Split cable entry frames
for cable diameters up to 75 mm

IP54

KEL 183 / KEL 183-E / KTMB 183

34 – 35

Split cable entry frames
for cable diameters up to 65 mm
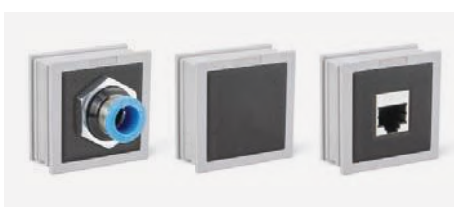
IP54

KEL-JUMBO / KTF

36 – 37

Grommets and plugs
for cables with/without connectors,
cable diameter range 1 – 35 mm

IP66
IP54

KT small / KT large / KT-DPF / KTMB / KT-SC /
KT-DT / ST / KT Service Box

48 – 53

IMAS-CONNECT™
Modular adapter system

AT-M / AT-B / AT-KS

54 – 57

icotek

c ⚠ us	IP54	UL TYPE 12 UL 50E	🚂 HL3 EN 45545-2	🚂 E45 EI30 EN 45545-3	UV ISO 4892-2A	ECOLAB certified	RoHS compliant	Made in Germany	Ex

KEL-U 24
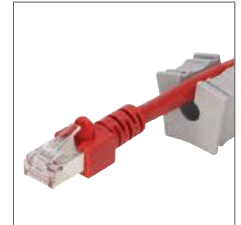## Cable entry frames

Configure online now

IP54

V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Split KT grommets

Product description

Split cable entry system for routing cables with connectors providing an IP54 / up to UL type 12 rating. Routing, sealing and providing strain relief for cable diameters from 1 to 35 mm. The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-U 24 is the same size as a standard 24 pin industrial connector. Use existing tooling for cut outs of either 36 mm or 46 mm in height depending on your cable requirements. All frame systems come with a rubber gasket .
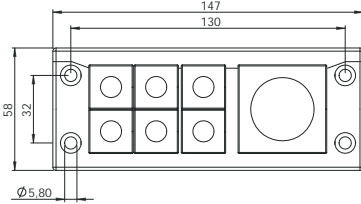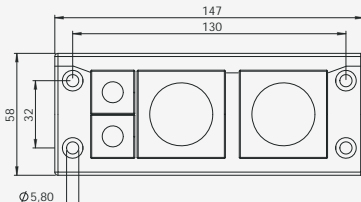
Advantages & benefits

- Fast and easy assembly
- Maintain manufacturer's warranty on pre-termi-nated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 112 mm / page 220 – 221**
Frame depth	**17 mm**

Accessories

Description		Type	Order No.	Grommets small | large	PU
		KEL-U 24|10	54241	10|-	10
		KEL-U 24|10 with V2A screws	54241.200	10|-	10
		KEL-U 24|7	54247	6|1	10
		KEL-U 24|7 with V2A screws	54247.200	6|1	10
		KEL-U 24|4	54244	2|2	10
		KEL-U 24|4 with V2A screws	54244.200	2|2	10

The cable entry frames enable the integration of the new IMAS-Connect™ adapter grommets.

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icotek®

KEL-ER 24
Cable entry frames

Configure online now

V2A anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Split KT grommets

IP66

Description	Type	Order No.	Grommets small | large	PU
147 / 130 / 58 / 32 / Ø5,80	KEL-ER 24|10	48241	10|-	10
	KEL-ER 24|10 with V2A screws	48241.200	10|-	10
147 / 130 / 58 / 32 / Ø5,80	KEL-ER 24|7	48247	6|1	10
	KEL-ER 24|7 with V2A screws	48247.200	6|1	10
147 / 130 / 58 / 32 / Ø5,80	KEL-ER 24|4	48244	2|2	10
	KEL-ER 24|4 with V2A screws	48244.200	2|2	10

Product description

Split cable entry system for routing and sealing cables with connectors, providing an IP66 / up to UL type 4X rating and strain relief for cable diameters from 1 to 16 mm (KT 1 - 15) and 16 to 35 mm (KT 16 - 34).

The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-ER 24 is the same size as a standard 24 pin industrial connector. All frame systems come with a rubber gasket.
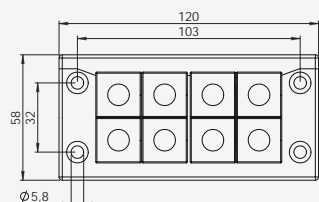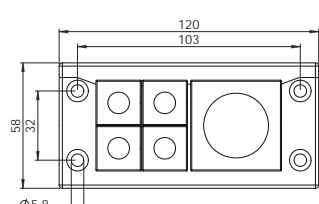
Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP66, with gasket and correct selection of single grommets (certified acc. to EN 60529)**
UL type rating	**UL type 4X (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 112 mm / page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

cRUus IP54 UL TYPE **12** UL 50E ⊞HL3 EN 45545-2 E45 EI30 EN 45545-3 UV ISO 4892-2A ECOLAB certified RoHS compliant Made in Germany ⟨Ex⟩

KEL-U 16
Cable entry frames

Configure online now

IP54

Split KT grommets

V2A anti-corrosive
Also available with stainless steel screws (V2A).

Also available with threaded bushings.

1.11

Product description

Split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. Routing, sealing and providing strain relief for cable diameters from 1 to 35 mm. The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-U 16 is the same size as a standard 16 pin industrial connector. Either a cut-out of 36 mm or 46 mm in height can be chosen depending on the cables being routed. All frame systems come with a rubber gasket.
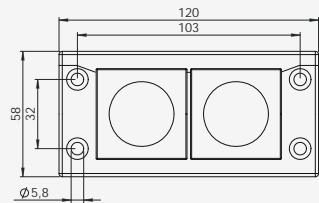
Advantages & benefits

- Fast and easy assembly
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 86 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

Description	Type	Order No.	Grommets small | large	PU
	KEL-U 16|8	**54168**	8|-	10
	KEL-U 16|8 with V2A screws	**54168.200**	8|-	10
	KEL-U 16|5	**54165**	4|1	10
	KEL-U 16|5 with V2A screws	**54165.200**	4|1	10
	KEL-U 16|2	**54162**	-|2	10
	KEL-U 16|2 with V2A screws	**54162.200**	-|2	10

The cable entry frames enable the integration of the new IMAS-Connect™ adapter grommets.

KEL-ER 16
Cable entry frames

V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Split KT grommets

Configure online now

IP66

Description	Type	Order No.	Grommets small | large	PU
120 / 103 / 58 / 32 / Ø 5,8	KEL-ER 16|8	48168	8|-	10
	KEL-ER 16|8 with V2A screws	48168.200	8|-	10
120 / 103 / 58 / 32 / Ø 5,8	KEL-ER 16|5	48165	4|1	10
	KEL-ER 16|5 with V2A screws	48165.200	4|1	10
120 / 103 / 58 / 32 / Ø 5,8	KEL-ER 16|2	48162	-|2	10
	KEL-ER 16|2 with V2A screws	48162.200	-|2	10

Product description

Split cable entry system for routing and sealing cables with connectors, providing an IP66 / up to UL type 4X rating and strain relief for cable diameters from 1 to 16 mm (KT 1 - 15) and 16 to 35 mm (KT 16 - 34).

The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-ER 16 is the same size as a standard 16 pin industrial connector. All frame systems come with a rubber gasket.

Advantages & benefits
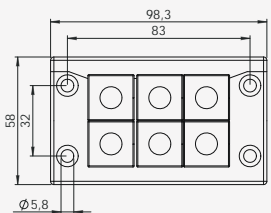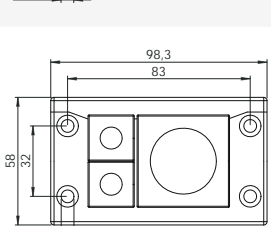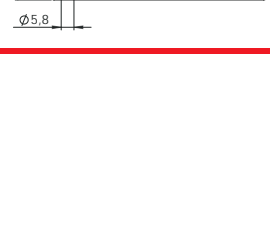
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP66, with gasket and correct selection of single grommets (certified acc. to EN 60529)**
UL type rating	**UL type 4X (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 86 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

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KEL-U 10
Cable entry frames

Configure online now

IP54

Split KT grommets

V2A anti-corrosive
Also available with stainless steel screws (V2A).

Also available with threaded bushings.

1.11

Product description

Split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. Routing, sealing and providing strain relief for cable diameters from 1 to 35 mm. The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-U 10 is the same size as a standard 10 pin industrial connector. Either a cut-out of 36 mm or 46 mm in height can be chosen depending on the cables being routed. All frame systems come with a rubber gasket.

Advantages & benefits

- Fast and easy assembly
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 65 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Grommets small | large	PU
	KEL-U 10|6	54216	6|-	10
	KEL-U 10|6 with V2A screws	54216.200	6|-	10
	KEL-U 10|3	54212	2|1	10
	KEL-U 10|3 with V2A screws	54212.200	2|1	10

The cable entry frames enable the integration of the new IMAS-Connect™ adapter grommets.

IP66 | UL TYPE **12** UL50E | UL TYPE **4X** UL50E | **HL3** EN 45545-2 | **E45 EI30** EN 45545-3 | **UV** ISO 4892-2A | **ECOLAB** certified | **RoHS** compliant | Made in Germany

KEL-ER 10
Cable entry frames

V2A anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Split KT grommets

Configure online now

IP66

Description	Type	Order No.	Grommets small | large	PU
	KEL-ER 10|6	48216	6|-	10
	KEL-ER 10|6 with V2A screws	48216.200	6|-	10
	KEL-ER 10|3	48212	2|1	10
	KEL-ER 10|3 with V2A screws	48212.200	2|1	10

98,3 / 83 / 58 / 32 / Ø 5,8

98,3 / 83 / 58 / 32 / Ø 5,8

Product description

Split cable entry system for routing and sealing cables with connectors, providing an IP66 / up to UL type 4X rating and strain relief for cable diameters from 1 to 16 mm (KT 1 - 15) and 16 to 35 mm (KT 16 - 34).

The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-ER 10 is the same size as a standard 10 pin industrial connector. All frame systems come with a rubber gasket.

Advantages & benefits
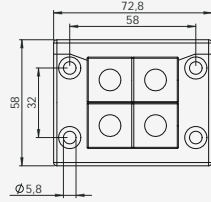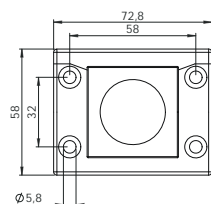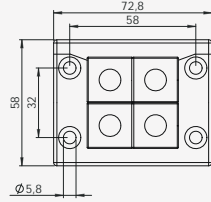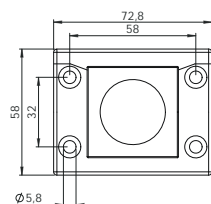
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP66, with gasket and correct selection of single grommets (certified acc. to EN 60529)**
UL type rating	**UL type 4X (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36 /46× 65 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

1.11

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KEL-U-B
Cable entry frames

Configure online now

IP54

Split KT grommets

V2A anti-corrosive
Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Product description

Split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. Routing, sealing and providing strain relief for cable diameters from 1 to 35 mm.

The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-U-B frame matches exactly the cut-out dimensions of 46 × 46 mm measuring instruments. All frame systems come with a rubber gasket.

Advantages & benefits

- Fast and easy assembly
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**46 × 46 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
FP Flange plates	194 - 203
ST Plugs	53

Description		Type	Order No.	Grommets small | large	PU
72,8 / 58 / 58 / 32 / Ø 5,8		KEL-U-B4	54204	4|-	10
		KEL-U-B4 with V2A screws	54204.200	4|-	10
72,8 / 58 / 58 / 32 / Ø 5,8		KEL-U-B1	54206	-|1	10
		KEL-U-B1 with V2A screws	54206.200	-|1	10

The cable entry frames enable the integration of the new IMAS-Connect™ adapter grommets.

IP66 UL TYPE 12 UL TYPE 4X HL3 EN 45545-2 E45 EI30 EN 45545-3 UV ISO 4892-2A ECOLAB certified RoHS compliant Made in Germany

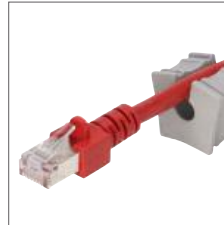# KEL-ER-B
Cable entry frames

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V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Split KT grommets

Configure online now

IP66

Description	Type	Order No.	Grommets small | large	PU
	KEL-ER-B4	48204	4|-	10
	KEL-ER-B4 with V2A screws	48204.200	4|-	10
	KEL-ER-B1	48206	-|1	10
	KEL-ER-B1 with V2A screws	48206.200	-|1	10

72,8 / 58 / 58 / 32 / Ø 5,8

72,8 / 58 / 58 / 32 / Ø 5,8

Product description

Split cable entry system for routing and sealing cables with connectors, providing an IP66 / up to UL type 4X rating and strain relief for cable diameters from 1 to 16 mm (KT 1 - 15) and 16 to 35 mm (KT 16 - 34).

The new cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. The KEL-ER-B frame matches exactly the cut-out dimensions of 46 × 46 mm measuring instruments. All frame systems come with a rubber gasket.

Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- Small cut-out, high cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP66, with gasket and correct selection of single grommets (certified acc. to EN 60529)**
UL type rating	**UL type 4X (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**46 × 46 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

cULus IP54 UL TYPE 12 UL50E TYPE APPROVED PRODUCT DNV·GL DNVGL.COM/AF HL3 EN 45545-2 E45 EI30 EN 45545-3 UV ISO 4892-2A ECOLAB certified RoHS compliant Made in Germany Ex

KEL-E
Compact cable entry frames

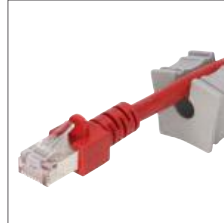Configure online now

IP54

Split KT grommets

V2A anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Product description

Split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. Routing, sealing and providing strain relief for cable diameters from 1 to 17 mm. The KEL-E version is particularly suited for flat connectors. The small frame is ideal for applications with limited space.

All frame systems come with a rubber gasket.

Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- Space saving shape
- Optimal for D-Sub connectors
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Cut-out [mm]	Grommets small | large	PU
72,8 / 58 / 39,5 / 26,5 / 13 / Ø5,80	KEL-E2	42249	43 × 24	2|-	10
	KEL-E2 with V2A screws	42249.200	43 × 24	2|-	10
98,3 / 83 / 39,5 / 26,5 / 13 / Ø5,80	KEL-E3	42258	65 × 24	3|-	10
	KEL-E3 with V2A screws	42258.200	65 × 24	3|-	10
120 / 103 / 39,5 / 26,5 / 13 / Ø5,80	KEL-E4	42259	86 × 24	4|-	10
	KEL-E4 with V2A screws	42259.200	86 × 24	4|-	10
147 / 130 / 39,5 / 26,5 / 13 / Ø5,80	KEL-E5	42250	112 × 24	5|-	10
	KEL-E5 with V2A screws	42250.200	112 × 24	5|-	10

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KEL-ER-E
Compact cable entry frames

V2A
anti-corrosive

Also available with stainless steel screws (V2A).
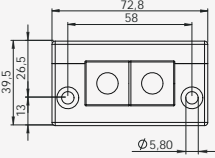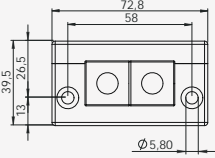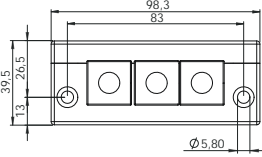

Also available with threaded bushings.

Split KT grommets

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IP66

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Description	Type	Order No.	Cut-out [mm]	Grommets small | large	PU
	KEL-ER-E2	48249	43 × 24	2|-	10
	KEL-ER-E2 with V2A screws	48249.200	43 × 24	2|-	10
	KEL-ER-E3	48258	65 × 24	3|-	10
	KEL-ER-E3 with V2A screws	48258.200	65 × 24	3|-	10
	KEL-ER-E4	48259	86 × 24	4|-	10
	KEL-ER-E4 with V2A screws	48259.200	86 × 24	4|-	10
	KEL-ER-E5	48250	112 × 24	5|-	10
	KEL-ER-E5 with V2A screws	48250.200	112 × 24	5|-	10

Product description

Split cable entry system for routing and sealing cables with connectors, providing an IP66 / up to UL type 12 rating and strain relief for cable diameters from 1 to 16 mm (KT 1 - 15). It is particularly suited for flat connectors. The small frame is ideal for applications with limited space.

The cable entry system is easy to install. Cable grommets are placed into compartments and are securely fixed to the frame during assembly. All frame systems come with a rubber gasket.
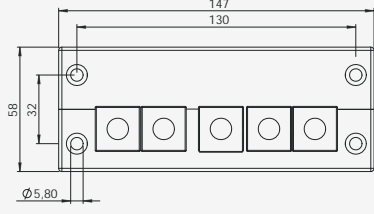
Advantages & benefits
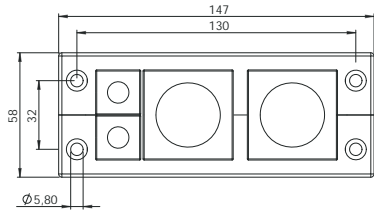
- Maintain manufacturer's warranty on pre-termi-nated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- Strain relief according to EN 62444
- Space saving shape
- Optimal for D-Sub connectors
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP66, with gasket and correct selection of single grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

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KEL 24
Cable entry frames

Configure online now

IP54

Split KT grommets

V2A anti-corrosive
Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Product description

Centrally split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. The slit grommet matching the cable diameter is placed around the cable and inserted into the cable entry frame. Either a cut-out of 36 mm or 46 mm in height can be chosen depending on the cables being routed. The split cable entry frame KEL 24 is the same size as a standard 24 pin industrial connector. All frame systems come with a rubber gasket.

Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 112 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

Description	Type	Order No.	Grommets small | large	PU
147 / 130 / 58 / 32 / Ø 5,80	KEL 24|10	42241	10|-	10
	KEL 24|10 with V2A screws	42241.200	10|-	10
147 / 130 / 58 / 32 / Ø 5,80	KEL 24|7	42247	6|1	10
	KEL 24|7 with V2A screws	42247.200	6|1	10
147 / 130 / 58 / 32 / Ø 5,80	KEL 24|5	42248	5|-	10
	KEL 24|5 with V2A screws	42248.200	5|-	10
147 / 130 / 58 / 32 / Ø 5,80	KEL 24|4	42244	2|2	10
	KEL 24|4 with V2A screws	42244.200	2|2	10

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KEL 16
Cable entry frames

Split KT grommets

V2A
anti-corrosive

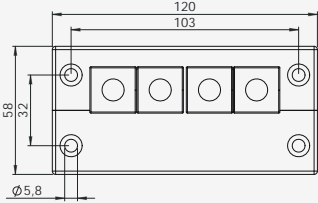Also available with stainless steel screws (V2A).

Also available with threaded bushings.

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IP54

1.11

Description	Type	Order No.	Grommets small | large	PU
	KEL 16|8	42168	8|-	10
	KEL 16|8 with V2A screws	42168.200	8|-	10
	KEL 16|5	42165	4|1	10
	KEL 16|5 with V2A screws	42165.200	4|1	10
	KEL 16|4	42164	4|-	10
	KEL 16|4 with V2A screws	42164.200	4|-	10
	KEL 16|2	42162	-|2	10
	KEL 16|2 with V2A screws	42162.200	-|2	10

Product description

Centrally split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. The slit grommet matching the cable diameter is placed around the cable and inserted into the cable entry frame. Either a cut-out of 36 mm or 46 mm in height can be chosen depending on the cables being routed. The split cable entry frame KEL 16 is the same size as a standard 16 pin industrial connector. All frame systems come with a rubber gasket.

Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 86 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
KDR Base plates	176 - 183
FP Flange plates	194 - 203
ST Plugs	53

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KEL 10
Cable entry frames

1.11

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IP54

Split KT grommets

V2A anti-corrosive
Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Product description

Centrally split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. The slit grommet matching the cable diameter is placed around the cable and inserted into the cable entry frame. Either a cut-out of 36 mm or 46 mm in height can be chosen depending on the cables being routed. The split cable entry frame KEL 10 is the same size as a standard 10 pin industrial connector. All frame systems come with a rubber gasket.
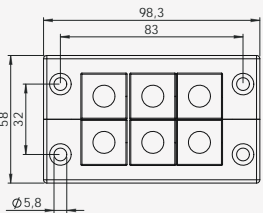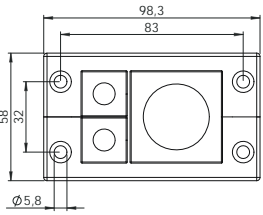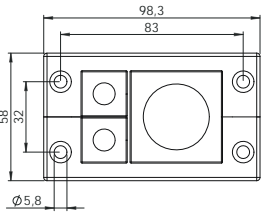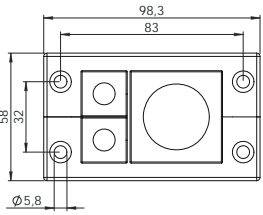
Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36/46 × 65 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Grommets small | large	PU
98,3 / 83 / 58 / 32 / Ø5,8	**KEL 10|6**	**42216**	**6|-**	**10**
	KEL 10|6 with V2A screws	**42216.200**	**6|-**	**10**
98,3 / 83 / 58 / 32 / Ø5,8	**KEL 10|3**	**42212**	**2|1**	**10**
	KEL 10|3 with V2A screws	**42212.200**	**2|1**	**10**

The cable entry frames enable the integration of the new IMAS-Connect™ adapter grommets.

c⊔us	IP54	UL TYPE 12 UL50E	TYPE APPROVED PRODUCT DNV·GL DNVGL.COM/AF	HL3 EN 45545-2	UV ISO 4892-2A	ECOLAB certified	RoHS compliant	Made in Germany	Ⓔx

KEL-B
Cable entry frames

Split KT grommets

V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

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IP54

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Description	Type	Order No.	Grommets small | large	PU
72,8 / 58 / 58 / 32 / Ø 5,8	KEL-B4	42204	4|-	10
	KEL-B4 with V2A screws	42204.200	4|-	10
72,8 / 58 / 58 / 32 / Ø 5,8	KEL-B1	42206	-|1	10
	KEL-B1 with V2A screws	42206.200	-|1	10

Product description

Centrally split cable entry system for routing cables with connectors, providing an IP54 / up to UL type 12 rating. The slit grommet matching the cable diameter is placed around the cable and inserted into the cable entry frame. Either a cut-out of 36 mm or 46 mm in height can be chosen depending on the cables being routed. The split cable entry frame KEL-B matches exactly the cut-out dimensions of 46 × 46 mm measuring instruments. All frame systems come with a rubber gasket.

Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- Space saving shape
- Small cut-out, high cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**46 × 46 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KEL 24-E
Extended cable entry frames

Configure online now

IP54

V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Product description

The cable entry frame KEL 24-E offers a larger frame size for routing a greater amount of cables, pipes or conduits.

The KEL24-E series are KEL 24 frames extended with an additional middle frame for routing additional cables. Thus allowing a quick, easy and cost effective routing solution for up to 60 cables.

All frame systems come with a rubber gasket.
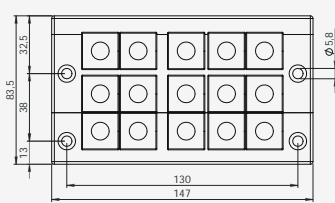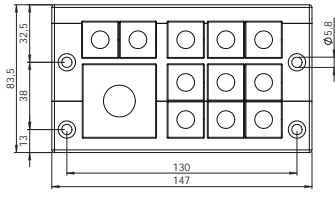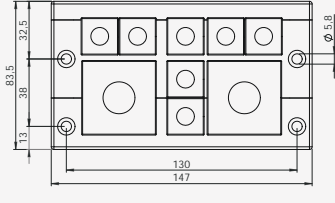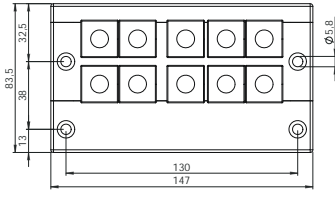
Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**66 × 112 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description		Type	Order No.	Grommets small | large	PU
		KEL 24|15-E	42209	15|-	1
		KEL 24|15-E with V2A screws	42209.200	15|-	1
		KEL 24|12-E	42208	11|1	1
		KEL 24|12-E with V2A screws	42208.200	11|1	1
		KEL 24|9-E	42207	7|2	1
		KEL 24|9-E with V2A screws	42207.200	7|2	1
		KEL 24|10-E	49056	10|-	1
		KEL 24|10-E with V2A screws	49056.200	10|-	1

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UL cRUus IP54 DNV·GL DNVGL.COM/AF | HL3 EN 45545-2 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany | Ex

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KEL 24-MT
Extended cable entry frames

Configure online now

IP54

V2A anti-corrosive

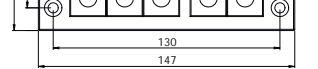Also available with stainless steel screws (V2A).

Also available with threaded bushings.

1.11

Product description

The cable entry frame KEL 24-MT provides additional cable routing possibilities.

The KEL 24-MT series are KEL frames extended with an additional middle frame for routing additional cables. Thus allowing the quick, easy and cost effective routing solution for up to 80 cables.

All frame systems come with a rubber gasket.

Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
Temperature	**-40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**82 × 112 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Grommets small | large	PU
Ø5,8 102 38 38 130 147	**KEL 24|20-MT**	**42232**	20|-	1
	KEL 24|20-MT with V2A screws	**42232.200**	20|-	1
Ø5,8 102 38 38 130 147	**KEL 24|17-MT**	**42224**	16|1	1
	KEL 24|17-MT with V2A screws	**42224.200**	16|1	1
13 38 102 38 13 Ø5,8 130 147	**KEL 24|14-MT**	**42225**	12|2	1
	KEL 24|14-MT with V2A screws	**42225.200**	12|2	1
13 38 102 38 13 Ø5,8 130 147	**KEL 24|11-MT**	**42222**	8|3	1
	KEL 24|11-MT with V2A screws	**42222.200**	8|3	1
Ø5,8 13 38 102 38 13 130 147	**KEL 24|8-MT**	**42221**	4|4	1
	KEL 24|8-MT with V2A screws	**42221.200**	4|4	1

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KEL 24-2MT
Extended cable entry frames

1.11

Configure online now

IP54

V2A anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Product description

The KEL 24-2MT is our largest frame providing the ability to route and seal up to 120 cables.

The cable entry frames KEL 24-2MT series are KEL frames extended with two additional middle frames for routing additional cables. Thus allowing the quick, easy and cost effective routing solution for up to 120 cables. All frame systems come with a rubber gasket.
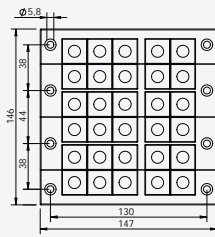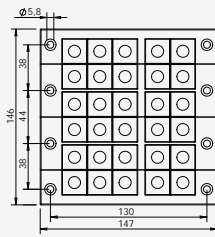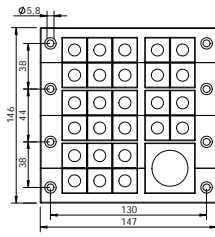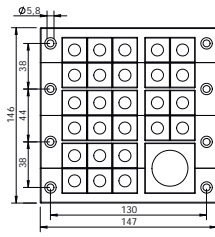
Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
Temperature	**-40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**126 × 112 mm / Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

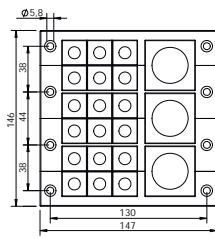| Description	Type	Order No.	Grommets small | large	PU
	KEL 24|30-2MT	42234	30|-	1
	KEL 24|30-2MT with V2A screws	42234.200	30|-	1
	KEL 24|27-2MT	42233	26|1	1
	KEL 24|27-2MT with V2A screws	42233.200	26|1	1
	KEL 24|24-2MT	42227	22|2	1
	KEL 24|24-2MT with V2A screws	42227.200	22|2	1
	KEL 24|21-2MT	42226	18|3	1
	KEL 24|21-2MT with V2A screws	42226.200	18|3	1
	KEL 24|12-2MT	42223	6|6	1
	KEL 24|12-2MT with V2A screws	42223.200	6|6	1

KEL 16-E
Extended cable entry frames

V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Configure online now

IP54

Description	Type	Order No.	Grommets small | large	PU
KEL 16|12-E	42141	12|-	1
KEL 16|12-E with V2A screws	42141.200	12|-	1
KEL 16|6-E	42140	4|2	1
KEL 16|6-E with V2A screws	42140.200	4|2	1

Product description

The cable entry frame KEL 16-E offers a larger frame size for routing a greater amount of cables, pipes or conduits.

The KEL16-E series are KEL 16 frames extended with an additional middle frame for routing additional cables. Thus allowing a quick, easy and cost effective routing solution for up to 48 cables.

All frame systems come with a rubber gasket.
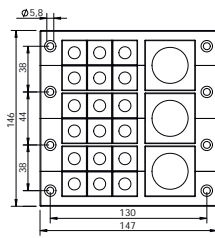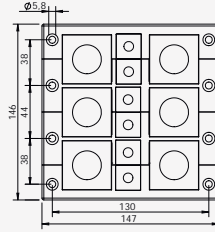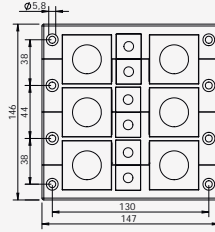
Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of cable grommets (certified acc. to EN 60529)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**66 × 86 mm**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

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cULus IP54 HL3 EN 45545-2 UV ISO 4892-2A ECOLAB certified RoHS compliant Made in Germany Ex

KEL 16-MT
Extended cable entry frames

Configure online now

IP54

V2A anti-corrosive

Also available with stainless steel screws (V2A).

Also available with threaded bushings.

Product description

The cable entry frame KEL 16-MT provides additional cable routing possibilities.

The KEL 16-MT series are KEL 16 frames extended with an additional middle frame for routing additional cables. Thus allowing the quick, easy and cost effective routing solution for up to 64 cables.

All frame systems come with a rubber gasket.

Advantages & benefits

- Maintain manufacturer's warranty on pre-termi-nated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
Temperature	**-40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**82 × 86 mm**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Grommets small | large	PU
	KEL 16|16-MT	42145	16|-	1
	KEL 16|16-MT with V2A screws	42145.200	16|-	1
	KEL 16|10-MT	42144	8|2	1
	KEL 16|10-MT with V2A screws	42144.200	8|2	1
	KEL 16|4-MT	42143	-|4	1
	KEL 16|4-MT with V2A screws	42143.200	-|4	1

The cable entry frames enable the integration of the new IMAS-Connect™ adapter grommets.

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cULus | **IP54** | **HL3** EN 45545-2 | **UV** ISO 4892-2A | **ECOLAB** certified | **RoHS** compliant | **Made in Germany** | **Ex**

KEL 16-2MT
Extended cable entry frames

V2A anti-corrosive

Also available with stainless steel screws (V2A).
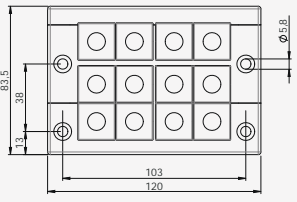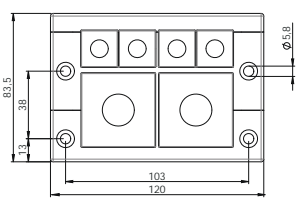
Also available with threaded bushings.

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IP54

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Description	Type	Order No.	Grommets small | large	PU
	KEL 16|24-2MT	**42149**	24|-	1
	KEL 16|24-2MT with V2A screws	**42149.200**	24|-	1
	KEL 16|12-2MT	**42148**	8|4	1
	KEL 16|12-2MT with V2A screws	**42148.200**	8|4	1
	KEL 16|6-2MT	**42147**	-|6	1
	KEL 16|6-2MT with V2A screws	**42147.200**	-|6	1

Product description

The KEL 16-2MT is our largest frame providing the ability to route and seal up to 96 cables.

The cable entry frames KEL 16-2MT series are KEL 16 frames extended with two additional middle frames for routing additional cables. Thus allowing the quick, easy and cost effective routing solution for up to 96 cables. All frame systems come with a rubber gasket.
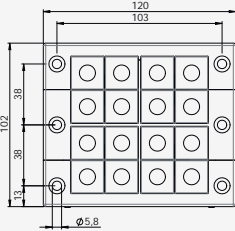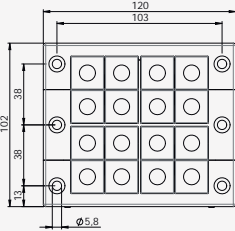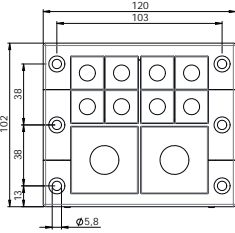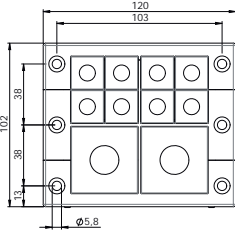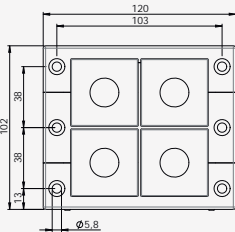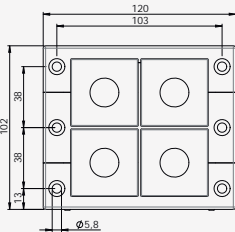
Advantages & benefits

- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
Temperature	**-40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**126 × 86 mm**
Frame depth	**17 mm**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

KEL-FG-A

Flange enclosures for cable entry

1.11

Configure online now

IP54

V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Split KT grommets

Product description

The cable entry frames KEL-FG-A are suited for installation, sealing and strain relief of cables with connectors and conduits at an angle of 90° to the cabinet, enclosure or machine wall.
The KEL-FG-A frame is the same size as a standard 24 pin industrial connector. All frame systems come with a rubber gasket.

Advantages & benefits

- Installation at an angle of 90° to the wall
- Mechanical protection of cable directly at the place of entry
- Protection against water spray and drips
- Maintain manufacturer's warranty on pre-terminated cables
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**36 × 112 mm, Page 220-221**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Grommets small | large	PU
	KEL-FG-A10	42320	10|-	1
	KEL-FG-A10 with V2A screws	42320.200	10|-	1
	KEL-FG-A7	42322	6|1	1
	KEL-FG-A7 with V2A screws	42322.200	6|1	1
	KEL-FG-A4	42324	2|2	1
	KEL-FG-A4 with V2A screws	42324.200	2|2	1

57,5 · 10 · 147,3

57,5 · 10 · 147,3

57,5 · 10 · 147,3

Ø5,5 · 130 · 32 · 135,3

57,50 · 56,8 · 23,4

The cable entry frames enable the integration of the new IMAS-Connect™ adapter grommets.

UL us
in progress | IP54 | UL TYPE 12 ULSDE | DNV·GL DNVGL.COM/AF | HL3 EN 45545-2 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany

KEL-FG-B
Flange enclosures for cable entry

Configure online now

Also available with threaded bushings.

V2A anti-corrosive

Also available with stainless steel screws (V2A).

Split KT grommets

IP54

Description		Type	Order No.	Grommets small | large	PU
57,5 — 79,8 — 10		**KEL-FG-B4**	**42330**	4|-	1
		KEL-FG-B4 with V2A screws	**42330.200**	4|-	1
57,5 — 79,8 — 10		**KEL-FG-B1**	**42332**	-|1	1
		KEL-FG-B1 with V2A screws	**42332.200**	-|1	1

56,8 — 23,4 — 57,50

Ø5,5 — 62,5 — 32 — 64,8

Product description

The cable entry frames KEL-FG-B are suited for installation, sealing and strain relief of cables with connectors and conduits at an angle of 90° to the cabinet, enclosure or machine wall. All frame systems come with a rubber gasket.
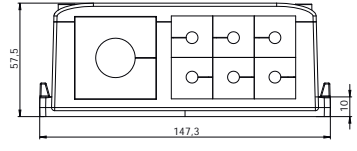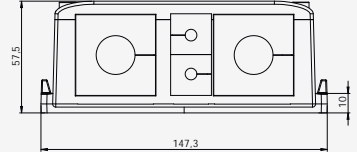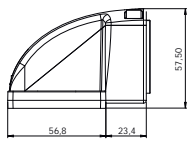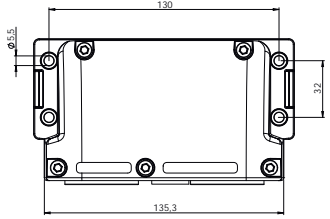
Advantages & benefits

- Installation at an angle of 90° to the wall
- Mechanical protection of cable directly at the place of entry
- Protection against water spray and drips
- Maintain manufacturer's warranty on pre-terminated cables
- Space saving shape
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**46 × 36 mm, Page 220-221**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

UL (c)(us) in progress | IP54 | UL TYPE 12 UL50E in progress | TYPE APPROVED PRODUCT DNV·GL DNVGL.COM/AF | HL3 EN 45545-2 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany

KEL-FG-E

Flange enclosures for cable entry

1.11

Configure online now

IP54

Also available with threaded bushings.

V2A anti-corrosive
Also available with stainless steel screws (V2A).

Split KT grommets

Product description

The cable entry frames KEL-FG-E are suited for installation, sealing and strain relief of cables with connectors and conduits at an angle of 90° to the cabinet, enclosure or machine wall.
The KEL-FG-E version is particularly suited for flat connectors. The small frame is ideal for applications with limited space. All frame systems come with a rubber gasket.

Advantages & benefits

- Installation at an angle of 90° to the wall
- Mechanical protection of cable directly at the place of entry
- Protection against water spray and drips
- Maintain manufacturer's warranty on pre-terminated cables
- Space saving shape
- Optimal for D-Sub connectors
- Strain relief according to EN 62444
- High stability, vibration resistant

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**E2: 43 × 24 mm**
	E3: 65 × 24 mm
	E5: 112 × 24 mm

Accessories

KT Cable grommets	48 - 52
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Grommets small | large	PU
	KEL-FG-E2	42333	2|-	5
	KEL-FG-E2 with V2A screws	42333.200	2|-	5
	KEL-FG-E3	42334	3|-	5
	KEL-FG-E3 with V2A screws	42334.200	3|-	5
	KEL-FG-E5	42336	5|-	5
	KEL-FG-E5 with V2A screws	42336.200	5|-	5

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KEL-SNAP
Snap mounting frames

IP54

Integrated circular sealing (IP54)

Blank plate BPK-SNAP, see page 186

38

Product description

The patented KEL-SNAP frame provides a quick assembly of the KEL / KEL-U / KEL-QUICK system when necessary. Control panels, cabinets or machines can be equipped with the KEL-SNAP frame at delivery, allowing a simple push in of the KEL frame when routing the cables and conduits. Perfect for enclosures that are maintenance intensive or for an install at a later date.

A cut-out of 46 mm also can be chosen instead of 36 mm. Thus prefabricated multi-pin connectors can be used.

Description	Type	Order No.	Fits for	Cut-out [mm]	PU
81 56 38 64 46 32 ⌀5,5	KEL-SNAP-B	42038	KEL-B KEL-U-B KEL-QUICK-B	46 × 38	10
108 83 64 64 45 32 ⌀5,5	KEL-SNAP 10	42039	KEL 10 KEL-U 10 KEL-QUICK 10	46 × 65	10
128 103 85 64 46 32 ⌀5,5	KEL-SNAP 16	42040	KEL 16 KEL-U 16 KEL-QUICK 16	46 × 85	10
155 130 112 64 32 46 ⌀5,5	KEL-SNAP 24	42042	KEL 24 KEL-U 24 KEL-FG-A KEL-QUICK 24	46 × 112	10
155 130 112 89,50 71,50 38 ⌀5,5	KEL-SNAP 24-E	42044	KEL 24-E	71 × 112	1
155 130 112 108 90 38 38 ⌀5,5	KEL-SNAP 24-MT	42046	KEL 24-MT	89 × 112	1

Advantages & benefits

- Upon disassembly (e.g. maintenance) screwing and unscrewing of KEL frame is not necessary
- Previously assembled KEL frames are quickly and easily attached
- Integrated gasket
- Drilling template identical to KEL frame (except KEL-SNAP-B)

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54 (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**See Page 220-221**

Accessories

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cᴿᴸus   IP54   DNV·GL TYPE APPROVED PRODUCT DNVGL.COM/AF   HL3 EN 45545-2   UV ISO 4892-2A   RoHS compliant   Made in Germany   Ex

KEL-FL
Cable entry frames
for flat cables

Configure online now

IP54

Also available with threaded bushings.

V2A anti-corrosive

Also available with stainless steel screws (V2A).

Product description

The KEL-FL range enables simple, fast and flexible cable routing and sealing of flat wires, e.g. in lift construction.

Innovative construction of the grommets compensates for manufacturing inconsistencies in flat cables. Split KT grommets can be utilised to additionally route round cables with connectors. All frame systems come with a rubber gasket.
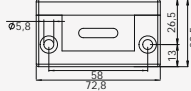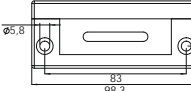
Advantages & benefits

- Routing of flat cables in combination with pre-terminated round cables by using a single KEL-FL cable entry frame
- Space saving shape

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Drilling template	**See Page 220-221**
Frame depth	**17 mm**

Accessories

KT Cable grommets, small	48 - 52
KTMB/KT-DPF Cable grommets, small	51
FT Cable grommets, flat	33
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Cut-out [mm]	Grommets KT | FT	PU
	KEL-FL|A	46100	43 × 24	0× KT 1× FT-1	10
	KEL-FL|B	46105	65 × 24	0× KT 1× FT-2	10
	KEL-FL|C	46110	65 × 24	1× KT 1× FT-1	10
	KEL-FL|D	46115	86 × 24	0× KT 1× FT-3	10
	KEL-FL|E	46120	86 × 24	1× KT 1× FT-2	10
	KEL-FL|F	46125	86 × 24	0× KT 2× FT-1	10
	KEL-FL|G	46130	86 × 24	2× KT 1× FT-1	10
	KEL-FL|H	46135	112 × 24	2× KT 1× FT-2	10
	KEL-FL|I	46140	112 × 24	1× KT 2× FT-1	10
	KEL-FL|J	46145	112 × 24	3× KT 1× FT-1	10
	KEL-FL|K	46150	112 × 24	1× FT-1 1× FT-2	10
	KEL-FL|L	46155	112 × 24	1× FT-4	10

FT
Grommets for flat cables

1.11

Description	Type	Order No.	Clamping range	PU
	FT-1|0	46201	Blank grommet	5
	FT-1|A	46210	Width: 19 - 23 mm Thickness: 5.5 - 6 mm	5
	FT-1|B	46211	Width: 28 - 33 mm Thickness: 5.5 - 6 mm	5
	FT-1|C	46212	Width: 24 - 30 mm Thickness: 8.5 - 9 mm	5
	FT-1|E	46214	Width: 19 - 24 mm Thickness: 6.5 - 7 mm	5
	FT-1|F	46215	Width: 28 - 33 mm Thickness: 9 - 9.5 mm	5
	FT-2|0	46202	Blank grommet	5
	FT-2|A	46250	Width: 32.5 - 38 mm Thickness: 5 - 5.5 mm	5
	FT-2|B	46251	Width: 45 - 50.5 mm Thickness: 6 - 6.5 mm	5
	FT-2|C	46252	Width: 47 - 52 mm Thickness: 9.5 - 10 mm	5
	FT-2|F	46255	Width: 38 - 43 mm Thickness: 12.5 - 13 mm	5
	FT-2|G	46256	Width: 49 - 54 mm Thickness: 5 - 6 mm	5
	FT-3|0	46203	Blank grommet	5
	FT-3|A	46300	Width: 72 - 77 mm Thickness: 5 - 5.5 mm	5
	FT-4|0	46204	Blank grommet	5
	FT-4|A	46330	Width: 85 - 99 mm Thickness: 4.2 - 5.2 mm	5

Product description

FT grommets are used to route flat cables, e.g. in lift construction. Suitable for cable entry frames KEL-FL.

Innovative construction of the grommets compensates for manufacturing inconsistencies in flat cables.

Advantages & benefits

- Routing of flat cables with various dimensions

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

Compatible with

KEL-FL Cable entry frames   32

cULus IP54 UL TYPE 12 UL50E HL3 EN 45545-2 UV ISO 4892-2A ECOLAB certified RoHS compliant Made in Germany Ex

KEL 183 | KEL 183-E
Cable entry frames
for supply cables

1.11

Configure online now

IP54

Product description

The split cable entry frame KEL 183 enables the user to route cables and tubes with a diameter of up to 75 mm (depending on the frame type) and to seal them in accordance with IP54 / up to UL type 12.

For cables up to 35 mm the cable grommets KT can be used. With these split cable grommets, pre-ter-minated cables can be routed.

For cables up to 75 mm we have created the grom-mets KTMB for KEL 183. Those are not split and have a defined area for pushing the cable through.

All frame systems come with a rubber gasket.

Advantages & benefits

- Installation of cables up to 75 mm
- Grommets allow rigid cables to be properly positi-oned and oriented during the installation process
- Retrofits, repairs and maintenance can be done much more easily and quickly

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54 with gasket and correct selection of the cables (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**See page 220-221**
Frame depth	**17 mm**

Accessories

KTMB 183 Cable grommets	35
KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

Description	Type	Order No.	Grommets KT KT 183 | KT large	PU
	KEL 183|2	47200	2|-	1
	KEL 183|2 with V2A screws	47200.200	2|-	1
	KEL 183|5	47220	1|4	1
	KEL 183|5 with V2A screws	47220.200	1|4	1
	KEL 183|8	47240	-|8	1
	KEL 183|8 with V2A screws	47240.200	-|8	1
	KEL 183-E4	47250	-|4	1
	KEL 183-E4 with V2A screws	47250.200	-|4	1
	KEL 183-E16	47255	16 KT small	1
	KEL 183-E16 with V2A screws	47255.200	16 KT small	1

IP54 | **UL TYPE 12** U.L.50E | **HL3** EN 45545-2 | **UV** ISO 4892-2A | **ECOLAB** certified | **RoHS** compliant | Made in Germany | **Ex**

KTMB 183
Grommets for KEL 183

IP54

Type	Order No.	Clamping range	PU
KTMB-O	41410	Blank grommet	1
KTMB-P	41415	34 - 44 mm	1
KTMB-Q	41420	44 - 54 mm	1
KTMB-R	41425	54 - 64 mm	1
KTMB-S	41430	64 - 75 mm	1

Product description

The grommets KTMB-P to KTMB-S are suitable for cable diameters up to 75 mm. These grommets can be used with the KEL 183 cable entry frames.

These multi-range grommets are not split and have a defined area for pushing the cable through.

The blank grommet KTMB-O can accept cable sizes within a specified range. The membrane of the KTMB-O can be pierced or cut (cable diameter minus 10 mm) for cables up to 55mm in diameter.

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

Compatible with

KEL 183 Cable entry frames   34

cULus   **IP54**   **UL TYPE 12** UL 50E   **HL3** EN 45545-2   **UV** ISO 4892-2A   **ECOLAB** certified   **RoHS** compliant   Made in Germany

KEL-JUMBO
Cable entry frames
for supply cables

IP54

V2A
anti-corrosive

Also available with stainless steel screws (V2A).

Product description

The KEL-JUMBO cable entry system for installation of cables and conduits with a diameter of up to 65 mm, especially suited for supply cables.

The innovative grommet design with the flex-membrane provides flexing and adjustment of the position for larger and more rigid cables.

We recommend round cut-outs, which can be made using standard punching tools.

Suggested cut-out: cable diameter +15 - 20%.
All frame systems come with a rubber gasket.

Advantages & benefits

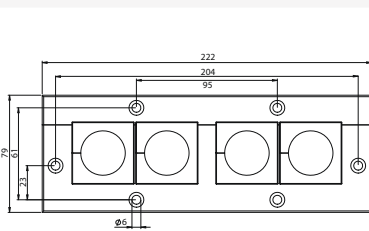- Installation of cables up to 65 mm
- KTF grommets allow flexing and adjustment of the cable position
- Retrofitting and maintenance can be carried out easily and quickly
- Strain relief according to EN 62444

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimensions	**Round, cable diameter +15%**
Frame depth	**35 mm**

Accessories

KTF Cable grommets	37
KDR-ESR Base plates	176 - 181
KDR2 Split base plates	182 - 183
MP Module plates	188 - 189

Description	Type	Order No.	Dimensions length | width | height	PU
	KEL-JUMBO 1	42360	110 × 116 × 35 mm	1
	KEL-JUMBO 1 with V2A screws	42360.200	110 × 116 × 35 mm	1
	KEL-JUMBO 2	42350	200 × 116 × 35 mm	1
	KEL-JUMBO 2 with V2A screws	42350.200	200 × 116 × 35 mm	1

1.11

| | IP54 | UL TYPE 12 UL 50E | HL3 EN 45545-2 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany |

KTF
Grommets for KEL-JUMBO

KTF

IP54

1.11

Product description

The grommets KTF are suitable for cable diameters up to 65 mm.

Suitable for KEL-JUMBO cable entry frames.

Cables with a comparatively smaller diameter can be utilised with KEL-JUMBO frames by using an adapter grommet.

Type	Order No.	Clamping range	PU
KTF 00	42371	Blank grommet	1
KTA	42370	Adapter grommet for KT large	1
KTF 34	42376	33 - 36 mm	1
KTF 38	42379	37 - 40 mm	1
KTF 42	42382	41 - 44 mm	1
KTF 46	42385	45 - 48 mm	1
KTF 50	42388	48 - 52 mm	1
KTF 54	42391	53 - 56 mm	1
KTF 58	42394	56 - 60 mm	1
KTF 62	42397	61 - 65 mm	1

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

Compatible with

KEL-JUMBO Cable entry frames   36

Accessories

KT Cable grommets, large   50

1.12 Split cable glands
for the KT grommet system

$c\mathbf{U}_{us}$	up to **IP68**	up to **UL TYPE 4·X** UL 50E	TYPE APPROVED PRODUCT **DNV·GL** DNVGL.COM/AF	**HL3** EN 45545-2	**ECOLAB** certified	**RoHS** compliant	Made in Germany	**UL-94 V0**	**+100°C -30°C**	**1–35 mm**

By using split cable glands by icotek cables with or without connectors or complete cable harnesses with diameters from 1 to 35 mm can be quickly routed into enclosures, cabinets or machines and be sealed with up to IP66/IP68 / UL type 4X rated ingress protection.

The split system of the KVT cable glands enables quick and easy assembly which is great for retrofitting and maintenance. The cable is placed into the slit grommet which is set into one of the gland halves. Depending on the size of the cable gland one, two or four separate grommets can be installed. The two gland halves can be easily snapped together without the need of tools. The routed lines are securely sealed and held inside the grommets. To mount the cable glands either snap it into the round metric standard cut-out (sizes available from M20 to M80) or screw it with a hexagonal locknut. The mounting method is dependent on the model type.

By screwing (stainless steel screws by default) the top section of the split cable gland to its body, a higher clamping pressure can be achieved.

Split system

Fast and easy assembly

For metric cut-outs M20 – M80

High cable density, wide variety in cable grommets

Integrated seal

Warranty on pre-terminated cables remains

Special locknuts for e.g. D-Sub or PROFIBUS connectors as well as split locknuts available.

Very good strain relief acc. to DIN EN 62444

Product range

KVT-ER   IP66 IP68

KVT   IP54

KVT-W90   IP54

KVT-SNAP   IP54

KVT 80   IP54

Split cable glands
M25 – M63, for cable diameters up to 35 mm

KVT-ER

40 – 41

Split cable glands
M20 – M80, for cable diameters up to 35 mm

KVT / KVT 80 / KVT-SNAP / KVT-W90

42 – 46

Grommets and plugs
for cables with/without connectors, cable diameter range 1 – 35 mm

KT small / KT large / KT-DPF / KTMB / KT-SC / KT-DT / ST / KT ServiceBox

47 – 53

IMAS-CONNECT™
Modular adapter system

AT-M / AT-B / AT-KS

54 – 57

1.12

UL c us in progress | **IP66** | **IP68** | **UL TYPE 12** | **UL TYPE 4X** | **HL3** EN 45545-2 | **ECOLAB** certified | **RoHS** compliant | **Made in Germany**

KVT-ER
Split cable glands

1.12

IP66 **IP68**

Certified protection class
IP65/IP66/IP67/IP68

Slit KT grommets

Product description

KVT-ER are split cable glands for routing and sealing cables with and without connectors, conduits or pneumatic hoses with diameters from 1 to 16 mm (KT 1 - 15) and 16 to 35 mm (KT 16 - 34).

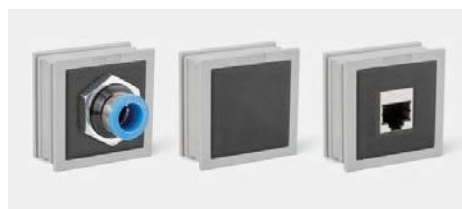Due to the injected gasket and if single-hole grommets are used, the KVT-ER provides certified protection ratings IP65/IP66/IP67/IP68.

The KVT-ER sizes are based on metric standard cut-outs M25, M32, M50 and M63. Hexagonal locknuts are included in the shipment.

For assembly, we recommend to tighten the cover lid screws with max. 2 Nm.

Locknuts

Locknuts with special cut-outs are available separately.

KGM-SUB-D9 fits D-Sub 9 connectors
(Required wall cut-out: ∅ 36 mm, PU: 10)
■ **Order No. 45106**

KGM-SUB-D25 fits SUB-D25 connectors
(Required wall cut-out: ∅ 50 - 54 mm, PU:10)
■ **Order No. 45110**

Type GMT: Split locknut, p. 209

Description	Type	Order No.	Grommets KT small | large	Thread Thread length	PU
	KVT-ER 25*	45450	1|-	M25 × 1.5 Length: 18 mm	10
	KVT-ER 32	45452	1|-	M32 × 1.5 Length: 18 mm	10
	KVT-ER 50|2	45454	2|-	M50 × 1.5 Length: 20.5 mm	5

* Max. cable diameter of 15 mm

icotek®

KVT-ER
Split cable glands

Configure online now

V2A anti-corrosive

Injected elastomer gasket

Slit KT grommets

IP66 **IP68**

Description	Type	Order No.	Grommets KT small | large	Thread Thread length	PU
	KVT-ER 63|1	45455	-|1	M63 x 1.5 Length: 20.5 mm	5
	KVT-ER 63|4	45456	4|-	M63 × 1.5 Length: 20.5 mm	5

M Ø 63x1,5 · 20,5 · 36 · 38,3 · 75 · 74,2 · 74 · 83

M Ø 63x1,5 · 20,5 · 36 · 38,3 · 75 · 74,2 · 74 · 83

Advantages & benefits

- Certified protection class IP65/IP66/IP67/IP68 according to EN 60529
- Very high strain relief according to EN 62444
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done easily and quickly
- High cable density
- Suitable for metric cut-outs
- Hexagonal nut included in the delivery
- Anti-corrosive V2A stainless steel screws
- Very robust housing, vibration resistant
- Modern design

Specifications

Material	**Frame: Polypropylene (PP) Injected gasket: Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP65/IP66/IP67/IP68, if correctly assembled with single grommets (certified acc. to EN 60529)**
Temperature	**- 40°C to + 110°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimension	**Metric sizes**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KVT-EMC Brackets	151
Locknuts	208 - 209
ST Plugs	53

1.12

41

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KVT
Split cable glands

Configure online now

IP54

1.12

Product description

KVT is a circular split frame for quick and easy installation and sealing of cables with connectors or complete cable harnesses.

Polyamide locknuts as well as a sealing ring are included in the shipment.

For routing D-Sub, DVI or PROFIBUS connectors in combination with the split cable glands KVT, special locknuts with cut-outs are required.

Locknuts

Locknuts with special cut-outs are available separately. The cut-out dimensions are listed on page 208.
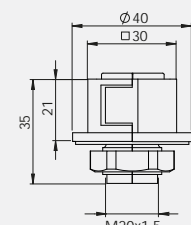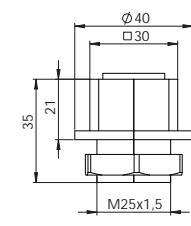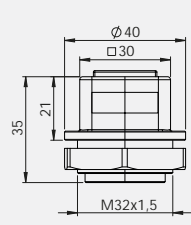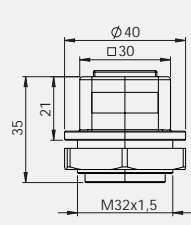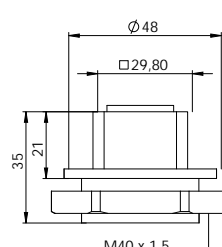
KGM-SUB-D9 fits D-Sub 9 connectors
(Required wall cut-out: ⌀ 36 mm, PU: 10)
☐ **Order No. 45105** ■ **Order No. 45106**

KGM-PB fits DVI and PROFIBUS connectors
(Required wall cut-out: ⌀ 42 mm, PU: 10)
☐ **Order No. 45107** ■ **Order No. 45109**

KGM-SUB-D25 fits SUB-D25 connectors
(Required wall cut-out: ⌀ 50 - 54 mm, PU:10)
☐ **Order No. 45108** ■ **Order No. 45110**

Description	Type	Order No.	Grommets small | large	Thread / Thread length	PU
⌀ 40, □ 30, 35, 21, M20x1,5	KVT 20**	☐ 45034 ■ 45024	1|-	M20 × 1.5 / Length: 14 mm	10
⌀ 40, □ 30, 35, 21, M25x1,5	KVT 25***	☐ 45035 ■ 45025	1|-	M25 × 1.5 / Length: 14 mm	10
⌀ 40, □ 30, 35, 21, M32x1,5	KVT 32	☐ 45036 ■ 45026	1|-	M32 × 1.5 / Length: 14 mm	10
	KVT 32 + KGM-SUB-D9	☐ 45037 ■ 45027	1|-	M32 × 1.5 / Length: 14 mm	10
⌀ 48, □ 29,80, 35, 21, M40 x 1,5	KVT 40	☐ 45203 ■ 45028	1|-	M40 × 1.5 / Length: 14 mm	10
	KVT 40 + KGM-PB	☐ 45205 ■ 45029	1|-	M40 × 1.5 / Length: 14 mm	10

* Only valid for grey product types ** Max. cable diameter of 11 mm | *** Max. cable diameter of 15 mm

IP54 · **IP54** · UL TYPE **12** · DNV·GL · **HL3** EN 45545-2 * · ECOLAB certified · RoHS compliant · Made in Germany

KVT
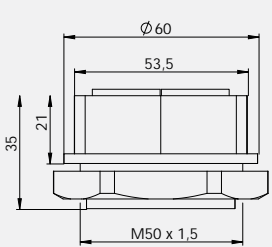## Split cable glands

Configure online now

IP54

Advantages & benefits

- Insertion of pre-terminated cables
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Suitable for metric cut-outs
- Locknut is included

Description	Type	Order No.	Grommets small | large	Thread Thread length	PU
Ø 60 / 53,5 / 35 / 21 / M50 x 1,5	KVT 50|2	▢ 45204 ■ 45030	2|-	M50 × 1.5 Length: 14 mm	5
	KVT 50|2 + KGM-SUB-D25	▢ 45206 ■ 45031	2|-	M50 × 1.5 Length: 14 mm	5
Ø 70,50 / ▢52 / 35 / 21 / M63x1,5	KVT 63|1	▢ 45212 ■ 45112	-|1	M63 × 1.5 Length: 14 mm	5
	KVT 63|4	▢ 45215 ■ 45115	4|-	M63 × 1.5 Length: 14 mm	5

* Only valid for grey product types

Specifications

Material	**Polycarbonate (PC)**
Colour	▢ **grey (similar RAL 7035)** ■ **black**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 30°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimension	**Metric sizes**

Accessories

KT Cable grommets	48 - 52
AT Adapter grommets	54 - 57
KVT-EMC Brackets	151
Locknuts	208 - 209
ST Plugs	53

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| c**UL**us | IP54 | UL TYPE **12** UL 50E | **HL3** EN 45545-2 | ECOLAB certified | RoHS compliant | Made in Germany | * |

KVT 80

Split cable glands
for front mounting

Configure online now

IP54

Product description

The KVT 80 split cable glands are designed for routing and sealing cables with connectors. By assembling the two frame halves with the screws provided, the grommets provide sufficient pressure on the routed cables to obtain a high degree of strain relief. The KVT 80 can be fitted to a wall thickness from 1.5 mm to 10 mm. A flat rubber gasket is included in the shipment.

Advantages & benefits

- Insertion of pre-terminated cables
- Maintain manufacturer's warranty on pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets
- Fast and easy mounting from the front side
- Strain relief according to EN 62444

Note

When mounting the KVT 80 on sheet metal, we recommend the following torque values:
1.5 mm sheet = 1 N m | 2 - 10 mm sheet = 1.5 N m

Specifications

Material	**Polycarbonate (PC)**
Colour	☐ **grey (similar RAL 7035)**
	■ **black**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 30°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimension	**80 mm in diameter**

Accessories

Cable grommets	48 - 52
ST Plugs	53

Description	Type	Order No.	Grommets KT small | large	PU
⌀100, 78,2	KVT 80|3	☐ 45236 ■ 45239	2|1	1
⌀100, 78,2	KVT 80|6	☐ 45237 ■ 45238	6|-	1
⌀100, 78,2, 35,50, 16, ⌀79				

*Only valid for grey product types

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KVT-SNAP
Split pluggable cable glands

Configure online now

IP54

1.12

Product description

KVT is a circular split frame for quick and easy installation of cables with connectors or complete cable harnesses.

By using the model KVT-SNAP, cables can be routed through thick walls (> 5 mm) e.g. into cast terminal boxes without the use of tools. A sealing ring is included in the shipment.

Assembly

- The snap ring is screwed into metric thread or tapped into the cut-out (it can also be fastened with a locknut, which is included in the shipment of KVT-SNAP 63)
- Once the snap ring is affixed to the housing the equipped KVT is simply pushed into it. Fast and easy installation!

Description	Type	Order No.	Grommets small | large	Thread Thread length	PU
Ø 40, □ 30, 21, 35, M32x1,5, SW36	KVT-SNAP 32	45130	1|-	M32 × 1.5 Length: 11 mm	10
Ø 40, □ 30, 21, 35, M40x1,5, SW46	KVT-SNAP 40	45134	1|-	M40 × 1.5 Length: 11 mm	10
Ø 70,50, □ 50, 21, 35, M63x1,5, SW68	KVT-SNAP 63|4 + KGM 63	45152	4|-	M63 × 1.5 Length: 11 mm	5
Ø 70,50, □ 50, 21, 35, M63x1,5, SW68	KVT-SNAP 63|1 + KGM 63	45154	-|1	M63 × 1.5 Length: 11 mm	5
	KGM 32	52275 / 52285	PA	M32 × 1.5	10
	KGM 40	52276 / 52286	PA	M40 × 1.5	10
	KGM 63	52278 / 52288	PA	M63 × 1.5	5

* Only valid for grey product types

Specifications

Material	**Polycarbonate (PC)**
Colour	☐ **grey (similar RAL 7035)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
Temperature	**- 30°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimension	**Metric cut-outs**

Accessories

Cable grommets	48 - 52
KVT-EMC Brackets	151
KGM Locknuts	208 - 209
ST Plugs	53

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U·us **IP54** *TYPE APPROVED PRODUCT DNV·GL DNVGL.COM/AF* **HL3 EN 45545-2*** **ECOLAB certified** **RoHS compliant** **Made in Germany**

KVT-W90
Split cable glands

1.12

IP54

Configure online now

Product description

The split KVT-W90 cable glands are used to insert and seal pre-terminated cables and conduits at a 90° angle.

In particular, the KVT 50-W90 is perfectly suited to hold corrugated or smooth hoses. A large number of cable entry grommets is available to the user.

Polyamide standard locknuts as well as a sealing ring are included in the shipment. Split locknuts can be ordered separately.

Advantages & benefits

- Installation at an angle of 90° to the cabinet
- Insertion of pre-terminated cables and conduits
- Maintain manufacturer's warranty on pre-terminated cables
- Suitable for metric cut-outs

Specifications

Material	**Polycarbonate (PC)**
Colour	**☐ grey (similar RAL 7035)**
	■ black
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets (certified acc. to EN 60529)**
Temperature	**- 30°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimension	**Metric cut-outs**

Accessories

Cable grommets	48 - 52
KVT-EMC Brackets	151
KGM Locknuts	208 - 209
ST Plugs	53

Description	Type	Order No. with locknut	Grommets small | large	Thread Thread length	PU
Ø40, 14.50, M32 x 1,5, 46, 26, 40,6	KVT 32-W90	☐ 45404 ■ 45406	1|-	M32 × 1.5 Length: 11.5 mm	10
Ø62, 46,50, 14,50, M50x1,5	KVT 50|4-W90	☐ 45424 ■ 45426	4|-	M50 × 1.5 Length: 11.5 mm	5
Ø62, 46,5, 14,5, M50x1,5, 73, 42, 61	KVT 50|1-W90	☐ 45414 ■ 45416	-|1	M50 × 1.5 Length: 11.5 mm	5

*Only valid for grey product types

KT ServiceBox
Service box for cable grommets

Product description

Convenient - everything available right away!

The KT ServiceBox is perfect for installations and service calls. It ensures your KT grommets are readily available.

Order No. 88001

Content*

Cable grommets, small:
- 110 KT for cables 1 - 17 mm
- 10 BTK blank grommets
- 10 KTMB multi-range grommets
- 2 KT-DPF mutli-range grommets
- 8 KT-ASI for ASI-Bus cables

Cable grommets, large:
- 25 KT for cables 16 - 35 mm
- 4 BTG blank grommets / ATG adapter grommets
- 3 KTMB multi-range grommets
- 2 KT-DT multi-membrane grommets
- 2 KT-DPF multi-range grommets

Accessories:
- 1 Cable entry frame KEL-U 10|3
- 1 Cable entry frame KEL-E3
- 1 KVT split cable gland
- 1 KZL strain relief plate

- 1 Cable template

*Subject to alterations

KMS
Cable template

The correct size of the KT grommets can easily be determined by using the cable template (material: stainless steel V2A).

- Determining the diameter of the cable using the cable template

- Selecting the KT grommets according to the data on the cable template

Cable templates can also be ordered separately. **Order-No. 39800**

47

icotek

KT

Grommets, small, single

1.1

IP54 IP66 IP68

Product description

Cable grommets KT small are used with the cable entry frames & cable glands of product groups 1.11 & 1.12.

The model range KT small is designed for cable diameters from 1 to 17 mm.

Assembly note

When installing the grommets, the flat side should be facing the middle of the frame. This allows the flat sides of adjacent grommets to match up and provide a secure seal.

21 / 21

Description		Type	Order No grey	Order No black	Clamping range	PU
	BTK	BTK	☐ 41251	■ 41351	Blank grommet	10
	KT round	KT 1	☐ 39941	■ 39943	1 - 2 mm	10
		KT 2	☐ 39934	■ 41302	2 - 3 mm	10
		KT 3	☐ 41203	■ 41303	3 - 4 mm	10
		KT 4	☐ 41204	■ 41304	4 - 5 mm	10
		KT 5	☐ 41205	■ 41305	5 - 6 mm	10
		KT 6	☐ 41206	■ 41306	6 - 7 mm	10
		KT 7	☐ 41207	■ 41307	7 - 8 mm	10
		KT 8	☐ 41208	■ 41308	8 - 9 mm	10
		KT 9	☐ 41209	■ 41309	9 - 10 mm	10
		KT 10	☐ 41210	■ 41310	10 - 11 mm	10
		KT 11	☐ 41211	■ 41311	11 - 12 mm	10
		KT 12	☐ 41212	■ 41312	12 - 13 mm	10
		KT 13	☐ 41213	■ 41313	13 - 14 mm	10
		KT 14	☐ 41214	■ 41314	14 - 15 mm	10
		KT 15	☐ 41215	■ 41315	15 - 16 mm	10
		KTs 16	☐ 39901	■ 39912	16 mm	10
		KTs 17	☐ 39900	■ 39913	17 mm	10

*Only valid for grey product types

KT 2|× ... etc.

KT

Grommets, small, multi & special grommets

IP54

Description	Type	Order No grey	Order No black	Clamping range	PU
KT 2|×	KT 2|1	▨ 39942	■ 39944	2× ø 1 mm	10
	KT 2|2	▨ 39935	■ 39936	2× ø 2 mm	10
	KT 2|3	▨ 39939	■ 39940	2× ø 3 mm	10
	KT 2|4	▨ 39906	■ 39907	2× ø 4 mm	10
	KT 2|5	▨ 41200	■ 39904	2× ø 5 mm	10
	KT 2|6	▨ 41201	■ 39905	2× ø 6 mm	10
	KT 2|7	▨ 41202	■ 39916	2× ø 7 mm	10
	KT 2|8	▨ 39917	■ 39918	2× ø 8 mm	10
KT 4|×	KT 4|2	▨ 39937	■ 39938	4× ø 2 mm	10
	KT 4|3	▨ 39914	■ 39915	4× ø 3 mm	10
	KT 4|4	▨ 39909	■ 39911	4× ø 4 mm	10
	KT 4|5	▨ 39908	■ 39910	4× ø 5 mm	10
	KT 4|6	▨ 39932	■ 39933	4× ø 6 mm	10
KT ASI	KT-ASI	▨ 39902	■ 39903	1 ASI-cable	10
	KT-ASI2|rl	▨ 39922	■ 39924	2 ASI-cables	10
	KT-ASI2|ll	▨ 39921	■ 39923	2 ASI-cables	10
KT oval	KT oval	▨ 39930	–	approx. 8 × 4 mm	10
KT S1	KT S1	▨ 39931	–		10
KT tele	KT tele	▨ 39929	–	Telephone cable	10
	KT tele1	▨ 41257	–	Data cable RJ12	10
	KT tele2	▨ 41258	–	Data cable RJ10 / RJ45	10

*Only valid for grey product types

▨ Specifications KT grey

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**KT round, single: up to IP66/IP68**
	KT round, multi: IP54
	KT special, multi: IP54
UL type rating	**up to UL type 4X (acc. to UL 50E)**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

■ Specifications KT black

Material	**Elastomer**
Flame class	**UL94-HB**
IP rating	**KT round, single: up to IP66/IP68**
	KT round, multi: IP54
	KT special, multi: IP54
Temperature	**- 30°C to + 90°C (static)**
Properties	**Higher chemical resistance**

Accessories

ST Plugs   53

1.1

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KT
Grommets, large

1.1

IP54 **IP66** **IP68**

Product description

Cable grommets KT large accept a wide range of cable diameters from 16 to 35 mm. They are used with the cable entry frames & cable glands of product groups 1.11 & 1.12.
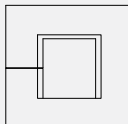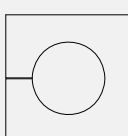
ATG adapter grommets provide the possibility to hold a small KT grommet to reduce the clamping range down to 1 mm.

☐ Specifications KT grey

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**KT round, single: up to IP66/IP68**
	ATG/BTG: IP54
UL type rating	**up to UL type 4X (acc. to UL 50E)**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

■ Specifications KT black

Material	**Elastomer**
Flame class	**UL94-HB**
IP rating	**KT round, single: up to IP66/IP68**
	ATG/BTG: IP54
Temperature	**- 30°C to + 90°C (static)**
Properties	**Higher chemical resistance**

KT / KT-DPF large

Description		Type	Order No. grey	Order No. black	Clamping range	PU
ATG		ATG	☐ 41253	■ 41353	Adapter grommet	10
BTG		BTG	☐ 41252	■ 41352	Blank grommet	10
KT round		KT 16	☐ 41216	■ 41316	16 - 17 mm	10
		KT 17	☐ 41217	■ 41317	17 - 18 mm	10
		KT 18	☐ 41218	■ 41318	18 - 19 mm	10
		KT 19	☐ 41219	■ 41319	19 - 20 mm	10
		KT 20	☐ 41220	■ 41320	20 - 21 mm	10
		KT 21	☐ 41221	■ 41321	21 - 22 mm	10
		KT 22	☐ 41222	■ 41322	22 - 23 mm	10
		KT 23	☐ 41223	■ 41323	23 - 24 mm	10
		KT 24	☐ 41224	■ 41324	24 - 25 mm	10
		KT 25	☐ 41225	■ 41325	25 - 26 mm	10
		KT 26	☐ 41226	■ 41326	26 - 27 mm	10
		KT 27	☐ 41227	■ 41327	27 - 28 mm	10
		KT 28	☐ 41228	■ 41328	28 - 29 mm	10
		KT 29	☐ 41229	■ 41329	29 - 30 mm	10
		KT 30	☐ 41230	■ 41330	30 - 31 mm	10
		KT 31	☐ 41231	■ 41331	31 - 32 mm	10
		KT 32	☐ 41232	■ 41332	32 - 33 mm	10
		KT 33	☐ 41233	■ 41333	33 - 34 mm	10
		KT 34	☐ 41234	■ 41334	34 - 35 mm	10

*Only valid for grey product types

UL* | IP54 | UL TYPE 12* | HL3* EN 45545-2 | E45 EI30* EN 45545-3 —> 216 | UV* ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany | Ex

icotek®

KT-DPF | KT-SC | KTMB
Grommets, multi-range

1.1

IP54

KTMB large — 41,5 / 40,5

KT-DPF / KTMB small — 21 / 21

KT-DPF-B

KT-SC

Description	Type	Order No.	Size KT	Clamping range	PU
KT-DPF-A	KT-DPF-A	☐ 41260 ■ 41360	KT small	3 - 12 mm	10
KT-DPF-B / KT-DPF-C	KT-DPF-B	☐ 41261 ■ 41361	KT large	4 - 18 mm	10
	KT-DPF-C	☐ 41262 ■ 41362	KT large	14 - 26 mm	10
KT-SC	KT-SC **NEW**	41485	KT large	5 - 28 mm	10
KTMB-D	KTMB-A	41432	KT small	2.5 - 6.5 mm	10
	KTMB-B	41434	KT small	4 - 7.5 mm	10
	KTMB-C	41436	KT small	6.5 - 10 mm	10
Cross section KTMB	KTMB-D	41438	KT small	9.5 - 13 mm	10
	KTMB-E	41440	KT small	13 - 16 mm	10
KTMB-I	KTMB-G	41460	KT large	13 - 18 mm	10
	KTMB-H	41465	KT large	18 - 23 mm	10
	KTMB-I	41470	KT large	23 - 28 mm	10
	KTMB-J	41475	KT large	28 - 33 mm	10
KTMB-K	KTMB-K	41480	KT large	2× 13 - 18 mm	10

*Only valid for grey product types

Product description

The KT-DPF / KTMB grommets accept a wide range of cable diameters. This is a great benefit when the exact cable diameter is not known in advance. The KT-DPF / KTMB grommets are not split and therefore only usable for cables without connectors. Cutting of KT-DPF grommets: Cable diameter less 20%.

The KT-SC grommet is based on the large KT grommet and enables flexible routing and sealing of electrical cables and pneumatic hoses with diameters from 5 – 28 mm.

☐ Specifications grey

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

■ Specifications black

Material	**Elastomer**
Flame class	**UL94-HB**
IP rating	**IP54**
Temperature	**- 30°C to + 90°C (static)**
Properties	**Higher chemical resistance**

KMS Cable template

Page 47
Order No. 39800

icotek

| cULus | IP54 | UL TYPE 12 UL50E | HL3 EN 45545-2 | E45 EI30 EN 45545-3 –> 216 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany | Ex |

KT-DT

Membrane cable grommets

1.1

IP54

Product description

The KT-DT cable grommets are designed for cables without preassembled connectors. A large number of cables can be routed utilising minimal space.

KT-DT 1 – KT-DT 5 grommets are designed to fit in KT large grommet spaces. KT-DT 7 & KT-DT 8 grommets are designed to fit in KT small grommet spaces.

The KT-DT grommets are also perfectly suitable for the assembly of subsequently terminated cable harnesses.
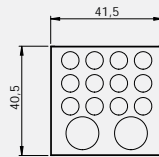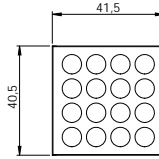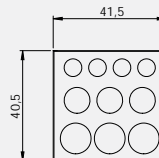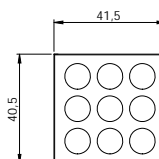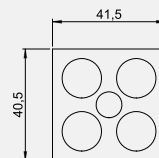
Advantages & benefits

- Combination of routing pre-terminated cables and cables without connectors with one cable entry frame
- Enables sub-assembly of cable harnesses
- High cable density

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

Accessories

ST-B Plugs   93

Description	Type	Order No.	Number of cables	PU
41,5 / 40,5	KT-DT 1	41500	12× max. 6.5 mm 2× max. 12.2 mm	10
41,5 / 40,5	KT-DT 2	41510	16× max. 7.1 mm	10
41,5 / 40,5	KT-DT 3	41520	4× max. 6.5 mm 3× max. 9.5 mm 3× max. 11.3 mm	10
41,5 / 40,5	KT-DT 4	41530	9× max. 9.5 mm	10
41,5 / 40,5	KT-DT 5	41540	4× max. 14.5 mm 1× max. 9.5 mm	10
21 / 21	KT-DT 7	41550	4× max. 6 mm	10
21 / 21	KT-DT 8	41552	2× max. 7 mm 2× max. 4 mm	10

ST
Plugs for cable grommets

Description	Type	Order No.	Diameter D	Length L	PU
	ST 1	42900	1 mm	25 mm	25
	ST 2	42909	2 mm	25 mm	25
	ST 3	42901	3 mm	25 mm	25
	ST 4	42908	4 mm	25 mm	25
	ST 5	42906	5 mm	25 mm	25
	ST 6	42903	6 mm	25 mm	25
	ST 7	42905	7 mm	25 mm	25
	ST 8	42899	8 mm	20 mm	25
	ST 9	42897	9 mm	20 mm	25
	ST 10	42895	10 mm	20 mm	25
	ST 11	42893	11 mm	20 mm	25
	ST 12	42891	12 mm	20 mm	25
	ST 13	42889	13 mm	20 mm	25
	ST 14	42887	14 mm	20 mm	25
	ST 15	42885	15 mm	20 mm	25
	ST 16	42883	16 mm	20 mm	25
	ST 17	42881	17 mm	20 mm	25
	ST ASI	42877	-	25 mm	25

Product description

Plugs are used to close either KT or QT grommets which are not equipped with cables. IP ratings of the grommets remain.

Perfect for applications where cables have been removed or might be routed at a later stage.

Advantages & benefits

- Sealing unused cable grommets

Specifications

Material	**Polyamide (PA), white**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP rating of grommets remains**
UL type rating	**UL type 12 (acc. to UL 50E)**
Temperature	**- 40°C to + 120°C**
Properties	**Halogen-free, silicone-free**

Compatible with

KT Cable grommets	48 - 52
QT Cable grommets	70

1.13 Modular adapter system
IMAS-CONNECT™

icotek exclusive LINE · **NEW** · **IP65** · **HL3** EN 45545-2 · **UV** ISO 4892-2A · **ECOLAB** certified · **RoHS** compliant · Made in Germany

The new modular adapter system IMAS-CONNECT™ by icotek is a consistently modular designed grommet system for mounting metric connectors, Keystone couplers, hose fittings, pressure compensation elements and much more.

By utilising the modular adapter system, the cable entry frame becomes a hybrid system. Pre-terminated and standard cables or hoses can be routed and at the same time the system serves as an interface for connectors.

The grommets, made of elastomer with a polyamide body, fit perfectly into the icotek cable entry frames, like e.g. KEL-U, KEL-ER, KEL-FG and meet the protection classes IP54 to IP65.

Perfect integration into the split icotek cable entry frames.

High protection class: up to IP65

Available with metric inner threads of M12 x 1.0, M16 x 1.5, M20 x 1.5 and M25 x 1.5 (AT-M).

At a high cable density only one cut-out is necessary.

Usable area for special cut-outs and drill-holes: 24 x 24 mm; Wall thickness: 6 mm

Elastomer body with polyamide thread based on the grommet KT large.

Available with pre-terminated cut-out for Keystone couplers (AT-KS).

Product range

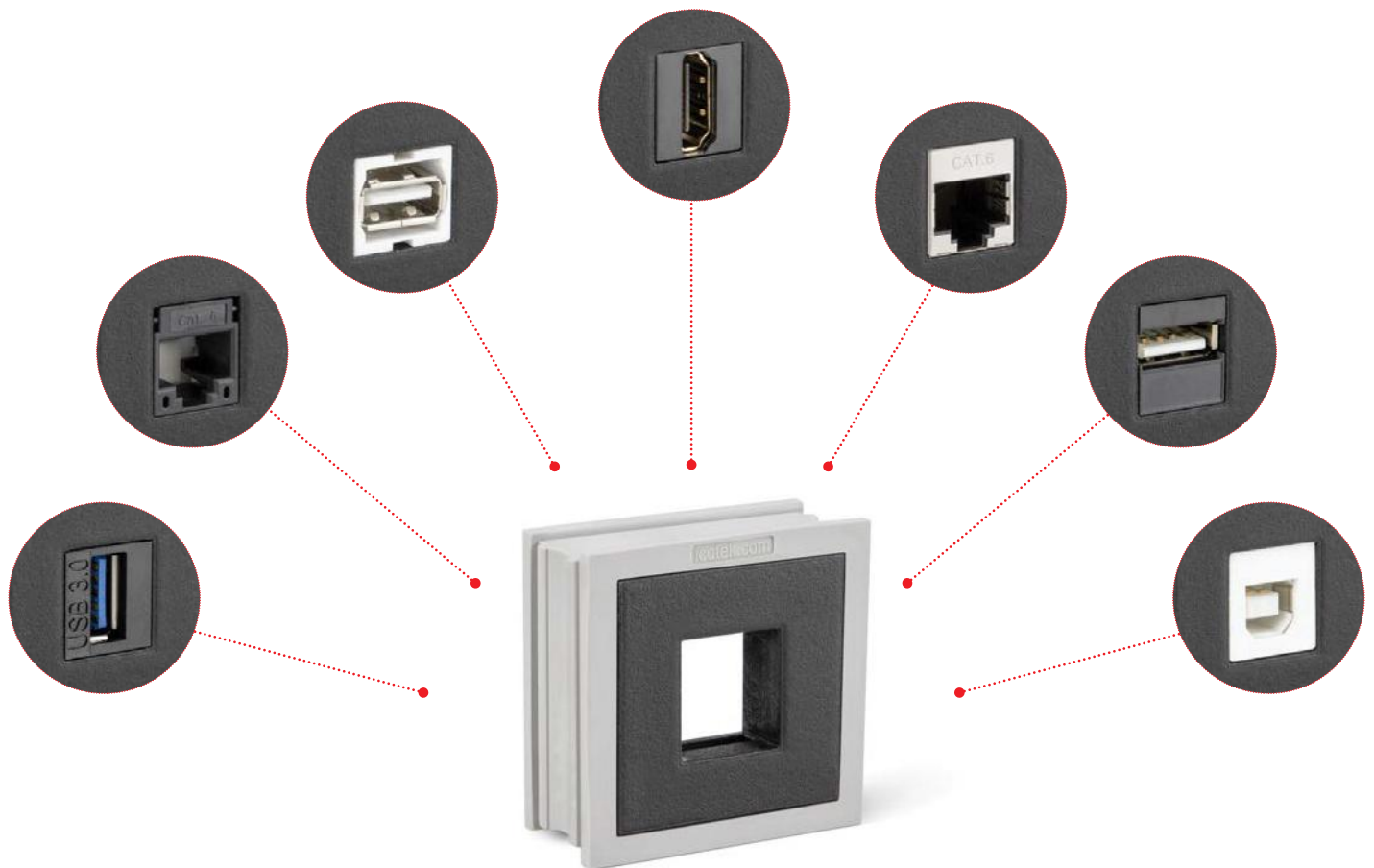| AT-B | AT-M 12 x 1.0 | AT-M 16 x 1.5 | AT-M 20 x 1.5 | AT-M 25 x 1.5 | AT-KS |

Chapter content 1.13

Adapter grommet
with metric inner thread

AT-M

56

Adapter grommet, blank

AT-B

56

Adapter grommet
for Keystone couplers

AT-KS

57

Big variety in Keystone coupler integration possibilities

icotek

AT-M | AT-B
Adapter grommet
with metric inner thread

1.13

IP65

KEL-U 24|7 mounted with 1x AT-M, equipped with 1 connector M12x1.0, for the connection of sensors.

Product description

AT-M is a grommet (based on large KT grommets) with integrated metric threads, suitable for split icotek cable entry systems. The AT-M grommets are made of elastomer with a polyamide body. AT-M grommets are available with inner threads in sizes M12x1.0, M16x1.5, M20x1.5 and M25x1.5.

The AT-M is ideal for creating an interface for signal, data, power and hybrid connectors by simply screwing them into the AT-M thread. Pressure compensation elements or conduit connectors up to M25x1.5 can also be screwed into the AT-M.

There is also a blank AT-B grommet available. The integrated polyamide body is completely closed on one side. The effective area is 24 x 24 mm, the wall thickness is 6 mm. Custom drill-holes and cut-outs can be made here for e.g. installation of screw mounted hybrid connectors.

icotek also offers screw plugs for sizes M16, M20 and M25 to close the new adapter grommet with the metric internal thread AT-M.
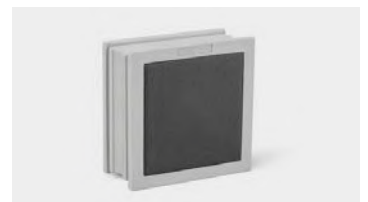
Advantages & benefits

- By using AT-M grommets, panel connectors and sockets can be integrated directly into the cable entry system
- Separate cut-outs for connectors are no longer necessary
- Space-saving solution
- Thread sizes M12 to M25 available

Specifications

Material	**Grommet: Elastomer**
	Body with thread: Polyamide
Flame class	**UL94-V0, self-extinguishing**
Protection class	**IP65 when using correct components**
Temperature	**-40°C to +90°C (static)**
Properties	**Halogen free, silicone free**

Type	Order No.	Height × width × length [mm]	Thread	Material	PU
AT-M 12x1.0	39946	42 x 41.5 x 19	M12 × 1.0	PA / Elastomer	10
AT-M 16x1.5	39947	42 x 41.5 x 19	M16 × 1.5	PA / Elastomer	10
AT-M 20x1.5	39948	42 x 41.5 x 19	M20 × 1.5	PA / Elastomer	10
AT-M 25x1.5	39949	42 x 41.5 x 19	M25 × 1.5	PA / Elastomer	10
AT-B blind	39950	42 x 41.5 x 19	–	PA / Elastomer	10

Screw plugs for AT-M

Type	Order No.	Thread	Material	PU
Screw plug M16 × 1.5	99195	M16	Polyamide	10
Screw plug M20 × 1.5	99196	M20	Polyamide	10
Screw plug M25 × 1.5	99197	M25	Polyamide	10

icotek

AT-KS

Adapter grommet for Keystone couplers

KEL-U 24|7 assembled with 1x AT-KS, equipped with a Keystone coupler.

USB-, RJ45 or e.g. HDMI connectors can be plugged in from the front and from the back.

1.13

Type	Order No.	Height × Width × Length [mm]	Material	PU
AT-KS	39952	42 x 41.5 x 19	PA / Elastomer	10

Various application examples

USB, RJ45, HDMI and approx. 70 other Keystone couplers.

Product description

The grommet AT-KS is constructed on the basis of a KT cable grommet. In this elastomer grommet, a polyamide body is integrated. All couplers based on the Keystone system can be simply snapped in.

By using the grommet AT-KS, the split cable entry frame can be used to route pre-terminated cables and at the same time it can also be used as an interface for connectors. This can save additional cut-outs and reduce labour costs.

Advantages & benefits

- By utilising the AT-KS grommet, connectors can be integrated directly into the cable entry frame
- Separate cut-outs for connectors are no longer necessary
- Space-saving solution
- Grommet is suitable for all Keystone couplers
- Snap-in assembly

Specifications

Material	**Grommet: Elastomer**
	Body: Polyamide
Flame class	**UL94-V0, self-extinguishing**
Temperature	**-40°C to +90°C (static)**
Properties	**Halogen free, silicone free**

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1.21 Split cable entry frames
for the QT grommet system

cULus | **IP54** | **UL TYPE 12** in progress | **HL3** EN 45545-2 | **ECOLAB** certified | **RoHS** compliant | **Made in Germany** | **UL-94 V0** | **+140°C -40°C** | **1–15 mm**
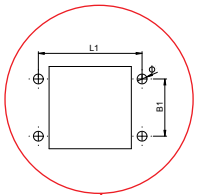
With the new version of the compact, split cable entry system KEL-QUICK icotek released a highly efficient and cost-effective possibility for pass-through and IP54 sealing of cables with or without connectors, conduits and pneumatic hoses.

The cable entry system KEL-QUICK is an outstanding alternative to cable glands. Especially for applications that do not necessarily require standard-compliant strain relief acc. to EN 62444, the KEL-QUICK is the perfect solution.

Slit cable grommets of the QT series are used for routing lines with diameters of 1 – 24 mm within the KEL-QUICK. In addition, there are multi-hole grommets for up to 4 lines per slot and special grommets e.g. for ASI cables.

After equipping the frame with the cables or hoses, the cover lid of the KEL-QUICK is simply snapped onto the frame. A fast and easy assembly is the biggest benefit when using the QUICK series - and when used with the KEL-SNAP frame, mounting without the need of tools is possible.

Cut-outs according to industrial standard dimensions

Warranty on pre-terminated cables remains

High cable density, wide variety

Fast and easy assembly

Split system

Product range

KEL-QUICK

KEL-QUICK-E

IP54

Split cable entry frames
for cable diameters up to 24 mm

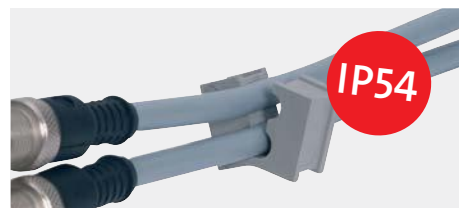KEL-QUICK 24 / KEL-QUICK 16 /
KEL-QUICK 10 / KEL-QUICK-B

60

IP54

Split cable entry frames, single row
for cable diameters up to 15 mm

KEL-QUICK-E5 / KEL-QUICK-E4 /
KEL-QUICK-E3 / KEL-QUICK-E2

61

IP54

Grommets
for cables with/without connectors,
cable diameter range 1 – 24 mm

QT / QT-DT / QT ServiceBox

70 – 73

1.21

icotek

| c**UL**us | IP54 | UL TYPE **12** UL 50E in progress | HL3 EN 45545-2 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany |

KEL-QUICK
Cable entry frames
for quick assembly

Configure online now

IP54

Cover lid is simply snapped onto the frame.

Tool-free mounting with KEL-SNAP frame.

Slit QT grommets

Product description

The KEL-QUICK range is a compact system to route and seal pre-terminated cables as well as conduits or pneumatic hoses utilising split QT grommets. After populating the entry frame with QT grommets and cables, the cover lid is snapped onto the frame without using tools. The KEL-QUICK frames match exactly the cut-out dimensions for 24-, 16- and 10-pin standard industrial connectors. The KEL-QUICK-B matches cut-out dimensions of 36×46 mm. KEL-QUICK frames can either be screw mounted or simply snapped into the KEL-SNAP frame. A flat rubber gasket is included in the shipment.
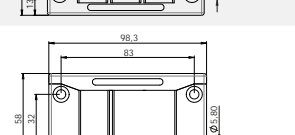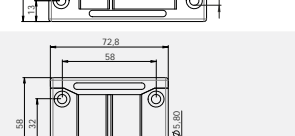
Advantages & benefits

- Fast and easy assembly and when used with the KEL-SNAP frame, mounting without tools possible
- Warranty on pre-terminated cables remains
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Drilling template	**See Page 218 - 219**
Frame depth	**17 mm**

Accessories

QT Cable grommets	66
KEL-SNAP Mounting frames	31
KEL-EMC Cable collectors	148 - 150
KDR Base plates	174 - 187
FP Flange plates	194 - 203
MP Module plates	188 - 189
ST Plugs	53

Description	Type	Order No.	Cut-out [mm]	Grommets	PU
	KEL-QUICK 24|10	42410	36 × 112	10|–	10
NEW	KEL-QUICK 24|7	42412	36 × 112	6|1	10
NEW	KEL-QUICK 24|4	42413	36 × 112	2|2	10
	KEL-QUICK 16|8	42418	36 × 86	8|–	10
NEW	KEL-QUICK 16|5	42425	36 × 86	4|1	10
NEW	KEL-QUICK 16|2	42426	36 × 86	0|2	10
	KEL-QUICK 10|6	42420	36 × 65	6|–	10
NEW	KEL-QUICK 10|3	42427	36 × 65	2|1	10
	KEL-QUICK-B4	42434	36 × 46	4|–	10

1.21

UL us | IP54 | UL TYPE **12** in progress | HL3 EN 45545-2 | UV ISO 4892-2A | ECOLAB certified | RoHS compliant | Made in Germany

KEL-QUICK-E
Cable entry frames for quick assembly

Configure online now

Cover lid is simply snapped onto the frame.

Slit QT grommets

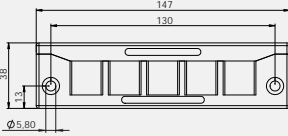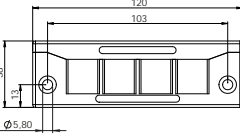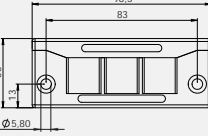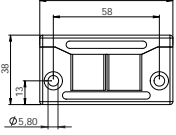**IP54**

1.21

Description	Type	Order No.	Cut-out [mm]	Grommets	PU
147 / 130 / 38 / 13 / Ø5,80	KEL-QUICK-E5	42424	24 × 112	5 QT	10
120 / 103 / 38 / 13 / Ø5,80	KEL-QUICK-E4	42423	24 × 86	4 QT	10
98,3 / 83 / 38 / 13 / Ø5,80	KEL-QUICK-E3	42422	24 × 65	3 QT	10
72,8 / 58 / 38 / 13 / Ø5,80	KEL-QUICK-E2	42421	24 × 43	2 QT	10

Product description

The KEL-QUICK-E range is a compact single row system to route and seal pre-terminated cables as well as conduits or pneumatic hoses utilising split QT grommets. The KEL-QUICK-E version is particularly suited for flat connectors. The small frame is ideal for applications with limited space.

After populating the entry frame with QT grommets and cables, the cover lid is snapped onto the frame without using tools. A flat rubber gasket is included in the shipment.

Advantages & benefits

- Fast and easy assembly by locking the frame without tools
- Warranty on pre-terminated cables remains
- Retrofits, repairs and maintenance can be done much more easily and quickly
- High cable density, wide variety of grommets

Specifications

Material	**Polyamide (PA)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets**
Temperature	**- 40°C to + 140°C (static)**
Properties	**Halogen-free, silicone-free**
Drilling template	**See Page 220 - 221**
Frame depth	**17 mm**

Accessories

QT Cable grommets	66
KEL-EMC Cable collectors	148 - 150
ST Plugs	53

1.22 Split cable glands
for the QT grommet system

IP54	TYPE APPROVED PRODUCT DNV·GL DNVGL.COM/AF	HL3 EN 45545-2	ECOLAB certified	RoHS compliant	Made in Germany	UL-94 V0	+100°C -30°C	1–15 mm

By using split QVT cable glands by icotek cables with or without connectors or complete cable harnesses with diameters from 1 to 15 mm can be quickly routed into enclosures, cabinets or machines and be sealed with IP54 rated ingress protection.

The split system of the QVT cable glands enables quick and easy assembly which is great for retrofitting and maintenance. The cable is placed into the slit grommet which is set into one of the gland halves. Depending on the size of the cable gland one, two or four separate grommets can be

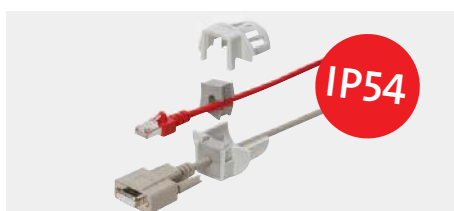installed. The two gland halves can be easily snapped together without the need of tools. The routed lines are securely sealed and held inside the grommets. To mount the cable glands either snap it into the round metric standard cut-out (sizes available from M16 to M50) or screw it with a hexagonal locknut. The mounting method is dependent on the model type.

For metric cut-outs M16 - M50

Warranty on pre-terminated cables remains

Split system

Special locknuts for e.g. D-Sub or PROFIBUS connectors as well as split locknuts available.

Fast and easy assembly

High cable density, wide variety in cable grommets

Product range

QVT   QVT-CLICK

Split cable glands
M16 – M50,
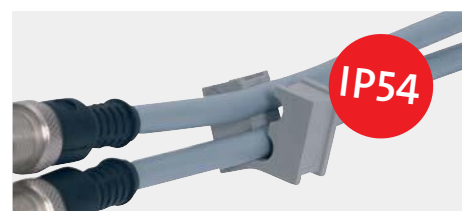for cable diameters up to 15 mm

QVT

64

Split pluggable cable glands
M20 – M40,
for cable diameters up to 15 mm

QVT-CLICK

65

Grommets
for cables with/without connectors,
cable diameter range 1 – 15 mm

QT / QT-DT / QT ServiceBox

70 – 73

icotek®

QVT
Split cable glands

IP54 · DNV·GL · HL3 EN 45545-2 · ECOLAB certified · RoHS compliant · Made in Germany

IP54

Product description

QVT is a circular split frame for quick and easy installation of pre-terminated cables or complete cable harnesses. Because of its extremely compact design, the QVT range is especially suitable for small machines, devices and instruments.

Polyamide locknuts as well as a sealing ring are included in the shipment.

Advantages & benefits

- Compact design
- Routing of pre-terminated cables
- Warranty on pre-terminated cables remains
- Retrofits, repairs and maintenance can be done much more easily and quickly
- Suitable for metric hole sizes
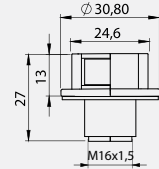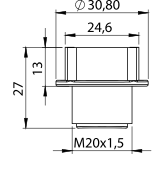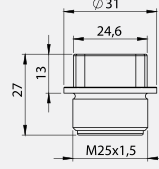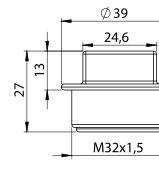- Locknut is included

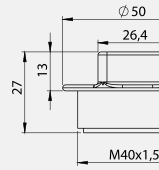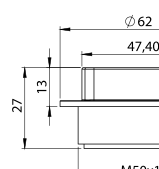## Specifications

Material	Polycarbonate (PC)
Colour	grey (similar RAL 7035)
Flame class	UL94-V0, self-extinguishing
IP rating	IP54, with gasket and correct selection of the cable grommets
Temperature	- 30°C to + 100°C (static)
Properties	Halogen-free, silicone-free
Cut-out dimension	Metric sizes

Accessories

QT Cable grommets	70
KVT-EMC Brackets	151
KGM Locknuts	208 – 209
ST Plugs	53

Type GMT: Split locknut, p. 210

Description	Type	Order No.	Cable Grommets	Thread Thread length	PU
	QVT 16*	45692	1 × QT	M16 × 1.5 Length: 13 mm	10
	QVT 20	45695	1 × QT	M20 × 1.5 Length: 13 mm	10
	QVT 25	45702	1 × QT	M25 × 1.5 Length: 13 mm	10
	QVT 32	45711	1 × QT	M32 × 1.5 Length: 13 mm	10
	QVT 40|2	45715	2 × QT	M40 × 1.5 Length: 13 mm	10
	QVT 50|4	45722	4 × QT	M50 × 1.5 Length: 13 mm	10

* Max. cable diameter of 10 mm

64

QVT-CLICK
Split pluggable cable glands

Configure online now

IP54

1.22

Product description

QVT-CLICK is a circular split frame for quick and easy installation of pre-terminated cables or complete cable harnesses. The QVT-CLICK can be assembled without tools from the front side of the enclosure wall. Because of its extremely compact design, the QVT-CLICK range is especially suitable for small machines, devices and instruments.
A sealing ring is included in the shipment.

The QVT-CLICK Tool for quick and easy mounting.
Order No. 61435 (PU: 1)

Advantages & benefits

- Fast and easy mounting from the front side
- Compact design
- Routing of pre-terminated cables
- Retrofits, repairs and maintenance can be done much more easily and quickly
- Warranty on pre-terminated cables remains
- Fast and easy assembly
- For wall thickness 1 - 2.5 mm, QVT-CLICK 16/ QVT-CLICK 20 for wall thickness 1.5 – 2.5 mm
- Sizes 16 and 20 pluggable and screwable

Specifications

Material	**Polycarbonate (PC)**
Colour	**grey (similar RAL 7035)**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with gasket and correct selection of the cable grommets**
Temperature	**- 30°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out	**Metric cut-outs**

Accessories

QT Cable grommets	70
QVT-CLICK Tool	Order No. 61435
ST Plugs	53

Description	Type	Order No.	Cable Grommets	Cut-out* diameter	Thread Thread length	PU
NEW	QVT Click 16**	45726	1 × QT	16.2 mm	M16 × 1.5 (13 mm)	10
NEW	QVT Click 20**	45728	1 × QT	20.4 mm	M20 × 1.5 (13 mm)	10
	QVT-CLICK 25	45730	1 × QT	25.5 mm	–	10
	QVT-CLICK 32	45732	1 × QT	32.5 mm	–	10
	QVT-CLICK 40|2	45734	2 × QT	40.5 mm	–	10
	QVT-CLICK Tool	61435	Mounting tool		–	1

* Please consider any paint layers or powder coatings!
** pluggable and screwable; locknut is not included in the shipment

1.23 Split cable entry plates
for the QT grommet system

c $\boxed{\text{UL}}$ us	IP54	⌂HL3 EN 45545-2	ECOLAB certified	RoHS compliant	Made in Germany	🔥 UL-94 V0	🌡 +90°C -40°C	⊘ 1–15 mm

KEL-QTA are puggable and split IP54 cable entry plates for wall thicknesses from 1.5 to 4 mm. icotek offers several versions for rectangular standard cut-outs as well as for round metric cut-outs. The QTA system offers a large size variety.

KEL-QTA enable cable routing with or without preassembled connectors. Some types offer a combination of membranes for cable pass-through and the QT grommet system.

Slit cable grommets of the QT series are used for routing pre-connectorised lines with diameters of 1 - 15 mm within the KEL-QTA. In addition, there are multi-hole grommets for up to 4 lines per slot and special grommets e.g. for ASI cables.

For metric cut-outs M20 - M50

Warranty on pre-terminated cables remains

Split system

High cable density, wide variety in cable grommets

Fast and easy assembly

Cut-outs according to industrial standard dimensions

Product range

KEL-QTA 24/10/-B   KEL-QTA 32/50   KEL-QTE 20

Split cable entry plates
pluggable, for cable diameters up to 15 mm

KEL-QTA 24 / KEL-QTA 10 / KEL-QTA-B /
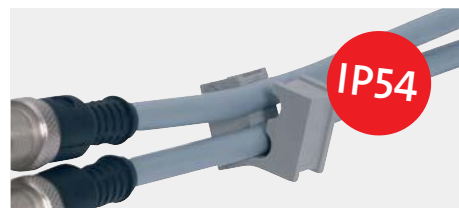KEL-QTA round

68

Split cable entry plates
pluggable, for cable diameters up to 5.2 mm

KEL-QTE

69

Grommets
for cables with/without connectors,
cable diameter range 1 – 15 mm

QT / QT-DT / QT ServiceBox

70 – 73

1.23

icotek

KEL-QTA
Split cable entry plates

IP54

Product description

The KEL-QTA easily routes pre-terminated cables, multi-conductors, hoses or conduits without using any tools for assembly.
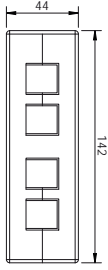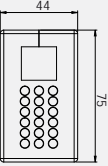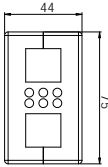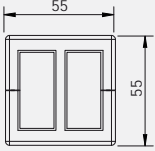
Advantages & benefits

- Quick assembly without tools
- High cable density by using multi-position grommets
- Simple assembly and disassembly in case of change or service
- Routing of cables with and without connectors in a high density
- Suitable for standard industrial connector cut-outs

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54, with correct selection of the cable grommets QT**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**
Type A:	**For wall thickness 1.5 - 2.5 mm**
Type B:	**For wall thickness 2.8 - 4 mm**

Accessories

QT Cable grommets	70
ST-B Plugs	93
FP Flange plates	194 - 203

Description	Type	Order No. Type A	Order No. Type B	Cut-out [mm]	Cables	PU
44 / 142	KEL-QTA 24|2 -DP 18	43642	43643	112 × 36	pre-terminated 2× 1 - 15 mm without connector 16× max. 7 mm 1× max. 12 mm 1× max. 16 mm	10
44 / 142	KEL-QTA 24|4	43644	43645	112 × 36	pre-terminated 4× 1 - 15 mm	10
44 / 75	KEL-QTA 10|1 -DP 18	43655	43658	65 × 36	pre-terminated 1× 1 - 15 mm without connector 18× max. 5 mm	10
44 / 75	KEL-QTA 10|2 -DP 6	43656	43659	65 × 36	pre-terminated 2× 1 - 15 mm without connector 6× max. 5 mm	10
55 / 55	KEL-QTA-B4	43660	-	46 × 46	pre-terminated 4× 1 - 15 mm	10

KEL-QTA | KEL-QTE
Split cable entry plates

KEL-QTE (Patent)

IP54

1.23

Product description

The KEL-QTA easily routes pre-terminated cables, multi-conductors, hoses or conduits without using any tools for assembly.

Advantages & benefits

- Fast and easy assembly without tools
- Increased cable density by using multi-position grommets
- Simple assembly and disassembly in case of change or service
- Routing of cables with and without connectors in a high density

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating (QTA)	**IP54, with correct selection of the cable grommets (QT single)**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**
Cut-out dimension	**Metric sizes**
Type A:	**For wall thickness 1.5 - 2.5 mm**
Type B:	**For wall thickness 2.8 - 4 mm**

Accessories

QT Cable grommets	70
ST Plugs	53

Description	Type	Order No. Type A	Order No. Type B	Cut-out [mm]	Cables pre-terminated	Cables non-pre-term.	PU
Ø 37,5; 12; 5	KEL-QTA 32	43632	43636	ø 32	1× 1 - 15 mm	-	10
Ø 59; 12; 5	KEL-QTA 50	43622	43626	ø 50	2× 1 - 15 mm	-	10
Ø 24; 6,4; 2,3	KEL-QTE 20|2.5	43412	-	ø 20	1× 2.6 - 3.2 mm	1× max. 5.2 mm	10
Ø 24; 6,4; 2,3	KEL-QTE 20|3	43413	-	ø 20	1× 3.1 - 3.8 mm	1× max. 5.2 mm	10
Ø 24; 6,4; 2,3	KEL-QTE 20|4	43414	-	ø 20	1× 3.8 - 4.8 mm	1× max. 5.2 mm	10
Ø 24; 6,4; 2,3	KEL-QTE 20|5	43415	-	ø 20	1× 4.7 - 5.6 mm	1× max. 5.2 mm	10

icotek

QT
Cable grommets

1.2

IP54

19

20

Product description

The QT range supports cable diameters from
1 to 15 mm. They are used with cable entry frames
and cable glands of product groups 1.21, 1.22 & 1.23.

Large QT cable grommets are expected to be available
from spring 2020.

Assembly note

When installing multiple grommets make sure
the flat side of the grommet faces the other grom-
met. This ensures a secure seal.

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

Accessories

ST Plugs   53

Description		Type	Order No.	Clamping range	PU
QT small					
QTB	QTB	QTB	42540	Blank grommet	10
QT	QT	QT 1	42501	1 - 2 mm	10
		QT 2	42502	2 - 3 mm	10
		QT 3	42503	3 - 4 mm	10
		QT 4	42504	4 - 5 mm	10
		QT 5	42505	5 - 6 mm	10
		QT 6	42506	6 - 7 mm	10
		QT 7	42507	7 - 8 mm	10
		QT 8	42508	8 - 9 mm	10
		QT 9	42509	9 - 10 mm	10
		QT 10	42510	10 - 11 mm	10
		QT 11	42511	11 - 12 mm	10
		QT 12	42512	12 - 13 mm	10
		QT 13	42513	13 - 14 mm	10
		QT 14	42514	14 - 15 mm	10

QT grommet in combination with QVT-CLICK

IP54
HL3 EN 45545-2
UV ISO 4892-2A
ECOLAB certified
RoHS compliant
Made in Germany

QT
Cable grommets

19

20

IP54

1.2

Product description

The QT range supports cable diameters from 1 to 15 mm. They are used with cable entry frames and cable glands of product groups 1.21, 1.22 & 1.23.

Assembly note

When installing the grommets, the flat side should be facing the middle of the frame. This allows the flat sides of adjacent grommets to match up and provide a secure seal.

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

Accessories

ST Plugs   53

Description		Type	Order No. grey	Clamping range	PU
QT-ASI		QT-ASI 1	42573	1× ASI-cable	10
		QT-ASI 2	42574	2× ASI-cable	10
QT tele		QT tele	42575	Telephone cable	10
QT 2|x		QT 2|3	42566	2× ø 3 mm	10
		QT 2|4	42568	2× ø 4 mm	10
		QT 2|5	42570	2× ø 5 mm	10
		QT 2|5.5	42571	2× ø 5.5 mm	10
		QT 2|6	42572	2× ø 6 mm	10
		QT 2|6.5	42576	2× ø 6.5 mm	10
		QT 2|7	42578	2× ø 7 mm	10
QT 4|x		QT 4|3	42580	4× ø 3 mm	10
		QT 4|4	42582	4× ø 4 mm	10
		QT 4|4.5	42583	4× ø 4.5 mm	10
		QT 4|5	42584	4× ø 5 mm	10
		QT 4|5.5	42585	4× ø 5.5 mm	10
		QT 4|6	42586	4× ø 6 mm	10

icotek

QT-DT
QT-DT grommets
for QUICK system

1.2

19

20

Product description

The new QT-DT membrane cable grommet enables the routing of cables without connectors. Using the QT-DT grommet considerably increases the cable packing density and decreases the space needed. This new grommet can be used in the KEL-QUICK cable entry frames as well as in the KEL-QTA cable entry plates. Therefore, it is possible to insert cables with and without connectors into one cable entry system.

Advantages

- Combination of pre-assembled and non-assembled cables in one cable entry product
- Very high packing density
- Considerable space and cost savings
- Pre-assembly of individual assemblies possible

Specifications

Material	**Elastomer**
Flame class	**UL94-V0, self-extinguishing**
IP rating	**IP54**
Temperature	**- 40°C to + 100°C (static)**
Properties	**Halogen-free, silicone-free**

Accessories

ST Plugs   53

	Description	Type	Order No. grey	Clamping range	PU
NEW		QT-DT 1	42550	4x max. 6.5 mm	10
NEW		QT-DT 2	42551	2x max. 3.5 mm 2x max. 6.5 mm	10
NEW		QT-DT 3	42552	9x max. 3.5 mm	10

QT ServiceBox
Service box for cable grommets

Product description

Convenient – everything available right away!

The QT ServiceBox is perfect for installations and service calls. It ensures your QT grommets are readily available.

Order No. 88005

Content*

Cable grommets:
210 QT for cables 1 - 15 mm
10 QTB blank grommets

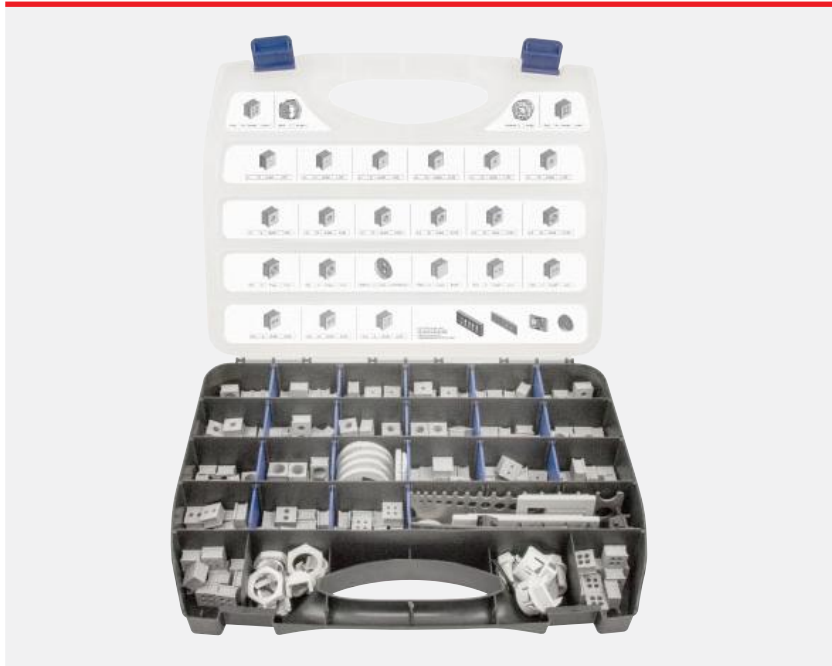**Cable entry components:**
5 KEL-QTA 50 A cable entry plates
1 KEL-QTA 32 A cable entry plate
1 KEL-QTA 24|2-DP 18 A cable entry plate
1 KEL-QTA 10|1-DP 18 A cable entry plate
1 KEL-QUICK 24|10 cable entry frame
1 QVT 25 split cable gland
1 QVT-CLICK 32 split cable gland

Accessories:
1 Cable template

* Subject to alterations

KMS
Cable template

The correct size of the QT grommets can easily be determined by using the cable template

■ Determining the diameter of the cable using the cable template

■ Selecting the QT grommets according to the data on the cable template

Cable templates can also be ordered separately. **Order-No. 39800**

KEL-BES
Brush plate for cable pass-through

Suitable for control panel construction ...

... as well as for energy and building technology.

1.3

Product description

Brush plates KEL-BES for routing cables into server racks, control panels and electrical enclosures. KEL-BES is also an ideal solution for entry and exit of cables that are routed inside raised floors, e.g. in computer centres. The brush plates can either be mounted via screws or via expanding rivets.

The KEL-BES plates match exactly the cut-out dimensions for 10-, 16- or 24-pin standard industrial connectors.

Advantages & benefits

- Fast and easy assembly (optional without screws)
- Versatile utilisation
- Allows reduced airflow while filtering out dust, hair and larger particulate matter
- Visual screening
- Protects cables against wear due to sharp edges of the cut-out

Specifications

Material	**Frame, rectangular: Polyamide (PA) (Flame class UL94-V0) Brushes: Polyamide (PA) Brush profile: sheet steel, zinc plated**
Temperature	**- 20°C to + 90°C**
Properties	**Halogen-free, silicone-free**
Frame depth	**10 mm**

Accessories

KEL-EMC-PF Cable collectors   149

Description	Type	Order No.	Cut-out	PU
	KEL-BES 24	51515	36 x 112 mm	10
	KEL-BES 16	51510	36 x 86 mm	10
	KEL-BES 10	51505	36 x 65 mm	10
	Expanding rivets	99153	For wall thickness 1-4 mm	100

KEL-BES-S
Split brush plate for cable pass-through

Screw mounting or mounting via expanding rivets possible.

Round version with M50 thread for locknut or snap-in mounting.

Description	Type	Order No.	Cut-out	PU
	KEL-BES-S 24	51522	36 x 112 mm	10
	KEL-BES-S 24 with expanding rivets	51522.002	36 x 112 mm	10
	KEL-BES-S 16	51521	36 x 86 mm	10
	KEL-BES-S 16 with expanding rivets	51521.002	36 x 86 mm	10
	KEL-BES-S 10	51520	36 x 65 mm	10
	KEL-BES-S 10 with expanding rivets	51520.002	36 x 65 mm	10
	Expanding rivets	99153	For wall thickness 1-4 mm	100
	KEL-BES-S 50	51540	M50 x 1.5 Snap-in function for wall thickness 1 - 2.5 mm	10
	KEL-BES-S 32	51538	M32 x 1.5 Snap-in function for wall thickness 1 - 2.5 mm	10

Product description

Split brush plates KEL-BES-S for routing cables into server racks, control panels and electrical enclosures. The brush plates can either be mounted via screws or via expanding rivets. Due to the split frame the KEL-BES-S can also be subsequently installed around the routed cables. The KEL-BES-S frames match exactly the cut-out dimensions for 10-, 16- or 24-pin standard industrial connectors.

For round metric cut-outs M32/M50 icotek offers the split KEL-BES-S 32/50. It can be either directly snapped into the cut-out or screwed with a locknut.

Advantages & benefits

- Fast and easy assembly (optional without screws)
- Subsequent assembly possible
- Versatile utilisation
- Allows reduced airflow while filtering out dust, hair and larger particulate matter
- Visual screening
- Protects cables against wear due to sharp edges of the cut-out

Specifications

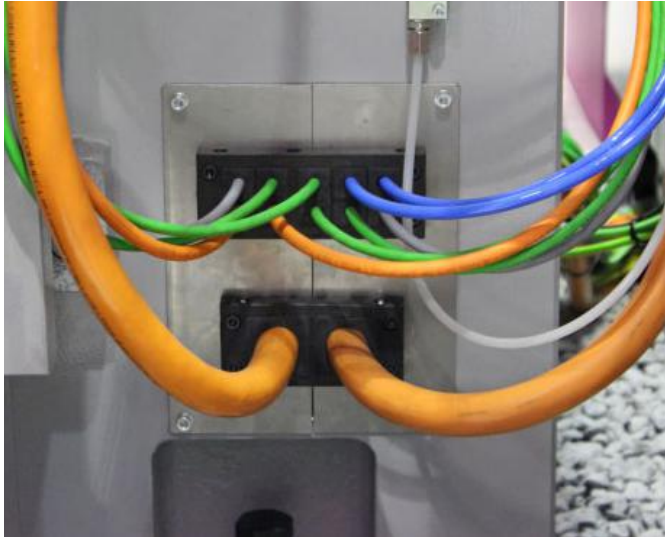|	
Material	Frame, rectangular: Polyamide (PA) Frame, round: Polycarbonate (PC) (Flame class UL94-V0) Brushes: Polyamide (PA) Brush profile: sheet steel, zinc plated
Temperature	- 20°C to + 90°C
Properties	Halogen-free, silicone-free
Frame depth	10 mm

Accessories

KEL-EMC-PF Cable collectors   149

icotek

Typical applications
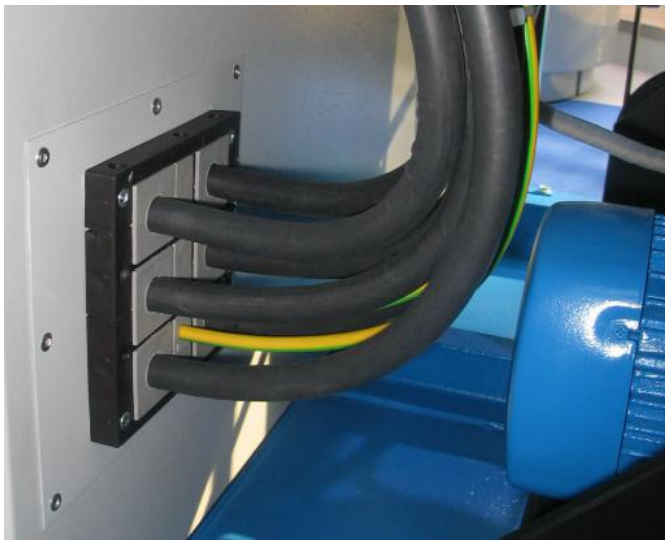### Cable entry systems for pre-terminated cables

KEL-U 24|10 - Page 8 / **KEL-U 16|2** - Page 10

Routing of 12 cables with various diamters (some of them assembled with connectors) into the body of a grinding machine.
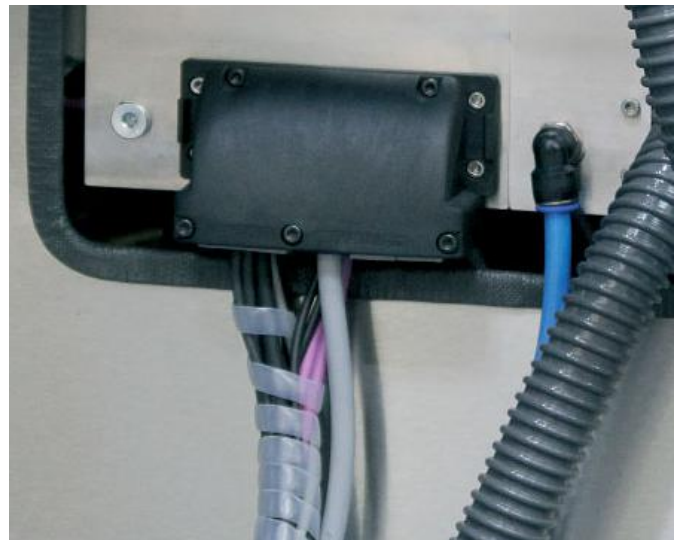

KEL 16|8 - Page 10

Routing of several pre-terminated lines into the electrical enclosure of a tension measuring machine.

KEL 24|12-2MT - Page 24
Routing of 6 large cables up to 35 mm with one cable entry frame.

KEL-FG A10 - Page 28

Used in combination with drag chains to provide strain relief and compact, high density cable entry into an integrated switch cabinet.

KEL-JUMBO 2 - Page 36 / **KEL 24|x** - Page 18

Routing of conduits and large cables between vehicle body and chassis

KVT 50-W90 - Page 46

Low profile 90 degree routing of a terminated cable
from a control panel into the machine

KEL-QUICK-E4 - Page 61

Routing of cables with connectors into a control panel / IPC

KEL-QUICK 24|10 - Page 60 **/ KEL-SNAP 24 -** Page 31

Routing of corrugated conduits into an external enclosure of a
construction machine. Tool-free mounting/unmounting with snap frame