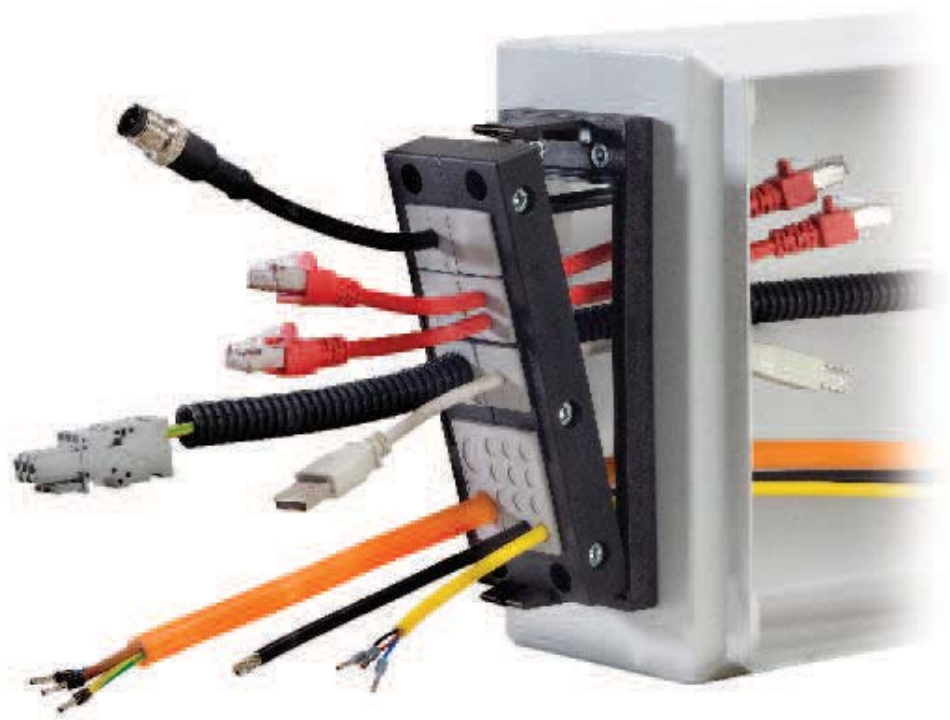


icotek®

# Cable Entry Systems EMC Solutions



innovative  
creative  
technology

## Product program

A company of the icotek group



Customer requests and our constant involvement in ever changing markets is motivation for icotek to continuously develop new and innovative products.

Our product offering will continue to grow in an effort to meet the needs of our customers.

## Ideas move the world ...

Can't find the product that meets the demands of your application? Contact us and we will be more than happy to discuss a customized solution for you!

Our experienced managers and qualified personnel are in constant pursuit of customer satisfaction.

Trust our innovation.

Your comments and suggestions are important to us. We look forward to hearing from you.

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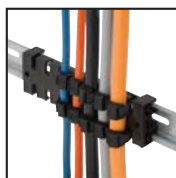


**Cable entry systems**  
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Product group 3

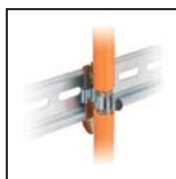


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## Appendix

Technical data and comments

### Technical information



#### At a glance ...

Technical data and drilling templates at a glance.

IP rating according to the DIN EN 60529 and flammability classification according to the UL 94.



# Appendix

Technical data and comments

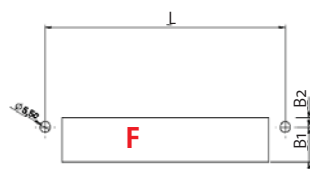
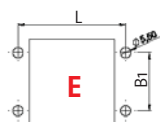
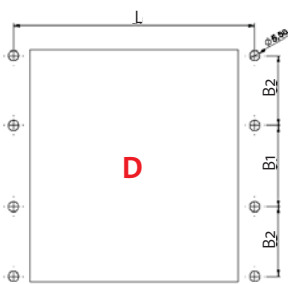
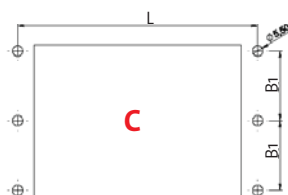
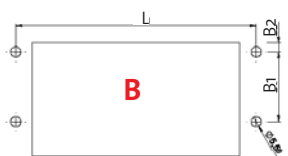
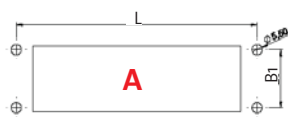
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# Technical data

## Drilling templates



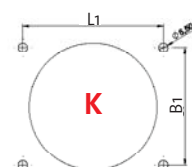
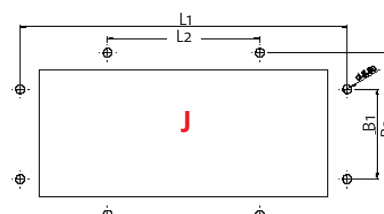
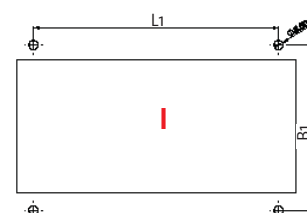
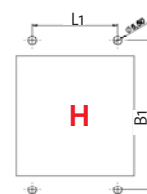
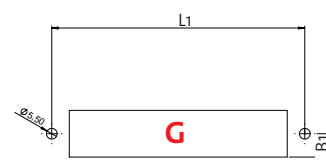
Type	Page	Drill. templ.	Dimensions [mm]			Cut-out h x l [mm]
			L	B1	B2	
KEL 24   x KEL-FG A KEL-QUICK 24 KEL-DPZ 24   x	6 14 36 44	A	130	32	-	36 x 112
KEL-SNAP 24	17	A	130	32	-	max. 46 x 112
KEL 16   x KEL-QUICK 16	7 36	A	103	32	-	36 x 86
KEL-SNAP 16	17	A	103	32	-	max. 46 x 86
KEL 10   x KEL-SNAP 10	8 17	A	83	32	-	36 x 65
KEL 24   x - E	11	B	130	38	5	62 x 112
KEL 24   x - MT	12	C	130	38	-	82 x 112
KEL 24   x - 2MT	13	D	130	44	38	126 x 112
KEL-B	9	E	58	32	-	46 x 46
KEL-SNAP B KEL-QUICK B	17 36	E	56	32	-	46 x 38
KEL-FG B	15	E	62.5	32	-	46 x 36
KEL-E   x KEL-FL   x	10 30	F	KEL-E2: 58 KEL-E3: 83 KEL-E4: 103 KEL-E5: 130	19	5	KEL-E2: 43 x 24 KEL-E3: 65 x 24 KEL-E4: 86 x 24 KEL-E5: 112 x 24



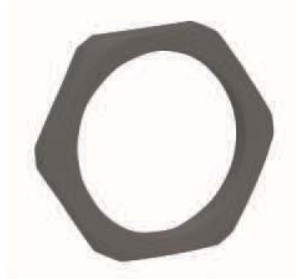
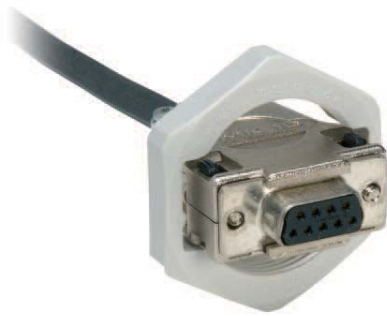
# Technical data

## Drilling templates

Type	Page	Drill. templ.	Dimensions [mm]				Cut-out h x l [mm]
			L1	L2	B1	B2	
KEL - DPZ - E	47	G	130	-	12	-	112 x 24
KEL-JUMBO 1	34	H	56,5	-	100,5	-	78 x 80,5
KEL-JUMBO 2	34	I	147,5	-	100,5	-	168 x 80,5
KEL 183	32	J	204	95	56	102	180 x 80
KEL-JUMBO flex	54	K	83	-	70	-	∅ 75,5
KEL-ULTRA flex	55	L	∅ 157	-	-	-	∅ 140



# KGM Locknuts



Type KGM: Standard nut, plastic



Type KGM: SUB-D9, PB, SUB-D25

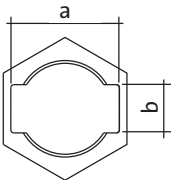


Type GMT: Split locknut

## Product description

Hexagonal nut with metric threads for attaching components together.

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



## Specification

Material	PA Polyamid/ PC Polycarbonate/ brass (see table)
Flame class	UL-94 Vo, self-extinguishing
Temperature Properties	- 30°C to + 120°C halogen-free, silicone-free

## Accessories

KVT, KVT-SNAP, KVT-W90	Page 18   21
QVT	Page 37
KEL-DPZ	Page 48   49
KEL-DPF	Page 53

Thread	Type	Order No.	Material	Height [mm]	Wrench size	Diagonal [mm]	Cut-out axb[mm]	PU
--------	------	-----------	----------	-------------	-------------	---------------	-----------------	----

### Type KGM: Standard nut, plastic

M25 x 1.5	KGM 25	52274	PA, grey	7.0	SW 32	36	-	10
M25 x 1.5	KGM 25	52284	PA, black	7.0	SW 32	36	-	10
M32 x 1.5	KGM 32	52275	PA, grey	7.0	SW 41	46	-	10
M32 x 1.5	KGM 32	52285	PA, black	7.0	SW 41	46	-	10
M40 x 1.5	KGM 40	52276	PA, grey	7.0	SW 50	56	-	10
M40 x 1.5	KGM 40	52286	PA, black	7.0	SW 50	56	-	10
M50 x 1.5	KGM 50	52277	PA, grey	8.6	SW 60	66	-	10
M50 x 1.5	KGM 50	52287	PA, black	8.6	SW 60	66	-	10
M63 x 1.5	KGM 63	52278	PA, grey	8.6	SW 75	86	-	5
M63 x 1.5	KGM 63	52288	PA, black	8.6	SW 75	83	-	5
M63 x 1.5	GM 63	56152	brass	5.5	SW 70	78	-	5

### Type KGM: PB, SUB-D9, SUB-D25

M32 x 1.5	KGM-SUB-D9	45105	PA, grey	7.0	SW 41	36	35 x 16	10
M40 x 1.5	KGM - PB	45107	PA, grey	8.0	SW 50	55	43 x 17	10
M50 x 1.5	KGM-SUB-D25	45108	PA, grey	8.0	SW 60	66	55 x 16	10

### Type GMT: Split locknut

M25 x 1.5	GMT 25	31100	PA, black	9.0	SW 32	35	-	5
M32 x 1.5	GMT 32	31120	PA, black	12.0	SW 40	44	-	5
M50 x 1.5	GMT 50	31140	PA, black	15.0	SW 63	69	-	5

## Appendix Certificates

**ISO 9001:2008**



**icotek GmbH**

Bischof-von-Lipp-Str. 1 | D-73569 Eschach

Certificate ISO 9001:2008

**Von UL gelistet:**



**icotek GmbH**

Bischof-von-Lipp-Str. 1 | D-73569 Eschach

UL E 336024

**NF F 16-101**

**icotek GmbH**

Bischof-von-Lipp-Str. 1 | D-73569 Eschach

NF F 16-101



## Appendix

### Flammability classification according UL 94

#### Flame class UL 94 - HB

Applying the horizontal burning test the material burns slowly. For parts with a thickness up to 3 mm the burning speed must not faster than 3 inch/min and for parts with a thickness over 3 mm the burning speed must not faster than 1,5 inch/mm.

Materials which burn faster are not UL certified.

#### Flame class UL 94 - V2

Applying the vertical burning test, the material must extinguish itself on average past 25 seconds or less, but maximal past 30 seconds is also allowed. The material may drop and cotton wool placed under the probe may inflame. The material must not longer glow than 60 seconds.

#### Flame class UL 94 - V1

Applying the vertical burning test, the material must extinguish itself on average past 25 seconds or less, but maximal past 30 seconds is also allowed. The material may drop and cotton wool placed under the probe may inflame. The material must not longer glow than 30 seconds.

#### Flame class UL 94 - V0

Applying the vertical burning test, the material must extinguish itself on average past 5 seconds or less, but maximal past 10 seconds is also allowed. The material may drop down, but cotton wool placed under the probe must not inflame. The material must not longer glow than 30 seconds.



# Appendix

## Sealing rates according DIN EN 60529

The protection class is labelled by a letter-figure combination consisting of two letters "IP" and a figure of two digits (e.g. IP 54),

### Degree of protection for contact and solid protection

First code digit	Description	Description of scope of protection
0	Not protected	No protection of persons against direct contact with active or moveable parts. No protection against the penetration of solid foreign bodies
1	Protected against large solids	Protection against accidental large-area contact of active and internal moveable parts, e.g. by hand, but no protection against intentional access to these parts. Protection against the penetration of solid foreign bodies with a diameter greater than 50 mm
2	Protected against middle solids	Protection against contact with active or internal moveable parts. Protection against the penetration of solid foreign bodies with a diameter greater than 2,5 mm
3	Protected against small solids	Protection against contact with active or internal moveable parts under voltage with tools, wires etc. of a thickness greater than 2,5 mm. Protection against the penetration of solid foreign bodies with a diameter greater than 2,5 mm
4	Protected against grainy solids	Protection against contact with active or internal moveable parts under voltage with tools, wires etc. of a thickness greater than 1 mm
5	Dust-protected	Complete protection against contact with standing or internal moveable parts under voltage, protection against dangerous dust deposits. Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety
6	Dust-tight	Protection against contact with standing or internal moveable parts under voltage. Protection against penetration of dust

### Degree of protection for water protection

Second code digit	Description	Description of scope of protection
0	Not protected	No special protection
1	Protected against vertically falling water	Vertically falling drops shall have no harmful effects
2	Protected against vertically falling water drops enclosure is tilted up to 15°	Vertically falling drops have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.
3	Protected against spraying water	Water sprayed at an angle up to 60° degrees on either side of the vertical shall have no harmful effects
4	Protected against splashing water	Water splashed against the enclosure from any direction shall have no harmful effects
5	Protected against water jets	Water projected in jets against the enclosure from any direction shall have no harmful effects
6	Protected against floods	Water projected in powerful jets against the enclosure from any direction shall have no harmful effects.
7	Protected against the effects of temporary immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed 1 meter in water under standardized conditions of pressure and time
8	Protected against the effects of continuous immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water under conditions which shall be agreed between manufacturer and the user, but are more severe than for number 7

## Appendix

### General reference notes

We provide all the information on chemical and physical properties of our products and technical advice to the best of knowledge.

They do not release the customer of own examinations and tests to determine the practical suitability of the products for the usage intended.

Application, use and installation of the products is the customers responsibility. Legal and regulatory provisions and any rights to third parties have to be observed.

Moreover our general terms and conditions, which can be requested from us, apply.

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