

Bemak



Pushing Performance

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HARTING News 2018

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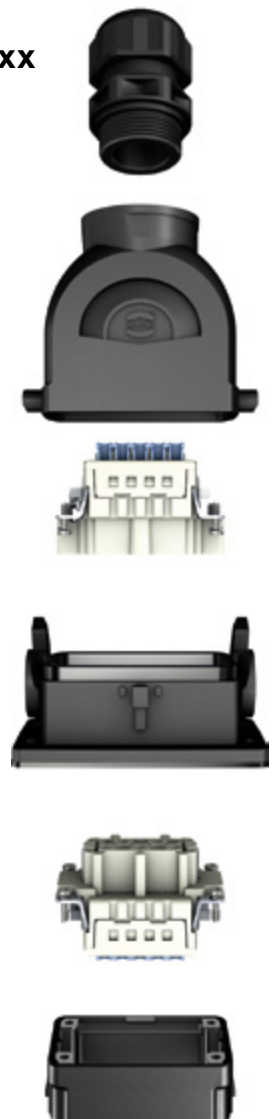
Han-Eco® Modular 19 41 xxx xxxx



Han-Eco® A 19 46 xxx xxxx



Han-Eco® B 19 43 xxx xxxx



The Han-Eco® B series is a new series of hoods and housings in the Han-Eco® portfolio that comes in sizes 6B – 24B. This series is completely compatible with the Han® B industrial standard. Standard inserts and modules in conjunction with the hinged frames from the Han-Modular® portfolio may be used.

Highlights Han-Eco® B



Backwards compatibility with the Han® B metal hoods and housings



Rear mounting for the inserts enables faster installation



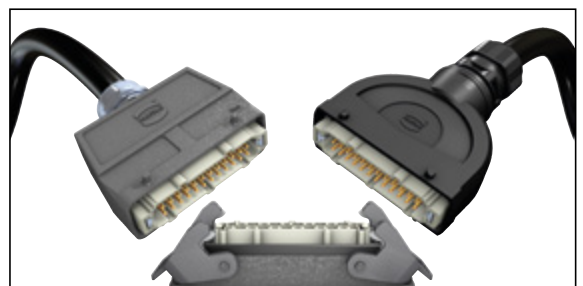
Minimal weight with excellent mechanical robustness



Outdoor variant is available for more extreme environmental conditions



"Click and mate" installation ensures secure assembly



Features

- Suitable for standard inserts and modules from the Han-Mod-ular® portfolio
- With integrated cable gland
- Optional PE contact module to hold the protective ground conductor
- Suitable for applications according to protection class II
- Minimal weight with excellent mechanical robustness

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP65
Material (hood/housing)	Polyamide, Fibre-glass reinforced
Colour (hood/housing)	RAL 9005 (jet black)
Material (seal)	NBR
Colour (seal)	RAL 9005 (jet black)
Material (locking)	Polyamide, Fibre-glass reinforced
Colour (locking)	RAL 9005 (jet black)
Flammability acc. to UL 94	V-0
Flammability acc. to UL 94 (locking levers)	V-0

Specifications and approvals

IEC 61984
EN 45545-2
R22: HL1, HL2, HL3
R23: HL1, HL2, HL3
R24: HL1, HL2, HL3

Details

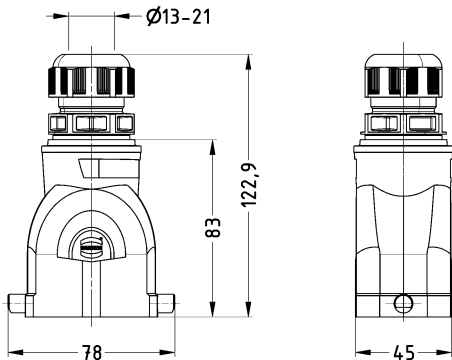
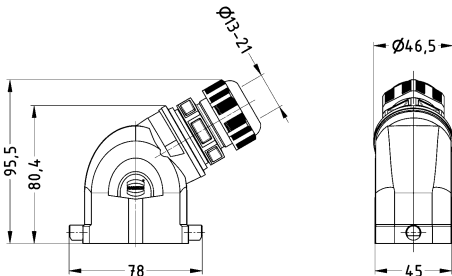
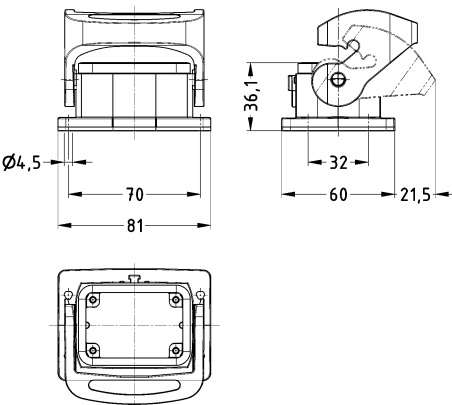
Mating compatible with all metal hoods and housings of the series Han® B.

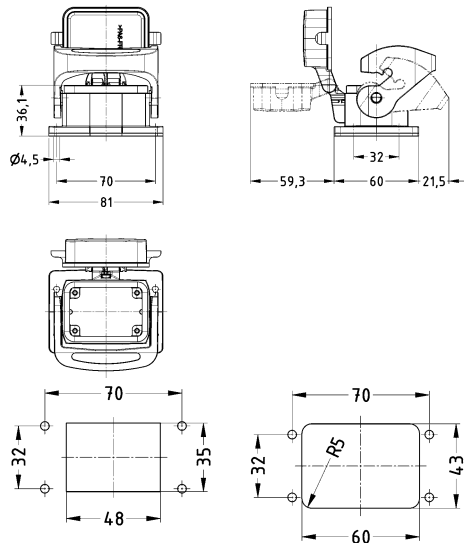
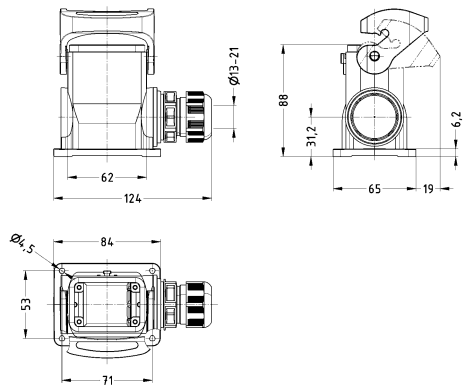
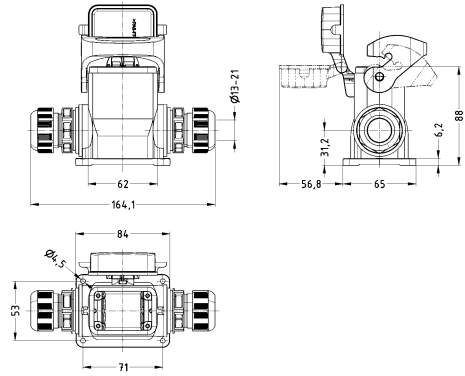
As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

Available as from July 2018

Single locking lever

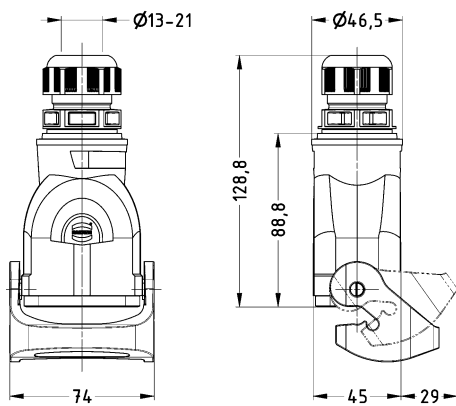
Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 106 0445 19 43 106 0446 19 43 106 0447	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 106 0545 19 43 106 0546 19 43 106 0547	
Han-Eco® B, Bulkhead mounted housings 			19 43 006 0340	

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 006 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 106 0250 19 43 106 0251 19 43 106 0252 19 43 106 0290 19 43 106 0291 19 43 106 0292	
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 106 0255 19 43 106 0256 19 43 106 0257 19 43 106 0295 19 43 106 0296 19 43 106 0297	

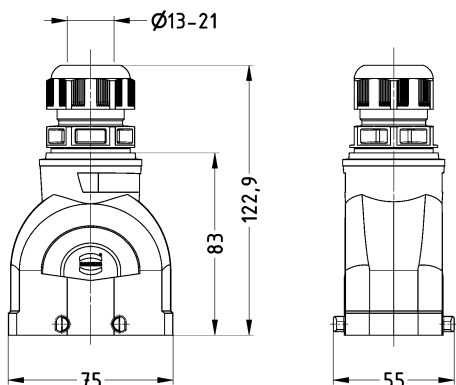
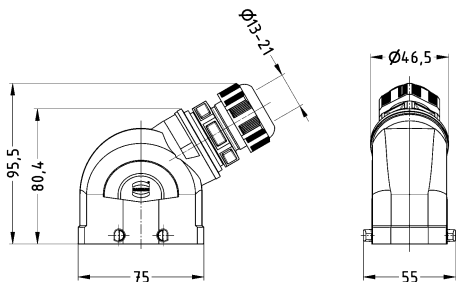
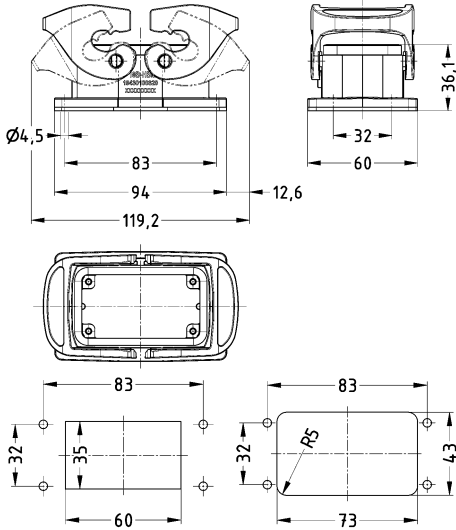
Han

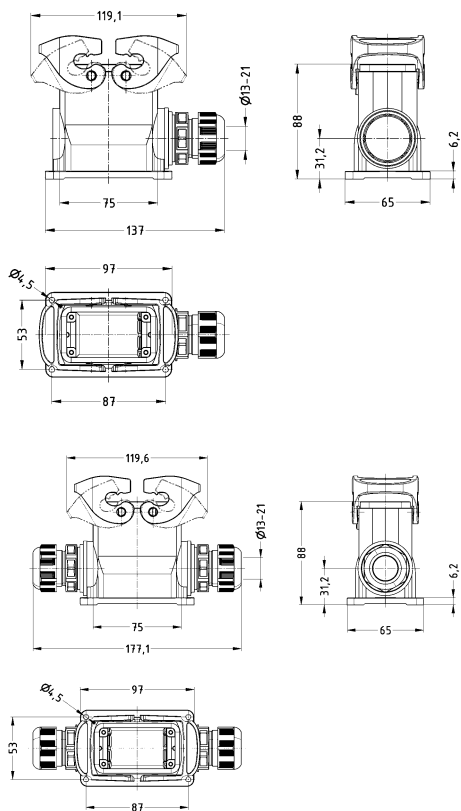
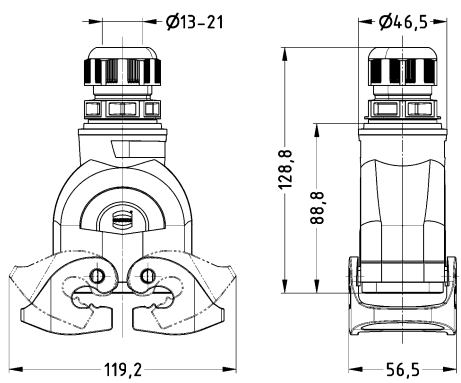
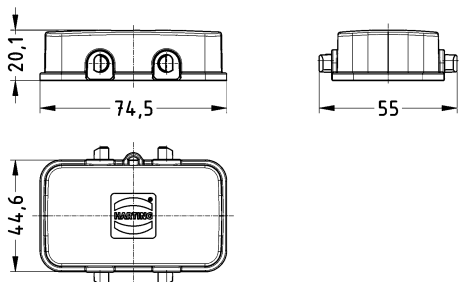
Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 106 0755 19 43 106 0756 19 43 106 0757	
Han-Eco® B, Protection cover, for hoods Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings Han-Eco® B, Protection cover, for cable to cable housing			19 43 006 5442 19 43 006 5410 19 43 006 5446	

Double locking lever

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0425 19 43 110 0426 19 43 110 0427	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0525 19 43 110 0526 19 43 110 0527	
Han-Eco® B, Bulkhead mounted housings 			19 43 010 0320	 Panel cut out Front mounting / Rear mounting

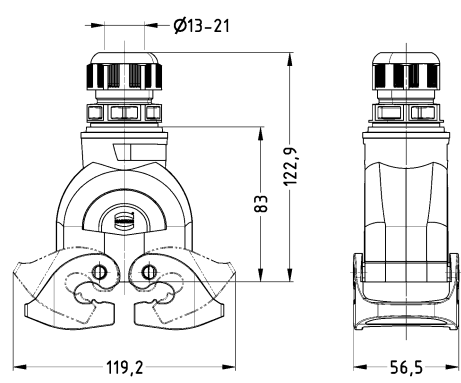
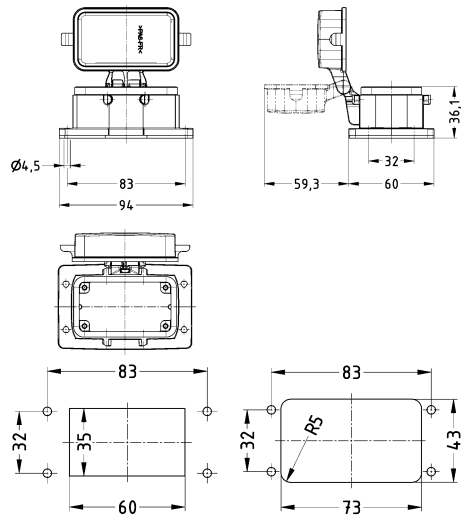
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 1x M40 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 16 ... 28 6 ... 13 9 ... 17 13 ... 21	19 43 110 0230 19 43 110 0231 19 43 110 0232 19 43 110 0233 19 43 110 0270 19 43 110 0271 19 43 110 0272	
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0735 19 43 110 0736 19 43 110 0737	
Han-Eco® B, Protection cover, for hoods Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings 			19 43 010 5422 19 43 010 5425	

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Protection cover, for cable to cable housing			19 43 010 5426	

Han

Double locking lever (on the hood)

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry	1x M32	13 ... 21	19 43 110 0437	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M32	13 ... 21	19 43 110 0537	
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover			19 43 010 0322	 Panel cut out Front mounting / Rear mounting

Han-Eco® B, Hoods, With integrated cable gland, Top entry



Han-Eco® B, Hoods, With integrated cable gland, Side entry

1x M32

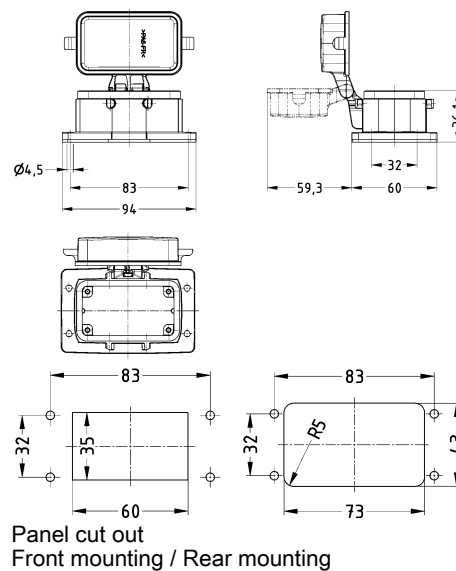
13 ... 21

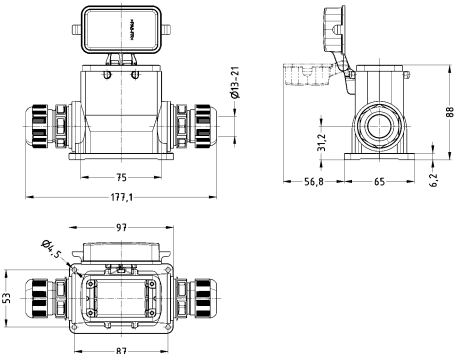
19 43 110 0537

Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover



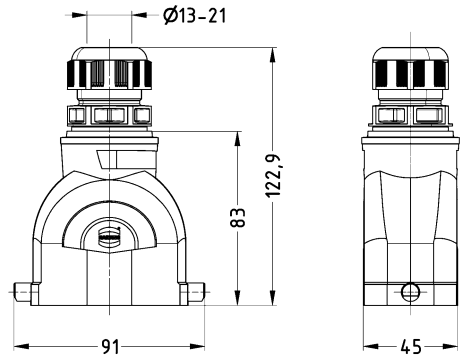
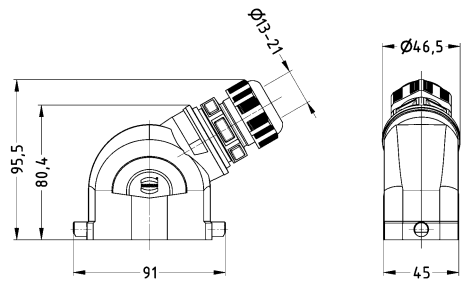
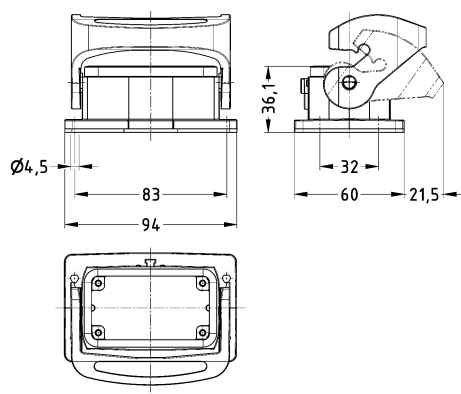
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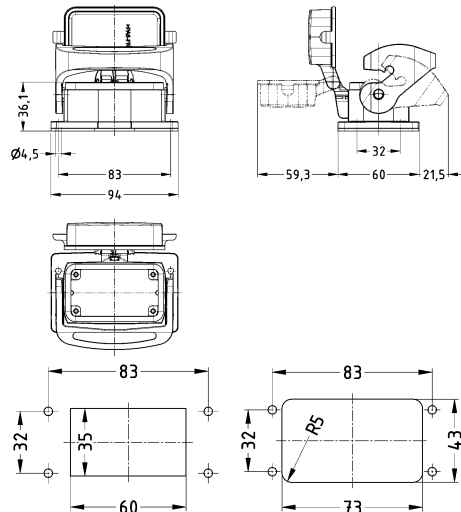
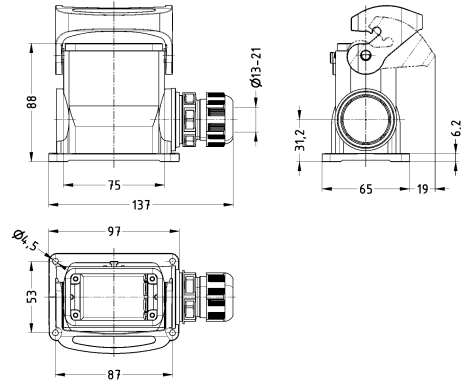
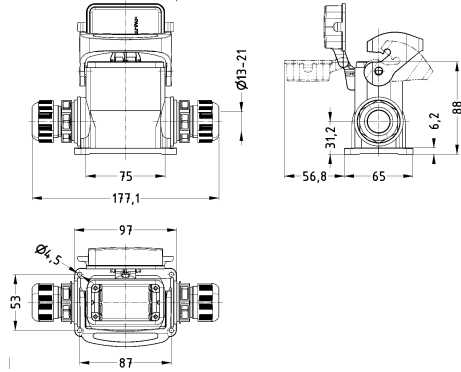


Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M32 2x M32	13 ... 21 13 ... 21	19 43 110 0227 19 43 110 0267	

Single locking lever

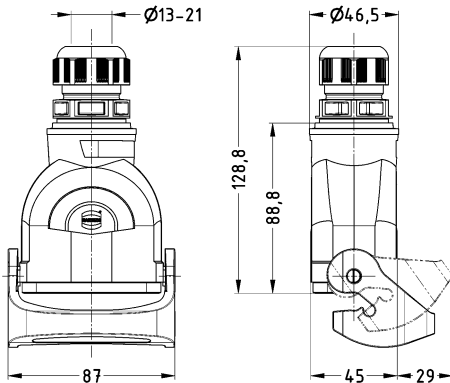
Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0445 19 43 110 0446 19 43 110 0447	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0545 19 43 110 0546 19 43 110 0547	
Han-Eco® B, Bulkhead mounted housings 			19 43 010 0340	

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 010 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 110 0250 19 43 110 0251 19 43 110 0252 19 43 110 0290 19 43 110 0291 19 43 110 0292	
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 110 0255 19 43 110 0256 19 43 110 0257 19 43 110 0295 19 43 110 0296 19 43 110 0297	

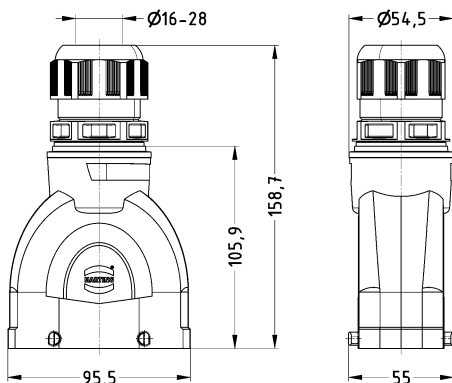
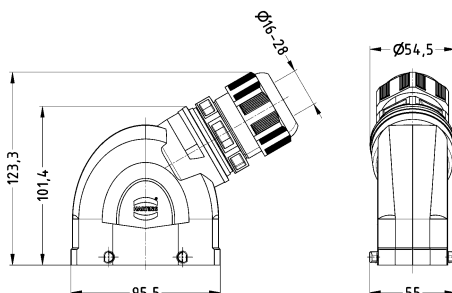
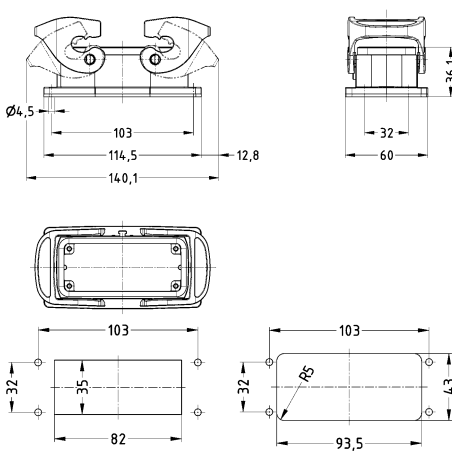
Han

Han

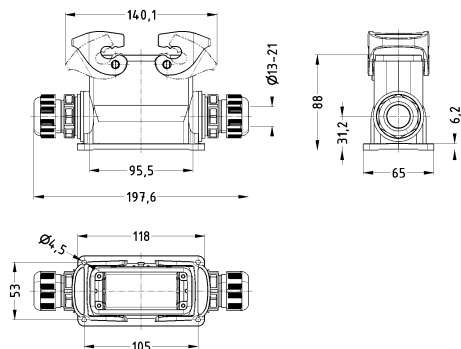
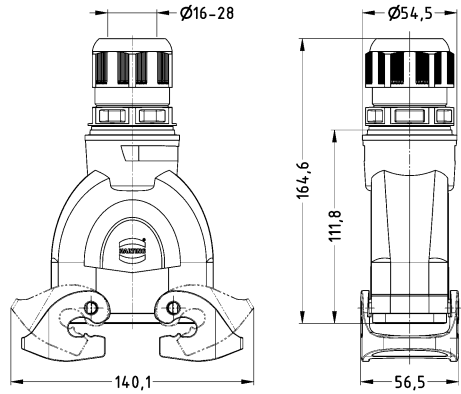
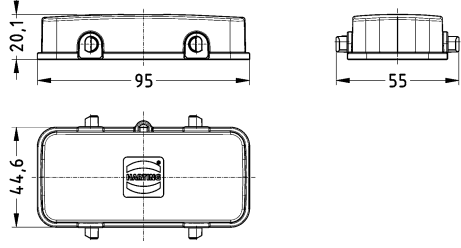
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0755 19 43 110 0756 19 43 110 0757	
Han-Eco® B, Protection cover, for hoods			19 43 010 5442	
Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings			19 43 010 5410	
Han-Eco® B, Protection cover, for cable to cable housing			19 43 010 5446	

Double locking lever

Han

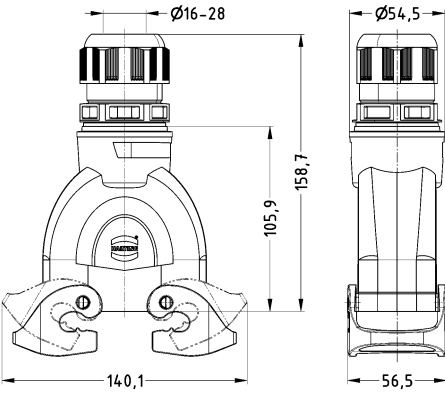
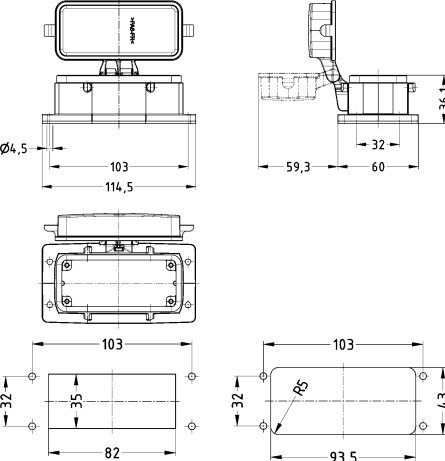
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0426 19 43 116 0427 19 43 116 0428	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0526 19 43 116 0527 19 43 116 0528	
Han-Eco® B, Bulkhead mounted housings 			19 43 016 0320	 Panel cut out Front mounting / Rear mounting

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 116 0231 19 43 116 0232 19 43 116 0233 19 43 116 0271 19 43 116 0272 19 43 116 0273	
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0736 19 43 116 0737 19 43 116 0738	
Han-Eco® B, Protection cover, for hoods Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings 			19 43 016 5422 19 43 016 5425	
Han-Eco® B, Protection cover, for cable to cable housing			19 43 016 5426	

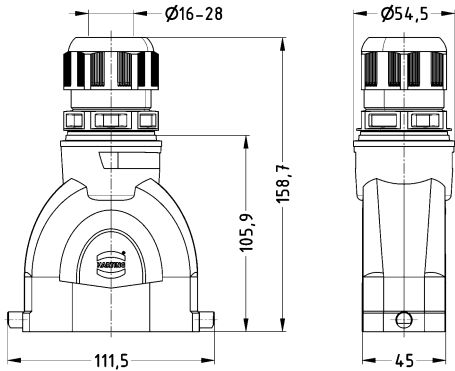
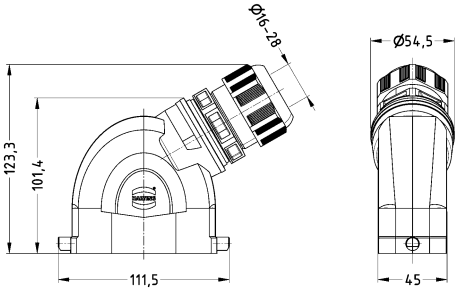
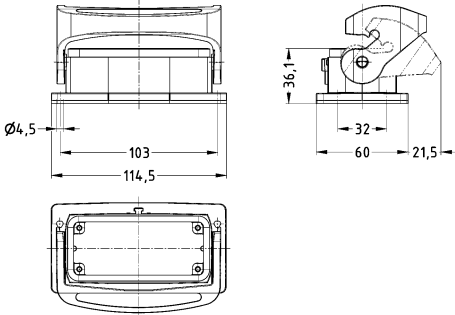
Double locking lever (on the hood)

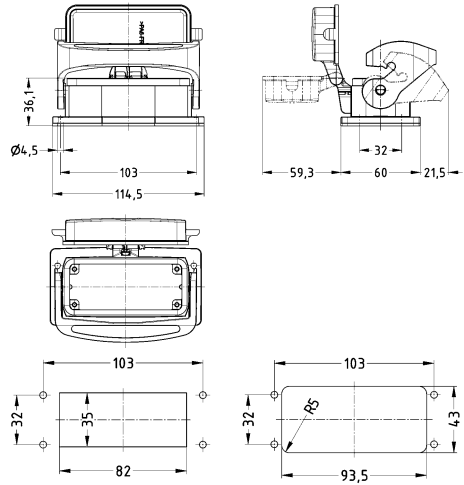
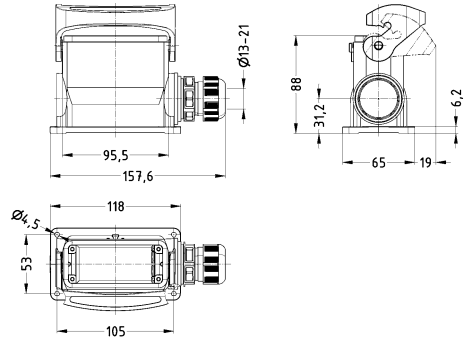
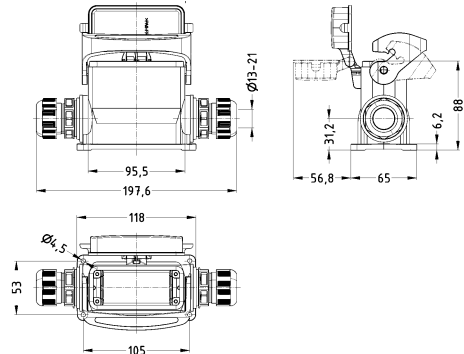
Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M40	16 ... 28	19 43 116 0438	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M40	16 ... 28	19 43 116 0538	
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 016 0322	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M40 2x M40	16 ... 28 16 ... 28	19 43 116 0228 19 43 116 0268	

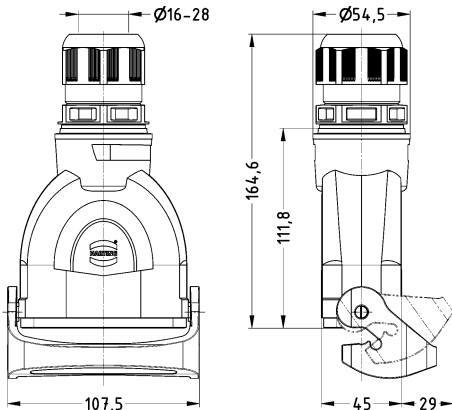
Single locking lever

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0446 19 43 116 0447 19 43 116 0448	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0546 19 43 116 0547 19 43 116 0548	
Han-Eco® B, Bulkhead mounted housings 			19 43 016 0340	

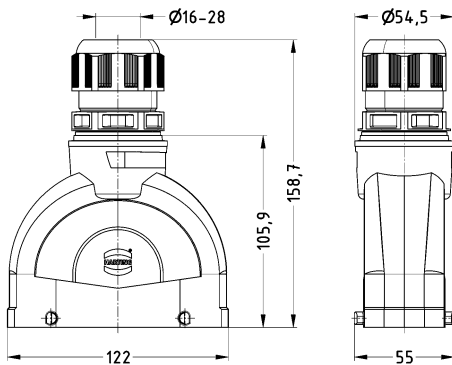
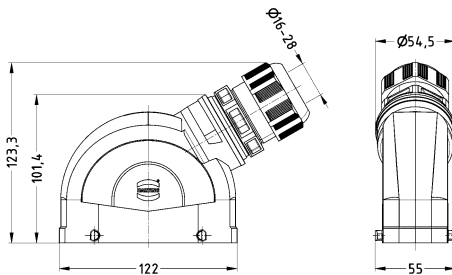
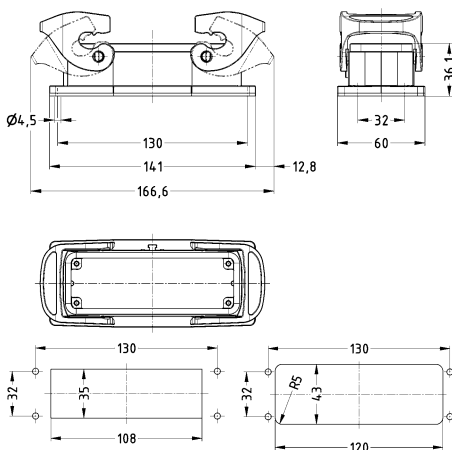
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 016 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 116 0251 19 43 116 0252 19 43 116 0253 19 43 116 0291 19 43 116 0292 19 43 116 0293	
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 116 0256 19 43 116 0257 19 43 116 0258 19 43 116 0296 19 43 116 0297 19 43 116 0298	

Han

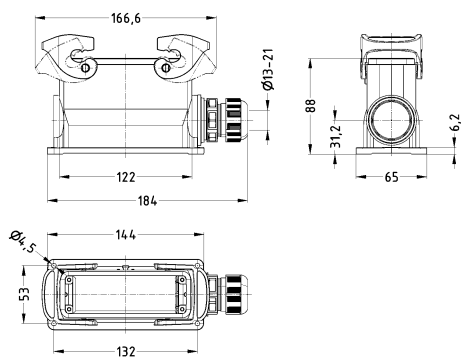
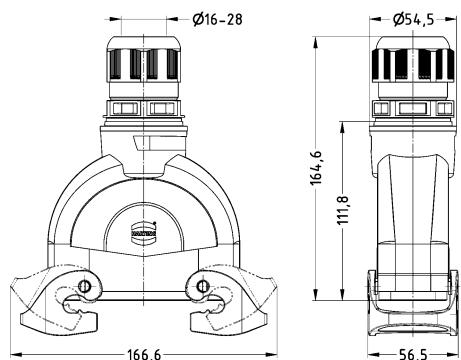
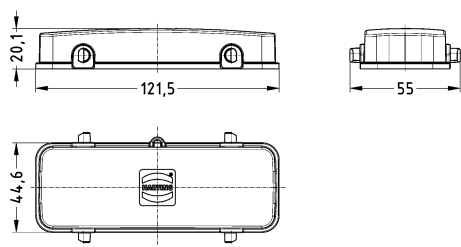
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0756 19 43 116 0757 19 43 116 0758	
Han-Eco® B, Protection cover, for hoods Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings Han-Eco® B, Protection cover, for cable to cable housing			19 43 016 5442 19 43 016 5410 19 43 016 5446	

Double locking lever

Han

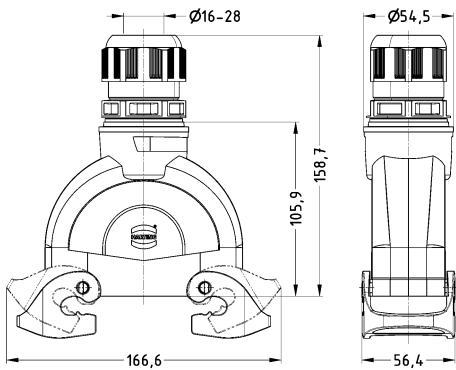
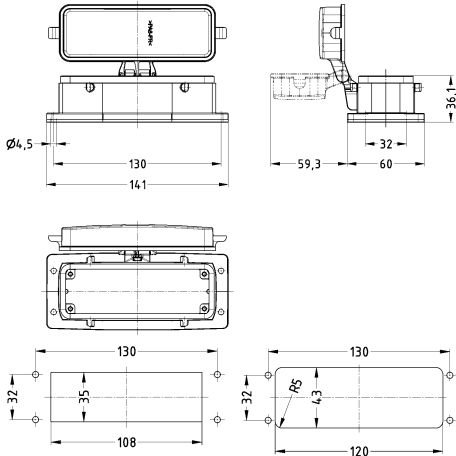
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0427 19 43 124 0428	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0527 19 43 124 0528	
Han-Eco® B, Bulkhead mounted housings 			19 43 024 0320	 Panel cut out Front mounting / Rear mounting

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 124 0231 19 43 124 0232 19 43 124 0233 19 43 124 0271 19 43 124 0272 19 43 124 0273	
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0737 19 43 124 0738	
Han-Eco® B, Protection cover, for hoods Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings 			19 43 024 5422 19 43 024 5425	
Han-Eco® B, Protection cover, for cable to cable housing			19 43 024 5426	

Double locking lever (on the hood)

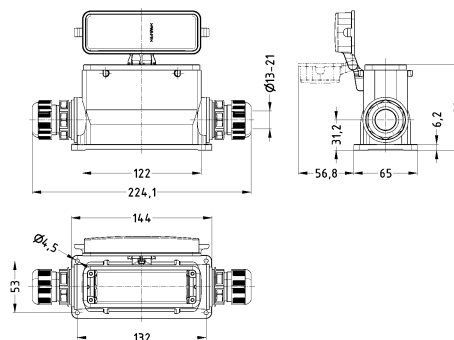
Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M40	16 ... 28	19 43 124 0438	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M40	16 ... 28	19 43 124 0538	
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 024 0322	 Panel cut out Front mounting / Rear mounting

Han

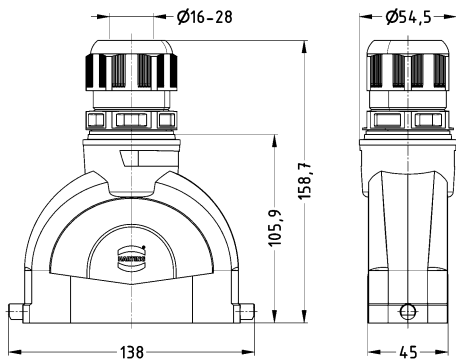
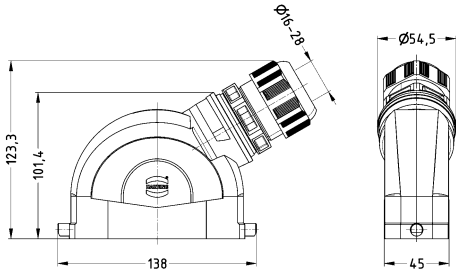
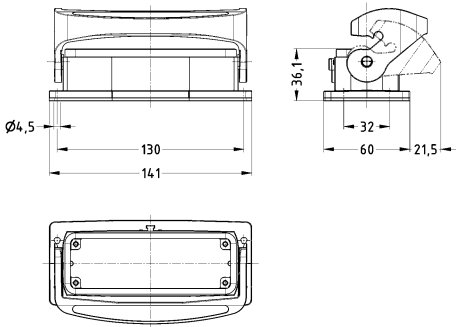
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
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Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry	1x M32 1x M40 2x M32 2x M40	13 ... 21 16 ... 28 13 ... 21 16 ... 28	19 43 124 0227 19 43 124 0228 19 43 124 0267 19 43 124 0268	
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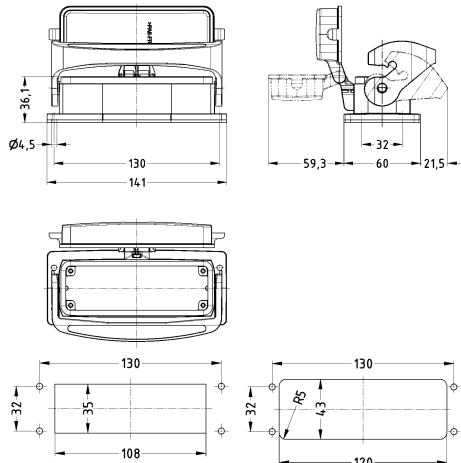
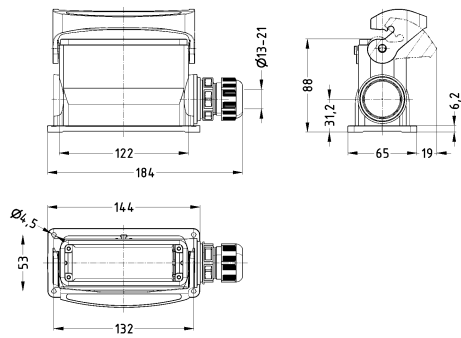
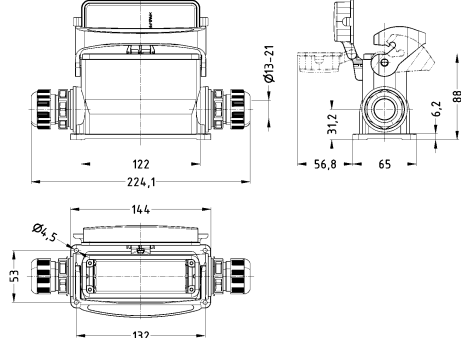


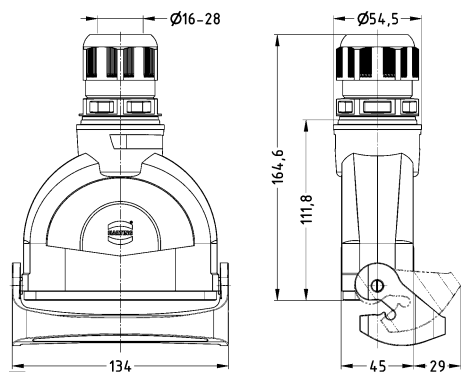
Single locking lever

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0447 19 43 124 0448	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0547 19 43 124 0548	
Han-Eco® B, Bulkhead mounted housings 			19 43 024 0340	

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 024 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 124 0251 19 43 124 0252 19 43 124 0253 19 43 124 0291 19 43 124 0292 19 43 124 0293	
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 124 0256 19 43 124 0257 19 43 124 0258 19 43 124 0296 19 43 124 0297 19 43 124 0298	

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0757 19 43 124 0758	
Han-Eco® B, Protection cover, for hoods Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings Han-Eco® B, Protection cover, for cable to cable housing			19 43 024 5442 19 43 024 5410 19 43 024 5446	

Han

Features

- Suitable for standard inserts and modules from the Han-Mod-ular® portfolio
- With integrated cable gland
- Optional PE contact module to hold the protective ground conductor
- Suitable for applications according to protection class II
- Minimal weight with excellent mechanical robustness

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP65
Material (hood/housing)	Polyamide, Fibre-glass reinforced
Colour (hood/housing)	RAL 9005 (jet black)
Material (seal)	FPM
Colour (seal)	RAL 7001 (silver-grey)
Material (locking)	Polyamide, Fibre-glass reinforced
Colour (locking)	RAL 9005 (jet black)
Flammability acc. to UL 94	V-0
Flammability acc. to UL 94 (locking levers)	V-0

Specifications and approvals

IEC 61984
 EN 45545-2
 R22: HL1, HL2, HL3
 R23: HL1, HL2, HL3
 R24: HL1, HL2, HL3

Details

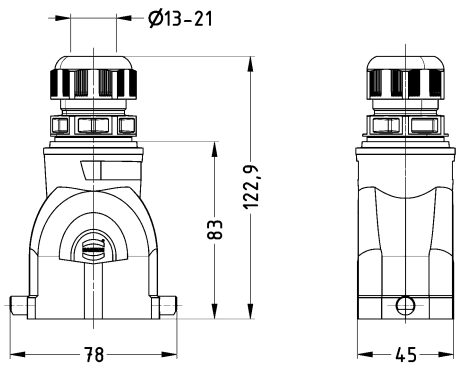
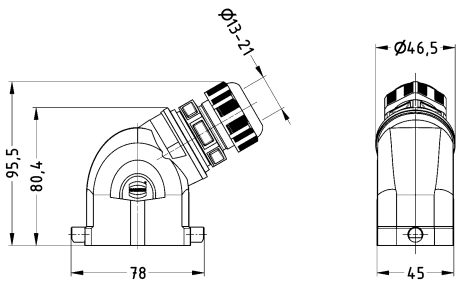
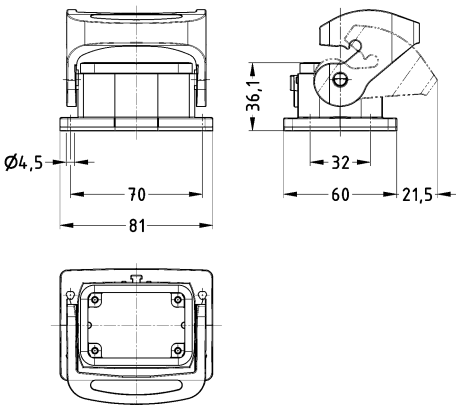
Mating compatible with all metal hoods and housings of the series Han® B.

As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

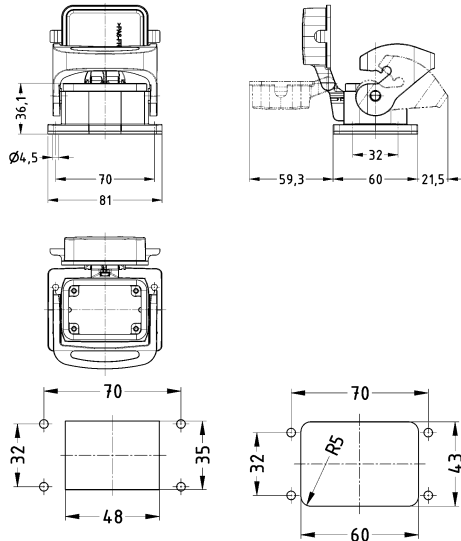
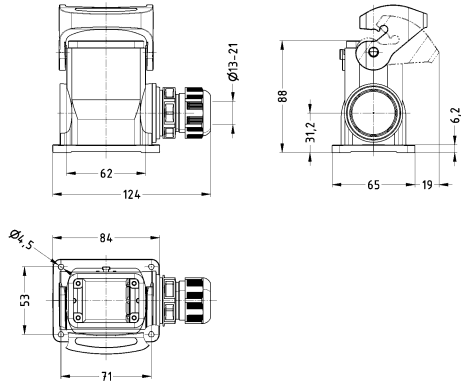
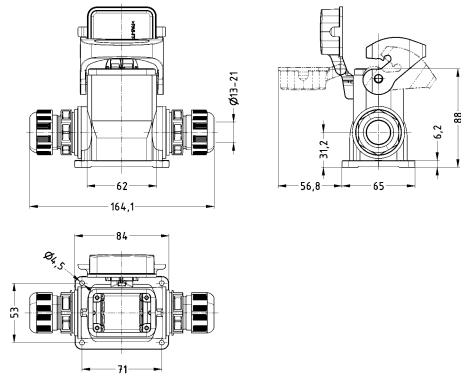
Available as from October 2018

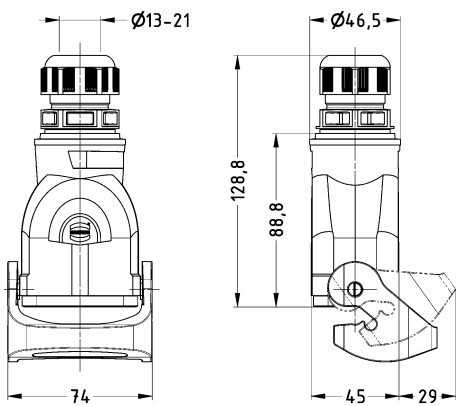
Single locking lever

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 106 0445 19 43 106 0446 19 43 106 0447	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 106 0545 19 43 106 0546 19 43 106 0547	
Han-Eco® B, Bulkhead mounted housings 			19 43 206 0340	

Han

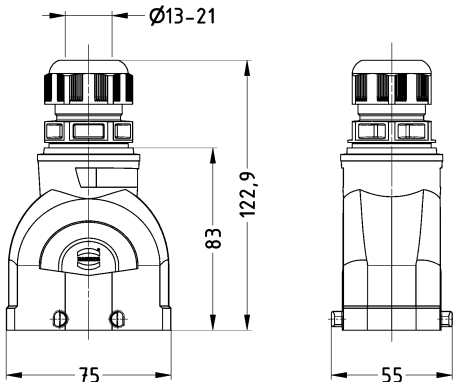
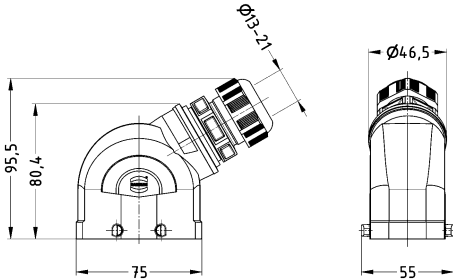
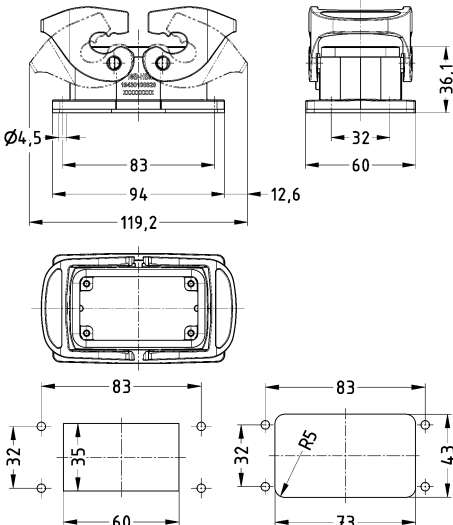
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 206 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 306 0250 19 43 306 0251 19 43 306 0252 19 43 306 0290 19 43 306 0291 19 43 306 0292	
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 306 0255 19 43 306 0256 19 43 306 0257 19 43 306 0295 19 43 306 0296 19 43 306 0297	

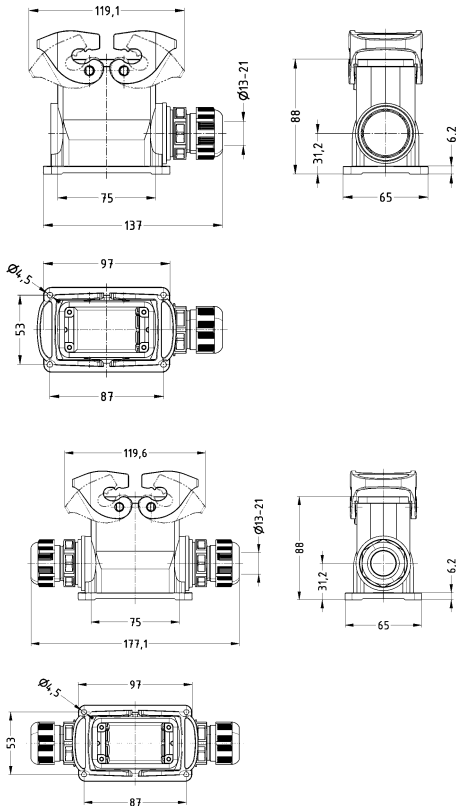
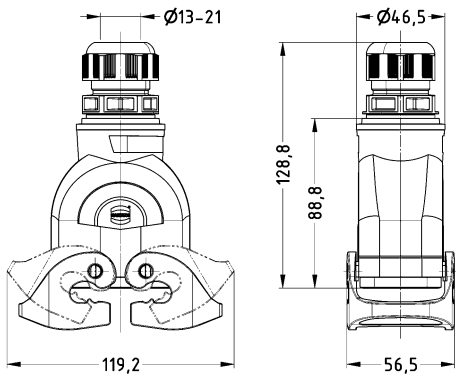
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 306 0755 19 43 306 0756 19 43 306 0757	
Han-Eco® B, Protection cover, for hoods Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings Han-Eco® B, Protection cover, for cable to cable housing			19 43 206 5442 19 43 006 5410 19 43 006 5446	

Han

Double locking lever

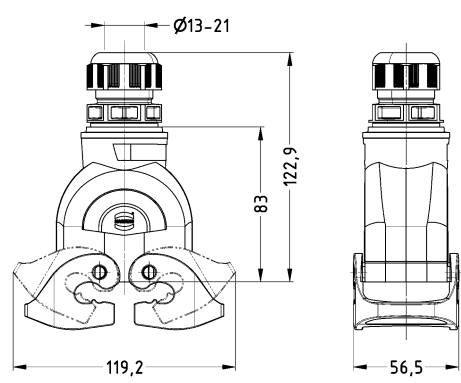
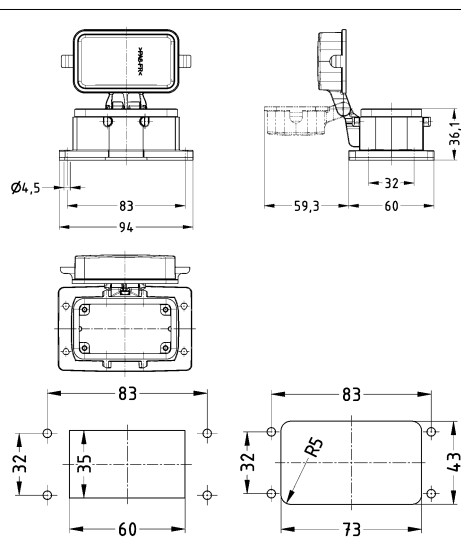
Han

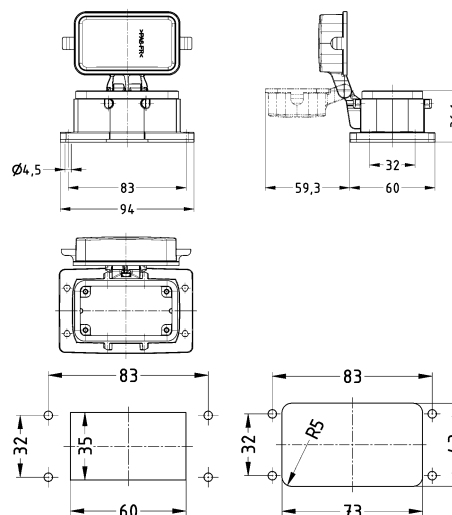
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0425 19 43 110 0426 19 43 110 0427	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0525 19 43 110 0526 19 43 110 0527	
Han-Eco® B, Bulkhead mounted housings 			19 43 210 0320	 Panel cut out Front mounting / Rear mounting

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 1x M40 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 16 ... 28 6 ... 13 9 ... 17 13 ... 21	19 43 310 0230 19 43 310 0231 19 43 310 0232 19 43 310 0233 19 43 310 0270 19 43 310 0271 19 43 310 0272	
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 310 0735 19 43 310 0736 19 43 310 0737	
Han-Eco® B, Protection cover, for hoods			19 43 210 5422	

Double locking lever (on the hood)

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry	1x M32	13 ... 21	19 43 110 0437	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M32	13 ... 21	19 43 110 0537	
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover			19 43 210 0322	 Panel cut out Front mounting / Rear mounting

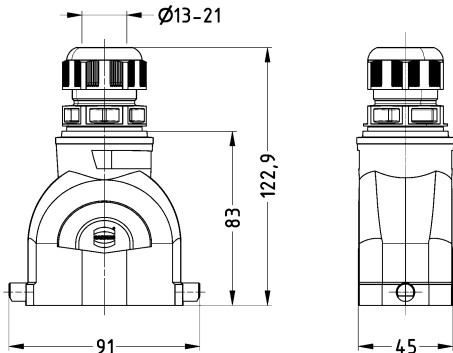
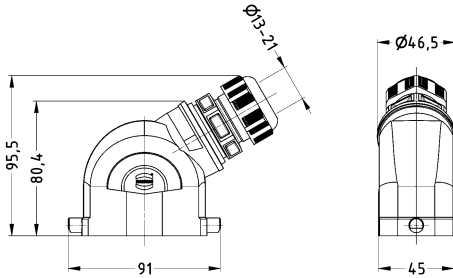
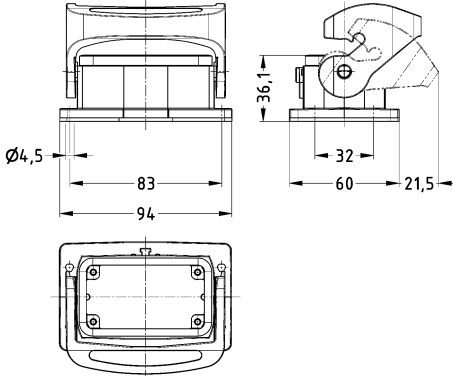


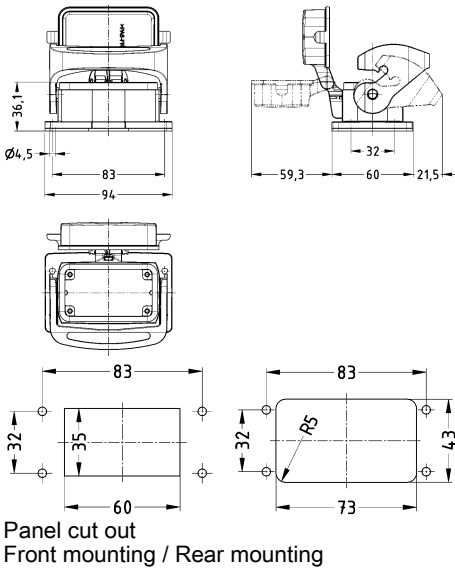
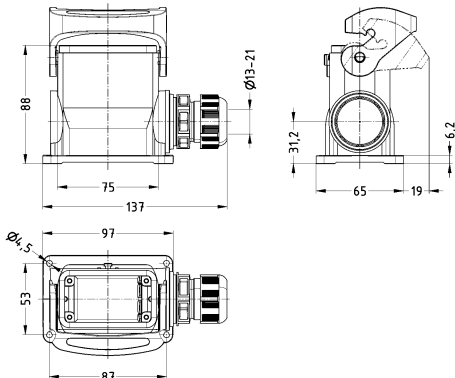
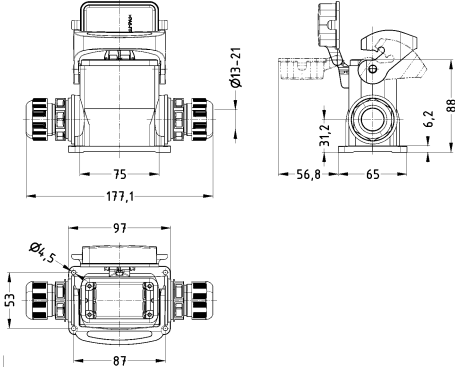
Panel cut out
Front mounting / Rear mounting

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry	1x M32 2x M32	13 ... 21 13 ... 21	19 43 310 0227 19 43 310 0267	

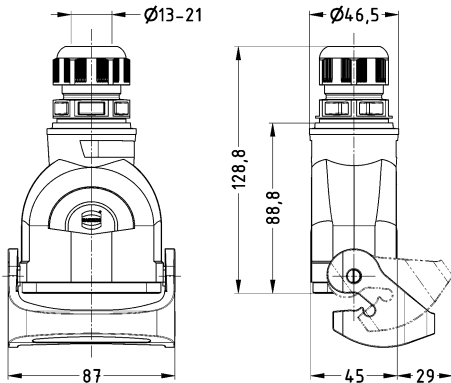
Single locking lever

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0445 19 43 110 0446 19 43 110 0447	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0545 19 43 110 0546 19 43 110 0547	
Han-Eco® B, Bulkhead mounted housings 			19 43 210 0340	

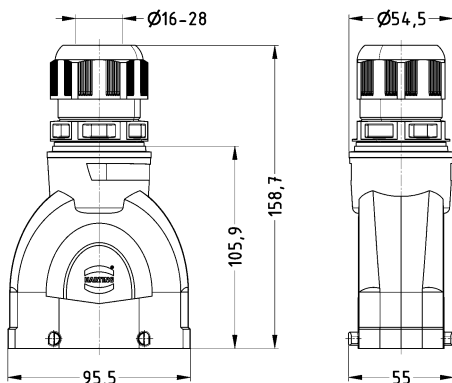
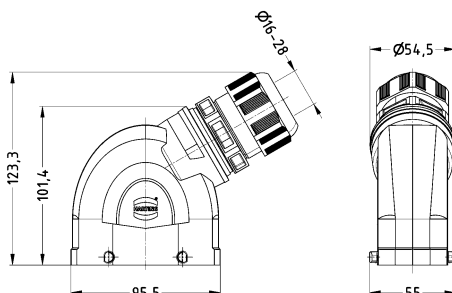
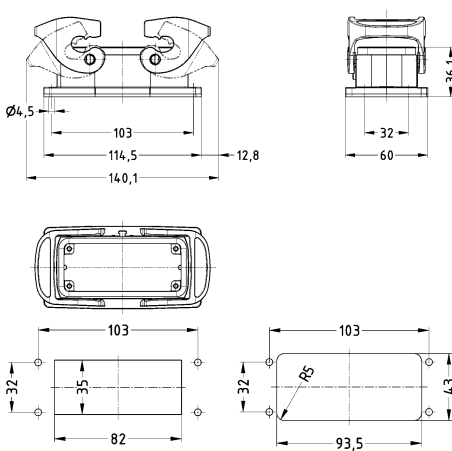
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 210 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 310 0250 19 43 310 0251 19 43 310 0252 19 43 310 0290 19 43 310 0291 19 43 310 0292	
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 6 ... 13 9 ... 17 13 ... 21	19 43 310 0255 19 43 310 0256 19 43 310 0257 19 43 310 0295 19 43 310 0296 19 43 310 0297	

Han

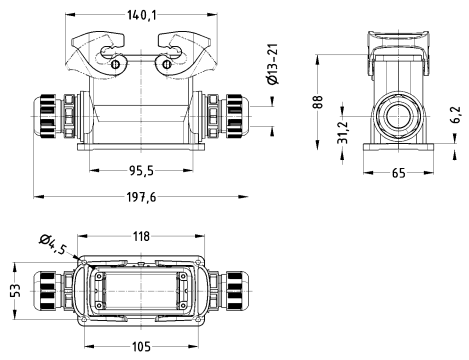
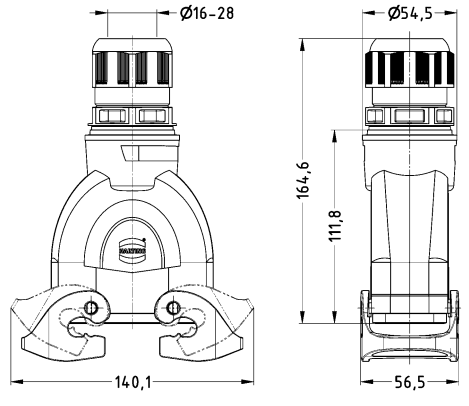
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 310 0755 19 43 310 0756 19 43 310 0757	
Han-Eco® B, Protection cover, for hoods			19 43 210 5442	

Double locking lever

Han

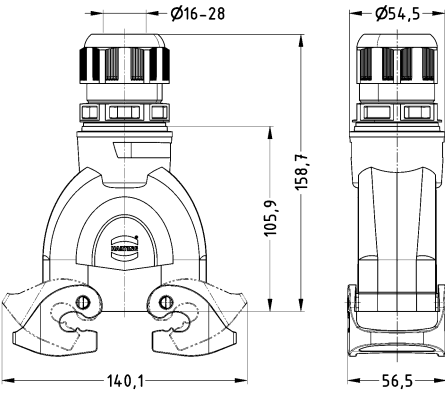
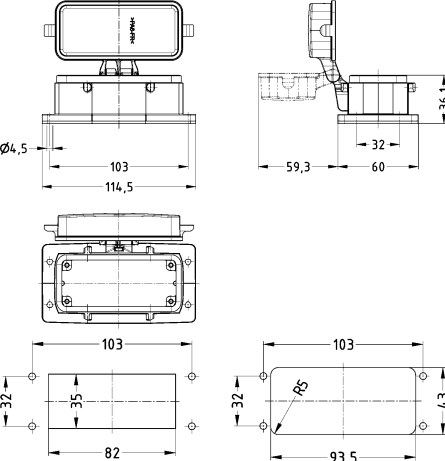
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0426 19 43 116 0427 19 43 116 0428	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0526 19 43 116 0527 19 43 116 0528	
Han-Eco® B, Bulkhead mounted housings 			19 43 216 0320	 Panel cut out Front mounting / Rear mounting

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 316 0231 19 43 316 0232 19 43 316 0233 19 43 316 0271 19 43 316 0272 19 43 316 0273	
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 316 0736 19 43 316 0737 19 43 316 0738	
Han-Eco® B, Protection cover, for hoods			19 43 216 5422	

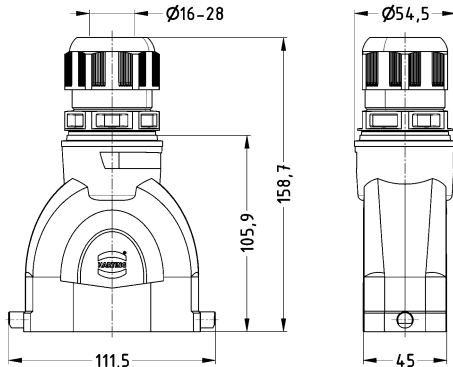
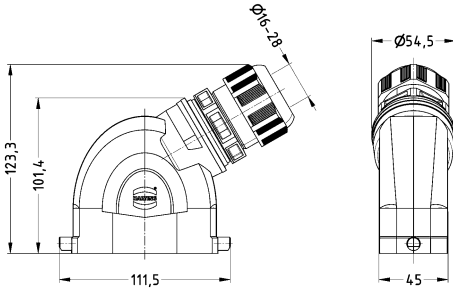
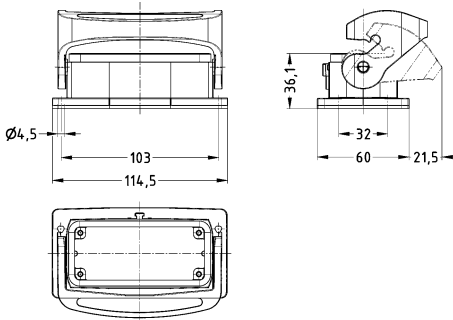
Double locking lever (on the hood)

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M40	16 ... 28	19 43 116 0438	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M40	16 ... 28	19 43 116 0538	
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 216 0322	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M40 2x M40	16 ... 28 16 ... 28	19 43 316 0228 19 43 316 0268	

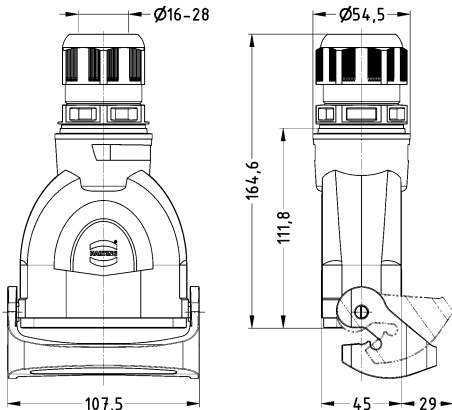
Single locking lever

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0446 19 43 116 0447 19 43 116 0448	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0546 19 43 116 0547 19 43 116 0548	
Han-Eco® B, Bulkhead mounted housings 			19 43 216 0340	

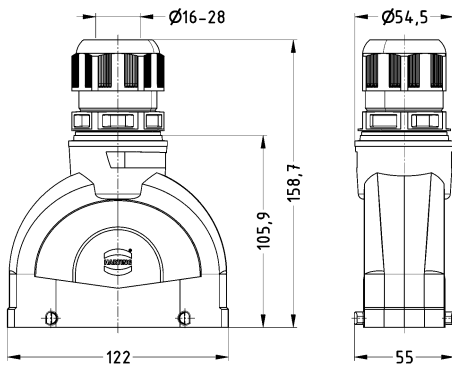
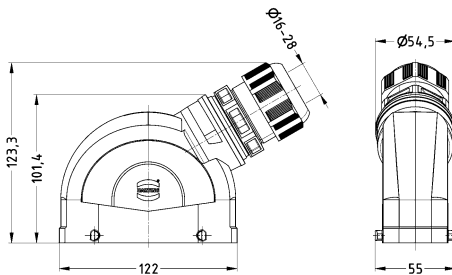
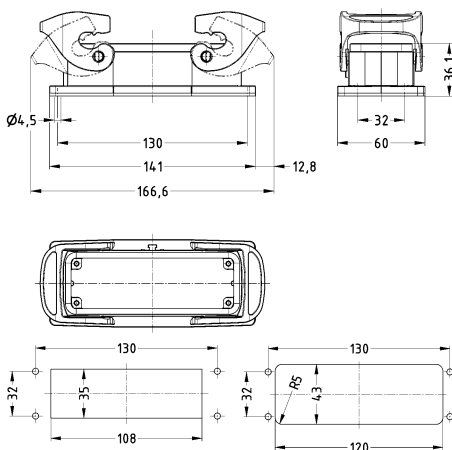
1.
43

Han

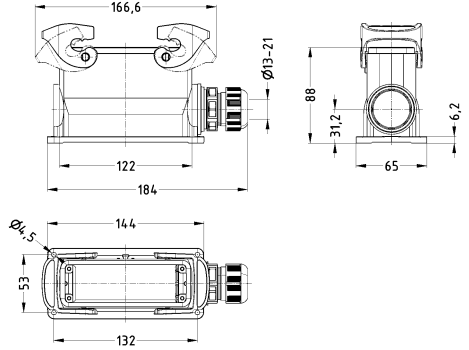
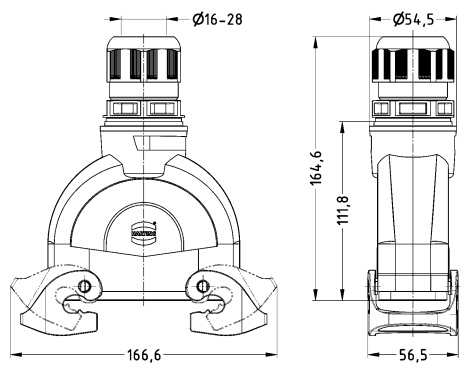
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 316 0756 19 43 316 0757 19 43 316 0758	
Han-Eco® B, Protection cover, for hoods			19 43 216 5442	

Double locking lever

Han

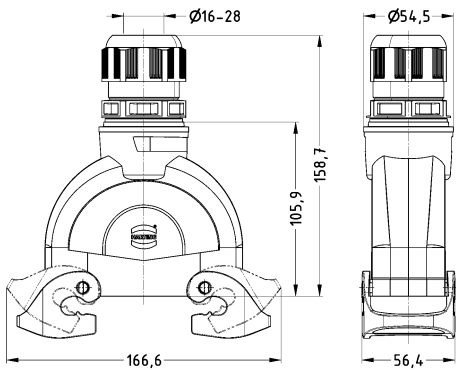
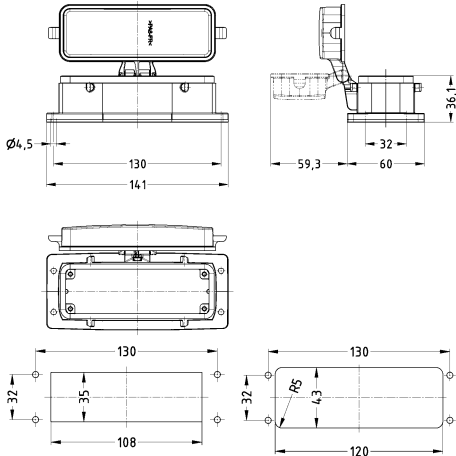
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0427 19 43 124 0428	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0527 19 43 124 0528	
Han-Eco® B, Bulkhead mounted housings 			19 43 224 0320	 Panel cut out Front mounting / Rear mounting

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 324 0231 19 43 324 0232 19 43 324 0233 19 43 324 0271 19 43 324 0272 19 43 324 0273	
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 324 0737 19 43 324 0738	
Han-Eco® B, Protection cover, for hoods			19 43 224 5422	

Double locking lever (on the hood)

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M40	16 ... 28	19 43 124 0438	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M40	16 ... 28	19 43 124 0538	
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 224 0322	 Panel cut out Front mounting / Rear mounting

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
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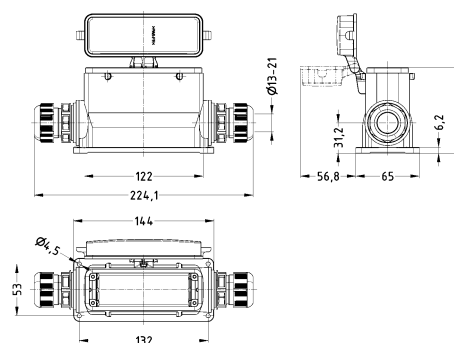
Han-Eco® B,
Surface mounted housing,
With thermo-plastic cover,
With integrated cable gland,
Side entry



1x M32
1x M40
2x M32
2x M40

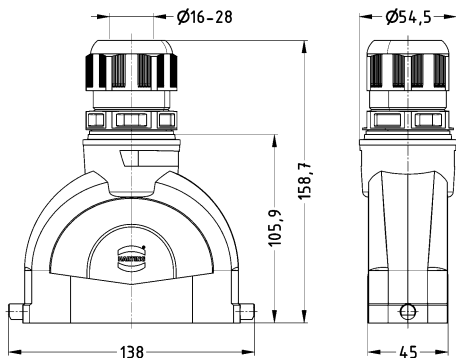
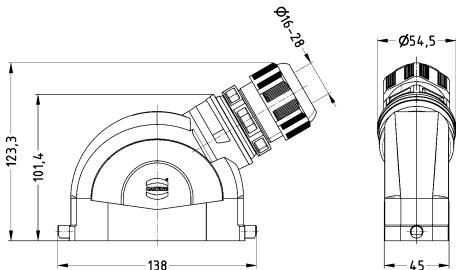
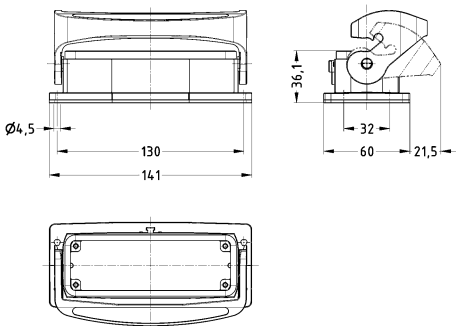
13 ... 21
16 ... 28
13 ... 21
16 ... 28

19 43 324 0227
19 43 324 0228
19 43 324 0267
19 43 324 0268

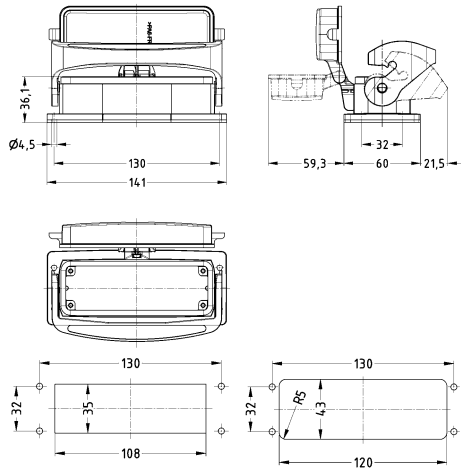
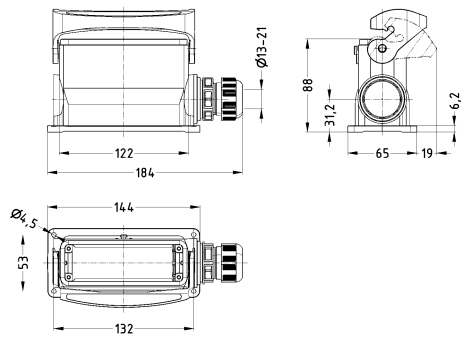
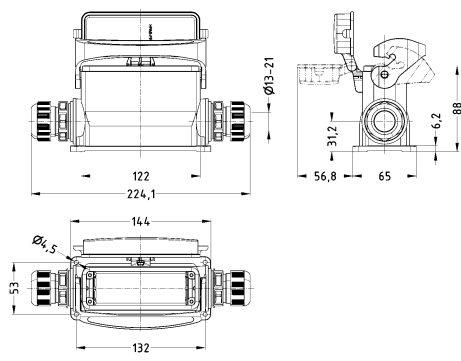


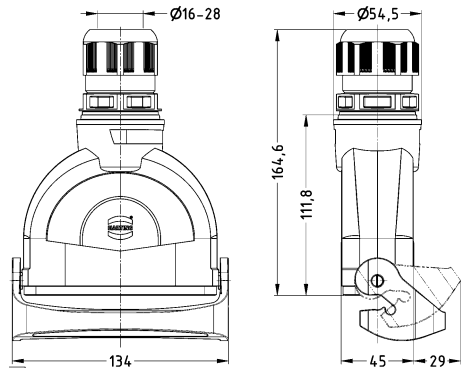
Single locking lever

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0447 19 43 124 0448	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0547 19 43 124 0548	
Han-Eco® B, Bulkhead mounted housings 			19 43 224 0340	

Han

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 224 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 324 0251 19 43 324 0252 19 43 324 0253 19 43 324 0291 19 43 324 0292 19 43 324 0293	
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 324 0256 19 43 324 0257 19 43 324 0258 19 43 324 0296 19 43 324 0297 19 43 324 0298	

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 324 0757 19 43 324 0758	
Han-Eco® B, Protection cover, for hoods			19 43 224 5442	



Number of contacts

5



Features

- Surge protection for two pairs of balanced signals
- Protects symmetric signals interfaces with electrical isolation
- Compatible with Han-Modular® components

Technical characteristics

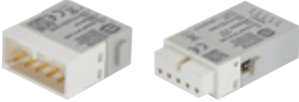
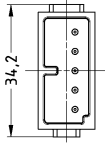
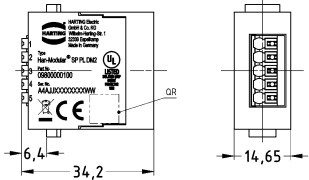
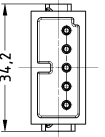
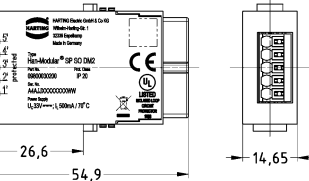
Number of contacts	5
Operating temperature	-40 ... +85 °C
Storage temperature	-40 ... +85 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP20
Nominal current	0.5 A
Material (insert)	Polyamide
Colour (insert)	RAL 7032 (pebble grey)
Flammability acc. to UL 94	V-0

Details

The surge protection module protects up to 2 pairs of balanced signal interfaces with electrical isolation against lightning strikes or overvoltage events.

Preferred field of application is the protection of analogue signal interfaces like for 0/4-20 mA or differential signals.

The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)
		Male	Female	
Han-Modular®, Han® Surge protection module, Two channels, Differential mode without common reference potential, Push-in-spring-cage termination 	0.25 ... 1.5	09 80 000 0100	09 80 003 0200	   

Number of contacts

5



Han

Features

- Surge protection for four single lines
- Protects signals with common reference potential
- Compatible with Han-Modular® components

Technical characteristics

Number of contacts	5
Operating temperature	-40 ... +85 °C
Storage temperature	-40 ... +85 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP20
Nominal current	0.5 A
Material (insert)	Polyamide
Colour (insert)	RAL 7032 (pebble grey)
Flammability acc. to UL 94	V-0

Details

The surge protection module protects up to 4 single lines with common reference potential and unbalanced interfaces against lightning strikes or overvoltages.

Preferred field of application is the protection of digital signals up to 24 VDC with a max load of 0.5 A / line.

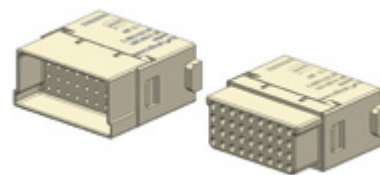
The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)
		Male	Female	
Han-Modular®, Han® Surge protection module, Four channels, Common reference potential, Push-in-spring-cage termination	0.25 ... 1.5	09 80 000 0101	09 80 003 0201	

Number of contacts

36

4 A 32 V 0.8 kV 3



Features

- Suitable for standard D-Sub crimp contacts
- 44 % higher density

Technical characteristics

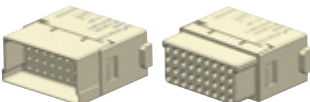
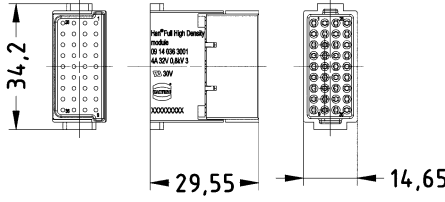
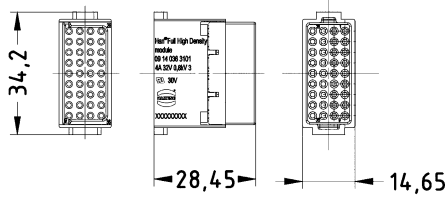
Number of contacts	36
Electrical data acc. to IEC 61984	4 A 32 V 0.8 kV 3
Rated current	4 A
Rated voltage	32 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$\geq 10^{10} \Omega$
Limiting temperature	-40 ... +125 °C
Mating cycles	≥ 500
Material (insert)	Polycarbonate
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Flammability acc. to UL 94	V-0
RoHS	compliant with exemption

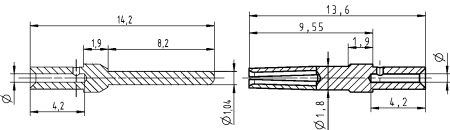
Specifications and approvals

EN 60664-1
IEC 61984

Details

This product is available upon request. Please contact your local HARTING subsidiary.

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)
		Male	Female	
Han-Modular®, Han® Full High Density module, Crimp termination  Please order crimp contacts separately.	0.09 ... 0.52	09 14 036 3001	09 14 036 3101	 

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)															
		Male	Female																
D-Sub, Crimp contact, Turned, Pack contents: Single contact	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	 <table><tr><th>Wire gauge</th><th>Ø</th><th>Stripping length</th></tr><tr><td>0.09-0.25 mm²</td><td>0.64 mm</td><td>4 mm</td></tr><tr><td>0.13-0.33 mm²</td><td>0.88 mm</td><td>4 mm</td></tr><tr><td>0.25-0.52 mm²</td><td>1.13 mm</td><td>4 mm</td></tr><tr><td>0.33-0.82 mm²</td><td>1.34 mm</td><td>4 mm</td></tr></table> for stranded wire according IEC 60228 Class 5 max. insulation diameter 2.3 mm	Wire gauge	Ø	Stripping length	0.09-0.25 mm²	0.64 mm	4 mm	0.13-0.33 mm²	0.88 mm	4 mm	0.25-0.52 mm²	1.13 mm	4 mm	0.33-0.82 mm²	1.34 mm	4 mm
Wire gauge	Ø	Stripping length																	
0.09-0.25 mm²	0.64 mm	4 mm																	
0.13-0.33 mm²	0.88 mm	4 mm																	
0.25-0.52 mm²	1.13 mm	4 mm																	
0.33-0.82 mm²	1.34 mm	4 mm																	



Han

Han



Features	Technical characteristics
• Applicable as a guiding element for electrical power and signal modules in the Han-Modular® hinged frame plus • Considerable time saving assembly compared to conventional guide pins / bushes • Colour coding with 6 different colours	Limiting temperature-40 ... +125 °C Material (accessories)Polycarbonate Colour (accessories)Grey, Red, Blue, Black, Yellow, Green Flammability acc. to UL 94V-0

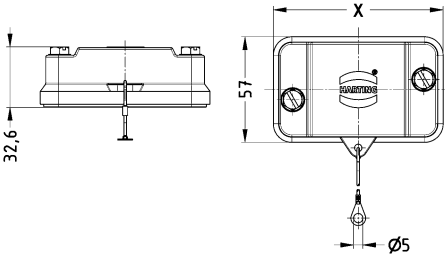
Identification		Part number	Drawing (dimensions in mm)
Han-Modular®, Guide element, for Han-Modular® hinged frames	Black	09 14 000 9993	11 19,7 9,8 4,6 4,5
	Blue	09 14 000 9992	
	Green	09 14 000 9995	
	Grey	09 14 000 9990	
	Red	09 14 000 9991	
	Yellow	09 14 000 9994	

Screw locking



Han

Technical characteristics		Specifications and approvals	
Limiting temperature	-40 ... +120 °C	EN 60664-1	
Tightening torque	4 Nm	IEC 61984	
Degree of protection acc. to IEC 60529	IP66		
Material (hood/housing)	Polycarbonate		
Colour (hood/housing)	RAL 7037 (dust grey)		
Material (seal)	NBR		
Material (locking)	Stainless steel		

Identification		Part number	Drawing (dimensions in mm)	
Han® HP Direct B, Protection cover, for device side, With fixing cord	06 B	09 39 006 5410		6 B: x = 92 mm 10 B: x = 106 mm 16 B: x = 125.5 mm 24 B: x = 152 mm
	10 B	09 39 010 5410		
	16 B	09 39 016 5410		
	24 B	09 39 024 5410		

Number of contacts

5+ 

16 A 230/400 V 4 kV 3



Features

- Compact design saves space
- Suitable for Han E® crimp contacts
- 32 coding options without loss of contacts
- Mating compatible to the standard Han® Q 5/0 insert

Technical characteristics

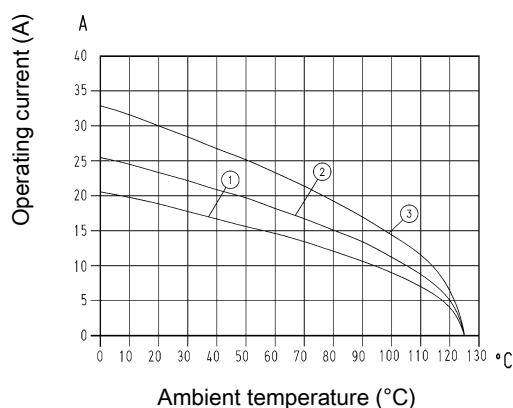
Number of contacts	5
Electrical data acc. to IEC 61984	16 A 230/400 V 4 kV 3
Rated current	16 A
Rated voltage conductor-earth	230 V
Rated voltage conductor-conductor	400 V
Rated impulse voltage	4 kV
Pollution degree	3
Insulation resistance	$\geq 10^{10} \Omega$
Contact resistance	$\leq 1 \text{ m}\Omega$
Limiting temperature	-40 ... +125 °C
Mating cycles	≥ 500
Material (insert)	Polycarbonate
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material (accessories)	Polyamide
Colour (accessories)	Red
Flammability acc. to UL 94	V-0
RoHS	compliant with exemption

Derating

Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2



- ① Conductor cross-section 1 mm²
- ② Conductor cross-section 1.5 mm²
- ③ Conductor cross-section 2.5 mm²

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

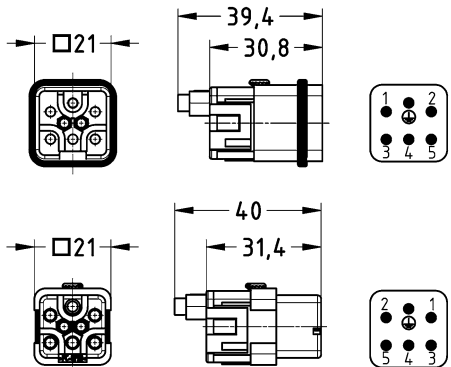
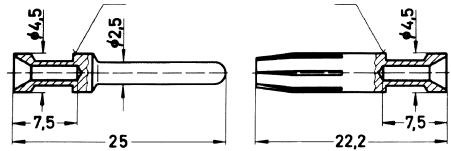
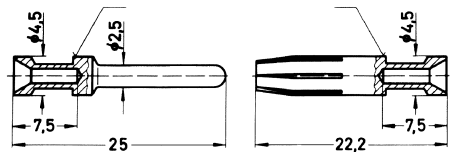
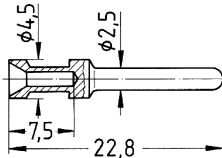
Details

Remarks on the crimp technique

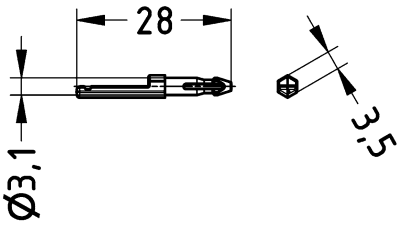
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Coding pin

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)																											
		Male	Female																												
Han® Q, Crimp termination  Please order crimp contacts separately. Please order coding pins separately.	0.14 ... 2.5	09 12 005 3004	09 12 005 3104	 Contact arrangement (view from mating side)																											
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202	 <table><tr><th colspan="2">Conductor cross-section</th><th>Identification</th></tr><tr><td>0.14-0.37 mm²</td><td>AWG 26-22</td><td>no groove</td></tr><tr><td>0.5 mm²</td><td>AWG 20</td><td>no groove</td></tr><tr><td>0.75 mm²</td><td>AWG 18</td><td>1 groove*</td></tr><tr><td>1 mm²</td><td>AWG 18</td><td>1 groove</td></tr><tr><td>1.5 mm²</td><td>AWG 16</td><td>2 grooves</td></tr><tr><td>2.5 mm²</td><td>AWG 14</td><td>3 grooves</td></tr><tr><td>3 mm²</td><td>AWG 12</td><td>wide groove</td></tr><tr><td>4 mm²</td><td>AWG 12</td><td>no groove</td></tr></table> * on the back crimp collar Stripping length 7.5 mm	Conductor cross-section		Identification	0.14-0.37 mm²	AWG 26-22	no groove	0.5 mm²	AWG 20	no groove	0.75 mm²	AWG 18	1 groove*	1 mm²	AWG 18	1 groove	1.5 mm²	AWG 16	2 grooves	2.5 mm²	AWG 14	3 grooves	3 mm²	AWG 12	wide groove	4 mm²	AWG 12	no groove
Conductor cross-section		Identification																													
0.14-0.37 mm²	AWG 26-22	no groove																													
0.5 mm²	AWG 20	no groove																													
0.75 mm²	AWG 18	1 groove*																													
1 mm²	AWG 18	1 groove																													
1.5 mm²	AWG 16	2 grooves																													
2.5 mm²	AWG 14	3 grooves																													
3 mm²	AWG 12	wide groove																													
4 mm²	AWG 12	no groove																													
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223																												
Han E®, Crimp contact, Relay contact, Contact surface: Silver plated 	0.75 ... 1 1.5 2.5	09 33 000 6109 09 33 000 6110 09 33 000 6111																													

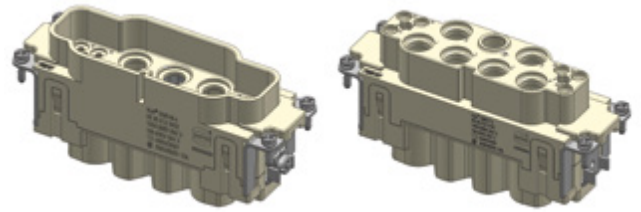
Han

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)
		Male	Female	
Coding element, Pack contents: 20 pieces per frame 		09 12 000 9927	09 12 000 9927	

Number of contacts

6+ 

100 A 690 V 8 kV 3
 + 6 additional signal contacts
 16 A 400 V 6 kV



Han

Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han® C and Han E® contacts
- 16 coding options

Technical characteristics

Number of contacts	6
Additional contacts	+ 6 additional signal contacts
Electrical data acc. to IEC 61984	100 A 690 V 8 kV 3
Rated current	100 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
Electrical data, signal	16 A 400 V 6 kV
Rated current (signal)	16 A
Rated voltage (signal)	400 V
Rated impulse voltage (signal)	6 kV
Pollution degree (signal)	3
Rated current acc. to CSA	100 A
Rated current acc. to CSA (signal)	15 A
Rated voltage acc. to UL	600 V
Rated voltage acc. to UL (signal)	300 V
Rated voltage acc. to CSA	600 V
Rated voltage acc. to CSA (signal)	600 V
Insulation resistance	$\geq 10^{10} \Omega$
Contact resistance	$\leq 0.5 \text{ m}\Omega, \leq 1 \text{ m}\Omega, \leq 0.3 \text{ m}\Omega$
Contact resistance, signal area	$\leq 3 \text{ m}\Omega$
Limiting temperature	-40 ... +125 °C
Mating cycles	≥ 500
Material (insert)	Polycarbonate
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material (accessories)	Thermoplastic
Flammability acc. to UL 94	V-0
RoHS	compliant with exemption, compliant

Specifications and approvals

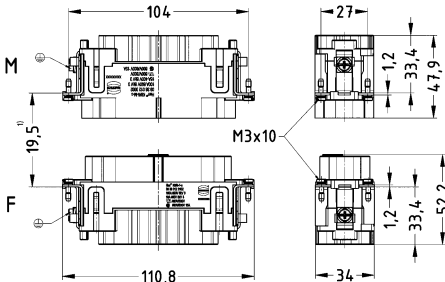
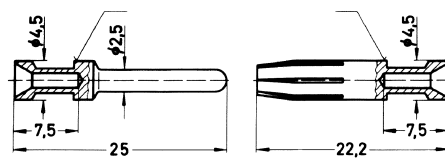
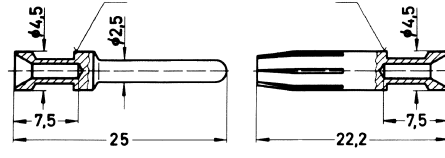
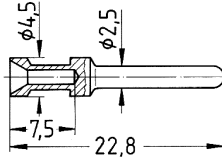
EN 60664-1
 IEC 61984
 UL 1977 ECBT2.E235076
 DNV GL

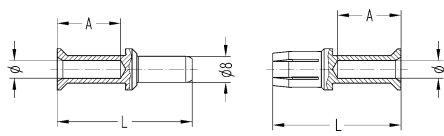
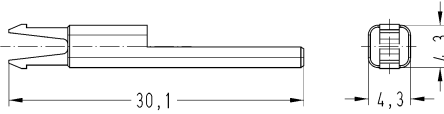
Details

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

Remarks on the crimp technique

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)																		
		Male	Female																			
Han-Com®, Crimp termination, Contact surface: Silver plated  Please order crimp contacts separately. Please order coding pins separately.	0.14 ... 35	09 38 012 3002	09 38 012 3102	 1) distance for contact max. 21 mm max. insulation diameter 5 mm																		
Han E®, Crimp contact, Contact surface: Silver plated 	0.5 0.75 1 1.5 2.5 4	09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6107	09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6207	 <table><tr><th>Conductor cross-section</th><th>Identification</th></tr><tr><td>0.14-0.37 mm²</td><td>AWG 26-22 no groove</td></tr><tr><td>0.5 mm²</td><td>AWG 20 no groove</td></tr><tr><td>0.75 mm²</td><td>AWG 18 1 groove*</td></tr><tr><td>1 mm²</td><td>AWG 18 1 groove</td></tr><tr><td>1.5 mm²</td><td>AWG 16 2 grooves</td></tr><tr><td>2.5 mm²</td><td>AWG 14 3 grooves</td></tr><tr><td>3 mm²</td><td>AWG 12 wide groove</td></tr><tr><td>4 mm²</td><td>AWG 12 no groove</td></tr></table> * on the back crimp collar Stripping length 7.5 mm	Conductor cross-section	Identification	0.14-0.37 mm²	AWG 26-22 no groove	0.5 mm²	AWG 20 no groove	0.75 mm²	AWG 18 1 groove*	1 mm²	AWG 18 1 groove	1.5 mm²	AWG 16 2 grooves	2.5 mm²	AWG 14 3 grooves	3 mm²	AWG 12 wide groove	4 mm²	AWG 12 no groove
Conductor cross-section	Identification																					
0.14-0.37 mm²	AWG 26-22 no groove																					
0.5 mm²	AWG 20 no groove																					
0.75 mm²	AWG 18 1 groove*																					
1 mm²	AWG 18 1 groove																					
1.5 mm²	AWG 16 2 grooves																					
2.5 mm²	AWG 14 3 grooves																					
3 mm²	AWG 12 wide groove																					
4 mm²	AWG 12 no groove																					
Han E®, Crimp contact, Contact surface: Gold plated 	0.5 0.75 1 1.5 2.5 4	09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	 <table><tr><th>Conductor cross-section</th><th>Identification</th></tr><tr><td>0.14-0.37 mm²</td><td>AWG 26-22 no groove</td></tr><tr><td>0.5 mm²</td><td>AWG 20 no groove</td></tr><tr><td>0.75 mm²</td><td>AWG 18 1 groove*</td></tr><tr><td>1 mm²</td><td>AWG 18 1 groove</td></tr><tr><td>1.5 mm²</td><td>AWG 16 2 grooves</td></tr><tr><td>2.5 mm²</td><td>AWG 14 3 grooves</td></tr><tr><td>3 mm²</td><td>AWG 12 wide groove</td></tr><tr><td>4 mm²</td><td>AWG 12 no groove</td></tr></table> * on the back crimp collar Stripping length 7.5 mm	Conductor cross-section	Identification	0.14-0.37 mm²	AWG 26-22 no groove	0.5 mm²	AWG 20 no groove	0.75 mm²	AWG 18 1 groove*	1 mm²	AWG 18 1 groove	1.5 mm²	AWG 16 2 grooves	2.5 mm²	AWG 14 3 grooves	3 mm²	AWG 12 wide groove	4 mm²	AWG 12 no groove
Conductor cross-section	Identification																					
0.14-0.37 mm²	AWG 26-22 no groove																					
0.5 mm²	AWG 20 no groove																					
0.75 mm²	AWG 18 1 groove*																					
1 mm²	AWG 18 1 groove																					
1.5 mm²	AWG 16 2 grooves																					
2.5 mm²	AWG 14 3 grooves																					
3 mm²	AWG 12 wide groove																					
4 mm²	AWG 12 no groove																					
Han E®, Crimp contact, Relay contact, Contact surface: Silver plated 	0.75 ... 1 1.5 2.5	09 33 000 6109 09 33 000 6110 09 33 000 6111																				

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)															
		Male	Female																
TC 100, Crimp contact, Contact surface: Silver plated	10 16 25 35	09 11 000 6114 09 11 000 6116 09 11 000 6125 09 11 000 6135	09 11 000 6214 09 11 000 6216 09 11 000 6225 09 11 000 6235	 <table><tr><th>Wire gauge</th><th>Ø</th><th>Stripping length A</th></tr><tr><td>10 mm²</td><td>4.3</td><td>19 mm</td></tr><tr><td>16 mm²</td><td>5.5</td><td>19 mm</td></tr><tr><td>25 mm²</td><td>7</td><td>19 mm</td></tr><tr><td>35 mm²</td><td>8.2</td><td>16 mm</td></tr></table> for stranded wire according to IEC 60 228 Class 5	Wire gauge	Ø	Stripping length A	10 mm²	4.3	19 mm	16 mm²	5.5	19 mm	25 mm²	7	19 mm	35 mm²	8.2	16 mm
Wire gauge	Ø	Stripping length A																	
10 mm²	4.3	19 mm																	
16 mm²	5.5	19 mm																	
25 mm²	7	19 mm																	
35 mm²	8.2	16 mm																	
Coding element		09 12 000 9922	09 12 000 9922																

Han

Number of contacts

6+ 

40 A 690 V 8 kV 3
 + 12 additional signal contacts
 10 A 230/400 V 4 kV 3



Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han® C and Han D® contacts
- 16 coding options

Technical characteristics

Number of contacts	6
Additional contacts	+ 12 additional signal contacts
Electrical data acc. to IEC 61984	40 A 690 V 8 kV 3
Rated current	40 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
Electrical data, signal	10 A 230/400 V 4 kV 3
Rated current (signal)	10 A
Rated voltage conductor-earth (signal)	230 V
Rated voltage conductor-conductor (signal)	400 V
Rated impulse voltage (signal)	4 kV
Pollution degree (signal)	3
Rated voltage acc. to UL	600 V
Rated voltage acc. to UL (signal)	600 V
Rated voltage acc. to CSA	300 V
Rated voltage acc. to CSA (signal)	300 V
Insulation resistance	$\geq 10^{10} \Omega$
Contact resistance	$\leq 0.5 \text{ m}\Omega, \leq 1 \text{ m}\Omega, \leq 3 \text{ m}\Omega$
Contact resistance, signal area	$\leq 3 \text{ m}\Omega$
Limiting temperature	-40 ... +125 °C
Mating cycles	≥ 500
Material (insert)	Polycarbonate
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material (accessories)	Thermoplastic
Flammability acc. to UL 94	V-0
RoHS	compliant with exemption, compliant

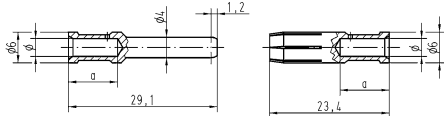
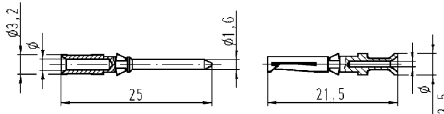
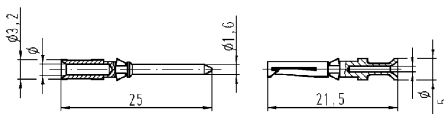
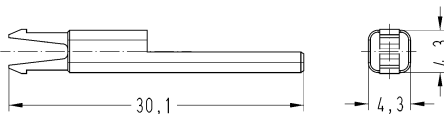
Specifications and approvals

EN 60664-1
 IEC 61984
 UL 1977 ECBT2.E235076
 DNV GL

Details

Remarks on the crimp technique

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)																					
		Male	Female																						
Han-Com®, Crimp termination, Contact surface: Silver plated  Please order crimp contacts separately. Please order coding pins separately.	0.14 ... 6	09 38 018 3002	09 38 018 3102																						
Han® C, Crimp contact, Contact surface: Silver plated 	1.5 2.5 4 6	09 32 000 6104 09 32 000 6105 09 32 000 6107 09 32 000 6108	09 32 000 6204 09 32 000 6205 09 32 000 6207 09 32 000 6208	 <table><tr><th>Conductor cross-section</th><th>Ø</th><th>Stripping length</th></tr><tr><td>1.5 mm² AWG 16</td><td>1.75 mm</td><td>9.5 mm</td></tr><tr><td>2.5 mm² AWG 14</td><td>2.25 mm</td><td>9.5 mm</td></tr><tr><td>4 mm² AWG 12</td><td>2.85 mm</td><td>9.5 mm</td></tr><tr><td>6 mm² AWG 10</td><td>3.5 mm</td><td>9.5 mm</td></tr><tr><td>10 mm² AWG 8</td><td>4.3 mm</td><td>12 mm</td></tr></table>	Conductor cross-section	Ø	Stripping length	1.5 mm² AWG 16	1.75 mm	9.5 mm	2.5 mm² AWG 14	2.25 mm	9.5 mm	4 mm² AWG 12	2.85 mm	9.5 mm	6 mm² AWG 10	3.5 mm	9.5 mm	10 mm² AWG 8	4.3 mm	12 mm			
Conductor cross-section	Ø	Stripping length																							
1.5 mm² AWG 16	1.75 mm	9.5 mm																							
2.5 mm² AWG 14	2.25 mm	9.5 mm																							
4 mm² AWG 12	2.85 mm	9.5 mm																							
6 mm² AWG 10	3.5 mm	9.5 mm																							
10 mm² AWG 8	4.3 mm	12 mm																							
Han D®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	 <table><tr><th>Wire gauge</th><th>Ø</th><th>Stripping length</th></tr><tr><td>0.14-0.37 mm² AWG 26-22</td><td>0.9 mm</td><td>8 mm</td></tr><tr><td>0.5 mm² AWG 20</td><td>1.1 mm</td><td>8 mm</td></tr><tr><td>0.75 mm² AWG 18</td><td>1.3 mm</td><td>8 mm</td></tr><tr><td>1 mm² AWG 18</td><td>1.45 mm</td><td>8 mm</td></tr><tr><td>1.5 mm² AWG 16</td><td>1.75 mm</td><td>8 mm</td></tr><tr><td>2.5 mm² AWG 14</td><td>2.25 mm</td><td>6 mm</td></tr></table>	Wire gauge	Ø	Stripping length	0.14-0.37 mm² AWG 26-22	0.9 mm	8 mm	0.5 mm² AWG 20	1.1 mm	8 mm	0.75 mm² AWG 18	1.3 mm	8 mm	1 mm² AWG 18	1.45 mm	8 mm	1.5 mm² AWG 16	1.75 mm	8 mm	2.5 mm² AWG 14	2.25 mm	6 mm
Wire gauge	Ø	Stripping length																							
0.14-0.37 mm² AWG 26-22	0.9 mm	8 mm																							
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1.5 mm² AWG 16	1.75 mm	8 mm																							
2.5 mm² AWG 14	2.25 mm	6 mm																							
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	 <table><tr><th>Wire gauge</th><th>Ø</th><th>Stripping length</th></tr><tr><td>0.14-0.37 mm² AWG 26-22</td><td>0.9 mm</td><td>8 mm</td></tr><tr><td>0.5 mm² AWG 20</td><td>1.1 mm</td><td>8 mm</td></tr><tr><td>0.75 mm² AWG 18</td><td>1.3 mm</td><td>8 mm</td></tr><tr><td>1 mm² AWG 18</td><td>1.45 mm</td><td>8 mm</td></tr><tr><td>1.5 mm² AWG 16</td><td>1.75 mm</td><td>8 mm</td></tr><tr><td>2.5 mm² AWG 14</td><td>2.25 mm</td><td>6 mm</td></tr></table>	Wire gauge	Ø	Stripping length	0.14-0.37 mm² AWG 26-22	0.9 mm	8 mm	0.5 mm² AWG 20	1.1 mm	8 mm	0.75 mm² AWG 18	1.3 mm	8 mm	1 mm² AWG 18	1.45 mm	8 mm	1.5 mm² AWG 16	1.75 mm	8 mm	2.5 mm² AWG 14	2.25 mm	6 mm
Wire gauge	Ø	Stripping length																							
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1 mm² AWG 18	1.45 mm	8 mm																							
1.5 mm² AWG 16	1.75 mm	8 mm																							
2.5 mm² AWG 14	2.25 mm	6 mm																							
Coding element 		09 12 000 9922	09 12 000 9922																						

Standard Hoods/housings for industrial applications
Double locking lever

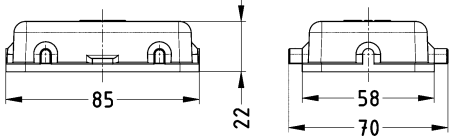
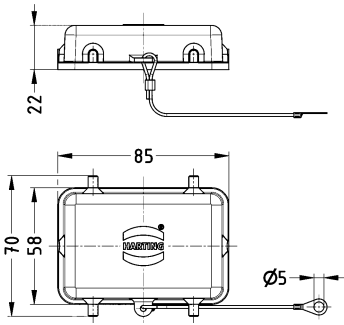


Technical characteristics

Limiting temperature -40 ... +125 °C
Degree of protection acc. to IEC IP65
60529

Specifications and approvals

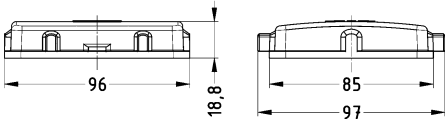
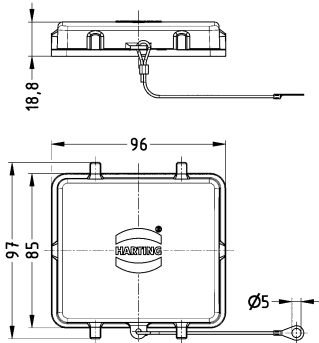
DNV GL

Identification	Part number	Drawing (dimensions in mm)
Han A®, Protection cover, for bulkhead mounted housings, for surface mounted housings, Thermoplastic 	09 20 032 5407	
Han A®, Protection cover, for bulkhead mounted housings, for surface mounted housings, Thermoplastic, With fixing cord 	09 20 032 5408	

Standard hoods/housings for industrial connectors
Double locking lever



Han

Technical characteristics		Specifications and approvals	
Limiting temperature-40 ... +125 °C Degree of protection acc. to IEC IP65 60529		DNV GL	
Identification	Part number	Drawing (dimensions in mm)	
Han® B, Protection cover, for bulkhead mounted housings, for surface mounted housings, Thermoplastic  Han® B, Protection cover, for bulkhead mounted housings, for surface mounted housings, Thermoplastic, With fixing cord 	09 30 032 5405 09 30 032 5406	 	

Standard hoods/housings for industrial connectors
Single locking lever



Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP65
Material (hood/housing)	Aluminium die-cast
Surface (hood/housing)	Powder-coated

Technical characteristics

Colour (hood/housing)	RAL 7037 (dust grey)
Material (seal)	NBR
Material (locking)	Polycarbonate, Stainless steel
Colour (locking)	RAL 7037 (dust grey)
Flammability acc. to UL 94 (locking levers)	V-0

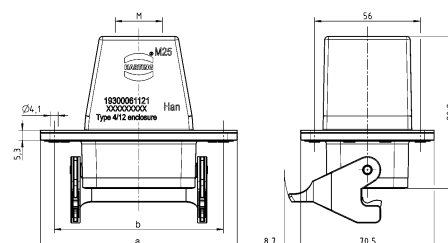
Identification	Cable entry	Part number	Drawing (dimensions in mm)
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Han® B,
Panel feed through housing,
Top entry,
Han-Easy Lock®,
6 B



1x M25
1x M32

19 30 006 1121
19 30 006 1122



Han® B,
Panel feed through housing,
Top entry,
Han-Easy Lock®,
10 B



1x M25
1x M32

19 30 010 1131
19 30 010 1132

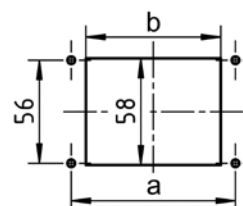
Size	a	b
6 B	104 mm	89.5 mm
10 B	126.5 mm	112 mm
16 B	141 mm	126.5 mm
24 B	168.5 mm	154 mm

Han® B,
Panel feed through housing,
Top entry,
Han-Easy Lock®,
16 B



1x M32
1x M40

19 30 016 1131
19 30 016 1132



Han® B,
Panel feed through housing,
Top entry,
Han-Easy Lock®,
24 B



1x M32
1x M40

19 30 024 1131
19 30 024 1132

Size	a	b
6 B	89.5	73.5
10 B	112 mm	96 mm
16 B	126.5 mm	110.5 mm
24 B	154 mm	138 mm

Standard hoods/housings for industrial connectors
Double locking lever



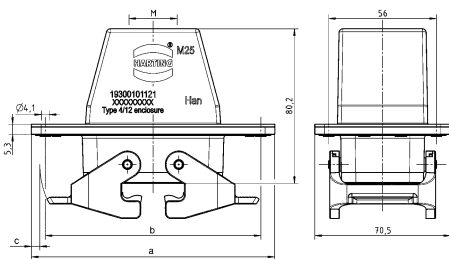
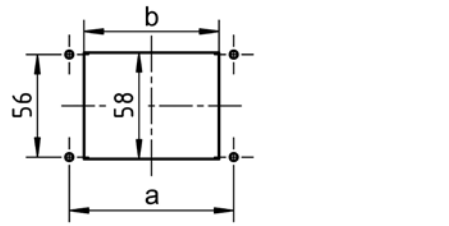
Han

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP65
Material (hood/housing)	Aluminium die-cast
Surface (hood/housing)	Powder-coated

Technical characteristics

Colour (hood/housing)	RAL 7037 (dust grey)
Material (seal)	NBR
Material (locking)	Polycarbonate, Stainless steel
Colour (locking)	RAL 7037 (dust grey)
Flammability acc. to UL 94 (locking levers)	V-0

Identification	Cable entry	Part number	Drawing (dimensions in mm)																
Han® B, Panel feed through housing, Top entry, Han-Easy Lock®, 10 B	1x M25 1x M32	19 30 010 1121 19 30 010 1122	 <table><tr><th>Size</th><th>a</th><th>b</th><th>c</th></tr><tr><td>10 B</td><td>126.5 mm</td><td>112 mm</td><td>4.4 mm</td></tr><tr><td>16 B</td><td>141 mm</td><td>126.5 mm</td><td>1.2 mm</td></tr><tr><td>24 B</td><td>168.5 mm</td><td>154</td><td>1.7 mm</td></tr></table>	Size	a	b	c	10 B	126.5 mm	112 mm	4.4 mm	16 B	141 mm	126.5 mm	1.2 mm	24 B	168.5 mm	154	1.7 mm
Size	a	b	c																
10 B	126.5 mm	112 mm	4.4 mm																
16 B	141 mm	126.5 mm	1.2 mm																
24 B	168.5 mm	154	1.7 mm																
Han® B, Panel feed through housing, Top entry, Han-Easy Lock®, 16 B	1x M32 1x M40	19 30 016 1121 19 30 016 1122	 <table><tr><th>Size</th><th>a</th><th>b</th><th>c</th></tr><tr><td>10 B</td><td>126.5 mm</td><td>112 mm</td><td>4.4 mm</td></tr><tr><td>16 B</td><td>141 mm</td><td>126.5 mm</td><td>1.2 mm</td></tr><tr><td>24 B</td><td>168.5 mm</td><td>154</td><td>1.7 mm</td></tr></table>	Size	a	b	c	10 B	126.5 mm	112 mm	4.4 mm	16 B	141 mm	126.5 mm	1.2 mm	24 B	168.5 mm	154	1.7 mm
Size	a	b	c																
10 B	126.5 mm	112 mm	4.4 mm																
16 B	141 mm	126.5 mm	1.2 mm																
24 B	168.5 mm	154	1.7 mm																
Han® B, Panel feed through housing, Top entry, Han-Easy Lock®, 24 B	1x M32 1x M40	19 30 024 1121 19 30 024 1122	 <table><tr><th>Size</th><th>a</th><th>b</th></tr><tr><td>10 B</td><td>112 mm</td><td>96 mm</td></tr><tr><td>16 B</td><td>126.5 mm</td><td>110.5 mm</td></tr><tr><td>24 B</td><td>154 mm</td><td>138 mm</td></tr></table>	Size	a	b	10 B	112 mm	96 mm	16 B	126.5 mm	110.5 mm	24 B	154 mm	138 mm				
Size	a	b																	
10 B	112 mm	96 mm																	
16 B	126.5 mm	110.5 mm																	
24 B	154 mm	138 mm																	

Standard hoods/housings for industrial connectors
Central locking lever (on the hood)

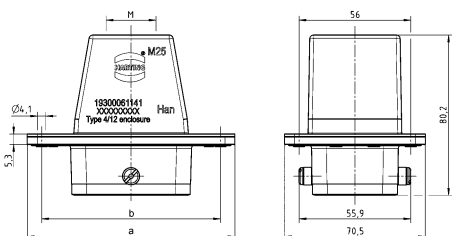
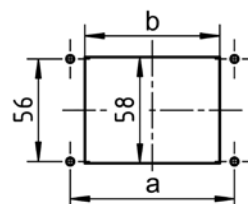


Technical characteristics

Limiting temperature -40 ... +125 °C
Degree of protection acc. to IEC IP65
60529

Technical characteristics

Material (hood/housing) Aluminium die-cast
Surface (hood/housing) Powder-coated
Colour (hood/housing) RAL 7037 (dust grey)
Material (seal) NBR

Identification	Cable entry	Part number	Drawing (dimensions in mm)															
Han® B, Panel feed through housing, Top entry, 6 B	1x M25 1x M32	19 30 006 1141 19 30 006 1142																
Han® B, Panel feed through housing, Top entry, 10 B	1x M25 1x M32	19 30 010 1141 19 30 010 1142	<table><tr><th>Size</th><th>a</th><th>b</th></tr><tr><td>6 B</td><td>104 mm</td><td>89.5 mm</td></tr><tr><td>10 B</td><td>126.5 mm</td><td>112 mm</td></tr><tr><td>16 B</td><td>141 mm</td><td>126.5 mm</td></tr><tr><td>24 B</td><td>168.5 mm</td><td>154</td></tr></table>	Size	a	b	6 B	104 mm	89.5 mm	10 B	126.5 mm	112 mm	16 B	141 mm	126.5 mm	24 B	168.5 mm	154
Size	a	b																
6 B	104 mm	89.5 mm																
10 B	126.5 mm	112 mm																
16 B	141 mm	126.5 mm																
24 B	168.5 mm	154																
Han® B, Panel feed through housing, Top entry, 16 B	1x M32 1x M40	19 30 016 1141 19 30 016 1142																
Han® B, Panel feed through housing, Top entry, 24 B	1x M32 1x M40	19 30 024 1141 19 30 024 1142	<table><tr><th>Size</th><th>a</th><th>b</th></tr><tr><td>6 B</td><td>89.5</td><td>73.5</td></tr><tr><td>10 B</td><td>112 mm</td><td>96 mm</td></tr><tr><td>16 B</td><td>126.5 mm</td><td>110.5 mm</td></tr><tr><td>24 B</td><td>154 mm</td><td>138 mm</td></tr></table>	Size	a	b	6 B	89.5	73.5	10 B	112 mm	96 mm	16 B	126.5 mm	110.5 mm	24 B	154 mm	138 mm
Size	a	b																
6 B	89.5	73.5																
10 B	112 mm	96 mm																
16 B	126.5 mm	110.5 mm																
24 B	154 mm	138 mm																

Standard hoods/housings for industrial connectors
Double locking lever



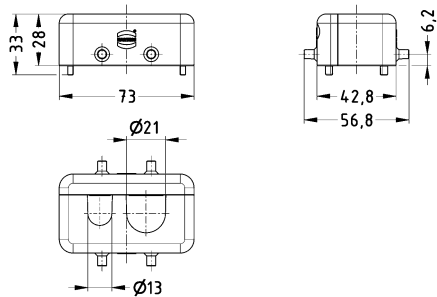
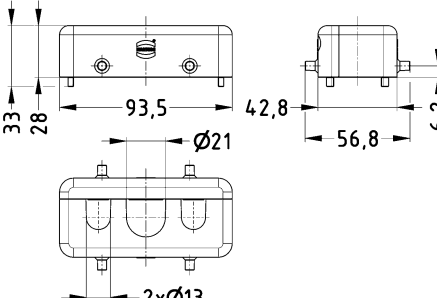
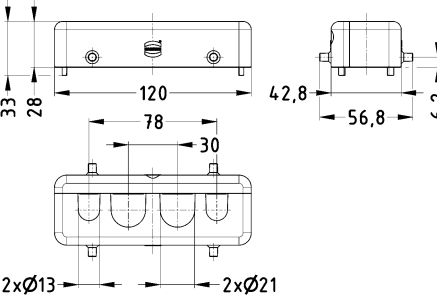
Han

Features

- Allows the entry of pre-assembled cables into a switch cabinet
- Robust design
- High pole cable entry seals for up to 10 different cables
- For sealing and feed through of pre-assembled cables

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP65
Material (hood/housing)	Polycarbonate
Colour (hood/housing)	RAL 7037 (dust grey)
Material (seal)	NBR

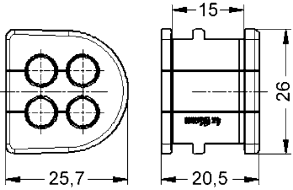
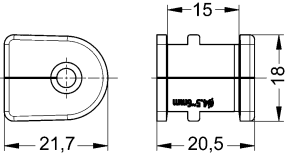
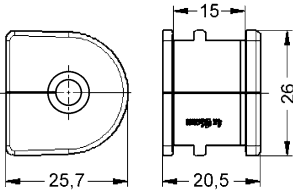
Identification	Cable entry	Part number	Drawing (dimensions in mm)
Han® B, Panel feed through housing, Top entry, 10 B, Pack contents: 2 split hood halves, 2x M4 screw  Please order cable entry seals separately.	2x Integrated	09 30 010 0498	
Han® B, Panel feed through housing, Top entry, 16 B, Pack contents: 2 split hood halves, 2x M4 screw  Please order cable entry seals separately.	3x Integrated	09 30 016 0498	
Han® B, Panel feed through housing, Top entry, 24 B, Pack contents: 2 split hood halves, 3x M4 screw  Please order cable entry seals separately.	4x Integrated	09 30 024 0498	

Technical characteristics

Material (accessories) NBR

Technical characteristics

Colour (accessories) Black

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Cable entry seal, 4 cable entries, Wide version	... 6	09 00 000 6004	
Cable entry seal, 1 cable entry, Narrow version	4.5 ... 6 6 ... 7.5 7.5 ... 9	09 00 000 6005 09 00 000 6006 09 00 000 6007	
Cable entry seal, 1 cable entry, Wide version	9 ... 10.5 10.5 ... 12 12 ... 13.5 13.5 ... 15 15 ... 16	09 00 000 6008 09 00 000 6009 09 00 000 6010 09 00 000 6011 09 00 000 6012	



Features

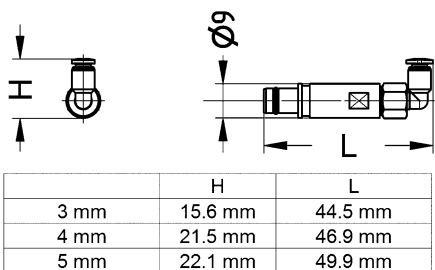
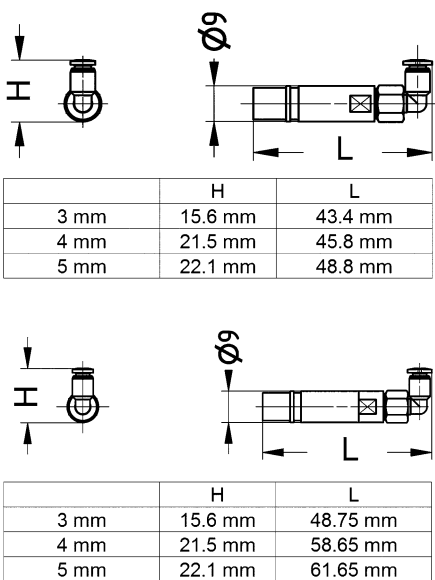
- for the transmission of clean and dry compressed air
- Female contacts with / without shut-off

Technical characteristics

Limiting temperature	-20 ... +85 °C
Tube outer diameter	3 mm, 4 mm, 6 mm
Material (seal)	NBR
Material (contacts)	Brass

Specifications and approvals



Identification		Part number		Drawing (dimensions in mm)
		Male	Female	
Pneumatic contact, Angled	3 mm	09 14 000 7353	09 14 000 7453	
	4 mm	09 14 000 7354	09 14 000 7454	
	6 mm	09 14 000 7356	09 14 000 7456	
Pneumatic contact, With shut-off, Angled	3 mm		09 14 000 7463	
	4 mm		09 14 000 7464	
	6 mm		09 14 000 7466	

Contents	Page
HARTING MICA Wireless.....	2.2
HARTING MICA 2.....	2.3



Features

- With full suite of wireless connectivity
- GSM: 2G/3G/4G
- GNSS (GPS, Galileo, Glonass)
- Customisable function board
- IP67

Technical characteristics

Limiting temperature	-20 ... +60 °C
Storage temperature	-25 ... +85 °C
Degree of protection acc. to IEC 60529	IP67
Supply voltage	24 V DC
Processor	Dual core 1.3 GHz ARM
Memory	2 GB RAM, 16 GB eMMC
Fixing	On-wall or DIN rail mounting
Interfaces	GSM: 2G/3G/4G, WiFi: 802.11a/b/g/n, WPA/WPA2 Enterprise, GNSS (GPS, Galileo, Glonass)
Diagnostic display	LEDs to display operating state, LEDs to display connection status
Material (hood/housing)	Aluminium
Surface (hood/housing)	Powder-coated
RoHS	compliant

Specifications and approvals

IEC 60068-2-6
IEC 60068-2-27
EN 301489
EN 60950
IEC 50364



Identification

HARTING IIC,
MICA,
Wireless



Part number

20 95 000 0010 00

Drawing (dimensions in mm)



Mica

Features

- Dual core 1.3 GHz processor
- Increased processing speed compared to MICA Basic
- For demanding edge-computing applications
- Customisable function board
- IP67
- Power over Ethernet (PoE)

Technical characteristics

Limiting temperature	-20 ... +70 °C
Storage temperature	-25 ... +85 °C
Degree of protection acc. to IEC 60529	IP67
Supply voltage	24 V DC
Processor	Dual core 1.3 GHz ARM
Memory	2 GB RAM, 16 GB eMMC
Fixing	On-wall or DIN rail mounting
Interfaces	Ethernet (TCP/IP) 10/100 Mbit/s, Full Spec. 802.3 via IP67 M12 connector, Up to 8 digital GPIOs
Diagnostic display	LEDs to display operating state, LEDs to display connection status
Material (hood/housing)	Aluminium
Surface (hood/housing)	Powder-coated
RoHS	compliant

Specifications and approvals

IEC 60068-2-6
IEC 60068-2-27
EN 301489
EN 60950
IEC 50364

Identification	Part number	Drawing (dimensions in mm)
HARTING IIC, MICA, 2 	20 95 000 0012 00	

Contents	Page
Ha-VIS RF-ANT-WR24.....	4.2
Ha-VIS RFID FT on metal (NT)	4.5
Ha-VIS RF-R300-M	4.6
Ha-VIS RF-R300-W.....	4.7
Accessories	4.8

Ha-VIS RF-ANT-WR24-i for harsh industrial applications



Features

- Designed for harshest industrial environments
- Circular UHF antenna with wide range
- High antenna gain of 9 dBic

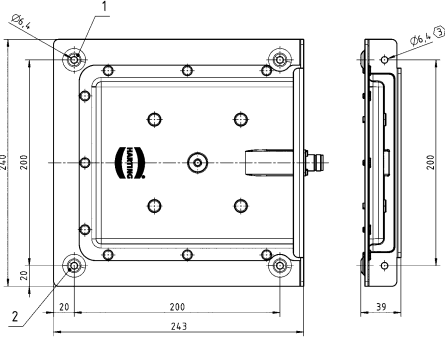
Technical characteristics

Operating temperature	-45 ... +65 °C
Degree of protection acc. to IEC 60529	IP54
Frequency	865 ... 868 MHz, 902 ... 928 MHz
Impedance	50 Ω
Polarisation	Circular (right)
Gain	9 dBic
Opening angle	67 °
Transmitting power	4 W EIRP
Down tilt	≤10 °
Fixing	Fixing hole 4 x 6.4 mm
Termination method	N socket
RoHS	compliant

Details

The antennas are fulfilling the requirements of the harshest industrial applications. Due to the metal ground plate the antenna could be mounted directly on metal. In addition this design is increasing the overall robustness.

Read ranges from 1 to 12 meters could be fulfilled in combination with HARTING UHF RFID readers and passive UHF transponders.

Identification	Part number		Drawing (dimensions in mm)
Ha-VIS RFID, Antenna, for harsh industrial applications 	865 ... 868 MHz 902 ... 928 MHz	20 93 201 0501 20 93 201 0504	 Use always 4 mounting holes (3) Use these two mounting holes (Ø 6.4 mm) only in combination with holes 1 + 2.



Ha-VIS RF-ANT-WR24-t for high temperature applications



Features

- Designed for harshest environments
- Circular UHF antenna with wide range
- High temperature antenna (+150 °C)

Technical characteristics

Operating temperature	-45 ... +150 °C
Degree of protection acc. to IEC 60529	IP64
Frequency	865 ... 868 MHz, 902 ... 928 MHz
Impedance	50 Ω
Polarisation	Circular (right)
Gain	8 dBic
Opening angle	70 °
Transmitting power	4 W EIRP
Down tilt	≤10 °
Fixing	Fixing hole 4 x 6.4 mm
Termination method	N socket
RoHS	compliant

Specifications and approvals

EN 45545-2
EN 61373
DIN EN 50467
DIN EN 60512-11-6
DIN ISO 1431-1

Details

Meets the highest demands in railway and industrial applications. Optimised to allow even high temperature applications. Thanks to the metal design, the antenna withstands mechanical influences and can be mounted directly on metal.

Read ranges from 1 to 12 meters could be fulfilled in combination with HARTING UHF RFID readers and passive UHF transponders.

Identification

Ha-VIS RFID,
Antenna,
for high temperature applications

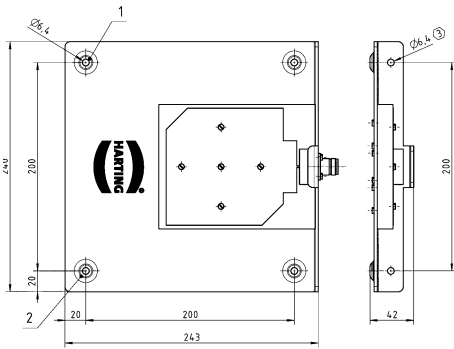


865 ... 868 MHz
902 ... 928 MHz

Part number

20 93 201 0503
20 93 201 0506

Drawing
(dimensions in mm)



Use always 4 mounting holes
(3) Use these two mounting holes (Ø 6.4 mm) only in combination with holes 1 + 2.



RFID

Features

- High read ranges on metal
- Scratch- and smudge-resistant by polycarbonate film
- Washable, resistant to chemicals
- Flexible mounting on different forms
- Flexible printing possible (barcode, datamatrix, custom logo / name)

Technical characteristics

Operating temperature	-40 ... +80 °C
Storage temperature	-40 ... +80 °C
Degree of protection acc. to IEC 60529	IP64, IP67, IP69K
Frequency	860 ... 870 MHz, 900 ... 930 MHz
EPC memory	128 Bit
User memory	512 Bit
Fixing	Glue
Colour	White

Details

Applications on metallic and non-conducting surfaces

Metal container detection

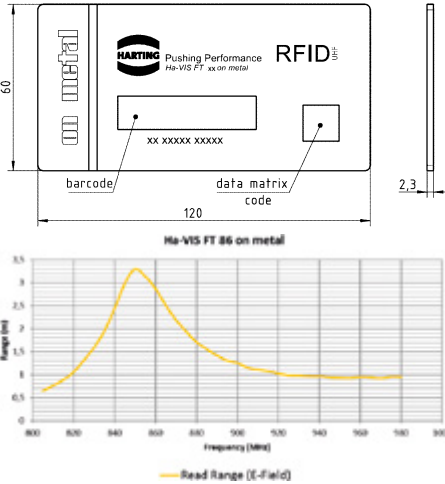
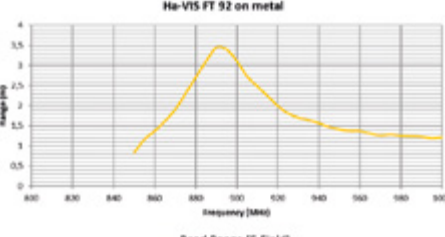
Container management

Asset management

Intralogistic

EPC C1 Gen2 compatible

Read range (on metal, 2 W ERP): > 2 m

Identification		Part number	Drawing (dimensions in mm)
Ha-VIS RFID FT series, Transponder, FT 86 on metal, Pack contents: Packaging unit: 50 pieces	860 ... 870 MHz	20 92 641 3786	
Ha-VIS RFID FT series, Transponder, FT 92 on metal, Pack contents: Packaging unit: 50 pieces	900 ... 930 MHz	20 92 641 3792	



Features

- 2G/3G/4G communication and WLAN-capable (2G only in Europe)
- Designed for the harsh industrial environment
- Tested according industry standards
- Ready for software customisation
- Ha-VIS Middleware compatible
- OPC UA for AutoID Companion specification
- Modbus/TCP communication
- GS1® ALE 1.1 based Middleware included

Technical characteristics

Limiting temperature	-20 ... +55 °C
Storage temperature	-25 ... +85 °C
Degree of protection acc. to IEC 60529	IP67
Supply voltage	24 V DC
Frequency	865 ... 928 MHz
Transmitting power	0.5 W
Processor	1 GHz ARM
Memory	1 GB RAM, 4 GB eMMC, Up to 32 GB Flash (via Micro SD Card)
Operating system	Linux (Kernel 3.x.x)
Fixing	DIN rail mounting kit
Termination method	2 x RP-TNC connector (50 Ohm), reader internally multiplexed
Interfaces	GSM: 2G/3G/4G, WiFi: 802.11a/b/g/n, WPA/WPA2 Enterprise, Bluetooth 4/BLE, GNSS (GPS, Galileo, Glonass)
Protocol	EPC Class 1 Gen2 (ISO 18000-6c), LLRP (Low Level Reader Protocol, worldwide standardised), OPC UA for AutoID Companion specification, Modbus/TCP for an easy PLC connection, Embedded middleware functionality based on the GS1® ALE 1.1 standard
Material (hood/housing)	Aluminium
Surface (hood/housing)	Powder-coated

Specifications and approvals

EN 301489
 EN 302208
 IEC 60068-2-27
 EN 50364
 IEC 60068-2-6
 EN 60950
 FCC 47 FCR Part 15
 IC RSS-GEN, RSS-210

Details

The Ha-VIS RF-R300-M is a very robust industry and railway approved RFID reader. It is supporting 4G, WLAN and Bluetooth connection.

This eliminates the need for expensive Ethernet cabling. The data could be transferred easily via LTE or WLAN networks. Bluetooth sensors signals could be processed via the Bluetooth connection to trigger the reader.

All components are designed for a very long lifetime in harsh industrial environments.

The modular software design of the new reader gives HARTING the ability to support various communications protocols such as LLRP, OPC UA, Modbus TCP or even the implementation of a very powerful middleware functionality based on ALE 1.1 standard of the GS1®. In addition, customer-specific variants can be supplied.

Up to 100 transponder/s

Up to 10 meters, related to the transponder type and environmental conditions

Identification	Part number	Drawing (dimensions in mm)
----------------	-------------	-------------------------------

Ha-VIS RFID,
Reader,
RF-R300-M

20 91 105 2101





Features

- WLAN-capable
- Designed for the harsh industrial environment
- Tested according industry standards
- Ready for software customisation
- Ha-VIS Middleware compatible
- OPC UA for AutotD Companion specification
- Modbus/TCP communication
- GS1® ALE 1.1 based Middleware included

Technical characteristics

Limiting temperature	-20 ... +55 °C
Storage temperature	-25 ... +85 °C
Degree of protection acc. to IEC 60529	IP67
Supply voltage	24 V DC
Frequency	865 ... 928 MHz
Transmitting power	0.5 W
Processor	1 GHz ARM
Memory	1 GB RAM, 4 GB eMMC, Up to 32 GB Flash (via Micro SD Card)
Operating system	Linux (Kernel 3.x.x)
Fixing	DIN rail mounting kit
Termination method	2 x RP-TNC connector (50 Ohm), reader internally multiplexed
Interfaces	WiFi: 802.11a/b/g/n, WPA/WPA2 Enterprise, Bluetooth 4/BLE, GNSS (GPS, Galileo, Glonass)
Protocol	EPC Class 1 Gen2 (ISO 18000-6c), LLRP (Low Level Reader Protocol, worldwide standardised), OPC UA for AutotD Companion specification, Modbus/TCP for an easy PLC connection, Embedded middleware functionality based on the GS1® ALE 1.1 standard
Material (hood/housing)	Aluminium
Surface (hood/housing)	Powder-coated

Specifications and approvals

EN 301489
 EN 302208
 IEC 60068-2-27
 EN 50364
 IEC 60068-2-6
 EN 60950
 FCC 47 FCR Part 15
 IC RSS-GEN, RSS-210

Details

The Ha-VIS RF-R300-W is a very robust industry approved RFID reader. It is supporting WLAN and Bluetooth connections.

This eliminates the need for expensive Ethernet cabling. The data could be transferred easily via LTE or WLAN networks. Bluetooth sensors signals could be processed via the Bluetooth connection to trigger the reader.

All components are designed for a very long lifetime in harsh industrial environments.

The modular software design of the new reader gives HARTING the ability to support various communications protocols such as LLRP, OPC UA, Modbus TCP or even the implementation of a very powerful middleware functionality based on ALE 1.1 standard of the GS1®. In addition, customer-specific variants can be supplied.

Up to 100 transponder/s

Up to 10 meters, related to the transponder type and environmental conditions

Identification	Part number	Drawing (dimensions in mm)
----------------	-------------	-------------------------------

Ha-VIS RFID,
Reader,
RF-R300-W



20 91 105 2201

RFID



Technical characteristics		Technical characteristics	
Number of cores	12	Colour (cable)	Grey, Black
Core structure	12x 0.14 mm ²	Material (accessories)	Aluminium, Stainless steel
Connector 1	M12, A-coding, Male, Straight, TNC connector	RoHS	compliant with exemption
Connector 2	TNC-RP connector	Details Other cable lengths on request!	
Impedance	50 Ω		
Material (cable)	PVC		

Identification	Cable length	Part number	Drawing (dimensions in mm)
Ha-VIS RFID, Software update ALE 1.1, for RF-R3x0		26 99 400 0000 02	
Ha-VIS RFID, DIN rail mounting kit, Ha-VIS RF-R300		20 95 200 0004	
Ha-VIS RFID, Wall mounting kit, Ha-VIS RF-R300		20 95 300 0007	
Circular connectors M12, Copper cable (round), Pre-assembled on one side	2 m	21 34 840 0C79 020	
Copper cable (round), Coax cable, Pre-assembled on both sides	3 m	20 93 204 0121	

Contents	Page
HARTING ix Industrial®	6.2
preLink®	6.10
Han® PushPull Power L	6.12
Mini DisplayPort.....	6.16
D-Sub InduCom hoods	6.18
D-Sub InduCom.....	6.21

Number of contacts

8
+ 2x GND



Features

- Miniaturised Ethernet data interface suitable for industry in acc. to IEC 61076-3-124 type A
- Robust industrial design
- 360° shielding
- Category of transmission Cat. 6_A
- 5000 mating cycles
- 70 % reduced size compared to RJ45
- Suitable for all PoE versions

Technical characteristics

Number of contacts	8
Additional contacts	+ 2x GND
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage U _{r.m.s.}	0.5 kV
Contact resistance	≤30 mΩ
Shielding resistance	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥5000
Degree of protection acc. to IEC 60529	IP20
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Insertion force	≤25 N
Withdrawal force	≤25 N
Material (insert)	LCP
Colour (insert)	Black
Material (contacts)	Copper alloy
Flammability acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

IEC 61076-3-124



Details

Cable assemblies see chapter 8

Identification	Part number	Drawing (dimensions in mm)
HARTING ix Industrial[®], PCB connector, Angled, Solder termination, Fully shielded, 360° shielding contact, Pack contents: 1 sample piece Contact surface: Au over Ni	09 45 281 2560 333	
HARTING ix Industrial[®], PCB connector, Angled, Solder termination, Fully shielded, 360° shielding contact, Pack contents: 400 pieces on reel Contact surface: Au over Ni	09 45 281 2560	

Number of contacts

8
+ 2x GND



Features

- Miniaturised Ethernet data interface suitable for industry in acc. to IEC 61076-3-124 type A
- Robust industrial design
- 360° shielding
- Category of transmission Cat. 6_A
- 5000 mating cycles
- Suitable for all PoE versions

Technical characteristics

Number of contacts	8
Additional contacts	+ 2x GND
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage U _{r.m.s.}	0.5 kV
Contact resistance	≤30 mΩ
Shielding resistance	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥5000
Degree of protection acc. to IEC 60529	IP20
Cable diameter	6.3 ... 7.2 mm
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Insertion force	≤25 N
Withdrawal force	≤25 N
Material (insert)	LCP
Colour (insert)	Black
Material (contacts)	Copper alloy
Flammability acc. to UL 94	V-0

Specifications and approvals

IEC 61076-3-124



Details

Cable assemblies see chapter 8

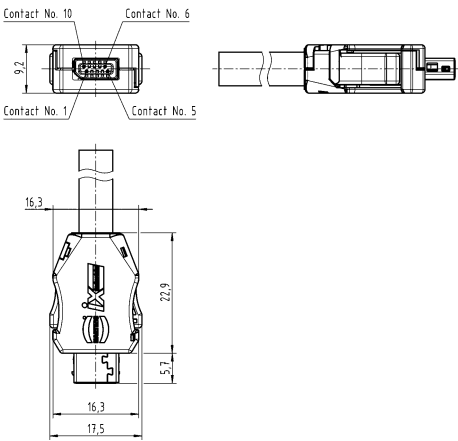
Identification

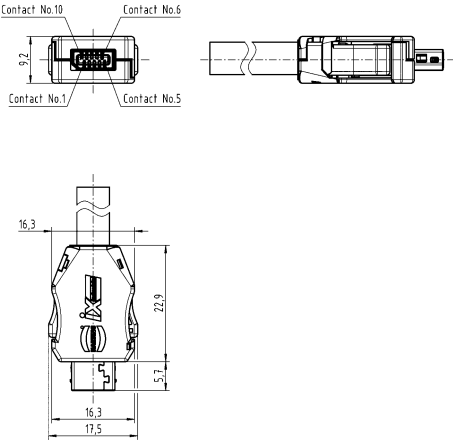
HARTING ix Industrial®,
Cable connector,
Solder termination,
Fully shielded, 360° shielding contact,
for AWG 28/7 - 22/7 and conductor diameters up to 1.55 mm,
Pack contents:
Packaging with 100 pieces
Contact surface:
Au over Ni

Part number

09 45 181 2560 XL

Drawing
(dimensions in mm)



Identification	Part number	Drawing (dimensions in mm)
HARTING ix Industrial®, Cable connector, IDC termination, Fully shielded, 360° shielding contact, for AWG 28/7 - 26/7 and conductor diameters from 0.95 - 1.05 mm, Pack contents: Packaging with 100 pieces Contact surface: Au over Ni	09 45 181 2561 XL	
Assembly tool, for HARTING ix Industrial® to assemble the single wire to the IDC and the cable strain relief crimping	09 45 800 0181	

Inter-
face

10

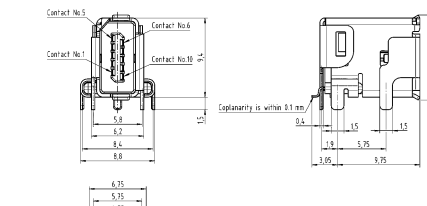
Interface



- Miniaturised interface for signals and bus systems in acc. to IEC 61076-3-124 type B, suitable for industrial use
- Robust industrial design
- 360° shielding
- 5000 mating cycles
- Very small and space saving interface

Number of contacts	10
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage $U_{r.m.s.}$	0.5 kV
Contact resistance	≤ 30 m Ω
Shielding resistance	≤ 100 m Ω
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥ 5000
Degree of protection acc. to IEC 60529	IP20
Insertion force	≤ 25 N
Withdrawal force	≤ 25 N
Material (insert)	LCP
Colour (insert)	Black
Material (contacts)	Copper alloy
Flammability acc. to UL 94	V-0

Cable assemblies see chapter 8

Identification	Part number	Drawing (dimensions in mm)
HARTING ix Industrial®, PCB connector, Solder termination, Fully shielded, 360° shielding contact, Pack contents: 1 sample piece Contact surface: Au over Ni	09 45 281 9000 333	 The drawing includes three views of the connector: a top view, a front view, and a side view. The top view shows a square footprint with dimensions 9.8 mm by 9.8 mm. It features four contact pads labeled Contact No. 1, Contact No. 5, Contact No. 6, and Contact No. 10. The front view shows the height of the connector, with dimensions 1.5 mm, 2.0 mm, and 8.8 mm. The side view shows the profile of the connector, with dimensions 0.4 mm, 1.9 mm, 5.75 mm, and 9.75 mm. A note indicates 'Coplanarity is within 0.1 mm'.

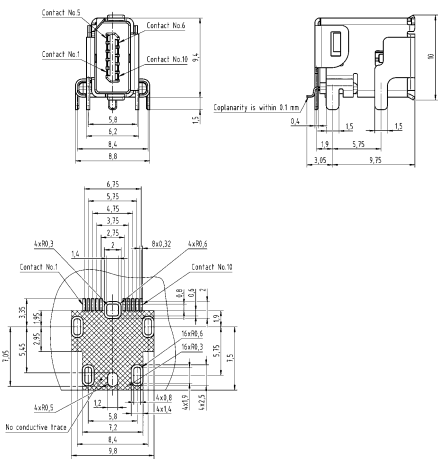
Identification

Part number

Drawing
(dimensions in mm)

HARTING ix Industrial®,
PCB connector,
Solder termination,
Fully shielded, 360° shielding contact,
Pack contents:
400 pieces on reel
Contact surface:
Au over Ni

09 45 281 9000



Inter-
face



Number of contacts

10



Features

- Miniaturised interface for signals and bus systems in acc. to IEC 61076-3-124 type B, suitable for industrial use
- Robust industrial design
- 360° shielding
- 5000 mating cycles
- Very small and space saving interface

Technical characteristics

Number of contacts	10
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage $U_{r.m.s.}$	0.5 kV
Contact resistance	$\leq 30 \text{ m}\Omega$
Shielding resistance	$\leq 100 \text{ m}\Omega$
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥ 5000
Degree of protection acc. to IEC 60529	IP20
Cable diameter	6.3 ... 7.2 mm
Insertion force	$\leq 25 \text{ N}$
Withdrawal force	$\leq 25 \text{ N}$
Material (insert)	LCP
Colour (insert)	Black
Material (contacts)	Copper alloy
Flammability acc. to UL 94	V-0

Specifications and approvals



Details

Cable assemblies see chapter 8

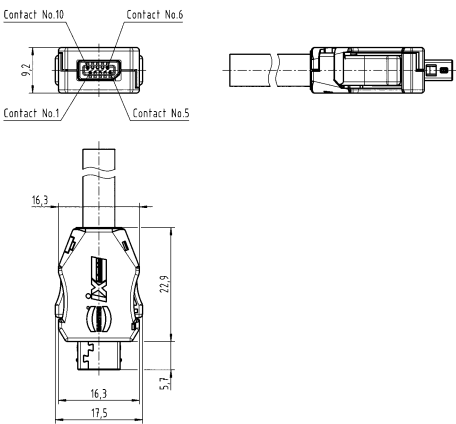
Identification

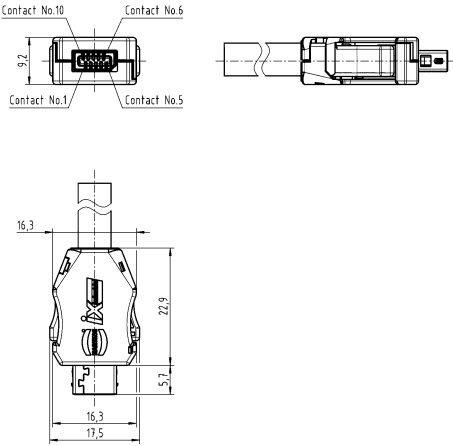
HARTING ix Industrial®,
Cable connector,
Solder termination,
Fully shielded, 360° shielding contact,
for AWG 28/7 - 22/7 and conductor diameters up to 1.55 mm,
Pack contents:
Packaging with 100 pieces
Contact surface:
Au over Ni

Part number

09 45 181 9000 XL

Drawing
(dimensions in mm)



Identification	Part number	Drawing (dimensions in mm)
HARTING ix Industrial®, Cable connector, IDC termination, Fully shielded, 360° shielding contact, for AWG 28/7 - 26/7 and conductor diameters from 0.95 - 1.05 mm, Pack contents: Packaging with 100 pieces Contact surface: Au over Ni	09 45 181 9001 XL	 Technical drawing of the cable connector. The top view shows a rectangular component with dimensions 16.3 mm (width) and 17.5 mm (length). The side view shows a height of 22.9 mm. The drawing also indicates the positions of Contact No. 1, Contact No. 5, Contact No. 6, and Contact No. 10. A dimension of 9.2 mm is shown for the width of the contact area.
Assembly tool, for HARTING ix Industrial® to assemble the single wire to the IDC and the cable strain relief crimping	09 45 800 0181	 Image of the assembly tool, a crimping plier with yellow handles.

Inter-
face

Number of contacts

8



Features

- For an easy device integration
- Robust design
- 360° shielding
- Suitable for wave and reflow soldering (PSL R0 and MSL 1)
- Suitable for termination of massive and flexible wires
- Suitable for all PoE versions
- Very fast preLink® termination technology

Technical characteristics

Number of contacts	8
Limiting temperature	-40 ... +85 °C
Mating cycles	≥50
Degree of protection acc. to IEC 60529	IP20
Cable diameter	5 ... 9.5 mm
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Colour (insert)	Yellow, White, Black
Material (hood/housing)	Thermoplastic, Copper-zinc alloy
Surface (hood/housing)	Nickel plated
RoHS	compliant

Specifications and approvals



Identification

Part number

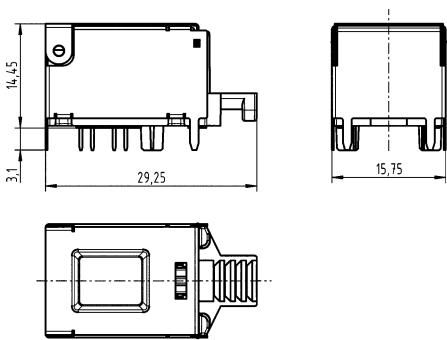
Drawing
(dimensions in mm)

preLink®,
PCB jack,
THR,
preLink® termination,
Fully shielded, 360° shielding contact



Please order terminal module separately

20 82 007 1100

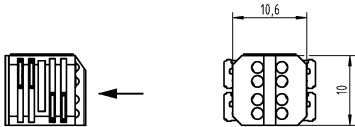


preLink®,
Terminal module,
8-pins,
IDC insulation displacement termination,
Conductor diameter 1.3 - 1.6 mm,
AWG 23/22,
IP20,
Pack contents:
Packaging unit: 10 pieces



Yellow

20 82 000 0001

Identification		Part number	Drawing (dimensions in mm)
preLink®, Terminal module, 8-pins, IDC insulation displacement termination, Conductor diameter 0.8 - 1.1 mm, AWG 27/26, IP20, Pack contents: Packaging unit: 10 pieces 	White	20 82 000 0003	
preLink®, Terminal module, 4-pin, AIDA compliant, IDC insulation displacement termination, Conductor diameter 1.3 - 1.6 mm, AWG 23/22, IP20, Pack contents: Packaging unit: 10 pieces 	Black	20 82 000 0005	 
preLink®, Terminal module, 4-pin, AIDA compliant, IDC insulation displacement termination, Conductor diameter 1.3 - 1.6 mm, AWG 23/22, IP20, Pack contents: Packaging unit: 100 pieces 	Black	20 82 000 0005 XL	
Assembly tool, for preLink® terminal module		20 82 000 9901	

Inter-
face

Number of contacts

4+ 

16 A 24 V 1.5 kV 3



Features

- HARTING PushPull technology
- Robust design
- Spring force connection
- AIDA compliant
- Enlarged size for an optimized connection of 2.5 mm² conductor cross sections

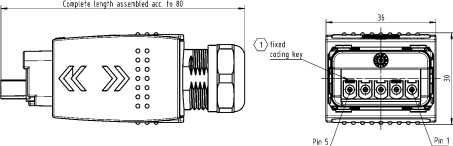
Technical characteristics

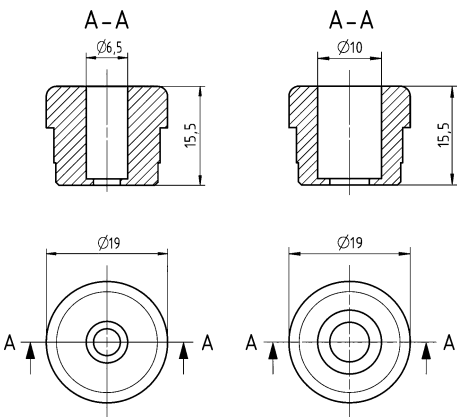
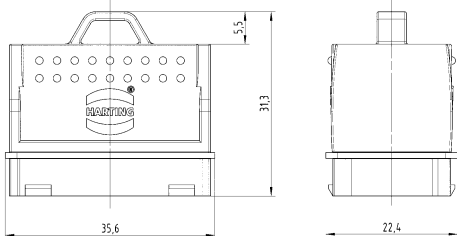
Number of contacts	4
Electrical data acc. to IEC 61984	16 A 24 V 1.5 kV 3
Rated current	16 A
Rated voltage	24 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Limiting temperature	-40 ... +70 °C
Mating cycles	≥100
Degree of protection acc. to IEC 60529	IP65, IP67
Material (insert)	PA
Material (hood/housing)	Zinc die-cast
Surface (hood/housing)	Nickel plated
Colour (hood/housing)	Silver
Material (accessories)	Thermoplastic
Colour (accessories)	Black
Flammability acc. to UL 94	V-0
RoHS	compliant with exemption, compliant

Specifications and approvals

IEC PAS 61076-3-126
UL 1059 XCFR2.E314677
CSA-C22.2 No. 158-10 XCFR8.E314677



Identification	Conductor cross-section (mm²)	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han® PushPull, Connector set, AIDA compliant, With fixed coding, Spring clamp termination, Pack contents: incl. metal housing and female insert 	0.75 ... 2.5	9 ... 13	09 35 433 0401	

Identification	Conductor cross-section (mm²)	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han® PushPull, Connector set, AIDA compliant, With variable coding, Spring clamp termination, Pack contents: incl. metal housing and female insert 	0.75 ... 2.5	9 ... 13	09 35 434 0401	
Seal, Pack contents: Packaging unit: 10 pieces 		4 ... 6.5 6 ... 10	09 35 004 9907 09 35 004 9908	
Han® PushPull, Protection cover, for connectors, for cable side, IP65 / IP67 			09 35 004 5412	

Inter-
face

4+ 



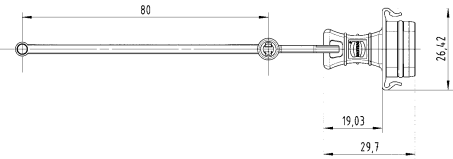

- HARTING PushPull technology
- Robust design
- Spring force connection
- AIDA compliant

Number of contacts	4
Electrical data acc. to IEC 61984	16 A 24 V 1.5 kV 3
Rated current	16 A
Rated voltage	24 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Limiting temperature	-40 ... +70 °C
Mating cycles	≥100
Degree of protection acc. to IEC 60529	IP65, IP67
Material (insert)	PA
Material (hood/housing)	Zinc die-cast
Surface (hood/housing)	Nickel plated
Material (seal)	NBR
Material (accessories)	Thermoplastic
Colour (accessories)	Black
Flammability acc. to UL 94	V-0
RoHS	compliant with exemption

IEC PAS 61076-3-126
UL 1059 XCFR2.E314677
CSA-C22.2 No. 158-10 XCFR8.E314677



6
.
14

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Han® PushPull, Protection cover, for device side, With fixing cord, IP65 / IP67		09 35 004 5402	

Inter-
face

Adapter

Inter-
face

Technical characteristics

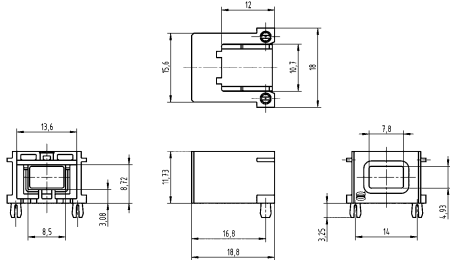
Limiting temperature	-40 ... +80 °C
Mating cycles	≥100
Degree of protection acc. to IEC 60529	IP20, IP65 / IP67, when mated
Material (hood/housing)	Polybutylene terephthalate (PBT)
Colour (hood/housing)	Black

Technical characteristics

RoHS	compliant
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Details

Cable assemblies see chapter 8

Identification	Part number	Drawing (dimensions in mm)
HARTING PushPull, Adapter, Polybutylene terephthalate (PBT) 	09 45 545 1002	

Number of contacts

20

0.5 A 30 V
PCB jack

Inter-
face

Technical characteristics

Number of contacts	20
Electrical data acc. to IEC 61984	0.5 A 30 V
Rated current	0.5 A
Rated voltage	30 V
Limiting temperature	-40 ... +80 °C

Technical characteristics

Mating cycles	≥100
Degree of protection acc. to IEC 60529	IP20, IP65 / IP67, when mated
Material (hood/housing)	Polyamide
Colour (hood/housing)	Black
RoHS	compliant

Identification

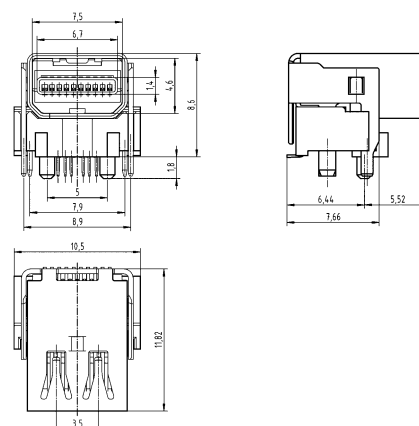
HARTING PushPull,
PCB jack,
Solder termination,
Polyamide



Part number

09 45 551 1000

Drawing
(dimensions in mm)





Inter-
face



Features

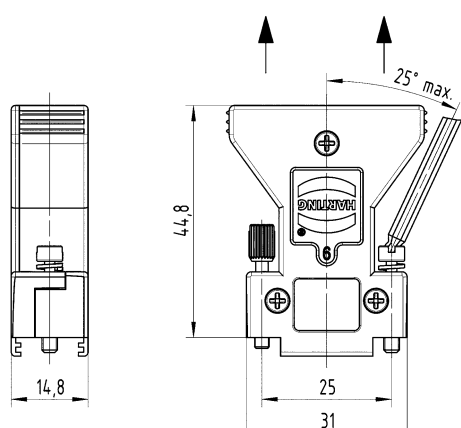
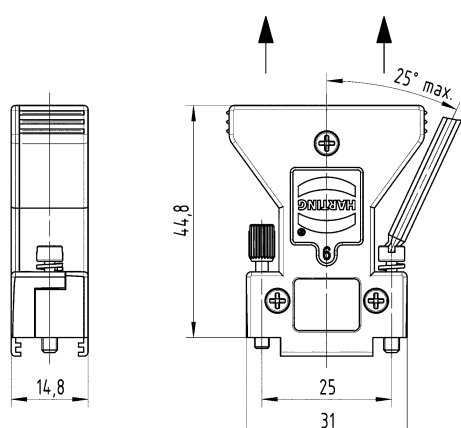
- easy access: side by side arrangement of housings easily possible - by connection of 2 cables the locking screws are easily accessible
- 360° shielding
- Low transfer impedance, best EMC behaviour
- Shock and vibration resistant acc. to EN 61373
- Variable screw options: knurled or hexagonal screw with 4-40 UNC- or M3-thread
- For cable diameter 5.0 up to 14.0 mm
- For D-Sub Standard, High Density and Mixed cable connectors

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP30
Material (hood/housing)	Zinc die-cast
Material (screw)	Brass, nickel plated

Details

An additional InduCom cable clamp or a crimp flange - ferrule combination is available dependant on the use of the cable.

Identification	Cable entry		Part number	Drawing (dimensions in mm)
D-Sub InduCom, Shell housing, Top entry, Hexagonal screw, With internal grounding block	2x	4-40 UNC	61 03 001 2110	 Tightening torque 0.4 Nm
	2x	M3	61 03 001 1110	
D-Sub InduCom, Shell housing, Top entry, Hexagonal screw, Without internal grounding block	2x	4-40 UNC	61 03 001 2110 010	
	2x	M3	61 03 001 1110 010	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, With internal grounding block	2x	4-40 UNC	61 03 001 0110	 Tightening torque 0.4 Nm
	2x	M3	61 03 001 3110	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, Without internal grounding block	2x	4-40 UNC	61 03 001 0110 010	
	2x	M3	61 03 001 3110 010	





Interface

Features

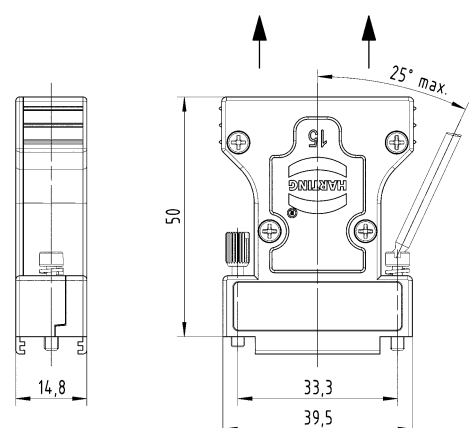
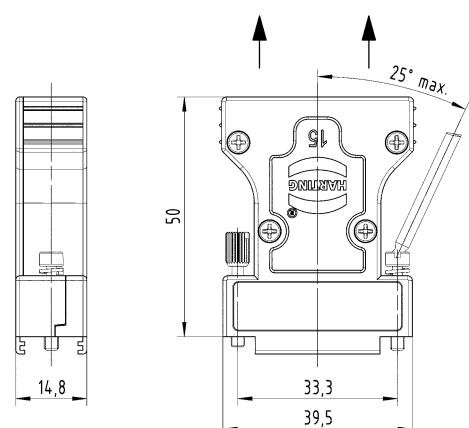
- easy access: side by side arrangement of housings easily possible - by connection of 2 cables the locking screws are easily accessible
- 360° shielding
- Low transfer impedance, best EMC behaviour
- Shock and vibration resistant acc. to EN 61373
- Variable screw options: knurled or hexagonal screw with 4-40 UNC- or M3-thread
- For cable diameter 5.0 up to 14.0 mm
- For D-Sub Standard, High Density and Mixed cable connectors

Technical characteristics

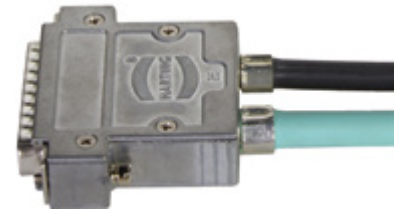
Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP30
Material (hood/housing)	Zinc die-cast
Material (screw)	Brass, nickel plated

Details

An additional InduCom cable clamp or a crimp flange - ferrule combination is available dependant on the use of the cable.

Identification	Cable entry		Part number	Drawing (dimensions in mm)
D-Sub InduCom, Shell housing, Top entry, Hexagonal screw, With internal grounding block	2x	4-40 UNC	61 03 001 2116	 Tightening torque 0.4 Nm
	2x	M3	61 03 001 1116	
D-Sub InduCom, Shell housing, Top entry, Hexagonal screw, Without internal grounding block	2x	4-40 UNC	61 03 001 2116 010	
	2x	M3	61 03 001 1116 010	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, With internal grounding block	2x	4-40 UNC	61 03 001 0116	 Tightening torque 0.4 Nm
	2x	M3	61 03 001 3116	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, Without internal grounding block	2x	4-40 UNC	61 03 001 0116 010	
	2x	M3	61 03 001 3116 010	





Features

- easy access: side by side arrangement of housings easily possible - by connection of 2 cables the locking screws are easily accessible
- 360° shielding
- Low transfer impedance, best EMC behaviour
- Shock and vibration resistant acc. to EN 61373
- Variable screw options: knurled or hexagonal screw with 4-40 UNC- or M3-thread
- For cable diameter 5.0 up to 14.0 mm
- For D-Sub Standard, High Density and Mixed cable connectors

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP30
Material (hood/housing)	Zinc die-cast
Material (screw)	Brass, nickel plated

Details

An additional InduCom cable clamp or a crimp flange - ferrule combination is available dependant on the use of the cable.

Identification	Cable entry		Part number	Drawing (dimensions in mm)
----------------	-------------	--	-------------	-------------------------------

D-Sub InduCom,
Shell housing,
Top entry,
Hexagonal screw,
With internal grounding block

2x
2x

4-40 UNC
M3

61 03 001 2117
61 03 001 1117

D-Sub InduCom,
Shell housing,
Top entry,
Hexagonal screw,
Without internal grounding block

2x
2x

4-40 UNC
M3

61 03 001 2117 010
61 03 001 1117 010

D-Sub InduCom,
Shell housing,
Top entry,
Knurled screw,
With internal grounding block

2x
2x

4-40 UNC
M3

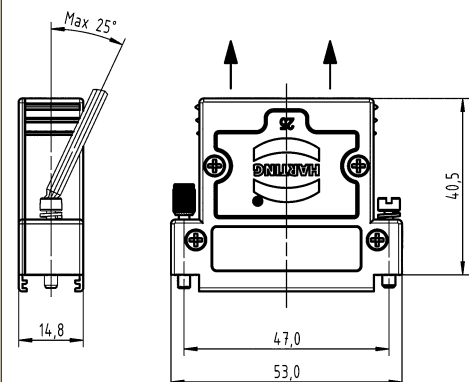
61 03 001 0117
61 03 001 3117

D-Sub InduCom,
Shell housing,
Top entry,
Knurled screw,
Without internal grounding block

2x
2x

4-40 UNC
M3

61 03 001 0117 010
61 03 001 3117 010



Tightening torque 0.4 Nm

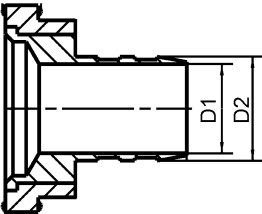
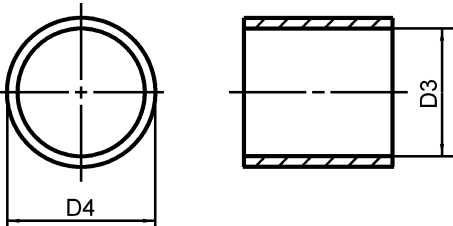
Technical characteristics

RoHS

compliant with exemption

Details

HARTING offers to test and define the best crimp flange and ferrule combination for customer specific cables.

Identification	Inner diameter	Outer diameter	Part number	Drawing (dimensions in mm)
D-Sub, Crimp flange, D-Sub 1 ... 4 	3 mm	4 mm	61 03 000 0062	 D1 = Inner diameter D2 = Outer diameter
	3.5 mm	4.5 mm	61 03 000 0063	
	4 mm	5 mm	61 03 000 0064	
	4.5 mm	5.5 mm	61 03 000 0065	
	5 mm	6 mm	61 03 000 0066	
	5.5 mm	6.5 mm	61 03 000 0166	
	6 mm	7 mm	61 03 000 0067	
	6.5 mm	7.5 mm	61 03 000 0068	
	7 mm	8 mm	61 03 000 0069	
	7.5 mm	8.5 mm	61 03 000 0070	
	8 mm	9 mm	61 03 000 0071	
	8.5 mm	9.5 mm	61 03 000 0165	
	9 mm	10 mm	61 03 000 0072	
D-Sub, Crimp ferrule 	5 mm	6 mm	61 03 000 0045	 D4 = Outer diameter D3 = Inner diameter
	5.5 mm	6.5 mm	61 03 000 0046	
	6 mm	7 mm	61 03 000 0047	
	6.5 mm	7.5 mm	61 03 000 0048	
	7 mm	8 mm	61 03 000 0049	
	7.5 mm	8.5 mm	61 03 000 0050	
	8 mm	9 mm	61 03 000 0051	
	8.5 mm	9.5 mm	61 03 000 0052	
	9 mm	10 mm	61 03 000 0053	
	9.5 mm	10.5 mm	61 03 000 0054	
	10 mm	11 mm	61 03 000 0055	
	10.5 mm	11.5 mm	61 03 000 0056	
	11 mm	12 mm	61 03 000 0057	
	11.5 mm	12.5 mm	61 03 000 0058	
	12 mm	13 mm	61 03 000 0142	
	12.5 mm	13.5 mm	61 03 000 0059	
	13 mm	14 mm	61 03 000 0127	
	13.7 mm	15 mm	61 03 000 0060	
	14 mm	15 mm	61 03 000 0061	



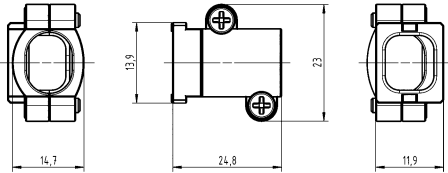
Inter-
face

Technical characteristics

Cable diameter 5 ... 7 mm, 7 ... 10 mm, 9 ... 12 mm, 11 ... 14 mm

Technical characteristics

RoHS compliant

Identification	Part number	Drawing (dimensions in mm)
Cable clamp, D-Sub 1 ... 4, 5 ... 7 mm	61 03 000 0141	
		
Cable clamp, D-Sub 1 ... 4, 7 ... 10 mm	61 03 000 0044	
		
Cable clamp, D-Sub 1 ... 4, 9 ... 12 mm	61 03 000 0143	
		
Cable clamp, D-Sub 1 ... 4, 11 ... 14 mm	61 03 000 0148	
		

Contents	Page
<i>HARAX</i> ® M12 Slim design	7.2
M12 PushPull angled.....	7.6
M12 Slim design with crimp flange	7.12
M12 Transformer	7.21
preLink® M12	7.31
Han® M23 Power	7.35

Circular

Number of contacts

4

Male

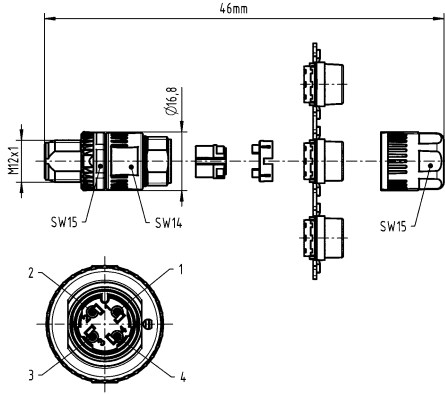
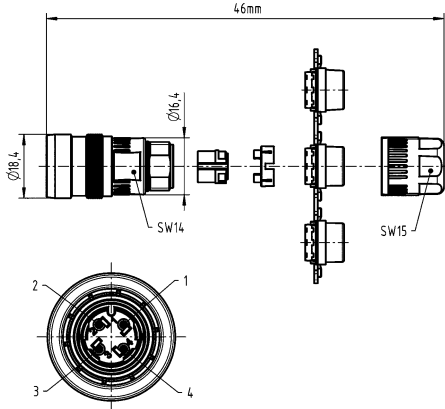


Technical characteristics

Number of contacts	4
Rated current	4 A
Rated voltage	50 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω
Contact resistance	≤10 mΩ
Mating cycles	≥500

Technical characteristics

Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Cable diameter	5.7 ... 8.8 mm
Material (insert)	Polyamide
Material (hood/housing)	Zinc die-cast
Material (contacts)	Copper alloy
RoHS	compliant, compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, HARAX® connection technology, Shielded, Screw locking, Male Contact surface: Gold plated 	0.34	21 03 322 1400	
Circular connectors M12, Cable connector, Straight, HARAX® connection technology, Shielded, PushPull, Male Contact surface: Gold plated 	0.34	21 03 322 1401	

Number of contacts

4

Female



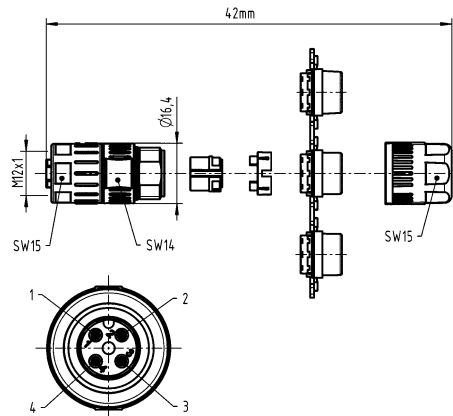
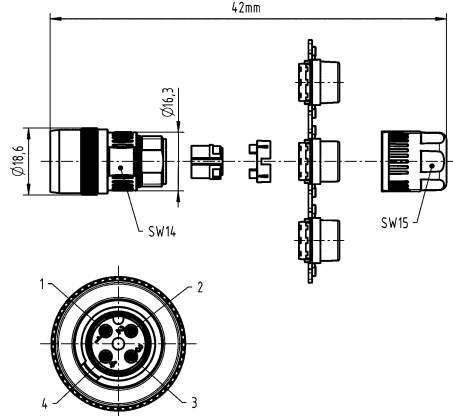
Circular

Technical characteristics

Number of contacts	4
Rated current	4 A
Rated voltage	50 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	$\geq 10^8 \Omega$
Contact resistance	$\leq 10 \text{ m}\Omega$
Mating cycles	≥ 500

Technical characteristics

Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Cable diameter	5.7 ... 8.8 mm
Material (insert)	Polyamide
Material (hood/housing)	Zinc die-cast
Material (contacts)	Copper alloy
RoHS	compliant, compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, HARAX® connection technology, Shielded, Screw locking, Female Contact surface: Gold plated 	0.34	21 03 322 2400	
Circular connectors M12, Cable connector, Straight, HARAX® connection technology, Shielded, PushPull, Female Contact surface: Gold plated 	0.34	21 03 322 2401	



Circular

Number of contacts

4

Male



Technical characteristics

Number of contacts	4
Rated current	4 A
Rated voltage	50 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω
Contact resistance	≤10 mΩ
Mating cycles	≥500

Technical characteristics

Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Cable diameter	5.7 ... 8.8 mm
Material (insert)	Polyamide
Material (hood/housing)	Zinc die-cast
Material (contacts)	Copper alloy
RoHS	compliant, compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, HARAX® connection technology, Shielded, Screw locking, Male Contact surface: Gold plated	0.34	21 03 382 1400	
Circular connectors M12, Cable connector, Straight, HARAX® connection technology, Shielded, PushPull, Male Contact surface: Gold plated	0.34	21 03 382 1401	

Number of contacts

4

Female



Technical characteristics		Technical characteristics	
Number of contacts	4	Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Rated current	4 A	Cable diameter	5.7 ... 8.8 mm
Rated voltage	50 V	Material (insert)	Polyamide
Rated impulse voltage	1.5 kV	Material (hood/housing)	Zinc die-cast
Pollution degree	3	Material (contacts)	Copper alloy
Insulation resistance	≥10 ⁸ Ω	RoHS	compliant, compliant with exemption
Contact resistance	≤10 mΩ		
Mating cycles	≥500		

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, HARAX [®] connection technology, Shielded, Screw locking, Female Contact surface: Gold plated	0.34	21 03 382 2400	
Circular connectors M12, Cable connector, Straight, HARAX [®] connection technology, Shielded, PushPull, Female Contact surface: Gold plated	0.34	21 03 382 2401	

Number of contacts

5
Male

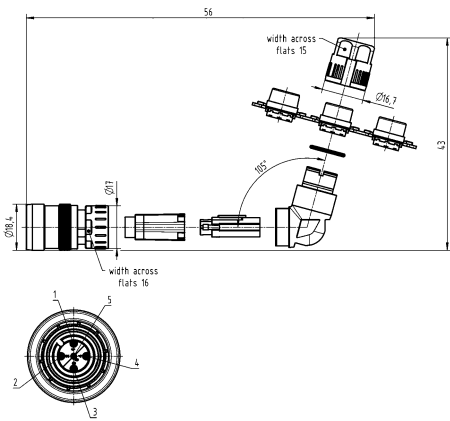


Technical characteristics

Number of contacts	5
Rated current	4 A
Rated voltage	60 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω
Contact resistance	≤10 mΩ

Technical characteristics

Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP67, when mated
Cable diameter	5.7 ... 8.8 mm
Material (insert)	LCP
Material (hood/housing)	Zinc die-cast
RoHS	compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, PushPull, Male  Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 3530	

Number of contacts

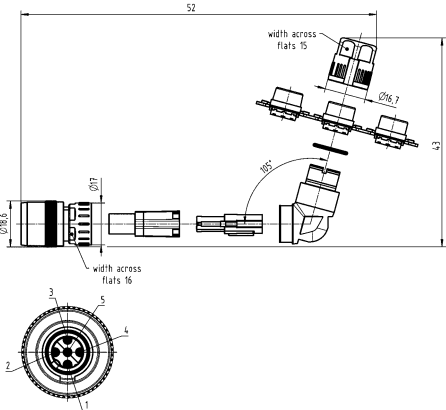
5

Female



Circular

Technical characteristics		Technical characteristics	
Number of contacts	5	Mating cycles	≥500
Rated current	4 A	Degree of protection acc. to IEC 60529	IP67, when mated
Rated voltage	60 V	Cable diameter	5.7 ... 8.8 mm
Rated impulse voltage	1.5 kV	Material (insert)	LCP
Pollution degree	3	Material (hood/housing)	Zinc die-cast
Insulation resistance	≥10 ⁸ Ω	RoHS	compliant with exemption
Contact resistance	≤10 mΩ		

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, PushPull, Female  Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 4530	

Number of contacts

8
Male

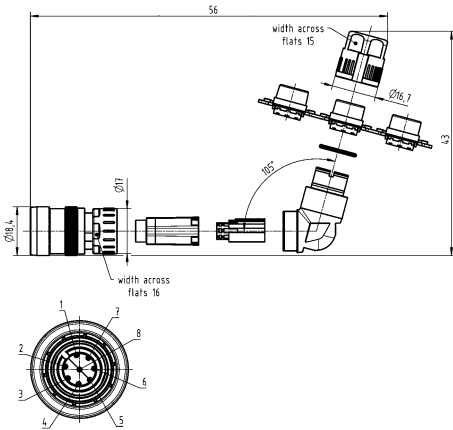


Technical characteristics

Number of contacts	8
Rated current	2 A
Rated voltage	30 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω
Contact resistance	≤10 mΩ

Technical characteristics

Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP67, when mated
Cable diameter	5.7 ... 8.8 mm
Material (insert)	LCP
Material (hood/housing)	Zinc die-cast
RoHS	compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, PushPull, Male  Please order crimp contacts separately.	0.13 ... 0.33	21 03 821 3830	

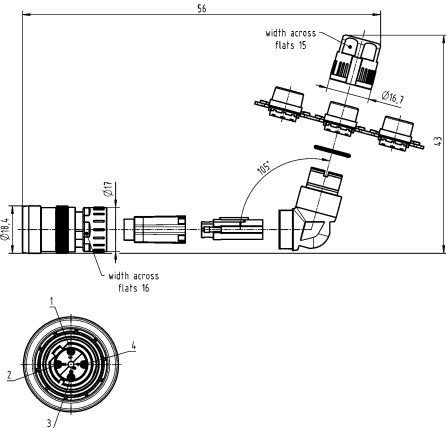
Number of contacts

4
Male



Circular

Technical characteristics		Technical characteristics	
Number of contacts	4	Mating cycles	≥500
Rated current	4 A	Degree of protection acc. to IEC 60529	IP67, when mated
Rated voltage	250 V	Cable diameter	5.7 ... 8.8 mm
Rated impulse voltage	1.5 kV	Transmission characteristics	Cat. 5, Class D up to 100 MHz
Pollution degree	3	Material (insert)	LCP
Insulation resistance	≥10 ⁸ Ω	Material (hood/housing)	Zinc die-cast
Contact resistance	≤10 mΩ	RoHS	compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, PushPull, Male  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 3430	



Number of contacts

8

Male

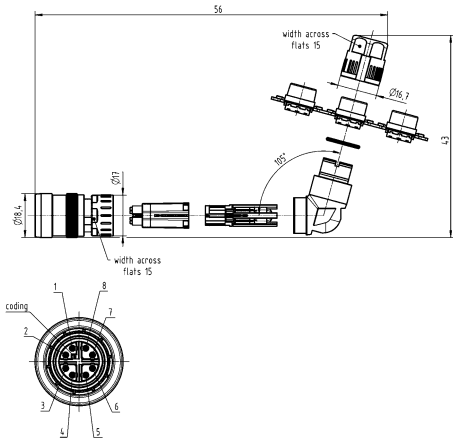


Technical characteristics

Number of contacts	8
Rated current	0.5 A
Rated voltage	48 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$\geq 10^8 \Omega$
Contact resistance	$\leq 10 \text{ m}\Omega$

Technical characteristics

Mating cycles	≥ 500
Degree of protection acc. to IEC 60529	IP67, when mated
Cable diameter	5.7 ... 8.8 mm
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Material (insert)	LCP
Material (hood/housing)	Zinc die-cast
RoHS	compliant with exemption

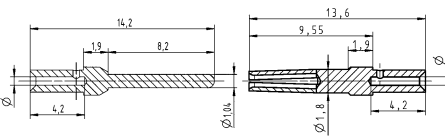
Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, PushPull, Male  Please order crimp contacts separately.	0.08 ... 0.25	21 03 881 3830	

Technical characteristics

Material (contacts) Copper alloy

Technical characteristics

RoHS compliant with exemption

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)															
		Male	Female																
D-Sub, Crimp contact, Turned, Pack contents: Single contact	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52 0.33 ... 0.82	09 67 000 7576 09 67 000 5576 09 67 000 8576 09 67 000 3576	09 67 000 7476 09 67 000 5476 09 67 000 8476 09 67 000 3476	 <table><tr><th>Wire gauge</th><th>Ø</th><th>Stripping length</th></tr><tr><td>0.09-0.25 mm²</td><td>0.64 mm</td><td>4 mm</td></tr><tr><td>0.13-0.33 mm²</td><td>0.88 mm</td><td>4 mm</td></tr><tr><td>0.25-0.52 mm²</td><td>1.13 mm</td><td>4 mm</td></tr><tr><td>0.33-0.82 mm²</td><td>1.34 mm</td><td>4 mm</td></tr></table> for stranded wire according IEC 60228 Class 5 max. insulation diameter 2.3 mm	Wire gauge	Ø	Stripping length	0.09-0.25 mm²	0.64 mm	4 mm	0.13-0.33 mm²	0.88 mm	4 mm	0.25-0.52 mm²	1.13 mm	4 mm	0.33-0.82 mm²	1.34 mm	4 mm
Wire gauge	Ø	Stripping length																	
0.09-0.25 mm²	0.64 mm	4 mm																	
0.13-0.33 mm²	0.88 mm	4 mm																	
0.25-0.52 mm²	1.13 mm	4 mm																	
0.33-0.82 mm²	1.34 mm	4 mm																	
Crimp contact, Turned, Pack contents: Single contact	0.13 ... 0.33	21 01 100 9020																	
har-speed, Crimp contact, Turned, Pack contents: Single contact	0.08 ... 0.22 0.13 ... 0.25	21 01 100 9014 21 01 100 9019																	

Number of contacts

5
Male

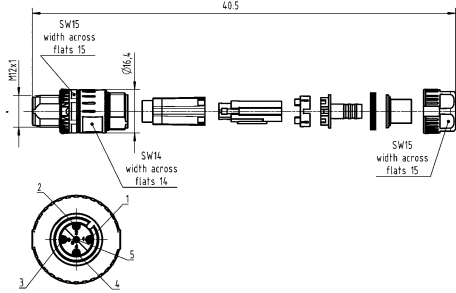


Technical characteristics

Number of contacts	5
Rated current	4 A
Rated voltage	60 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω
Contact resistance	≤10 mΩ

Technical characteristics

Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Cable diameter	5.3 mm, 6 mm
Material (insert)	LCP
Material (hood/housing)	Zinc die-cast
RoHS	compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 5.3 mm, Screw locking, Male 	0.13 ... 0.82	21 03 821 1511	
Please order crimp contacts separately. Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6 mm, Screw locking, Male 	0.13 ... 0.82	21 03 821 1512	
Please order crimp contacts separately.			

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 5.3 mm, Screw locking, Male Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 3511	
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6 mm, Screw locking, Male Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 3512	

Circu-
lar

Number of contacts

5

Female

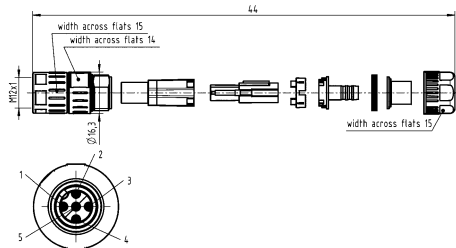


Technical characteristics

Number of contacts	5
Rated current	4 A
Rated voltage	60 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω
Contact resistance	≤10 mΩ

Technical characteristics

Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Cable diameter	5.3 mm, 6 mm
Material (insert)	LCP
Material (hood/housing)	Zinc die-cast
RoHS	compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 5.3 mm, Screw locking, Female 	0.13 ... 0.82	21 03 821 2511	
Please order crimp contacts separately. Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6 mm, Screw locking, Female 	0.13 ... 0.82	21 03 821 2512	
Please order crimp contacts separately.			

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 5.3 mm, Screw locking, Female Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 4511	
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6 mm, Screw locking, Female Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 4512	

Circu-
lar

Number of contacts

4

Male

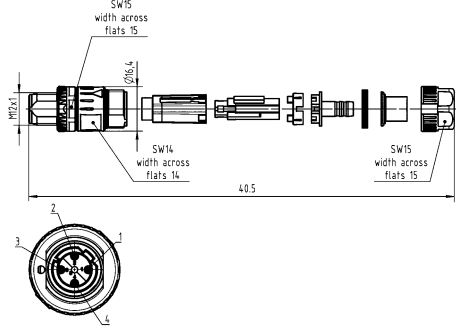


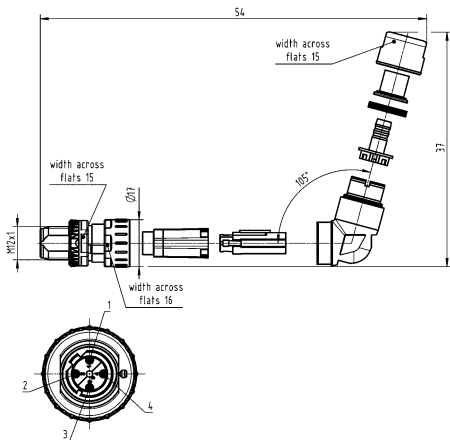
Technical characteristics

Number of contacts	4
Rated current	4 A
Rated voltage	250 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω
Contact resistance	≤10 mΩ

Technical characteristics

Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Cable diameter	6.6 mm, 7.8 mm
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Material (insert)	LCP
Material (hood/housing)	Zinc die-cast
RoHS	compliant with exemption

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6.6 mm, Screw locking, Male  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 1411	
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 7.8 mm, Screw locking, Male  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 1412	

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6.6 mm, Screw locking, Male  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 3411	

Circular



Number of contacts

4

Female

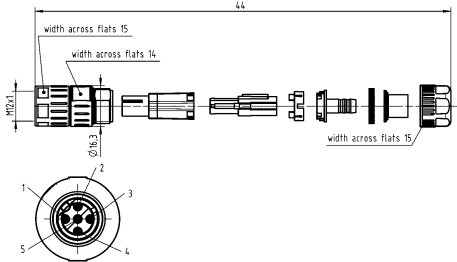


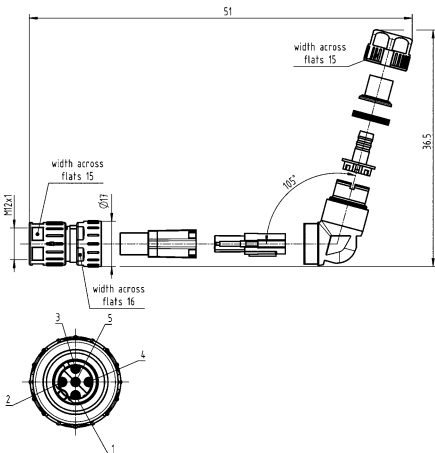
Technical characteristics

Number of contacts	4
Rated current	4 A
Rated voltage	250 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	$\geq 10^8 \Omega$
Contact resistance	$\leq 10 \text{ m}\Omega$

Technical characteristics

Mating cycles	≥ 500
Degree of protection acc. to IEC 60529	IP65 / IP67, when mated
Cable diameter	6.6 mm, 7.8 mm
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Material (insert)	LCP
Material (hood/housing)	Zinc die-cast
RoHS	compliant with exemption

Identification	Conductor cross-section (mm ²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6.6 mm, Screw locking, Female  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 2411	
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 7.8 mm, Screw locking, Female  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 2412	

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6.6 mm, Screw locking, Female  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 4411	



Circular

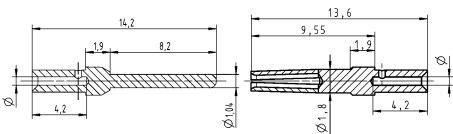
Technical characteristics

Material (contacts) Copper alloy

Technical characteristics

RoHS compliant with exemption

Identification	Conductor cross-section (mm²)	Part number	
		Male	Female
D-Sub, Crimp contact, Turned, Pack contents: Single contact	0.09 ... 0.25	09 67 000 7576	09 67 000 7476
	0.13 ... 0.33	09 67 000 5576	09 67 000 5476
	0.25 ... 0.52	09 67 000 8576	09 67 000 8476
	0.33 ... 0.82	09 67 000 3576	09 67 000 3476



Wire gauge	Ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm

for stranded wire according IEC 60228 Class 5
max. insulation diameter 2.3 mm

Number of contacts

4
Female

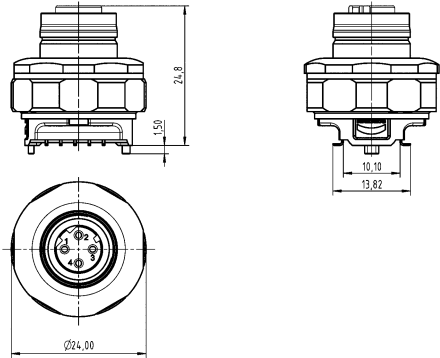
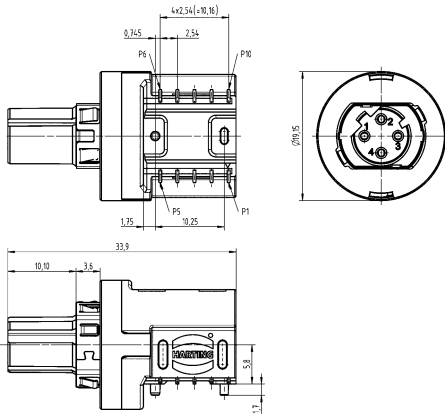


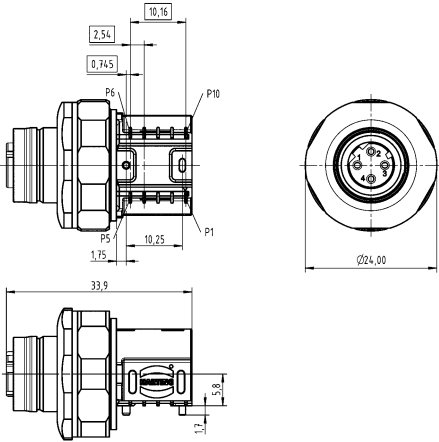
Circu-
lar

Technical characteristics		Technical characteristics	
Number of contacts	4	Contact resistance	≤10 mΩ
Rated current	3 A	Mating cycles	≥100
Rated voltage	57 V	Transmission characteristics	Cat. 5, Class D up to 100 MHz
Rated impulse voltage	1.5 kV	Data rate	100 Mbit/s
Pollution degree	3	Material (insert)	LCP
Insulation resistance	≥10 ⁸ Ω	Material (contacts)	Brass
		RoHS	compliant with exemption

Identification	Part number	Drawing (dimensions in mm)	
Circular connectors M12, PCB connector, Straight, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 60 pieces Contact surface: Au over Ni	21 03 381 2410		
Circular connectors M12, PCB connector, Straight, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 60 pieces Contact surface: Au over Ni	21 03 381 2411		

Circular

Identification	Part number	Drawing (dimensions in mm)
Circular connectors M12, PCB connector, Straight, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging: 1 piece incl. housing Contact surface: Au over Ni 	21 03 381 2421	
Circular connectors M12, PCB connector, Angled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 30 pieces Contact surface: Au over Ni 	21 03 381 4420	
Circular connectors M12, PCB connector, Angled, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 30 pieces Contact surface: Au over Ni 	21 03 381 4421	

Identification	Part number	Drawing (dimensions in mm)
Circular connectors M12, PCB connector, Angled, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging: 1 piece incl. housing Contact surface: Au over Ni 	21 03 381 4422	

Circu-
lar

Number of contacts

8
Female

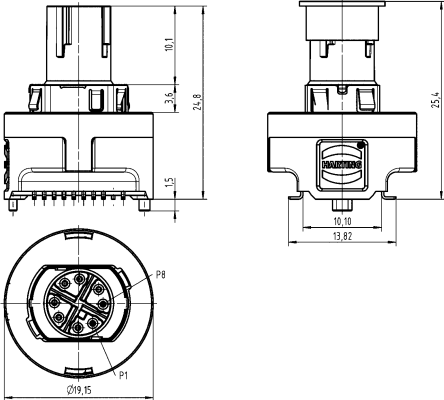


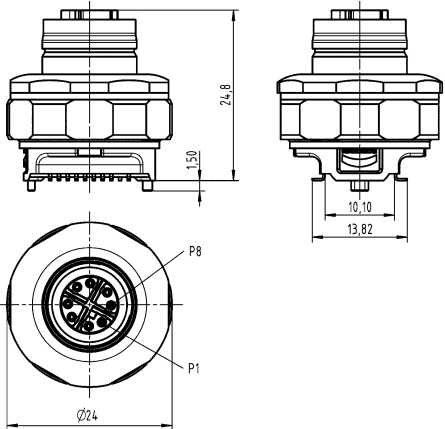
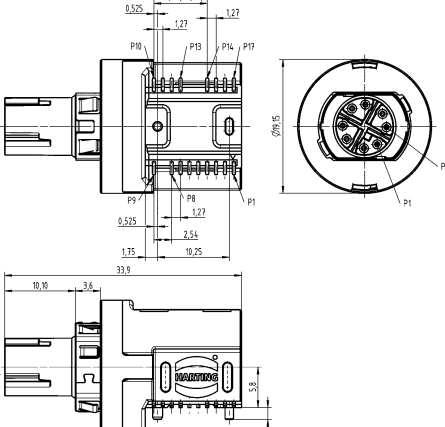
Technical characteristics

Number of contacts	8
Rated current	0.8 A
Rated voltage	57 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10 ⁸ Ω

Technical characteristics

Contact resistance	≤10 mΩ
Mating cycles	≥100
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	1 Gbit/s
Material (insert)	LCP
Material (contacts)	Brass
RoHS	compliant with exemption

Identification	Part number	Drawing (dimensions in mm)
Circular connectors M12, PCB connector, Straight, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 60 pieces Contact surface: Au over Ni 	21 03 381 2815	
Circular connectors M12, PCB connector, Straight, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 60 pieces Contact surface: Au over Ni 	21 03 381 2817	

Identification	Part number	Drawing (dimensions in mm)
Circular connectors M12, PCB connector, Straight, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging: 1 piece incl. housing Contact surface: Au over Ni	21 03 381 2824	
Circular connectors M12, PCB connector, Angled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 30 pieces Contact surface: Au over Ni	21 03 381 4820	
Circular connectors M12, PCB connector, Angled, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 30 pieces Contact surface: Au over Ni	21 03 381 4822	

Circu-
lar

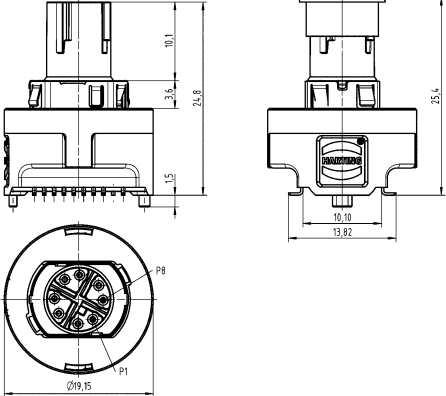
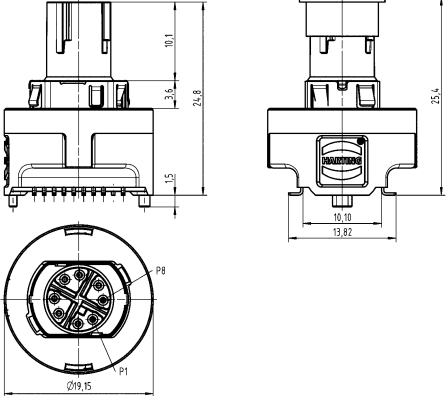
Number of contacts

8
Female



Circular
lar

Technical characteristics		Technical characteristics	
Number of contacts	8	Contact resistance	≤10 mΩ
Rated current	0.8 A	Mating cycles	≥100
Rated voltage	57 V	Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Rated impulse voltage	1.5 kV	Data rate	10 Gbit/s
Pollution degree	3	Material (insert)	LCP
Insulation resistance	≥10 ⁸ Ω	Material (contacts)	Brass
		RoHS	compliant with exemption

Identification	Part number	Drawing (dimensions in mm)	
Circular connectors M12, PCB connector, Straight, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 60 pieces Contact surface: Au over Ni	21 03 381 2818		
Circular connectors M12, PCB connector, Straight, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging unit: 60 pieces Contact surface: Au over Ni	21 03 381 2823		

Circular

Identification

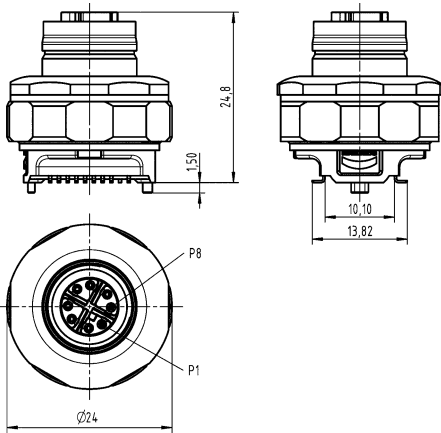
Circular connectors M12,
PCB connector,
Straight,
PoE enabled,
Reflow soldering termination (SMT),
Shielded,
Female,
Pack contents:
Packaging: 1 piece incl. housing
Contact surface:
Au over Ni



Part number

21 03 381 2825

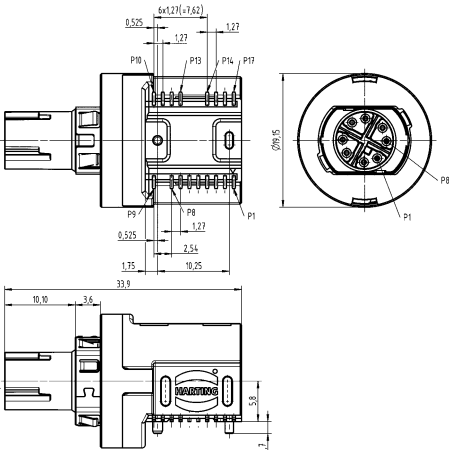
Drawing
(dimensions in mm)



Circular connectors M12,
PCB connector,
Angled,
Reflow soldering termination (SMT),
Shielded,
Female,
Pack contents:
Packaging unit: 30 pieces
Contact surface:
Au over Ni



21 03 381 4823



Circular connectors M12,
PCB connector,
Angled,
PoE enabled,
Reflow soldering termination (SMT),
Shielded,
Female,
Pack contents:
Packaging unit: 30 pieces
Contact surface:
Au over Ni



21 03 381 4825

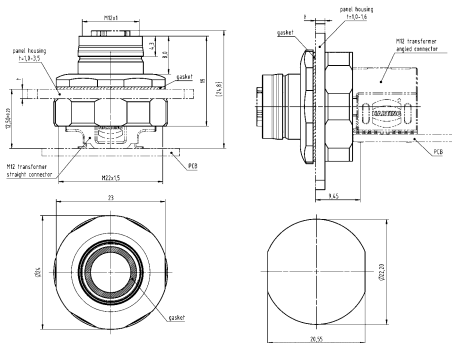
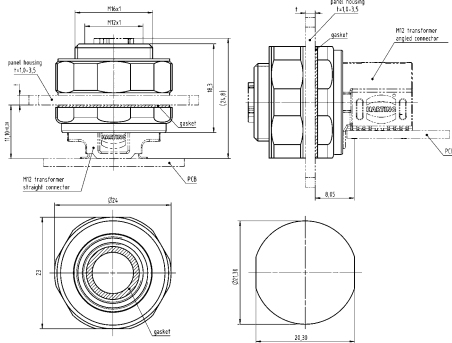
Identification	Part number	Drawing (dimensions in mm)
Circular connectors M12, PCB connector, Angled, PoE enabled, Reflow soldering termination (SMT), Shielded, Female, Pack contents: Packaging: 1 piece incl. housing Contact surface: Au over Ni	21 03 381 4827	Technical drawing of a circular connector showing side and front views with dimensions. The side view shows a connector with a diameter of 10.25 mm and a length of 33.9 mm. The front view shows a connector with a diameter of 10.25 mm and a length of 1.1 mm. The drawing includes labels for various parts: P10, P13, P14, P17, P1, P8, and P9. Dimensions are given in mm: 0.525, 1.27, 7.62, 1.27, 1.35, 0.525, 7.54, 10.25, 33.9, 1.1, and 10.25.

Female

Circular



Technical characteristics		Technical characteristics	
Material (accessories)	Brass, nickel plated	RoHS	compliant with exemption

Identification	Part number	Drawing (dimensions in mm)
Housing, for front mounting, Female, Pack contents: Packaging unit: 30 pieces 	21 03 301 2006	 Panel cut out
Housing, for rear mounting, Female, Pack contents: Packaging unit: 30 pieces 	21 03 301 2007	 Panel cut out

Number of contacts

4



Circu-
lar

Features

- Ethernet data connector suitable for industry
- Robust design
- 360° shielding
- Category of transmission Cat. 5
- Suitable for termination of massive and flexible wires
- Suitable for all PoE versions
- Very fast preLink® termination technology

Technical characteristics

Number of contacts	4
Limiting temperature	-40 ... +85 °C
Mating cycles	≥50
Degree of protection acc. to IEC 60529	IP65, IP67
Cable diameter	5 ... 9.5 mm
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Data rate	10 Mbit/s, 100 Mbit/s
Colour (insert)	Yellow, White, Black
Material (hood/housing)	Zinc die-cast
Surface (hood/housing)	Nickel plated
RoHS	compliant with exemption, compliant

Specifications and approvals

IEC 61076-2-101



Identification

preLink®,
M12,
Cable jack set,
IDC insulation displacement termination,
Fully shielded, 360° shielding contact



Please order terminal module separately

preLink®,
Terminal module,
8-pins,
IDC insulation displacement termination,
Conductor diameter 1.3 - 1.6 mm,
AWG 23/22,
IP20,
Pack contents:
Packaging unit: 10 pieces



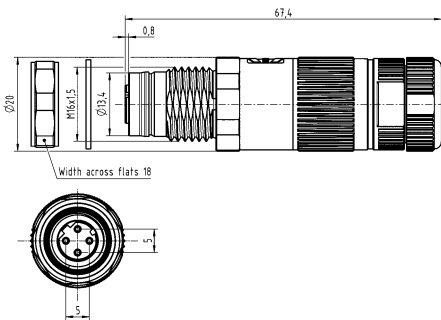
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Part number

20 82 005 2001

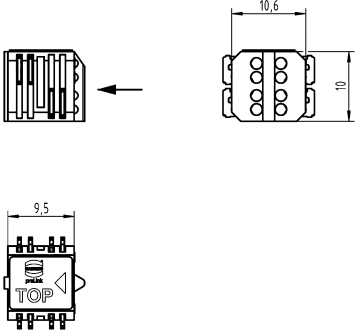
20 82 000 0001

Drawing
(dimensions in mm)





Circular

Identification		Part number	Drawing (dimensions in mm)
preLink®, Terminal module, 8-pins, IDC insulation displacement termination, Conductor diameter 0.8 - 1.1 mm, AWG 27/26, IP20, Pack contents: Packaging unit: 10 pieces 	White	20 82 000 0003	
preLink®, Terminal module, 4-pin, AIDA compliant, IDC insulation displacement termination, Conductor diameter 1.3 - 1.6 mm, AWG 23/22, IP20, Pack contents: Packaging unit: 10 pieces 	Black	20 82 000 0005	
preLink®, Terminal module, 4-pin, AIDA compliant, IDC insulation displacement termination, Conductor diameter 1.3 - 1.6 mm, AWG 23/22, IP20, Pack contents: Packaging unit: 100 pieces 	Black	20 82 000 0005 XL	
Assembly tool, for preLink® terminal module		20 82 000 9901	

Number of contacts

8



Circu-
lar

Features

- Ethernet data connector suitable for industry
- Robust design
- 360° shielding
- Category of transmission Cat. 6_A
- Suitable for termination of massive and flexible wires
- Suitable for all PoE versions
- Very fast preLink® termination technology

Technical characteristics

Number of contacts	8
Limiting temperature	-40 ... +85 °C
Mating cycles	≥50
Degree of protection acc. to IEC 60529	IP65, IP67
Cable diameter	5 ... 9.5 mm
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Colour (insert)	Yellow, White, Black
Material (hood/housing)	Zinc die-cast
Surface (hood/housing)	Nickel plated
RoHS	compliant with exemption, compliant

Specifications and approvals

IEC 61076-2-109



Identification

Part number

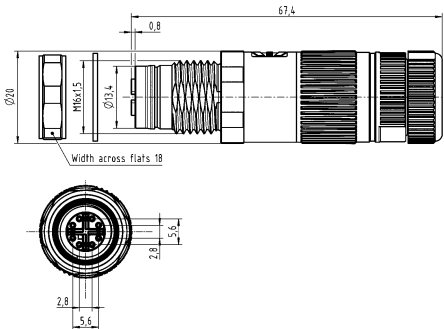
Drawing
(dimensions in mm)

preLink®,
M12,
Cable jack set,
IDC insulation displacement termination,
Fully shielded, 360° shielding contact



Please order terminal module separately

20 82 006 2001



preLink®,
Terminal module,
8-pins,
IDC insulation displacement termination,
Conductor diameter 1.3 - 1.6 mm,
AWG 23/22,
IP20,
Pack contents:
Packaging unit: 10 pieces

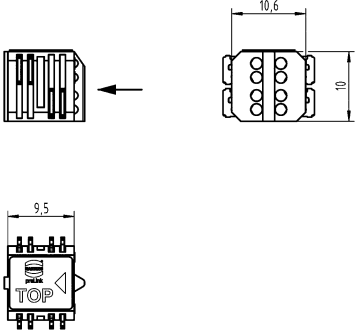


Yellow

20 82 000 0001



Circular

Identification		Part number	Drawing (dimensions in mm)
preLink®, Terminal module, 8-pins, IDC insulation displacement termination, Conductor diameter 0.8 - 1.1 mm, AWG 27/26, IP20, Pack contents: Packaging unit: 10 pieces 	White	20 82 000 0003	
preLink®, Terminal module, 4-pin, AIDA compliant, IDC insulation displacement termination, Conductor diameter 1.3 - 1.6 mm, AWG 23/22, IP20, Pack contents: Packaging unit: 10 pieces 	Black	20 82 000 0005	
preLink®, Terminal module, 4-pin, AIDA compliant, IDC insulation displacement termination, Conductor diameter 1.3 - 1.6 mm, AWG 23/22, IP20, Pack contents: Packaging unit: 100 pieces 	Black	20 82 000 0005 XL	
Assembly tool, for preLink® terminal module		20 82 000 9901	

Circu-
lar

Features

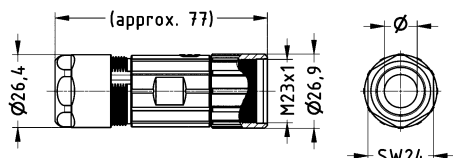
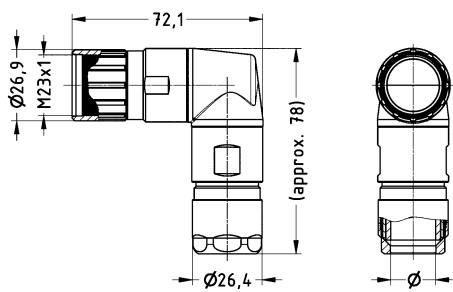
- Hoods/housings for industrial applications
- Excellent EMC characteristics
- Signal
- Power
- Crimp termination

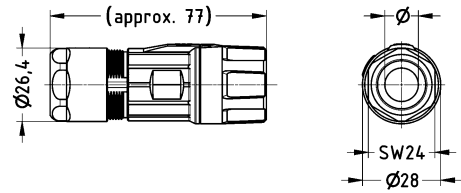
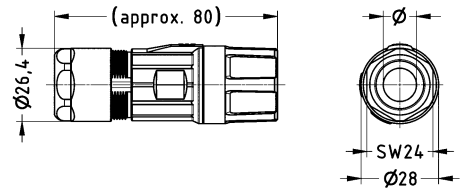
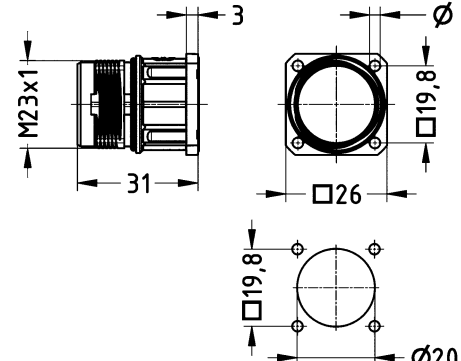
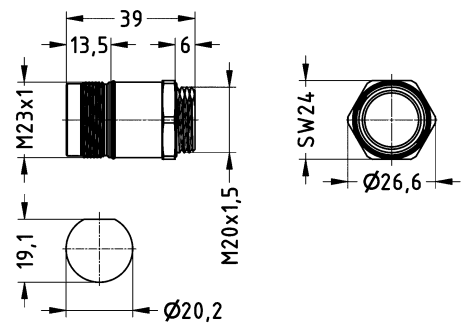
Technical characteristics

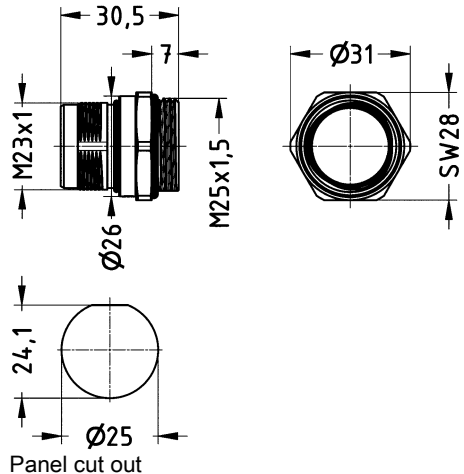
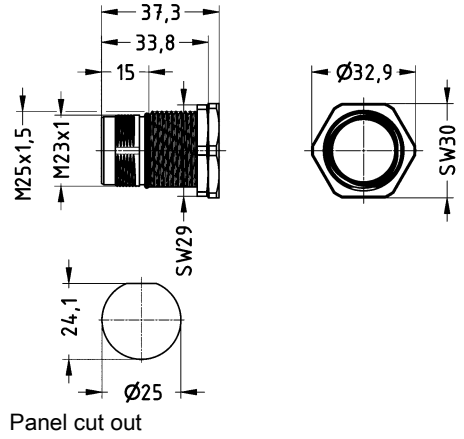
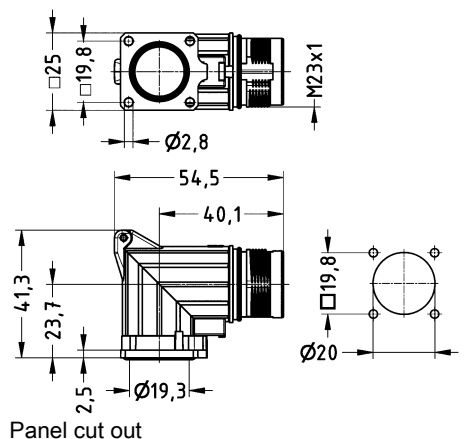
Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP67 / IP69K, in locked position
Fixing	Fixing hole 4 x 2.7 mm, Fixing hole 4 x 3.2 mm, Thread M20 x 1.5, Thread M25 x 1.5, Fixing hole 4 x 2.75 mm
Material (hood/housing)	Copper-zinc alloy
Surface (hood/housing)	Nickel plated
Material (seal)	NBR
Colour (seal)	Black

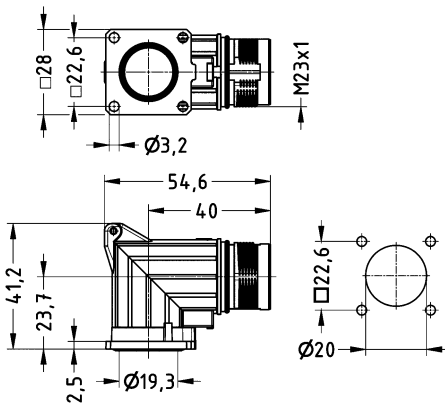
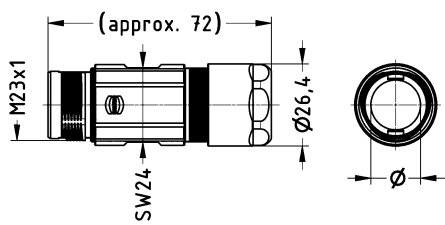
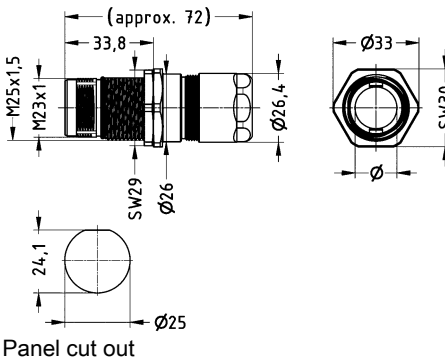
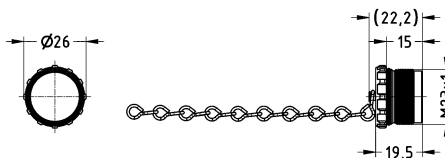
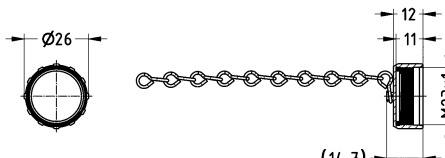
Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han® M23 Power, Hoods, EMC version, Top entry, Screw locking 	7 ... 12 11 ... 17	09 15 600 0402 09 15 600 0403	
Han® M23 Power, Hoods, EMC version, Rotatable, Angled entry, Screw locking 	7 ... 12 11 ... 17	09 15 600 0603 09 15 600 0604	

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han® M23 Power, Hoods, EMC version, Top entry, ComLock rapid locking	7 ... 12 11 ... 17	09 15 600 0492 09 15 600 0493	
Han® M23 Power, Hoods, EMC version, Top entry, ComLock-S rapid locking	7 ... 12 11 ... 17	09 15 600 0482 09 15 600 0483	
Compatible to Intercontec (TE)			
Han® M23 Power, Bulkhead mounted housings, Straight, Front mounting, Fixing hole 4 x 2.7 mm		09 15 600 0301	 Panel cut out
Han® M23 Power, Bulkhead mounted housings, Straight, Front mounting, Fixing hole 4 x 3.2 mm		09 15 600 0302	
Han® M23 Power, Bulkhead mounted housings, Straight, Front mounting, Thread M20 x 1.5		09 15 600 0303	 Panel cut out
Not compatible to ComLock			

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han® M23 Power, Bulkhead mounted housings, Straight, Front mounting, Thread M25 x 1.5 Not compatible to ComLock		09 15 600 0313	
Han® M23 Power, Bulkhead mounted housings, Straight, Rear mounting, Thread M25 x 1.5  Not compatible to ComLock		09 15 600 0308	
Han® M23 Power, Bulkhead mounted housings, Angled, Rotatable, Fixing hole 4 x 2.7 mm		09 15 600 0902	

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han® M23 Power, Bulkhead mounted housings, Angled, Rotatable, Fixing hole 4 x 3.2 mm 		09 15 600 0912	
Han® M23 Power, Cable to cable housing, EMC version, Top entry 	7 ... 12 11 ... 17	09 15 600 0702 09 15 600 0703	
Han® M23 Power, Panel feed through housing, Rear mounting, EMC version 	7 ... 12 11 ... 17	09 15 600 0310 09 15 600 0311	
Han® M23 Power, Cover, for hoods, With chain (100 mm) 		09 15 600 9103	
Han® M23 Power, Cover, for bulkhead mounted housings, for cable to cable housing, With chain (70 mm) 		09 15 600 9102	

Number of contacts

5+

28 A 600 V 4 kV 3



Circu-
lar

Technical characteristics		Technical characteristics	
Number of contacts	5	Colour (insert)	Blue
Electrical data acc. to IEC 61984	28 A 600 V 4 kV 3	Flammability acc. to UL 94	V-0
Rated current	28 A	Specifications and approvals	
Rated voltage	600 V		
Rated impulse voltage	4 kV		
Pollution degree	3		
Insulation resistance	>10 ¹³ Ω		
Limiting temperature	-40 ... +125 °C		
Mating cycles	≥1000		
Material (insert)	Polyamide	UL 1977 ECBT2.E235076 CSA-C22.2 No. 182.3 ECBT8.E235076	

Identification	Part number		Drawing (dimensions in mm)
	Male	Female	
Han® M23 Power, Inserts, Crimp termination Please order crimp contacts separately.	09 15 606 3001	09 15 606 3101	



Number of contacts

3+

28 A 600 V 4 kV 3
+ 4 additional signal contacts
8 A 300 V 2.5 kV 3



Technical characteristics

Number of contacts	3
Additional contacts	+ 4 additional signal contacts
Electrical data acc. to IEC 61984	28 A 600 V 4 kV 3
Rated current	28 A
Rated voltage	600 V
Rated impulse voltage	4 kV
Pollution degree	3
Electrical data, signal	8 A 300 V 2.5 kV 3
Rated current (signal)	8 A
Rated voltage (signal)	300 V
Rated impulse voltage (signal)	2.5 kV
Pollution degree (signal)	3
Insulation resistance	>10 ¹³ Ω

Technical characteristics

Limiting temperature	-40 ... +125 °C
Mating cycles	≥1000
Material (insert)	Polyamide
Colour (insert)	Blue
Flammability acc. to UL 94	V-0

Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Identification	Part number		Drawing (dimensions in mm)
	Male	Female	
Han® M23 Power, Inserts, Crimp termination	09 15 608 3001	09 15 608 3101	
 Please order crimp contacts separately.			

Number of contacts

3+ 

 28 A 630 V 4 kV 3
 + 5 additional signal contacts
 10 A 250 V 2.5 kV 3
Circu-
lar

Technical characteristics

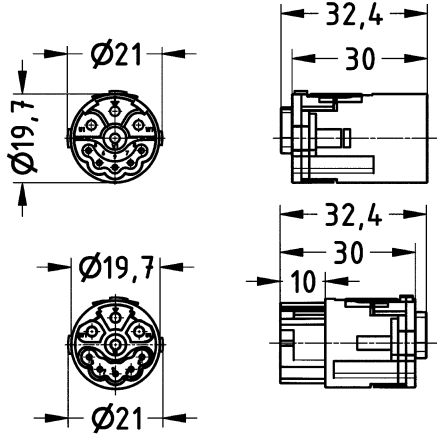
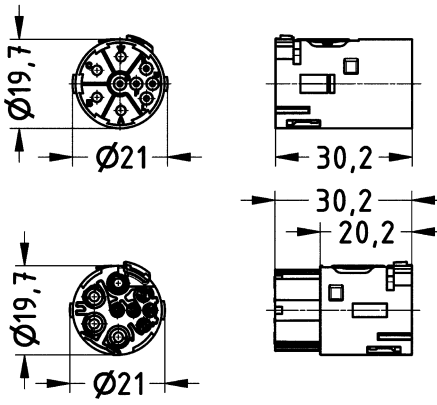
Number of contacts	3
Additional contacts	+ 5 additional signal contacts
Electrical data acc. to IEC 61984	28 A 630 V 4 kV 3
Rated current	28 A
Rated voltage	630 V
Rated impulse voltage	4 kV
Pollution degree	3
Electrical data, signal	10 A 250 V 2.5 kV 3
Rated current (signal)	10 A
Rated voltage (signal)	250 V
Rated impulse voltage (signal)	2.5 kV
Pollution degree (signal)	3
Insulation resistance	$>10^{13} \Omega$

Technical characteristics

Limiting temperature	-40 ... +125 °C
Mating cycles	≥ 1000
Material (insert)	Polyamide
Colour (insert)	Blue
Flammability acc. to UL 94	V-0

Specifications and approvals

 UL 1977 ECBT2.E235076
 CSA-C22.2 No. 182.3 ECBT8.E235076

Identification	Part number		Drawing (dimensions in mm)
	Male	Female	
Han® M23 Power, Inserts, Mating face (A), Crimp termination  Please order crimp contacts separately.	09 15 609 3001	09 15 609 3101	
Han® M23 Power, Inserts, Mating face (B), Crimp termination  Please order crimp contacts separately.	09 15 609 3011	09 15 609 3111	

Number of contacts

3+

28 A 630 V 4 kV 3
+ 4 additional signal contacts + 4 Data
8 A 300 V 2.5 kV 3



Technical characteristics

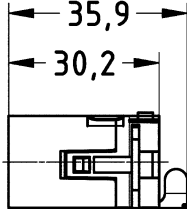
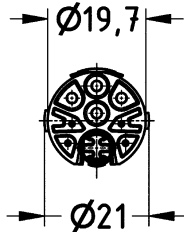
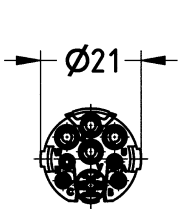
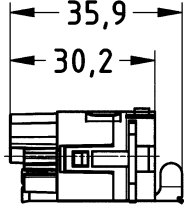
Number of contacts	3
Additional contacts	+ 4 additional signal contacts, + 4 Data
Electrical data acc. to IEC 61984	28 A 630 V 4 kV 3
Rated current	28 A
Rated voltage	630 V
Rated impulse voltage	4 kV
Pollution degree	3
Electrical data, signal	8 A 300 V 2.5 kV 3
Rated current (signal)	8 A
Rated voltage (signal)	300 V
Rated impulse voltage (signal)	2.5 kV
Pollution degree (signal)	3
Electrical data, data	2 A 60 V 0.5 kV 3
Rated current (data)	2 A
Rated voltage (data)	60 V

Technical characteristics

Rated impulse voltage (data)	0.5 kV
Pollution degree (data)	3
Limiting temperature	-40 ... +125 °C
Mating cycles	≥1000
Material (insert)	Polyamide
Colour (insert)	Blue
Flammability acc. to UL 94	V-0

Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Identification	Part number		Drawing (dimensions in mm)	
	Male	Female		
Han® M23 Hybrid, Inserts, Crimp termination  Please order crimp contacts separately.	09 15 612 3001	09 15 612 3101	 	 

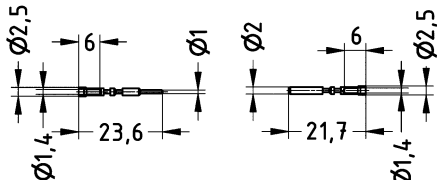
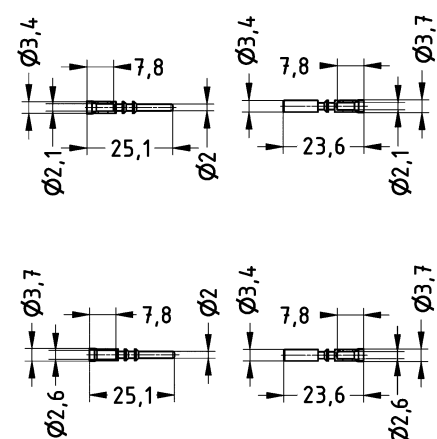
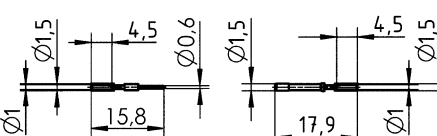


Technical characteristics

Contact resistance	≤3 mΩ
Material (contacts)	Copper alloy

Specifications and approvals

EN 60664-1
IEC 61984

Identification	Conductor cross-section (mm²)	Part number		Drawing (dimensions in mm)
		Male	Female	
Han® M23 Power, Crimp contact, Turned 1 mm, Contact surface: Gold plated 	0.14 ... 1	09 15 600 6101	09 15 600 6201	
Han® M23 Power, Crimp contact, Turned 2 mm, Contact surface: Gold plated 	0.75 ... 2.5 2.5 ... 4	09 15 600 6121 09 15 600 6122	09 15 600 6221 09 15 600 6222	
Han® M23 Power, Crimp contact, Turned 0.6 mm, Contact surface: Gold plated 	0.08 ... 0.34	09 15 600 6191	09 15 600 6291	

Circular

Technical characteristics

RoHS compliant

Identification	Conductor cross-section (mm²)	Part number	
Crimping tool, for individual contacts, Pack contents: incl. locator, Handling instruction	0.08 ... 2.5	09 99 000 0890	
Crimping tool, for power contact Not to be used for 0.6 mm contacts.	0.14 ... 4	09 99 000 0896	
HARTING crimping tool, for shielded bushing		09 99 000 0898	

Contents	Page
HARTING ix Industrial®	8.2
Mini DisplayPort.....	8.5
HARTING PushPull Signal	8.7
HARTING PushPull RJ45.....	8.9
HARTING PushPull V4 Industrial Fibre Optic.....	8.13
Han® M23 overmoulded cable assemblies	8.22
HARTING sea cable	8.24

4x 2x AWG 28/7
HARTING ix Industrial® Type A
RJ45



Features

- Miniaturised Ethernet data interface suitable for industry in acc. to IEC 61076-3-124 type A
- Robust industrial design
- 360° shielding
- Category of transmission Cat. 6_A
- 5000 mating cycles
- Flexible, space saving
- Suitable for all PoE versions

Technical characteristics

Number of cores	8
Core structure	4x 2x AWG 28/7
Connector 1	HARTING ix Industrial®, Type A
Connector 2	RJ45
Limiting temperature	-40 ... +80 °C
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Material (cable)	PVC
Colour (cable)	Yellow
RoHS	compliant

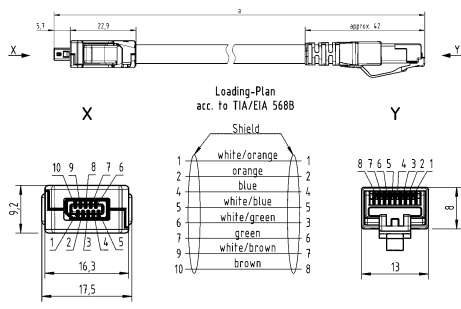
Specifications and approvals

IEC 61076-3-124



Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING ix Industrial® RJ45, Copper cable (round), Pre-assembled on both sides	0.2 m 0.3 m 0.4 m 0.5 m 0.7 m 1 m 1.5 m 2 m 2.5 m 3 m 5 m 7.5 m 10 m	09 48 261 2749 002 09 48 261 2749 003 09 48 261 2749 004 09 48 261 2749 005 09 48 261 2749 007 09 48 261 2749 010 09 48 261 2749 015 09 48 261 2749 020 09 48 261 2749 025 09 48 261 2749 030 09 48 261 2749 050 09 48 261 2749 075 09 48 261 2749 100	

4x 2x AWG 28/7
HARTING ix Industrial® Type A
HARTING ix Industrial® Type A



Cable

Features

- Miniaturised Ethernet data interface suitable for industry in acc. to IEC 61076-3-124 type A
- Robust industrial design
- 360° shielding
- Category of transmission Cat. 6_A
- 5000 mating cycles
- Flexible, space saving
- Suitable for all PoE versions

Technical characteristics

Number of cores	8
Core structure	4x 2x AWG 28/7
Connector 1	HARTING ix Industrial®, Type A
Connector 2	HARTING ix Industrial®, Type A
Limiting temperature	-40 ... +80 °C
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Material (cable)	PVC
Colour (cable)	Yellow
RoHS	compliant

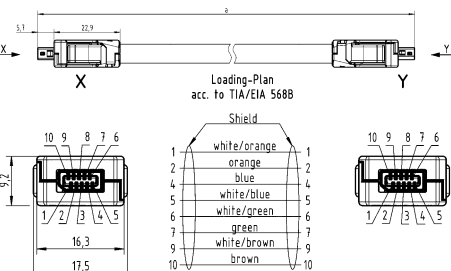
Specifications and approvals

IEC 61076-3-124



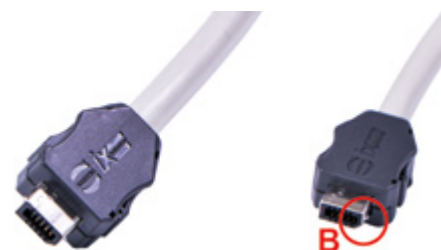
Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING ix Industrial®, Copper cable (round), Pre-assembled on both sides	0.2 m 0.3 m 0.4 m 0.5 m 0.7 m 1 m 1.5 m 2 m 2.5 m 3 m 5 m 7.5 m 10 m	09 48 262 6749 002 09 48 262 6749 003 09 48 262 6749 004 09 48 262 6749 005 09 48 262 6749 007 09 48 262 6749 010 09 48 262 6749 015 09 48 262 6749 020 09 48 262 6749 025 09 48 262 6749 030 09 48 262 6749 050 09 48 262 6749 075 09 48 262 6749 100	

10x AWG 26
HARTING ix Industrial® Type B
HARTING ix Industrial® Type B

Cable



Features

- Miniaturised interface for signals and bus systems in acc. to IEC 61076-3-124 type B, suitable for industrial use
- Robust industrial design
- 360° shielding
- 5000 mating cycles
- Flexible, space saving

Technical characteristics

Number of cores	10
Core structure	10x AWG 26
Connector 1	HARTING ix Industrial®, Type B
Connector 2	HARTING ix Industrial®, Type B
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Limiting temperature	-30 ... +80 °C, -40 ... +80 °C
Material (cable)	PVC, PUR (polyurethane)
Colour (cable)	Grey

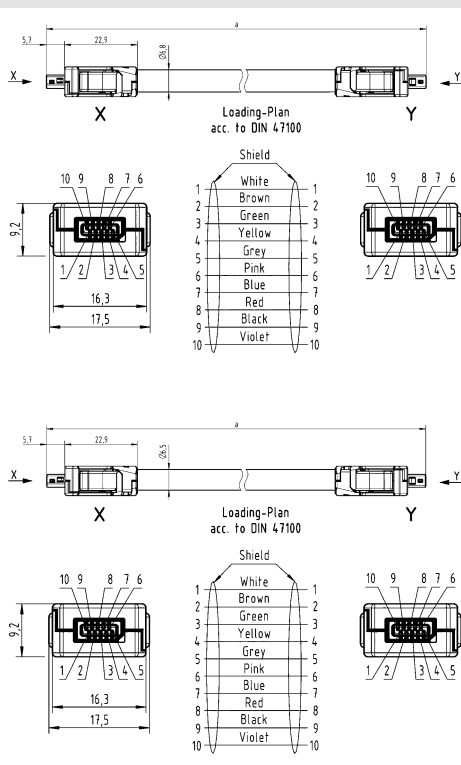
Specifications and approvals

IEC 61076-3-124



Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING ix Industrial®, Copper cable (round), Pre-assembled on both sides, PVC, -30 °C ... +80 °C	0.2 m	33 48 111 1A20 002	
	0.3 m	33 48 111 1A20 003	
	0.4 m	33 48 111 1A20 004	
	0.5 m	33 48 111 1A20 005	
	0.7 m	33 48 111 1A20 007	
	1 m	33 48 111 1A20 010	
	1.5 m	33 48 111 1A20 015	
	2 m	33 48 111 1A20 020	
	2.5 m	33 48 111 1A20 025	
	3 m	33 48 111 1A20 030	
	5 m	33 48 111 1A20 050	
HARTING ix Industrial®, Copper cable (round), Pre-assembled on both sides, PUR (polyurethane), -40 °C ... +80 °C	7.5 m	33 48 111 1A20 075	
	10 m	33 48 111 1A20 100	
	0.2 m	33 48 111 1A21 002	
	0.3 m	33 48 111 1A21 003	
	0.4 m	33 48 111 1A21 004	
	0.5 m	33 48 111 1A21 005	
	0.7 m	33 48 111 1A21 007	
	1 m	33 48 111 1A21 010	
	1.5 m	33 48 111 1A21 015	
	2 m	33 48 111 1A21 020	
	2.5 m	33 48 111 1A21 025	
	3 m	33 48 111 1A21 030	
	5 m	33 48 111 1A21 050	
	7.5 m	33 48 111 1A21 075	
	10 m	33 48 111 1A21 100	

20x AWG 32
Mini DisplayPort
Mini DisplayPort



Cable

Technical characteristics

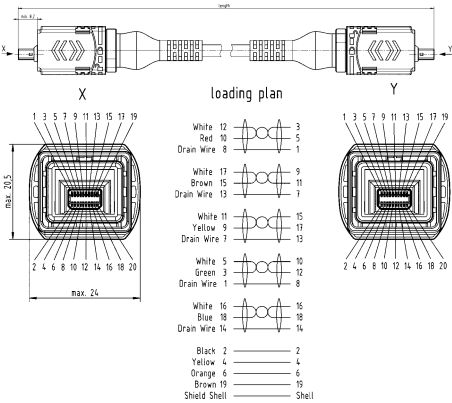
Number of cores	20
Core structure	20x AWG 32
Connector 1	Mini DisplayPort
Connector 2	Mini DisplayPort
Limiting temperature	-40 ... +80 °C
Transmission characteristics	DisplayPort 1.2, DisplayPort 1.1
Material (cable)	TPE

Technical characteristics

Colour (cable)	Black
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, Copper cable (round), Pre-assembled on both sides, DisplayPort 1.2 	0.5 m 1 m 1.5 m 2 m	09 45 145 1000 09 45 145 1001 09 45 145 1002 09 45 145 1003	
HARTING PushPull, Copper cable (round), Pre-assembled on both sides, DisplayPort 1.1 	3 m	09 45 145 1004	

20x AWG 32
Mini DisplayPort
IP20



Technical characteristics

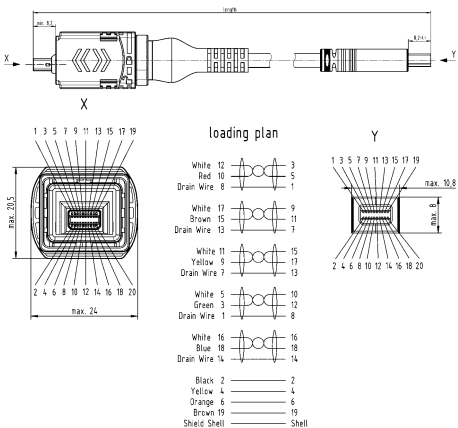
Number of cores	20
Core structure	20x AWG 32
Connector 1	Mini DisplayPort
Connector 2	IP20
Limiting temperature	-40 ... +80 °C
Transmission characteristics	DisplayPort 1.2, DisplayPort 1.1
Material (cable)	TPE

Technical characteristics

Colour (cable)	Black
RoHS	compliant

Details

Other cable lengths on request!

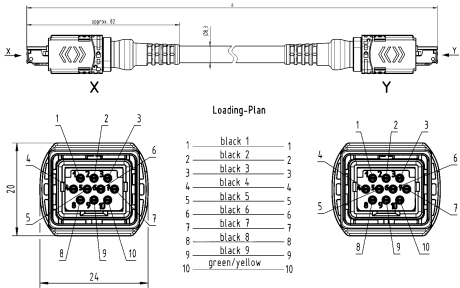
Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, Copper cable (round), Pre-assembled on both sides, DisplayPort 1.2 	0.5 m 1 m 1.5 m 2 m	09 45 145 1010 09 45 145 1011 09 45 145 1012 09 45 145 1013	
HARTING PushPull, Copper cable (round), Pre-assembled on both sides, DisplayPort 1.1 	3 m	09 45 145 1014	

10x AWG 20
HARTING PushPull Signal 10-pin
HARTING PushPull Signal 10-pin



Cable

Features	Technical characteristics																		
- Double-sided IP68 protection - Simple handling by HARTING PushPull 10-pin	<table><tr><td>Number of cores</td><td>10</td></tr><tr><td>Core structure</td><td>10x AWG 20</td></tr><tr><td>Connector 1</td><td>HARTING PushPull, Signal, 10-pin</td></tr><tr><td>Connector 2</td><td>HARTING PushPull, Signal, 10-pin</td></tr><tr><td>Rated current</td><td>5 A</td></tr><tr><td>Rated voltage</td><td>50 V</td></tr><tr><td>Limiting temperature</td><td>-40 ... +80 °C</td></tr><tr><td>Material (cable)</td><td>PVC</td></tr><tr><td>Colour (cable)</td><td>Grey</td></tr></table>	Number of cores	10	Core structure	10x AWG 20	Connector 1	HARTING PushPull, Signal, 10-pin	Connector 2	HARTING PushPull, Signal, 10-pin	Rated current	5 A	Rated voltage	50 V	Limiting temperature	-40 ... +80 °C	Material (cable)	PVC	Colour (cable)	Grey
Number of cores	10																		
Core structure	10x AWG 20																		
Connector 1	HARTING PushPull, Signal, 10-pin																		
Connector 2	HARTING PushPull, Signal, 10-pin																		
Rated current	5 A																		
Rated voltage	50 V																		
Limiting temperature	-40 ... +80 °C																		
Material (cable)	PVC																		
Colour (cable)	Grey																		
	Details Other cable lengths on request!																		

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides 	0.5 m 1 m 1.5 m 2 m 3 m 4 m 5 m 7.5 m 10 m 15 m 20 m	09 48 313 18A6 005 09 48 313 18A6 010 09 48 313 18A6 015 09 48 313 18A6 020 09 48 313 18A6 030 09 48 313 18A6 040 09 48 313 18A6 050 09 48 313 18A6 075 09 48 313 18A6 100 09 48 313 18A6 150 09 48 313 18A6 200	 Technical drawing details: - Top view: Dimensions 20mm (height) and 24mm (width). - Side view: Dimensions 10mm (height) and 24mm (width). - Pin layout: 10 pins numbered 1-10. Legend: 1-9 are black, 10 is green/yellow. - Loading-Plan: Shows pin 10 (green/yellow) at the bottom.



20x AWG 26/7
HARTING PushPull Signal 20-pin
HARTING PushPull Signal 20-pin



Features

- Double-sided IP68 protection
- Simple handling by HARTING PushPull
- 20-pin

Technical characteristics

Number of cores	20
Core structure	20x AWG 26/7
Connector 1	HARTING PushPull, Signal, 20-pin
Connector 2	HARTING PushPull, Signal, 20-pin
Rated current	2 A
Rated voltage	50 V
Limiting temperature	-40 ... +80 °C
Material (cable)	PUR (polyurethane)
Colour (cable)	Black

Details

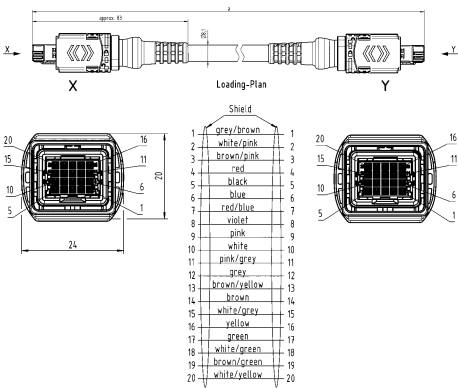
Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
----------------	--------------	-------------	-------------------------------

HARTING PushPull,
Copper cable (round),
Wiring 1:1,
Pre-assembled on both sides,
Fully shielded, 360° shielding contact



0.5 m	09 48 353 5848 005
1 m	09 48 353 5848 010
1.5 m	09 48 353 5848 015
2 m	09 48 353 5848 020
3 m	09 48 353 5848 030
4 m	09 48 353 5848 040
5 m	09 48 353 5848 050
7.5 m	09 48 353 5848 075
10 m	09 48 353 5848 100
15 m	09 48 353 5848 150
20 m	09 48 353 5848 200



4x 2x AWG 26/7
HARTING PushPull RJ45
HARTING PushPull RJ45



Cable

Features

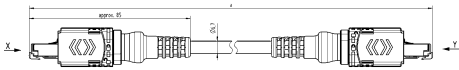
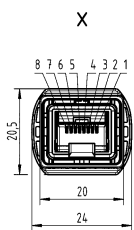
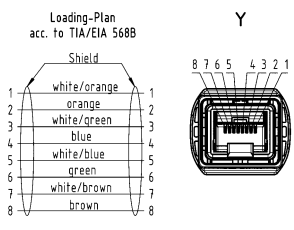
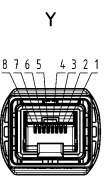
- Transmission of up to 10 Gbit/s
- Double-sided IP68 protection
- Simple handling by HARTING PushPull
- Cables suitable for industry
- Suitable for outdoor applications (PVC (outdoor))

Technical characteristics

Number of cores	8
Core structure	4x 2x AWG 26/7
Connector 1	HARTING PushPull, RJ45
Connector 2	HARTING PushPull, RJ45
Limiting temperature	-40 ... +80 °C, -20 ... +80 °C
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s
Material (cable)	PUR (polyurethane), PVC
Colour (cable)	Yellow, Black

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides, Fully shielded, 360° shielding contact, PUR (polyurethane), Yellow, -40 °C ... +80 °C	0.5 m 1 m 5 m 7.5 m 10 m 15 m 20 m	09 48 282 8756 005 09 48 282 8756 010 09 48 282 8756 050 09 48 282 8756 075 09 48 282 8756 100 09 48 282 8756 150 09 48 282 8756 200	
HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides, Fully shielded, 360° shielding contact, PVC, Yellow, -20 °C ... +80 °C	0.5 m 1 m 5 m 7.5 m 10 m 15 m 20 m	09 48 282 8757 005 09 48 282 8757 010 09 48 282 8757 050 09 48 282 8757 075 09 48 282 8757 100 09 48 282 8757 150 09 48 282 8757 200	 Loading-Plan acc. to TIA/EIA 568B  

Cable

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides, Fully shielded, 360° shielding contact, PVC (outdoor), Black, -20 °C ... +80 °C	0.5 m	09 48 282 8758 005	
	1 m	09 48 282 8758 010	
	5 m	09 48 282 8758 050	
	7.5 m	09 48 282 8758 075	
	10 m	09 48 282 8758 100	
	15 m	09 48 282 8758 150	
	20 m	09 48 282 8758 200	



4x 2x AWG 26/7
HARTING PushPull RJ45
RJ45



Cable

Features

- Transmission of up to 10 Gbit/s
- Double-sided IP68 protection
- Simple handling by HARTING PushPull
- Cables suitable for industry
- Suitable for outdoor applications (PVC (outdoor))

Technical characteristics

Number of cores	8
Core structure	4x 2x AWG 26/7
Connector 1	HARTING PushPull, RJ45
Connector 2	RJ45
Limiting temperature	-20 ... +75 °C
Transmission characteristics	Cat. 6 _A , Class E _A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s
Material (cable)	PUR (polyurethane), PVC
Colour (cable)	Yellow, Black

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides, Fully shielded, 360° shielding contact, PUR (polyurethane), Yellow, -20 °C ... +75 °C	1 m 2 m 3 m 5 m 7 m 10 m 15 m 20 m	09 48 284 7756 010 09 48 284 7756 020 09 48 284 7756 030 09 48 284 7756 050 09 48 284 7756 070 09 48 284 7756 100 09 48 284 7756 150 09 48 284 7756 200	
HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides, Fully shielded, 360° shielding contact, PVC, Yellow, -20 °C ... +75 °C	1 m 2 m 3 m 5 m 7 m 10 m 15 m 20 m	09 48 284 7757 010 09 48 284 7757 020 09 48 284 7757 030 09 48 284 7757 050 09 48 284 7757 070 09 48 284 7757 100 09 48 284 7757 150 09 48 284 7757 200	

Cable

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides, Fully shielded, 360° shielding contact, PVC (outdoor), Black, -20 °C ... +75 °C	1 m	09 48 284 7758 010	
	2 m	09 48 284 7758 020	
	3 m	09 48 284 7758 030	
	5 m	09 48 284 7758 050	
	7 m	09 48 284 7758 070	
	10 m	09 48 284 7758 100	
	15 m	09 48 284 7758 150	
	20 m	09 48 284 7758 200	



9 / 125 µm
HARTING PushPull
HARTING PushPull



Cable

Features

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	9 / 125 µm
Connector 1	HARTING PushPull
Connector 2	HARTING PushPull
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Singlemode, Overmoulded, Pre-assembled on both sides	1 m	33 61 221 0010 001	
	2 m	33 61 221 0020 001	
	3 m	33 61 221 0030 001	
	4 m	33 61 221 0040 001	
	5 m	33 61 221 0050 001	
	6 m	33 61 221 0060 001	
	7 m	33 61 221 0070 001	
	8 m	33 61 221 0080 001	
	9 m	33 61 221 0090 001	
	10 m	33 61 221 0100 001	
	11 m	33 61 221 0110 001	
	12 m	33 61 221 0120 001	
	13 m	33 61 221 0130 001	
	14 m	33 61 221 0140 001	
	15 m	33 61 221 0150 001	
	20 m	33 61 221 0200 001	
	25 m	33 61 221 0250 001	
	30 m	33 61 221 0300 001	
	35 m	33 61 221 0350 001	
	40 m	33 61 221 0400 001	
	45 m	33 61 221 0450 001	
	50 m	33 61 221 0500 001	
	60 m	33 61 221 0600 001	
	70 m	33 61 221 0700 001	
	80 m	33 61 221 0800 001	
	90 m	33 61 221 0900 001	
	100 m	33 61 221 1000 001	
FO cable, Singlemode, Not assembled	10 m	33 58 751 0100 002	
	20 m	33 58 751 0200 002	
	100 m	33 58 751 1000 002	

50 / 125 µm
HARTING PushPull
HARTING PushPull



Features

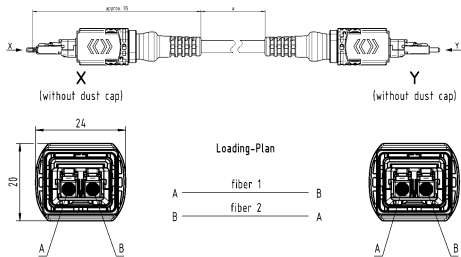
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	50 / 125 µm
Connector 1	HARTING PushPull
Connector 2	HARTING PushPull
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides 	1 m	33 61 221 0010 002	
	2 m	33 61 221 0020 002	
	3 m	33 61 221 0030 002	
	4 m	33 61 221 0040 002	
	5 m	33 61 221 0050 002	
	6 m	33 61 221 0060 002	
	7 m	33 61 221 0070 002	
	8 m	33 61 221 0080 002	
	9 m	33 61 221 0090 002	
	10 m	33 61 221 0100 002	
	11 m	33 61 221 0110 002	
	12 m	33 61 221 0120 002	
	13 m	33 61 221 0130 002	
	14 m	33 61 221 0140 002	
	15 m	33 61 221 0150 002	
	20 m	33 61 221 0200 002	
	25 m	33 61 221 0250 002	
	30 m	33 61 221 0300 002	
	35 m	33 61 221 0350 002	
	40 m	33 61 221 0400 002	
	45 m	33 61 221 0450 002	
	50 m	33 61 221 0500 002	
	60 m	33 61 221 0600 002	
	70 m	33 61 221 0700 002	
	80 m	33 61 221 0800 002	
	90 m	33 61 221 0900 002	
	100 m	33 61 221 1000 002	
FO cable, Multimode, Not assembled 	10 m	33 58 751 0100 003	
	20 m	33 58 751 0200 003	
	100 m	33 58 751 1000 003	

62.5 / 125 µm
HARTING PushPull
HARTING PushPull



Cable

Features

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	62.5 / 125 µm
Connector 1	HARTING PushPull
Connector 2	HARTING PushPull
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm, 7 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides	1 m	33 61 221 0010 003	
	2 m	33 61 221 0020 003	
	3 m	33 61 221 0030 003	
	4 m	33 61 221 0040 003	
	5 m	33 61 221 0050 003	
	6 m	33 61 221 0060 003	
	7 m	33 61 221 0070 003	
	8 m	33 61 221 0080 003	
	9 m	33 61 221 0090 003	
	10 m	33 61 221 0100 003	
	11 m	33 61 221 0110 003	
	12 m	33 61 221 0120 003	
	13 m	33 61 221 0130 003	
	14 m	33 61 221 0140 003	
	15 m	33 61 221 0150 003	
	20 m	33 61 221 0200 003	
	25 m	33 61 221 0250 003	
	30 m	33 61 221 0300 003	
	35 m	33 61 221 0350 003	
	40 m	33 61 221 0400 003	
	45 m	33 61 221 0450 003	
	50 m	33 61 221 0500 003	
	60 m	33 61 221 0600 003	
	70 m	33 61 221 0700 003	
	80 m	33 61 221 0800 003	
	90 m	33 61 221 0900 003	
	100 m	33 61 221 1000 003	
FO cable, Multimode, Not assembled	10 m	33 58 751 0100 001	
	20 m	33 58 751 0200 001	
	100 m	33 58 751 1000 001	

9 / 125 µm
HARTING PushPull
LC duplex



Cable

Features

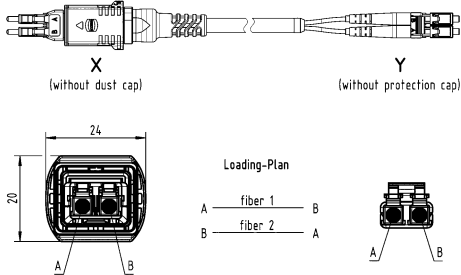
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	9 / 125 µm
Connector 1	HARTING PushPull
Connector 2	LC duplex
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Singlemode, Overmoulded, Pre-assembled on both sides 	1 m	33 61 431 0010 001	
	2 m	33 61 431 0020 001	
	3 m	33 61 431 0030 001	
	4 m	33 61 431 0040 001	
	5 m	33 61 431 0050 001	
	6 m	33 61 431 0060 001	
	7 m	33 61 431 0070 001	
	8 m	33 61 431 0080 001	
	9 m	33 61 431 0090 001	
	10 m	33 61 431 0100 001	
	11 m	33 61 431 0110 001	
	12 m	33 61 431 0120 001	
	13 m	33 61 431 0130 001	
	14 m	33 61 431 0140 001	
	15 m	33 61 431 0150 001	
	20 m	33 61 431 0200 001	
	25 m	33 61 431 0250 001	
	30 m	33 61 431 0300 001	
	35 m	33 61 431 0350 001	
	40 m	33 61 431 0400 001	
	45 m	33 61 431 0450 001	
	50 m	33 61 431 0500 001	
	60 m	33 61 431 0600 001	
	70 m	33 61 431 0700 001	
	80 m	33 61 431 0800 001	
	90 m	33 61 431 0900 001	
	100 m	33 61 431 1000 001	
FO cable, Singlemode, Not assembled 	10 m	33 58 751 0100 002	
	20 m	33 58 751 0200 002	
	100 m	33 58 751 1000 002	

50 / 125 µm
HARTING PushPull
LC duplex



Cable

Features

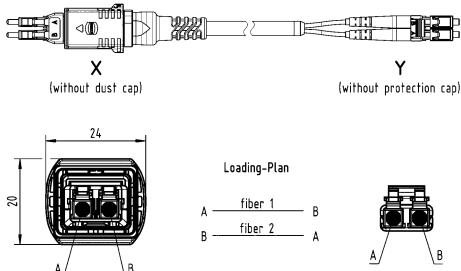
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	50 / 125 µm
Connector 1	HARTING PushPull
Connector 2	LC duplex
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides 	1 m	33 61 431 0010 002	
	2 m	33 61 431 0020 002	
	3 m	33 61 431 0030 002	
	4 m	33 61 431 0040 002	
	5 m	33 61 431 0050 002	
	6 m	33 61 431 0060 002	
	7 m	33 61 431 0070 002	
	8 m	33 61 431 0080 002	
	9 m	33 61 431 0090 002	
	10 m	33 61 431 0100 002	
	11 m	33 61 431 0110 002	
	12 m	33 61 431 0120 002	
	13 m	33 61 431 0130 002	
	14 m	33 61 431 0140 002	
	15 m	33 61 431 0150 002	
	20 m	33 61 431 0200 002	
	25 m	33 61 431 0250 002	
	30 m	33 61 431 0300 002	
	35 m	33 61 431 0350 002	
	40 m	33 61 431 0400 002	
	45 m	33 61 431 0450 002	
	50 m	33 61 431 0500 002	
	60 m	33 61 431 0600 002	
	70 m	33 61 431 0700 002	
	80 m	33 61 431 0800 002	
	90 m	33 61 431 0900 002	
	100 m	33 61 431 1000 002	
FO cable, Multimode, Not assembled 	10 m	33 58 751 0100 003	
	20 m	33 58 751 0200 003	
	100 m	33 58 751 1000 003	

62.5 / 125 µm
HARTING PushPull
LC duplex



Features

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	62.5 / 125 µm
Connector 1	HARTING PushPull
Connector 2	LC duplex
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm, 7 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides	1 m	33 61 431 0010 003	
	2 m	33 61 431 0020 003	
	3 m	33 61 431 0030 003	
	4 m	33 61 431 0040 003	
	5 m	33 61 431 0050 003	
	6 m	33 61 431 0060 003	
	7 m	33 61 431 0070 003	
	8 m	33 61 431 0080 003	
	9 m	33 61 431 0090 003	
	10 m	33 61 431 0100 003	
	11 m	33 61 431 0110 003	
	12 m	33 61 431 0120 003	
	13 m	33 61 431 0130 003	
	14 m	33 61 431 0140 003	
	15 m	33 61 431 0150 003	
	20 m	33 61 431 0200 003	
	25 m	33 61 431 0250 003	
	30 m	33 61 431 0300 003	
	35 m	33 61 431 0350 003	
	40 m	33 61 431 0400 003	
	45 m	33 61 431 0450 003	
	50 m	33 61 431 0500 003	
	60 m	33 61 431 0600 003	
	70 m	33 61 431 0700 003	
	80 m	33 61 431 0800 003	
	90 m	33 61 431 0900 003	
	100 m	33 61 431 1000 003	
FO cable, Multimode, Not assembled	10 m	33 58 751 0100 001	
	20 m	33 58 751 0200 001	
	100 m	33 58 751 1000 001	

9 / 125 µm
HARTING PushPull
SC duplex



Cable

Features

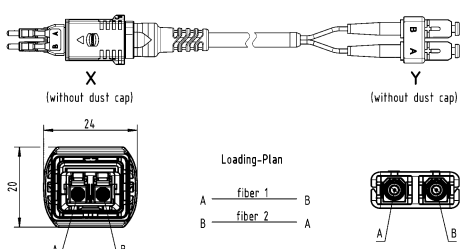
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	9 / 125 µm
Connector 1	HARTING PushPull
Connector 2	SC duplex
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Singlemode, Overmoulded, Pre-assembled on both sides 	1 m	33 61 431 0010 004	
	2 m	33 61 431 0020 004	
	3 m	33 61 431 0030 004	
	4 m	33 61 431 0040 004	
	5 m	33 61 431 0050 004	
	6 m	33 61 431 0060 004	
	7 m	33 61 431 0070 004	
	8 m	33 61 431 0080 004	
	9 m	33 61 431 0090 004	
	10 m	33 61 431 0100 004	
	11 m	33 61 431 0110 004	
	12 m	33 61 431 0120 004	
	13 m	33 61 431 0130 004	
	14 m	33 61 431 0140 004	
	15 m	33 61 431 0150 004	
	20 m	33 61 431 0200 004	
	25 m	33 61 431 0250 004	
	30 m	33 61 431 0300 004	
	35 m	33 61 431 0350 004	
	40 m	33 61 431 0400 004	
	45 m	33 61 431 0450 004	
	50 m	33 61 431 0500 004	
	60 m	33 61 431 0600 004	
	70 m	33 61 431 0700 004	
	80 m	33 61 431 0800 004	
	90 m	33 61 431 0900 004	
	100 m	33 61 431 1000 004	
FO cable, Singlemode, Not assembled 	10 m	33 58 751 0100 002	
	20 m	33 58 751 0200 002	
	100 m	33 58 751 1000 002	

50 / 125 µm
HARTING PushPull
SC duplex



Features

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	50 / 125 µm
Connector 1	HARTING PushPull
Connector 2	SC duplex
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides	1 m	33 61 431 0010 005	
	2 m	33 61 431 0020 005	
	3 m	33 61 431 0030 005	
	4 m	33 61 431 0040 005	
	5 m	33 61 431 0050 005	
	6 m	33 61 431 0060 005	
	7 m	33 61 431 0070 005	
	8 m	33 61 431 0080 005	
	9 m	33 61 431 0090 005	
	10 m	33 61 431 0100 005	
	11 m	33 61 431 0110 005	
	12 m	33 61 431 0120 005	
	13 m	33 61 431 0130 005	
	14 m	33 61 431 0140 005	
	15 m	33 61 431 0150 005	
	20 m	33 61 431 0200 005	
	25 m	33 61 431 0250 005	
	30 m	33 61 431 0300 005	
	35 m	33 61 431 0350 005	
	40 m	33 61 431 0400 005	
	45 m	33 61 431 0450 005	
	50 m	33 61 431 0500 005	
	60 m	33 61 431 0600 005	
	70 m	33 61 431 0700 005	
	80 m	33 61 431 0800 005	
	90 m	33 61 431 0900 005	
	100 m	33 61 431 1000 005	
FO cable, Multimode, Not assembled	10 m	33 58 751 0100 003	
	20 m	33 58 751 0200 003	
	100 m	33 58 751 1000 003	

62.5 / 125 µm
HARTING PushPull
SC duplex



Cable

Features

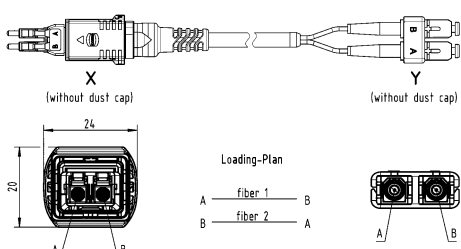
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	62.5 / 125 µm
Connector 1	HARTING PushPull
Connector 2	SC duplex
Limiting temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP68
Cable diameter	6.5 mm, 7 mm
Material (hood/housing)	Thermoplastic
Material (cable)	PUR (polyurethane)
RoHS	compliant

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides 	1 m	33 61 431 0010 006	
	2 m	33 61 431 0020 006	
	3 m	33 61 431 0030 006	
	4 m	33 61 431 0040 006	
	5 m	33 61 431 0050 006	
	6 m	33 61 431 0060 006	
	7 m	33 61 431 0070 006	
	8 m	33 61 431 0080 006	
	9 m	33 61 431 0090 006	
	10 m	33 61 431 0100 006	
	11 m	33 61 431 0110 006	
	12 m	33 61 431 0120 006	
	13 m	33 61 431 0130 006	
	14 m	33 61 431 0140 006	
	15 m	33 61 431 0150 006	
	20 m	33 61 431 0200 006	
	25 m	33 61 431 0250 006	
	30 m	33 61 431 0300 006	
	35 m	33 61 431 0350 006	
	40 m	33 61 431 0400 006	
	45 m	33 61 431 0450 006	
	50 m	33 61 431 0500 006	
	60 m	33 61 431 0600 006	
	70 m	33 61 431 0700 006	
	80 m	33 61 431 0800 006	
	90 m	33 61 431 0900 006	
	100 m	33 61 431 1000 006	
FO cable, Multimode, Not assembled 	10 m	33 58 751 0100 001	
	20 m	33 58 751 0200 001	
	100 m	33 58 751 1000 001	

3x (2x 0.14) + (2x 0.5) mm²
Han® M23 Female Straight 12-pin
D-Sub Standard Male 9-pin



Features

- Shielding
- Cables suitable for industry
- Drag chain compatible
- Fast lock technology ComLock-S
- Compatible with Speedtec locking (Intercontec)
- No special tools required
- EMC conform

Technical characteristics

Core structure	3x (2x 0.14) + (2x 0.5) mm ²
Connector 1	Han® M23, Female, Straight, 12-pin
Connector 2	D-Sub, Standard, Male, 9-pin
Limiting temperature	-40 ... +100 °C
Degree of protection acc. to IEC 60529	IP65, IP67
Material (cable)	PUR (polyurethane)
Colour (cable)	Green

Details

Other cable lengths on request!

Suitable motor cable see next page

Identification

Encoder cable,
Pre-assembled on both sides,
for servo drives,
Standard in acc. to Lenze



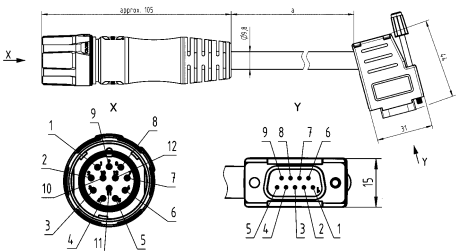
Cable length

5 m
7.5 m
10 m
12.5 m
15 m
17 m
20 m

Part number

09 48 566 0847 050
09 48 566 0847 075
09 48 566 0847 100
09 48 566 0847 125
09 48 566 0847 150
09 48 566 0847 170
09 48 566 0847 200

Drawing (dimensions in mm)



(4x 1.5 + (2x 0.5)) mm²
Han® M23 Female Straight 6-pins



Cable

Features

- 360° shielding
- Cables suitable for industry
- Drag chain compatible
- Fast lock technology ComLock-S
- Compatible with Speedtec locking (Intercontec)
- No special tools required
- EMC conform

Technical characteristics

Core structure	(4x 1.5 + (2x 0.5)) mm ²
Connector 1	Han® M23, Female, Straight, 6-pins
Limiting temperature	-40 ... +100 °C
Degree of protection acc. to IEC 60529	IP65, IP67
Material (cable)	PUR (polyurethane)
Colour (cable)	Orange

Details

Other cable lengths on request!

Suitable encoder cable see previous page

Identification	Cable length	Part number	Drawing (dimensions in mm)
Motor cable, Pre-assembled on one side, for servo drives, Standard in acc. to Lenze, With brake cores	5 m 7.5 m 10 m 12.5 m 15 m 17 m 20 m	21 37 E20 0637 050 21 37 E20 0637 075 21 37 E20 0637 100 21 37 E20 0637 125 21 37 E20 0637 150 21 37 E20 0637 170 21 37 E20 0637 200	



4x 2x AWG 26/7
Cat. 7 FRNC (SHF1)



Features

- Especially suitable for data cabling on and below deck of civil ships as well as other offshore applications
- Flame retardant, halogen free and RoHS compliant
- Oil and UV resistant
- Suitable for structured cabling acc. to Cat. 7, class F (ISO/IEC 11801 resp. EN 50173)
- Qualified for the transmission of Gigabit- and 10 Gigabit-Ethernet acc. to IEEE 802.3

Technical characteristics

Number of cores	8
Core structure	4x 2x AWG 26/7
Test voltage $U_{r.m.s.}$	1 kV Wire / wire / shielding
Limiting temperature	-40 ... +80 °C
Coupling attenuation @ 20 °C / 100 MHz	10 mΩ/m
Conductor resistance @ 20 °C	≤290 Ω/km
Insulation resistance @ 20 °C	≥500 MΩ x km
Signal run time @ 20 °C	≤5.3 ns/m
Impedance @ 100 MHz	100 Ω ±5 %
Cable diameter	7.1 mm
Minimum bending radius	10x Cable diameter, (repeated bending), 5x Cable diameter, (singular bending)
Transmission characteristics	Cat. 7, Class F up to 600 MHz
Material (cable)	FRNC
Colour (cable)	Black
RoHS	compliant

Specifications and approvals

DNV GL

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
Copper cable (round), Not assembled	100 m 500 m 1000 m	09 45 600 0525 09 45 600 0523 09 45 600 0524	

