Pushing Performance

People | Power | Partnership

HARTING News 2018

News 2018

Contents	Chapter

The **HARTING eCatalogue / eShop** can be found on our homepage at **www.HARTING.com** or at the direct link **www.eCatalogue.HARTING.com**.

The HARTING e-Catalogue is your platform for conveniently selecting individual products as well as configuring complete solutions. Our comprehensive product pages provide you with all necessary technical information and CAD files in various formats for downloading. You may also contact our technical sales department directly.

Find out about **product innovations and news** on the start page of the HARTING e-Catalogue or go directly to **www.product-news.HARTING.com**.

Registered users can take advantage of MyHARTING to check on availability or prices, and to place or track their orders. Here, your customized “HARTING history” provides you with a list of your inquiries, quotations and more.

Sign up now for your free e-Catalogue account at HARTING!

www.eShop.HARTING.com

Product samples: Fast-track delivery to your desk, free of charge

The new free express sample service in the HARTING eCatalogue allows customers to order samples immediately, easily and completely free of charge. A broad selection is now available. If a product is unavailable, the system offers alternative products with similar features that can be requested at a mouse click.

The free samples are shipped within 24 hours at no cost to you. This service enables tremendous flexibility, especially in the design phase of projects.

Transforming customer wishes into concrete solutions

The HARTING Technology Group is skilled in the fields of electrical, electronic and optical connection, transmission and networking technology, as well as in manufacturing, mechatronics and software creation. The Group uses these skills to develop customized solutions and products such as connectors for energy and data-transmission/data-networking applications, including, for example, mechanical engineering, rail technology, wind energy plants, factory automation and the telecommunications sector. In addition, HARTING also produces electro-magnetic components for the automobile industry and offers solutions in the field of housing technology and shop systems.

The HARTING Group currently comprises 57 sales companies and production plants worldwide employing a total of about 4,600 staff.

HARTING Subsidiary

HARTING Representation

We aspire to top performance.

Connectors ensure functionality. As core elements of electrical and optical termination, connection and infrastructure technologies, they are essential in enabling the modular construction of devices, machines and systems across an extremely wide range of industrial applications. Their reliability is a crucial factor guaranteeing smooth functioning in the manufacturing area, telecommunications, applications in medical technology – in short, connectors are at work in virtually every conceivable application area. Thanks to the ongoing development of our technologies, our customers enjoy investment security and benefit from durable, long-term functionality.

Wherever our customers are, we're there.

Increasing industrialization is creating growing markets that are characterized by widely diverging demands and requirements. What these markets all share in common is the quest for perfection, increasingly efficient processes and reliable technologies. **HARTING** is providing these technologies – in Europe, the Americas and Asia. In order to implement customer requirements in the best possible manner, the **HARTING** professionals at our international subsidiaries engage in up-close, partnership-based interaction with our customers, right from the very early product development phase.

Our on-site staff form the interface to the centrally coordinated development and production departments. In this way, our customers can rely on consistently high, superior product quality – worldwide.

Our claim: Pushing Performance.

HARTING provides more than optimally attuned components. In order to offer our customers the best possible solutions, on request **HARTING** contributes a great deal more and is tightly integrated into the value-creation process.

From ready-assembled cables through to control racks or ready-to-go control desks. Our aim is to generate maximum benefit for our customers – with no compromises!

Quality creates reliability – and warrants trust.

The **HARTING** brand stands for superior quality and reliability – worldwide. The standards we set are the result of consistent, stringent quality management that is subject to regular certifications and audits.

EN ISO 9001, the EU Eco-Audit and ISO 14001:2004 are key elements here. We take a proactive stance towards new requirements, which is why **HARTING** is the first company worldwide to have obtained the new IRIS quality certificate for rail vehicles.

HARTING technology creates added value for customers.

Technologies by **HARTING** are at work worldwide. **HARTING's** presence stands for smoothly functioning systems powered by intelligent connectors, smart infrastructure solutions and sophisticated network systems. Over the course of many years of close, trust-based cooperation with its customers, the **HARTING** Technology Group has become one of the leading specialists globally for connector technology. We offer individual customers specific and innovative solutions that go beyond the basic standard functionalities. These tailored solutions deliver sustained results, ensure investment security and enable customers to achieve significant added value.

Opting for HARTING opens up an innovative, complex world of concepts and ideas.

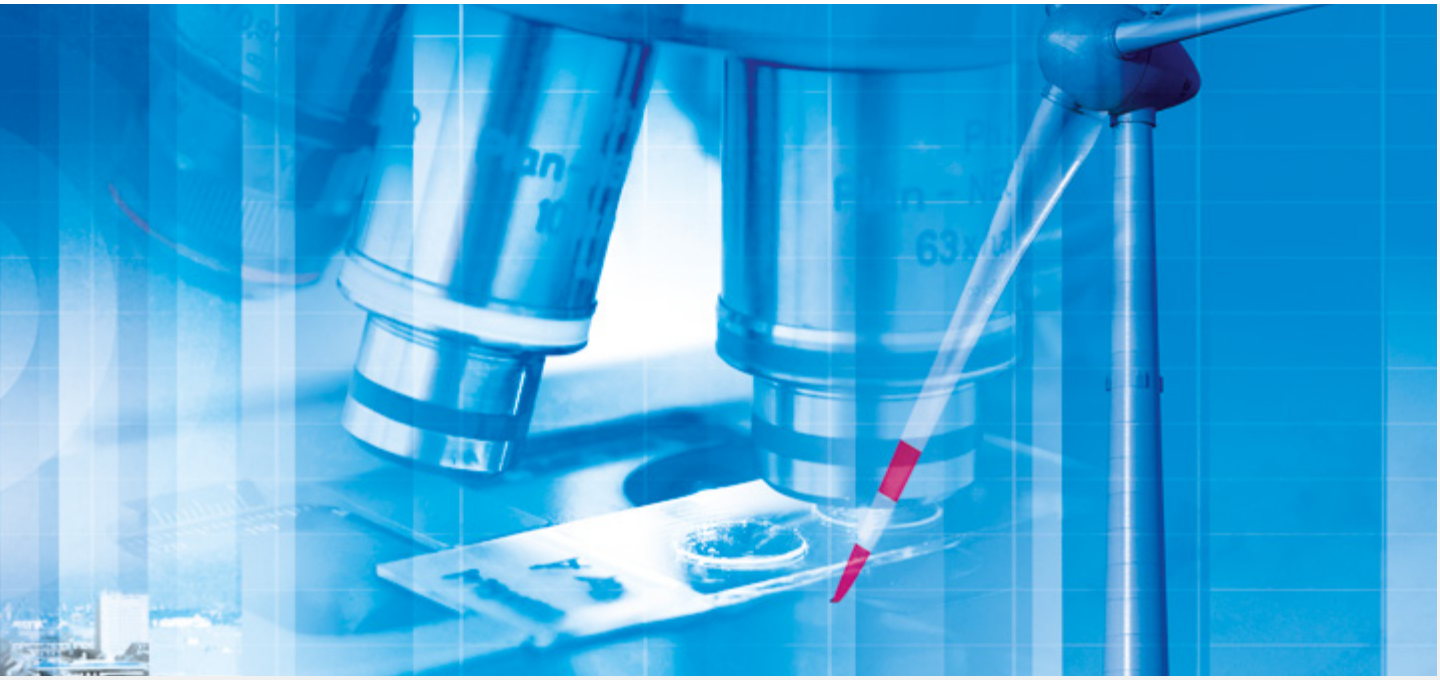
In order to develop and produce connectivity and network solutions serving an exceptionally wide range of connector applications in a professional and cost-effective manner, **HARTING** not only commands the full array of conventional tools and basic technologies. Above and beyond these capabilities, **HARTING** is constantly harnessing and refining its broad base of knowledge and experience to create new solutions that also ensure continuity. To secure its lead in know-how, HARTING draws on a wealth of sources from its in-house research and applications.

Salient examples of these sources of innovative knowledge include microstructure technologies, 3D design and connection technology, high-temperature and ultrahigh-frequency applications that are finding use in telecommunications and automation networks, in the automotive industry, or in industrial sensor and actuator applications, RFID and wireless technologies, in addition to packaging and housing made of plastics, aluminum and stainless steel.

HARTING overcomes technological limitations.

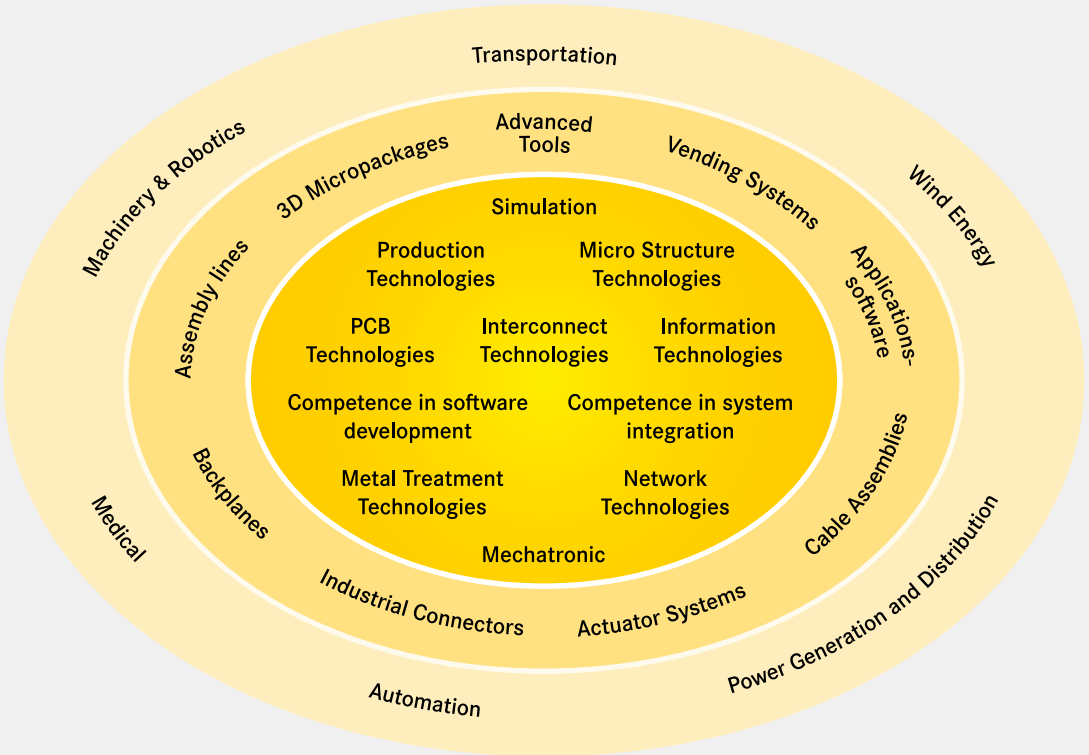
Drawing on the comprehensive resources of the group's technology pool, **HARTING** devises practical solutions for its customers. Whether this involves industrial networks for manufacturing automation, or hybrid interface solutions for wireless telecommunication infrastructures, 3D circuit carriers with microstructures, or cable assemblies for high-temperature applications in the automotive industry – **HARTING** technologies offer not only components, but comprehensive solutions attuned to individual customer requirements and preferences. The range of cost-effective solutions covers ready-to-use cable configurations, completely assembled backplanes and board system carriers, as well as fully wired and tested control panels.

In order to ensure the future-proof design of RF and EMC-compatible interface solutions, the central **HARTING** laboratory (certified to EN 45001) employs simulation tools, as well as experimental, testing and diagnostics facilities all the way to scanning electron microscopes. In addition to product and process suitability considerations, lifecycle and environmental aspects play a key role in the selection of materials and processes.



HARTING's knowledge is practical know-how that generates synergy effects.

HARTING commands decades of experience with regard to the applications conditions involved in connections in telecommunications, computer, network and medical technologies, as well as industrial automation technologies, e.g. in the mechanical engineering and plant engineering areas, in addition to the power generation industry and the transportation sector. **HARTING** is highly conversant with the specific application areas in all of these technology fields. In every solution approach, the key focus is on the application. In this context, uncompromising, superior quality is our hallmark. Every new solution found invariably flows back into the **HARTING** technology pool, thereby enriching our resources. And every new solution we go on to create will draw on this wealth of resources in order to optimize each and every individual solution. **HARTING** is synergy in action.



Contents	Page

Han-Eco® Modular
19 41 xxx xxxx

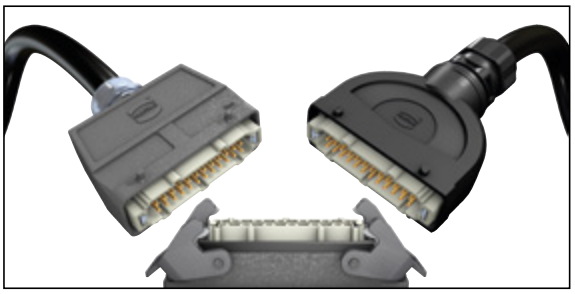
Han-Eco® A
19 46 xxx xxxx

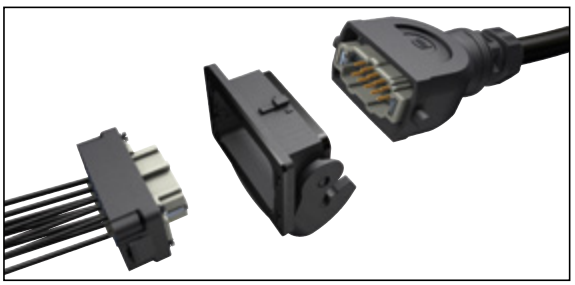
Han-Eco® B
19 43 xxx xxxx

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





Han-Eco® B Hoods/housings for industrial applications

Features

- Suitable for standard inserts and modules from the Han-Modular® 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

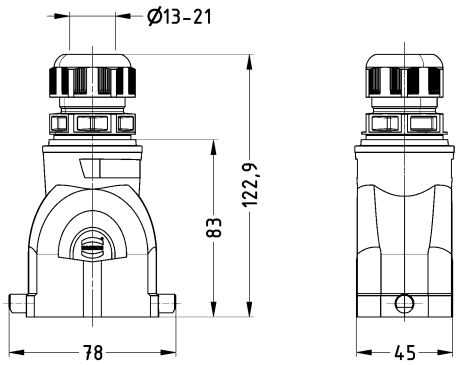
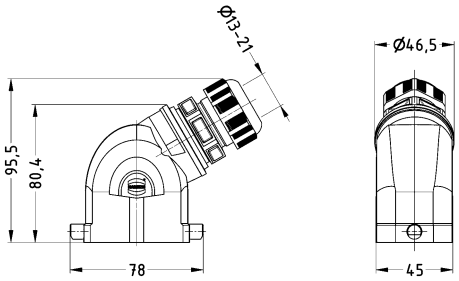
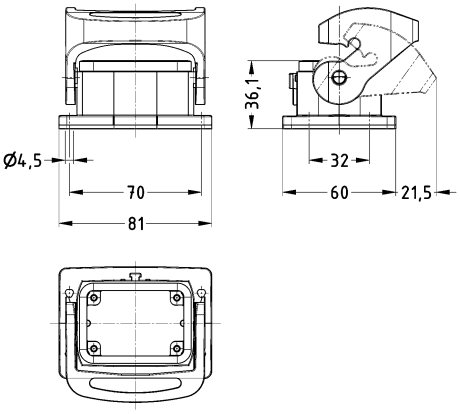
Details

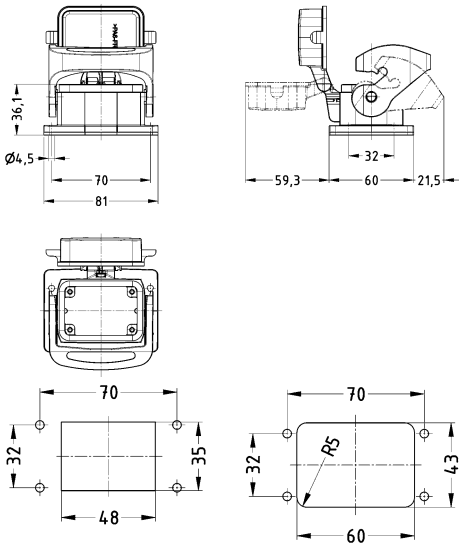
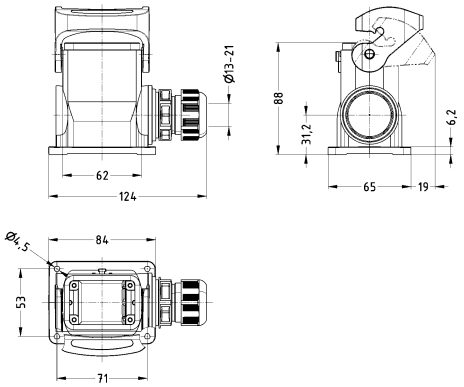
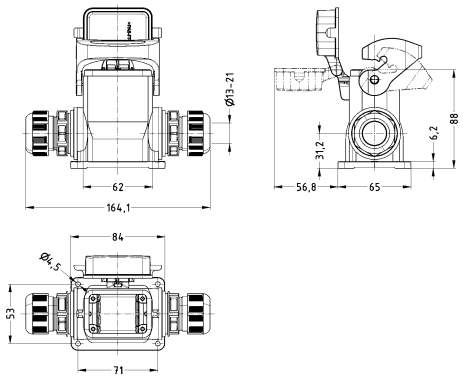
Mating compatible with all metal hoods and housings of the series Han® B.

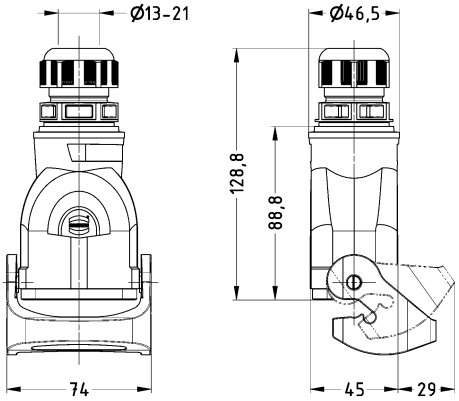
As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

Available as from July 2018

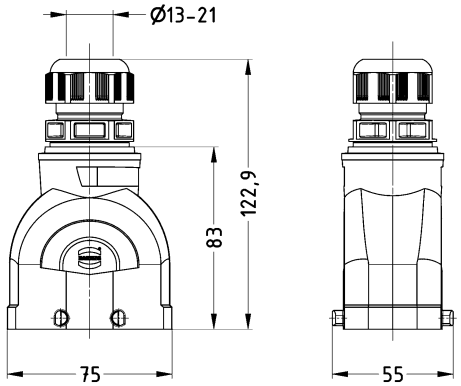
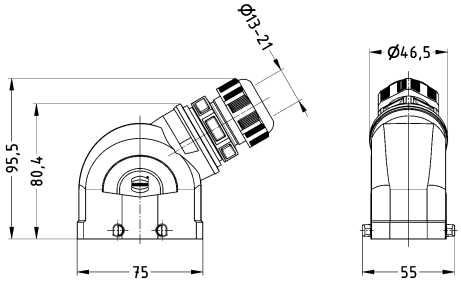
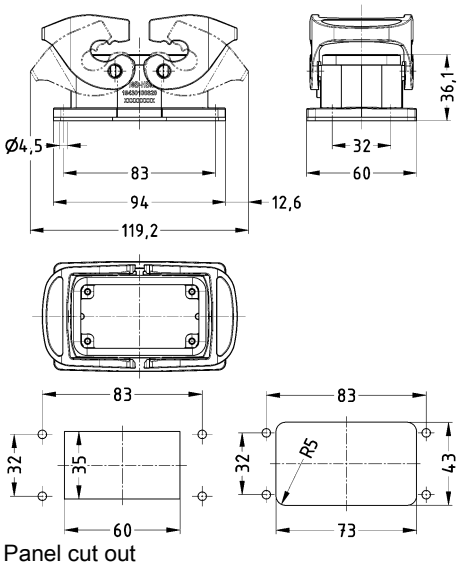
Single locking lever

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	

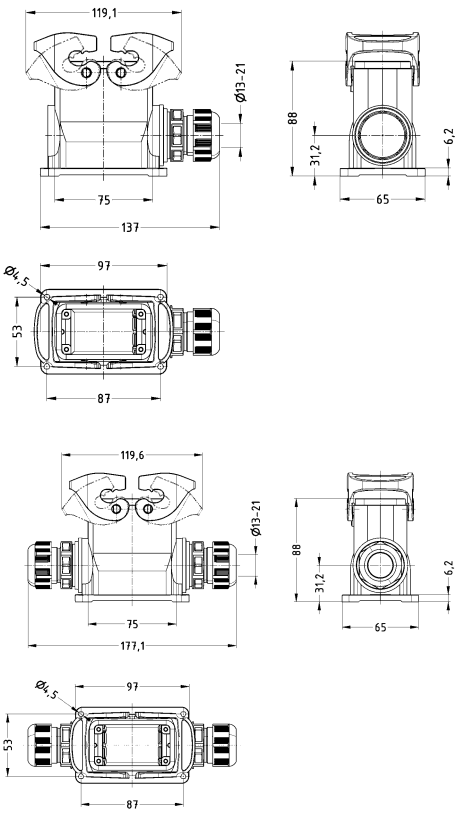
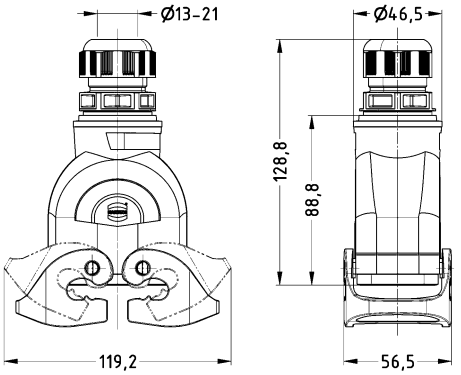
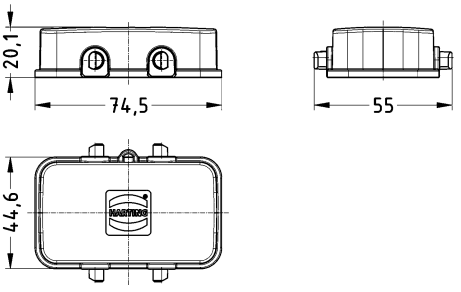
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 006 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x 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	

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			19 43 006 5442	
Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings			19 43 006 5410	
Han-Eco® B, Protection cover, for cable to cable housing			19 43 006 5446	

Double locking lever

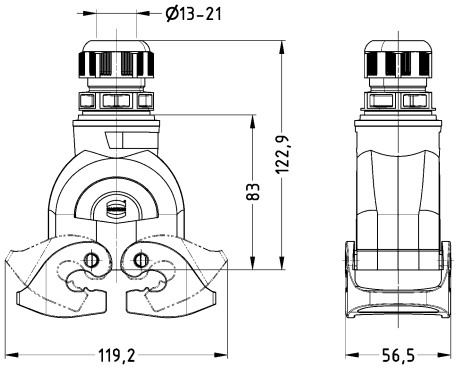
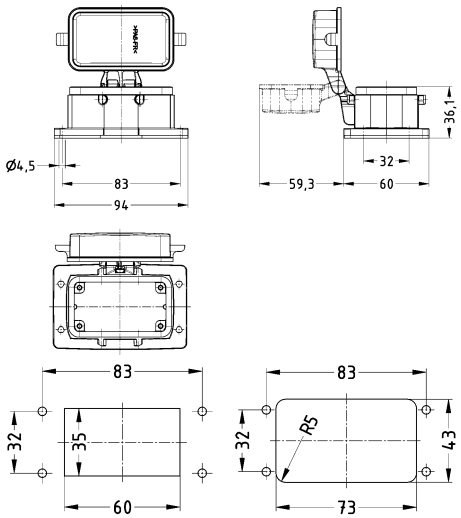
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0425 19 43 110 0426 19 43 110 0427	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x 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

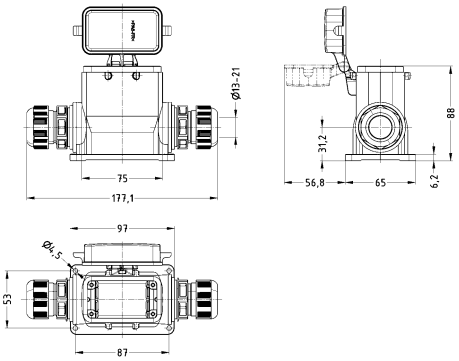
Han-Eco® B Hoods/housings for industrial applications Size 10 B

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	

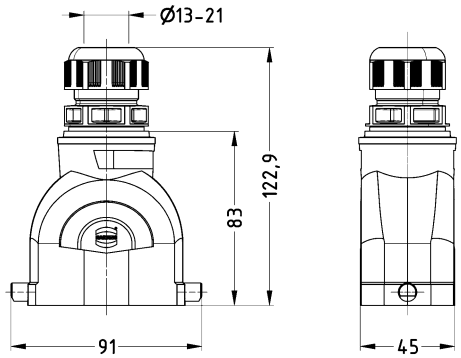
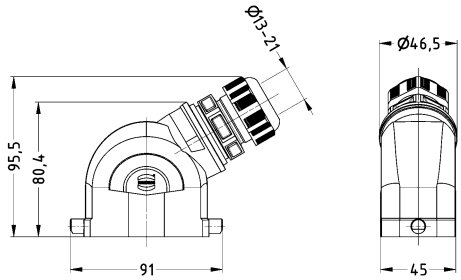
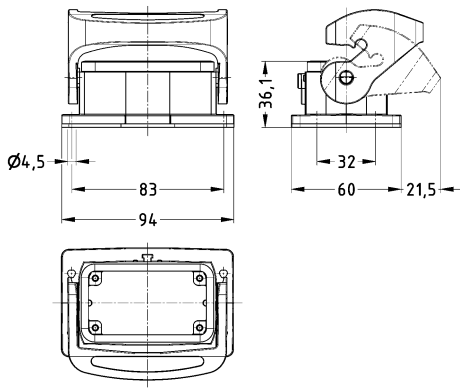
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Protection cover, for cable to cable housing			19 43 010 5426	

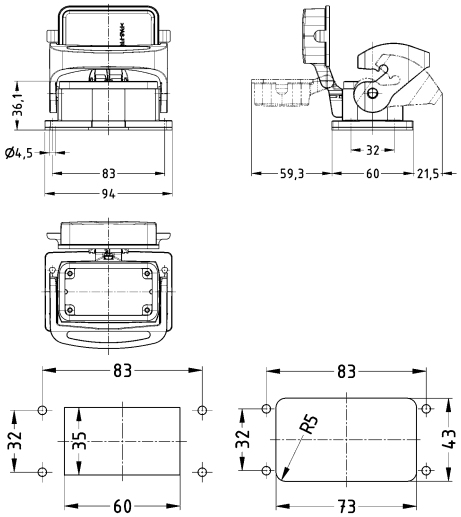
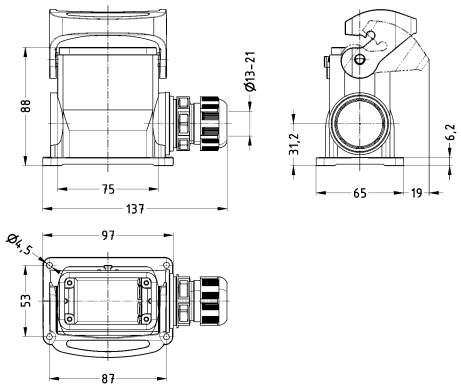
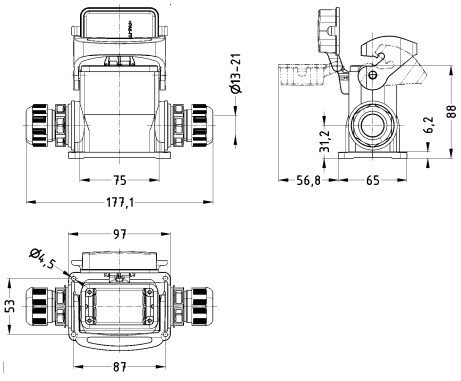
Double locking lever (on the hood)

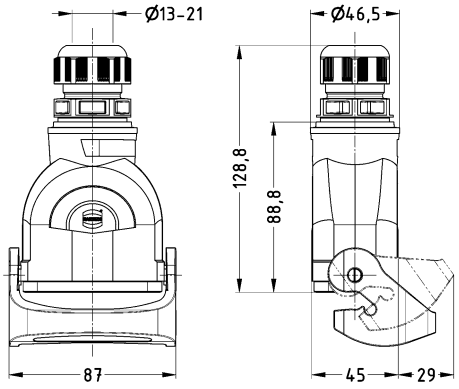
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M32	13 ... 21	19 43 110 0437	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M32	13 ... 21	19 43 110 0537	
Han-Eco® B, Bulkhead mounted housings,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

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	

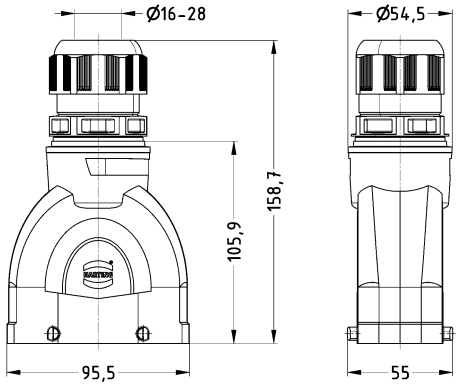
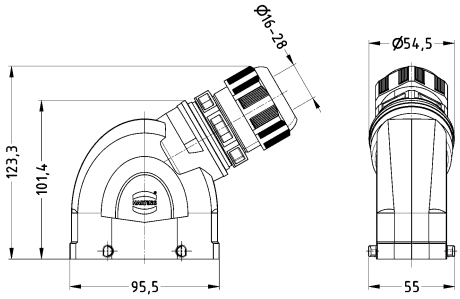
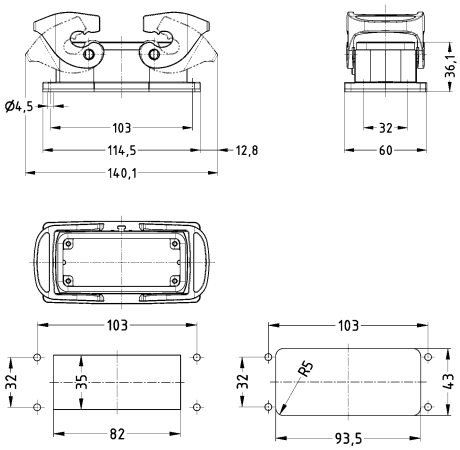
Single locking lever

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	

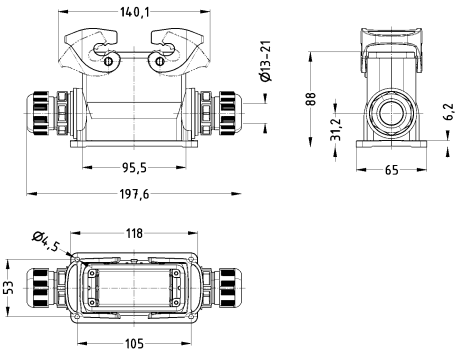
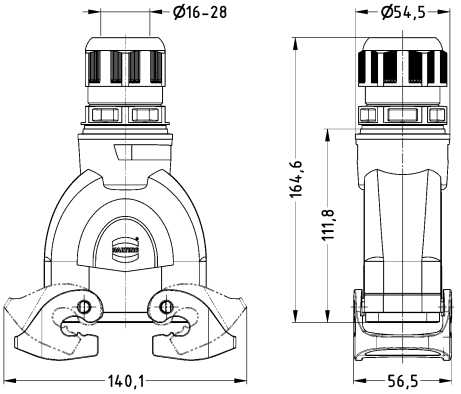
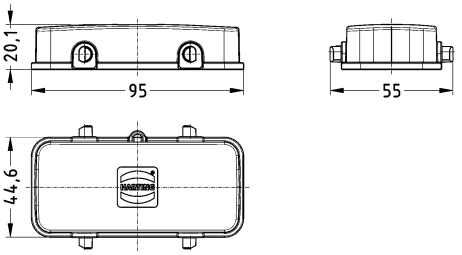
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 010 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x 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	

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	

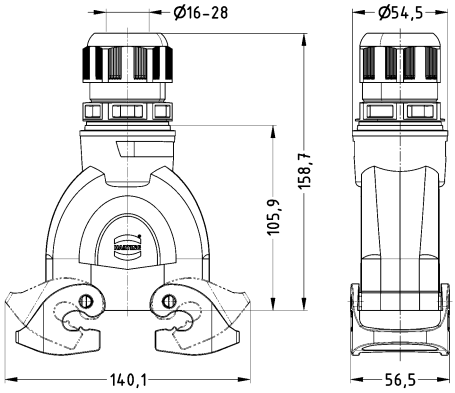
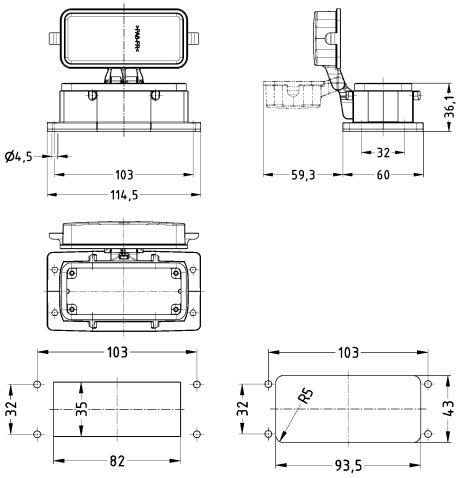
Double locking lever

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

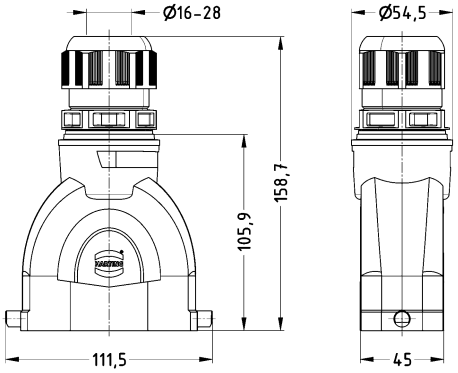
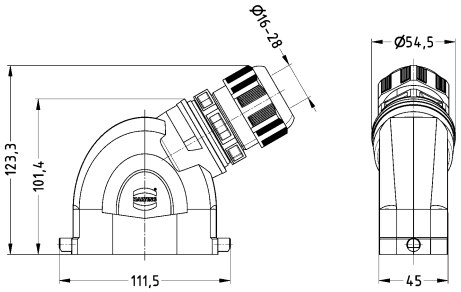
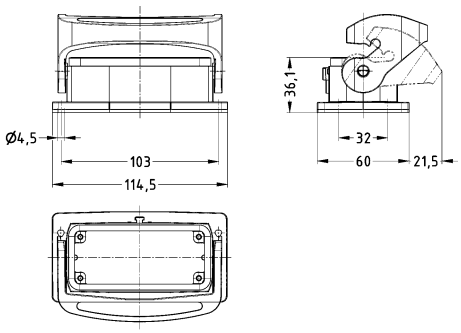
Han-Eco® B Hoods/housings for industrial applications Size 16 B

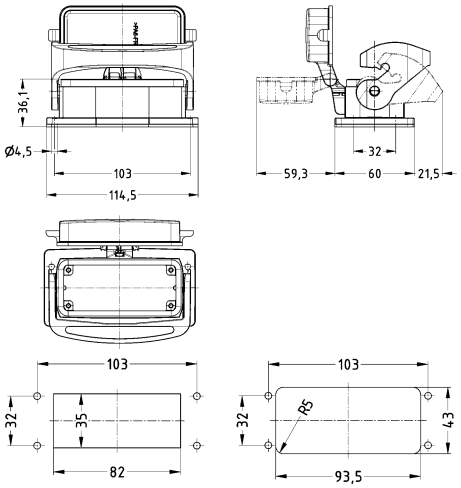
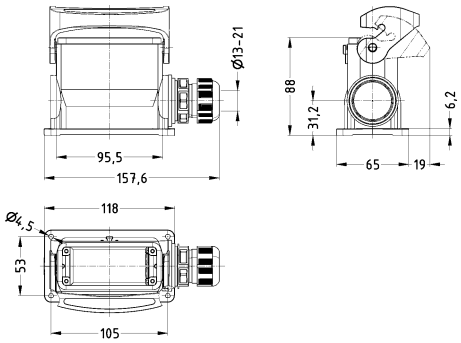
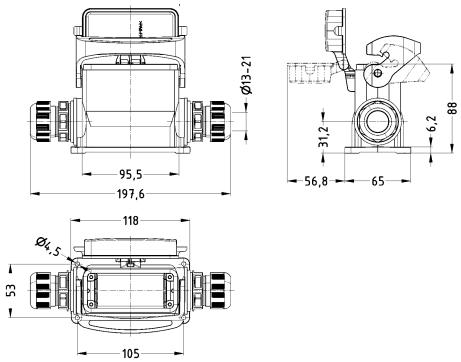
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 116 0231 19 43 116 0232 19 43 116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

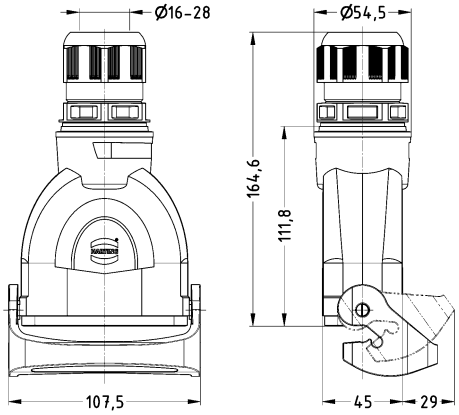
Double locking lever (on the hood)

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	

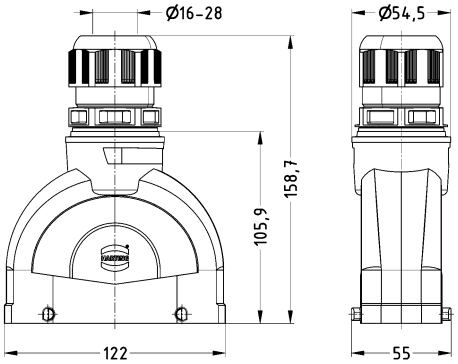
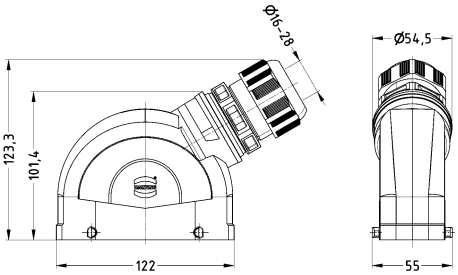
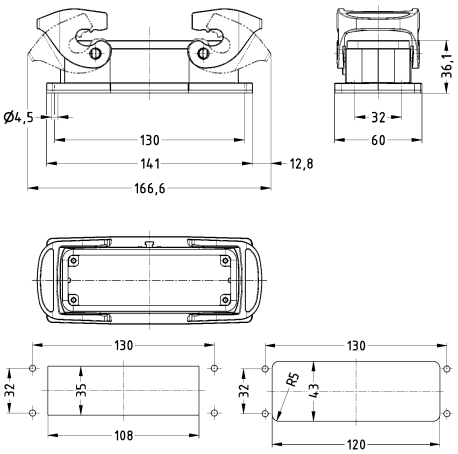
Single locking lever

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	

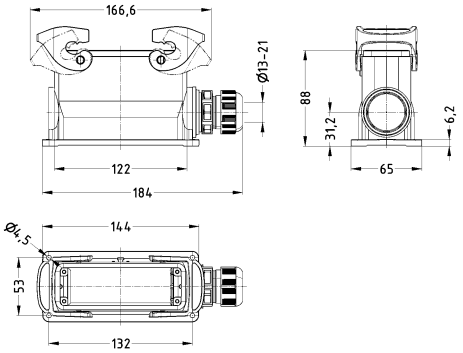
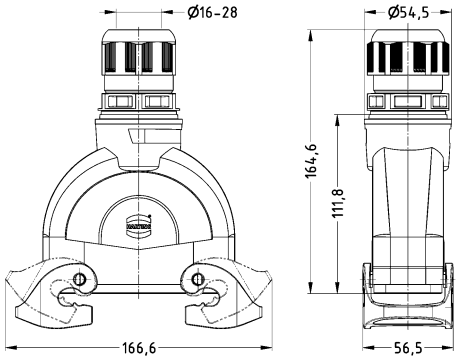
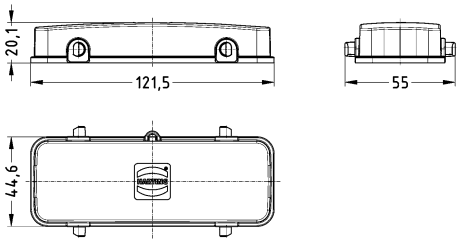
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 016 0341	 Panel cut out Front mounting / Rear mounting
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x 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	

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			19 43 016 5442	
Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings			19 43 016 5410	
Han-Eco® B, Protection cover, for cable to cable housing			19 43 016 5446	

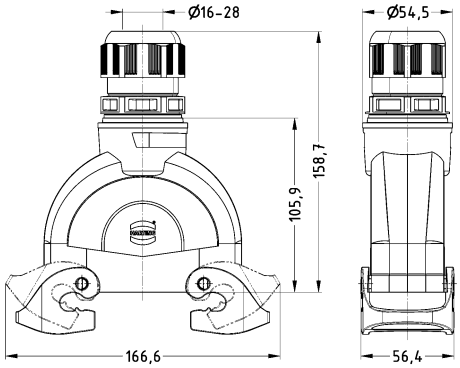
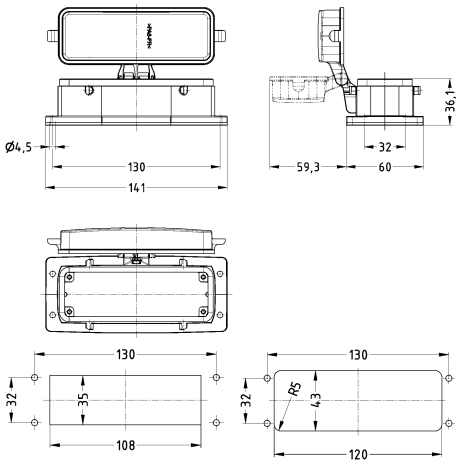
Double locking lever

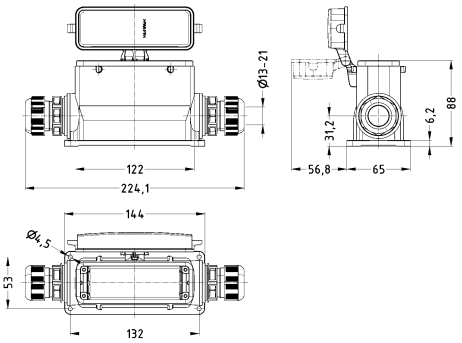
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0427 19 43 124 0428	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M32 1x M40	13 ... 21 16 ... 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-Eco® B Hoods/housings for industrial applications Size 24 B

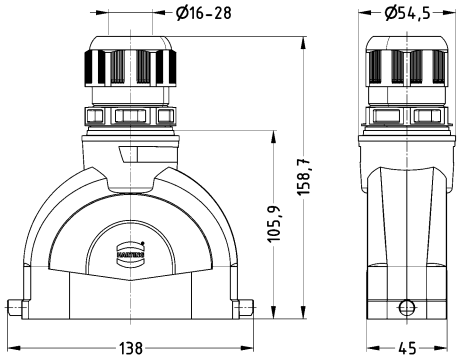
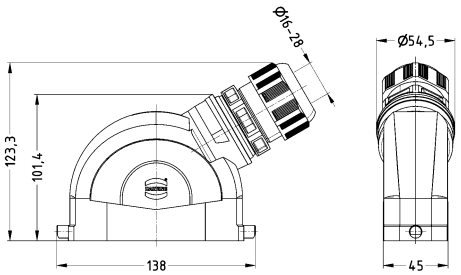
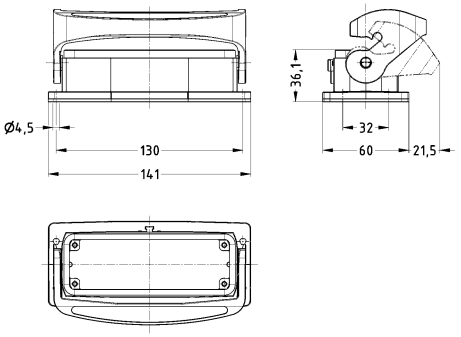
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 124 0231 19 43 124 0232 19 43 124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

Double locking lever (on the hood)

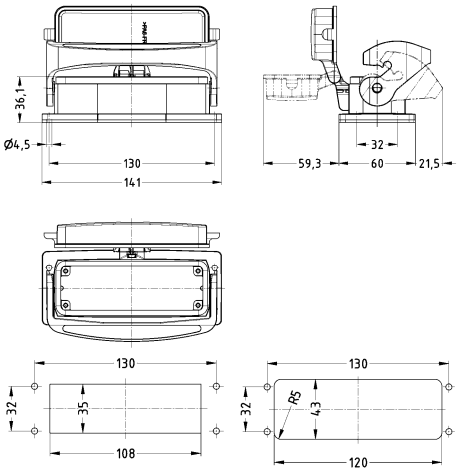
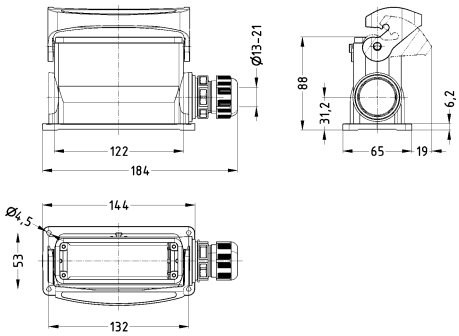
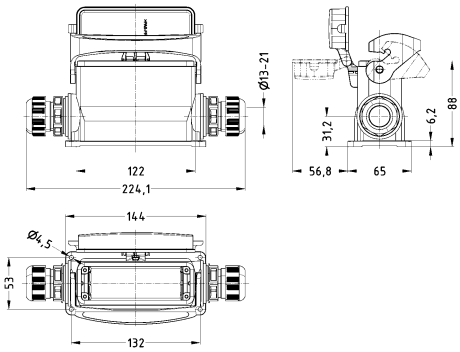
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M40	16 ... 28	19 43 124 0438	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M40	16 ... 28	19 43 124 0538	
Han-Eco® B, Bulkhead mounted housings,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

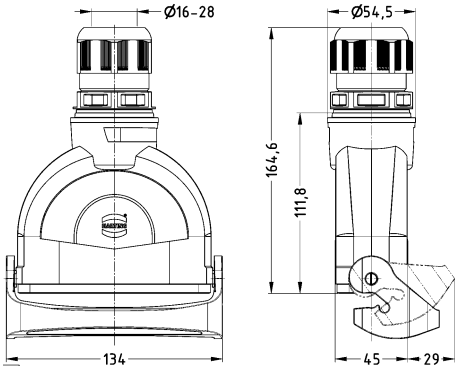
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M32 1x M40 2x M32 2x M40	13 ... 21 16 ... 28 13 ... 21 16 ... 28	19 43 124 0227 19 43 124 0228 19 43 124 0267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

Single locking lever

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-Eco® B Hoods/housings for industrial applications Size 24 B

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			19 43 024 5442	
Han-Eco® B, Protection cover, for bulkhead mounted housings, for surface mounted housings			19 43 024 5410	
Han-Eco® B, Protection cover, for cable to cable housing			19 43 024 5446	

Han-Eco® B Hoods/housings for outdoor applications

Features

- Suitable for standard inserts and modules from the Han-Modular® 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

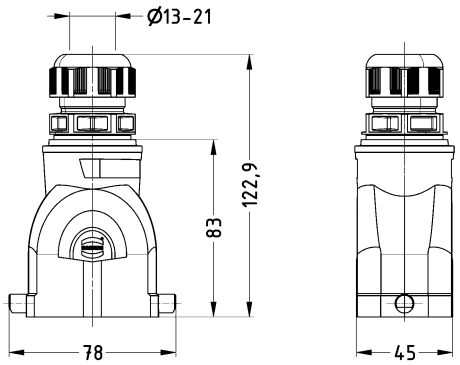
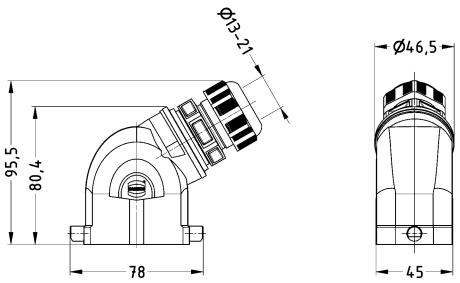
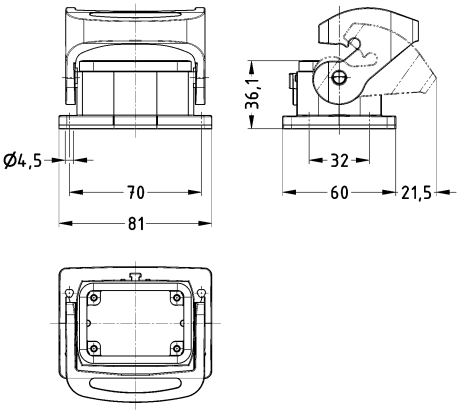
Details

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

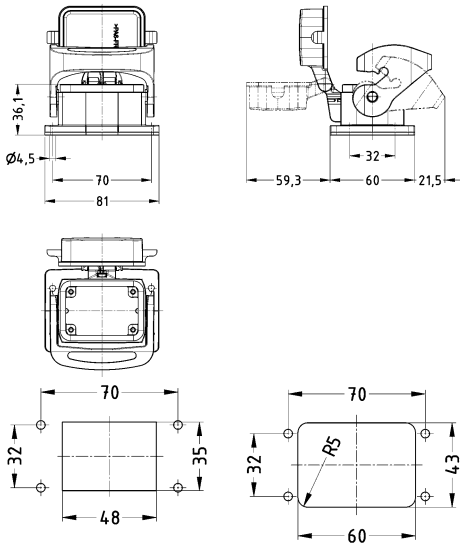
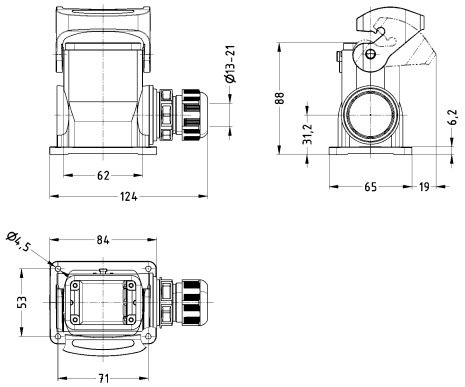
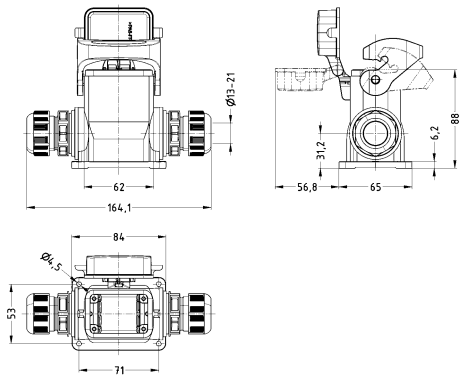
As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

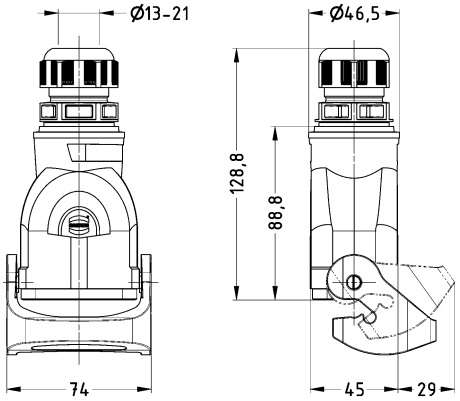
Available as from October 2018

Single locking lever

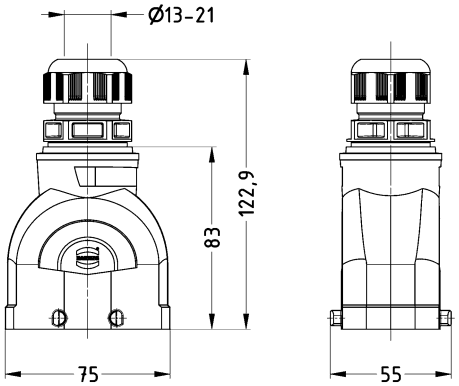
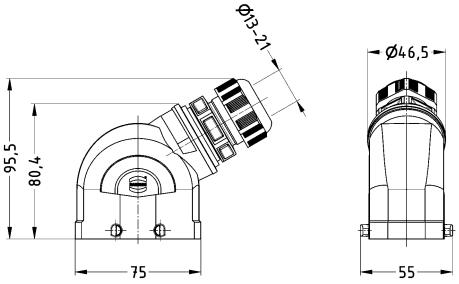
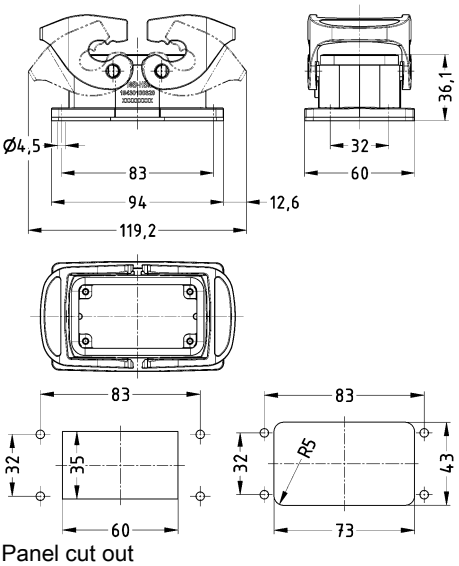
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 106 0445 19 43 106 0446 19 43 106 0447	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x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

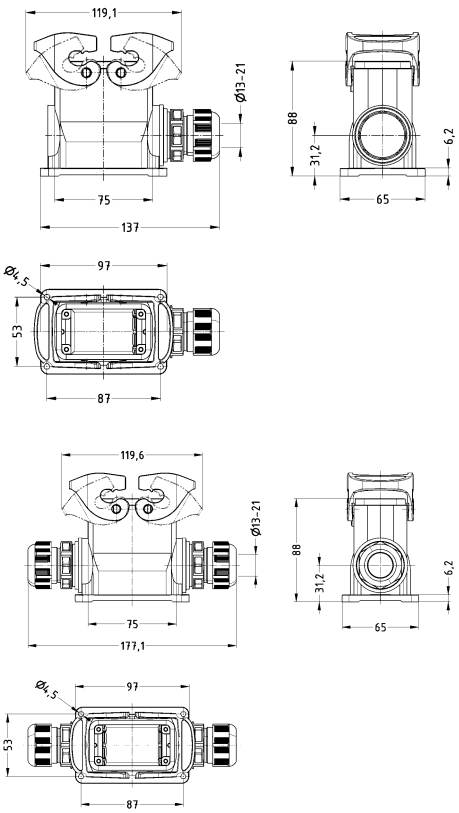
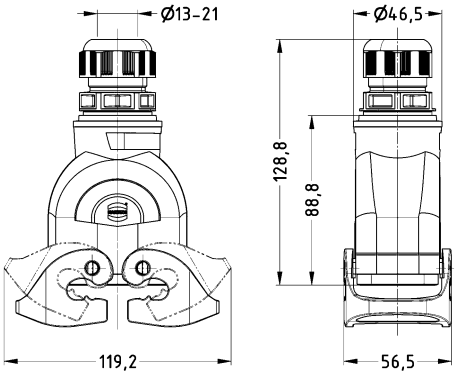
Han-Eco® B Hoods/housings for outdoor applications Size 6 B

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	

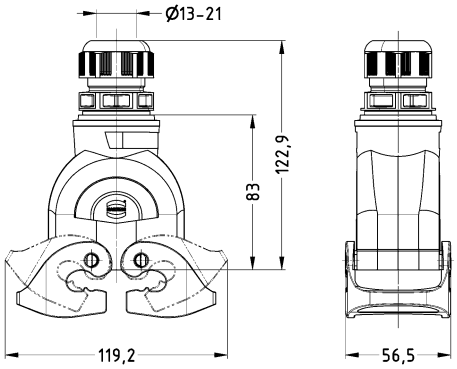
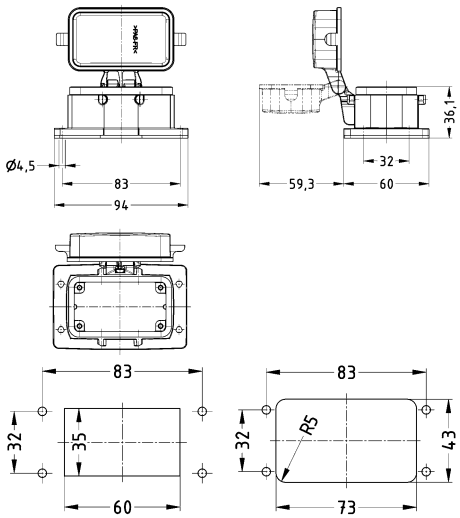
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Cable to cable housing, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 306 0755 19 43 306 0756 19 43 306 0757	
Han-Eco® B, Protection cover, for hoods			19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

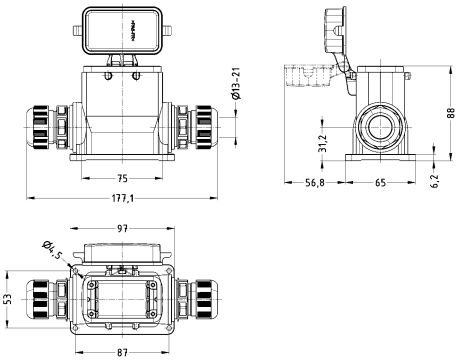
Double locking lever

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

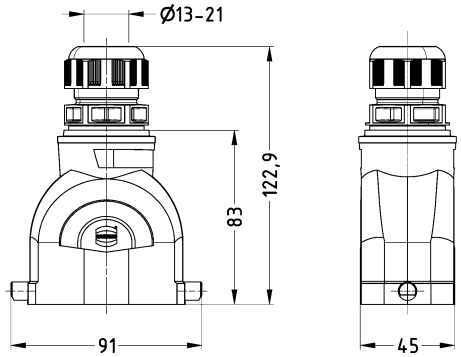
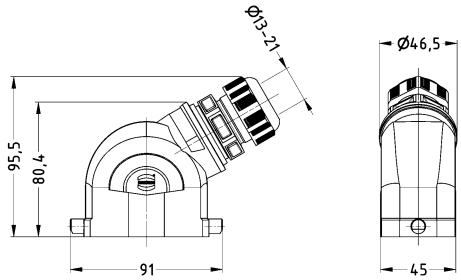
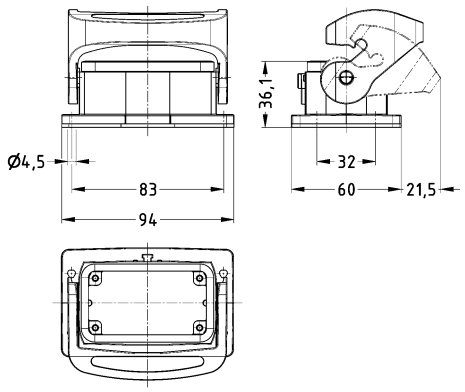
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M20 1x M25 1x M32 1x M40 2x M20 2x M25 2x M32	6 ... 13 9 ... 17 13 ... 21 16 ... 28 6 ... 13 9 ... 17 13 ... 21	19 43 310 0230 19 43 310 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	

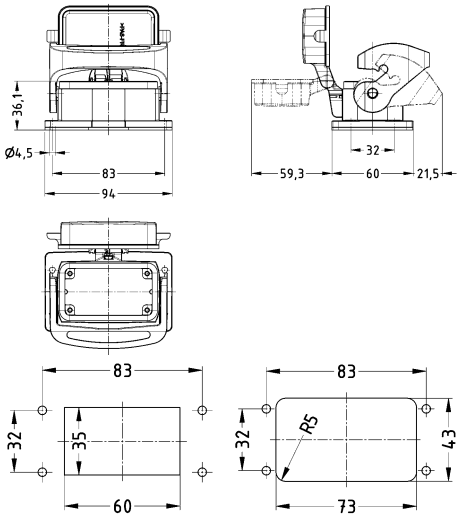
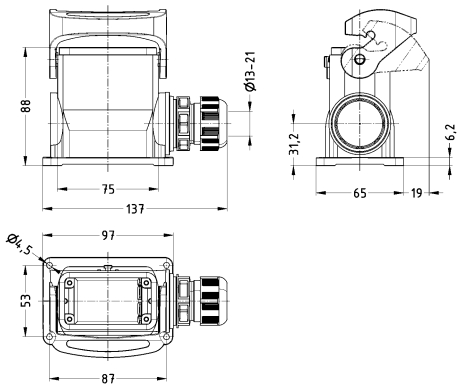
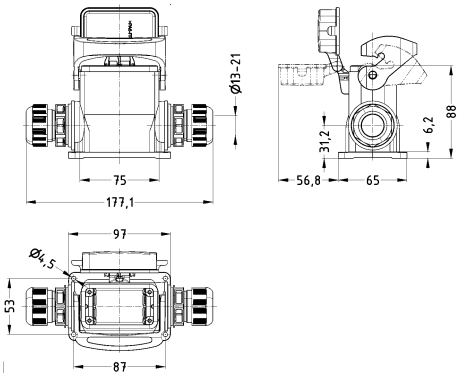
Double locking lever (on the hood)

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

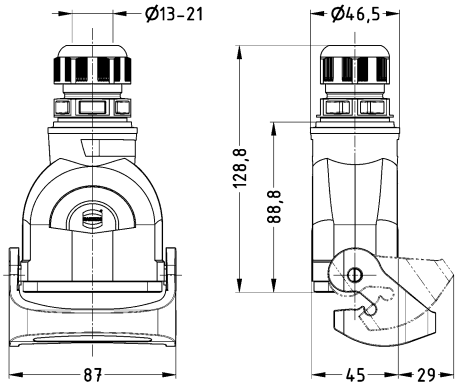
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M32 2x M32	13 ... 21 13 ... 21	19 43 310 0227 19 43 310 0267	

Single locking lever

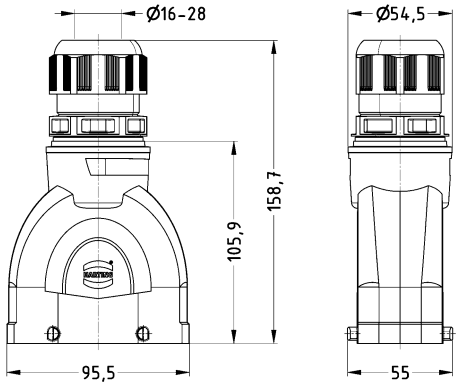
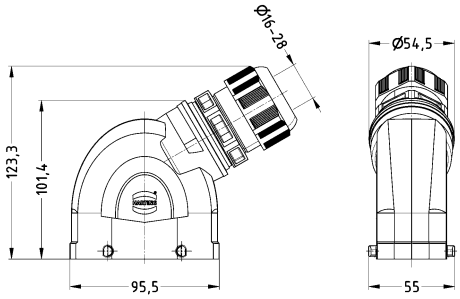
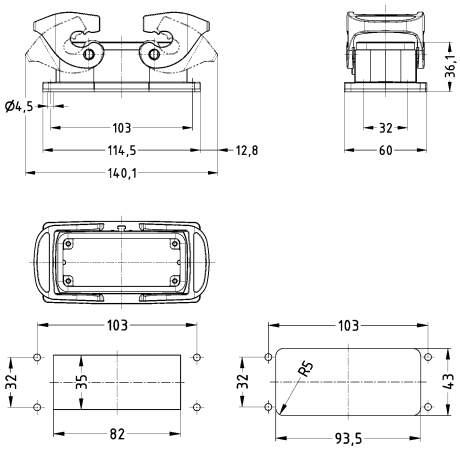
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M20 1x M25 1x M32	6 ... 13 9 ... 17 13 ... 21	19 43 110 0445 19 43 110 0446 19 43 110 0447	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x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

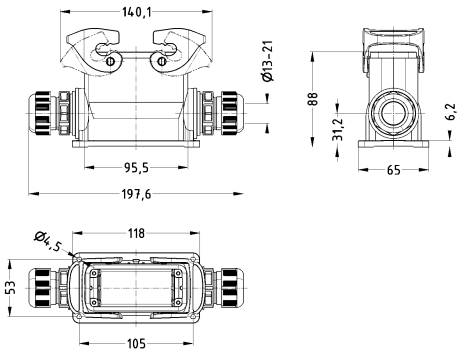
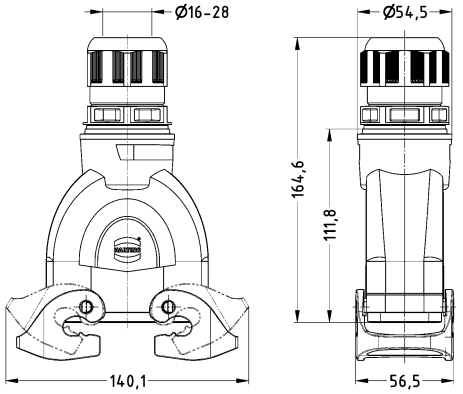
Han-Eco® B Hoods/housings for outdoor applications Size 10 B

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	

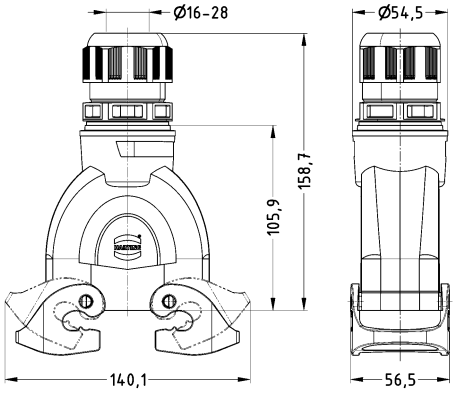
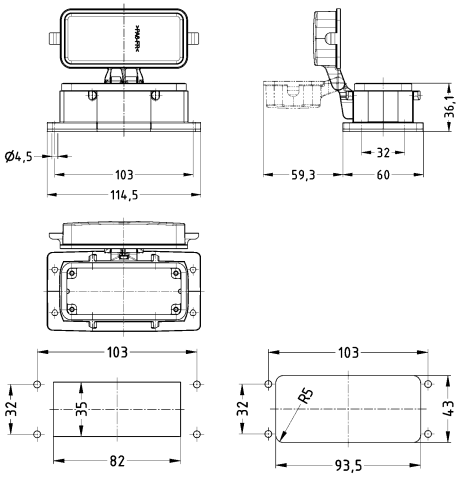
Double locking lever

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

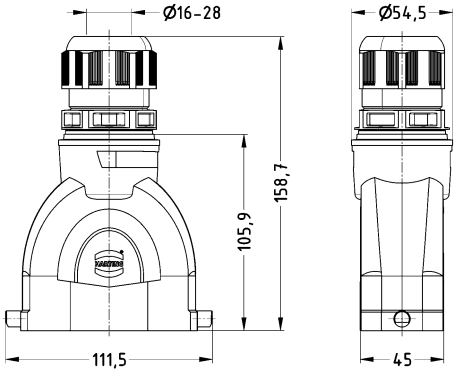
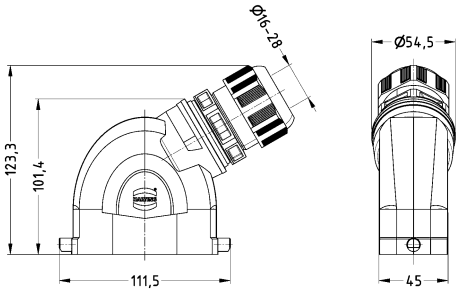
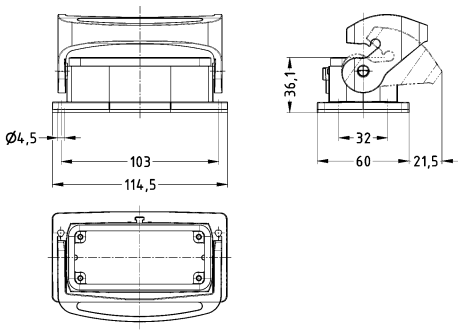
Han-Eco® B Hoods/housings for outdoor applications Size 16 B

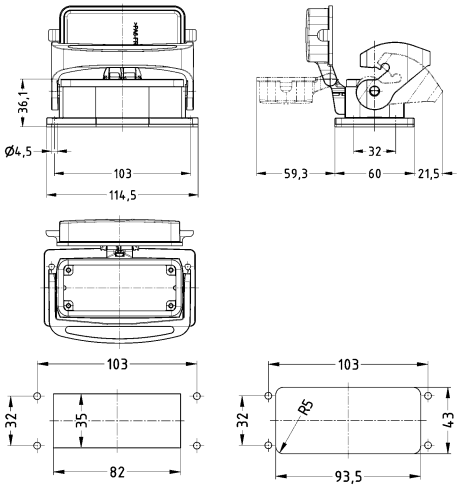
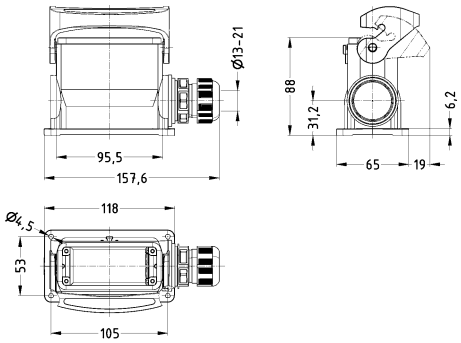
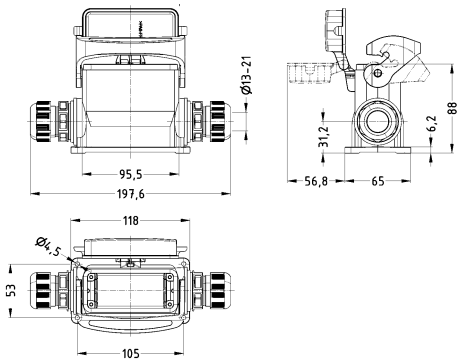
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 316 0231 19 43 316 0232 19 43 316 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)

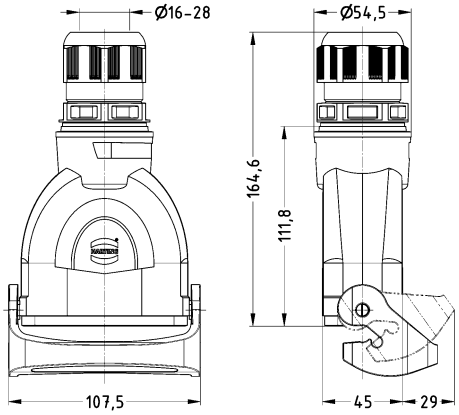
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M40	16 ... 28	19 43 116 0438	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M40	16 ... 28	19 43 116 0538	
Han-Eco® B, Bulkhead mounted housings, 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

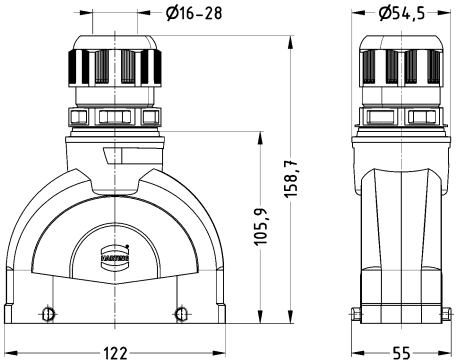
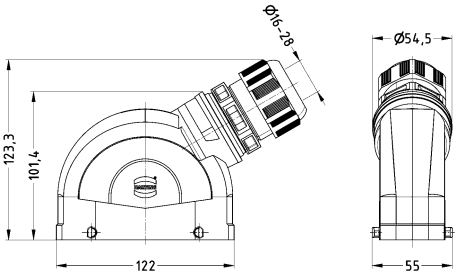
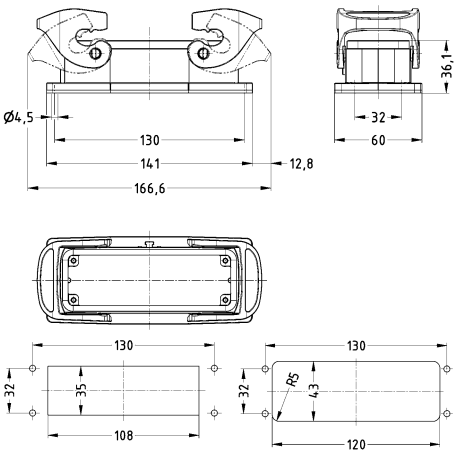
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M25 1x M32 1x M40	9 ... 17 13 ... 21 16 ... 28	19 43 116 0446 19 43 116 0447 19 43 116 0448	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 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

Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Bulkhead mounted housings, With thermo-plastic cover 			19 43 216 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 43 316 0251 19 43 316 0252 19 43 316 0253 19 43 316 0291 19 43 316 0292 19 43 316 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 43 316 0256 19 43 316 0257 19 43 316 0258 19 43 316 0296 19 43 316 0297 19 43 316 0298	

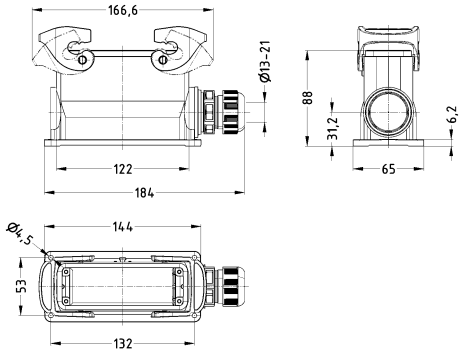
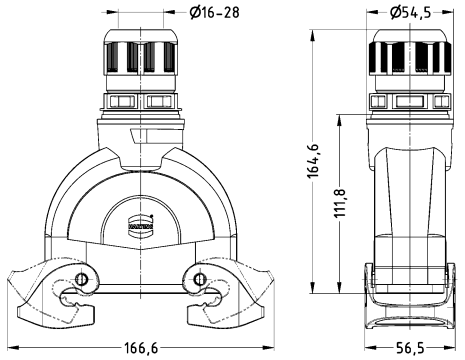
Han-Eco® B Hoods/housings for outdoor applications Size 16 B

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	

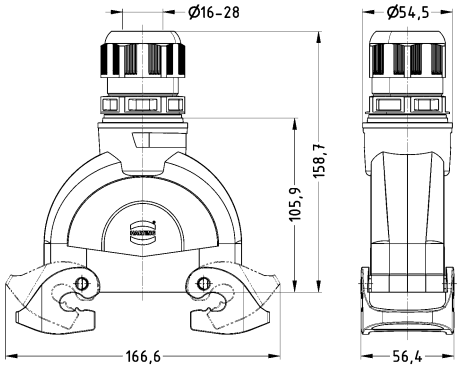
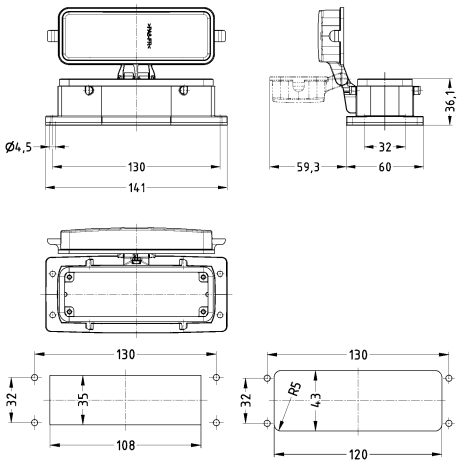
Double locking lever

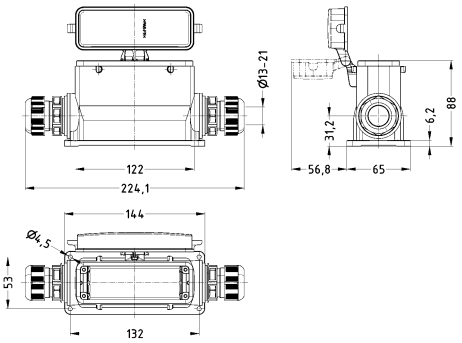
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M32 1x M40	13 ... 21 16 ... 28	19 43 124 0427 19 43 124 0428	
Han-Eco® B, Hoods, With integrated cable gland, Side entry 	1x M32 1x M40	13 ... 21 16 ... 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-Eco® B Hoods/housings for outdoor applications Size 24 B

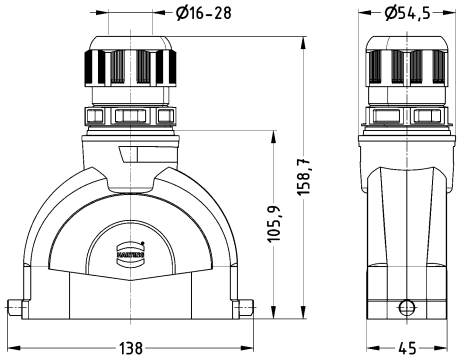
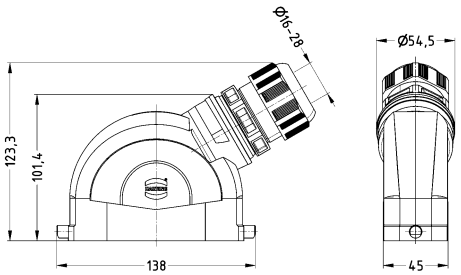
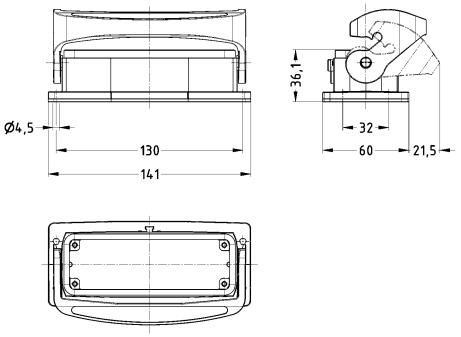
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With integrated cable gland, Side entry 	1x M25 1x M32 1x M40 2x M25 2x M32 2x M40	9 ... 17 13 ... 21 16 ... 28 9 ... 17 13 ... 21 16 ... 28	19 43 324 0231 19 43 324 0232 19 43 324 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)

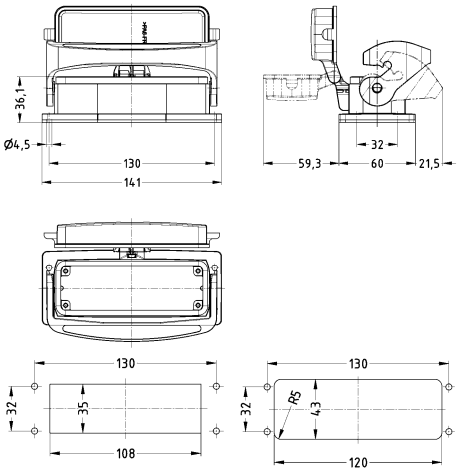
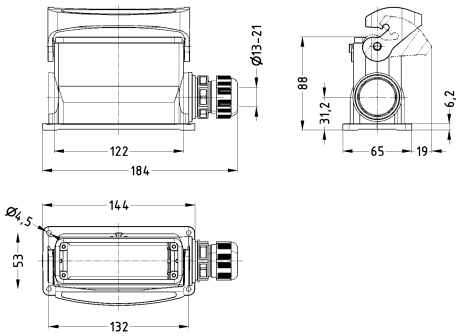
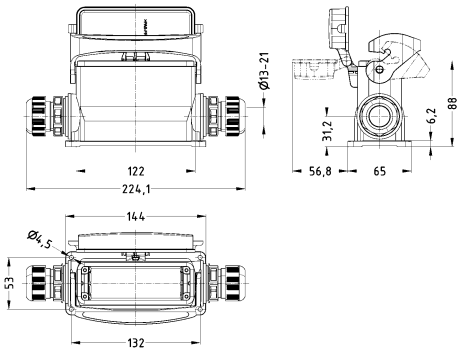
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Hoods, With integrated cable gland, Top entry 	1x M40	16 ... 28	19 43 124 0438	
Han-Eco® B, Hoods, With integrated cable gland, Side entry	1x M40	16 ... 28	19 43 124 0538	
Han-Eco® B, Bulkhead mounted housings,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

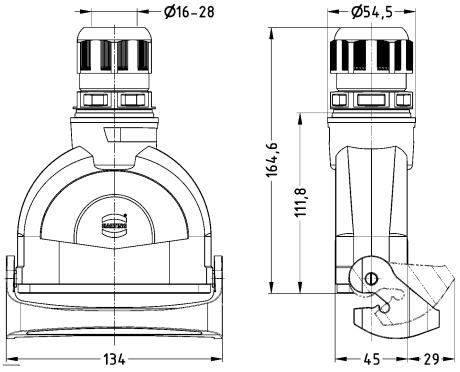
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Eco® B, Surface mounted housing, With thermo-plastic cover, With integrated cable gland, Side entry 	1x M32 1x M40 2x M32 2x M40	13 ... 21 16 ... 28 13 ... 21 16 ... 28	19 43 324 0227 19 43 324 0228 19 43 324 0267 19 43 324 0268	

Single locking lever

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-Eco® B Hoods/housings for outdoor applications Size 24 B

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	

Han® Surge protection module — Two channels

Han

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

Details

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

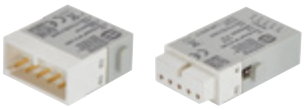
Preferred field of application is the protection of analogue signal interfaces like for 0/4-20 mA or differential signals.

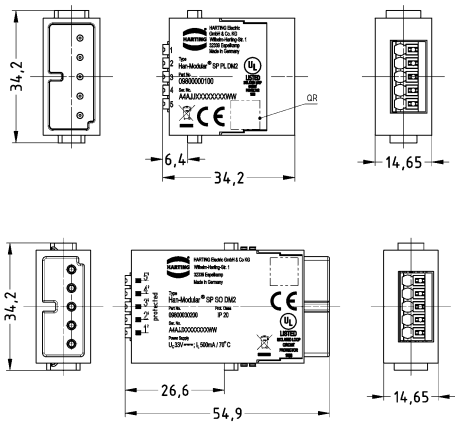
The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

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

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





Han® Surge protection module — Four channels

Number of contacts

5

Features

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

Technical characteristics

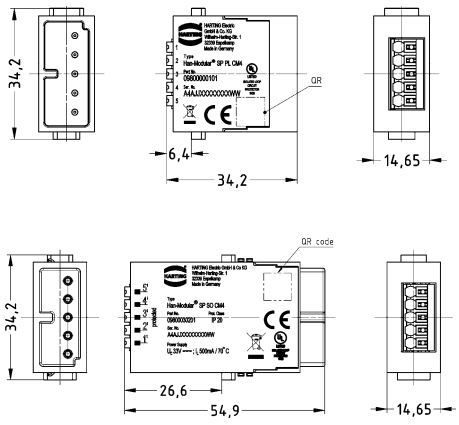
Number of contacts	5
Operating temperature	-40 ... +85 °C
Storage temperature	-40 ... +85 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP20
Nominal current	0.5 A
Material (insert)	Polyamide
Colour (insert)	RAL 7032 (pebble grey)
Flammability acc. to UL 94	V-0

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 Male	Part number Female	Drawing (dimensions in mm)
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	

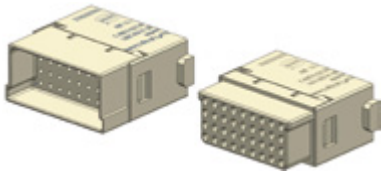
Han® Full High Density module

Han

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

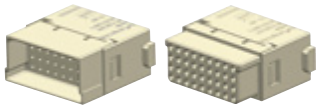
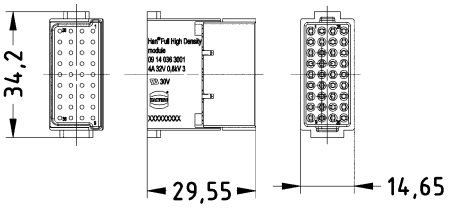
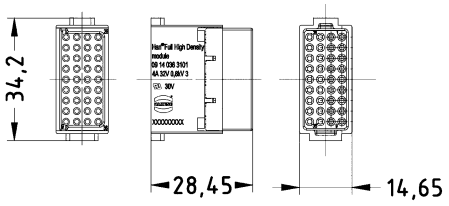
Number of contacts	36
Electrical data acc. to IEC 61984	4 A 32 V 0.8 kV 3
Rated current	4 A
Rated voltage	32 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	≥10^{10} Ω
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate
Colour (insert)	RAL 7032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

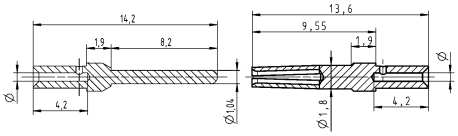
Specifications and approvals

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 Male	Part number Female	Drawing (dimensions in mm)
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 Male	Part number Female	Drawing (dimensions in mm)
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	

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

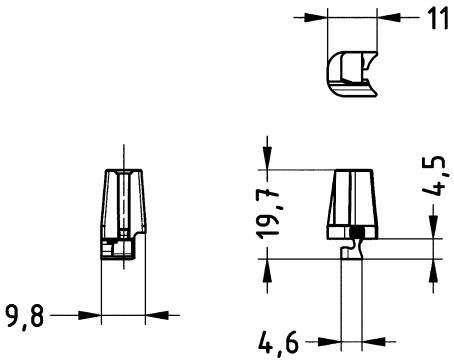
Han-Modular® Guard

Features

- 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

Technical characteristics

Limiting temperature	-40 ... +125 °C
Material (accessories)	Polycarbonate
Colour (accessories)	Grey, Red, Blue, Black, Yellow, Green
Flammability acc. to UL 94	V-0

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

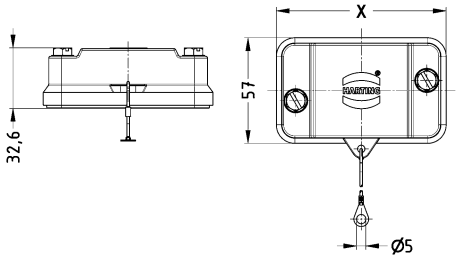
Screw locking

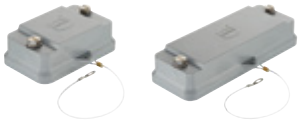
Technical characteristics

Limiting temperature	-40 ... +120 °C
Tightening torque	4 Nm
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

Specifications and approvals

EN 60664-1
IEC 61984

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



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

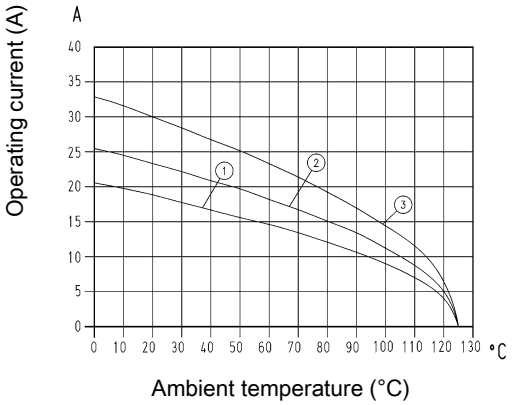
Number of contacts	5
Electrical data acc. to IEC 61984	16 A 230/400 V 4 kV 3
Rated current	16 A
Rated voltage conductor-earth	230 V
Rated voltage conductor-conductor	400 V
Rated impulse voltage	4 kV
Pollution degree	3
Insulation resistance	≥10^{10} Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +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

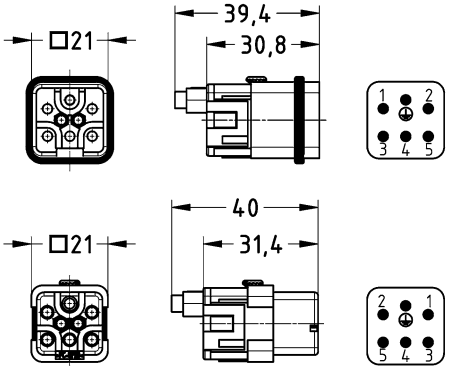
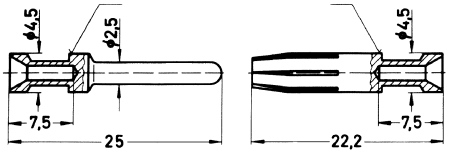
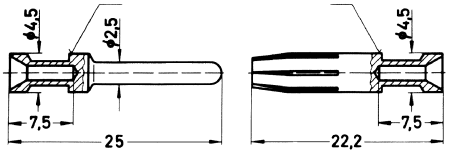
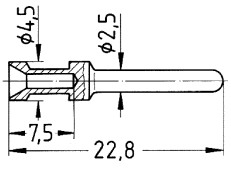
Details

Remarks on the crimp technique

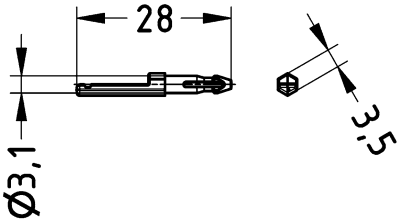
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

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 Male	Part number Female	Drawing (dimensions in mm)
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	 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 * on the back crimp collar Stripping length 7.5 mm
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® Q 5/0

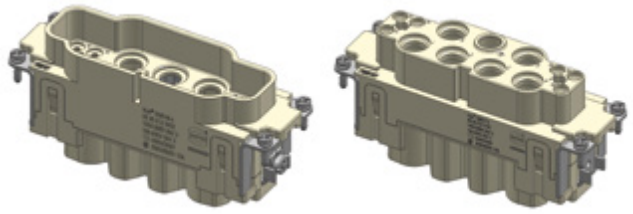
Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Coding element, Pack contents: 20 pieces per frame 		09 12 000 9927	09 12 000 9927	

Han® K 6/6

Number of contacts

6+ ⏚

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



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	≥10^{10} Ω
Contact resistance	≤0.5 mΩ, ≤1 mΩ, ≤0.3 mΩ
Contact resistance, signal area	≤3 mΩ
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

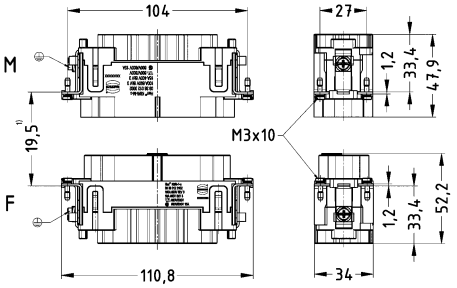
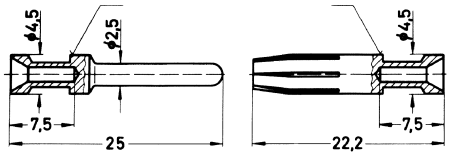
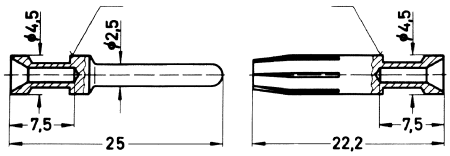
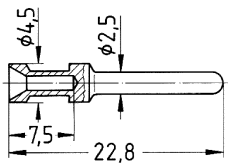
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

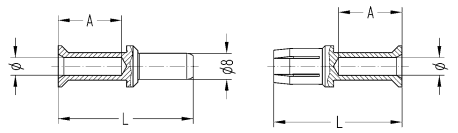
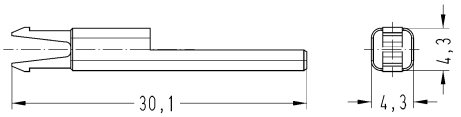
Details

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 Male	Part number Female	Drawing (dimensions in mm)
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	 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 * on the back crimp collar Stripping length 7.5 mm
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	 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 * on the back crimp collar Stripping length 7.5 mm
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 Male	Part number Female	Drawing (dimensions in mm)
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	
Coding element		09 12 000 9922	09 12 000 9922	

Wire gauge	∅	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
for stranded wire according to IEC 60 228 Class 5		

Han® K 6/12

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	≥10^{10} Ω
Contact resistance	≤0.5 mΩ, ≤1 mΩ, ≤3 mΩ
Contact resistance, signal area	≤3 mΩ
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

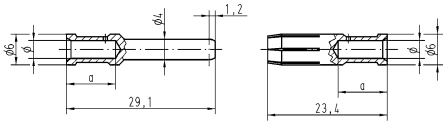
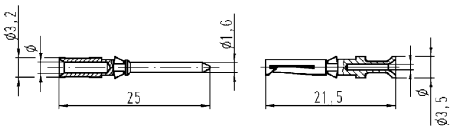
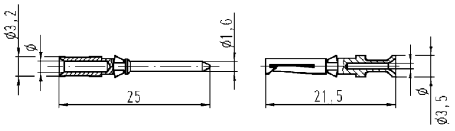
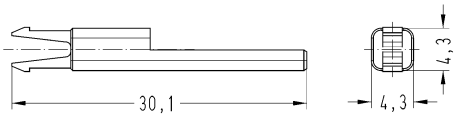
Specifications and approvals

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 Male	Part number Female	Drawing (dimensions in mm)
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	 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	 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
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	 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
Coding element 		09 12 000 9922	09 12 000 9922	

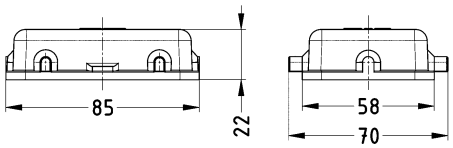
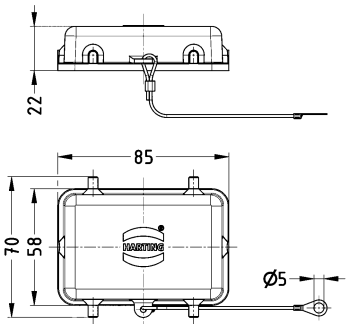
Standard Hoods/housings for industrial applications
Double locking lever

Technical characteristics

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

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	

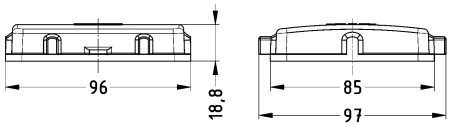
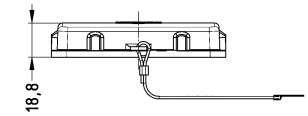
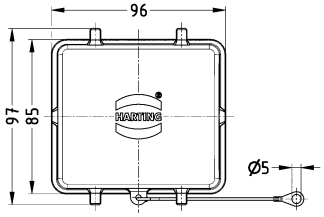
Standard hoods/housings for industrial connectors
Double locking lever

Technical characteristics

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

Specifications and approvals

DNV GL

Identification	Part number	Drawing (dimensions in mm)
Han® B, Protection cover, for bulkhead mounted housings, for surface mounted housings, Thermoplastic 	09 30 032 5405	
Han® B, Protection cover, for bulkhead mounted housings, for surface mounted housings, Thermoplastic, With fixing cord 	09 30 032 5406	 

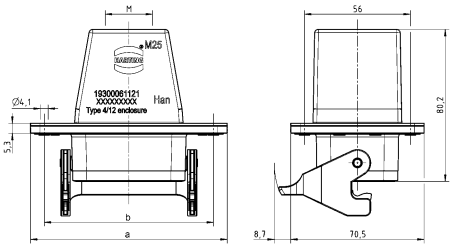
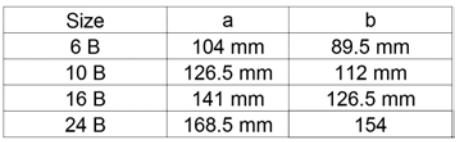
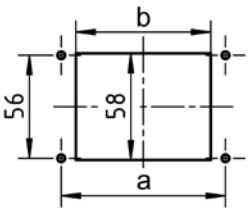
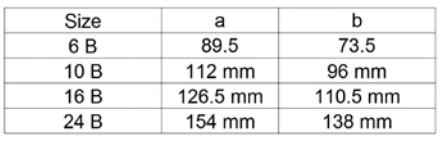
Standard hoods/housings for industrial connectors
Single locking lever

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)
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
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

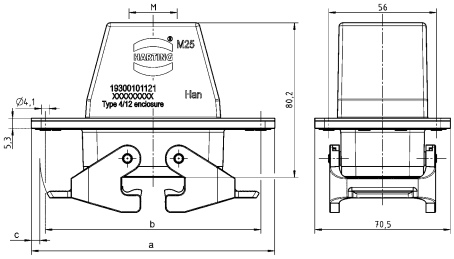
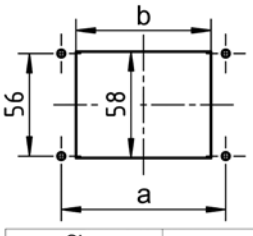
Standard hoods/housings for industrial connectors
Double locking lever

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	
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	
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	

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
10 B	112 mm	96 mm
16 B	126.5 mm	110.5 mm
24 B	154 mm	138 mm

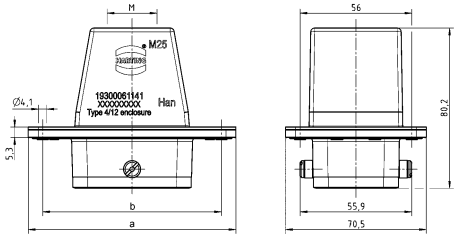
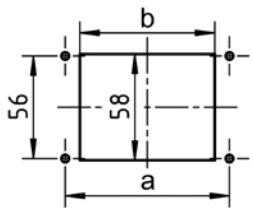
Standard hoods/housings for industrial connectors
Central locking lever (on the hood)

Technical characteristics

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

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	
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	

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	89.5	73.5
10 B	112 mm	96 mm
16 B	126.5 mm	110.5 mm
24 B	154 mm	138 mm

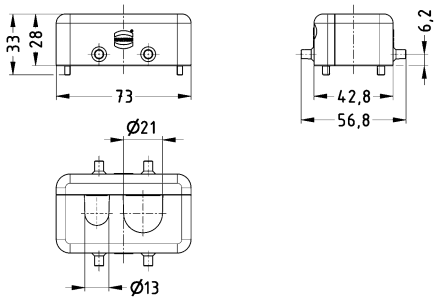
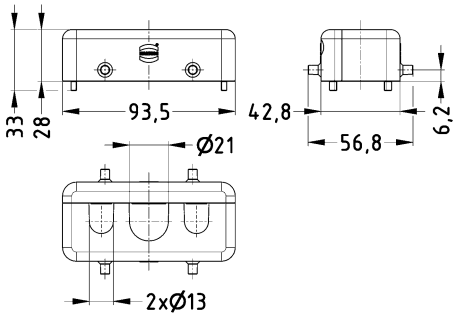
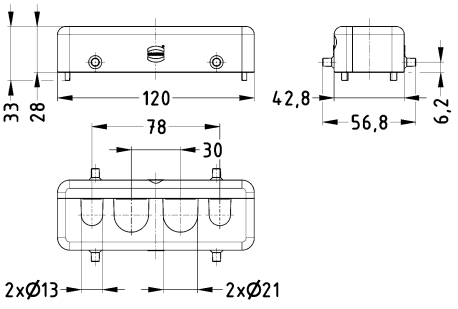
Standard hoods/housings for industrial connectors
Double locking lever

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

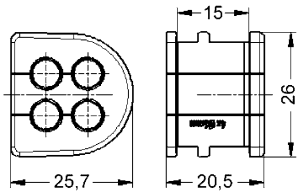
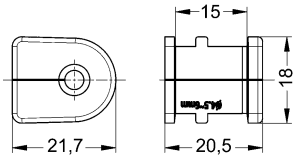
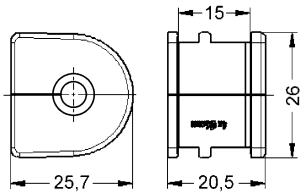
Identification	Cable entry	Part number	Drawing (dimensions in mm)
Han® B, Panel feed through housing, Top entry, 10 B, Pack contents: 2 split hood halves, 2x M4 screw  Please order cable entry seals separately.	2x Integrated	09 30 010 0498	
Han® B, Panel feed through housing, Top entry, 16 B, Pack contents: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

Hoods/housings for harsh environments
Single locking lever

Features

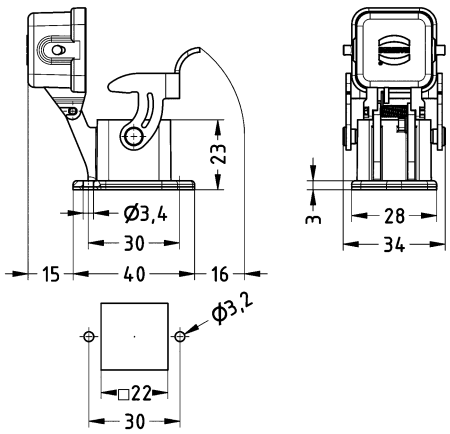
- Extremely resistant to chemicals and other aggressive influences
- Made completely from high-quality stainless steel
- Extremely resistant to corrosion

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP67
Degree of protection acc. to UL 50	4, 4X, 12
Material (hood/housing)	Stainless steel
Surface (hood/housing)	Electrical conductive
Colour (hood/housing)	Unpainted
Material (seal)	NBR
Material (locking)	Stainless steel

Specifications and approvals

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

Identification	Part number	Drawing (dimensions in mm)
Han-INOX®, Bulkhead mounted housings, Straight, With metal cover  for mounted male insert	19 44 003 0305	 Panel cut out 22 x 22 mm
Han-INOX®, Bulkhead mounted housings, Straight, With metal cover, With seal  for mounted female insert or for mounted Han-Brid® insert	19 44 003 0306	

Features

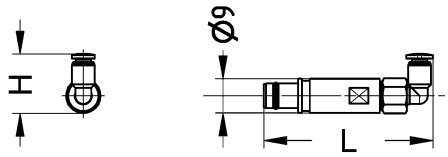
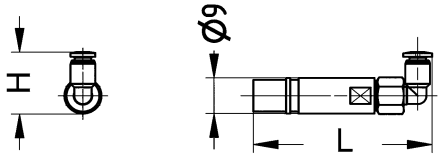
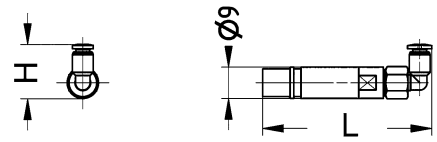
- for the transmission of clean and dry compressed air
- Female contacts with / without shut-off

Specifications and approvals

GERMAN INNOVATION AWARD '18 NOMINEE

Technical characteristics

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

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

	H	L
3 mm	15.6 mm	44.5 mm
4 mm	21.5 mm	46.9 mm
5 mm	22.1 mm	49.9 mm

	H	L
3 mm	15.6 mm	43.4 mm
4 mm	21.5 mm	45.8 mm
5 mm	22.1 mm	48.8 mm

	H	L
3 mm	15.6 mm	48.75 mm
4 mm	21.5 mm	58.65 mm
5 mm	22.1 mm	61.65 mm

HARTING MICA

Contents | Page

HARTING MICA Wireless

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

CE

Identification	Part number	Drawing (dimensions in mm)
HARTING IIC, MICA, Wireless 	20 95 000 0010 00	

HARTING MICA 2

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	

RFID

Contents | Page

Ha-VIS RF-ANT-WR24

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

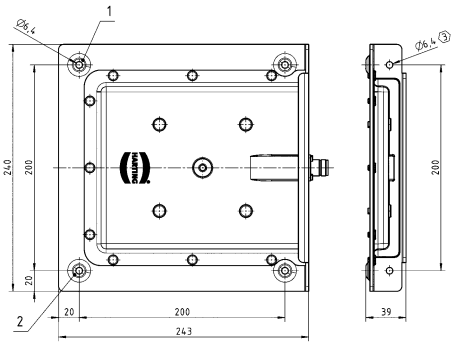
Technical characteristics

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

Ha-VIS RF-ANT-WR24-r for under the train applications

Features

- Designed for under train mounting
- Circular UHF antenna with wide range
- Withstands highest mechanical impacts due to the stainless steel design (IK08)

Technical characteristics

Operating temperature	-40 ... +85 °C
Degree of protection acc. to IEC 60529	IP67
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	Direct coax cable (3 m) with SMA connector
RoHS	compliant

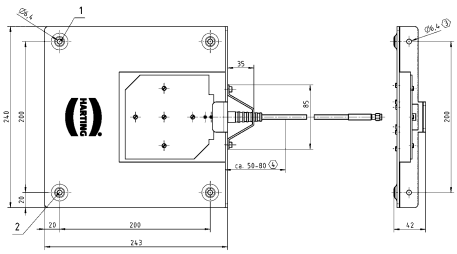
Specifications and approvals

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

Details

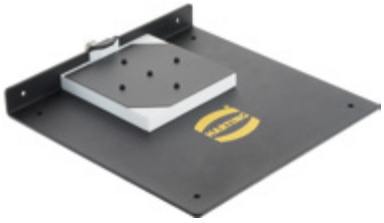
The antenna fulfills the requirements of the harshest railway applications. The stainless steel design allows direct mounting under the locomotive. The railway approved antenna cable is connected directly to the antenna - no connector directly at the antenna.

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 under the train applications 	865 ... 868 MHz 902 ... 928 MHz	20 93 201 0502 20 93 201 0505	 Use always 4 mounting holes (3) Use these two mounting holes (Ø 6.4 mm) only in combination with holes 1 + 2. (4) At this position (distance to the antenna itself) an addition cable fixation is mandatory, to protect the cable- antenna connection against vibrations.

Ha-VIS RF-ANT-WR24

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

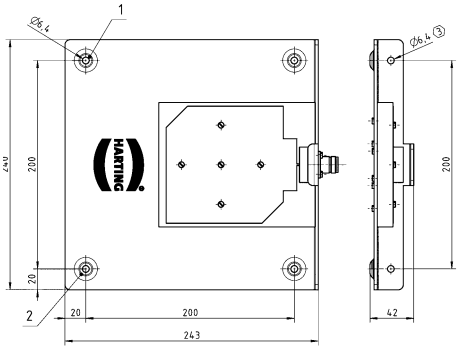
Specifications and approvals

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		Part number	Drawing (dimensions in mm)
Ha-VIS RFID, Antenna, for high temperature applications 	865 ... 868 MHz 902 ... 928 MHz	20 93 201 0503 20 93 201 0506	 Use always 4 mounting holes (3) Use these two mounting holes (Ø 6.4 mm) only in combination with holes 1 + 2.

Ha-VIS RFID FT on metal (NT)

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

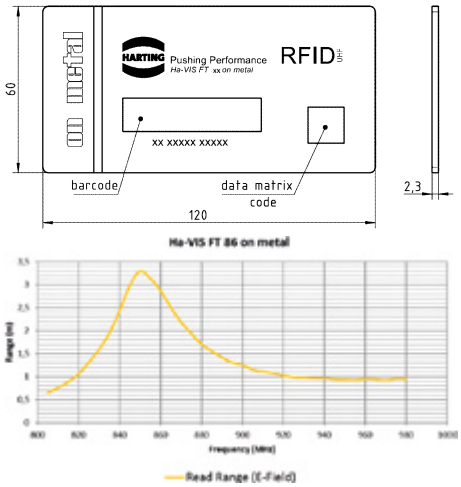
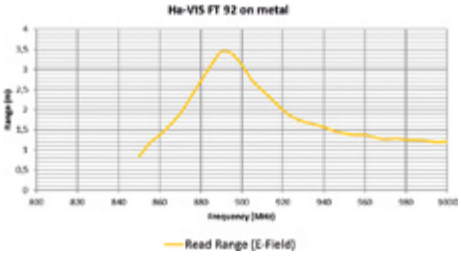
Container management

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	

Ha-VIS RF-R300-M

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	

Ha-VIS RF-R300-W

Features

- WLAN-capable
- 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	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-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	

Technical characteristics

Number of cores	12
Core structure	12x 0.14 mm²
Connector 1	M12, A-coding, Male, Straight, TNC connector
Connector 2	TNC-RP connector
Impedance	50 Ω
Material (cable)	PVC

Technical characteristics

Colour (cable)	Grey, Black
Material (accessories)	Aluminium, Stainless steel
RoHS	compliant with exemption

Details

Other cable lengths on request!

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	

Interface connectors

Contents	Page

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

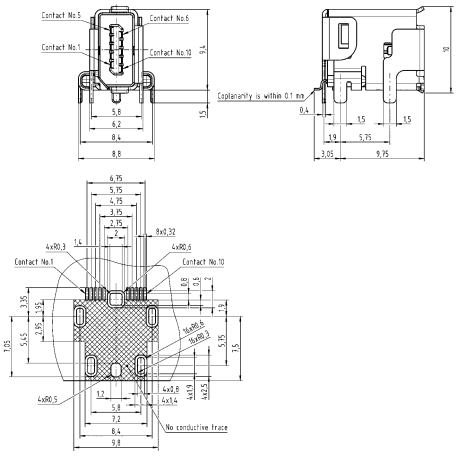
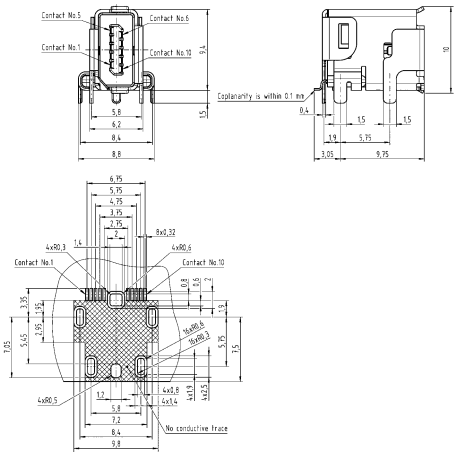
Number of contacts	8
Additional contacts	+ 2x GND
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage $U_{r.m.s.}$	0.5 kV
Contact resistance	≤30 mΩ
Shielding resistance	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥5000
Degree of protection 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

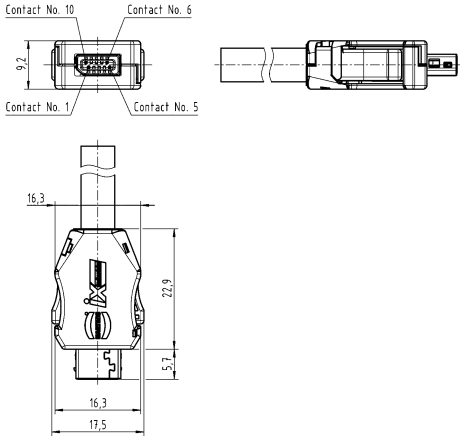
Number of contacts	8
Additional contacts	+ 2x GND
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage $U_{r.m.s.}$	0.5 kV
Contact resistance	≤30 mΩ
Shielding resistance	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥5000
Degree of protection 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

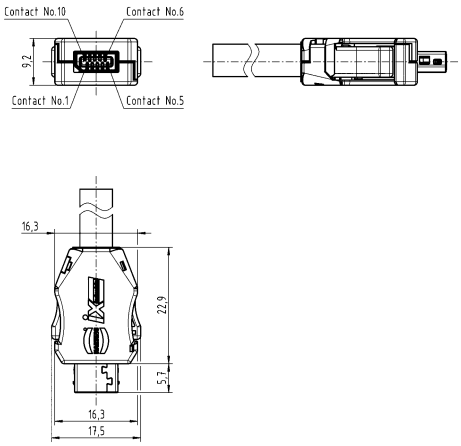
Specifications and approvals

IEC 61076-3-124

Details

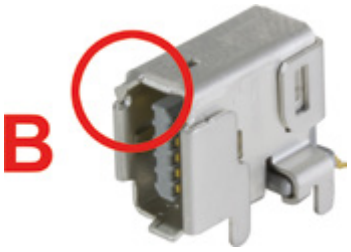
Cable assemblies see chapter 8

Identification	Part number	Drawing (dimensions in mm)
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	09 45 181 2560 XL	

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	

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

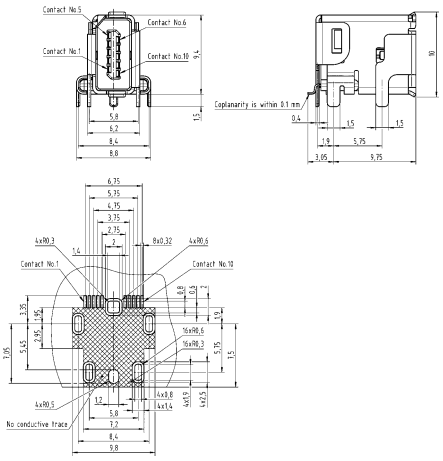
Number of contacts	10
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage $U_{r.m.s.}$	0.5 kV
Contact resistance	≤30 mΩ
Shielding resistance	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥5000
Degree of protection acc. to IEC 60529	IP20
Insertion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

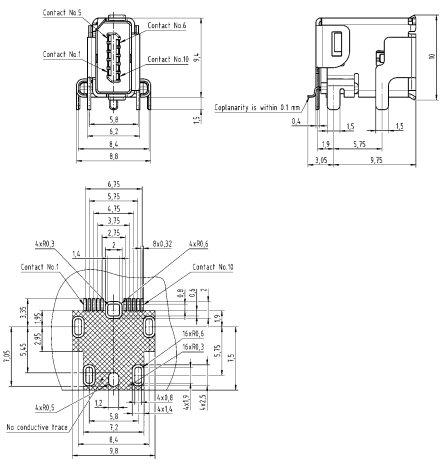
Specifications and approvals

IEC 61076-3-124

Details

Cable assemblies see chapter 8

Identification	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	

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	

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

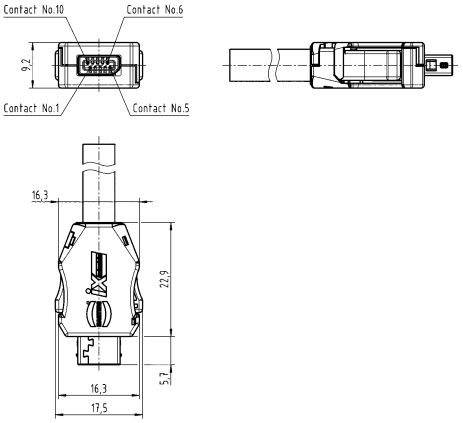
Technical characteristics

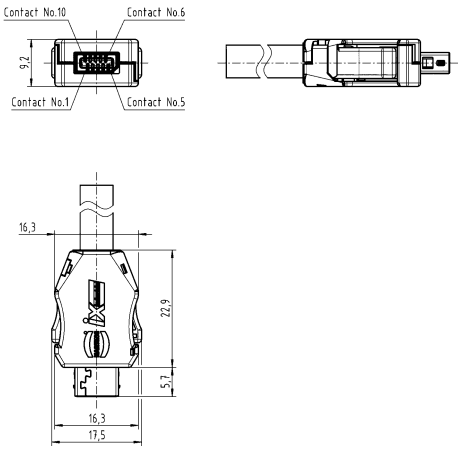
Number of contacts	10
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Test voltage $U_{r.m.s.}$	0.5 kV
Contact resistance	≤30 mΩ
Shielding resistance	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Mating cycles	≥5000
Degree of protection acc. to IEC 60529	IP20
Cable diameter	6.3 ... 7.2 mm
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

Details

Cable assemblies see chapter 8

Identification	Part number	Drawing (dimensions in mm)
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	09 45 181 9000 XL	

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	
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

Number of contacts

8

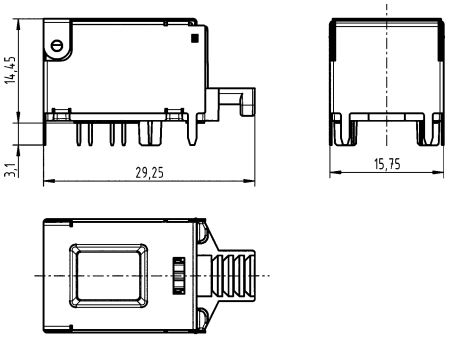
Features

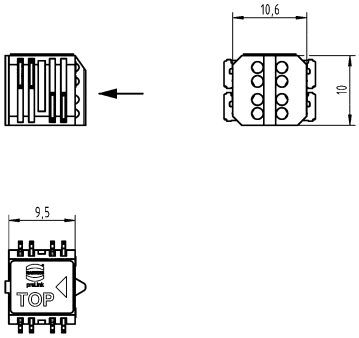
- For an easy device integration
- Robust design
- 360° shielding
- Suitable for wave and reflow soldering (PSL R0 and MSL 1)
- Suitable for termination of massive and flexible wires
- Suitable for all PoE versions
- Very fast preLink® termination technology

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	

Han® PushPull Power L

Number of contacts

4+ ⏚

16 A 24 V 1.5 kV 3

Features

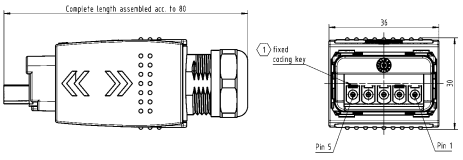
- HARTING PushPull technology
- Robust design
- Spring force connection
- AIDA compliant
- Enlarged size for an optimized connection of 2.5 mm² conductor cross sections

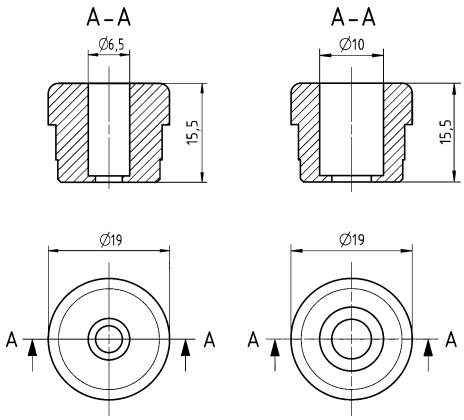
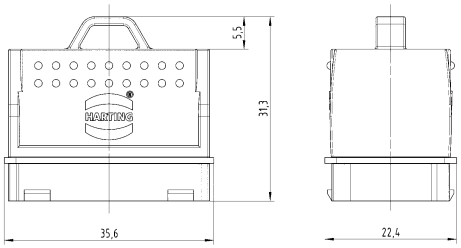
Technical characteristics

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	

Han® PushPull Power L

Number of contacts

4+ ⏚

16 A 24 V 1.5 kV 3

Features

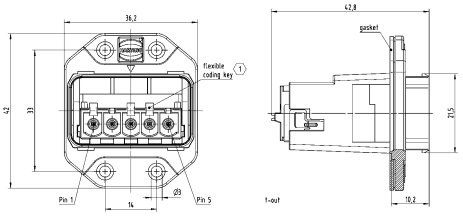
- HARTING PushPull technology
- Robust design
- Spring force connection
- AIDA compliant

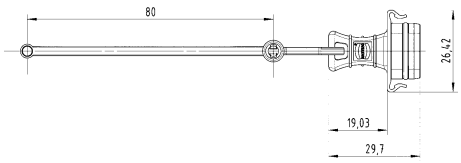
Technical characteristics

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
Material (seal)	NBR
Material (accessories)	Thermoplastic
Colour (accessories)	Black
Flammability acc. to UL 94	V-0
RoHS	compliant with exemption

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)	Part number	Drawing (dimensions in mm)
Han® PushPull, Panel feed trough set, AIDA compliant, With fixed coding, Spring clamp termination, Pack contents: incl. bulkhead mounted housing and male insert	0.75 ... 2.5	09 35 433 0311	
Han® PushPull, Panel feed trough set, AIDA compliant, With variable coding, Spring clamp termination, Pack contents: incl. bulkhead mounted housing and male insert	0.75 ... 2.5	09 35 434 0311	

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	

Adapter

Technical characteristics

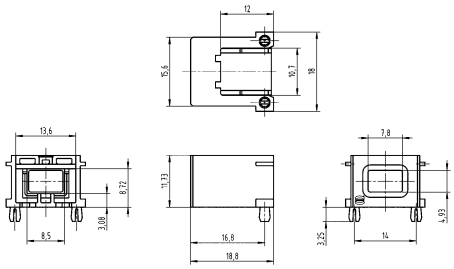
Limiting temperature	-40 ... +80 °C
Mating cycles	≥100
Degree of protection acc. to IEC 60529	IP20, IP65 / IP67, when mated
Material (hood/housing)	Polybutylene terephthalate (PBT)
Colour (hood/housing)	Black

Technical characteristics

RoHS	compliant

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

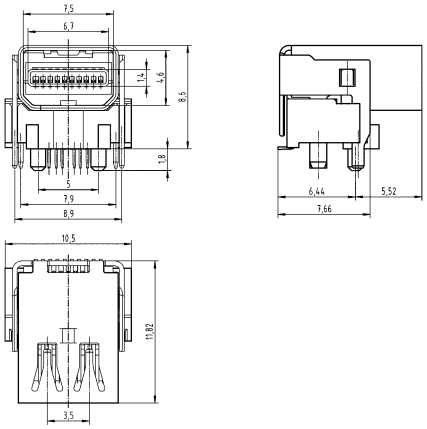
0.5 A 30 V
PCB jack

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		Part number	Drawing (dimensions in mm)
HARTING PushPull, PCB jack, Solder termination, Polyamide		09 45 551 1000	

Features

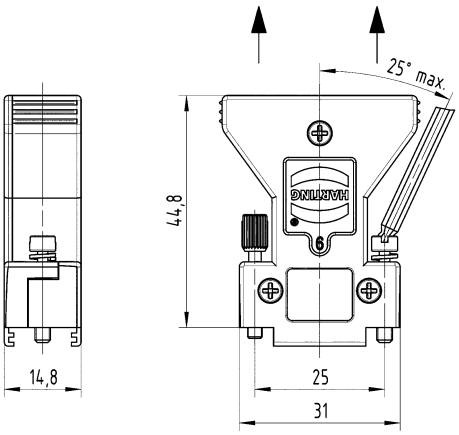
- easy access: side by side arrangement of housings easily possible - by connection of 2 cables the locking screws are easily accessible
- 360° shielding
- Low transfer impedance, best EMC behaviour
- Shock and vibration resistant acc. to EN 61373
- Variable screw options: knurled or hexagonal screw 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 2110 61 03 001 1110	
D-Sub InduCom, Shell housing, Top entry, Hexagonal screw, Without internal grounding block	2x 2x	4-40 UNC M3	61 03 001 2110 010 61 03 001 1110 010	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, With internal grounding block	2x 2x	4-40 UNC M3	61 03 001 0110 61 03 001 3110	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, Without internal grounding block 	2x 2x	4-40 UNC M3	61 03 001 0110 010 61 03 001 3110 010	 Tightening torque 0.4 Nm

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

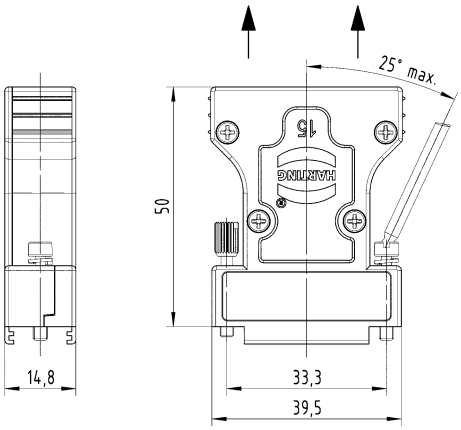
Technical characteristics

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

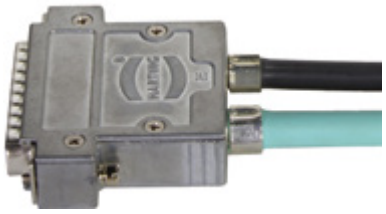
An additional InduCom cable clamp or a crimp flange - ferrule combination is available dependant on the use of the cable.

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 2116 61 03 001 1116	
D-Sub InduCom, Shell housing, Top entry, Hexagonal screw, Without internal grounding block	2x 2x	4-40 UNC M3	61 03 001 2116 010 61 03 001 1116 010	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, With internal grounding block	2x 2x	4-40 UNC M3	61 03 001 0116 61 03 001 3116	
D-Sub InduCom, Shell housing, Top entry, Knurled screw, Without internal grounding block	2x 2x	4-40 UNC M3	61 03 001 0116 010 61 03 001 3116 010	



Tightening torque 0.4 Nm

D-Sub InduCom hoods



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

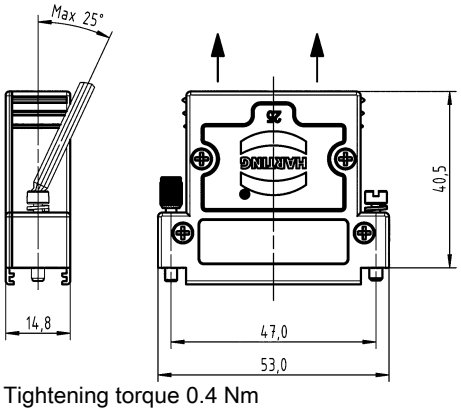
Technical characteristics

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	



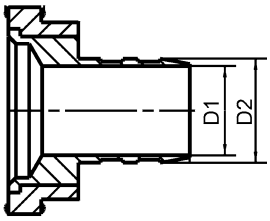
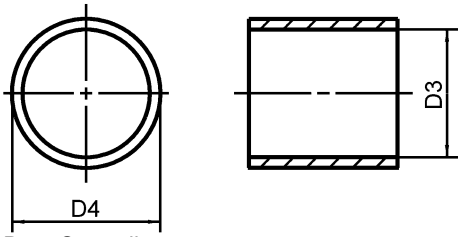
Tightening torque 0.4 Nm

Technical characteristics

RoHS	compliant with exemption

Details

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

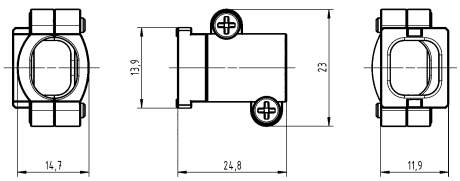
Identification	Inner diameter	Outer diameter	Part number	Drawing (dimensions in mm)
D-Sub, Crimp flange, D-Sub 1 ... 4 	3 mm	4 mm	61 03 000 0062	 D1 = Inner diameter D2 = Outer diameter
	3.5 mm	4.5 mm	61 03 000 0063	
	4 mm	5 mm	61 03 000 0064	
	4.5 mm	5.5 mm	61 03 000 0065	
	5 mm	6 mm	61 03 000 0066	
	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	

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

HARAX® M12 Slim design

A-coding

Number of contacts

4

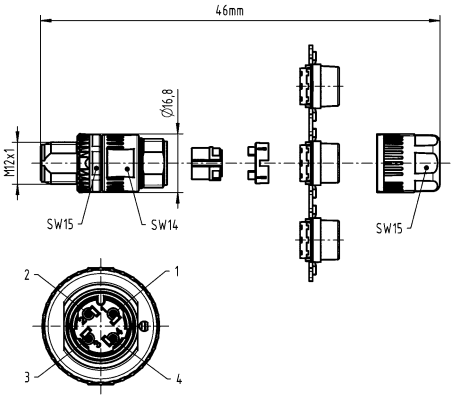
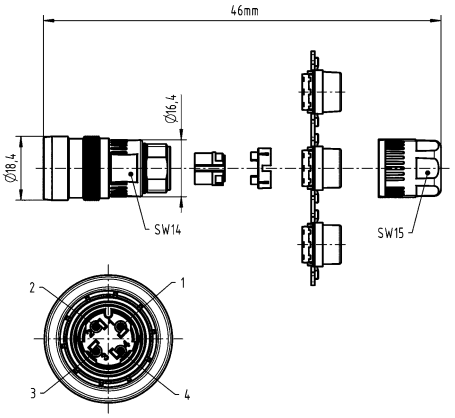
Male

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 (mm²)	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

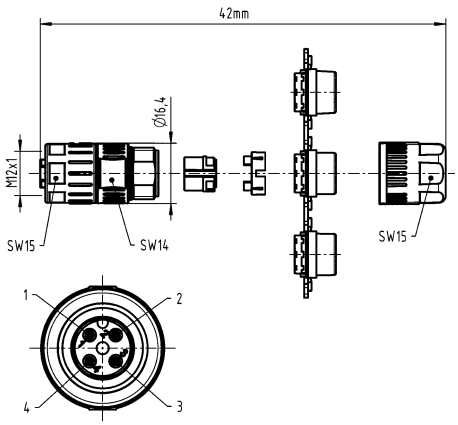
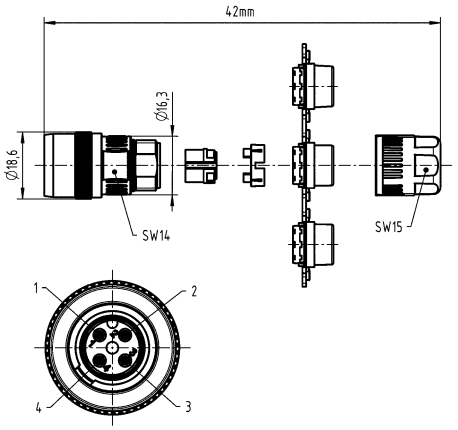
Female

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 (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 03 322 2400	
Circular connectors M12, Cable connector, Straight, *HARAX*® connection technology, Shielded, PushPull, Female Contact surface: Gold plated 	0.34	21 03 322 2401	

Number of contacts

4

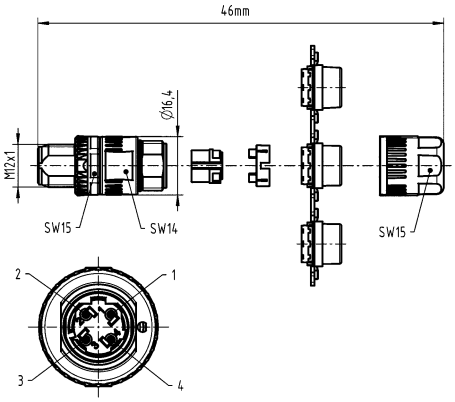
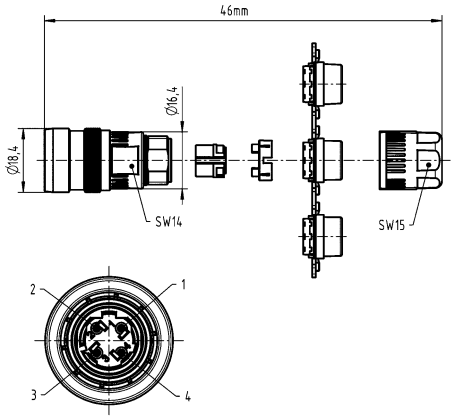
Male

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 (mm²)	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

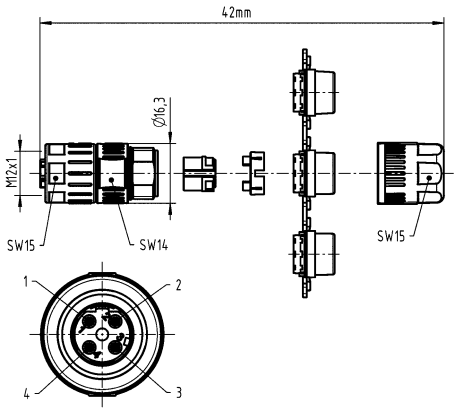
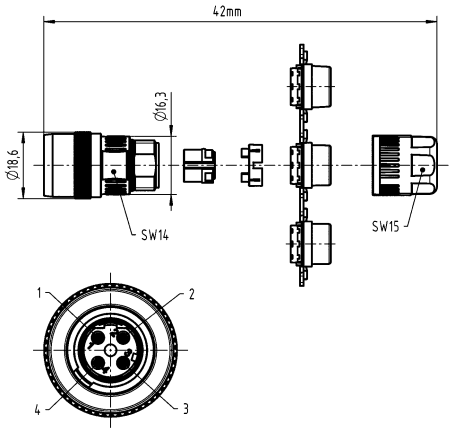
Female

Technical characteristics

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 (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	

M12 PushPull angled

A-coding

Number of contacts

5

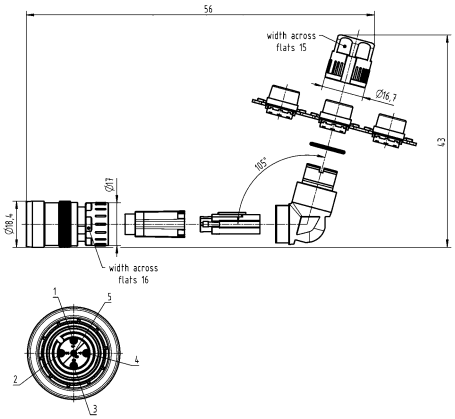
Male

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 (mm²)	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

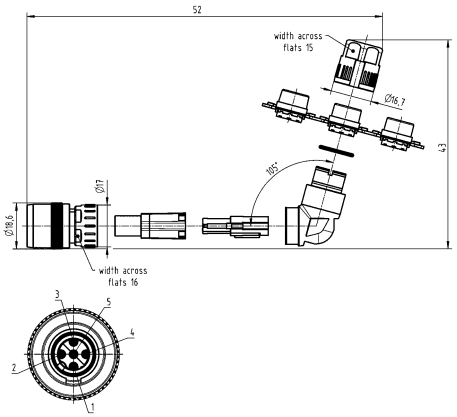
Female

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 (mm²)	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

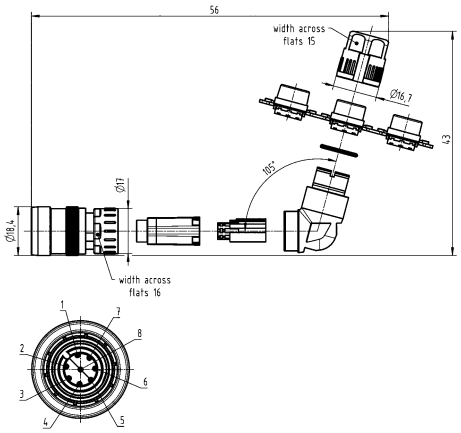
Male

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 (mm²)	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

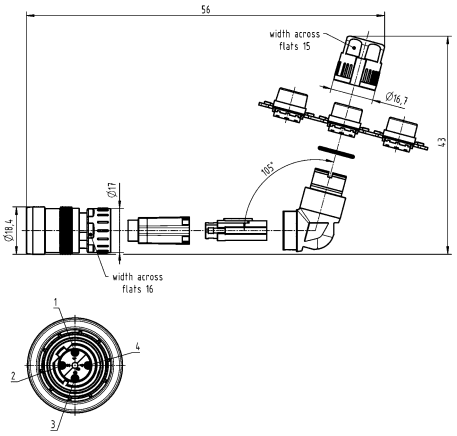
Male

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	IP67, when mated
Cable diameter	5.7 ... 8.8 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, Angled, Crimp termination, Shielded, PushPull, Male  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 3430	

M12 PushPull angled

X-coding

Number of contacts

8

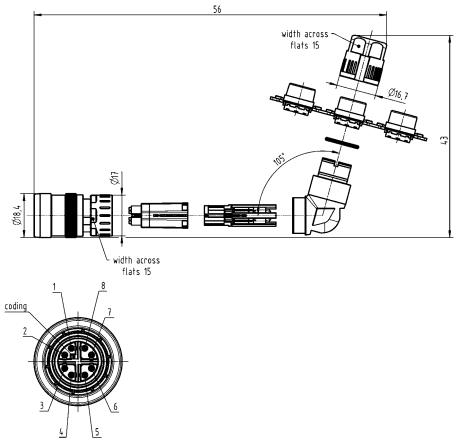
Male

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	≥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
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

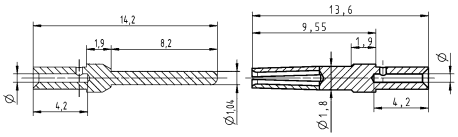
Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Straight, Crimp termination, Shielded, PushPull, Male  Please order crimp contacts separately.	0.08 ... 0.25	21 03 881 3830	

Technical characteristics

Material (contacts)	Copper alloy

Technical characteristics

RoHS	compliant with exemption

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
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	
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		

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

M12 Slim design with crimp flange

A-coding

Number of contacts

5

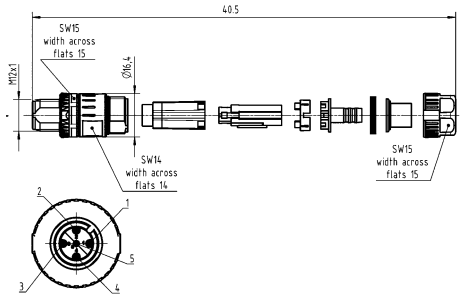
Male

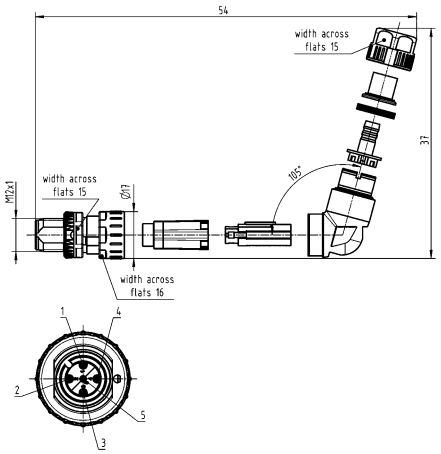
Technical characteristics

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 (mm²)	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  Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 1511	
Circular connectors M12, Cable connector, Straight, 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 1512	

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	

M12 Slim design with crimp flange

A-coding

Number of contacts

5

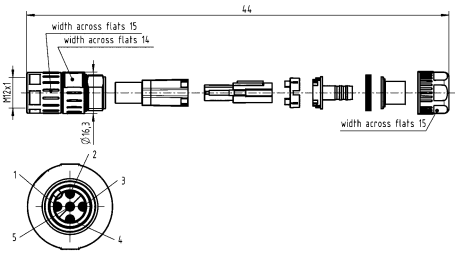
Female

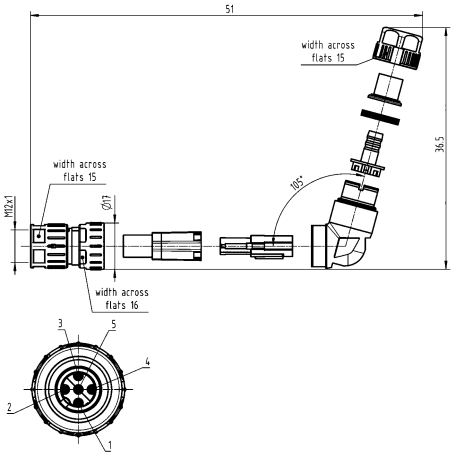
Technical characteristics

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 (mm²)	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  Please order crimp contacts separately.	0.13 ... 0.82	21 03 821 2511	
Circular connectors M12, Cable connector, Straight, 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 2512	

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	

M12 Slim design with crimp flange

D-coding

Number of contacts

4

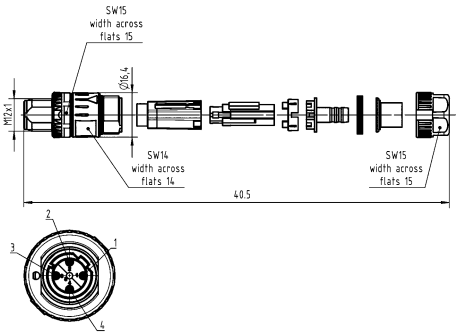
Male

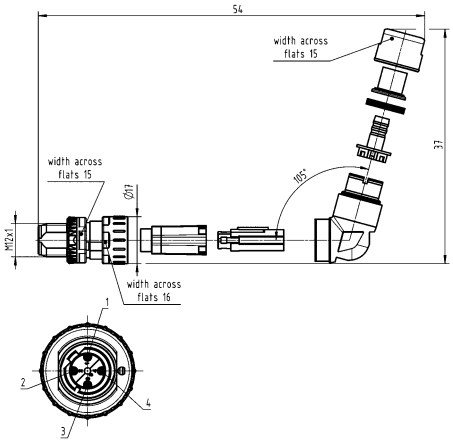
Technical characteristics

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 (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, Male  Please order crimp contacts separately.	0.13 ... 0.82	21 03 881 3411	

M12 Slim design with crimp flange

D-coding

Number of contacts

4

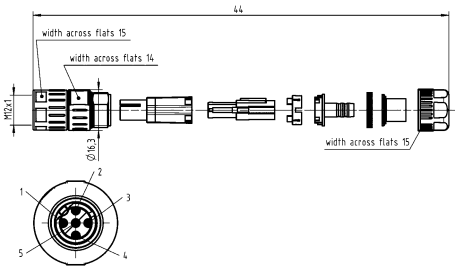
Female

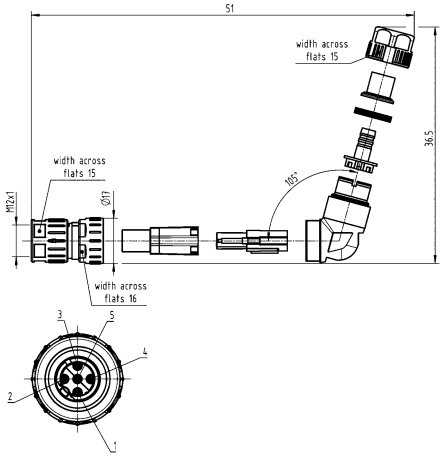
Technical characteristics

Number of contacts	4
Rated current	4 A
Rated voltage	250 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥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, 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	

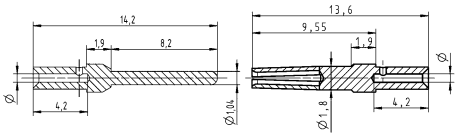
Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Circular connectors M12, Cable connector, Angled, Crimp termination, Shielded, Shield connection with crimp flange, Cable diameter 6.6 mm, Screw locking, Female  Please order crimp contacts separately.	0.13 ... 0.82	21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

Technical characteristics

Material (contacts)	Copper alloy

Technical characteristics

RoHS	compliant with exemption

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
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	

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

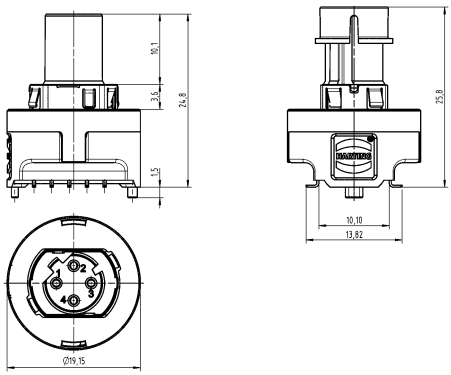
Female

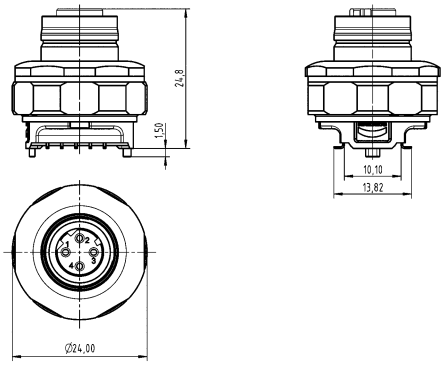
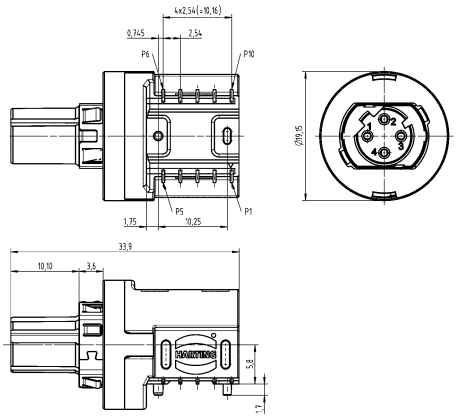
Technical characteristics

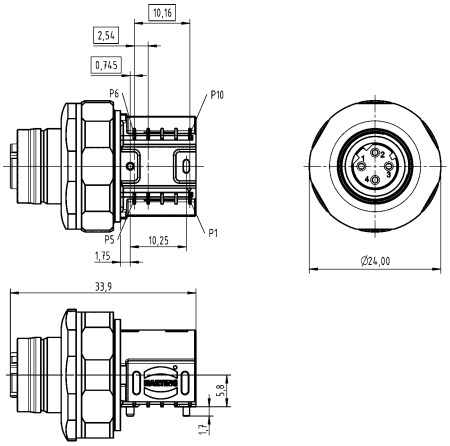
Number of contacts	4
Rated current	3 A
Rated voltage	57 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10^8 Ω

Technical characteristics

Contact resistance	≤10 mΩ
Mating cycles	≥100
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Data rate	100 Mbit/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 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	

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	

Number of contacts

8

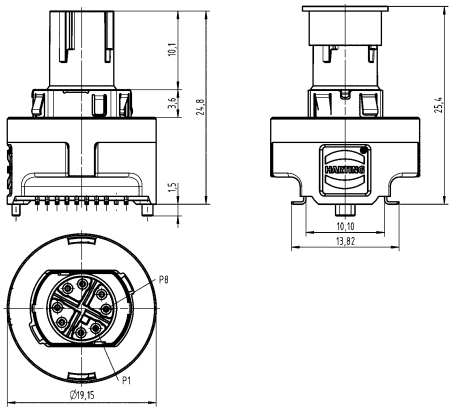
Female

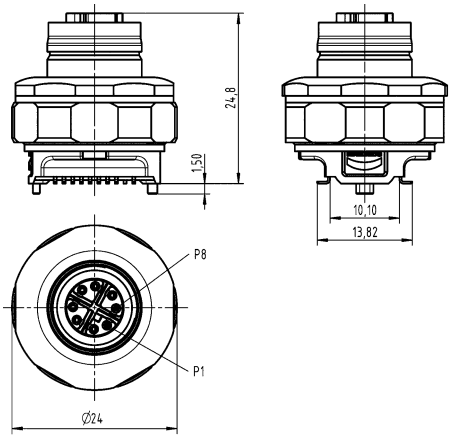
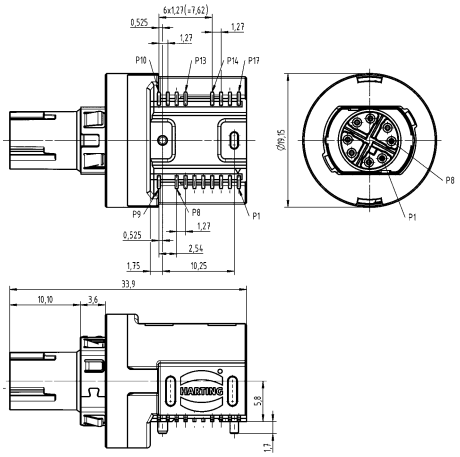
Technical characteristics

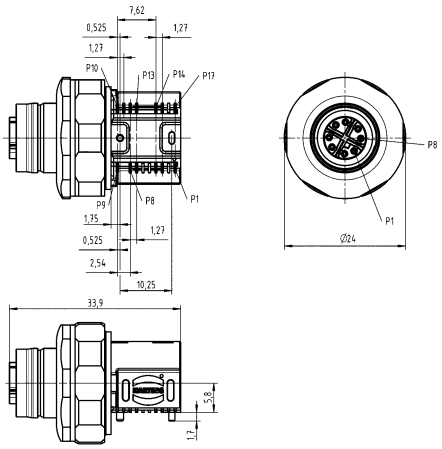
Number of contacts	8
Rated current	0.8 A
Rated voltage	57 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10^8 Ω

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	

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 4826	

Number of contacts

8

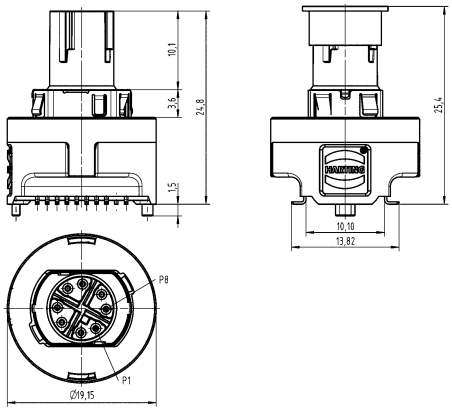
Female

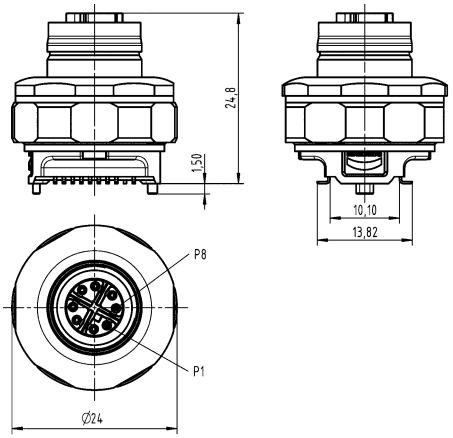
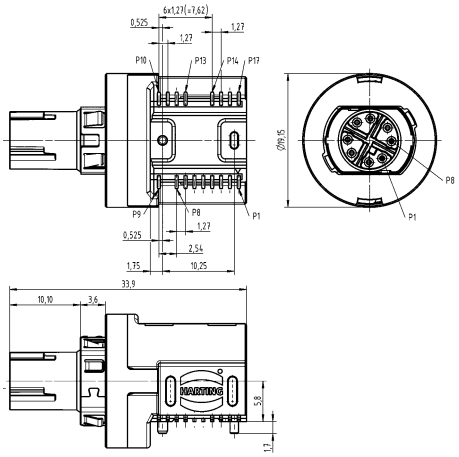
Technical characteristics

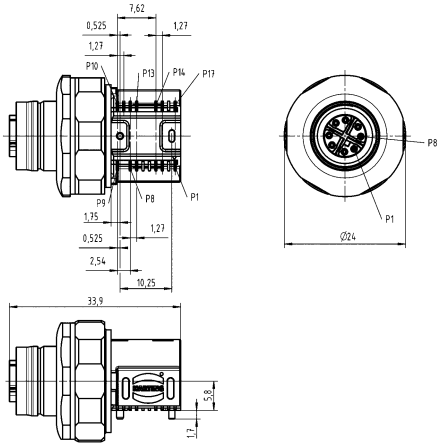
Number of contacts	8
Rated current	0.8 A
Rated voltage	57 V
Rated impulse voltage	1.5 kV
Pollution degree	3
Insulation resistance	≥10^8 Ω

Technical characteristics

Contact resistance	≤10 mΩ
Mating cycles	≥100
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz
Data rate	10 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 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	

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 2825	
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	

Female

Technical characteristics

Material (accessories)	Brass, nickel plated

Technical characteristics

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

Features

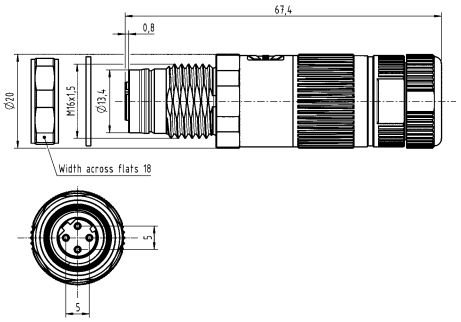
- Ethernet data connector suitable for industry
- Robust design
- 360° shielding
- Category of transmission Cat. 5
- Suitable for termination of massive and flexible wires
- Suitable for all PoE versions
- Very fast preLink® termination technology

Technical characteristics

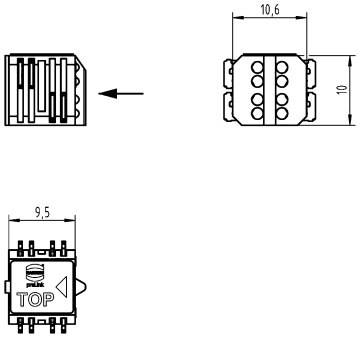
Number of contacts	4
Limiting temperature	-40 ... +85 °C
Mating cycles	≥50
Degree of protection acc. to IEC 60529	IP65, IP67
Cable diameter	5 ... 9.5 mm
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Data rate	10 Mbit/s, 100 Mbit/s
Colour (insert)	Yellow, White, Black
Material (hood/housing)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

Specifications and approvals

IEC 61076-2-101

Identification		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 82 005 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	

Circu-
lar

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

Features

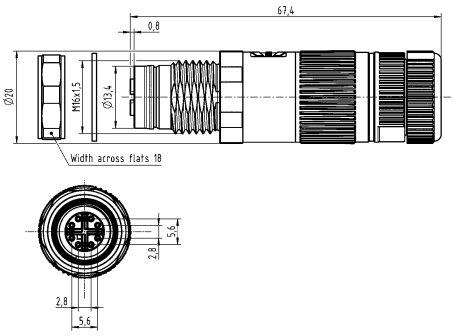
- Ethernet data connector suitable for industry
- Robust design
- 360° shielding
- Category of transmission Cat. 6_A
- Suitable for termination of massive and flexible wires
- Suitable for all PoE versions
- Very fast preLink® termination technology

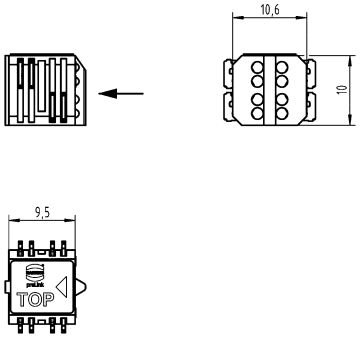
Technical characteristics

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	

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	

Features

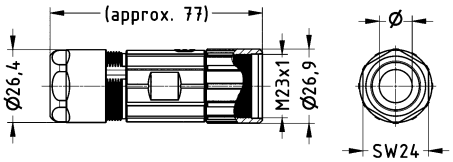
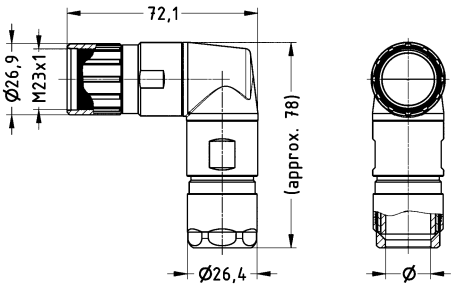
- Hoods/housings for industrial applications
- Excellent EMC characteristics
- Signal
- Power
- Crimp termination

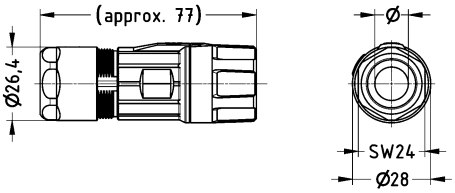
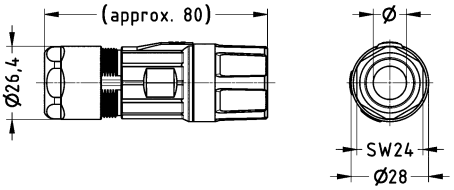
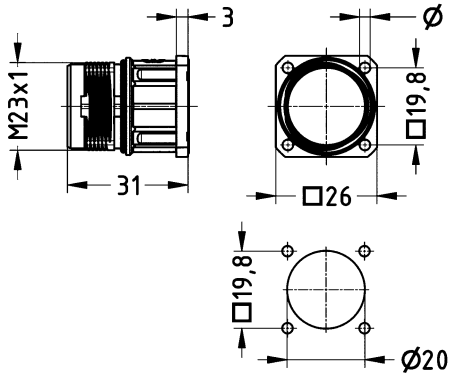
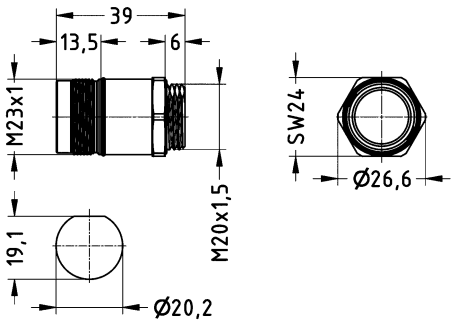
Technical characteristics

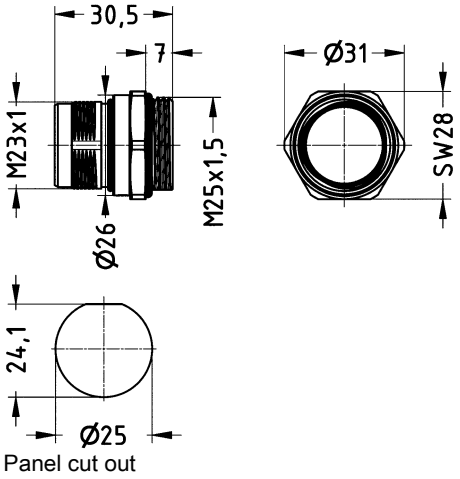
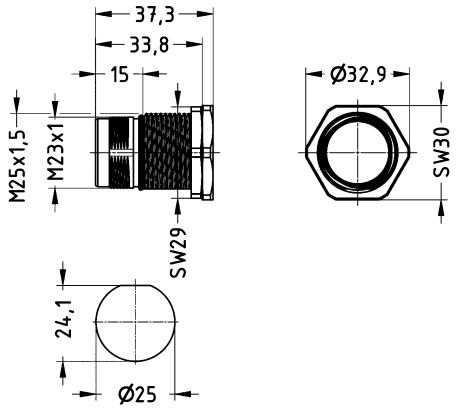
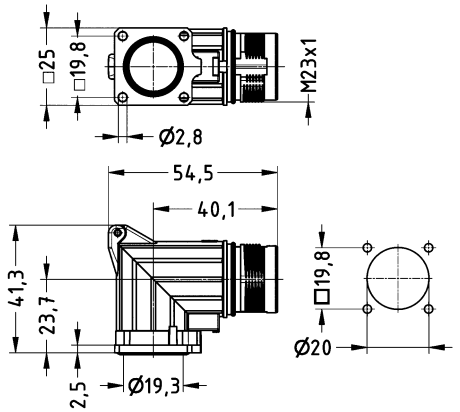
Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP67 / IP69K, in locked position
Fixing	Fixing hole 4 x 2.7 mm, Fixing hole 4 x 3.2 mm, Thread M20 x 1.5, Thread M25 x 1.5, Fixing hole 4 x 2.75 mm
Material (hood/housing)	Copper-zinc alloy
Surface (hood/housing)	Nickel plated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

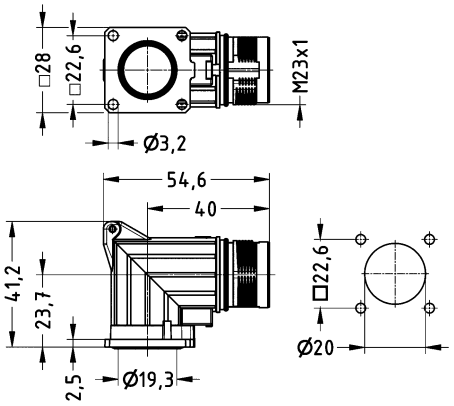
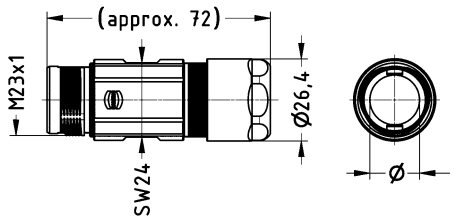
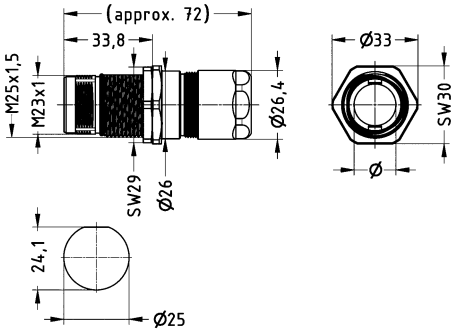
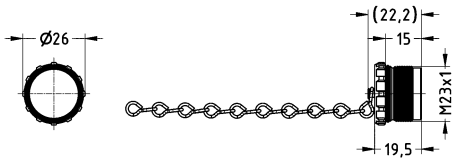
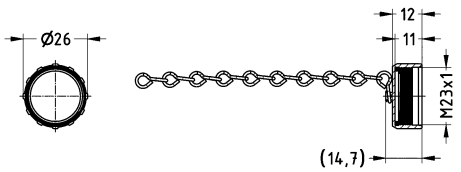
Specifications and approvals

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  Compatible to Intercontec (TE)	7 ... 12 11 ... 17	09 15 600 0482 09 15 600 0483	
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  Not compatible to ComLock		09 15 600 0303	 Panel cut out

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	 Panel cut out
Han® M23 Power, Bulkhead mounted housings, Straight, Rear mounting, Thread M25 x 1.5  Not compatible to ComLock		09 15 600 0308	 Panel cut out
Han® M23 Power, Bulkhead mounted housings, Angled, Rotatable, Fixing hole 4 x 2.7 mm 		09 15 600 0902	 Panel cut out

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	 Panel cut out
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

Technical characteristics

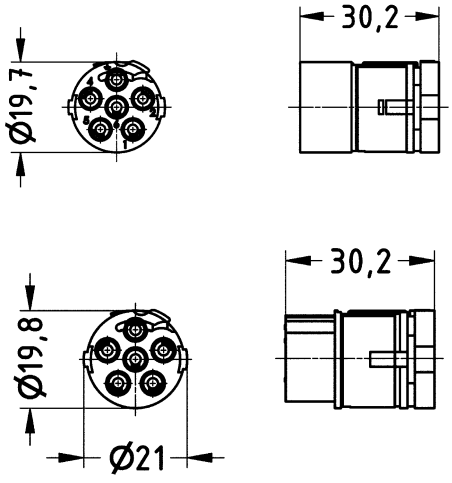
Number of contacts	5
Electrical data acc. to IEC 61984	28 A 600 V 4 kV 3
Rated current	28 A
Rated voltage	600 V
Rated impulse voltage	4 kV
Pollution degree	3
Insulation resistance	$>10^{13}$ Ω
Limiting temperature	-40 ... +125 °C
Mating cycles	≥1000
Material (insert)	Polyamide

Technical characteristics

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 Male	Part number Female	Drawing (dimensions in mm)
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

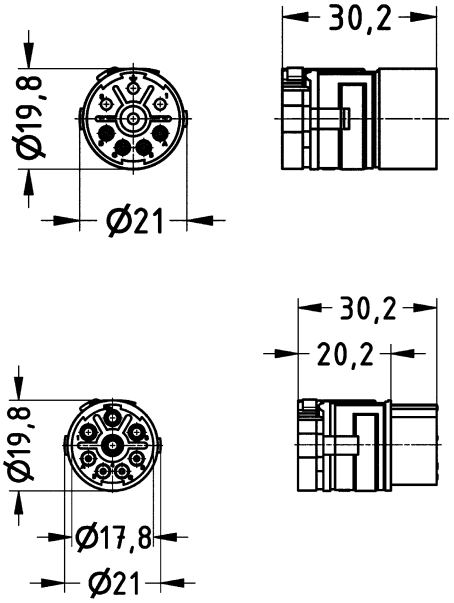
Number of contacts	3
Additional contacts	+ 4 additional signal contacts
Electrical data acc. to IEC 61984	28 A 600 V 4 kV 3
Rated current	28 A
Rated voltage	600 V
Rated impulse voltage	4 kV
Pollution degree	3
Electrical data, signal	8 A 300 V 2.5 kV 3
Rated current (signal)	8 A
Rated voltage (signal)	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 Male	Part number Female	Drawing (dimensions in mm)
Han® M23 Power, Inserts, Crimp termination  Please order crimp contacts separately.	09 15 608 3001	09 15 608 3101	

Number of contacts

3+ ⏚

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

Technical characteristics

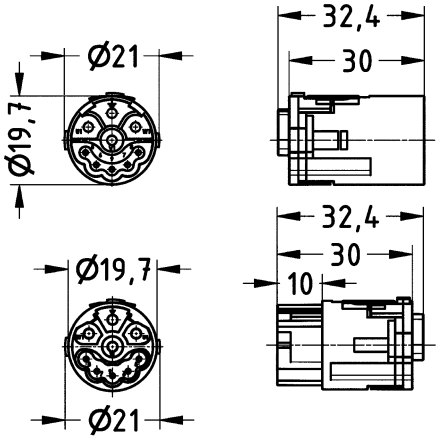
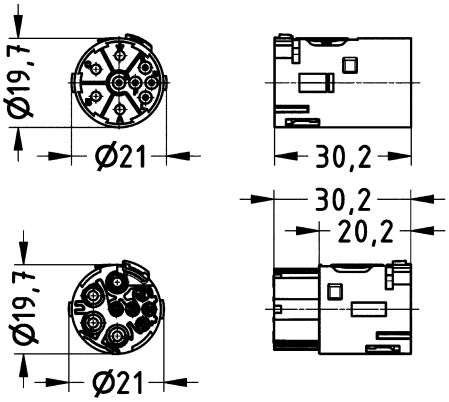
Number of contacts	3
Additional contacts	+ 5 additional signal contacts
Electrical data acc. to IEC 61984	28 A 630 V 4 kV 3
Rated current	28 A
Rated voltage	630 V
Rated impulse voltage	4 kV
Pollution degree	3
Electrical data, signal	10 A 250 V 2.5 kV 3
Rated current (signal)	10 A
Rated voltage (signal)	250 V
Rated impulse voltage (signal)	2.5 kV
Pollution degree (signal)	3
Insulation resistance	>10^{13} 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 Male	Part number Female	Drawing (dimensions in mm)
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

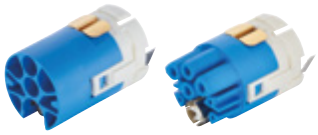
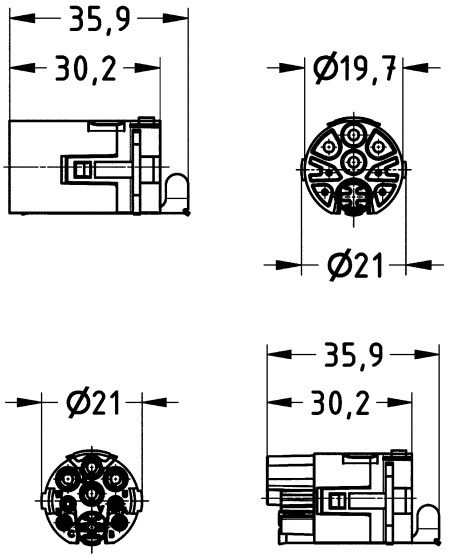
Number of contacts	3
Additional contacts	+ 4 additional signal contacts, + 4 Data
Electrical data acc. to IEC 61984	28 A 630 V 4 kV 3
Rated current	28 A
Rated voltage	630 V
Rated impulse voltage	4 kV
Pollution degree	3
Electrical data, signal	8 A 300 V 2.5 kV 3
Rated current (signal)	8 A
Rated voltage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

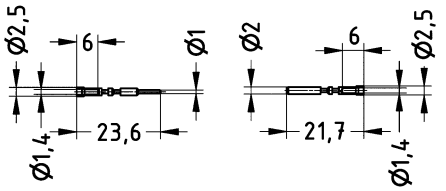
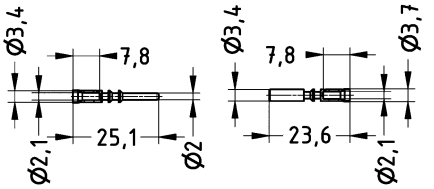
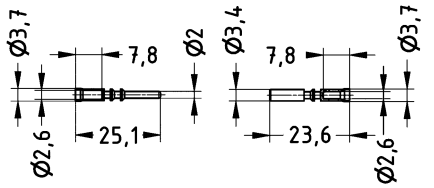
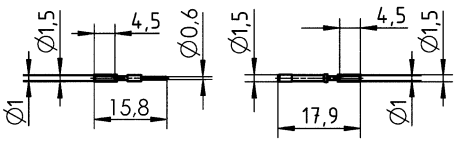
Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han® M23 Hybrid, Inserts, Crimp termination  Please order crimp contacts separately.	09 15 612 3001	09 15 612 3101	

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 Male	Part number Female	Drawing (dimensions in mm)
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	

Technical characteristics

RoHS compliant

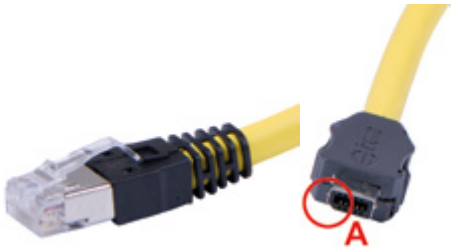
Identification	Conductor cross-section (mm²)	Part number	
Crimping tool, for individual contacts, Pack contents: incl. locator, Handling instruction	0.08 ... 2.5	09 99 000 0890	
Crimping tool, for power contact Not to be used for 0.6 mm contacts.	0.14 ... 4	09 99 000 0896	
HARTING crimping tool, for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

Cable assemblies

Contents	Page

Cable

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

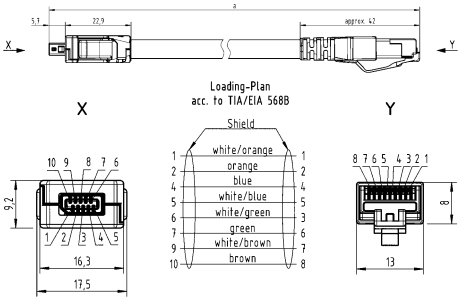
Number of cores	8
Core structure	4x 2x AWG 28/7
Connector 1	HARTING ix Industrial®, Type A
Connector 2	RJ45
Limiting temperature	-40 ... +80 °C
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Material (cable)	PVC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

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

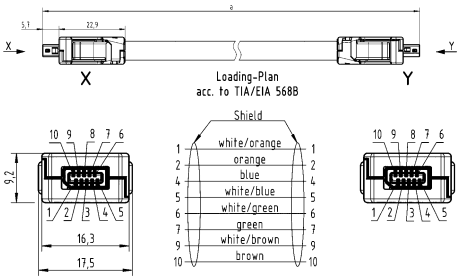
Number of cores	8
Core structure	4x 2x AWG 28/7
Connector 1	HARTING ix Industrial®, Type A
Connector 2	HARTING ix Industrial®, Type A
Limiting temperature	-40 ... +80 °C
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10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

Specifications and approvals

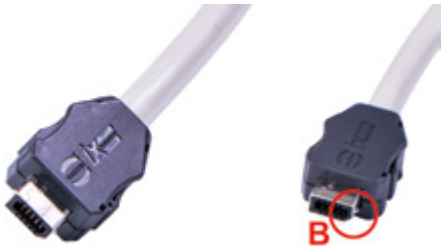
IEC 61076-3-124

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



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

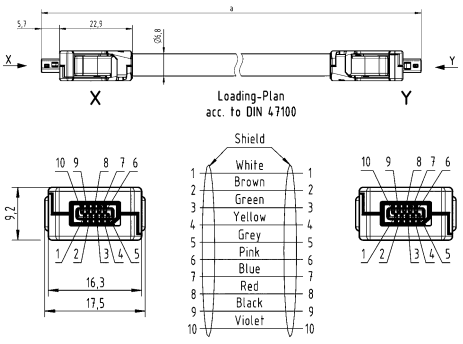
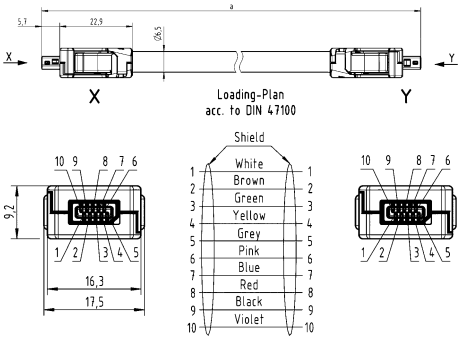
Number of cores	10
Core structure	10x AWG 26
Connector 1	HARTING ix Industrial®, Type B
Connector 2	HARTING ix Industrial®, Type B
Rated current	1.5 A
Rated voltage	50 V AC, 60 V DC
Limiting temperature	-30 ... +80 °C, -40 ... +80 °C
Material (cable)	PVC, PUR (polyurethane)
Colour (cable)	Grey

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 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	33 48 111 1A20 002 33 48 111 1A20 003 33 48 111 1A20 004 33 48 111 1A20 005 33 48 111 1A20 007 33 48 111 1A20 010 33 48 111 1A20 015 33 48 111 1A20 020 33 48 111 1A20 025 33 48 111 1A20 030 33 48 111 1A20 050 33 48 111 1A20 075 33 48 111 1A20 100	
HARTING ix Industrial®, Copper cable (round), Pre-assembled on both sides, PUR (polyurethane), -40 °C ... +80 °C	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	33 48 111 1A21 002 33 48 111 1A21 003 33 48 111 1A21 004 33 48 111 1A21 005 33 48 111 1A21 007 33 48 111 1A21 010 33 48 111 1A21 015 33 48 111 1A21 020 33 48 111 1A21 025 33 48 111 1A21 030 33 48 111 1A21 050 33 48 111 1A21 075 33 48 111 1A21 100	

Mini DisplayPort

20x AWG 32
Mini DisplayPort
Mini DisplayPort

Technical characteristics

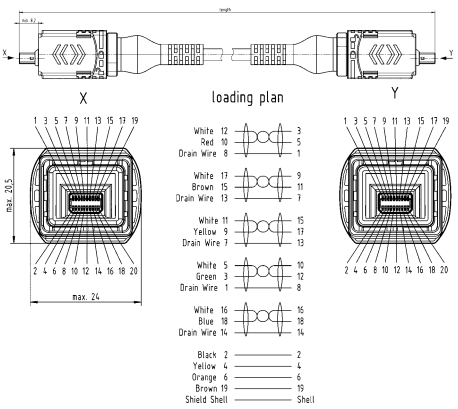
Number of cores	20
Core structure	20x AWG 32
Connector 1	Mini DisplayPort
Connector 2	Mini DisplayPort
Limiting temperature	-40 ... +80 °C
Transmission characteristics	DisplayPort 1.2, DisplayPort 1.1
Material (cable)	TPE

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	

Mini DisplayPort

20x AWG 32
Mini DisplayPort
IP20

Technical characteristics

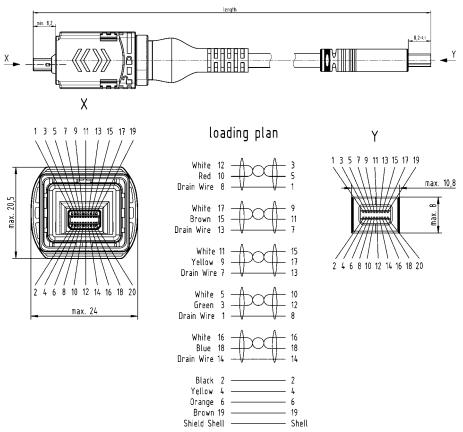
Number of cores	20
Core structure	20x AWG 32
Connector 1	Mini DisplayPort
Connector 2	IP20
Limiting temperature	-40 ... +80 °C
Transmission characteristics	DisplayPort 1.2, DisplayPort 1.1
Material (cable)	TPE

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	

HARTING PushPull Signal

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

Features

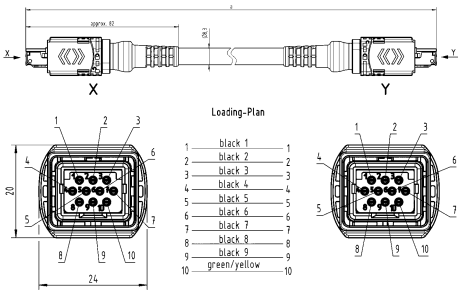
- Double-sided IP68 protection
- Simple handling by HARTING PushPull
- 10-pin

Technical characteristics

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	

HARTING PushPull Signal

Cable

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

Features

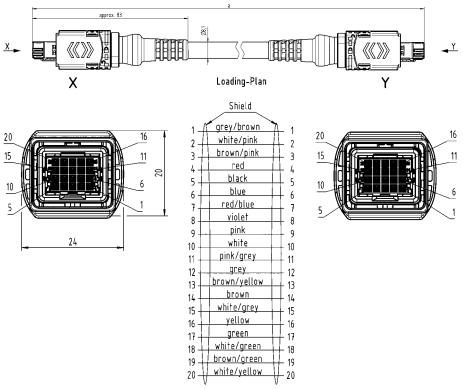
- Double-sided IP68 protection
- Simple handling by HARTING PushPull
- 20-pin

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

HARTING PushPull RJ45

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

Features

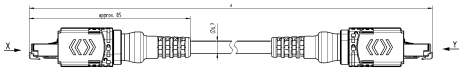
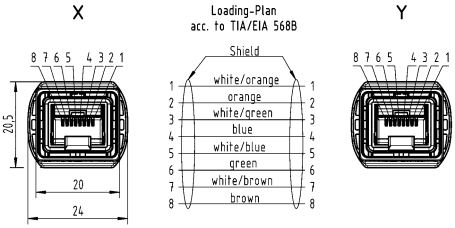
- Transmission of up to 10 Gbit/s
- Double-sided IP68 protection
- Simple handling by HARTING PushPull
- Cables suitable for industry
- Suitable for outdoor applications (PVC (outdoor))

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	

HARTING PushPull RJ45

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 1 m 5 m 7.5 m 10 m 15 m 20 m	09 48 282 8758 005 09 48 282 8758 010 09 48 282 8758 050 09 48 282 8758 075 09 48 282 8758 100 09 48 282 8758 150 09 48 282 8758 200	

HARTING PushPull RJ45

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

Features

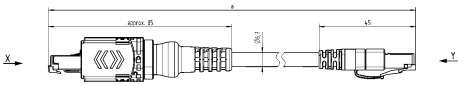
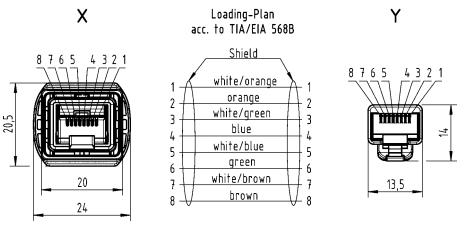
- Transmission of up to 10 Gbit/s
- Double-sided IP68 protection
- Simple handling by HARTING PushPull
- Cables suitable for industry
- Suitable for outdoor applications (PVC (outdoor))

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	

HARTING PushPull RJ45

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 2 m 3 m 5 m 7 m 10 m 15 m 20 m	09 48 284 7758 010 09 48 284 7758 020 09 48 284 7758 030 09 48 284 7758 050 09 48 284 7758 070 09 48 284 7758 100 09 48 284 7758 150 09 48 284 7758 200	

HARTING PushPull V4 Industrial Fibre Optic

9 / 125 µm
HARTING PushPull
HARTING PushPull

Features

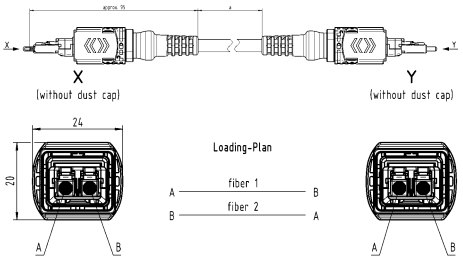
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	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	

HARTING PushPull V4 Industrial Fibre Optic

50 / 125 µm
HARTING PushPull
HARTING PushPull

Features

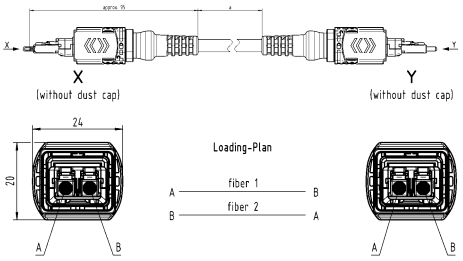
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

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	

HARTING PushPull V4 Industrial Fibre Optic

62.5 / 125 µm
HARTING PushPull
HARTING PushPull

Features

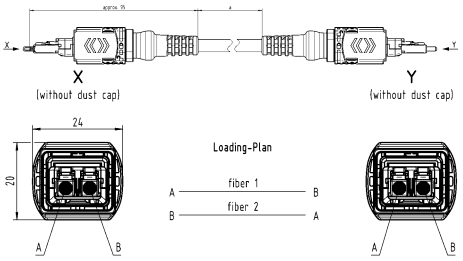
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	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	

HARTING PushPull V4 Industrial Fibre Optic

9 / 125 µm
HARTING PushPull
LC duplex

Features

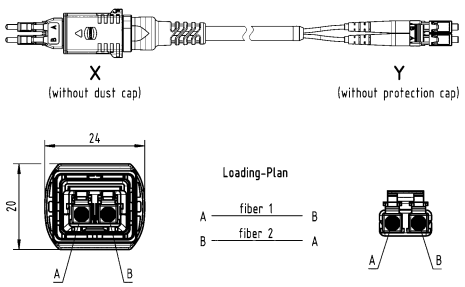
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	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	

HARTING PushPull V4 Industrial Fibre Optic

50 / 125 µm
HARTING PushPull
LC duplex

Features

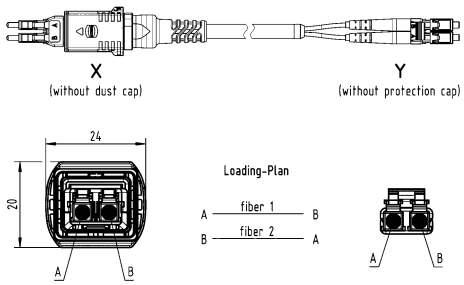
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	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	

HARTING PushPull V4 Industrial Fibre Optic

62.5 / 125 µm
HARTING PushPull
LC duplex

Cable

Features

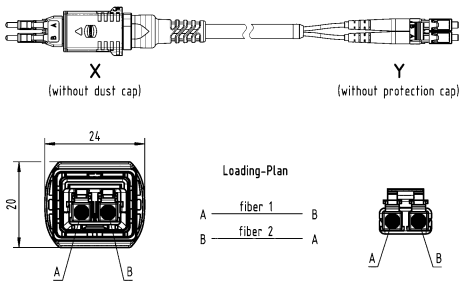
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	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	

HARTING PushPull V4 Industrial Fibre Optic

9 / 125 µm
HARTING PushPull
SC duplex

Features

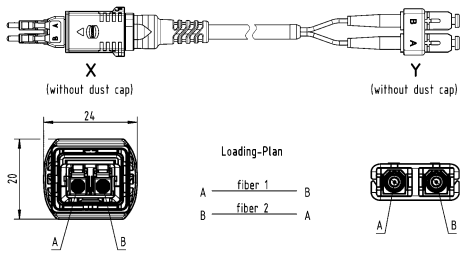
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	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	

HARTING PushPull V4 Industrial Fibre Optic

50 / 125 µm
HARTING PushPull
SC duplex

Features

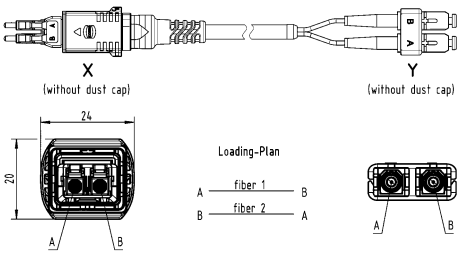
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

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	

HARTING PushPull V4 Industrial Fibre Optic

62.5 / 125 µm
HARTING PushPull
SC duplex

Features

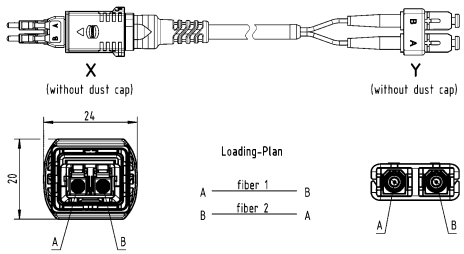
- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

Core structure	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	

Han® M23 overmoulded cable assemblies

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

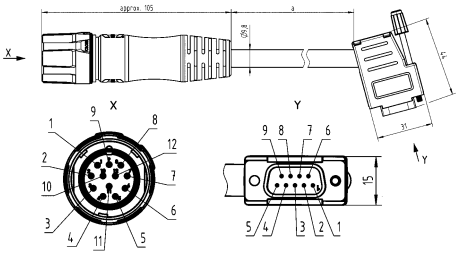
Technical characteristics

Core structure	3x (2x 0.14) + (2x 0.5) mm²
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	Cable length	Part number	Drawing (dimensions in mm)
Encoder cable, Pre-assembled on both sides, for servo drives, Standard in acc. to Lenze 	5 m 7.5 m 10 m 12.5 m 15 m 17 m 20 m	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	

Han® M23 overmoulded cable assemblies

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

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

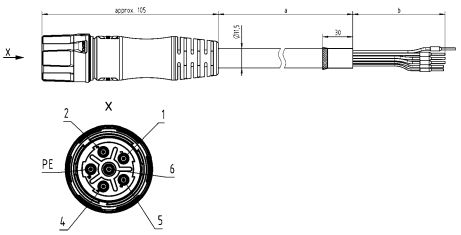
Technical characteristics

Core structure	(4x 1.5 + (2x 0.5)) mm²
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	

HARTING sea cable

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	

Distributors

Distributors – worldwide

ARROW: www.arrow.com

Digi-Key Corporation: www.digikey.com

Farnell: www.farnell.com

FUTURE Electronics: www.futureelectronics.com

Mouser Electronics: www.mouser.com

RS Components: www.rs-components.com

Other countries and general contact

HARTING
Electric GmbH & Co. KG

P.O. Box 1473
D-32328 Espelkamp
Germany

Phone +49 5772/47-97100

electric@HARTING.com
www.HARTING.com

HARTING
Electronics GmbH

P.O. Box 1433
32328 Espelkamp
Germany

Phone +49 5772/47-97200

electronics@HARTING.com
www.HARTING.com

Pushing Performance

HARTING.com –
the gateway to your local website.

www.HARTING.ae
www.HARTING.at
www.HARTING.com.au
www.HARTING.be
www.HARTING.com.br
www.HARTING.ca
www.HARTING.ch
www.HARTING.com.cn
www.HARTING.cz
www.HARTING.de
www.HARTING.dk
www.HARTING.ee
www.HARTING.es
www.HARTING.fi
www.HARTING.fr
www.HARTING.co.uk
www.HARTING.com.hk
www.HARTING.hu
www.HARTING.co.in
www.HARTING.it
www.HARTING.co.jp
www.HARTING.co.kr
www.HARTING.com.mx
www.HARTINGbv.nl
www.HARTING.no
www.HARTING.pl
www.HARTING.pt
www.HARTING.ro
www.HARTING.ru
www.HARTING.se
www.HARTING.com.sg
www.HARTING.sk
www.HARTING.com.tr
www.HARTING.com.tw
www.HARTING-USA.com
www.HARTING.co.za

HARTING Technology Group
info@HARTING.com
www.HARTING.com

BD | 2018-04-12 | 3.0 | 98 42 914 0201