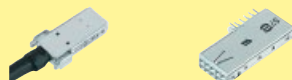


Interface connectors

Chapter

harlink® Modular metric high speed connectors
IEC 61076-4-107, 2.0 mm [0.079"] pitch



00

harmik® Miniature D connectors, IEC 61076-3-100,
IEC 61076-3-101, 1.27 mm [0.050"] pitch



01

D-Sub – Standard subminiature D connectors
CECC 75301-802



02

D-Sub – High Density subminiature D connectors



03

D-Sub – Mixed subminiature D connectors
DIN 41652 T1



04

D-Sub – Filter subminiature D connectors
IEC 1000, 2.54 mm [0.100"] pitch



05

D-Sub – Waterproof subminiature D IP 67 connectors
IP 67 housings



06

D-Sub – Housing range for subminiature D connectors
Comprehensive shielded and unshielded range



07

D-Sub – Accessories for subminiature D connectors

08

SEK Insulation Displacement Connector system (IDC)
IEC 60603-13, 2.54 mm [0.100"] pitch



09

Press-in technology
Press-in board connectors



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Surface Mount Technology (SMT)
board connectors



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Surface Mount Compatible (SMC)
board connectors



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Tooling for press-in technology



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Tooling for crimp technology



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Tooling for IDC technology



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Cables and cable assemblies



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List of part numbers

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Company addresses

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The **HARTING eCatalogue** is an electronic catalogue with a part configuration and 3D components library.

har-link

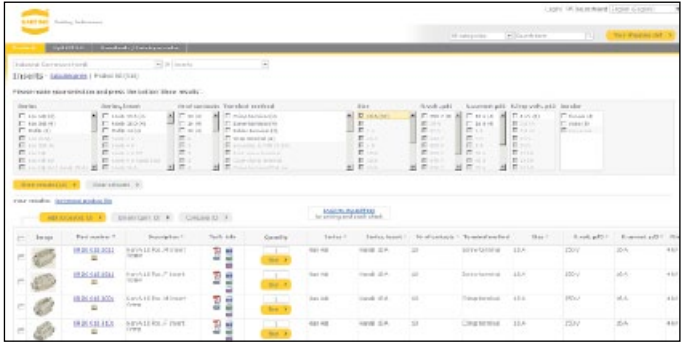
Here you can choose a connector according to your requirements. Afterwards you are able to send your inquiry directly to a HARTING sales partner.

The drawings to every single part are available in PDF-format.

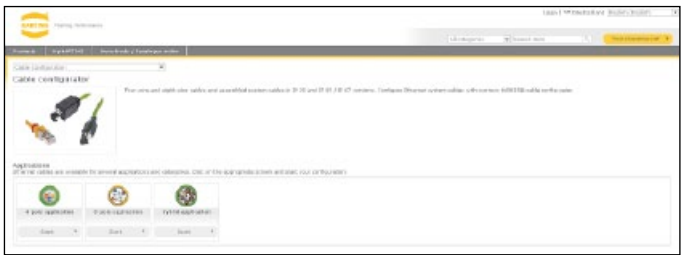
The parts are downloadable in 2D-format (DXF) and 3D-format (IGES, STEP).

The 3D-models can be viewed with a VRML-viewer.

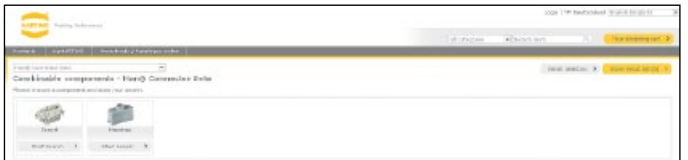
You can find the **HARTING eCatalogue** at www.HARTING.com.



Product selection



Product configuration



Product combination



Product overview

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 from the device connectivity product portfolio 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.

General approvals:



UL-listed E 10 2079 (M)



Interface connectors are in conformity with the **Directive 2002/95/EG** EC Directive on the Restriction and Use of Certain Hazardous Substances in Electrical and Electronic Devices **RoHS**

har-link® Modular metric high speed connectors, 2.0 mm pitch

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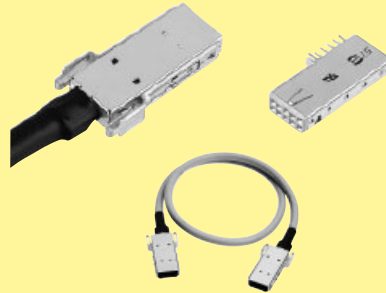
har-link® connector system – general information

00.04

Technical characteristics

00.06

Male and female connectors



00.07

Accessories and cable assemblies

00.08

The **harlink**® connector system of HARTING complies with the requirements of IEC 61076-4-107 and is a compact and robust pcb-to-cable interface with excellent data transmission properties for high-speed networking and telecommunications.

All dimensions of the **harlink**® connector are in accordance with IEC 917 and IEEE P 1301 requirements, which allows for easy implementation into both metric and inch-based systems. In addition, **harlink**® supports hot plugging as required by modern bus systems such as CompactPCI, S-bus and VME.

harlink® allows data transmission up to 2 Gbit/s per pair and is therefore perfectly suited for modern transmission protocols such as Low Voltage Differential Signals (see Fig. 1). The design of the **harlink**® connector allows differential pairs to be placed horizontally (parallel to the pcb), thus reducing the skew at high frequencies and considering high signal integrity.

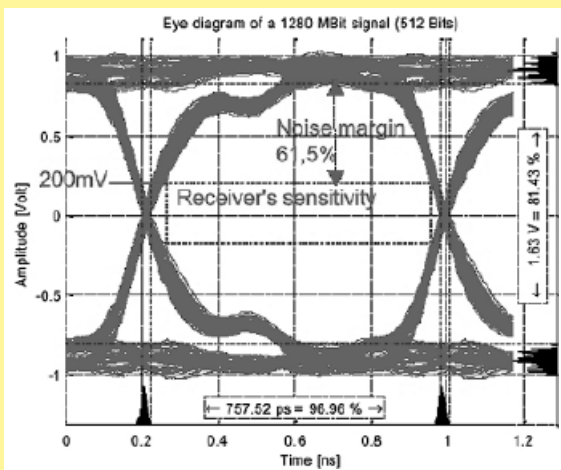


Fig. 1: Eye diagram of a 1280 MBit signal (512 Bits)

The metal shells of the **harlink**® connector are a guarantee for its superior performance in the EMI-polluted environment (see Fig. 2).



Fig. 2: 360° screened-can construction with locking levers

To reach a screening attenuation of more than 50 dB up to 1 GHz, HARTING offers brackets covering each connector in conjunction with a gasket, which is compressed between the bracket and the front panel (see Fig. 3).

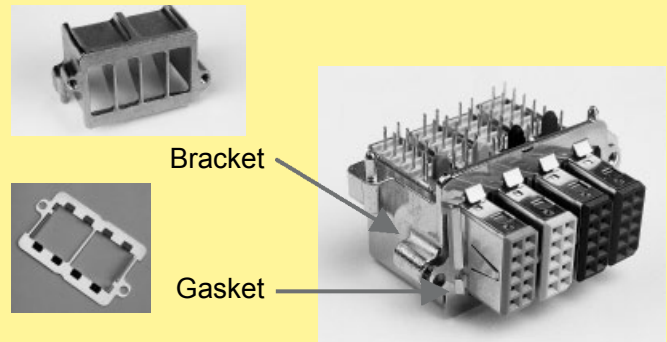


Fig. 3: 4 cavities bracket and gasket

Once plugged, the mated pair shows excellent mating safety. Due to the locking levers on both sides of the male connector, the connection withstands a pulling force of up to 80 N (see Fig. 2).

The high temperature resistant material of the **harlink**® female connector body supports the safe reflow soldering process. For easy identification of female modules, six different colours are available (see Fig. 4).

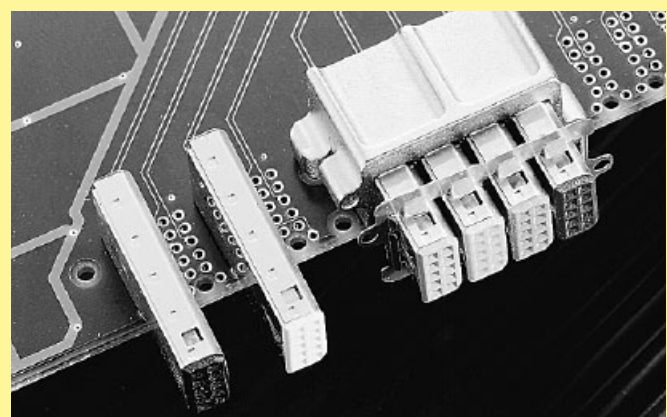
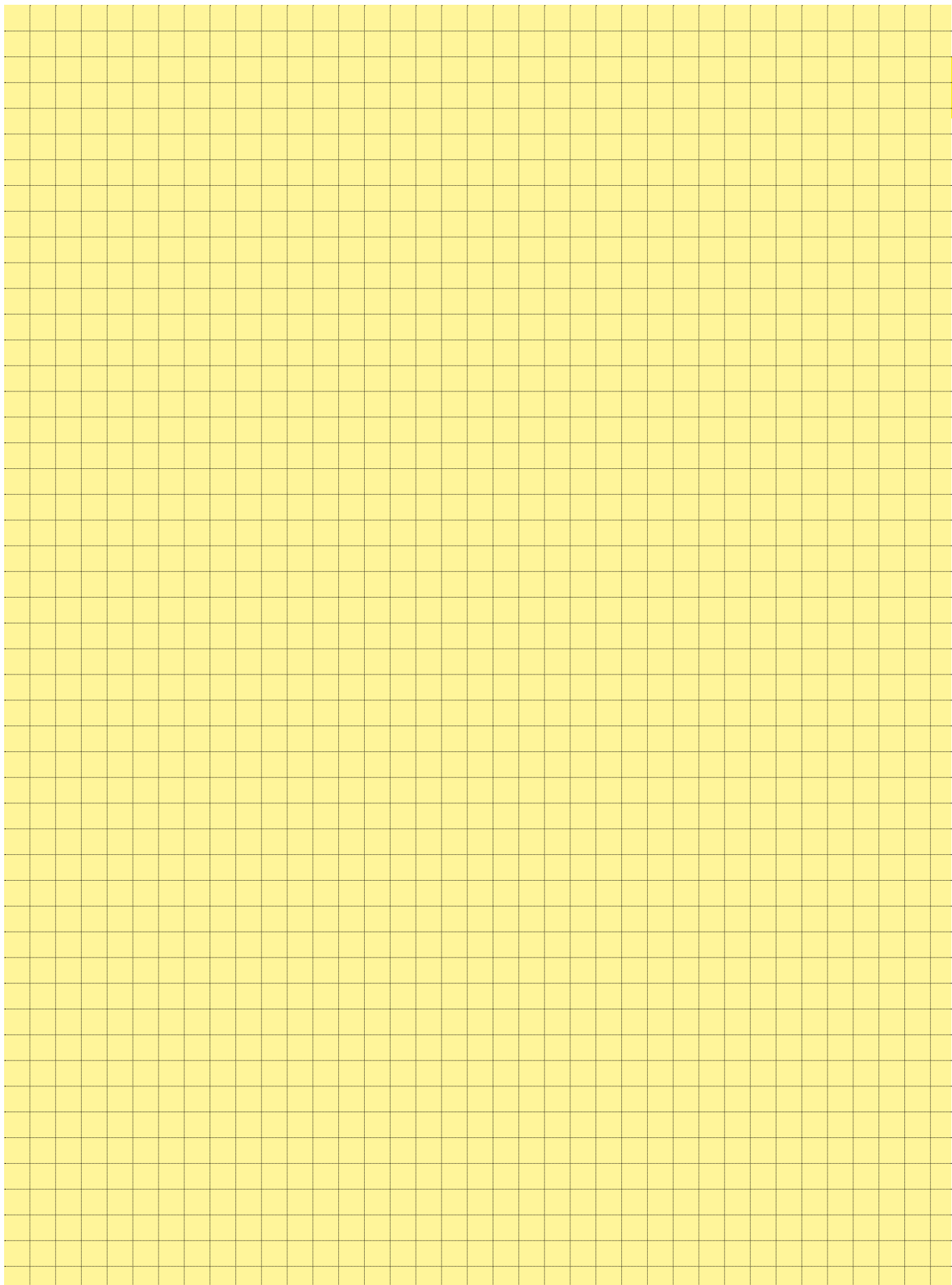
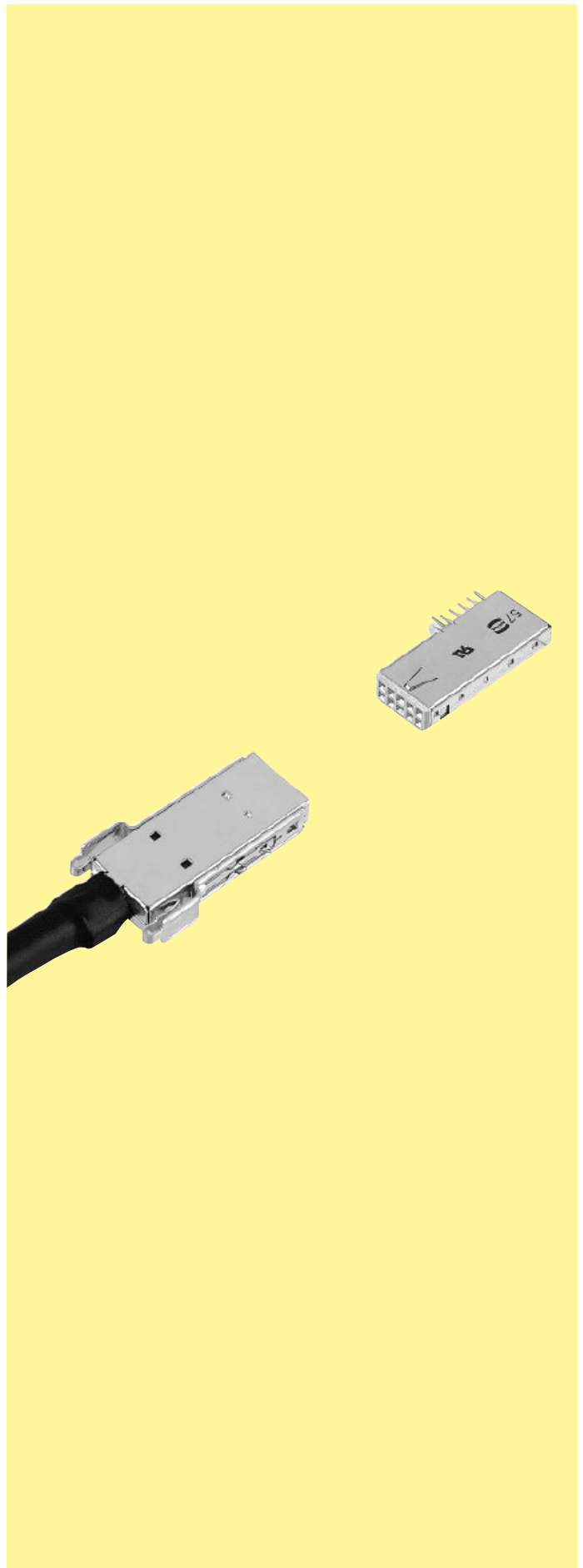


Fig. 4: Female modules

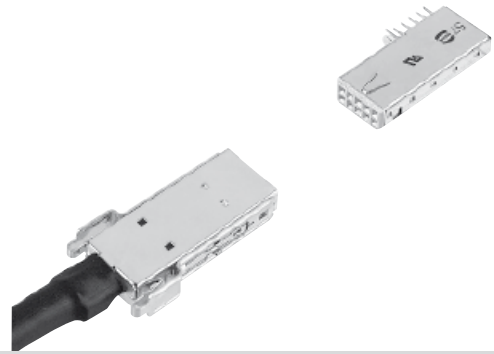
In addition to single connectors, HARTING provides cable assemblies with unshielded twisted pairs or with shielded twisted pairs for high speed applications such as IEEE 1355. A crimping tool range for terminating the male **harlink**® connectors is available.



Number of contacts	10
Approvals	IEC 61076-4-107 UL recognized: E102079
Contact pitch Connector pitch	2 mm 6 mm
Working current	1.5 A at 70 °C
Test voltage $U_{r.m.s.}$	750 V
Contact resistance Insulation resistance	$\leq 35 \text{ m}\Omega$ $\geq 10^{10} \Omega$
Temperature range during reflow soldering	-55 °C ... +125 °C female: max. + 260 °C for 60 s
Mating cycles	250, performance level 2
Terminations	Solder buckets (male), AWG 24-30, outer insulation \varnothing $5.33 \pm 0.25 \text{ mm}$ Solder pins for $\varnothing 0.6 \text{ mm}$ min. (female)
Insertion force Withdrawal force	10 N max. / module 2 N min. / module (without locking levers)
Latching system	Locking levers
Materials	
Mouldings	Male connector: Polyester, UL 94-V0 Female connector: High temperature plastic material, UL 94-V0
Contacts	Copper alloy
Shells	Male connector: Stainless steel Female connector: Silver nickel
Contact surface Contact zone	Selectively plated according to performance level

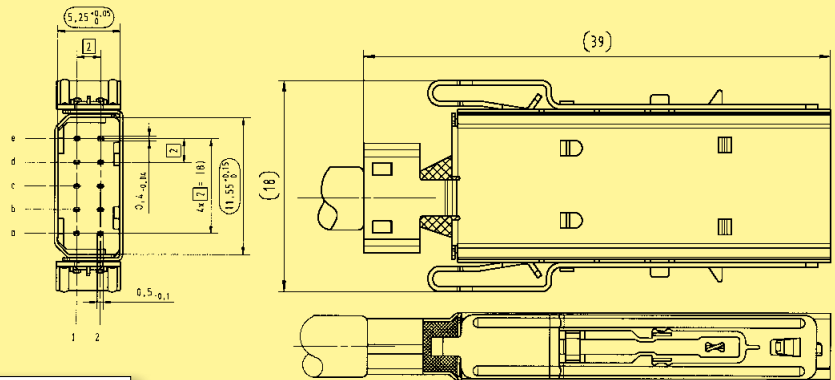


Male connectors, straight
Female connectors, angled



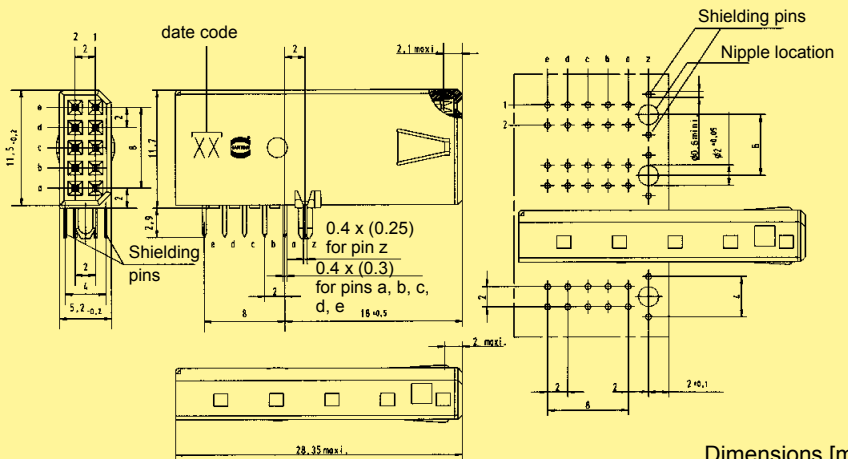
Identification	No. of contacts	Colour	Part No.
Male connector with solder buckets	10	Black	27 11 122 2001
Female connector with solder pins	10	Beige (standard)	27 21 121 8000
	10	Red	27 21 121 8002
	10	Yellow	27 21 121 8004
	10	Green	27 21 121 8005
	10	Blue	27 21 121 8006
	10	Black	27 21 121 8010

Male connector
(delivered in piece parts)



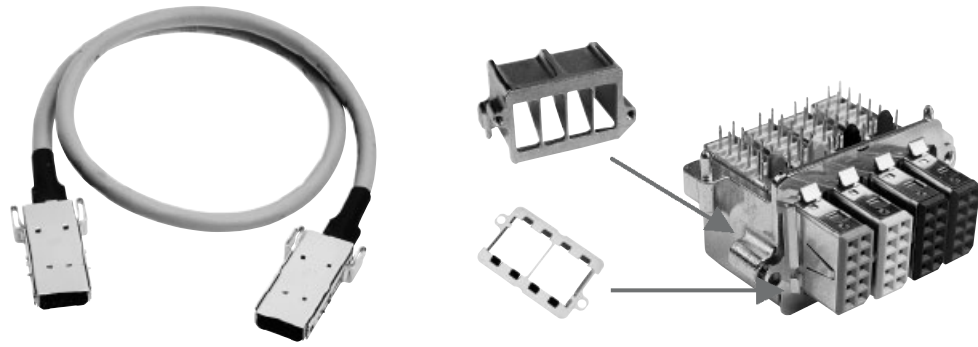
Manuals for the *har-link*® cable free connector assemblies are available in our online catalogue *HARKIS*® or on demand at your local HARTING representative.

Female connector



Dimensions [mm]

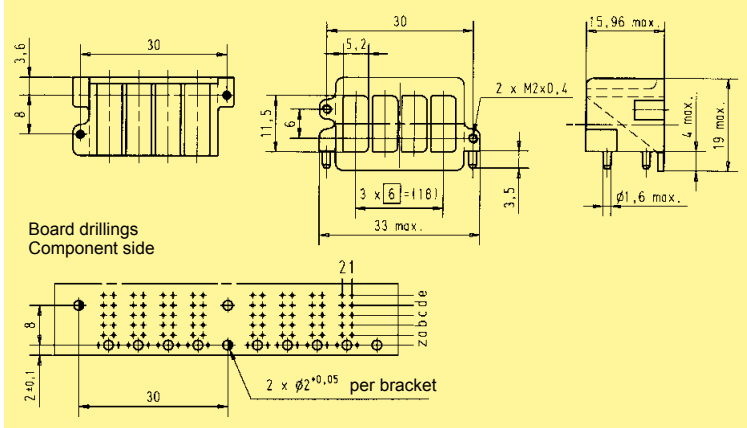
Accessories and cable assemblies



Identification Part No. Drawing Dimensions in mm

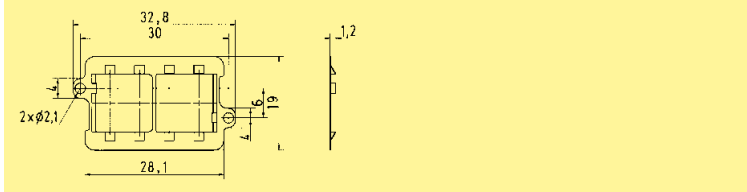
Bracket
with four cavities

27 71 040 0001



Gasket
with four cavities

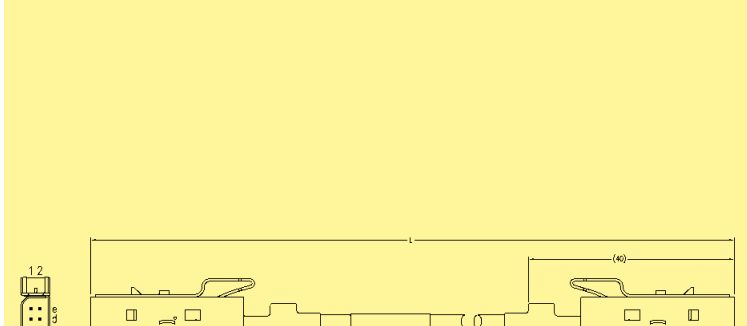
27 71 040 0002



Standard har-link® cable assembly
Cable: 5 twisted pairs, AWG 28, shielded, PVC
Wiring: 1:1

Length: L = 0.5 m
L = 1.0 m
L = 2.0 m

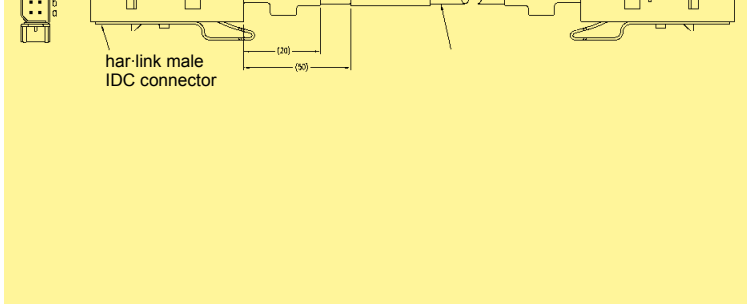
33 27 243 0500 001
33 27 243 1000 002
33 27 243 2000 003



High end har-link® cable assembly
Cable: 5 twisted pairs, AWG 30, double shielded, PVC
Wiring: 1:1

Length: L = 0.5 m
L = 1.0 m
L = 2.0 m

33 27 243 0500 006
33 27 243 1000 007
33 27 243 2000 008



Cable: 5 twisted pairs, AWG 30, double shielded, PVC
Wiring: acc. to IEEE 1355

Length: L = 0.5 m
L = 1.0 m
L = 2.0 m

33 27 243 0500 015
33 27 243 1000 016
33 27 243 2000 017

