

## Directory chapter 00



| harlinh* Modular metric high speed connectors, 2.0 mm pitch harlinh* connector system – general information |   |       |          |
|---|---|-------|----------|
| Technical characteristics   | harlink® Modular metric high speed connectors, 2.0 mm pitch | Page  |          |
| Male and female connectors  | harlink® connector system – general information             | 00.04 | har-link |
| Accessories and cable assemblies  | Technical characteristics                                   | 00.06 |          |
|   | Male and female connectors                                  | 00.07 |          |
|   | Accessories and cable assemblies                            | 00.08 |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   |   |       |          |
|   | Tooling see chanter 32                                      |       | 00       |

Tooling see chapter 32 Cables see chapter 40

The **Marink** 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.

**12:** connector system

All dimensions of the **larink** 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, Idian supports hot plugging as required by modern bus systems such as CompactPCI, S-bus and VME.

nation 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 **Nation** connector allows differential pairs to be placed horizontally (parallel to the pcb), thus reducing the skew at high frequencies and considering high signal integrity.

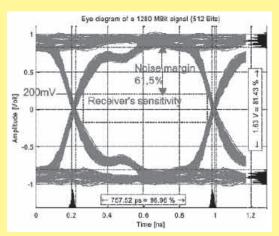


Fig. 1: Eye diagram of a 1280 MBit signal (512 Bits)

The metal shells of the harlink connector are a guarantee for its superior performance in the EMIpolluted 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).

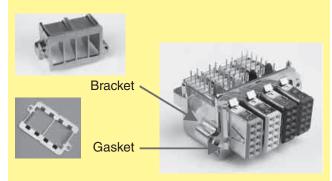


Fig. 3: 4 cavities bracket and gasket

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 Millim female connector body supports the safe reflow soldering process. For easy identification of female modules, six different colours are available (see Fig. 4).

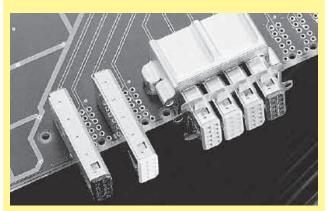
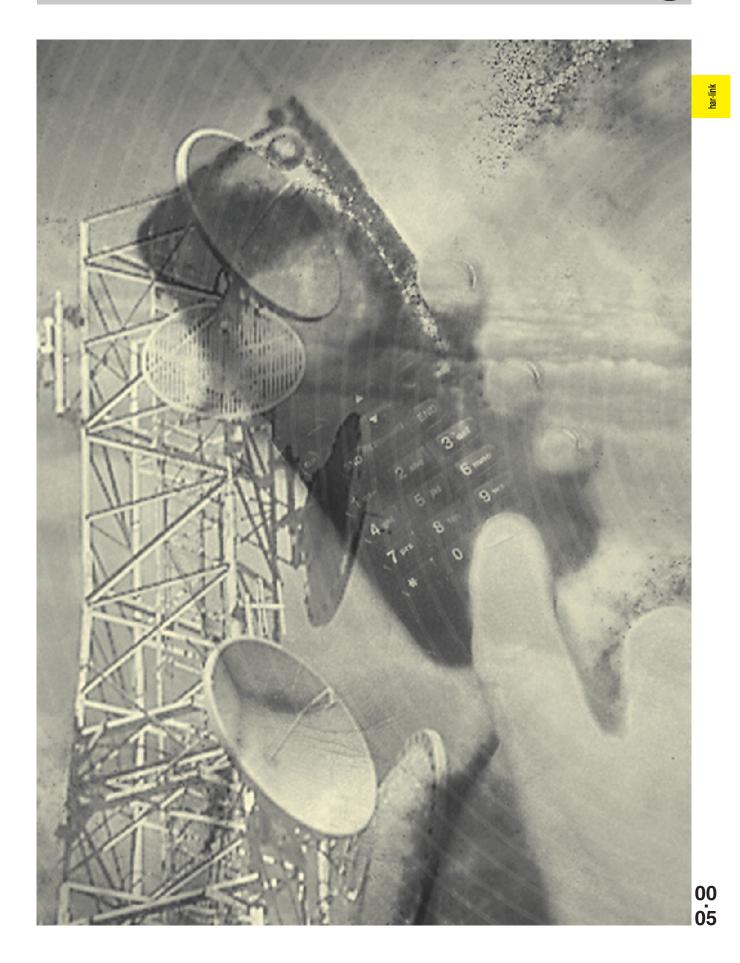
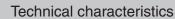


Fig. 4: Female modules

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 **littlink** connectors is available.



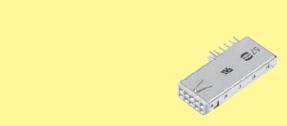






| v  |
|----|
| ె  |
| ≔  |
| =  |
| 22 |
| _  |
|    |

| Number of contacts                          | 10  |
|---|---|
| Approvals                                   | IEC 61 076-4-107<br>UL recognized: E102079  |
| Contact pitch<br>Connector pitch            | 2 mm<br>6 mm  |
| Working current                             | 1.5 A at 70 °C  |
| Test voltage U <sub>r.m.s.</sub>            | 750 V   |
| Contact resistance<br>Insulation resistance | $\leq 30~\text{m}\Omega$ $\geq 10^{10}~\Omega$  |
| Temperature range during reflow soldering   | -55 °C + 125 °C<br>female:<br>max. + 260 °C for 60 s  |
| Mating cycles                               | 250, performance level 2  |
| Terminations                                | Insulation displacement<br>(male), AWG 28/7-30/7,<br>AWG 30 solid<br>Solder pins for Ø 0.6 mm<br>min. (female)                |
| Insertion force<br>Withdrawal force         | 10 N max. / module<br>2 N min. / module<br>(without locking levers)   |
| Latching system                             | Locking levers  |
| Materials Mouldings  Contacts               | Male connector: Polyester,<br>UL 94-V0<br>Female connector: High<br>temperature plastic material,<br>UL 94-V0<br>Copper alloy |
| Shells                                      | Male connector:<br>Stainless steel<br>Female connector:<br>Silver nickel  |
| Contact surface<br>Contact zone             | Selectively gold-plated   |









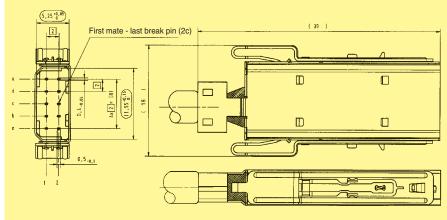




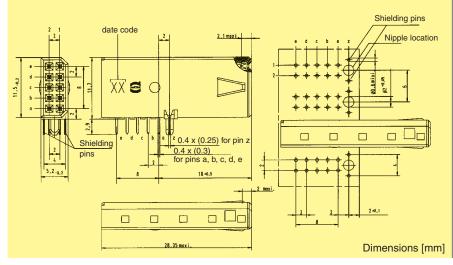
## Male connectors, straight Female connectors, angled

| Identification                             | No. of contacts | Colour           | Part No.       |  |
|--|-----------------|------------------|----------------|--|
| Male connector for insulation displacement | 10              | Black            | 27 11 161 8001 |  |
| 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



## Female connector





| Identification  | Part No.   | Drawing Dimensions [mm]                      |
|---|--|--|
| Bracket with four cavities  | 27 71 040 0001   | 30<br>2 x M2x0, 4<br>3 x 6 = (18)<br>33 max. |
| Gasket with four cavities   | 27 71 040 0002   | 2). 8<br>39<br>2 × 62,1                      |
| Standard cable assembly with <i>single</i> shielding and 1:1 wiring  Length: L = 0.5 m L = 1.0 m L = 2.0 m                              | 33 27 243 0500 001<br>33 27 243 1000 002<br>33 27 243 2000 003 | First har-link male IDC connector pin        |
| High end cable assembly with <i>double</i> shielding and 1:1 wiring suitable for HF applications  Length: L = 0.5 m L = 1.0 m L = 2.0 m | 33 27 243 0500 006<br>33 27 243 1000 007<br>33 27 243 2000 008 | First har-link male mate IDC connector pin   |

00 08