Pushing Performance
Since 1945

DIN-Signal harbus64-160FS-3,0C1-1-Trans.

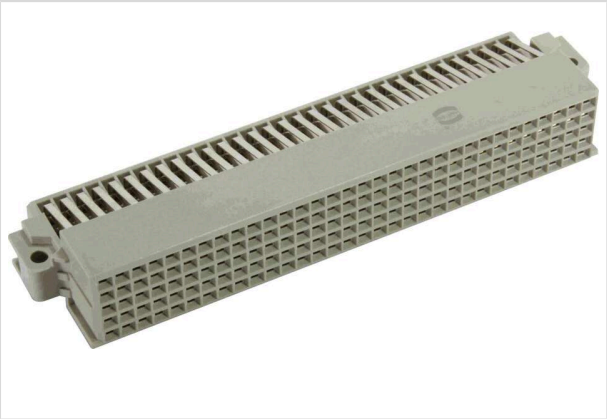

Image is for illustration purposes only. Please refer to product description.

Part number	02 04 160 1101
Specification	DIN-Signal harbus64-160FS-3,0C1-1-Trans.
HARTING eCatalogue	https://harting.com/02041601101

Identification

Category	Connectors
Series	har-bus® 64
Element	Female connector
Description of the contact	Angled

Version

Termination method	Wave soldering termination
Connection type	Motherboard to daughtercard
Number of contacts	160
Contact configuration	Rows z, a, b, c, and d, positions 1, 2, ... , 31, 32
PCB fixing	With fixing flange

Technical characteristics

Contact rows	5
Contact spacing (termination side)	2.54 mm
Contact spacing (mating side)	2.54 mm
Rated current	1 A
Rated current	Rated current measured at 20 °C, see derating curve for details
Clearance distance	0.6 mm between 2 rows (a, b, c) 0.6 mm between 2 rows (z, d) 0.8 mm between 2 contacts in a row (a, b, c) 0.8 mm between 2 contacts in a row (z, d)

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Technical characteristics

Creepage distance	0.6 mm between 2 rows (a, b, c) 0.6 mm between 2 rows (z, d) 0.8 mm between 2 contacts in a row (a, b, c) 0.8 mm between 2 contacts in a row (z, d)
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤20 mΩ for rows a, b, c ≤30 mΩ for rows z, d
Limiting temperature	-55 ... +125 °C
Insertion force	≤160 N
Withdrawal force	≤120 N
Performance level	1 acc. to IEC 61076-4-113
Mating cycles	≥500
Test voltage $U_{r.m.s.}$	1 kV
Isolation group	IIIa (175 ≤ CTI < 400)
Hot plugging	No

Material properties

Material (insert)	Liquid crystal polymer (LCP)
Colour (insert)	Beige
Material (contacts)	Copper alloy
Surface (contacts)	Noble metal over Ni Mating side Sn over Ni Termination side
Material flammability class acc. to UL 94	V-0
RoHS	compliant
ELV status	compliant
China RoHS	e
REACH Annex XVII substances	Not contained
REACH ANNEX XIV substances	Not contained
REACH SVHC substances	Not contained
California Proposition 65 substances	Yes
California Proposition 65 substances	Nickel
Fire protection on railway vehicles	EN 45545-2 (2020-08)
Requirement set with Hazard Levels	R26

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Specifications and approvals

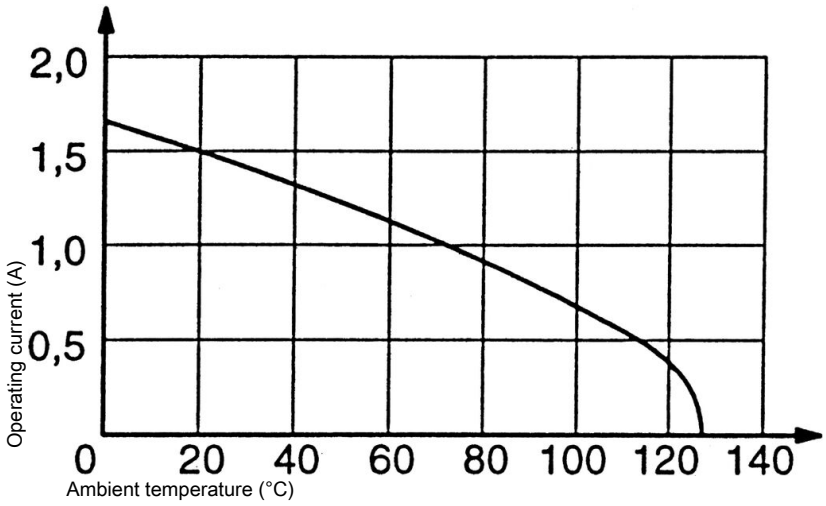
Specifications	IEC 61076-4-113 (complementary)
UL / CSA	UL 1977 ECBT2.E102079 CSA-C22.2 No. 182.3 ECBT8.E102079
Railway classification	F4/I3 acc. to NFF 16-101/102

Commercial data

Packaging size	20
Net weight	29.7 g
Country of origin	Germany
European customs tariff number	85366990
GTIN	5713140000322
eCl@ss	27460201 PCB connector (board connector)
ETIM	EC002637
UNSPSC 24.0	39121415

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



Soldering instructions

The connectors should be protected when being soldered. Otherwise, they might become contaminated as a result of soldering operations or deformed as a result of overheating.
1) For prototypes and short runs protect the connectors with an industrial adhesive tape, e.g. Tesaband 4331 (www.tesa.de). Cover the underside of the connector moulding and the adjacent parts of the pcb as well as the open sides of the connector. This will prevent heat and gases of the soldering apparatus from damaging the connector. About 140 + 5 mm of the tape should suffice.
2) For large series a jig is recommended. Its protective cover with a fast action mechanical locking devie shields the connectors from gas and heat generated by the soldering apparatus. As an additional protection a foil can be used for covering the parts that should not be soldered.

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