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DIN-Signal harbus64-160FP-13,0C1-1

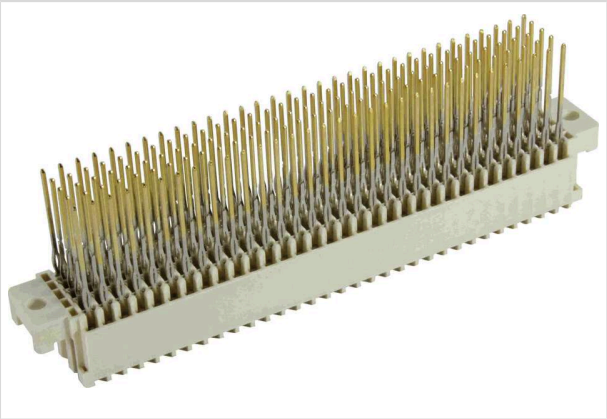


Image is for illustration purposes only. Please refer to product description.

Part number	02 02 160 1013
Specification	DIN-Signal harbus64-160FP-13,0C1-1
HARTING eCatalogue	https://harting.com/02021601013

Identification

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

Version

Termination method	Press-in termination
Connection type	Motherboard to daughtercard
Number of contacts	160
Contact configuration	Rows z, a, b, c, and d, positions 1, 2, ... , 31, 32
Termination length	13 mm
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	1 mm between 2 rows (a, b, c) 1.2 mm between 2 rows (z, d) 1 mm between 2 contacts in a row (a, b, c) 1 mm between 2 contacts in a row (z, d)

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Technical characteristics

Creepage distance	1 mm between 2 rows (a, b, c) 1.2 mm between 2 rows (z, d) 1 mm between 2 contacts in a row (a, b, c) 1 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	-40 ... +105 °C upper limiting temperature limited by the pcb
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)
PCB thickness	≥1.6 mm
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 Noble metal 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

Specifications and approvals

Specifications	IEC 61076-4-113

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Specifications and approvals

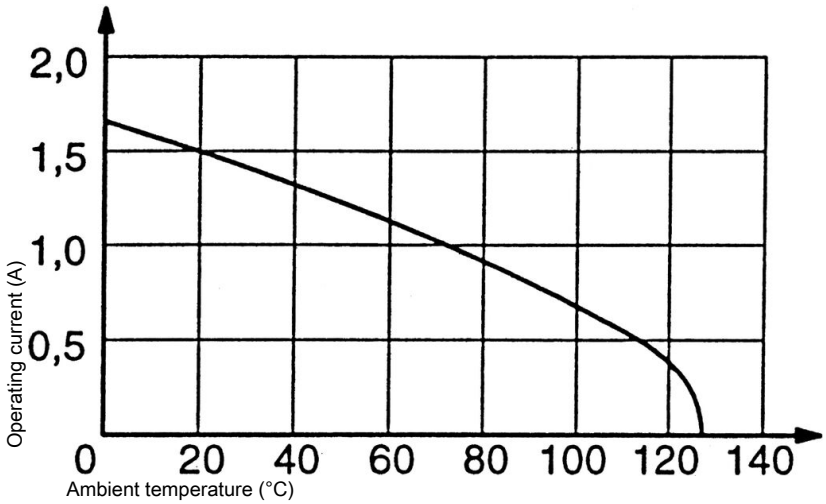
UL / CSA	UL 1977 ECBT2.E102079 CSA-C22.2 No. 182.3 ECBT8.E102079
Railway classification	F1/I2 acc. to NFF 16-101/102

Commercial data

Packaging size	20
Net weight	28.75 g
Country of origin	Germany
European customs tariff number	85366990
GTIN	5713140000124
eCl@ss	27460201 PCB connector (board connector)
ETIM	EC002637
UNSPSC 24.0	39121415

Current carrying capacity

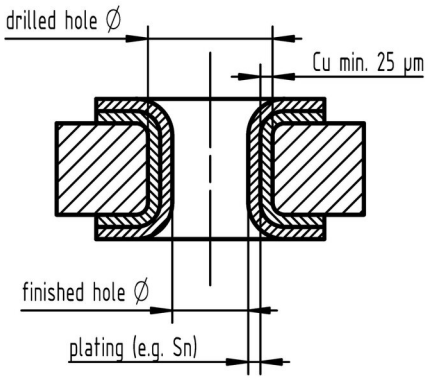
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.
Measuring and testing techniques acc. to IEC 60512-5-2



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Recommended configuration of plated through holes



Tin plated PCB (HAL) acc. to EN 60352-5	Drilled hole Ø	1,15±0,025 mm
	Sn	max. 15 µm
	plated hole Ø	0,94 – 1,09 mm
Chemical tin plated PCB	Drilled hole Ø	1,15±0,025 mm
	Sn	min. 0,8µm
	plated hole Ø	1,00 – 1,10 mm
Gold /Nickel plated PCB	Drilled hole Ø	1,15±0,025 mm
	Ni	3 – 7 µm
	Au	0,05 – 0,12 µm
	plated hole Ø	1,00 – 1,10 mm
Silver plated PCB	Drilled hole Ø	1,15±0,025 mm
	Ag	0,1 – 0,3 µm
	plated hole Ø	1,00 – 1,10 mm
Copper plated PCB (OSP)	Drilled hole Ø	1,15±0,025 mm
	plated hole Ø	1,00 – 1,10 mm

In addition to the hot-air-level (HAL) other pcb surfaces are getting more important. Due to their different properties, such as mechanical strength and coefficient of friction we recommend the above mentioned configuration of pcb through holes.

Assembly instructions

It is highly recommended to use HARTING press-in tools to ensure a reliable press-in process. Please refer to the catalogue for tools, machines and further information for the press-in process.

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