



har-bus® HM power female connector



General information

Design	OBSAI system specification V1.1	
No. of contacts	up to 4	
Contact spacing	3,0mm	
Test voltage	1500V AC	
Contact resistance	max. 1mOhm	
Insulation resistance	min. 10 ¹⁰ Ohm	
Working current	max. 23A at 70°C (with OBSAI configuration)	max. 20A at 70°C (fully loaded with power contacts)
Temperature range	-55°C ... +125°C	
Termination technology	press-in	
Clearance & creepage distance	0,6 mm each for free connector	
Insertion and withdrawal force	insertion force per contact: 4 N max.	withdrawal force per contact: 0,5 N min.
Mating cycles	- PL2 acc. to IEC 61076-4-101 =>	250 mating cycles
UL file	E102079	
RoHS - compliant	Yes	
Leadfree	Yes	

Insulator material

Material	PBT (thermoplastics, glass fiber reinforcement 30%)
Colour	RAL 7032 (grey)
UL classification	UL 94-V0
Material group acc. to IEC 60664-1	IIIa (175 ≤ CTI < 400)
NFF classification	I3, F4

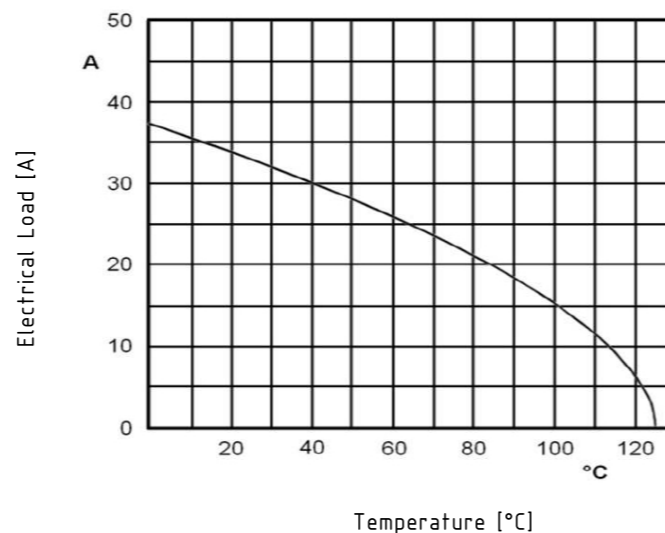
Contact material

Contact material	Copper alloy
Plating press-in zone	Ni
Plating contact zone	Au over Ni

Derating diagram acc. to IEC 60512-5 (Current carrying capacity)

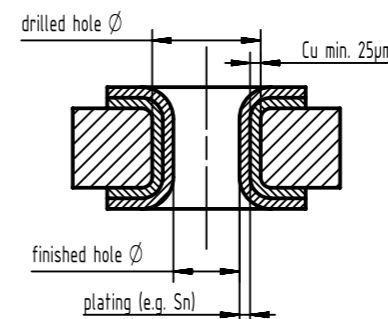
Loaded with four power contacts, each contact can carry up to 20A @ 70°C / 80% derating.

With a configuration of two power contacts, GND and ENA, the current carrying capacity is even up to 23A @ 70°C / 80% derating per contact.



Recommended configuration of plated through holes for press-in termination

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 following configuration of PCB through holes.



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

Assembly instructions

To press in correctly, use a flat upper tool, e.g. HARTING-tool 07790000156. The lower tool can be a customer manufactured loadnest.

All Dimensions in mm Original Size DIN A3		Scale 1:1	Free size tol.	Ref.	
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