Technical Data

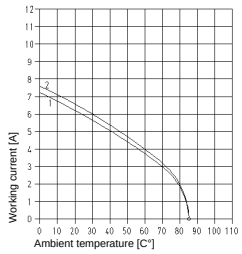
Specifications	IEC 60 352-4 IEC 60 947-5-2
Approval	

Construction type	***HARAX*® M8-S/M12-S**	***HARAX*® M12 angled**	***HARAX*® M12-L**	***HARAX*® M12-L** shielded, A-coded	***HARAX*® M12-L shielded** **Ethernet**	**Profibus**
Working voltage	32 V	32 V	50 V	32 V	32 V	32 V
Working current (see Derating-Diagram)	4 A	4 A	6 A	4 A	4 A	4 A
Conductor cross section	0.14 - 0.34 mm² AWG 26 - 22	0.25 - 0.5 mm² AWG 24/7 - 22	0.34 - 0.75 mm² AWG 22 - 18	0.25 - 0.34 mm² AWG 24 - 22	0.25 - 0.34 mm² AWG 24 - 22	0.25 - 0.34 mm² AWG 24 - 22
Diameter of individual strands	≥ 0.1 mm	≥ 0.1 mm	≥ 0.1 mm	≥ 0.1 mm	≥ 0.1 mm	≥ 0.1 mm
Conductor insulation material	PVC / PP	PVC	PVC	PVC	PVC	PVC
Conductor diameter	M8-S: 1.0 - 1.6 mm M12-S: 1.0 - 1.6 mm	1.2 - 1.6 mm	1.6 - 2.0 mm	1.2 - 1.6 mm	1.2 - 1.6 mm	2.0 - 2.6 mm
Cable diameter	M8-S: 3.2 - 5.4 mm M12-S: 4 - 5.1 mm	4 - 5.1 mm	5.5 - 8 mm	7 - 8.8 mm	5.5 - 7.2 mm	7 - 8.8 mm
Temperature limits	-25 °C / +85 °C	-25 °C / +85 °C	-25 °C / +85 °C	-25 °C / +85 °C	-25 °C / +85 °C	-25 °C / +85 °C
Temperature during termination	-5 °C / +50 °C	-5 °C / +50 °C	-5 °C / +50 °C	-5 °C / +50 °C	-5 °C / +50 °C	-5 °C / +50 °C
Degree of Protection	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67
Reconnection with the same cable cross section	10 times	10 times	10 times	10 times	10 times	10 times

Derating Diagram/ Current Carrying Capacity

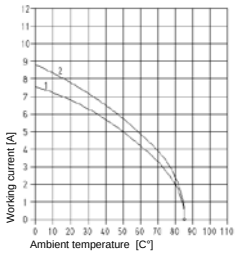
The current carrying capacity is limited by maximum temperature of materials for inserts and contact including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.
Control and test procedures in accordance with DIN IEC 60 512-3.

M8-S, 4 poles
M12-S, 4 poles
1 = wire gauge 0.25 mm²
2 = wire gauge 0.34 mm²

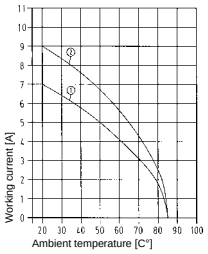


M12, 4 poles, angled

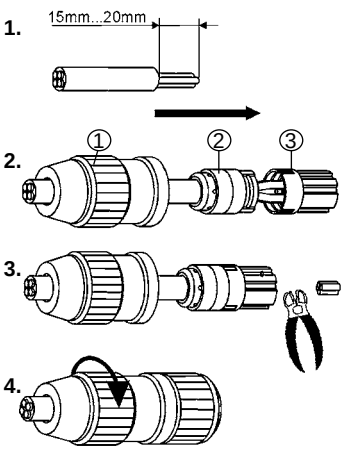
1 = wire gauge 0.25 mm²
2 = wire gauge 0.5 mm²



M12-L, 4 poles
M12-L, shielded
1 = wire gauge 0.34 mm²
2 = wire gauge 0.75 mm²



Assembly manual: *HARAX*®



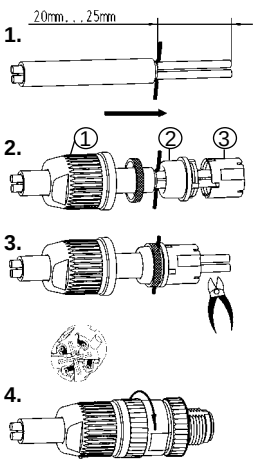
1. strip cable
2. assemble *HARAX*® elements
3. cut off cable ends
4. screw connector

① Nut
② Strain relief
③ Insert

Screw the nut onto the insert until a stop is noticeable.

Note! For reconnection cut off the used cable ends and repeat steps 1 to 4.

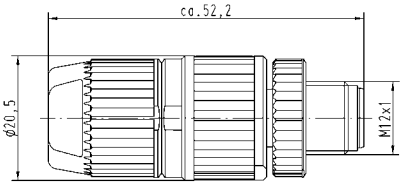
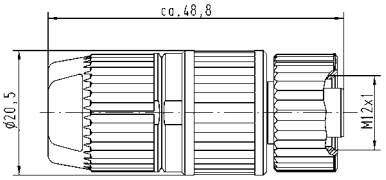
HARAX® shielded



1. strip cable
2. assemble *HARAX*® elements, twist screening braid and push it into the sealing slot
3. Slide ring over the sealing cut off cable ends and the screening braid.
4. Screw the connector
   ① Nut
   ② Strain relief
   ③ Insert

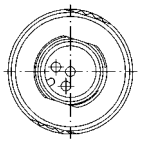
Note! For reconnection cut off the used cable ends and repeat steps 1 to 4.



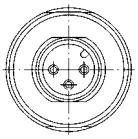

Identification	Part-Number Male contact (M)	Part-Number Female contact (F)	Drawing	Dimensions in mm
HARAX® M12-L				
straight version, 4 poles	21 03 212 1305			M
straight version, 3 poles	21 03 212 1400			
with first-mating contact				
straight version, 3 poles	21 03 212 1306			
				
straight version, 4 poles		21 03 212 2305		F
straight version, 3 poles		21 03 212 2400		
with first-mating contact				
straight version, 3 poles		21 03 212 2306		
				
HARAX® M12-L shielded				
PROFIBUS version, 3 poles	21 03 241 1300			
Ethernet version, 4 poles	21 03 281 1405			
A-coded, 4 poles	21 03 221 1405			
				
PROFIBUS version, 3 poles		21 03 241 2300		
Ethernet version, 4 poles		21 03 281 2405		
A-coded, 4 poles		21 03 221 2405		
				

View mating side, male:
HARAX® M12-L

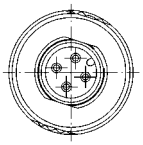
3 poles with first-mating contact



3 poles

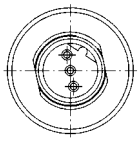


4 poles

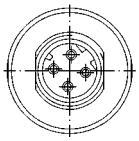


View mating side, male:
HARAX® M12-L shielded

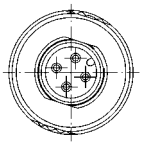
3 poles PROFIBUS B-coded



4 poles Ethernet D-coded

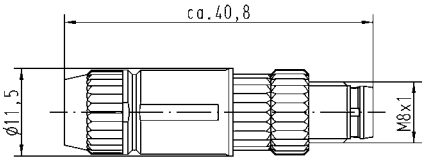
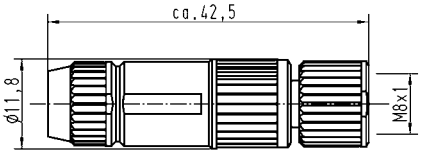
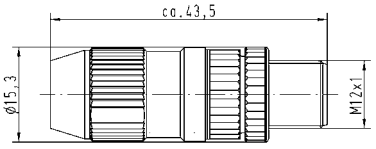
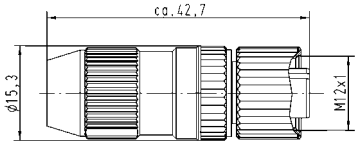
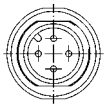
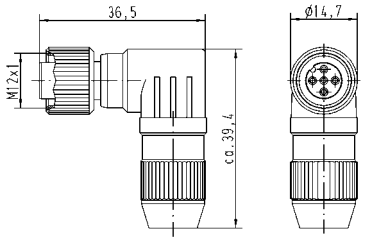
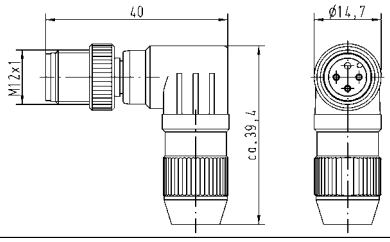


4 poles A-coded



HARAX® Circular Connectors



Identification	Part-Number Male contact (M)	Part-Number Female contact (F)	Drawing	Dimensions in mm
***HARAX*® M8-S**				
straight version, 3 poles	21 02 151 1305			
straight version, 4 poles	21 02 151 1405			
				
straight version, 3 poles		21 02 151 2305		
straight version, 4 poles		21 02 151 2405		
			View mating side: 3 poles, male 	View mating side: 4 poles, male 
***HARAX*® M12-S**				
straight version, 4 poles	21 03 111 1405			
				
straight version, 4 poles		21 03 111 2405		
			View mating side: 4 poles, male 	
***HARAX*® M12**			View mating side	
angled version, 3 poles	21 01 130 5081			
angled version, 4 poles	21 01 140 5081			
				
angled version, 3 poles		21 01 130 5091		
angled version, 4 poles		21 01 140 5091		
				

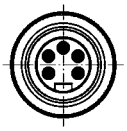
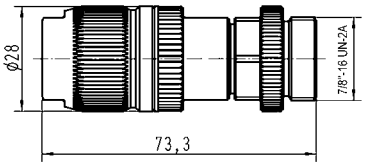
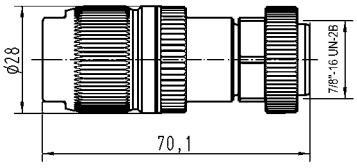
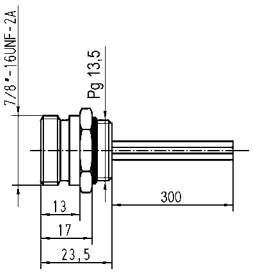
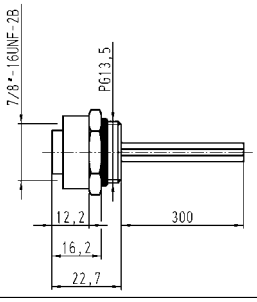
Han® 7/8“ Circular Connectors

New!

Rapid termination technology *HARAX*®

Technical Data

Number of contact	5
Rated voltage	230 V / 400 V
Rated impulse voltage	4 kV
Rated current	10 A
Wire gauge	0.75 - 1.5 mm² / AWG 18 - 16
Diameter of individual strands	≥ 0.2 mm
Wire insulation material	Polyvinylchloride
Wire diameter	≤ 2.8 mm
Cable diameter (black sealing)	6 - 9.5 mm
Cable diameter (grey sealing)	9 - 12.5 mm
Ambient temperature	-25 °C / +85 °C
Temperature during connection	-5 °C / +50 °C (please respect the cable manufacturer‘s recommendations)
Degree of protection	IP 65 / 67
Reconnection to the same wire gauge	10 times
Recomm. tightening torque mating side	1,5 Nm

Identification	Part-Number	Drawing	Dimensions in mm
HARAX® 7/8“ male 	21 04 116 1505	 	
HARAX® 7/8“ female 	21 04 116 2505	 	
Panel feed-through  Male Female	21 04 316 1505 21 04 316 2505	M  F 	

HARAX® M12-L, 5 pins

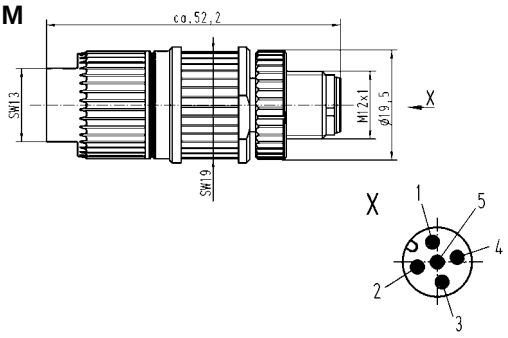
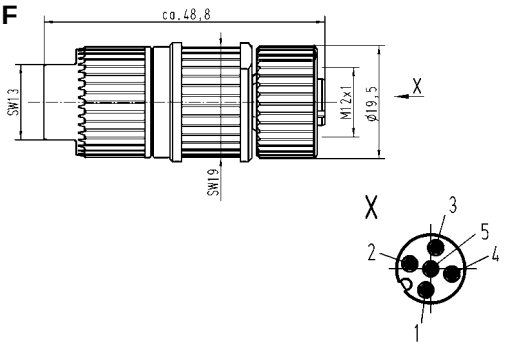
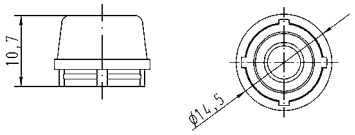
Rapid termination technology *HARAX*®

Features

- Easy handling
- Field terminatable
- Suitable for wire gauges up to 0.5 mm² / AWG 22
- Avaible for cable diameter up to 8 mm
- Suitable for bus cables with signal and power wires

Technical characteristics

Rated voltage	50 V
Rated current	3 A
Wire gauge	0.25 - 0.5 mm² AWG 24 - 20
Diameter of individual strands	≥ 0.1 mm
Wire insulation material	PVC
Wire diameter	1.2 - 2.0 mm
Cable diameter	5.5 - 8.0 mm
Temperature range	-25 °C / +85 °C
Temperature during termination	-5 °C / +50 °C
Protection degree	IP 65 / IP 67
Reconnection to the same wire gauge	10 times

Identification	Part-Number Male connector	Part-Number Female connector	Drawing	Dimensions in mm
HARAX® M12-L, 5 pins Wire gauge 0.25 - 0.34 mm² AWG 24 - AWG 22	21 03 271 1505	21 03 271 2505	**M** 	
Wire gauge 0.34 - 0.5 mm² AWG 22 - AWG 20	21 03 272 1505	21 03 272 2505	**F** 	
Seal M12-L 	21 01 010 2007			

Han® M12 Crimp

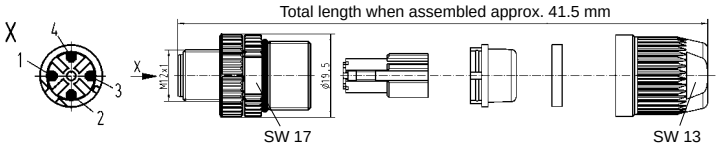
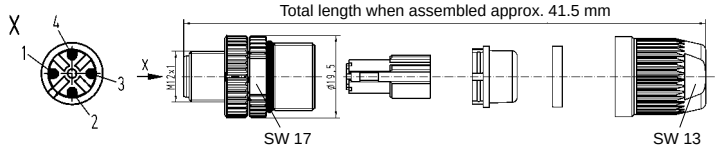
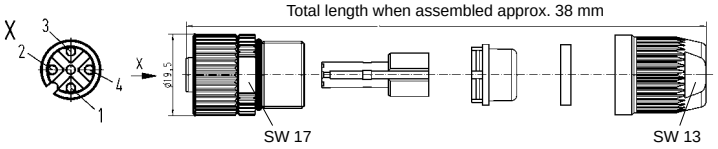
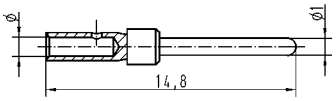
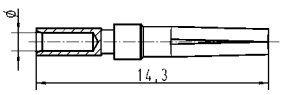
M12 Connector for Field Assembly

Features

- Short construction
- Compact design
- Easy and quick assembly

Technical characteristics

Number of contacts	4
Rated current	4 A
Rated voltage	32 V
Termination	Crimp termination
Wire gauge	AWG 22 - 20 0.34 - 0.5 mm²
Diameter of individual strands	2.0 - 2.3 mm
Wire diameter	7.0 - 8.8 mm
Flammability accd. to UL 94	V 0

Identification	Part-Number	Drawing	Dimensions in mm
Han® M12 Crimp			
male, D-coding	21 03 882 1405		
male, A-coding	21 03 812 1405		
female, A-coding	21 03 812 2405		
order crimp contacts separately			
Crimping tool	09 99 000 0501		
Locator	09 99 000 0502		
D-Sub contacts			
male, AWG 22	21 01 100 9012	ø 0.9	
male, AWG 20	21 01 100 9010	ø 1.12	
female, AWG 22	21 01 100 9013	ø 0.9	
female, AWG 20	21 01 100 9011	ø 1.12	