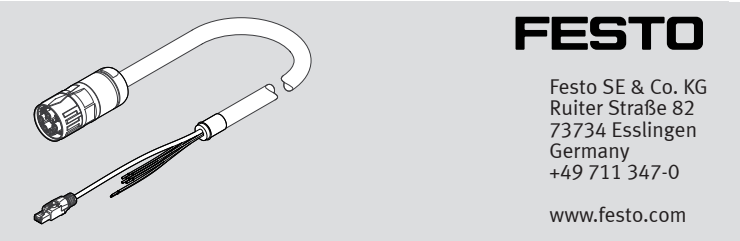


NEBM-M40G15-EH-...-Q...-R3LEG14
Motor cable



Assembly instructions

8188180
2023-04a
[8188182]



Translation of the original instructions
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1 Applicable documents

All available documents for the product -> www.festo.com/sp.

2 Safety

2.1 Safety instructions

- Before working on the product, switch off the power supply and secure it against being switched on again.

2.2 Intended use

The motor cable connects the servo motor EMMT-AS to the servo drive CMMT-AS.

3 Additional information

- Accessories -> www.festo.com/catalogue.

4 Product overview

4.1 Product design

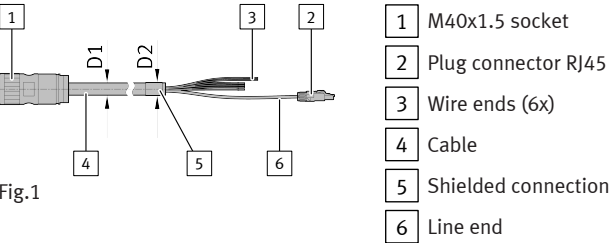


Fig.1

4.2 Contact assignment

Electrical connection 1 Field device side	Signal	Electrical connection 2 Controller side
1 Socket		3 Wire ends ¹⁾
	A	U
	B	V
	C	W
	D	Not assigned
	PE	Not assigned
	1	BR-
	2	Not assigned
	3	Not assigned
	4	BR+

1) Colour code in accordance with IEC 60757:2021-06
Tab. 1: Contact assignment for motor and brake

Electrical connection 1 Field device side	Signal	Electrical connection 2 Controller side
1 Socket		2 Plug connector
	5	Up
	6	0V
	7	DATA+
	8	DATA-
	9	CLK+
	10	CLK-

Tab. 2: Encoder contact assignment

5 Assembly

5.1 Mounting electrical connection 1

1. Align the socket 1 to fit the plug.
2. Connect the socket 1 to the plug and click into position.

5.2 Mounting electrical connection 2

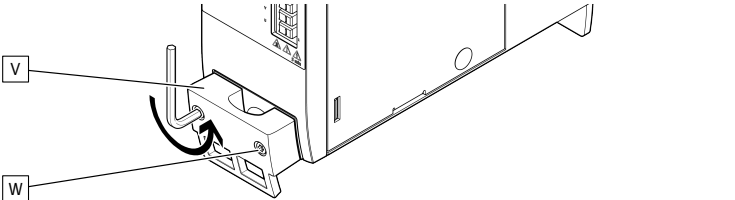


Fig.2

- Disconnect the shield clamp [V] from the servo drive.

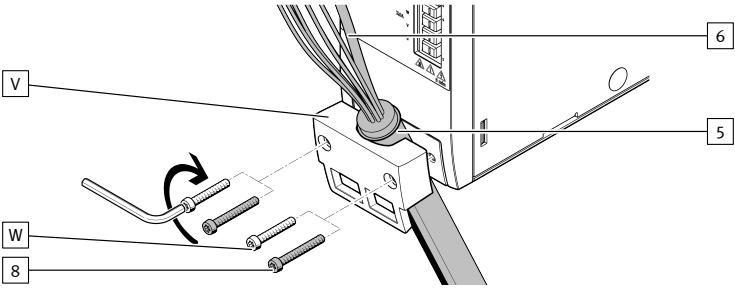


Fig.3

1. Select the right screws:
 - NEBM-M40G15-EH-...-Q11-R3LEG14: Screws [W], M4 x 25
 - NEBM-M40G15-EH-...-Q12-R3LEG14: Screws [8], M4 x 30 (2x in scope of delivery)
2. Fasten the shield connection [5] to the servo drive with the shield clamp [V] and the screws [8]/[W]. Tightening torque -> Operating instructions, servo drive CMMT-AS.
3. Connect the wire ends [3] in accordance with the contact assignment.
4. If necessary, lay the line end [6] in a loop and secure with cable binders to maintain the required distance from other components.
5. Align the plug [2] to match the socket.
6. Insert the plug [2] into the socket and click into place.

5.3 Strain relief for movable wiring

Electrical connection 1

NOTICE

Movements of the cable can cause malfunction and material damage. Push-in connector on the field device is damaged by transferred application of force.

- Ensure sufficient strain relief at a maximum 30 cm away from the socket.

Electrical connection 2

- Fix the cable in the area of the shield connection [5]. Force is not transferred to the insulated wires.

5.4 Wiring

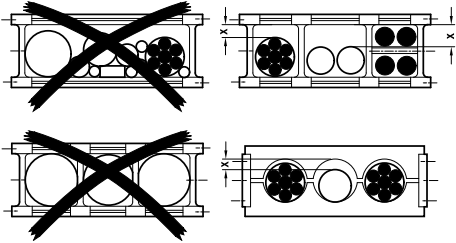
Feature	Cable characteristic	Wiring
-E	Suitable for energy chains	In energy chain or flexible

Tab. 3: Wiring

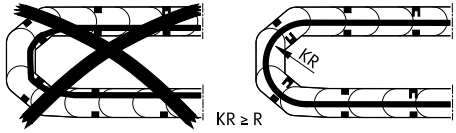
5.5 Mounting in energy chain

1. Lay out the energy chain lengthways.
2. Place the cables in the energy chain without twisting them.
3. Separate cables from each other using separators/drilled holes.
4. Do not bind cables in bundles.

5. Maintain space X. $X > 10\%$ of the cable diameter D.
With the energy chain hanging vertically: increase the space X.

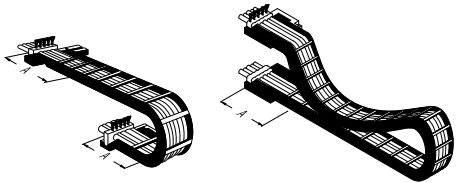


6. Align the energy chain in the working position:
- Make sure that the radius is greater than the bending radius R of the cables.
 - The cables can move freely in the bending radius KR of the energy chain.



↪ The cable movement is not forced by the energy chain.

7. Mount the energy chain → corresponding instruction manual.
8. Fasten the cables:
- for short energy chains with a length < 1 m at both ends of the energy chain
 - for long sliding energy chains with a length > 1 m at the driver end only
9. Do not move cables all the way to the fastening point.



↪ The mounting space A between the fastening point and bending movement is maintained.

NOTICE

Damage to cables if the chain breaks.

- Replace cables after a chain break.

NOTICE

Malfunction and material damage due to vertically suspended cables.

The cables stretch.

- Regularly check the length of the cables.
- Readjust the cables if required.

6 Technical data

NEBM-M40G15-EH-...-R3LEG14		-Q11	-Q12
Cable characteristic		Suitable for energy chains	
Cable function		3x motor cable	
Cable composition	[mm²]	4x4 + 1x (2x1.5) + 1x (2x0.24 + 2x 2x0.15)	4x6 + 1x (2x1.5) + 1x (2x0.24 + 2x 2x0.15)
Shielding		Shielded	
Cable diameter	D1 [mm]	16.4	18.7
Diameter of shield sleeve	D2 [mm]	approx. 17.6	approx. 19.9
Mounting space	A [mm]	≥ 350	≥ 400
Current rating at 40 °C	[A]	31.9	40
Surge resistance	[kV]	6	
Operating voltage range			
AC	U _B [V]	0 ... 630	
DC	U _B [V]	0 ... 850	
Bending radius			
Fixed cable installation	R [mm]	≥ 66.8	≥ 76
Flexible cable installation	R [mm]	≥ 125.3	≥ 142.5
Ambient temperature			
Fixed cable installation	[°C]	-40 ... +90	
Flexible cable installation	[°C]	-25 ... +80	
Material			
Cable sheath		TPE-U(PUR)	
Insulating sheath		PP	
Electrical connection 1			
Function		Field device side	
Connection type		Hybrid socket	
Connection technology		M40x1.5	
Type of mounting		Snap-locking	
Degree of protection In assembled state		IP67	
Electrical connection 2			
Function		Controller side	
Connection type		Plug connector and Cable	
Connection technology		RJ45 and Open end	
Wire ends		Wire end sleeve	
Degree of protection In assembled state		IP20	

Tab. 4: Technical data