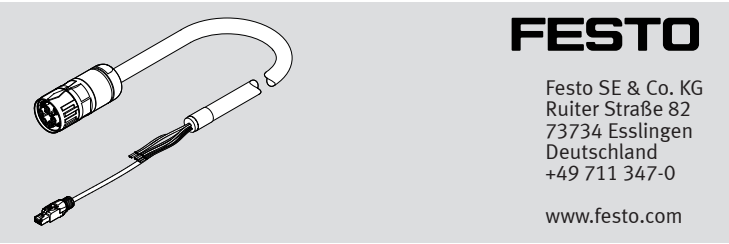


NEBM-M40G15-EH-...-R3LEG14
Motor cable



Assembly instructions

8165239
2021-12
[8165241]



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

- Work on the product may only be carried out by qualified personnel who can evaluate the work and detect dangers. The qualified personnel are trained in electrical engineering.
- Do not connect or disconnect plug connector when powered.
- Do not wire or disconnect an open cable end when powered.
- Only mount the product on components that are in a condition to be safely operated.

2.2 Intended use

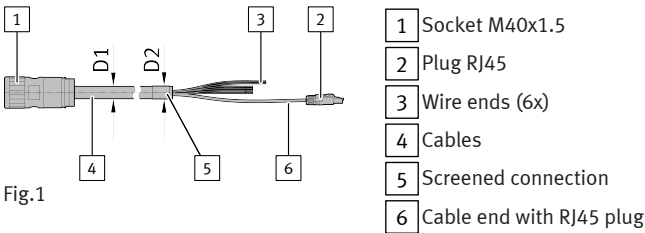
Connection of servo motor EMMT-AS to servo drive CMMT-AS.

3 Additional information

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

4 Structure

4.1 Product design



4.2 Contact assignment

Electrical connection 1 Field device side		Assignment/ signal	Electrical connection 2 Controller side
1 Socket	Pin		3 Wire ends <sup>1)</sup>
	A	U	BU
	B	V	BN
	C	W	BK
	D	not assigned	-
	PE	PE	GNYE
	1	BR-	BUWH
	2	not assigned	-
	3	not assigned	-
	4	BR+	GNWH

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

Electrical connection 1 Field device side		Assignment/ signal	Electrical connection 2 Controller side	
1 Socket	Pin		Pin	2 Plug connector
	5	Up	7	
	6	0V	8	
	7	DATA+	4	
	8	DATA-	5	
	9	CLK+	1	
	10	CLK-	2	

Tab. 2: Encoder contact assignment

5 Assembly

5.1 Mounting electrical connection 1

1. Align socket 1 to match plug.
2. Connect the socket 1 to the plug and click into place.

5.2 Mounting electrical connection 2

1. Fasten shield connection 5 to the servo drive CMMT-AS with a shield clamp.
2. Connect wire ends 3 in accordance with the contact assignment.
3. If necessary, lay the cable end 6 in a loop and secure with a cable binder to maintain the required distance from other components.
4. Align the plug 2 to match the socket.
5. Insert the plug 2 into the socket and click into place.

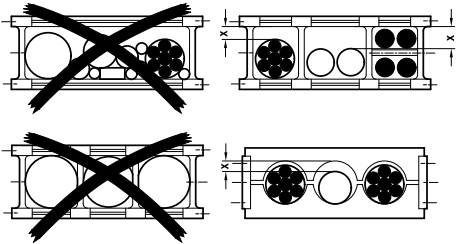
5.3 Wiring

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

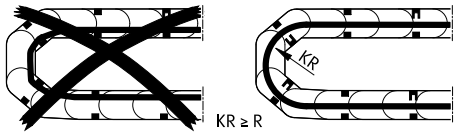
Tab. 3: Wiring

5.4 Mounting in energy chain

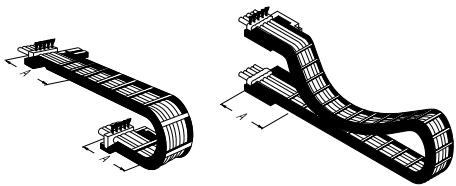
1. Lay out the energy chain lengthways.
2. Place the cables in the energy chain without twisting them.
3. Separate cables from each other using separators/drilled holes.
4. Do not bind cables in bundles.
5. Maintain space X. X > 10% of the cable diameter D. With the energy chain hanging vertically: increase 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-...		-Q11...-R3LEG14	-Q12...-R3LEG14
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 <sub>B</sub> [V]	0 ... 630	
DC	U <sub>B</sub> [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		IP67 In assembled state	
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		IP20 In assembled state	

Tab. 4: Technical data