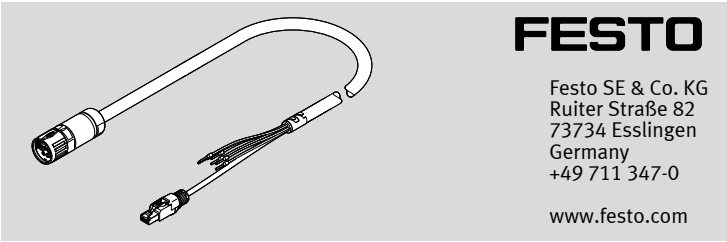


NEBM-M23G15-EH-...-R3LEG14
Motor cable



Assembly instructions

8144909
2020-10b
[8144911]
CE



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

- 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.
- Assembly and installation should only be carried out by qualified personnel. These personnel have electrical training or a relevant qualification.

2.2 Intended use

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

3 Additional information

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

4 Configuration

4.1 Product design

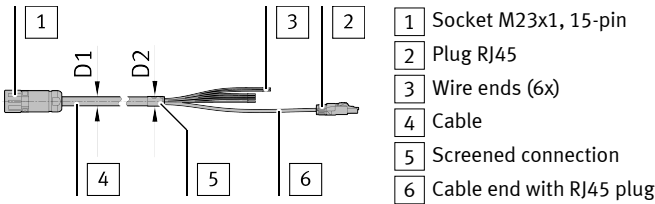


Fig. 1

4.2 Contact assignment

Electrical connection 1 Field device side		Assignment/ signal	Electrical connection 2 Controller side
1 Socket	Pin		3 Wire ends Wire colour¹)
	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 60757:1983-01

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 of electrical connection 1

1. Align socket 1 to match plug.
2. Connect socket 1 to the plug.
3. Tighten the screw-type lock of the socket 1. Tightening torque: 1.2 Nm ± 10%

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 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 screening connection 5.
No force may be transferred to the cables.

5.4 Wiring

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

Tab. 3 Wiring

5.5 Mounting in energy chain

1. Lay the chain out lengthwise.
2. Place the cables on the chain, making sure they are not twisted.
3. Separate cables from each other using separators/drilled holes.
4. Do not connect cables together.

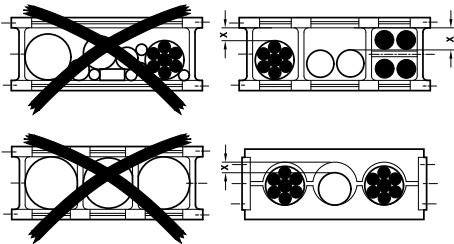


Fig. 2

5. Maintain space X. X > 10% of the cable diameter D.
If the chain is suspended vertically: increase space X.

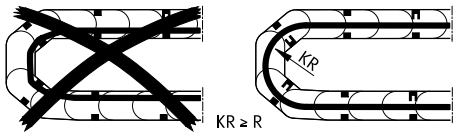


Fig. 3

6. Align chain in the operating position:
 - Make sure that the radius is greater than the bending radius R of the cables.
 - Cables can move freely in the bending radius KR of the energy chain.
 - Cables are not forced through the chain.
7. Mount the energy chain -> corresponding instructions.

8. Fasten cables:
- with short energy chains (length < 1 m) at both ends of the chain
 - with long sliding energy chains (length > 1 m) only at the driver end

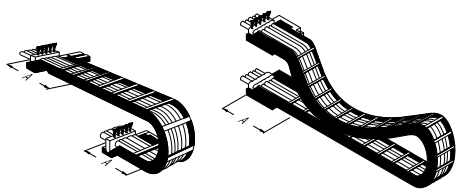


Fig. 4

9. Do not move cables all the way to the fastening point.
- ☞ 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-M23G15-EH-...-		Q7...- R3LEG14	Q9...- R3LEG14	Q10...- R3LEG14
Cable characteristic		Suitable for energy chains		
Cable composition	[mm²]	4x0.75 + 1x (2x0.75) + 1x (2x0.24 + 2x 2x0.15)	4x1.5 + 1x (2x0.75) + 1x (2x0.24 + 2x 2x0.15)	4x2.5 + 1x (2x1.0) + 1x (2x0.24 + 2x 2x0.15)
Shielding		Shielded		
Cable diameter	D1 [mm]	12	12.8	13.9
Diameter of shield sleeve	D2 [mm]	Approx. 13.2	Approx. 14	Approx. 15
Mounting space	A [mm]	≥ 250	≥ 250	≥ 300
Current rating at 40 °C	[A]	11.7	17.8	23.7
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]	≥ 48	≥ 51.2	≥ 55.6
Flexible cable installation	R [mm]	≥ 90	≥ 96	≥ 97.3
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		M23x1		
Type of mounting		Screw-type lock		
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		

Tab. 4 Technical data