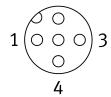
## Connecting cable NEBA-M12G5-U-5-N-LE3

**FESTO** 

Part number: 8078237





## **Data sheet**

EN 61984 Certification cUL us - Listed (QL) Intended use The connecting cable connects field devices (sensors, actuators) with controllers. Certificate issuing authority UL E253748 Cable designation Without label holder Contact durability 100 Product weight 102 g Application note Meets the requirements of IEC 61010-1 and 61010-2-202, in particula for electrically operated valves from Festo. Only energy-limited circuits with a maximum current of 4 A at a max, open circuit voltage of 30 VDC are permitted to be used for supplying electrically actuated valves from Festo. Electrical connection 1, function Field device end Electrical connection 1, connection type Socket Electrical connection 1, connection type Socket Electrical connection 1, connection technology M12x1 A-coded as per EN 61076-2-101 Electrical connection 1, number of pins/wires 5 Electrical connection 1, type of mounting Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable grown-rotatable screw lock Electrical connection 1, terminal allocation Pin 1 = BN Pin 3 = BU Pin 4 = BK Electrical connection 2, function Control side Electrical connection 2, function Control side Electrical connection 2, connection type Cable	Feature	Value
The connecting cable connects field devices (sensors, actuators) with controllers.  Certificate issuing authority  Certificate issuing authority  UL E253748  Cable designation  Without label holder  Contact durability  100  Product weight  Application note  Meets the requirements of IEC 61010-1 and 61010-2-202, in particula for electrically operated valves from Festo. Only energy-limited circuits with a maximum current of 4 A at a max. open circuit voltage of 30 VDC are permitted to be used for supplying electrically actuated valves from Festo.  Electrical connection 1, function  Electrical connection 1, connection type  Electrical connection 1, connection type  Electrical connection 1, connection technology  M12x1 A-coded as per EN 61076-2-101  Electrical connection 1, number of pins/wires  Electrical connection 1, occupied pins/wires  5  Electrical connection 1, occupied pins/wires  5  Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 2, function  Electrical connection 2, connection type  Electrical connection 2, connection type  Electrical connection 2, connection type  Cable  Electrical connection 2, connection technology  Open end	Conforms to standard	
controllers.  Certificate issuing authority  UL E253748  Cable designation  Without label holder  Contact durability  100  Product weight  Application note  Meets the requirements of IEC 61010-1 and 61010-2-202, in particula for electrically operated valves from Festo. Only energy-limited circuits with a maximum current of 4 A at a max. open circuit voltage of 30 VDC are permitted to be used for supplying electrically actuated valves from Festo.  Electrical connection 1, function  Electrical connection 1, design  Electrical connection 1, connection type  Electrical connection 1, cable outlet  Electrical connection 1, connection technology  M12x1 A-coded as per EN 61076-2-101  Electrical connection 1, number of pins/wires  Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 1, display  without  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Electrical connection 2, connection technology  Open end	Certification	c UL us - Listed (OL)
Cable designation  Contact durability  Product weight  Application note  Application	Intended use	` ' '
Application note Product weight Application note Applicat	Certificate issuing authority	UL E253748
Application note Applic	Cable designation	Without label holder
Application note  Meets the requirements of IEC 61010-1 and 61010-2-202, in particula for electrically operated valves from Festo. Only energy-limited circuits with a maximum current of 4 A at a max. open circuit voltage of 30 VDC are permitted to be used for supplying electrically actuated valves from Festo.  Electrical connection 1, function  Electrical connection 1, design  Round  Electrical connection 1, connection type  Electrical connection 1, connection type  Electrical connection 1, connection technology  M12x1 A-coded as per EN 61076-2-101  Electrical connection 1, number of pins/wires  Electrical connection 1, occupied pins/wires  Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Electrical connection 2, connection technology  Open end	Contact durability	100
for electrically operated valves from Festo. Only energy-limited circuits with a maximum current of 4 A at a max open circuit voltage of 30 VDC are permitted to be used for supplying electrically actuated valves from Festo.  Electrical connection 1, function Electrical connection 1, design Round Electrical connection 1, connection type Electrical connection 1, connection type Electrical connection 1, connection technology M12x1 A-coded as per EN 61076-2-101 Electrical connection 1, number of pins/wires Electrical connection 1, occupied pins/wires Electrical connection 1, type of mounting Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock Electrical connection 1, terminal allocation Pin 1 = BN Pin 3 = BU Pin 4 = BK Electrical connection 2, function Electrical connection 2, connection type Electrical connection 2, connection type Electrical connection 2, connection type Electrical connection 2, connection technology Open end	Product weight	102 g
Electrical connection 1, design  Electrical connection 1, connection type  Electrical connection 1, cable outlet  Electrical connection 1, cable outlet  Electrical connection 1, connection technology  M12x1 A-coded as per EN 61076-2-101  Electrical connection 1, number of pins/wires  5  Electrical connection 1, occupied pins/wires  3  Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 1, display  without  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Cable  Electrical connection 2, connection technology  Open end	Application note	Only energy-limited circuits with a maximum current of 4 A at a max. open circuit voltage of 30 VDC are permitted to be used for supplying
Electrical connection 1, connection type  Electrical connection 1, cable outlet  Electrical connection 1, connection technology  M12x1 A-coded as per EN 61076-2-101  Electrical connection 1, number of pins/wires  5  Electrical connection 1, occupied pins/wires  3  Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Electrical connection 2, connection type  Electrical connection 2, connection technology  Open end	Electrical connection 1, function	Field device end
Electrical connection 1, cable outlet  Electrical connection 1, connection technology  M12x1 A-coded as per EN 61076-2-101  Electrical connection 1, number of pins/wires  5  Electrical connection 1, occupied pins/wires  3  Electrical connection 1, type of mounting  Compatible with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Electrical connection 2, connection technology  Open end	Electrical connection 1, design	Round
Electrical connection 1, connection technology  Electrical connection 1, number of pins/wires  Electrical connection 1, occupied pins/wires  Electrical connection 1, type of mounting  Electrical connection 1, type of mounting  Electrical connection 1, terminal allocation  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 2, function  Electrical connection 2, connection type  Electrical connection 2, connection technology  Open end	Electrical connection 1, connection type	Socket
Electrical connection 1, number of pins/wires  Electrical connection 1, occupied pins/wires  Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 1, display  without  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Electrical connection 2, connection type  Cable  Electrical connection 2, connection technology  Open end	Electrical connection 1, cable outlet	Straight
Electrical connection 1, occupied pins/wires  Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 1, display  without  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Electrical connection 2, connection technology  Open end	Electrical connection 1, connection technology	M12x1 A-coded as per EN 61076-2-101
Electrical connection 1, type of mounting  Screw-type lock with hexagon AF13 and vertical knurling rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 1, display  without  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Cable  Electrical connection 2, connection technology  Open end	Electrical connection 1, number of pins/wires	5
rotatable Compatible with rotatable/non-rotatable screw lock  Electrical connection 1, terminal allocation  Pin 1 = BN Pin 3 = BU Pin 4 = BK  Electrical connection 1, display  without  Electrical connection 2, function  Control side  Electrical connection 2, connection type  Electrical connection 2, connection type  Open end	Electrical connection 1, occupied pins/wires	3
Pin 3 = BU Pin 4 = BK  Electrical connection 1, display without  Electrical connection 2, function Control side  Electrical connection 2, connection type Cable  Electrical connection 2, connection technology Open end	Electrical connection 1, type of mounting	rotatable
Electrical connection 2, function  Control side  Electrical connection 2, connection type  Cable  Electrical connection 2, connection technology  Open end	Electrical connection 1, terminal allocation	Pin 3 = BU
Electrical connection 2, connection type  Cable  Open end	Electrical connection 1, display	without
Electrical connection 2, connection technology Open end	Electrical connection 2, function	Control side
	Electrical connection 2, connection type	Cable
Electrical connection 2, number of pins/wires 3	Electrical connection 2, connection technology	Open end
	Electrical connection 2, number of pins/wires	3

Feature	Value
Electrical connection 2, occupied pins/wires	3
Electrical connection 2, terminal allocation	Pin 1 = BN Pin 3 = BU Pin 4 = BK
Electrical connection 2, display	without
DC operating voltage range	0 V250 V
Note on operating voltage range DC	0 - 30 V for UL applications NEC/CEC CLASS 2
Operating voltage range AC	0 V250 V
Note on operating voltage range AC	0 - 30 V for UL applications NEC/CEC CLASS 2
Current rating at 40° C	4 A
Surge resistance	2.5 kV
Cable length	5 m
Cable characteristic	Suitable for energy chains/robot applications abrasion-resistant low adhesion Flame-retardant and self-extinguishing
Connector cable test conditions	Test conditions on request Torsion resistance: > 300,000 cycles, ±270°/0.1 m Flexural strength: > 50000 cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 28 mm
Note on connector cable test conditions	tested at 23 °C
Bending radius, fixed cable installation	12 mm
Bending radius, flexible cable installation	39 mm
Cable diameter	3.8 mm
Cable design	3 x 0.25 mm <sup>2</sup>
Nominal conductor cross section	0.25 mm²
Wire ends	Stripped Cut off bluntly
Degree of protection	IP65 IP68 IP69K
Special features	UV-resistant hydrolysis resistant Resistant to cooling lubricants Resistant to microbes Oil-resistant Ozone-resistant
Use in exterior area	Locations of use with direct outdoor climatic exposure Class D1 based on IEC 60654-1
Ambient temperature	-40 °C85 °C
Note on ambient temperature	-40 - 50 °C for UL applications
Ambient temperature with flexible cable installation	-20 °C85 °C
Note on ambient temperature with flexible cable installation	-20 - 50 °C for UL applications
Storage temperature	-25 °C55 °C
Note on storage temperature	short-term for transport in packaging -40 85 °C
Relative air humidity	Max. 93% at 40 °C
Nominal altitude of use above sea level	<= 2000 m NHN
Overvoltage category	II
CE marking (see declaration of conformity)	As per EU low voltage directive As per EU RoHS directive
UKCA marking (see declaration of conformity)	To UK RoHS instructions To UK instructions for electrical equipment
LABS (PWIS) conformity	VDMA24364-B2-L
Suitability for the production of Li-ion batteries	Product corresponds to Festo's internal product definition for use in battery production: Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils

Feature	Value
Cleanroom class	Class 4 according to ISO 14644-1
Note on materials	CFC-free RoHS-compliant Cadmium-free Halogen-free Free of phosphoric acid ester
Contamination level	3
Corrosion resistance class (CRC)	1 - Low corrosion stress
Material of cable sheath	TPE-U(PUR)
Color cable sheath	Gray
Housing material	TPE-U(PUR)
Housing colour	Black
Material of screw-type lock	Die-cast zinc, nickel-plated
Seals material	FPM
Material of pin contacts	Copper alloy, gold-plated
Insulating sheath material	PP