Connecting cable NEBA-M8G4-U-0.5-N-M8G4 Part number: 8078293

FESTO



General operating condition

Data sheet

Feature	Value
Conforms to standard	EN 61076-2-104 EN 61984
Certification	c UL us - Listed (OL)
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	20 g
Application note	Meets the requirements of IEC 61010-1 and 61010-2-202, in particular 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, design	Round
Electrical connection 1, connection type	Socket
Electrical connection 1, cable outlet	Straight
Electrical connection 1, connection technology	M8x1 A-coded as per EN 61076-2-104
Electrical connection 1, number of pins/wires	4
Electrical connection 1, occupied pins/wires	4
Electrical connection 1, type of mounting	Screw-type lock with hexagon AF 9 and longitudinal knurl rotatable
Electrical connection 1, type of mounting	Compatible with rotatable/non-rotatable screw lock
Electrical connection for input 1, connection pattern	00991872
Electrical connection 1, terminal allocation	Pin 1 = BN Pin 2 = WH Pin 3 = BU Pin 4 = BK
Electrical connection 1, display	without
Electrical connection 2, function	Control side
Electrical connection 2, design	Round
Electrical connection 2, connection type	Plug
Electrical connection 2, cable outlet	Straight
Electrical connection 2, connection technology	M8x1 A-coded as per EN 61076-2-104
Electrical connection 2, number of pins/wires	4
Electrical connection 2, occupied pins/wires	4
Electrical connection 2, type of mounting	Screw-type lock with hexagon AF 9 and longitudinal knurl rotatable

Electrical connection 2, connection pattern Pin 1 = 0 N	Feature	Value
Electrical connection 2, terminal allocation Pin 1 – BN Pin 3 – BU Pin 4 – BK Pin 4 – BK Pin 3 – BU Pin 4 – BK Pin 5 – BK Pin 5 – BK Pin 5 – BK Pin 5 – BK Pin 6 – BK Pin 6 – BK	Electrical connection 2, type of mounting	Compatible with rotatable/non-rotatable screw lock
Pin 2 = WH Pin 3 = 8U Pin 4 = BK Pin 5 = BK Pin 5 = BK Pin 6 =	Electrical connection 2, connection pattern	00991171
OC operating voltage range DC O - 30 V for UL applications Operating voltage range DC O - 30 V for UL applications Operating voltage range AC O - 30 V for UL applications Operating voltage range AC O - 30 V for UL applications Occurrent rating at 40°C 4 A Current rating at 40°C A - 30 V for UL applications Occurrent rating at 40°C A - 30 V for UL applications Occurrent rating at 40°C A - 30 V for UL applications Occurrent rating at 40°C A - 30 V for UL applications Occurrent rating at 40°C A - 30 V for UL applications Occurrent rating at 40°C A - 30 V for UL applications Occurrent rating at 40°C A - 30 V for UL applications Occurrent rating at 40°C A - 30 V for UL applications Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range AC A - 40 V resistant Occurrent rating voltage range voltage rating	Electrical connection 2, terminal allocation	Pin 2 = WH Pin 3 = BU
Note on operating voltage range DC Operating voltage range AC Current rating at 40° C Surge resistance OPERATING voltage range AC OPERATING voltage voltage range AC OPERATING voltage voltag	Electrical connection 2, display	without
Operating voltage range AC OV 48 V Note on operating voltage range AC O . 30 V for UL applications Cable length O.5 m Cable length O.5 m Cable length Connector cable test conditions Flame-retardant and self-extinguishing Flame-retardant a	DC operating voltage range	0 V 60 V
Note on operating voltage range AC Current rating at 40° C Surge resistance Cable length O. 5 m Suitable for energy chains/robot applications Abassion resistant low adhesion Flame-retardant and self-extinguishing Test conditions on request Test conditions on request Test conditions on request Fest conditions on sequest Fest conditions o	Note on operating voltage range DC	0 - 30 V for UL applications
Current rating at 40°C Surge resistance 1.5 kV Cable characteristic 3.5 kV Cable characteristic 3.5 witable for energy chains/robot applications 3.6 abacison-resistant 3.6 was diseason 1.5 kV Cable characteristic 3.5 witable for energy chains/robot applications 3.6 abacison-resistant 3.6 was diseason 1.6 extra conditions 4.6 extra conditions 4.7 extra conditions 5. extra conditions 5. extra conditions 6. extra conditions 6	Operating voltage range AC	0 V 48 V
Surge resistance 1.5 kV Cable length 0.5 m Cable characteristic	Note on operating voltage range AC	0 - 30 V for UL applications
Cable length Cable characteristic Suitable for energy chains/robot applications abrasion-resistant low adhesion Fame-restardant and self-extinguishing Connector cable test conditions Test conditions on request Torsional resistance: > 300 000 cycles, e.270°/0.1 m Bending fatigue strength: > 50000 cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 5 mm Energy chain > 5 million 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 21 mm Rending radius, fixed cable installation 24 mm Cable daiser 4.5 mm Cable daiser 4.5 mm Cable daiser 4.5 mm Cable daiser 4.7 mm Note and degree of protection 1P65 1P68 1P68 1P68 1P68 Note on degree of protection In mounted state UV-resistant hydrolysis resistant hydrolysis resistant necoling lubricants Resistant to corolling lubricants Resistant to microbes Olli resistant of protection on 1EC 666654 million of use with direct outdoor climatic exposure Class D1 based on 1EC 666654 million on 1EC 6666	Current rating at 40° C	4 A
Cable characteristic Suitable for energy chains/robot applications abrasion-resistant low adhesion from the properties of the properties	Surge resistance	1.5 kV
abarasion-resistant low adhesion Flame-retardant and self-extinguishing Test conditions on request Torsional resistance: 300 000 cycles, 2270°/0.1 m Bending fatigue strength: \$0000 cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 5 mm Energy chain > 5 million 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, Reable dable installation 214 mm Bending radius, Reable dable installation 246 mm Cable design 4, 8, 0.25 mm² A, 0.25 mm² Note on degree of protection Ple6s Ple68 Ple68 Ple68 Ple69 Note on degree of protection In mounted state Uv-resistant Pydrolysis resistant Resistant to cooling lubricants Resistant to microbes Oil-resistant Quane-resistant Use in exterior area Locations of use with direct outdoor climatic exposure Class D1 based onlice 60654-1 Ambient temperature Ao 50 °C for UL applications Note on ambient temperature with flexible cable installation 2-0°C · 85°C Note on ambient temperature with flexible cable installation 2-0°C · 85°C Note on ambient temperature Storage temperature Storage temperature Short-term for transport in packaging -40 85°C Note on ambient temperature Relative air humidity Max. 93% at 40°C Emarking (see declaration of conformity) Fig. 10 Lapplications Note on Storage temperature Short-term for transport in packaging -40 85°C Note on MINN Uccervoltage category Il CE marking (see declaration of conformity) Fig. 10 Lapplications are nickel by mass are excluded from use, Exceptions are nickel by mass are excluded from use, Exceptions are nickel by mass are excluded from use, Exceptions are nickel plug connectors and colis And Colis Parking (see declaration of cl-ion batteries	Cable length	0.5 m
Note on connector cable test conditions Energy chain > 5 million cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 5 mm Energy chain > 5 million cycles, bending radius 28 mm Energy chain > 5 million cycles, bedterical plug connectors and colls Energy chain > 5 million cycles, each of mm Energy chain > 5 million cycles, each of mm Energy chain > 5 million cycles, each of crute bands, cables, electrical plug connectors and colls	Cable characteristic	abrasion-resistant low adhesion Flame-retardant and self-extinguishing
Bending radius, fixed cable installation	Connector cable test conditions	Torsional resistance: > 300 000 cycles, ±270°/0.1 m Bending fatigue strength: > 50000 cycles, bending radius 5 mm
Bending radius, flexible cable installation As 6 mm (As 7 mm (As 9 mm As 2.5 mm² As 2.5 mm² Degree of protection Degree of protection Degree of protection In mounted state UV-resistant hydrolysis resistant Resistant to cooling lubricants Resistant to cooling lubricants Resistant to cooling lubricants Resistant to microbes Oil-resistant Ozone-resistant Use in exterior area Use in exterior area Use in exterior area Locations of use with direct outdoor climatic exposure Class D1 based on EEC 60654-1 Ambient temperature 40 °C 85 °C Note on ambient temperature with flexible cable installation 7-20 °C 85 °C Note on ambient temperature with flexible cable installation 20 °C 85 °C Note on ambient temperature with flexible cable installation 20 °C 85 °C Note on storage temperature 40 °C 85 °C Note on storage temperature 40 °C 85 °C Note on shorage temperature 40 °C 85 °C Note on storage temperature 40 °C 85 °C Note on sto	Note on connector cable test conditions	tested at 23 °C
Cable design 4 x 0.25 mm² Nominal conductor cross section Degree of protection Pe8 Pe8 Pe9K Note on degree of protection Note on degree of protection In mounted state 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 Au - 50 °C for UL applications Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on storage temperature Note on storage temperature Note on storage temperature Short-term for transport in packaging -40 85 °C Relative air humidity Max. 93% at 40 °C Relative air humidity Max. 93% at 40 °C -2000 m NHN Overvoltage category II Extra marking (see declaration of conformity) LABS (PWIS) conformity VDMA24364-82-L Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Bending radius, fixed cable installation	≥14 mm
Av 0.25 mm² Nominal conductor cross section Degree of protection IP65 IP68 IP69K Note on degree of protection In mounted state UV-resistant hydrolysis resistant Resistant to cooling lubricants Resistant to cooling lubricants Resistant to microbes Oil-resistant Ozone-resistant Ozo	Bending radius, flexible cable installation	≥46 mm
Nominal conductor cross section Degree of protection Degree of protection Degree of protection In mounted state Uv-resistant hydrolysis resistant Resistant to cooling lubricants Resistant to microbes Oil-resistant Ozone-resistant Ozo	Cable diameter	4.5 mm
Degree of protection P65 P68 P68 P69K Note on degree of protection In mounted state UV-resistant hydrolysis resistant Resistant to cooling lubricants Resistant to cooling lubricants Resistant to microbes Oil-resistant Qzone-resistant Qzone	Cable design	4 x 0.25 mm ²
IP68 IP69K IP69K IP69K Note on degree of protection In mounted state UV-resistant hydrolysis resistant Resistant to cooling lubricants Resistant to microbes Oil-resistant Dozations of use with direct outdoor climatic exposure Class D1 based on IEC 60654-1 Ambient temperature -40 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on storage temperature with flexible cable installation -20 °C 85 °C Note on storage temperature with flexible cable installation -20 °C 85 °C Note on storage temperature -25 °C 55 °C Note on storage temperature -25 °C 55 °C Note on storage temperature -25 °C 95 °C Note on storage te	Nominal conductor cross section	0.25 mm ²
UV-resistant hydrolysis resistant Resistant to cooling lubricants Resistant to microbes Oil-resistant Ozone-resistant Use in exterior area Use in exterior area Locations of use with direct outdoor climatic exposure Class D1 based on IEC 60654-1 Ambient temperature -40 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on storage temperature -25 °C 55 °C Note on storage temperature short-term for transport in packaging -40 85 °C Relative air humidity Max. 93% at 40 °C Relative air humidity Max. 93% at 40 °C (= 2000 m NHN Overvoltage category II CE marking (see declaration of conformity) As per EU ROHS directive UKCA marking (see declaration of conformity) To UK ROHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Degree of protection	IP68
hydrolysis resistant Resistant to cooling lubricants Resistant to cooling librohes Nourcobs LEAS °C LOS °C os of or C of or UL applications -20 °C 85 °C -20 °C of or UL applications -20 °C 85 °C -20 °C or UL applications -20 °C 85 °C -20 °C or UL applications -20 °C 85 °C -20 °C or UL applications -20 °C 85 °C -20 °C or UL applications -20 °C 85 °C -20 °C 85 °C -20 °C or UL applications -20 °C 85 °C -	Note on degree of protection	In mounted state
on IEC 60654-1 Ambient temperature -40 °C 85 °C Note on ambient temperature -40 · 50 °C for UL applications Note derating Ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 · 50 °C for UL applications Storage temperature -25 °C 55 °C Note on storage temperature short-term for transport in packaging -40 85 °C Relative air humidity Max. 93% at 40 °C «= 2000 m NHN Overvoltage category II CE marking (see declaration of conformity) As per EU RoHS directive UKCA marking (see declaration of conformity) To UK RoHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Special features	hydrolysis resistant Resistant to cooling lubricants Resistant to microbes Oil-resistant
Note on ambient temperature -40 - 50 °C for UL applications Note derating Ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on storage temperature -25 °C 55 °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 RoHS directive UKCA marking (see declaration of conformity) To UK RoHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Use in exterior area	· ·
Ambient temperature with flexible cable installation -20 °C 85 °C Note on ambient temperature with flexible cable installation -20 °C 85 °C Note on storage temperature -25 °C 55 °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 RoHS directive UKCA marking (see declaration of conformity) To UK RoHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Ambient temperature	-40 °C 85 °C
Note on ambient temperature with flexible cable installation -20 - 50 °C for UL applications Storage temperature -25 °C 55 °C Note on storage temperature short-term for transport in packaging -40 85 °C Relative air humidity Max. 93% at 40 °C (= 2000 m NHN Overvoltage category II CE marking (see declaration of conformity) As per EU RoHS directive UKCA marking (see declaration of conformity) To UK RoHS instructions LABS (PWIS) conformity VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Note on ambient temperature	Note derating
Storage temperature -25 °C 55 °C Note on storage temperature short-term for transport in packaging -40 85 °C Relative air humidity Max. 93% at 40 °C (= 2000 m NHN Overvoltage category II CE marking (see declaration of conformity) MSC marking (see declaration of conformity) LABS (PWIS) conformity To UK ROHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Ambient temperature with flexible cable installation	-20 °C 85 °C
Note on storage temperature Relative air humidity Max. 93% at 40 °C Kelative air humidity II CE marking (see declaration of conformity) Max. 93% at 40 °C Kelative air humidity II CE marking (see declaration of conformity) Max. 93% at 40 °C Kelative air humidity II CE marking (see declaration of conformity) Max. 93% at 40 °C Kelative air humidity As per EU RoHS directive To UK RoHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Note on ambient temperature with flexible cable installation	-20 - 50 °C for UL applications
Relative air humidity Max. 93% at 40 °C Vominal altitude of use above sea level CE marking (see declaration of conformity) UKCA marking (see declaration of conformity) LABS (PWIS) conformity VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Storage temperature	-25 °C 55 °C
Nominal altitude of use above sea level CE marking (see declaration of conformity) UKCA marking (see declaration of conformity) LABS (PWIS) conformity VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Note on storage temperature	short-term for transport in packaging -40 85 °C
Overvoltage category CE marking (see declaration of conformity) As per EU RoHS directive UKCA marking (see declaration of conformity) To UK RoHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Relative air humidity	Max. 93% at 40 °C
CE marking (see declaration of conformity) As per EU RoHS directive To UK RoHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Nominal altitude of use above sea level	<= 2000 m NHN
UKCA marking (see declaration of conformity) To UK RoHS instructions VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	Overvoltage category	II
LABS (PWIS) conformity VDMA24364-B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	CE marking (see declaration of conformity)	As per EU RoHS directive
Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	UKCA marking (see declaration of conformity)	To UK RoHS instructions
are excluded from use. Exceptions are nickel in steel, chemically nickel- plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	LABS (PWIS) conformity	VDMA24364-B2-L
Cleanroom class Class 4 according to ISO 14644-1	Suitability for the production of Li-ion batteries	are excluded from use. Exceptions are nickel in steel, chemically nickel- plated surfaces, printed circuit boards, cables, electrical plug connectors
	Cleanroom class	Class 4 according to ISO 14644-1

Feature	Value
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