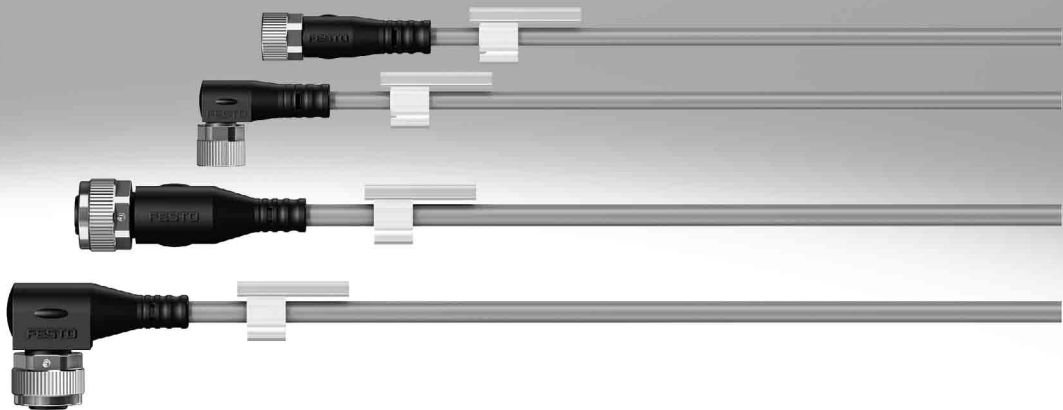


Connecting cables



Connecting cables

Key features

FESTO

Cable properties

The cable properties indicate the resistance of the connecting cable to the mechanical load.

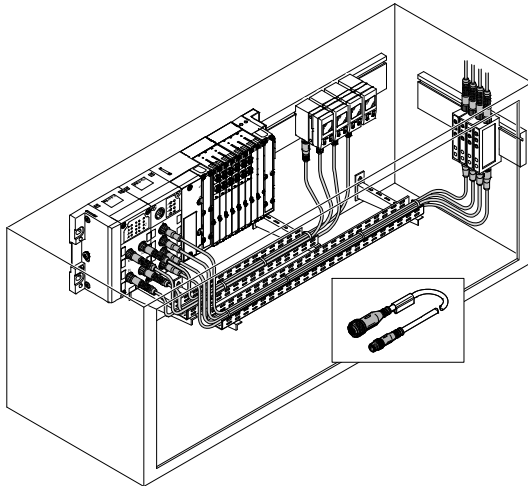
There are four qualities:

- For static applications
- Standard
- Suitable for energy chains
- Suitable for robot applications

The connecting cables NEBB are simple lines with a PVC cable sheath.

Connecting cables NEBB match the cable properties for static applications.

Cable properties for static applications



Static applications are characterised by fixed cable installation with no mechanical loads.

The connecting cable is not constantly moving (kinked or twisted).

The cable sheath for the connecting cables is usually made of PVC.

Connection technology version

The version of the plug connectors on the connecting cable (e.g. angled or straight) can be selected.

Connecting cables

Product range overview



Function	Version	Type	Connection technology (Electrical connection 2)	Cable properties	Length	→ Page/ Internet
Electrical connecting cable	Electrical connection 1 socket M8					
	3-pin	NEBB-M8G3 NEBB-M8W3	Open cable end	For static applications	2.5 m 5 m 10 m	5
	4-pin	NEBB-M8G4 NEBB-M8W4	Open cable end	For static applications	2.5 m 5 m 10 m	8
	Electrical connection 1 socket M12					
	5-pin	NEBB-M12G5 NEBB-M12W5	Open cable end	For static applications	2.5 m 5 m 10 m	11

Connecting cables

Type codes

FESTO

		NEBB	-				-	P	-		-	LE	
--	--	------	---	--	--	--	---	---	---	--	---	----	--

Function	
NEBB	Connecting cable

Connection technology, on the left	
M8	Socket with connecting thread M8
M12	Socket with connecting thread M12

Connection technology version, on the left	
G	Straight
W	Angled

Number of pins/wires (on the left)	
3	3-pin
4	4-pin
5	5-pin

Cable properties	
P	Basic

Cable length	
2.5	2.5 m
5	5 m
10	10 m

Connection technology, on the right	
LE	Open cable end

Number of pins/wires (on the right)	
3	3-wire
4	4-wire
5	5-wire

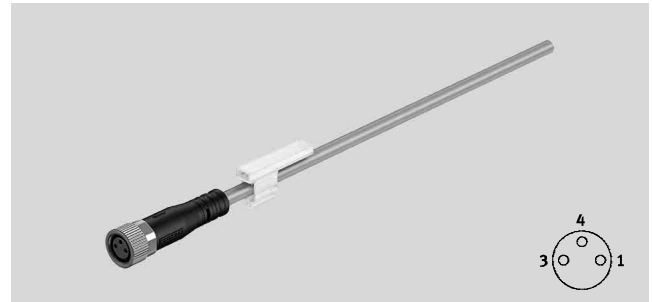
Connecting cables M8x1, 3-pin

Technical data

FESTO

Connecting cable NEBB-M8

- Connecting cable for connecting sensors and actuators
- Pre-assembled
- Cable lengths: 2.5 m, 5 m and 10 m
- 3 wires
- M8



General technical data	
Conforms to	Wire colours and connection numbers to EN 60947-5-2 EN 61076-2-104
Cable identification	With inscription label holder
Degree of protection	IP65, IP68, IP69K
Note on degree of protection	In mounted state

Technical data – Electrical connection 1	
Function	Field device side
Design	Round
Connection type	Socket
Cable outlet	Straight, angled
Connection technology	M8x1, A-coded to EN 61076-2-104
Number of pins/wires	3
Assigned pins/wires	3
Type of mounting	Screw lock with A/F9

Technical data – Electrical		
Operating voltage range	[V DC]	0 ... 60
	[V AC]	0 ... 60
Surge resistance	[kV]	1.5
Current rating at 40 °C	[A]	4

Technical data – Cables	
Cable properties	For static applications
Cable test conditions	Test conditions on request
Bending radius, fixed cable installation	[mm] ≥12
Cable diameter	[mm] 3.8
Cable design	[mm ²] 3 x 0.25
Nominal conductor cross section	[mm ²] 0.25

Technical data – Electrical connection 2	
Function	Controller side
Connection type	Cable
Connection technology	Open end
Number of pins/wires	3
Assigned pins/wires	3
Wire ends	Sheath removed, cut off bluntly

Connecting cables M8x1, 3-pin

FESTO

Technical data

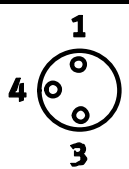
Materials	
Housing	TPE-U(PU)
Housing colour	Black
Cable sheath	PVC
Cable sheath colour	Grey
Insulating sheath	PVC
Screw lock	Nickel-plated brass
Seals	NBR
Pin contacts	Gold-plated copper base alloy
Note on materials	RoHS compliant
	Free of copper and PTFE

Operating and environmental conditions	
Ambient temperature [°C]	-25 ... +70
Corrosion resistance class CRC ¹⁾	2
CE marking (see declaration of conformity) ²⁾	To EU Low Voltage Directive
Contamination level	3

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

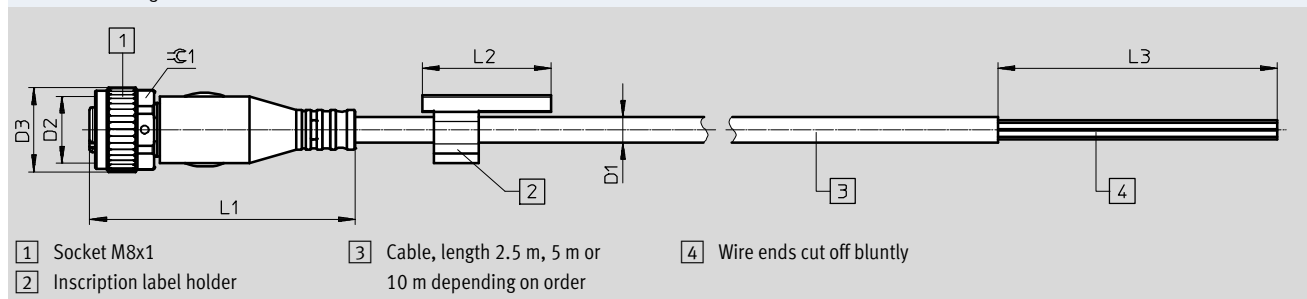
2) Additional information www.festo.com/sp → Certificates.

Circuitry (socket view)				
Electrical connection 1	Pin	Wire colour ¹⁾	Pin	Electrical connection 2
	1	BN	-	-
	3	BU	-	
	4	BK	-	

1) To IEC 757

Dimensions Download CAD data → www.festo.com

Cable outlet straight



Type	D1 Ø	D2	D3 Ø	L1	L2	L3	≈ 1
NEBB-M8G3	3.8	M8x1	10	34.6	23	50	9

Connecting cables M8x1, 3-pin

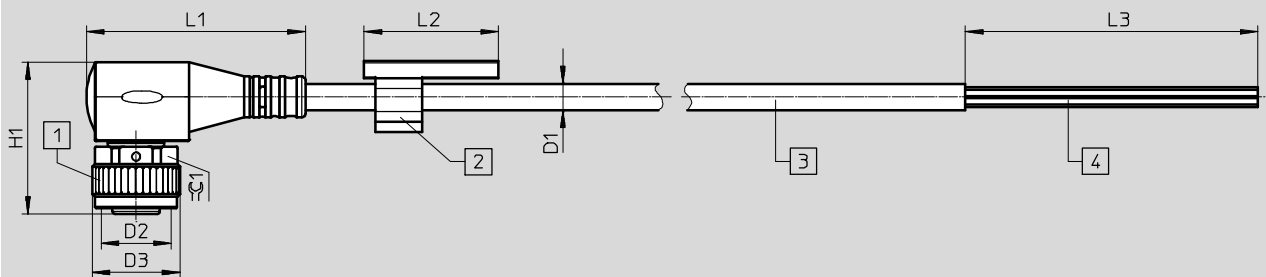
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

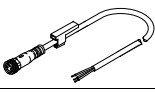
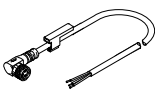
Cable outlet angled



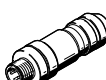
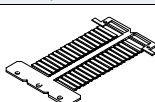
- 1 Socket M8x1
2 Inscription label holder
3 Cable, length 2.5 m, 5 m or 10 m depending on order
4 Wire ends cut off bluntly

Type	D1 Ø	D2	D3 Ø	H1	L1	L2	L3	±1
NEBB-M8W3	3.8	M8x1	10	17	26.9	23	50	9

Ordering data

		Cable length [m]	Part No.	Type
Open cable end, 3-wire				
	Cable outlet straight	2.5	8066658	NEBB-M8G3-P-2.5-LE3
		5	8066659	NEBB-M8G3-P-5-LE3
		10	8066660	NEBB-M8G3-P-10-LE3
	Cable outlet angled	2.5	8066664	NEBB-M8W3-P-2.5-LE3
		5	8066665	NEBB-M8W3-P-5-LE3
		10	8066666	NEBB-M8W3-P-10-LE3

Ordering data – Accessories

Designation		Part No.	Type
Plug connectors			
	Plug connectors for self-assembly	–	➔ Internet: necu
		–	➔ Internet: sea
Inscription labels			
	Inscription labels 23 mm for inscription label holder, 34 pieces, in frames	541598	ASLR-L-423

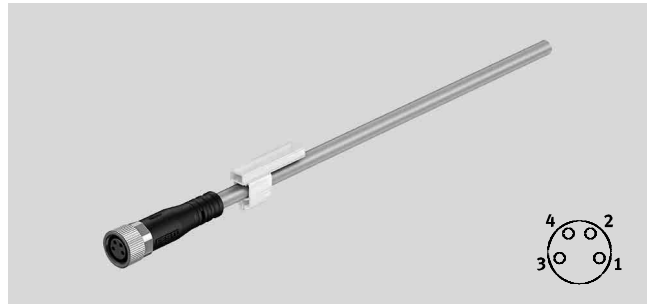
Connecting cables M8x1, 4-pin

Technical data

FESTO

Connecting cable NEBB-M8

- Connecting cable for connecting sensors and actuators
- Pre-assembled
- Cable lengths: 2.5 m, 5 m and 10 m
- 4 wires
- M8



General technical data	
Conforms to	Wire colours and connection numbers to EN 60947-5-2 EN 61076-2-104
Cable identification	With inscription label holder
Degree of protection	IP65, IP68, IP69K
Note on degree of protection	In mounted state

Technical data – Electrical connection 1	
Function	Field device side
Design	Round
Connection type	Socket
Cable outlet	Straight, angled
Connection technology	M8x1, A-coded to EN 61076-2-104
Number of pins/wires	4
Assigned pins/wires	4
Type of mounting	Screw lock with A/F9

Technical data – Electrical		
Operating voltage range	[V DC]	0 ... 30
	[V AC]	0 ... 30
Surge resistance	[kV]	0.8
Current rating at 40 °C	[A]	4

Technical data – Cables		
Cable properties	For static applications	
Cable test conditions	Test conditions on request	
Bending radius, fixed cable installation	[mm]	≥14
Cable diameter	[mm]	4.5
Cable design	[mm ²]	4 x 0.25
Nominal conductor cross section	[mm ²]	0.25

Technical data – Electrical connection 2	
Function	Controller side
Connection type	Cable
Connection technology	Open end
Number of pins/wires	4
Assigned pins/wires	4
Wire ends	Sheath removed, cut off bluntly

Connecting cables M8x1, 4-pin

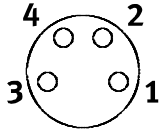
FESTO

Technical data

Materials	
Housing	TPE-U(PU)
Housing colour	Black
Cable sheath	PVC
Cable sheath colour	Grey
Insulating sheath	PVC
Screw lock	Nickel-plated brass
Seals	NBR
Pin contacts	Gold-plated copper base alloy
Note on materials	RoHS compliant
	Free of copper and PTFE

Operating and environmental conditions	
Ambient temperature [°C]	-25 ... +70
Corrosion resistance class CRC ¹⁾	2
Contamination level	3

- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Circuitry (socket view)				
Socket	Pin	Wire colour ¹⁾	Pin	Plug connector
Electrical connection, socket, 4-pin, M8 – open cable end				
	1	BN	–	–
	2	WH	–	
	3	BU	–	
	4	BK	–	

- 1) To IEC 757

Dimensions

Download CAD data → www.festo.com

Cable outlet straight

Technical drawing of a cable outlet assembly. The drawing shows a side view of the assembly with various dimensions and callouts. The dimensions are: L1 (length of the outlet body), L2 (length of the inscription label holder), L3 (length of the cable), D1 (diameter of the cable), D2 (diameter of the outlet body), and D3 (diameter of the outlet body). The callouts are: 1 (Socket M8x1), 2 (Inscription label holder), 3 (Cable, length 2.5 m, 5 m or 10 m depending on order), and 4 (Wire ends cut off bluntly). The drawing also shows a 90-degree angle symbol at the top left of the outlet body.

1 Socket M8x1

2 Inscription label holder

3 Cable, length 2.5 m, 5 m or
10 m depending on order

4 Wire ends cut off bluntly

Type	D1 Ø	D2	D3 Ø	L1	L2	L3	≈ 1
NEBB-M8G4	4.5	M8x1	10	34.6	23	50	9

Connecting cables M8x1, 4-pin

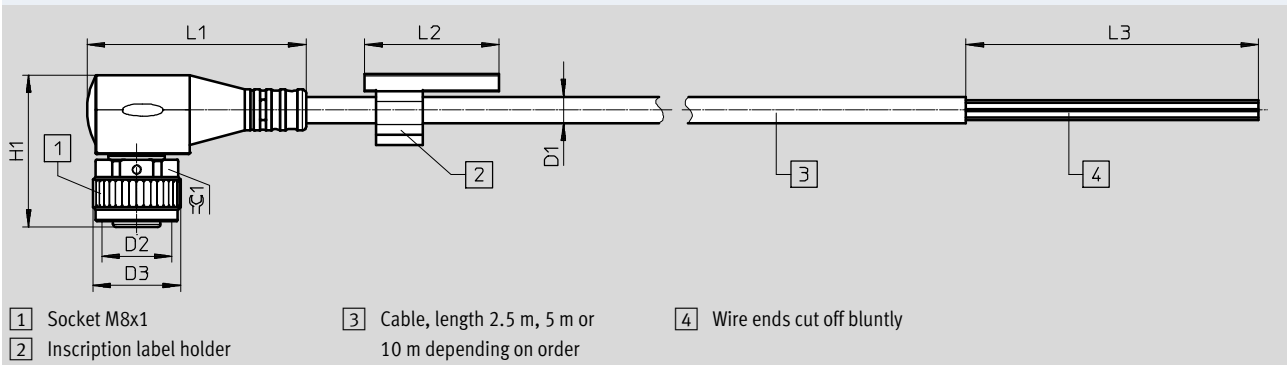
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

Cable outlet angled

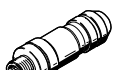
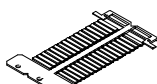


Type	D1 Ø	D2	D3 Ø	H1	L1	L2	L3	± 1
NEBB-M8W4	4.5	M8x1	10	17	26.9	23	50	9

Ordering data

		Cable length [m]	Part No.	Type
Open cable end, 4-wire				
	Cable outlet straight	2.5	8066661	NEBB-M8G4-P-2.5-LE4
		5	8066662	NEBB-M8G4-P-5-LE4
		10	8066663	NEBB-M8G4-P-10-LE4
	Cable outlet angled	2.5	8066667	NEBB-M8W4-P-2.5-LE4
		5	8066668	NEBB-M8W4-P-5-LE4
		10	8066669	NEBB-M8W4-P-10-LE4

Ordering data – Accessories

Designation		Part No.	Type
Plug connectors			
	Plug connectors for self-assembly	–	➔ Internet: necu
		–	➔ Internet: sea
Inscription labels			
	Inscription labels 23 mm for inscription label holder, 34 pieces, in frames	541598	ASLR-L-423

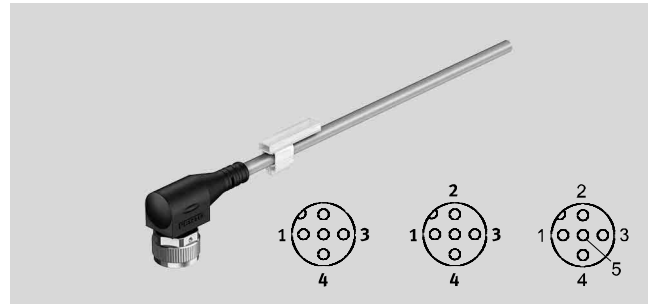
Connecting cables M12x1, 5-pin

Technical data

FESTO

Connecting cable NEBB-M12

- Connecting cable for connecting sensors and actuators
- Pre-assembled
- Cable lengths: 2.5 m, 5 m and 10 m
- 3, 4 or 5 wires
- M12x1, 5-pin



General technical data	
Conforms to	Wire colours and connection numbers to EN 60947-5-2 EN 61076-2-101
Cable identification	With inscription label holder
Degree of protection	IP65, IP68, IP69K
Note on degree of protection	In mounted state

Technical data – Electrical connection 1			
Function	Field device side		
Design	Round		
Connection type	Socket		
Cable outlet	Straight, angled		
Connection technology	M12x1, A-coded, to EN 61076-2-101		
Number of pins/wires	5		
Assigned pins/wires	3	4	5
Type of mounting	Screw lock with A/F13		

Technical data – Electrical			
Assigned pins/wires	3	4	5
Operating voltage range	[V DC]	0 ... 250	0 ... 250
	[V AC]	0 ... 250	0 ... 250
Surge resistance	[kV]	2.5	2.5
Current rating at 40 °C	[A]	4	4

Technical data – Cables			
Assigned pins/wires	3	4	5
Cable properties	For static applications		
Cable test conditions	Test conditions on request		
Bending radius, fixed cable installation	[mm]	≥12	≥14
Cable diameter	[mm]	3.8	4.5
Cable design	[mm ²]	3 x 0.25	4 x 0.25
Nominal conductor cross section	[mm ²]	0.25	0.25

Technical data – Electrical connection 2			
Assigned pins/wires	3	4	5
Function	Controller side		
Connection type	Cable		
Connection technology	Open end		
Number of pins/wires	3	4	5
Assigned pins/wires	3	4	5
Wire ends	Sheath removed, cut off bluntly		

Connecting cables M12x1, 5-pin

FESTO

Technical data

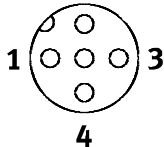
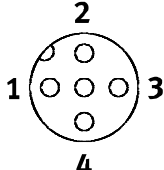
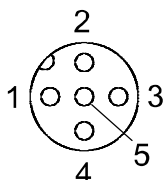
Materials	
Housing	TPE-U(PU)
Housing colour	Black
Cable sheath	PVC
Cable sheath colour	Grey
Insulating sheath	PVC
Screw lock	Nickel-plated brass
Seals	NBR
Pin contacts	Gold-plated copper base alloy
Note on materials	RoHS compliant
	Free of copper and PTFE

Operating and environmental conditions	
Ambient temperature [°C]	-25 ... +70
Corrosion resistance class CRC ¹⁾	2
CE marking (see declaration of conformity) ²⁾	To EU Low Voltage Directive
Contamination level	3

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Additional information www.festo.com/sp → Certificates.

Circuitry (socket view)				
Electrical connection 1	Pin	Wire colour ¹⁾	Pin	Electrical connection 2
Electrical connection 2: open cable end, 3-wire				
	1	BN	–	–
	3	BU	–	
	4	BK	–	
Electrical connection 2: open cable end, 4-wire				
	1	BN	–	–
	2	WH	–	
	3	BU	–	
	4	BK	–	
Electrical connection 2: open cable end, 5-wire				
	1	BN	–	–
	2	WH	–	
	3	BU	–	
	4	BK	–	
	5	GY	–	

1) To IEC 757

Connecting cables M12x1, 5-pin

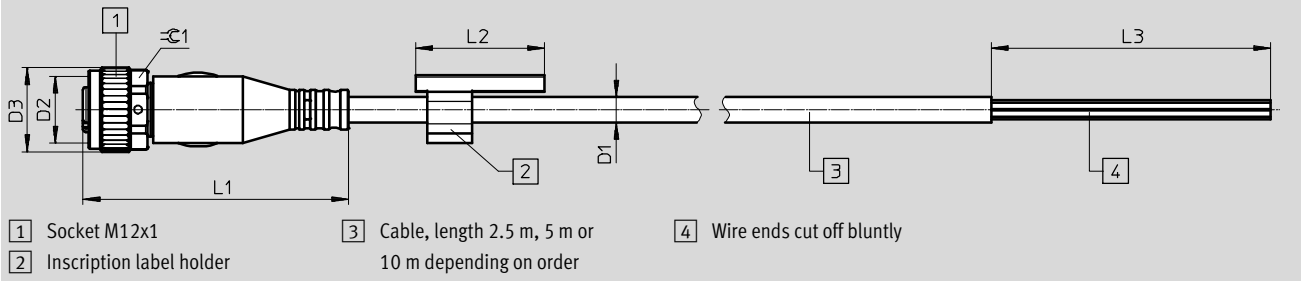
Technical data

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Dimensions

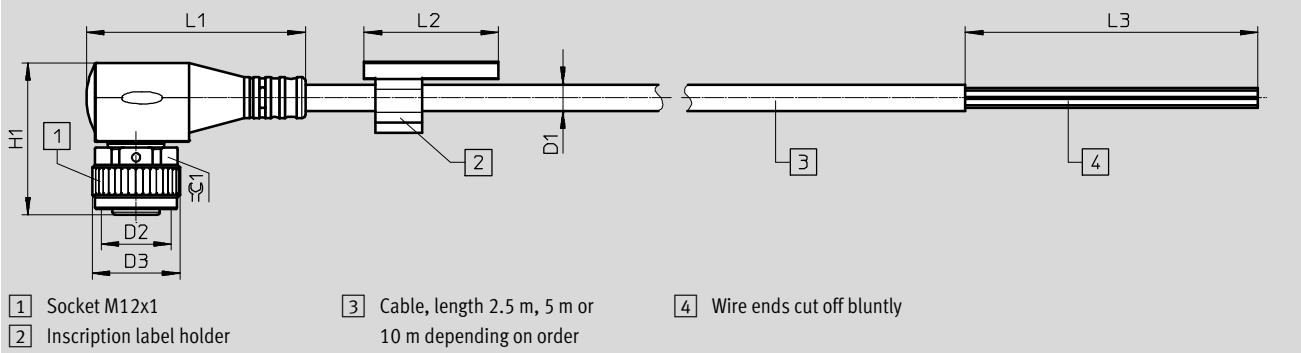
Download CAD data → www.festo.com

Cable outlet straight



Type	D1 Ø	D2	D3 Ø	L1	L2	L3	± 1
NEBB-M12G5-...-LE3	3.8	M12x1	15	47.5	23	50	13
NEBB-M12G5-...-LE4	4.5	M12x1	15	47.5	23	50	13
NEBB-M12G5-...-LE5	4.5	M12x1	15	47.5	23	50	13

Cable outlet angled

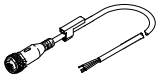
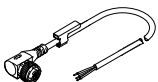
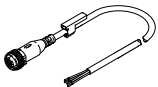
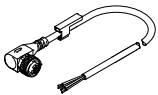
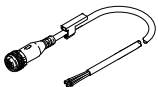
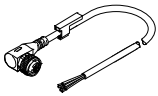


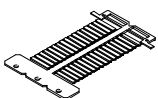
Type	D1 Ø	D2	D3 Ø	H1	L1	L2	L3	± 1
NEBB-M12W5-...-LE3	3.8	M12x1	15	26	37.5	23	50	13
NEBB-M12W5-...-LE4	4.5	M12x1	15	26	37.5	23	50	13
NEBB-M12W5-...-LE5	4.5	M12x1	15	26	37.5	23	50	13

Connecting cables M12x1, 5-pin

Technical data

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Ordering data				
		Cable length [m]	Part No.	Type
Open cable end, 3-wire				
	Cable outlet straight	2.5	8066670	NEBB-M12G5-P-2.5-LE3
		5	8066671	NEBB-M12G5-P-5-LE3
		10	8066672	NEBB-M12G5-P-10-LE3
	Cable outlet angled	2.5	8066679	NEBB-M12W5-P-2.5-LE3
		5	8066680	NEBB-M12W5-P-5-LE3
		10	8066681	NEBB-M12W5-P-10-LE3
Open cable end, 4-wire				
	Cable outlet straight	2.5	8066673	NEBB-M12G5-P-2.5-LE4
		5	8066674	NEBB-M12G5-P-5-LE4
		10	8066675	NEBB-M12G5-P-10-LE4
	Cable outlet angled	2.5	8066682	NEBB-M12W5-P-2.5-LE4
		5	8066683	NEBB-M12W5-P-5-LE4
		10	8066684	NEBB-M12W5-P-10-LE4
Open cable end, 5-wire				
	Cable outlet straight	2.5	8066676	NEBB-M12G5-P-2.5-LE5
		5	8066677	NEBB-M12G5-P-5-LE5
		10	8066678	NEBB-M12G5-P-10-LE5
	Cable outlet angled	2.5	8066685	NEBB-M12W5-P-2.5-LE5
		5	8066686	NEBB-M12W5-P-5-LE5
		10	8066687	NEBB-M12W5-P-10-LE5

Ordering data – Accessories			
Designation		Part No.	Type
Plug connectors			
	Plug connectors for self-assembly	–	➔ Internet: necu
		–	➔ Internet: sea
Inscription labels			
	Inscription labels 23 mm for inscription label holder, 34 pieces, in frames	541598	ASLR-L-423

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