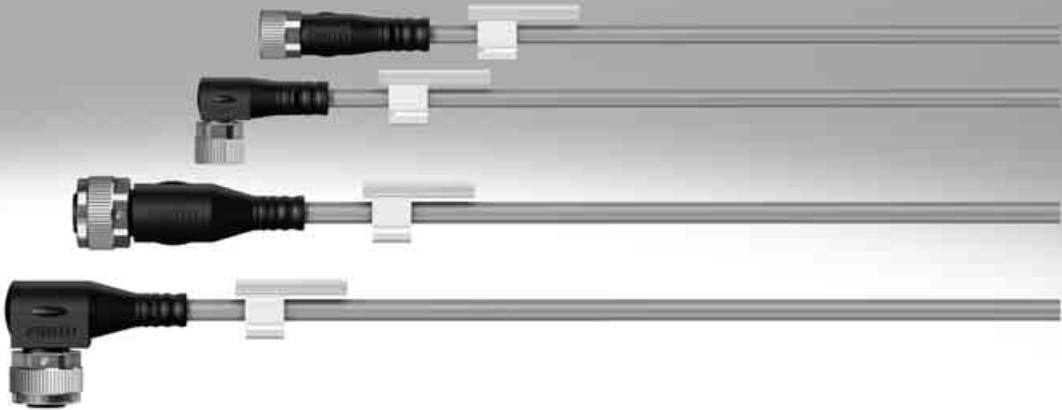


# Connecting cables



## Connecting cables

Key features

### Cable properties

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

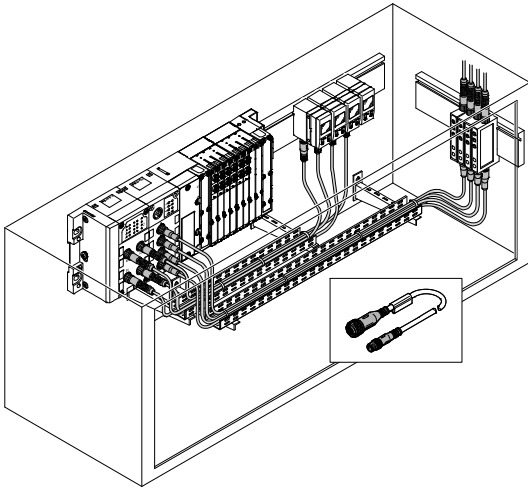
There are four qualities:

- 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	<b>Electrical connection 1 socket M8</b>					
	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
	<b>Electrical connection 1 socket M12</b>					
	5-pin	NEBB-M12G5 NEBB-M12W5	Open cable end	For static applications	2.5 m 5 m 10 m	11

# Connecting cables

Type codes

	NEBB	-		-	P	-		-	LE	
<b>Function</b>										
NEBB	Connecting cable									
<b>Connection technology, on the left</b>										
M8	Socket with connecting thread M8									
M12	Socket with connecting thread M12									
<b>Connection technology version, on the left</b>										
G	Straight									
W	Angled									
<b>Number of pins/wires (on the left)</b>										
3	3-pin									
4	4-pin									
5	5-pin									
<b>Cable properties</b>										
P	Basic									
<b>Cable length</b>										
2.5	2.5 m									
5	5 m									
10	10 m									
<b>Connection technology, on the right</b>										
LE	Open cable end									
<b>Number of pins/wires (on the right)</b>										
3	3-wire									
4	4-wire									
5	5-wire									

## Connecting cables M8x1, 3-pin

Technical data

### 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 <sup>2</sup> ]	3 x 0.25
Nominal conductor cross section	[mm <sup>2</sup> ]	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

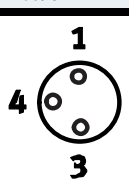
# Connecting cables M8x1, 3-pin

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 <sup>1)</sup>	2
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Low Voltage Directive
Contamination level	3

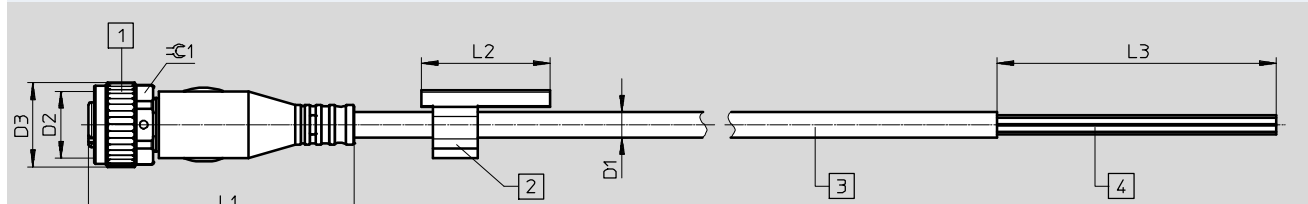
- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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

1) To IEC 757

## Dimensions Download CAD data → [www.festo.com](http://www.festo.com)

Cable outlet straight



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 ∅	D2	D3 ∅	L1	L2	L3	± 1
NEBB-M8G3	3.8	M8x1	10	34.6	23	50	9

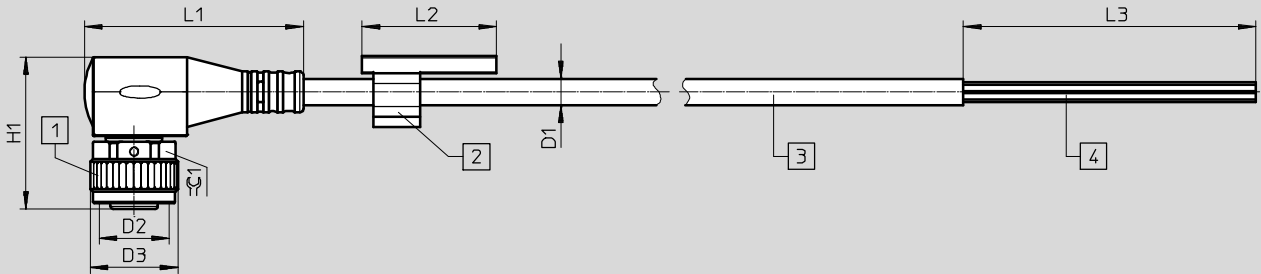
# Connecting cables M8x1, 3-pin

Technical data

**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

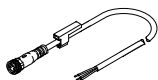
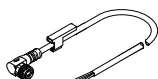
Cable outlet angled



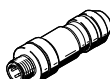
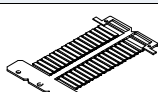
- 1 Socket M8x1
- 2 Inscription label holder
- 3 Cable, length 2.5 m, 5 m or 10 m depending on order
- 4 Wire ends cut off bluntly

Type	D1 ∅	D2	D3 ∅	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
<b>Open cable end, 3-wire</b>				
	Cable outlet straight	2.5	<b>8066658</b>	<b>NEBB-M8G3-P-2.5-LE3</b>
		5	<b>8066659</b>	<b>NEBB-M8G3-P-5-LE3</b>
		10	<b>8066660</b>	<b>NEBB-M8G3-P-10-LE3</b>
	Cable outlet angled	2.5	<b>8066664</b>	<b>NEBB-M8W3-P-2.5-LE3</b>
		5	<b>8066665</b>	<b>NEBB-M8W3-P-5-LE3</b>
		10	<b>8066666</b>	<b>NEBB-M8W3-P-10-LE3</b>

**Ordering data – Accessories**

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

## Connecting cables M8x1, 4-pin

Technical data

**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 <sup>2</sup> ]	4 x 0.25
Nominal conductor cross section	[mm <sup>2</sup> ]	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



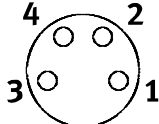
# Connecting cables M8x1, 4-pin

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 <sup>1)</sup>	2
Contamination level	3

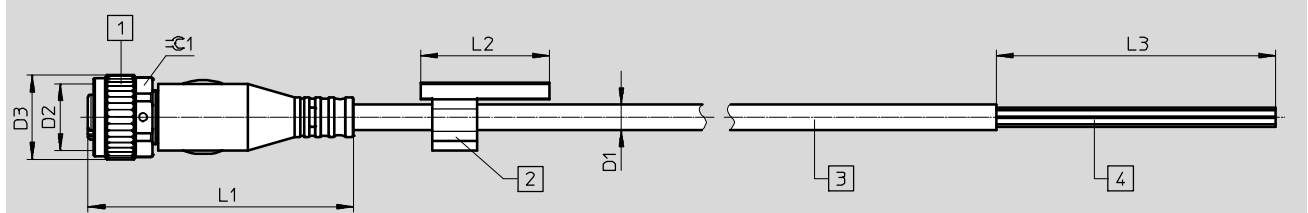
1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial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

Circuitry (socket view)				
Socket	Pin	Wire colour <sup>1)</sup>	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](http://www.festo.com)

Cable outlet straight



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

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

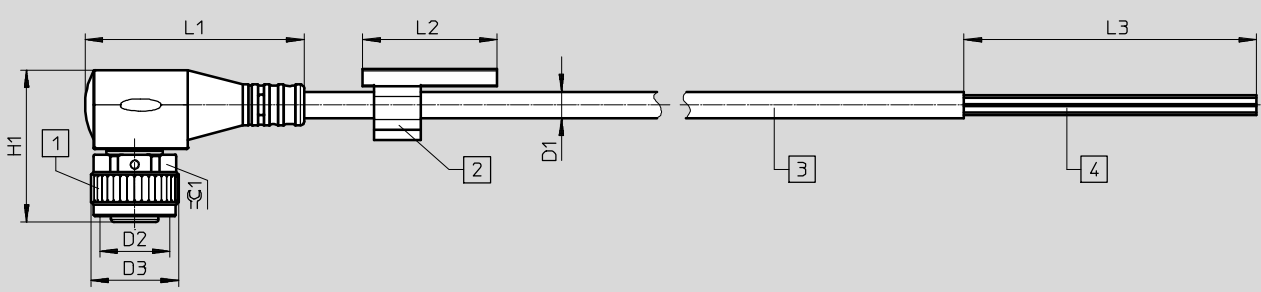
# Connecting cables M8x1, 4-pin

Technical data

**Dimensions**

Download CAD data → [www.festo.com](http://www.festo.com)

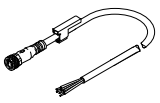
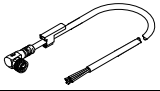
Cable outlet angled



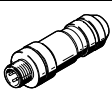
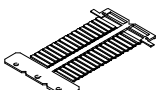
- 1 Socket M8x1
- 2 Inscription label holder
- 3 Cable, length 2.5 m, 5 m or 10 m depending on order
- 4 Wire ends cut off bluntly

Type	D1 ∅	D2	D3 ∅	H1	L1	L2	L3	±0.1
NEBB-M8W4	4.5	M8x1	10	17	26.9	23	50	9

**Ordering data**

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

**Ordering data – Accessories**

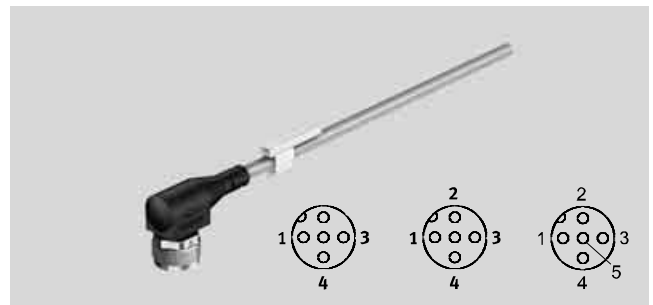
Designation		Part No.	Type
<b>Plug connectors</b>			
	Plug connectors for self-assembly	-	→ Internet: necu
		-	→ Internet: sea
<b>Inscription labels</b>			
	Inscription labels 23 mm for inscription label holder, 34 pieces, in frames	<b>541598</b>	<b>ASLR-L-423</b>

## Connecting cables M12x1, 5-pin

Technical data

### 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	0 ... 60
	[V AC]	0 ... 250	0 ... 250	0 ... 60
Surge resistance	[kV]	2.5	2.5	1.5
Current rating at 40 °C	[A]	4	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	≥14
Cable diameter	[mm]	3.8	4.5	4.5
Cable design	[mm <sup>2</sup> ]	3 x 0.25	4 x 0.25	5 x 0.25
Nominal conductor cross section	[mm <sup>2</sup> ]	0.25	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		

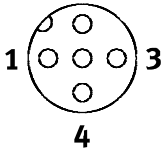
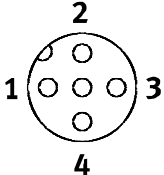
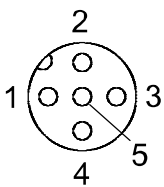
# Connecting cables M12x1, 5-pin

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 <sup>1)</sup>	2
CE marking (see declaration of conformity) <sup>2)</sup>	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](http://www.festo.com/sp) → Certificates.

Circuitry (socket view)				
Electrical connection 1	Pin	Wire colour <sup>1)</sup>	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

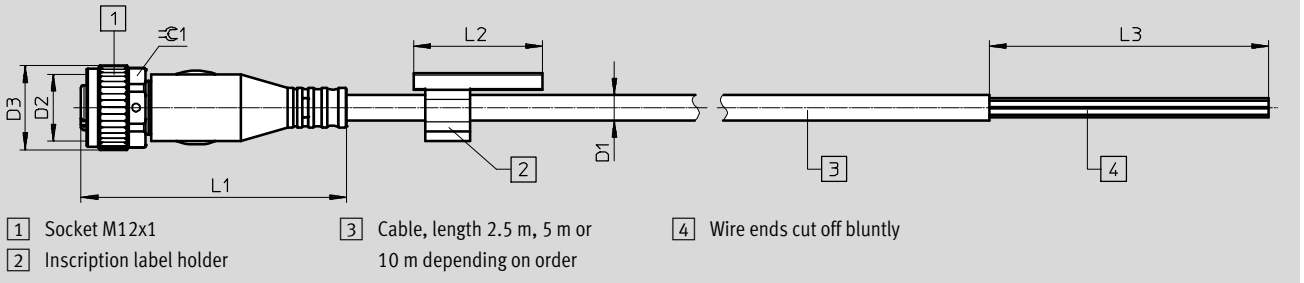
# Connecting cables M12x1, 5-pin

Technical data

**Dimensions**

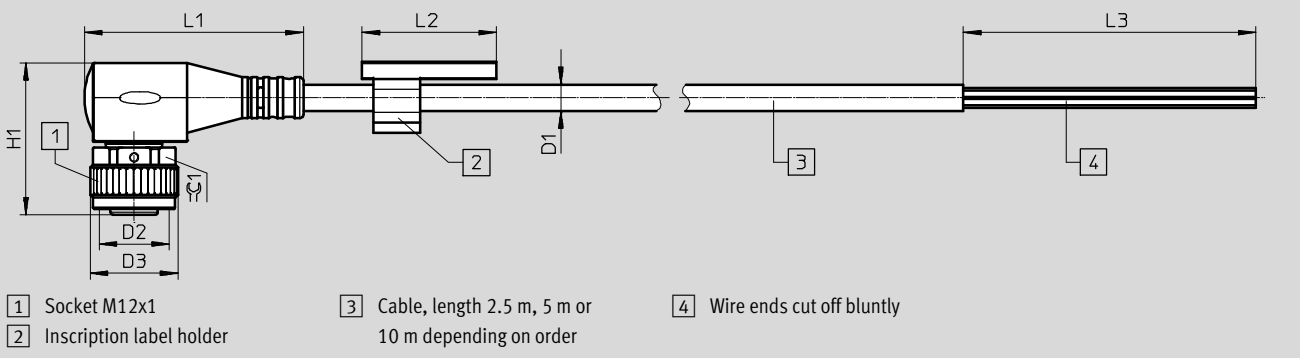
Download CAD data → [www.festo.com](http://www.festo.com)

Cable outlet straight



Type	D1 ∅	D2	D3 ∅	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

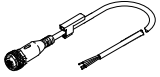
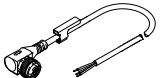
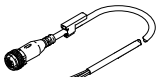
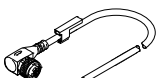
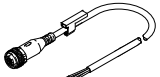
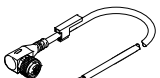
Cable outlet angled

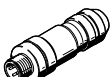



Type	D1 ∅	D2	D3 ∅	H1	L1	L2	L3	≈ 1
NEBB-M12W5-...-LE3	3.8	M12x1	15	26	37.5	23	50	13
NEBB-M12W5-...-LE4	4.5	M12x1	15	26	37.5	23	50	13
NEBB-M12W5-...-LE5	4.5	M12x1	15	26	37.5	23	50	13

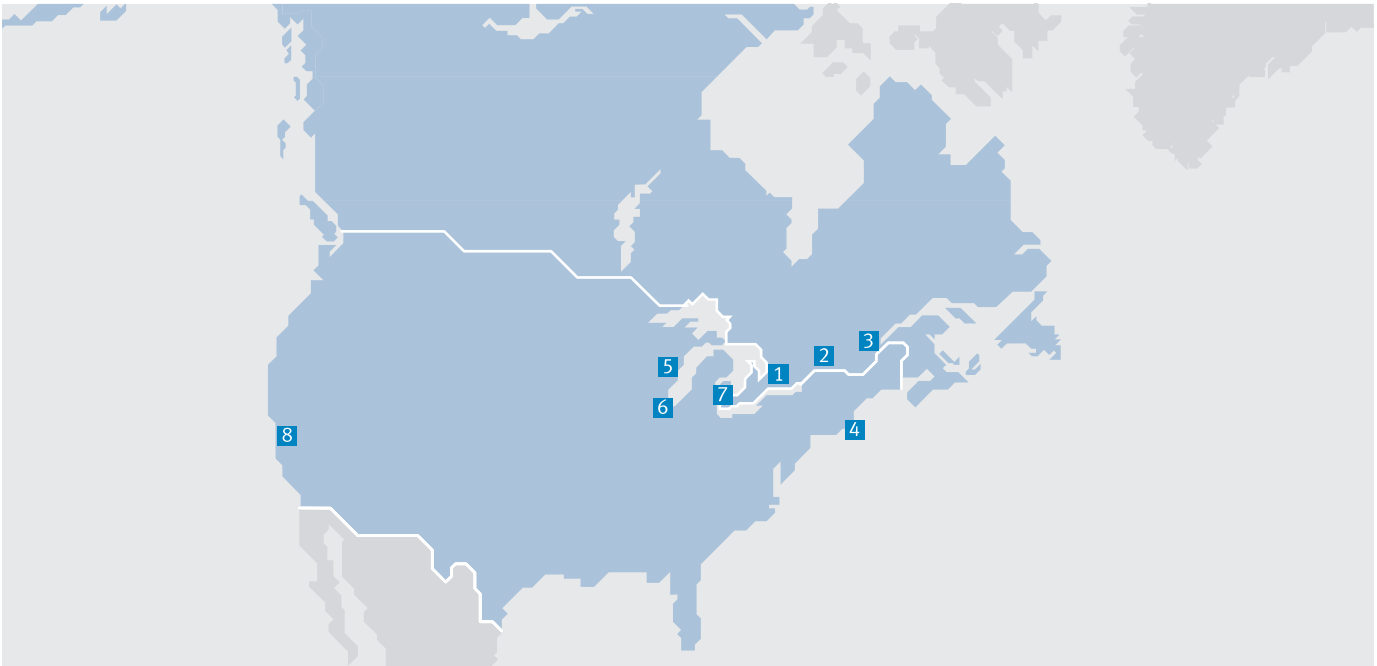
# Connecting cables M12x1, 5-pin

Technical data

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

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

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Subject to change

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