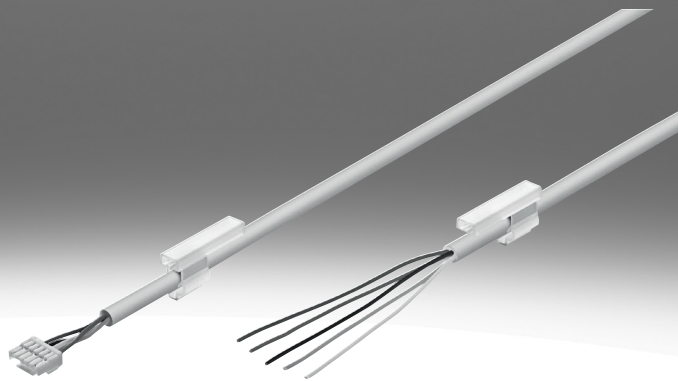


## Connecting cable NEBS

**FESTO**



Type code

<b>001</b>	<b>Series</b>	
<b>NEBS</b>	Connecting cable for sensors	
<b>002</b>	<b>Connection technology left, field device side</b>	
<b>L1</b>	PCB plug connector	
<b>M12</b>	Socket M12x1 A-coded, EN 61076-2-101	
<b>SM12</b>	Plug M12x1 A-coded	
<b>003</b>	<b>Cable outlet left</b>	
<b>G</b>	Straight	
<b>004</b>	<b>Number of pins/wires on the left</b>	
<b>4</b>	4	
<b>5</b>	5	
<b>12</b>	12	
<b>005</b>	<b>Cable characteristic</b>	
<b>E</b>	Suitable for energy chains	
<b>K</b>	Standard	
<b>006</b>	<b>Cable design</b>	
	Standard	
<b>S</b>	With shielding	

<b>007</b>	<b>Cable length [m]</b>	
<b>0.3</b>	0.3	
<b>0.5</b>	0.5	
<b>1</b>	1	
<b>2</b>	2	
<b>2.5</b>	2.5	
<b>5</b>	5	
<b>10</b>	10	
<b>15</b>	15	
<b>008</b>	<b>Cable identification</b>	
	With label holder	
<b>N</b>	Without label holder	
<b>009</b>	<b>Connection technology right, controller side</b>	
<b>LE</b>	Open end	
<b>M12</b>	Plug M12x1 A-coded, EN 61076-2-101	
<b>SM12</b>	Socket, M12, A-coded	
<b>010</b>	<b>Plug/socket</b>	
	None	
<b>G</b>	Straight	
<b>011</b>	<b>Number of pins/wires on the right</b>	
<b>4</b>	4	
<b>5</b>	5	
<b>12</b>	12	

## Datasheet

**General technical data – NEBS-L1G4**

Connection technology right, controller side	Open end	Plug M12x1 A-coded, EN 61076-2-101
Cable designation	With label holder	Without inscription label holder
Frequency of connection	100	

**Technical data – Electrical connection 1 Connecting cable NEBS-L1G4**

Electrical connection 1, function	Field device side
Electrical connection 1, cable outlet	Straight
Electrical connection 1, connection type	Socket
Electrical connection 1, design	Angular
Electrical connection 1, connector system	Connection pattern L1J
Electrical connection 1, number of connections/cores	4
Electrical connection 1, used connections/cores	4
Electrical connection 1, type of mounting	Snap-locking

**Technical data – Electrical connection 2 Connecting cable NEBS-L1G4**

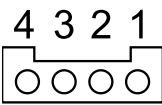
Electrical connection 2, function	Controller side
Electrical connection 2, connection type	Cable, Plugs
Electrical connection 2, cable outlet	Straight
Electrical connection 2, design	Round
Electrical connection 2, connector system	M12x1, A-coded to EN 61076-2-101, Open end
Wire ends	Cut off bluntly
Electrical connection 2, number of connections/cores	4
Electrical connection 2, used connections/cores	4
Electrical connection 2, type of mounting	Screw-type lock with 13 mm hexagon and longitudinal knurl

**Technical data – Electrical connecting cable NEBS-L1G4**

Operational voltage range DC	0 ... 30 V
Immunity to surge	0.8 kV
Current rating at 40° C	1 A
Pollution degree	2

## Datasheet

### Technical data – Connecting cable NEBS-L1G4



1. BN
2. BK
3. WH
4. BU

Cable structure	4 x 0.25 mm <sup>2</sup>	4 x 0.17 mm <sup>2</sup>
Cable diameter	4.5 mm	4.1 mm
Cable diameter tolerance	± 0.1 mm	± 0.15 mm
Cable characteristic	Standard	
Test conditions cable	Test conditions on request	
Bending radius, fixed cable	≥14 mm	≥13 mm
Bending radius, moving cable	≥46 mm	≥42 mm
Nominal cross section conductor	0.25 mm <sup>2</sup>	0.17 mm <sup>2</sup>

### Materials electrical connecting cable NEBS-L1G4

Material housing	PA, TPE-U(PUR)
Housing colour	Black, White
Material screw-type lock	Nickel-plated brass
Material electrical contact	Bronze, tin-plated, Gold-plated brass
Material cable sheath	PVC, TPE-U(PUR)
Cable sheath colour	Grey
Material insulating sheath	PP, PVC
Note on materials	RoHS-compliant, Free of halogen
LABS (PWIS) conformity	VDMA24364-B2-L, VDMA24364 zone III

### Operating and environmental conditions connecting cable NEBS-L1G4

Ambient temperature	-20 ... 60°C
Ambient temperature with moving cable	-5 ... 60°C
Storage temperature	-20 ... 60°C
Corrosion resistance class CRC <sup>1)</sup>	2 - Moderate corrosion stress, 4 - Very high corrosion stress
CE mark (see declaration of conformity) <sup>2)</sup>	In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity) <sup>3)</sup>	To UK RoHS instructions
Degree of protection	IP40, IP65, IP67, IP69K
Note on degree of protection	IP40 for plug connection pattern L1J, In assembled state

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

2) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

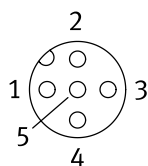
3) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

### General technical data – NEBS-M12G5

Cable designation	With 2x inscription label holders
Housing colour	Black
Special characteristics	UV resistant, Abrasion-resistant, Low adhesion, Flame-retardant and self-extinguishing, Hydrolysis-resistant, Alkali resistant, Solvent-resistant, Resistant to microbes, Oil resistant, Acid resistant
Protective conductor connection	Not available
Type of mounting	Via knurled nut

## Datasheet

## Technical data – Electrical connection 1 Connecting cable NEBS-M12G5



- 1. BN
- 2. WH
- 3. BU
- 4. BK
- 5. GY

Electrical connection 1, function	Field device side
Electrical connection 1, design	Round
Electrical connection 1, connection type	Socket
Electrical connection 1, cable outlet	Straight
Electrical connection 1, connector system	M12x1, A-coded to EN 61076-2-101
Electrical connection 1, number of connections/cores	5
Electrical connection 1, used connections/cores	5
Electrical connection 1, type of mounting	Screw-type lock, Rotatable
Electrical connection 1, tightening torque	0.4 Nm
Electrical connection 1, compatible type of mounting	Compatible with rotatable/non-rotatable screw-type lock

## Technical data – Electrical connection 2 Connecting cable NEBS-M12G5

Electrical connection 2, function	Controller side
Electrical connection 2, connection type	Cable
Electrical connection 2, connector system	Open end
Wire ends	Cut off bluntly
Electrical connection 2, number of connections/cores	5
Electrical connection 2, used connections/cores	5

## Technical data – Electrical connecting cable NEBS-M12G5

Operational voltage range DC	0 ... 60 V
Operational voltage range AC	0 ... 48 V
Immunity to surge	1.5 kV
Current rating at 40° C	4 A
Shielding	yes
Pollution degree	3
Overvoltage category	II
Frequency of connection	100

## Technical data – Connecting cable NEBS-M12G5

Cable diameter	5.25 mm
Cable diameter tolerance	± 0.2 mm
Cable structure	5 x 0.34 mm <sup>2</sup>
Conductor nominal cross section	AWG22
Test conditions cable	Test conditions on request
Bending radius, fixed cable	≥26 mm
Bending radius, moving cable	≥52 mm

## Datasheet

### Materials electrical connecting cable NEBS-M12G5

Material seals	NBR
Material electrical contact	Nickel-plated and gold-plated bronze
Material cable sheath	TPE-U(PUR)
Cable sheath colour	Black
Material insulating sheath	PP
Note on materials	RoHS-compliant, Free of halogen, Silicone free
Material screw-type lock	Die-cast zinc, nickel-plated
Material housing	TPE-U(PUR)
LABS (PWIS) conformity	VDMA24364-B2-L

### Operating and environmental conditions connecting cable NEBS-M12G5

Ambient temperature	-40 ... 80°C
Ambient temperature with moving cable	-25 ... 60°C
CE mark (see declaration of conformity) <sup>1)</sup>	In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK RoHS instructions
Degree of protection	IP65, IP67
Note on degree of protection	In assembled state
Note on the contamination level	In mounted state
Based on standard	EN 61076-2-101
Corrosion resistance class CRC	1 - Low corrosion stress

1) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

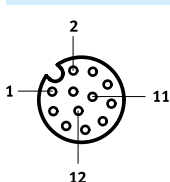
### General technical data – Connecting cable NEBS-M12G12

Cable designation	With label holder
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### Technical data – Electrical connecting cable NEBS-M12G12

Nominal operating voltage DC	30 V
Operational voltage range DC	0 ... 30 V
Immunity to surge	0.8 kV
Current rating at 40° C	1.5 A
Pollution degree	3
Shielding	yes

### Technical data – Connecting cable NEBS-M12G12



1. BN
2. BU
3. WH
4. GN
5. PK
6. YE
7. BK
8. GY
9. RD
10. VT
11. GY PK
12. RD BU

Cable diameter	8.5 mm
Cable diameter tolerance	± 0.2 mm
Cable structure	12 x 0.14 mm <sup>2</sup>
Cable characteristic	Basic
Bending radius, fixed cable	42.5 mm
Test conditions cable	Bending strength: to Festo standard

## Datasheet

**Materials connecting cable NEBS-M12G12**

Material union nut	Die-cast zinc
Material seals	NBR
Material electrical contact	Brass, Nickel-plated and gold-plated
Material cable sheath	TPE-U(PUR)
Cable sheath colour	Black
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

**Operating and environmental conditions – Connecting cable NEBS-M12G12**

Ambient temperature	-30 ... 80°C
Ambient temperature with moving cable	-25 ... 80°C
CE mark (see declaration of conformity) <sup>1)</sup>	In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity) <sup>2)</sup>	To UK RoHS instructions
Degree of protection	IP67
Corrosion resistance class CRC <sup>3)</sup>	0 - No corrosion stress

1) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

2) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

3) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

**General technical data – Connecting cable NEBS-SM12G12**

Conforms to standard	EN 61076-2-101
Cable designation	With accessories

**Technical data – Electrical connection 1 Connecting cable NEBS-SM12G12**

Electrical connection 1, function	Field device side
Electrical connection 1, connection type	Plugs
Electrical connection 1, cable outlet	Straight
Electrical connection 1, design	Round
Electrical connection 1, connector system	M12x1, A-coded to EN 61076-2-101
Electrical connection 1, number of connections/cores	12
Electrical connection 1, used connections/cores	12

**Technical data – Electrical connection 2 Connecting cable NEBS-SM12G12**

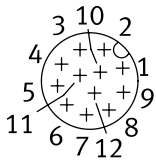
Electrical connection 2, function	Controller side
Electrical connection 2, connection type	Cable, Plugs
Electrical connection 2, cable outlet	Straight
Electrical connection 2, design	Round
Electrical connection 2, connector system	M12x1, A-coded to EN 61076-2-101, Open end
Electrical connection 2, number of connections/cores	12
Electrical connection 2, used connections/cores	12

## Datasheet

### Technical data – Electrical connecting cable NEBS-SM12G12

Operational voltage range DC	0 ... 30 V
Operational voltage range AC	0 ... 30 V
Immunity to surge	0.5 kV
Current rating at 40° C	1.5 A
Pollution degree	3
Frequency of connection	100

### Technical data – Connecting cable NEBS-SM12G12



- 1. BN
- 2. BU
- 3. WH
- 4. GN
- 5. PK
- 6. YE
- 7. BK
- 8. GY
- 9. RD
- 10. VT
- 11. GY PK
- 12. RD BU

Cable diameter	6.5 mm
Cable structure	12 x 0.25 mm <sup>2</sup>
Nominal cross section conductor	0.25 mm <sup>2</sup>
Cable characteristic	Suitable for energy chains
Bending radius, fixed cable	≥32 mm
Test conditions cable	Test conditions on request

### Material connecting cable NEBS-SM12G12

Material housing	TPE-U(PUR)
Housing colour	Black
Material screw-type lock	Die-cast zinc, nickel-plated
Material electrical contact	Gold-plated brass
Material cable sheath	TPE-U(PUR)
Cable sheath colour	Black
Note on materials	RoHS-compliant

### Operating and environmental conditions – Connecting cable NEBS-SM12G12

Ambient temperature	-5 ... 70°C
Ambient temperature with moving cable	-5 ... 70°C
Degree of protection	IP67
Note on degree of protection	In assembled state
Corrosion resistance class CRC <sup>1)</sup>	1 - Low corrosion stress
CE mark (see declaration of conformity) <sup>2)</sup>	In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity) <sup>3)</sup>	To UK RoHS instructions
LABS (PWIS) conformity	VDMA24364-B2-L

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

2) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

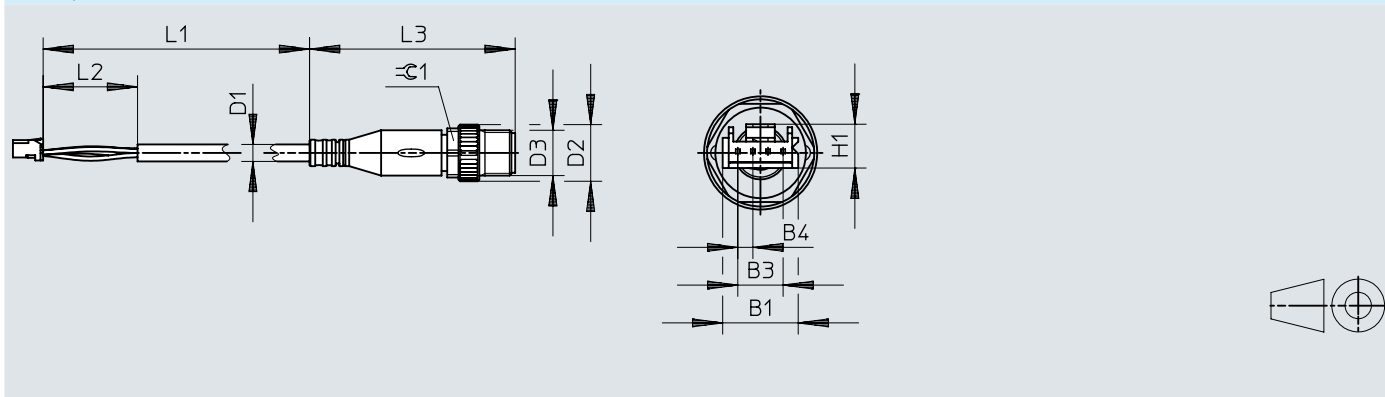
3) More information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.



## Dimensions

Dimensions – Electrical connection, socket, rectangular design L1 – plug  
M12x1, A-coded

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

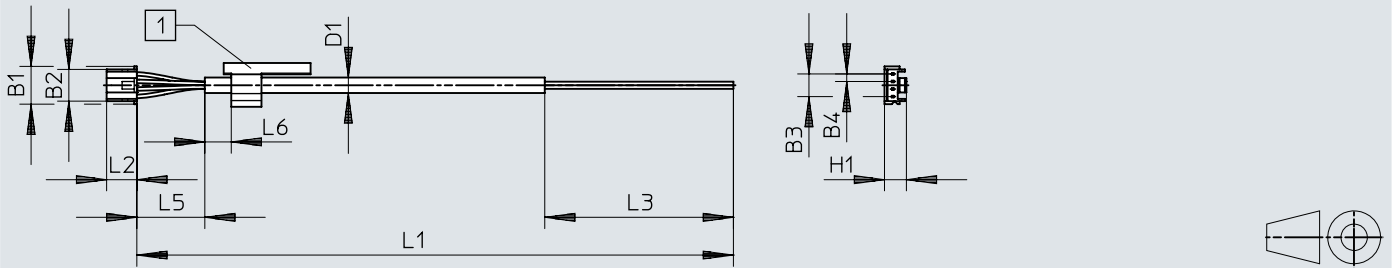


	B1	B3	B4	D1 ∅	D2 ∅	D3	H1	L1	L2	L3	⌀ 1
NEBS-L1G4-K-1-N-M12G4	10	6	2	4,5	15	M12x1	5,8	1000	25	54,5	13

## Dimensions

Dimensions – Electrical connection, socket, rectangular design L1 – open cable end

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

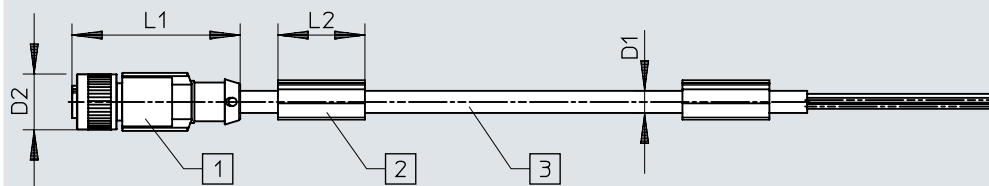


[1] Label holder

	B1	B2	B3	B4	D1 ∅	H1	L1	L2	L3	L5	L6
NEBS-L1G4-K-2.5-LE4	10	8,4	6	2	4,1	5,8	2500	8	50	35	≥ 5
NEBS-L1G4-K-5-LE4							5000				

## Dimensions

## Dimensions – Connecting cable NEBS-M12G5

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

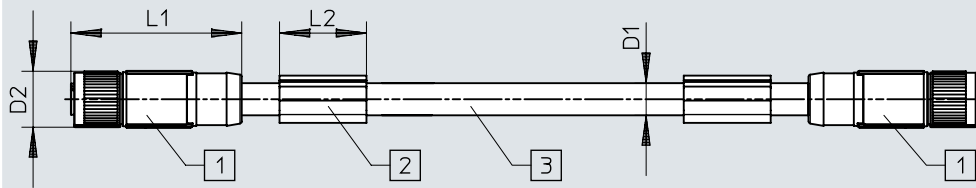
- [1] Socket, straight, M12x1, A-coded
- [2] Label holder
- [3] Cable, length depending on the order

	D1 ∅	D2 ∅	L1	L2
NEBS-M12G5-ES-5-LE5	5,25	14,8	44,5	22
NEBS-M12G5-ES-10-LE5				
NEBS-M12G5-ES-15-LE5				

## Dimensions

Dimensions – Electrical connection, socket M12x1, 12-pin – socket M12x1, 12-pin

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

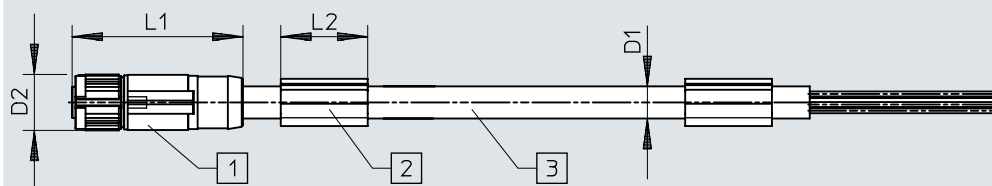


- [1] Socket, straight, M12x1, A-coded
- [2] Label holder
- [3] Cable, length depending on the order

	D1 ∅	D2 ∅	L1	L2
NEBS-M12G12-KS-0.5-SM12G12	8,5	14,8	45,2	22
NEBS-M12G12-KS-2-SM12G12				

## Dimensions

## Dimensions – Electrical connection, socket M12x1, 12-pin – open cable end

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

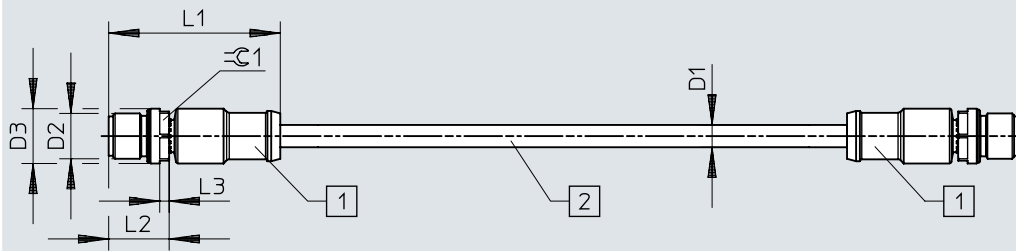
- [1] Socket, straight, M12x1, A-coded
- [2] Label holder
- [3] Cable, length depending on the order

	D1 ∅	D2 ∅	L1	L2
NEBS-M12G12-KS-5-LE12	8,5	14,8	45,2	22
NEBS-M12G12-KS-10-LE12				

## Dimensions

Dimensions – Electrical connection, plug M12x1, 12-pin – socket M12x1, 12-pin

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



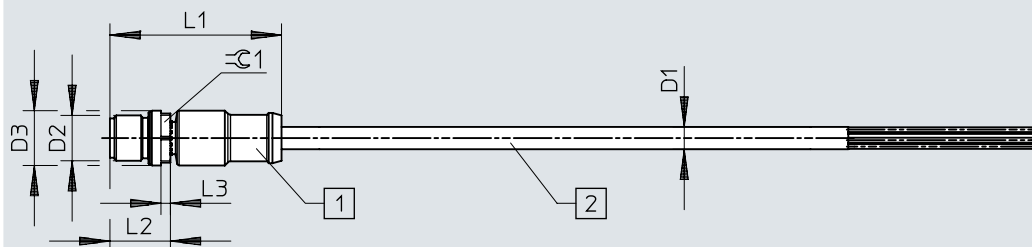
- [1] Plug, straight, 12-pin, M12x1, A-coded
- [2] Cable, length depending on the order

	D1 ∅	D2	D3 ∅	L1	L2	L3	13
NEBS-SM12G12-E-0.3-N-M12G12	6,5	M12x1	14,5	45,4	16	2,5	13

## Dimensions

### Dimensions – Electrical connection, plug M12x1, 12-pin – open cable end

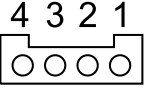
Download CAD data [www.festo.com](http://www.festo.com)

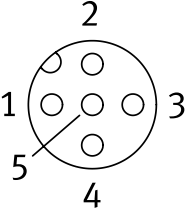


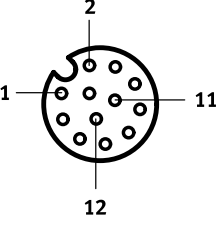
- [1] Plug, straight, 12-pin, M12x1, A-coded
- [2] Cable, length depending on the order

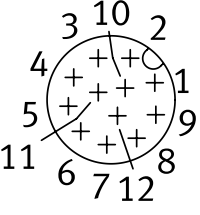
	D1 ∅	D2	D3 ∅	L1	L2	L3	≙ 1
NEBS-SM12G12-E-0.5-N-LE12	6,5	M12x1	14,5	45,4	16	2,5	13
NEBS-SM12G12-E-5-N-LE12							

Ordering data

Ordering data							
	Electrical connection 1, connector system	Electrical connection 2, connector system	Cable length	Product weight	Part no.	Type	
	Connection pattern L1J	M12x1, A-coded to EN 61076-2-101	1 m	40 g	<b>8091514</b>	<b>NEBS-L1G4-K-1-N-M12G4</b>	
		Open end		2.5 m	53 g	<b>572576</b>	<b>NEBS-L1G4-K-2.5-LE4</b>
				5 m	106 g	<b>572577</b>	<b>NEBS-L1G4-K-5-LE4</b>

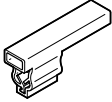
Ordering data						
	Electrical connection 1, connector system	Electrical connection 2, connector system	Cable length	Product weight	Part no.	Type
	M12x1, A-coded to EN 61076-2-101	Open end	5 m	276 g	<b>8030962</b>	<b>NEBS-M12G5-ES-5-LE5</b>
			10 m	528 g	<b>8030963</b>	<b>NEBS-M12G5-ES-10-LE5</b>
			15 m	828 g	<b>8097576</b>	<b>NEBS-M12G5-ES-15-LE5</b>

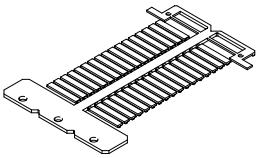
Ordering data						
	Electrical connection 1	Electrical connection 2	Cable length	Product weight	Part no.	Type
	Straight socket, M12x1, 12-pin, A-coded	Straight socket, M12x1, 12-pin, A-coded	0.5 m	87 g	<b>3056124</b>	<b>NEBS-M12G12-KS-0.5-SM12G12</b>
			2 m	223 g	<b>3058527</b>	<b>NEBS-M12G12-KS-2-SM12G12</b>
		Open end, 12-wire	5 m	492 g	<b>3058614</b>	<b>NEBS-M12G12-KS-5-LE12</b>
			10 m	945 g	<b>2912452</b>	<b>NEBS-M12G12-KS-10-LE12</b>

Ordering data							
	Electrical connection 1, connector system	Electrical connection 2, connector system	Cable length	Part no.	Type		
	M12x1, A-coded to EN 61076-2-101	M12x1, A-coded to EN 61076-2-101	0.3 m	<b>3947404</b>	<b>NEBS-SM12G12-E-0.3-N-M12G12</b>		
		Open end		0.5 m	<b>3947401</b>	<b>NEBS-SM12G12-E-0.5-N-LE12</b>	
				5 m	<b>3947395</b>	<b>NEBS-SM12G12-E-5-N-LE12</b>	



## Accessories

Accessories – Inscription label holders			
	Description	Part no.	Type
	For cable diameter 4.2 ... 5.6 mm	<b>8143238</b>	<b>NEAU-LH-4</b>
	For attaching to a cable with diameter 5 ... 8 mm	<b>33361</b>	<b>KM-BZ</b>
	For cable diameter 3.3 ... 4.8 mm	<b>8078307</b>	<b>NEAU-LH-3</b>

Accessories – Inscription label			
	Description	Part no.	Type
	Inscription label for inscription label holder NEAU	<b>541598</b>	<b>ASLR-L-423</b>