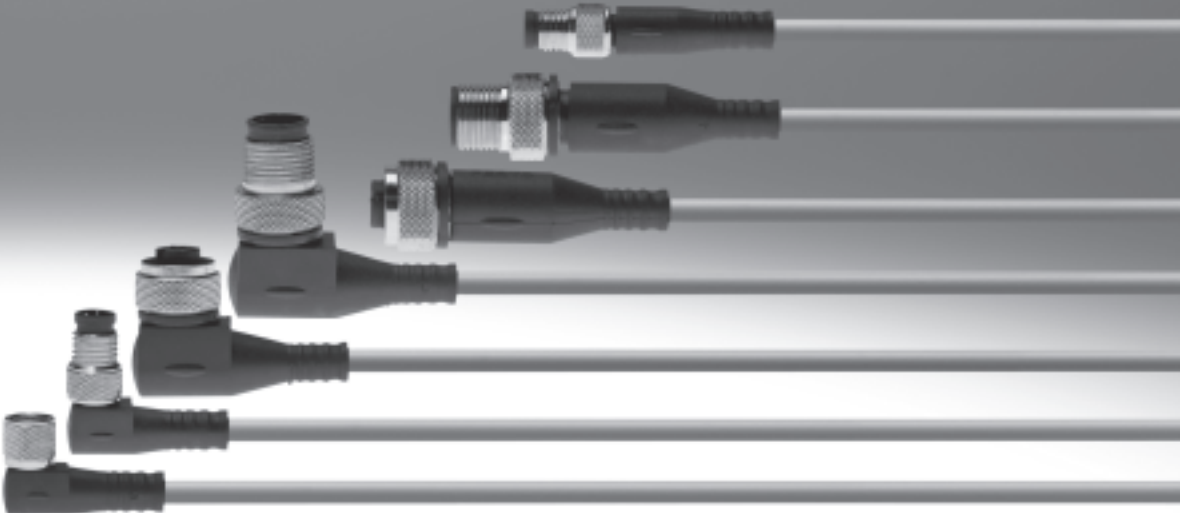


Connecting cables, universal



Connecting cables, universal

Key features

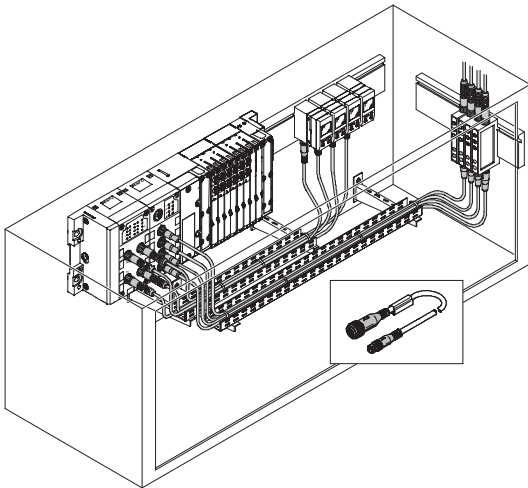
FESTO

Cable attributes

The connecting cables NEBU can be configured using the modular system. You can choose from attributes that

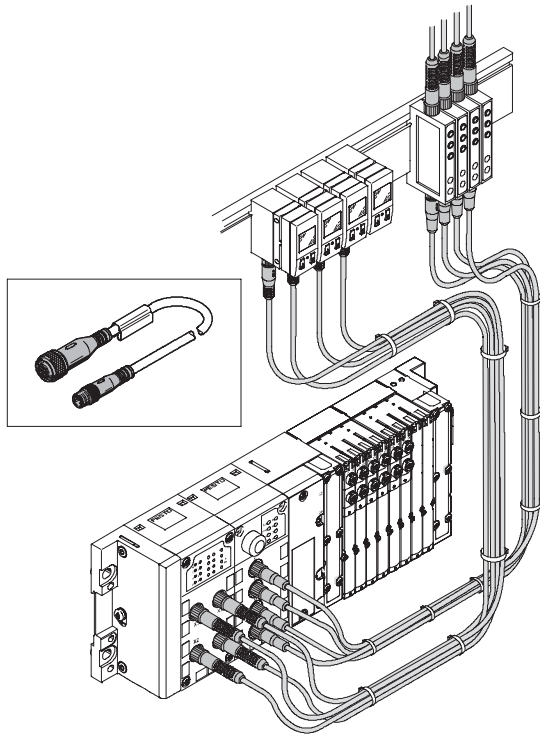
are suited to basic, standard, energy chain or robot applications.

Basic application



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

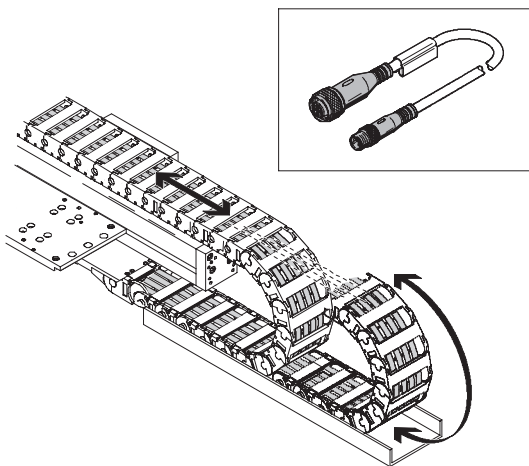
Standard application



Standard applications are characterised by fixed cable

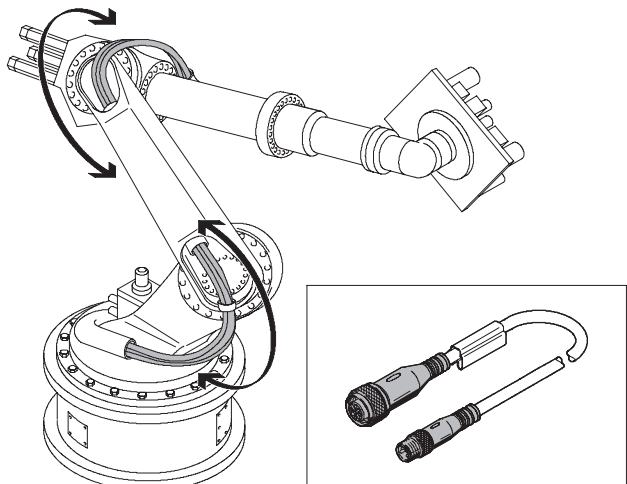
installation or small to medium mechanical loads.

Energy chain application



Energy chain applications involve high mechanical loads, particularly if very small radii are required.

Robot application



Robot applications involve high mechanical loads that are primarily caused by torsion.

Connecting cables, universal

Product range overview

FESTO

| Type | Electrical connection | | Number of wires | Cable length [m] | → Page/ Internet |
|--|-----------------------|----------------|-----------------|------------------|------------------|
| | Left-hand end | Right-hand end | | | |
| Cable property: Basic | | | | | |
| NEBU-LE | Open end | Plug M8x1 | 3, 4, 5 | 0.1 ... 30 | 12 |
| | | Plug M12x1 | | | |
| NEBU-M8 | Socket M8x1 | Open end | 2, 3, 4 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| NEBU-M12 | Socket M12x1 | Open end | 3, 4, 5 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| Cable property: Standard | | | | | |
| NEBU-LE | Open end | Plug M8x1 | 3, 4, 5 | 0.1 ... 30 | 12 |
| | | Plug M12x1 | | | |
| NEBU-M5 | Socket M5x0.5 | Open end | 3 | 5 | 6 |
| | | Plug M8x1 | 3 | 1 | |
| | | Plug M12x1 | 4 | 1 | |
| NEBU-M8 | Socket M8x1 | Open end | 2, 3, 4 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| SIM-M8 | Socket M8x1 | Open end | 3 | 2.5/5/10 | 25 |
| | | | 4 | 2.5/5 | |
| NEBU-M12 | Socket M12x1 | Open end | 3, 4, 5 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| | | Open end | 8 | 2/5 | 22 |
| SIM-M12 | Socket M12x1 | Open end | 3 | 2.5/5 | 25 |
| | | | 4 | 5 | |
| | | | 5 | 2.5/5 | |
| | | | 8 | 2/5/10 | 29 |
| KM12-8 | Socket M12x1 | Plug M12x1 | 8 | 2 | 31 |
| Cable property: Suitable for use with energy chains | | | | | |
| NEBU-M8 | Socket M8x1 | Open end | 3, 4 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| NEBU-M12 | Socket M12x1 | Open end | 3, 4, 5 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| Cable property: Suitable for robots | | | | | |
| NEBU-M8 | Socket M8x1 | Open end | 3, 4 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| NEBU-M12 | Socket M12x1 | Open end | 3, 4, 5 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |

Connecting cables, universal

Product range overview

FESTO

| Type | Electrical connection | | Number of wires | Cable length [m] | → Page/ Internet |
|--------------------------------------|-----------------------|----------------|-----------------|------------------|------------------|
| | Left-hand end | Right-hand end | | | |
| With switching status display | | | | | |
| NEBU-M8 | Socket M8x1 | Open end | 3 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| SIM-M8 | Socket M8x1 | Open end | 3 | 2.5/5 | 25 |
| Welding field immune | | | | | |
| NEBU-M12 | Socket M12x1 | Open end | 3 | 0.1 ... 30 | 12 |
| | | Plug M8x1 | | | |
| | | Plug M12x1 | | | |
| SIM-M12 | Socket M12x1 | Open end | 3 | 2.5/5 | 25 |
| Welding field immune | | | | | |
| SIM-M12-RS | Socket M12x1 | Open end | 3 | 3 | 33 |
| Clip-on | | | | | |
| SIM-K | Clip-on socket | Open end | 3 | 2.5/5/10 | 35 |
| | | | 4 | 2.5/5 | |
| Clean Design | | | | | |
| SIM-K-CDN | Clip-on socket | Open end | 3 | 2.5/5 | 37 |

Connecting cables NEBU-M5

Type codes

NEBU - M5 G 4 - K - 1 - Q3 - M8 G 3

Function

NEBU Connecting cable

Connection technology, left-hand end

M5 Socket with connecting thread

Socket design

G Straight

Number of pins/wires (left-hand end)

4 4-pin

Cable property

K Standard

Cable length

1 1 m

5 5 m

Alternative wire cross section

Q3 0.14 mm²

Connection technology, right-hand end

Cable length 5 m

LE Open end

Cable length 1 m

M8 Plug with connecting thread

M12 Plug with connecting thread, A-coded

Plug design

Open end

G Straight

Number of pins/wires (right-hand end)

Connection technology, right-hand end, LE or M8

3 3-pin

Connection technology, right-hand end, M12

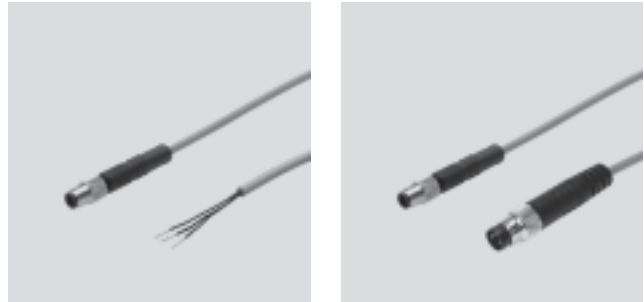
4 4-pin

Connecting cables NEBU-M5

Technical data

FESTO

Connecting cable NEBU-M5



| Electronic components | | |
|-------------------------|--------|----|
| Operating voltage range | [V AC] | 30 |
| Operating voltage range | [V DC] | 30 |

| Electromechanical components – Connection technology | | | |
|--|--|------------------------|------------------------|
| Type | NEBU-M5G4-K-5-Q3-LE3 | NEBU-M5G4-K-1-Q3-M8G3 | NEBU-M5G4-K-1-Q3-M12G4 |
| Connection technology, left-hand end | | | |
| Electrical connection | Straight socket | | |
| | M5x0.5 | | |
| | 4-pin | | |
| Connection technology, right-hand end | | | |
| Electrical connection | Open end | Straight plug | Straight plug |
| | – | M8x1 | M12x1 |
| | 3-wire | 4-pin | 4-pin |
| Max. tightening torque, socket | [Nm] 0.3 | 0.3 | 0.3 |
| Max. tightening torque, plug | [Nm] – | 0.3 | 0.5 |
| Cable property | Standard | Standard | Standard |
| Cable test conditions, standard | Energy chain: 5 million cycles, bending radius 75 mm | | |
| | Resistance to bending: to Festo standard | | |
| | Test conditions on request | | |
| Cable length | [m] 5 | 1 | 1 |
| Cable sheath colour | Grey | Grey | Grey |
| Cable composition | 3x0.14 mm ² | 3x0.14 mm ² | 4x0.14 mm ² |
| Cable type | LiFY11Y | LiFY11Y | LiFY11Y |
| Information on cable sheath materials | TPE-U(PU) | TPE-U(PU) | TPE-U(PU) |
| Information on pin contact materials | Gold-plated brass | Gold-plated brass | Gold-plated brass |
| Cable diameter | [mm] 2.9 | 2.9 | 3.4 |
| Conductor nominal cross section | [mm ²] 0.14 | 0.14 | 0.14 |
| Wire ends | Wire end sleeve | – | – |
| Acceptable current load | [A] 1.7 | 1.7 | 1.7 |

Connecting cables NEBU-M5

Technical data

| Mechanical components | | | |
|------------------------------------|----------------------------------|-----------------------|------------------------|
| Type | NEBU-M5G4-K-5-Q3-LE3 | NEBU-M5G4-K-1-Q3-M8G3 | NEBU-M5G4-K-1-Q3-M12G4 |
| Min. cable bending radius [mm] | 30 | 30 | 35 |
| Type of mounting | Via knurled nut Via union nut | | |
| Housing colour | Black | | |
| Information on housing materials | TPE-U(PU) | | |
| Information on union nut materials | Nickel-plated brass | | |

| Immissions/emissions | |
|-------------------------|------------|
| Protection class | IP65, IP67 |
| Degree of contamination | 3 |

| Pin allocation | | |
|----------------------|-----|-------------|
| NEBU-M5G4-K-5-Q3-LE3 | | |
| Socket M5x0.5, 4-pin | Pin | Wire colour |
| | 1 | Brown |
| | 3 | Blue |
| | 4 | Black |

| NEBU-M5G4-K-1-Q3-M8G3 | | | | | |
|-----------------------|-----|-------------|------------------|-----|-------------|
| Socket M5x0.5, 4-pin | Pin | Wire colour | Plug M8x1, 3-pin | Pin | Wire colour |
| | 1 | Brown | | 1 | Brown |
| | 3 | Blue | | 3 | Blue |
| | 4 | Black | | 4 | Black |

| NEBU-M5G4-K-1-Q3-M12G4 | | | | | |
|------------------------|-----|-------------|-------------------|-----|-------------|
| Socket M5x0.5, 4-pin | Pin | Wire colour | Plug M12x1, 4-pin | Pin | Wire colour |
| | 1 | Brown | | 1 | Brown |
| | 2 | White | | 2 | White |
| | 3 | Blue | | 3 | Blue |
| | 4 | Black | | 4 | Black |

Dimensions Download CAD Data → www.festo.com/us/cad

NEBU-M5G4-K-5-Q3-LE3

1 Socket M5x0.5, 4-pin

| Type | D1 ∅ | D2 | D3 ∅ | L1 [m] | L2 | L3 ±2 |
|----------------------|---------|--------|---------|-----------|------|----------|
| NEBU-M5G4-K-5-Q3-LE3 | 2.9 | M5x0.5 | 6 | 5 | 27.5 | 50 |

Connecting cables NEBU-M5

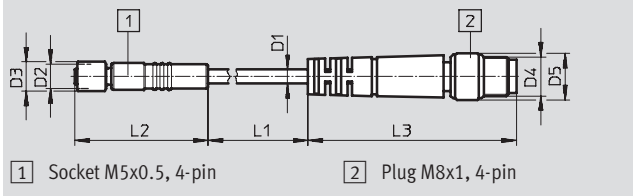
Technical data

FESTO

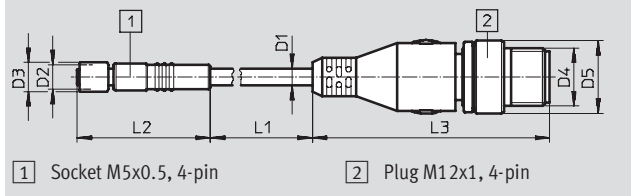
Dimensions

Download CAD Data → www.festo.com/us/cad

NEBU-M5G4-K-1-Q3-M8G3



NEBU-M5G4-K-1-Q3-M12G4



| Type | D1 ∅ | D2 | D3 ∅ | D4 | D5 ∅ | L1 [m] | L2 | L3 |
|------------------------|---------|--------|---------|-------|---------|-----------|------|----|
| NEBU-M5G4-K-1-Q3-M8G3 | 2.9 | M5x0.5 | 6 | M8x1 | 9.6 | 1 | 27.5 | 43 |
| NEBU-M5G4-K-1-Q3-M12G4 | 3.4 | M5x0.5 | 6 | M12x1 | 15 | 1 | 27.5 | 49 |

Ordering data

| Electrical connection | | Number of wires | Cable length [m] | Part No. | Type |
|-----------------------------------|--------------------------------|-----------------|---------------------|----------|------------------------|
| Left-hand end | Right-hand end | | | | |
| Cable property: Standard | | | | | |
| Socket M5x0.5, straight, 4-pin | Open end, 3-wire | 3 | 5 | 539508 | NEBU-M5G4-K-5-Q3-LE3 |
| | Plug M8x1, straight, 3-pin | 3 | 1 | 539510 | NEBU-M5G4-K-1-Q3-M8G3 |
| | Plug M12x1, straight, 4-pin | 4 | 1 | 539512 | NEBU-M5G4-K-1-Q3-M12G4 |

Connecting cables NEBU-LE

Type codes

| | | | | | | | | | | | | | | |
|--|--|---|----|---|---|---|---|---|---|--|---|-----|---|---|
| | NEBU | - | LE | 5 | - | K | - | 1 | - | | - | M12 | G | 5 |
| Function | | | | | | | | | | | | | | |
| NEBU | Connecting cable | | | | | | | | | | | | | |
| Connection technology, left-hand end | | | | | | | | | | | | | | |
| LE | Open end | | | | | | | | | | | | | |
| Number of pins/wires (left-hand end) | | | | | | | | | | | | | | |
| 3 | 3-pin | | | | | | | | | | | | | |
| 4 | 4-pin | | | | | | | | | | | | | |
| 5 | 5-pin | | | | | | | | | | | | | |
| Cable property | | | | | | | | | | | | | | |
| P | Basic | | | | | | | | | | | | | |
| K | Standard | | | | | | | | | | | | | |
| E | Suitable for use with energy chains | | | | | | | | | | | | | |
| R | Suitable for robots | | | | | | | | | | | | | |
| Cable length | | | | | | | | | | | | | | |
| 0.1 ... 30 | 0.1 ... 30 m | | | | | | | | | | | | | |
| Cable designation | | | | | | | | | | | | | | |
| | With inscription label holder (standard) | | | | | | | | | | | | | |
| N | Without inscription label holder | | | | | | | | | | | | | |
| Connection technology, right-hand end | | | | | | | | | | | | | | |
| M8 | Plug with connecting thread | | | | | | | | | | | | | |
| M12 | Plug with connecting thread, A-coded | | | | | | | | | | | | | |
| Plug design | | | | | | | | | | | | | | |
| G | Straight | | | | | | | | | | | | | |
| W | Angled | | | | | | | | | | | | | |
| Number of pins/wires (right-hand end) | | | | | | | | | | | | | | |
| 3 | 3-pin | | | | | | | | | | | | | |
| 4 | 4-pin | | | | | | | | | | | | | |
| 5 | 5-pin | | | | | | | | | | | | | |

Additional variants can be ordered using the modular system → 19

- Number of pins/wires (left-hand end)
- Cable property
- Cable designation
- Connection technology, right-hand end
- Plug design
- Number of pins/wires (right-hand end)

Connecting cables NEBU-M8

Type codes

NEBU - M8 G 3 - K - 2.5 - M8 G 3

Function

| | |
|------|------------------|
| NEBU | Connecting cable |
|------|------------------|

Connection technology, left-hand end

| | |
|----|-------------------------------|
| M8 | Socket with connecting thread |
|----|-------------------------------|

Socket design

| | |
|---|----------|
| G | Straight |
| W | Angled |

Number of pins/wires (left-hand end)

| | |
|---|-------|
| 3 | 3-pin |
| 4 | 4-pin |

Display

| | |
|---|------------------------|
| | Without LED (standard) |
| P | LED, PNP |
| N | LED, NPN |
| L | LED, DC |

Cable property

| | |
|---|-------------------------------------|
| P | Basic |
| K | Standard |
| E | Suitable for use with energy chains |
| R | Suitable for robots |

Cable length

| | |
|------------|--------------|
| 0.1 ... 30 | 0.1 ... 30 m |
|------------|--------------|

Cable designation

| | |
|---|--|
| | With inscription label holder (standard) |
| N | Without inscription label holder |

Connection technology, right-hand end

| | |
|-----|--------------------------------------|
| LE | Open end |
| M8 | Plug with connecting thread |
| M12 | Plug with connecting thread, A-coded |

Plug design

| | |
|---|----------|
| | Open end |
| G | Straight |
| W | Angled |

Number of pins/wires (right-hand end)

| | |
|---|-------|
| 2 | 2-pin |
| 3 | 3-pin |
| 4 | 4-pin |

Additional variants can be ordered using the modular system → 20

- Display
- Cable property
- Number of pins/wires (right-hand end)

Connecting cables NEBU-M12

Type codes

NEBU - M12 G 5 - K - 5 - - LE - 4

Function

| | |
|------|------------------|
| NEBU | Connecting cable |
|------|------------------|

Connection technology, left-hand end

| | |
|-----|--|
| M12 | Socket with connecting thread, A-coded |
|-----|--|

Socket design

| | |
|---|----------|
| G | Straight |
| W | Angled |

Number of pins/wires (left-hand end)

| | |
|---|-------|
| 5 | 5-pin |
|---|-------|

Display

| | |
|----|------------------------|
| | Without LED (standard) |
| P | LED, PNP |
| N | LED, NPN |
| P2 | 2x LED, PNP |

Cable property

| | |
|---|-------------------------------------|
| P | Basic |
| K | Standard |
| E | Suitable for use with energy chains |
| R | Suitable for robots |

Cable length

| | |
|------------|--------------|
| 0.1 ... 30 | 0.1 ... 30 m |
|------------|--------------|

Cable designation

| | |
|---|--|
| | With inscription label holder (standard) |
| N | Without inscription label holder |

Connection technology, right-hand end

| | |
|-----|--------------------------------------|
| LE | Open end |
| M8 | Plug with connecting thread |
| M12 | Plug with connecting thread, A-coded |

Plug design

| | |
|---|----------|
| | Open end |
| G | Straight |
| W | Angled |

Number of pins/wires (right-hand end)

| | |
|---|-------|
| 3 | 3-pin |
| 4 | 4-pin |
| 5 | 5-pin |

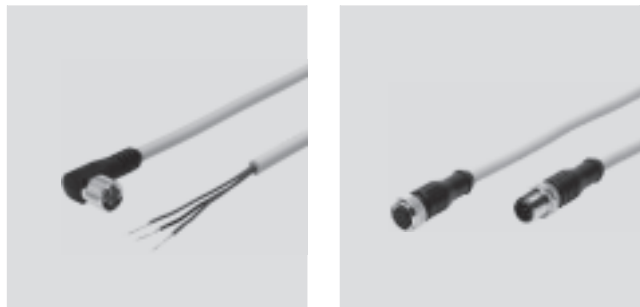
Additional variants can be ordered using the modular system → 21

- Display
- Cable property

Connecting cables NEBU-LE/M8/M12

Technical data

Connecting cable
NEBU-M8/M12
2, 3, 4 and 5-pin



| General technical data | | | |
|------------------------|---|------------------------|----------------|
| Type | NEBU-LE | NEBU-M8 | NEBU-M12 |
| Conforms to | EN 61076-2-101 | – | EN 61076-2-101 |
| | EN 61076-2-104 | EN 61076-2-104 | – |
| | EN 61984 | | |
| Note on materials | Free of copper and PTFE RoHS-compliant | | |
| Cable property | NEBU-...-E | Cable free of halogen | |
| | NEBU-...-R | Cable resistant to oil | |

| Electronic components | | | | | | |
|---------------------------------------|------------------------|------------------------|----------|-----------|------------------------|-----------|
| Type | NEBU-M8 | | | | | |
| Cable composition | 2x0.25 mm ² | 3x0.25 mm ² | | | 4x0.25 mm ² | |
| Display | L | – | P, N | – | P, N | |
| Operating voltage range ¹⁾ | [V AC] | – | 0 ... 60 | – | 0 ... 30 | – |
| Operating voltage range ¹⁾ | [V DC] | 21.6 ... 30 | 0 ... 60 | 10 ... 30 | 0 ... 30 | 10 ... 30 |

| Type | NEBU-M12 | | | | | |
|---------------------------------------|------------------------|-----------|------------------------|-----------|------------------------|----------|
| Cable composition | 3x0.25 mm ² | | 4x0.25 mm ² | | 5x0.25 mm ² | |
| Display | – | P, N | – | P2 | – | |
| Operating voltage range ¹⁾ | [V AC] | 0 ... 250 | – | 0 ... 250 | – | 0 ... 60 |
| Operating voltage range ¹⁾ | [V DC] | 0 ... 250 | 10 ... 30 | 0 ... 250 | 10 ... 30 | 0 ... 60 |

1) When different connection technologies are combined the lower value applies.

| Electromechanical components | | | | | | | | |
|--|-----------|------------|-----------------|-----------|------------|-----------------|-----------|------------|
| Type | NEBU-LE | | NEBU-M8 | | | NEBU-M12 | | |
| Electrical connection | Open end | | Socket M8x1 | | | Socket M12x1 | | |
| Connection technology, left-hand end | | | | | | | | |
| Electrical connection ¹⁾ | – | | Straight | | | Straight | | |
| | – | | Angled | | | Angled | | |
| | 3-wire | | 3-pin | | | – | | |
| | 4-wire | | 4-pin | | | – | | |
| 5-wire | | – | | | 5-pin | | | |
| Plug coding | – | | – | | | A | | |
| Connection technology, right-hand end | | | | | | | | |
| Electrical connection ¹⁾ | Plug M8x1 | Plug M12x1 | Open end | Plug M8x1 | Plug M12x1 | Open end | Plug M8x1 | Plug M12x1 |
| | Straight | | – | Straight | | – | Straight | |
| | Angled | | – | Angled | | – | Angled | |
| | – | – | 2-wire | – | – | – | – | – |
| | 3-pin | 3-pin | 3-wire | 3-pin | 3-pin | 3-wire | 3-pin | 3-pin |
| | 4-pin | 4-pin | 4-wire | 4-pin | 4-pin | 4-wire | 4-pin | 4-pin |
| – | 5-pin | – | – | – | 5-wire | – | 5-pin | |
| Acceptable current load at 40 °C ²⁾ | [A] | | 3 ³⁾ | | | 4 ⁴⁾ | | |

1) Depending on the combination of connection technology.

2) When different connection technologies are combined the lower value applies.

3) Also applies to display L.

4) Also applies to display P2.

Connecting cables NEBU-LE/M8/M12

Technical data

| Type | NEBU-...-P | NEBU-...-K | NEBU-...-E | NEBU-...-R |
|--|--|--|--|--|
| Cable property | Basic | Standard | Suitable for use with energy chains | Suitable for robot applications |
| Cable test conditions | Resistance to bending: to Festo standard | | | |
| | – | Energy chain: 5 million cycles, bending radius 75 mm | Energy chain: 5 million cycles, bending radius 28 mm | Energy chain: 5 million cycles, bending radius 28 mm |
| | – | – | – | Torsional strength: ±270°, test length 0.1 m |
| | Test conditions on request | | | |
| Cable length [m] | 0.1 ... 30 | | | |
| Cable sheath colour | Grey | | | |
| Cable composition | M8x1 | 2x0.25 mm ² | | |
| | | 3x0.25 mm ² | | |
| | | 4x0.25 mm ² | | |
| | M12x1 | 3x0.25 mm ² | | |
| | | 4x0.25 mm ² | | |
| | 5x0.25 mm ² | | | |
| Cable type ⁵⁾ | LiYY | LiFY11Y | Li12Y11Y | Li12Y11Y |
| Information on cable sheath materials | PVC-P | TPE-U(PU) | TPE-U(PU) | TPE-U(PU) |
| Information on insulating sheath materials ⁵⁾ | PVC-P | PVC-P | TPE-E | TPE-E |
| Information on pin contact materials | Gold-plated brass | | | |
| Cable diameter ⁵⁾ [mm] | 4.5 | | | |
| Conductor nominal cross section [mm ²] | 0.25 | | | |

5) The following applies to display L:
 Cable type: LiFY11Y for connection technology at right-hand end LE and LiF9Y11Y for connection technology at right-hand end plug M8 or M12,
 information on materials: insulating sheath PP,
 cable diameter: 3.4 mm.

| Mechanical components | |
|------------------------------------|---------------------|
| Housing colour | Black |
| Information on housing materials | TPE-U(PU) |
| Information on union nut materials | Nickel-plated brass |

| Display/operation | | | | |
|--------------------------|------------|------------|------------|-------------|
| Type | NEBU-...P | NEBU-...N | NEBU-...L | NEBU-...P2 |
| Display | LED, PNP | LED, NPN | LED, DC | 2x LED, PNP |
| Ready status display | Green LED | Green LED | – | Green LED |
| Switching status display | Yellow LED | Yellow LED | Yellow LED | Yellow LED |
| | – | – | – | Blue LED |

| Immissions/emissions | | | | |
|---|-------------|-------------|-------------------------------------|---------------------|
| Type | NEBU-...-P | NEBU-...-K | NEBU-...-E | NEBU-...-R |
| Cable property | Basic | Standard | Suitable for use with energy chains | Suitable for robots |
| Ambient temperature [°C] | –25 ... +70 | –25 ... +70 | –25 ... +80 | –25 ... +80 |
| Ambient temperature with flexible cable installation [°C] | –5 ... +80 | –5 ... +70 | –5 ... +80 | –5 ... +80 |
| Protection class | IP65, IP68 | | | |

| Type | NEBU-M8 | | | | |
|-----------------------------------|------------------------|-----|------------------------|-----|------------------------|
| Cable composition | 2x0.25 mm ² | | 3x0.25 mm ² | | 4x0.25 mm ² |
| Display | L | – | P, N | – | P, N |
| Surge capacity ¹⁾ [kV] | 0.8 | 1.5 | 0.8 | 0.8 | 0.8 |
| Degree of contamination | 3 | | | | |

1) When different connection technologies are combined the lower value applies.

Connecting cables NEBU-LE/M8/M12

Technical data

| | | | | | | |
|-----------------------------------|------------------------|------|------------------------|-----|------------------------|--|
| Type | NEBU-M12 | | | | | |
| Cable composition | 3x0.25 mm ² | | 4x0.25 mm ² | | 5x0.25 mm ² | |
| Display | - | P, N | - | P2 | - | |
| Surge capacity ¹⁾ [kV] | 2.5 ²⁾ | 0.8 | 2.5 | 0.8 | 1.5 | |
| Degree of contamination | 3 | | | | | |

- 1) When different connection technologies are combined the lower value applies.
 2) 0.8 kV applies for alternative number of wires = 3.

| Pin allocation to EN 60947-5-2 | | | | | | |
|--------------------------------|-----|-------------|-------|-----|-------------|--|
| Socket M8x1 | | | | | | |
| 3-pin | Pin | Wire colour | 4-pin | Pin | Wire colour | |
| | 1 | Brown | | 1 | Brown | |
| | 3 | Blue | | 2 | White | |
| | 4 | Black | | 3 | Blue | |
| | | | | 4 | Black | |

| Plug M8x1 | | | | | | |
|-----------|-----|-------------|-------|-----|-------------|--|
| 3-pin | Pin | Wire colour | 4-pin | Pin | Wire colour | |
| | 1 | Brown | | 1 | Brown | |
| | 3 | Blue | | 2 | White | |
| | 4 | Black | | 3 | Blue | |
| | | | | 4 | Black | |

| Socket M12x1 | | | | | | | | |
|--------------|-----|-------------|-------|-----|-------------|-------|-----|-------------|
| 3-pin | Pin | Wire colour | 4-pin | Pin | Wire colour | 5-pin | Pin | Wire colour |
| | 1 | Brown | | 1 | Brown | | 1 | Brown |
| | 3 | Blue | | 2 | White | | 2 | White |
| | 4 | Black | | 3 | Blue | | 3 | Blue |
| | | | | 4 | Black | | 4 | Black |
| | | | | | | | 5 | Grey |

| Plug M12x1 | | | | | | | | |
|------------|-----|-------------|-------|-----|-------------|-------|-----|-------------|
| 3-pin | Pin | Wire colour | 4-pin | Pin | Wire colour | 5-pin | Pin | Wire colour |
| | 1 | Brown | | 1 | Brown | | 1 | Brown |
| | 3 | Blue | | 2 | White | | 2 | White |
| | 4 | Black | | 3 | Blue | | 3 | Blue |
| | | | | 4 | Black | | 4 | Black |
| | | | | | | | 5 | Grey |

| Pin allocation – Display L | | | | | | | | |
|----------------------------|-----|-------------|-----------|-----|-------|------------|-------|-----|
| Socket M8x1 | | | Plug M8x1 | | | Plug M12x1 | | |
| 4-pin | Pin | Wire colour | 3-pin | Pin | 4-pin | Pin | 2-pin | Pin |
| | 3 | Black | | 3 | | 3 | | 3 |
| | 4 | Black | | 4 | | 4 | | 4 |

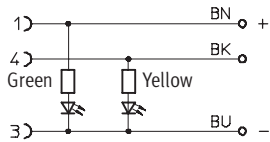
| Pin allocation – NEBU-M12 suitable for use with energy chains | | | | | | | | |
|---|-----------|------------------|-----------------------------|-----------|------------------|---------------------|-----------|------------------|
| NEBU-M12G5-E-2.5-W2-M8G4-V1 | | | NEBU-M12G5-E-2.5-W3-M8G4-V2 | | | | | |
| Socket M12x1, 5-pin | Pin → pin | Plug M8x1, 4-pin | Socket M12x1, 5-pin | Pin → pin | Plug M8x1, 4-pin | Socket M12x1, 5-pin | Pin → pin | Plug M8x1, 4-pin |
| | 1 → 1 | | | 1 → 1 | | | 3 → 3 | |
| | 3 → 2 | | | 4 → 4 | | | | |

Connecting cables NEBU-LE/M8/M12

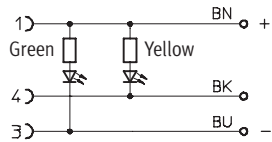
Technical data

Circuit diagram

LED display, PNP



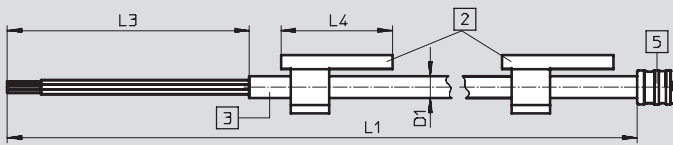
LED display, NPN



Dimensions – Connection technology at left-hand end

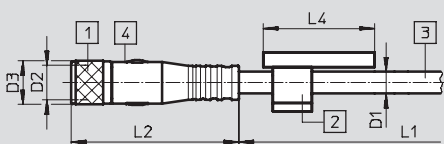
Download CAD Data → www.festo.com/us/cad

Open end



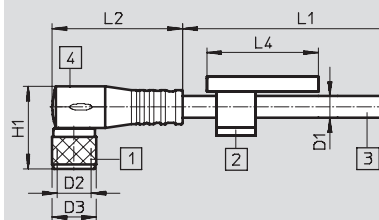
- 2 Inscription label holder
- 3 Cable
- 5 Socket

Socket M8x1, straight



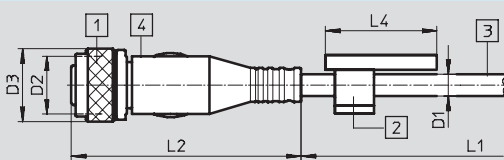
- 1 Socket M8x1, straight
- 2 Inscription label holder
- 3 Cable
- 4 Display field with version P, N or L

Socket M8x1, angled



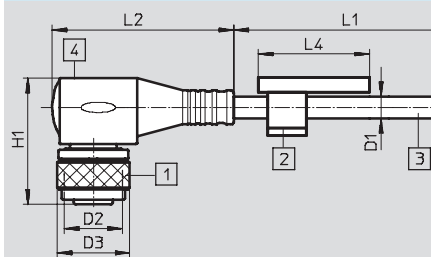
- 1 Socket M8x1, angled
- 2 Inscription label holder
- 3 Cable
- 4 Display field with version P, N or L

Socket M12x1, straight



- 1 Socket M12x1, straight
- 2 Inscription label holder
- 3 Cable
- 4 Display field with version P, N or P2

Socket M12x1, angled



- 1 Socket M12x1, angled
- 2 Inscription label holder
- 3 Cable
- 4 Display field with version P, N or P2

| Type | Connection technology, left-hand end | D1 ∅ | D2 | D3 ∅ | L1 [m] | L2 | L3 | L4 | H1 |
|-------------------------|--------------------------------------|---------|-------|---------|------------|------|----|----|----|
| NEBU-LE | Open end | 4.5 | – | – | 0.1 ... 30 | – | 50 | 23 | – |
| NEBU-M8G | Socket M8x1, straight | 4.5 | M8x1 | 9 | 0.1 ... 30 | 34.6 | – | 23 | – |
| NEBU-M8W | Socket M8x1, angled | | | | | 26.9 | | | 17 |
| NEBU-M12G | Socket M12x1, straight | 4.5 | M12x1 | 15 | 0.1 ... 30 | 47.5 | – | 23 | – |
| NEBU-M12W | Socket M12x1, angled | | | | | 37.5 | | | 26 |
| With display | | | | | | | | | |
| NEBU-M8GP/-...N/-...L | Socket M8x1, straight | 3.4 | M8x1 | 9 | 0.1 ... 30 | 34.6 | – | 23 | – |
| NEBU-M8WP/-...N/-...L | Socket M8x1, angled | | | | | 26.9 | | | 17 |
| NEBU-M12GP/-...N/-...P2 | Socket M12x1, straight | 4.5 | M12x1 | 15 | 0.1 ... 30 | 47.5 | – | 23 | – |
| NEBU-M12WP/-...N/-...P2 | Socket M12x1, angled | | | | | 37.5 | | | 26 |

Connecting cables NEBU-LE/M8/M12

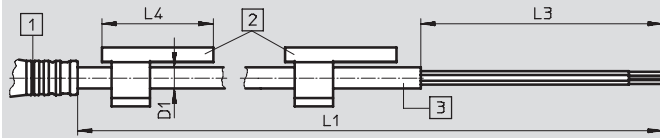
Technical data

FESTO

Dimensions – Connection technology at right-hand end

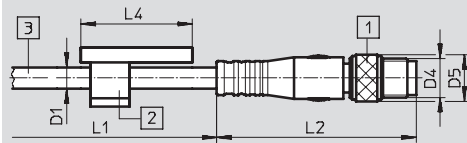
Download CAD Data → www.festo.com/us/cad

Open end



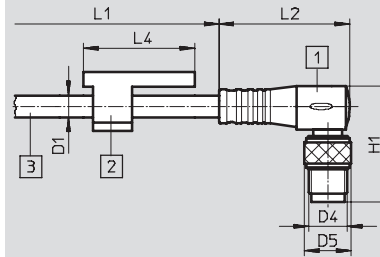
- 1 Socket
- 2 Inscription label holder
- 3 Cable

Plug M8x1, straight



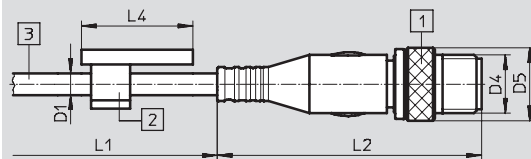
- 1 Plug M8x1, straight
- 2 Inscription label holder
- 3 Cable

Plug M8x1, angled



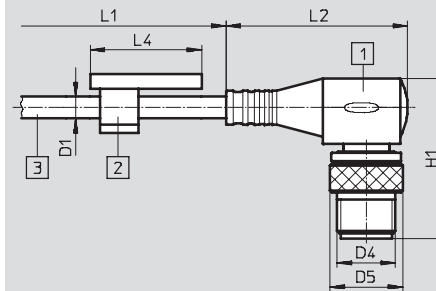
- 1 Plug M8x1, angled
- 2 Inscription label holder
- 3 Cable

Plug M12x1, straight



- 1 Plug M12x1, straight
- 2 Inscription label holder
- 3 Cable

Plug M12x1, angled













- 1 Plug M12x1, angled
- 2 Inscription label holder
- 3 Cable

| Type | Connection technology, right-hand end | D1 ∅ | D4 | D5 ∅ | L1 [m] | L2 | L3 | L4 | H1 |
|--------------------|---------------------------------------|---------|-------|---------|------------|------|----|----|------|
| NEBU-M...-...-LE | Open end | 4.5 | - | - | 0.1 ... 30 | - | 50 | 23 | - |
| NEBU-M...-...-M8G | Plug M8x1, straight | 4.5 | M8x1 | 9.6 | 0.1 ... 30 | 41.1 | - | 23 | - |
| NEBU-M...-...-M8W | Plug M8x1, angled | | | | | 26.9 | | | 24 |
| NEBU-M...-...-M12G | Plug M12x1, straight | 4.5 | M12x1 | 15 | 0.1 ... 30 | 54.5 | - | 23 | - |
| NEBU-M...-...-M12W | Plug M12x1, angled | | | | | 37.5 | | | 33.2 |

Connecting cables NEBU-LE/M8/M12

Technical data

FESTO

| Ordering data | | | | | | | | |
|---|------------------------|-----------------------|------------------------|-----------------|---|--|----------------------|----------------------|
| Electrical connection | | | | Cable length | Part No. | Type | | |
| Left-hand end | | Right-hand end | | [m] | | | | |
| Cable property: Standard | | | | | | | | |
| 5-wire | Open end | 5-pin | Plug M12x1, straight | 1 | 569840 | NEBU-LE5-K-1-M12G5  | | |
| 3-pin | Socket M8x1, straight | 3-wire | Cable, open end | 2.5 | 541333 | NEBU-M8G3-K-2.5-LE3 | | |
| | | | | 5 | 541334 | NEBU-M8G3-K-5-LE3 | | |
| | | | | 10 | 541332 | NEBU-M8G3-K-10-LE3 | | |
| | | 3-pin | Plug M8x1, straight | 0.5 | 541346 | NEBU-M8G3-K-0.5-M8G3 | | |
| | | | | 1 | 541347 | NEBU-M8G3-K-1-M8G3 | | |
| | | | | 2.5 | 541348 | NEBU-M8G3-K-2.5-M8G3 | | |
| | 5 | | | 541349 | NEBU-M8G3-K-5-M8G3 | | | |
| | 4-pin | Plug M8x1, straight | 2.5 | 5 | 569844 | NEBU-M8G3-K-10-M8G3  | | |
| | | | | 10 | 569844 | NEBU-M8G3-K-10-M8G3 | | |
| | 4-pin | Socket M8x1, straight | 4-wire | Cable, open end | 2.5 | 554037 | NEBU-M8G3-K-2.5-M8G4 | |
| 5 | | | | | 541338 | NEBU-M8W3-K-2.5-LE3 | | |
| 10 | | | | | 541341 | NEBU-M8W3-K-5-LE3 | | |
| Socket M8x1, angled | | 3-wire | Cable, open end | 2.5 | 541335 | NEBU-M8W3-K-10-LE3 | | |
| | | | | 5 | 541341 | NEBU-M8W3-K-5-LE3 | | |
| | | | | 10 | 541335 | NEBU-M8W3-K-10-LE3 | | |
| 4-pin | Socket M8x1, straight | 4-wire | Cable, open end | 2.5 | 541342 | NEBU-M8G4-K-2.5-LE4 | | |
| | | | | 5 | 541343 | NEBU-M8G4-K-5-LE4 | | |
| | | 4-pin | Plug M8x1, straight | 2.5 | 5 | 554035 | NEBU-M8G4-K-2.5-M8G4 | |
| | | | | | 5 | 541344 | NEBU-M8W4-K-2.5-LE4 | |
| | Socket M8x1, angled | 4-wire | Cable, open end | 2.5 | 541345 | NEBU-M8W4-K-5-LE4 | | |
| | | | | 5 | 541345 | NEBU-M8W4-K-5-LE4 | | |
| | | | | 10 | 541345 | NEBU-M8W4-K-5-LE4 | | |
| | | 5-pin | Socket M12x1, straight | 3-wire | Cable, open end | 2.5 | 541363 | NEBU-M12G5-K-2.5-LE3 |
| | | | | | | 5 | 541364 | NEBU-M12G5-K-5-LE3 |
| | | | | 4-wire | Cable, open end | 2.5 | 550326 | NEBU-M12G5-K-2.5-LE4 |
| 5 | 541328 | | | | | NEBU-M12G5-K-5-LE4 | | |
| 5-wire | Cable, open end | | | 2.5 | 541330 | NEBU-M12G5-K-2.5-LE5 | | |
| | | | | 5 | 541331 | NEBU-M12G5-K-5-LE5 | | |
| 4-pin | Plug M8x1, straight | 2.5 | 5 | 554038 | NEBU-M12G5-K-10-LE5 | | | |
| | | | 10 | 554038 | NEBU-M12G5-K-10-LE5 | | | |
| 5-pin | Socket M12x1, angled | 3-wire | Cable, open end | 2.5 | 554036 | NEBU-M12G5-K-2.5-M8G4 | | |
| | | | | 5 | 541367 | NEBU-M12W5-K-2.5-LE3 | | |
| | | 4-wire | Cable, open end | 2.5 | 541370 | NEBU-M12W5-K-5-LE3 | | |
| | | | | 5 | 550325 | NEBU-M12W5-K-2.5-LE4 | | |
| | 5-wire | Cable, open end | 2.5 | 541329 | NEBU-M12W5-K-5-LE4 | | | |
| | | | 5 | 569841 | NEBU-M12W5-K-10-LE4  | | | |
| | 5-wire | Cable, open end | 2.5 | 5 | 567843 | NEBU-M12W5-K-2.5-LE5  | | |
| | | | | 5 | 567844 | NEBU-M12W5-K-5-LE5  | | |
| Cable property: Suitable for use with energy chains | | | | | | | | |
| 3-pin | Socket M8x1, straight | 3-wire | Cable, open end | 5 | 569843 | NEBU-M8G3-E-5-LE3  | | |
| | | | | 10 | 569842 | NEBU-M8G3-E-10-LE3  | | |
| 5-pin | Socket M12x1, straight | 4-pin | Plug M8x1, straight | 2.5 | 554034 | NEBU-M12G5-E-2.5-W2-M8G4-V1 ¹⁾ | | |
| | | | | 5 | 554033 | NEBU-M12G5-E-2.5-W3-M8G4-V2 ²⁾ | | |
| Cable property: Suitable for robots | | | | | | | | |
| 3-pin | Socket M8x1, straight | 3-wire | Cable, open end | 2.5 | 569845 | NEBU-M8G3-R-2.5-LE3  | | |
| | | | | 5 | 569846 | NEBU-M8G3-R-5-LE3  | | |
| | Socket M8x1, angled | 3-wire | Cable, open end | 2.5 | 569847 | NEBU-M8W3-R-2.5-LE3  | | |
| 4-pin | Socket M8x1, straight | 4-pin | Plug M8x1, straight | 2 | 556946 | NEBU-M8G4-R-2-M8G4 | | |

1) Pin allocation designed for connecting the pressure transmitter SDET...-I to the signal converter SVE4-IS

2) Pin allocation designed for connecting the pressure transmitter SDET...-U to the signal converter SVE4-US

Connecting cables NEBU-LE/M8/M12

Technical data

| Ordering data | | | | | | | |
|-------------------------------|-------------------------|----------------|-----------------|------------------|---------------------|----------|-----------------------|
| Electrical connection | | | | Switching output | Cable length [m] | Part No. | Type |
| Left-hand end | | Right-hand end | | | | | |
| With switching status display | | | | | | | |
| 3-pin | Socket M8x1, angled | 3-wire | Cable, open end | PNP | 2.5 | 541 337 | NEBU-M8W3P-K-2.5-LE3 |
| | | | | | 5 | 541 340 | NEBU-M8W3P-K-5-LE3 |
| | | | | NPN | 2.5 | 541 336 | NEBU-M8W3N-K-2.5-LE3 |
| | | | | | 5 | 541 339 | NEBU-M8W3N-K-5-LE3 |
| 5-pin | Socket M12x1, angled | 3-wire | Cable, open end | PNP | 2.5 | 541 366 | NEBU-M12W5P-K-2.5-LE3 |
| | | | | | 5 | 541 369 | NEBU-M12W5P-K-5-LE3 |
| | | | | NPN | 2.5 | 541 365 | NEBU-M12W5N-K-2.5-LE3 |
| | | | | | 5 | 541 368 | NEBU-M12W5N-K-5-LE3 |

Connecting cables NEBU-LE

Ordering data – Modular products

FESTO

| Ordering table | | Condition s | Code | Enter code |
|----------------|--|--|---------------------------------|---------------|
| M | Module No. | 539052 | | |
| | Function | Connecting cable | NEBU | NEBU |
| | Connection technology, left-hand end | Open end | -LE | -LE |
| M | Number of pins/wires (left-hand end) | 3-pin (suitable for open end, M8 plug) | <input type="text" value="10"/> | 3 |
| | | 4-pin (suitable for open end, M8 plug) | <input type="text" value="10"/> | 4 |
| | | 5-pin (suitable for 3, 4 and 5-pin M12 plug) | <input type="text" value="10"/> | 5 |
| M | Cable properties | Basic | | -P |
| | | Standard | | -K |
| | | Suitable for use with energy chains | | -E |
| | | Suitable for robots | | -R |
| | Cable length | 0.1 ... 30 m (0.1 ... 2.5 m in 0.1 m increments, 2.5 ... 30 m in 0.5 m increments) | | -... |
| O | Wire cross section | 0.25 mm ² (standard) | | |
| | Cable colour | Grey (standard) | | |
| | Cable designation | With inscription label holder (standard) | | |
| | | Without inscription label holder | | -N |
| M | Connection technology, right-hand end | Plug with connecting thread M8 | | -M8 |
| | | Plug with connecting thread M12, A-coded | | -M12 |
| M | Plug design | Straight | | G |
| | | Angled | | W |
| M | Number of pins/wires (right-hand end) | 3-pin (suitable for M8/M12 socket) | <input type="text" value="9"/> | 3 |
| | | 4-pin (suitable for M8/M12 socket) | <input type="text" value="9"/> | 4 |
| | | 5-pin (suitable for M12 socket) | <input type="text" value="9"/> | 5 |

- 3, 4, 5** With LE connection technology at the left-hand end, the number of wires (left-hand end) must be copied over.
- 3, 4, 5** With LE connection technology at the left-hand end, the number of wires must be equal to the number of pins (right-hand end).

Transfer order code

- - - - -

Connecting cables NEBU-M8

Ordering data – Modular products

| Ordering table | | Conditions | Code | Enter code |
|----------------|---------------------------------------|--|-----------------|------------|
| M | Module No. | 539052 | | |
| | Function | Connecting cable | NEBU | NEBU |
| | Connection technology, left-hand end | Socket with connecting thread M8 | -M8 | -M8 |
| M | Socket design | Straight | G | |
| | | Angled | W | |
| M | Number of pins/wires (left-hand end) | 3-pin (suitable for open end, M8 plug) | ¹⁰ 3 | |
| | | 4-pin (suitable for open end, M8 plug) | ¹⁰ 4 | |
| O | Display | Without LED, DC (standard) | | |
| | | LED, PNP | ¹ P | |
| | | LED, NPN | ¹ N | |
| | | LED, DC | ¹¹ L | |
| M | Cable properties | Basic | -P | |
| | | Standard | -K | |
| | | Suitable for use with energy chains | -E | |
| | | Suitable for robots | -R | |
| | Cable length | 0.1 ... 30 m (0.1 ... 2.5 m in 0.1 m increments, 2.5 ... 30 m in 0.5 m increments) | -... | |
| O | Wire cross section | 0.25 mm ² (standard) | | |
| | Cable colour | Grey (standard) | | |
| | Cable designation | With inscription label holder (standard) | | |
| | | Without inscription label holder | -N | |
| M | Connection technology, right-hand end | Open end | -LE | |
| | | Plug with connecting thread M8 | -M8 | |
| | | Plug with connecting thread M12, A-coded | -M12 | |
| O | Plug design | Straight | ² G | |
| | | Angled | ² W | |
| M | Number of pins/wires (right-hand end) | 2-pin | ¹³ 2 | |
| | | 3-pin (suitable for M8/M12 socket) | ¹⁰ 3 | |
| | | 4-pin (suitable for M8/M12 socket) | ¹⁰ 4 | |

- ¹ **P, N** Can only be combined with socket design W and number of pins/wires (left-hand end) 3.
- ² **G, W** Must be selected with M8, M12 connection technology at right-hand end. Cannot be combined with LE connection technology at right-hand end.
- ¹⁰ **3, 4** With open end LE at right-hand end, the number of wires must be less than or equal to the number of pins on the opposite side.

- ¹¹ **L** Can only be combined with number of pins/wires (left-hand end) 4. Can only be combined with M8 connection technology at right-hand end with number of pins/wires (right-hand end) 3, 4 or with LE, M12 connection technology at right-hand end with number of pins/wires (right-hand end) 2 (always a 2-wire cable). Can only be combined with cable property K.
- ¹³ **2** Can only be combined with LE connection technology at right-hand end. Cannot be combined with cable property P, E, R.

Transfer order code

539052 NEBU - M8 [] [] [] - [] - [] - [] - [] [] []

Connecting cables NEBU-M12

Ordering data – Modular products

FESTO

| Ordering table | | Condition s | Code | Enter code |
|----------------|--|--|---------------------|---------------|
| M | Module No. | 539052 | | |
| | Function | Connecting cable | NEBU | NEBU |
| | Connection technology, left-hand end | Socket with connecting thread M12, A-coded | -M12 | -M12 |
| M | Socket design | Straight | G | |
| | | Angled | W | |
| M | Number of pins/wires (left-hand end) | 5-pin (suitable for 3, 4 and 5-pin M12 plug) | 5 | 5 |
| O | Display | Without LED, DC (standard) | | |
| | | LED, PNP | 1 P | |
| | | LED, NPN | 1 N | |
| | | 2x LED, PNP | 12 P2 | |
| M | Cable property | Basic | -P | |
| | | Standard | -K | |
| | | Suitable for use with energy chains | -E | |
| | | Suitable for robots | -R | |
| | Cable length | 0.1 ... 30 m (0.1 ... 2.5 m in 0.1 m increments, 2.5 ... 30 m in 0.5 m increments) | -... | |
| O | Wire cross section | 0.25 mm ² (standard) | | |
| | Cable colour | Grey (standard) | | |
| | Cable designation | With inscription label holder (standard) | | |
| | | Without inscription label holder | -N | |
| M | Connection technology, right-hand end | Open end | -LE | |
| | | Plug with connecting thread M8 | -M8 | |
| | | Plug with connecting thread M12, A-coded | -M12 | |
| O | Plug design | Straight | 2 G | |
| | | Angled | 2 W | |
| M | Number of pins/wires (right-hand end) | 3-pin (suitable for M8/M12 socket) | 10 3 | |
| | | 4-pin (suitable for M8/M12 socket) | 10 4 | |
| | | 5-pin (suitable for M12 socket) | 10 5 | |

- 1 P, N** Can only be combined with socket design W and number of pins/wires (left-hand end) 5 and number of pins/wires (right-hand end) 3.
- 2 G, W** Must be selected with M8, M12 connection technology at right-hand end. Cannot be combined with LE connection technology at right-hand end.

- 10 3, 4, 5** With open end LE at right-hand end, the number of wires must be less than or equal to the number of pins on the opposite side.
- 12 P2** Can only be combined with socket design W. Can only be combined with number of pins/wires (right-hand end) 4.

Transfer order code

539052 NEBU - M12 [] 5 [] - [] - [] - [] - [] [] []

Connecting cables NEBU-M12...8

Technical data

FESTO

Connecting cable
NEBU-M12
8-pin



| Electronic components | | |
|-------------------------|--------|----------|
| Operating voltage range | [V AC] | 0 ... 30 |
| Operating voltage range | [V DC] | 0 ... 36 |

| Electromechanical components | | |
|---------------------------------------|------|------------------------|
| Connection technology, left-hand end | | |
| Electrical connection | | Angled socket |
| | | M12x1 |
| | | 8-pin |
| Plug coding | | A |
| Connection technology, right-hand end | | |
| Electrical connection | | Open end |
| | | 8-wire |
| Cable length | [m] | 2 |
| | | 5 |
| | | 10 |
| Cable sheath colour | | Grey |
| Cable composition | | 8x0.25 mm ² |
| | | Screened |
| Wire ends | | Tin-plated |
| Information on cable sheath materials | | PUR |
| Min. cable bending radius | [mm] | 66 |
| Acceptable current load | [A] | 1.5 |

| Immissions/emissions | | |
|----------------------|------|-------------|
| Ambient temperature | [°C] | -25 ... +90 |
| Protection class | | IP67 |

| Pin allocation | | |
|----------------|-----|-------------|
| Socket M12x1 | | |
| 8-pin | Pin | Wire colour |
| | 1 | White |
| | 2 | Brown |
| | 3 | Green |
| | 4 | Yellow |
| | 5 | Grey |
| | 6 | Pink |
| | 7 | Blue |
| | 8 | Red |

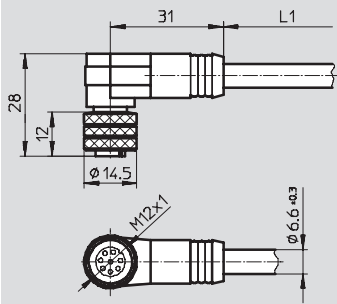
Connecting cables NEBU-M12...8

Technical data

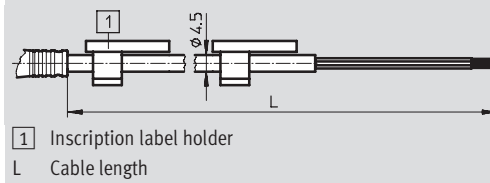
Dimensions

Download CAD Data → www.festo.com/us/cad

Electrical connection, left-hand end
Socket M12x1, angled



Electrical connection, right-hand end
Open end



1 Inscription label holder
L Cable length

Ordering data

| Electrical connection | | Cable length L | | Part No. | Type |
|--------------------------|----------------------|----------------|-----------------|----------|----------------------------|
| Left-hand end | Right-hand end | [m] | | | |
| Cable property: Standard | | | | | |
| 8-pin | Socket M12x1, angled | 8-wire | Cable, open end | 2 | 542256 NEBU-M12W8-2-N-LE8 |
| | | | | 5 | 542257 NEBU-M12W8-5-N-LE8 |
| | | | | 10 | 570007 NEBU-M12W8-10-N-LE8 |

Connecting cables SIM

Type codes

FESTO

SIM – M8 – [] – 4 – WD – 2,5 – [] – [] – PU – []

Type

| | |
|-----|------------------------------------|
| SIM | Plug socket with cable for sensors |
|-----|------------------------------------|

Electrical connection

| | |
|-----|-----------------|
| M8 | Union nut M8x1 |
| M12 | Union nut M12x1 |
| K | Clip-on plug |

Welding field immunity

| | |
|----|---------------------------------------|
| | Basic type, no welding field immunity |
| RS | Welding field immune |

Number of wires

| | |
|---|--------|
| | 3-wire |
| 3 | 3-wire |
| 4 | 4-wire |
| 5 | 5-wire |
| 8 | 8-wire |

Connection direction

| | |
|----|---------|
| GD | In-line |
| WD | Lateral |

Cable length

| | |
|-----|-------|
| 2 | 2 m |
| 2,5 | 2.5 m |
| 3 | 3 m |
| 5 | 5 m |
| 10 | 10 m |

Switching output

| | |
|----|------------|
| | PNP or NPN |
| PS | PNP |
| NS | NPN |

Display

| | |
|---|-----|
| L | LED |
|---|-----|

Cable sheath material

| | |
|----|--------------------|
| PU | Polyurethane |
| | Polyvinyl chloride |

Ease of cleaning

| | |
|-----|--|
| | Basic version |
| CDN | Clean Design, suitable for the food industry |

Connecting cables SIM-M8/M12

Technical data

Connecting cable
SIM-M8/M12,
3, 4 and 5-pin



| General technical data | | |
|------------------------|---|----------------|
| Type | SIM-M8 | SIM-M12 |
| Conforms to | EN 61076-2-104 EN 61984 | EN 61076-2-101 |
| Note on materials | Free of copper and PTFE RoHS-compliant | |

| Electronic components | | | | | | | |
|--------------------------------|----------|----------|-----------|-----------|----------|-----------|--------------|
| Type | SIM-M8 | | | SIM-M12 | | | SIM-...-...L |
| Electrical connection | 3-pin | 4-pin | 3-pin | 4-pin | 5-pin | 3-pin | |
| Operating voltage range [V AC] | 0 ... 60 | 0 ... 30 | 0 ... 250 | 0 ... 250 | 0 ... 60 | – | |
| Operating voltage range [V DC] | 0 ... 60 | 0 ... 30 | 0 ... 250 | 0 ... 250 | 0 ... 60 | 10 ... 30 | |

| Electromechanical components | | | | | | | | |
|--|--|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|------------------|
| Type | SIM-M8 | | | SIM-M12 | | | SIM-M8-...-...L | SIM-M12-...-...L |
| Electrical connection | 3-pin | 4-pin | 3-pin | 4-pin | 5-pin | 3-pin | | |
| Connection technology, left-hand end | | | | | | | | |
| Electrical connection | Straight socket | | Straight socket | | | – | | |
| | Angled socket | | Angled socket | | | – | | |
| | M8x1 | | M12x1 | | | M8x1 M12x1 | | |
| Electrical connection | 3-pin | 4-pin | 3-pin | 4-pin | 5-pin | 3-pin | | |
| Plug coding | A | | | A | | | A | |
| Connection technology, right-hand end | | | | | | | | |
| Electrical connection | Open end | | Open end | | | Open end | | |
| | 3-wire | 4-wire | 3-wire | 4-wire | 5-wire | 3-wire | | |
| Cable property | Standard | | | | | | | |
| Cable test conditions | Energy chain: 5 million cycles, bending radius 75 mm | | | | | | | |
| | Resistance to bending: to Festo standard | | | | | | | |
| | Test conditions on request | | | | | | | |
| Cable length [m] | 2.5 | 2.5 | 2.5 | – | 2.5 | 2.5 | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | 10 | – | – | – | – | – | | |
| Cable sheath colour | Grey | | | | | Grey | | |
| Cable composition | 3x0.25 mm ² | 4x0.25 mm ² | 3x0.25 mm ² | 4x0.25 mm ² | 5x0.25 mm ² | 3x0.25 mm ² | | |
| Information on cable sheath materials | TPE-U(PU) | | | TPE-U(PU) | | | TPE-U(PU) | |
| Information on insulating sheath materials | PVC | | | PVC | | | PVC | |
| Cable diameter [mm] | 4.5 | | | 4.5 | | | 4.5 | |
| Conductor nominal cross section [mm ²] | 0.25 | | | 0.25 | | | 0.25 | |
| Acceptable current load at 40 °C [A] | 3 | | | 4 | | | 3 4 | |



| Mechanical components | |
|------------------------------------|---------------------|
| Housing colour | Black |
| Information on housing materials | TPE-U(PU) |
| Information on union nut materials | Nickel-plated brass |




Connecting cables SIM-M8/M12

Technical data

| Display/operation | |
|--------------------------|--------------|
| Type | SIM-...-...L |
| Ready status display | Green LED |
| Switching status display | Yellow LED |

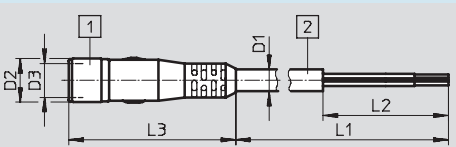
| Immissions/emissions | | | | | | |
|---|-------------|-------|-------------|-------|-------|--------------|
| Type | SIM-M8 | | SIM-M12 | | | SIM-...-...L |
| Electrical connection | 3-pin | 4-pin | 3-pin | 4-pin | 5-pin | 3-pin |
| Ambient temperature [°C] | -25 ... +70 | | -25 ... +70 | | | -25 ... +70 |
| Ambient temperature with flexible cable installation [°C] | -5 ... +70 | | -5 ... +70 | | | -5 ... +70 |
| Protection class | IP65, IP68 | | IP65, IP68 | | | IP65, IP68 |
| Surge capacity [kV] | 1.5 | 0.8 | 2.5 | 2.5 | 1.5 | 0.8 |
| Degree of contamination | 3 | | 3 | | | 3 |

| Pin allocation to EN 60947-5-2 | | | | | | |
|--|-----|-------------|--|-----|-------------|--|
| M8x1 | | | | | | |
| Socket, 3-pin | Pin | Wire colour | Socket, 4-pin | Pin | Wire colour | |
|  | 1 | Brown |  | 1 | Brown | |
| | 3 | Blue | | 2 | White | |
| | 4 | Black | | 3 | Blue | |
| | | | | 4 | Black | |

| M12x1 | | | | | | | | |
|---|-----|-------------|---|-----|-------------|---|-----|-------------|
| Socket, 3-pin | Pin | Wire colour | Socket, 4-pin | Pin | Wire colour | Socket, 5-pin | Pin | Wire colour |
|  | 1 | Brown |  | 1 | Brown |  | 1 | Brown |
| | 3 | Blue | | 2 | White | | 2 | White |
| | 4 | Black | | 3 | Blue | | 3 | Blue |
| | | | | 4 | Black | | 4 | Black |
| | | | | | | | 5 | Grey |

Dimensions

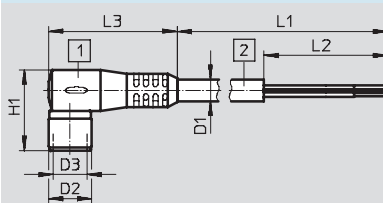
SIM-M8-...GD-...-PU



1 Straight socket, M8x1 2 PUR cable

Download CAD Data → www.festo.com/us/cad

SIM-M8-...WD-...-PU



1 Angled socket, M8x1 2 PUR cable

| | D1 | D2 | D3 | H1 | L1 | L2 | L3 |
|---------------------|------|------|------|-----------|--------|----|-----------|
| | ∅ | ∅ | | | | | |
| | ±0.1 | ±0.1 | | +0.3/-0.4 | +3% | ±2 | +0.4/-0.5 |
| SIM-M8-...GD-2,5-PU | 4.5 | 9 | M8x1 | - | 2,500 | 50 | 34.4 |
| SIM-M8-...GD-5-PU | | | | | 5,000 | | |
| SIM-M8-...GD-10-PU | | | | | 10,000 | | |
| SIM-M8-...WD-2,5-PU | 4.5 | 9 | M8x1 | 16.8 | 2,500 | 50 | 26.8 |
| SIM-M8-...WD-5-PU | | | | | 5,000 | | |
| SIM-M8-...WD-10-PU | | | | | 10,000 | | |

Connecting cables SIM-M8/M12

Technical data

Dimensions Download CAD Data → www.festo.com/us/cad

SIM-M12-...GD-...-PU

1 Straight socket, M12x1 2 PUR cable

SIM-M12-...WD-...-PU

1 Angled socket, M12x1 2 PUR cable

| | D1 ∅ ±0.1 | D2 ∅ | D3 | H1 | L1 +3% | L2 ±2 | L3 |
|----------------------|-----------------|---------|-------|----|-----------|----------|------|
| SIM-M12-...GD-2,5-PU | 4.5 | 15 | M12x1 | - | 2,500 | 50 | 48.5 |
| SIM-M12-...GD-5-PU | | | | | 5,000 | | |
| SIM-M12-...WD-2,5-PU | 4.5 | 15 | M12x1 | 26 | 2,500 | 50 | 37.5 |
| SIM-M12-...WD-5-PU | | | | | 5,000 | | |

Dimensions Download CAD Data → www.festo.com/us/cad

SIM-M8-...WD-...-...L-PU

1 Angled socket, M8x1 3 Switching status display, yellow LED
2 PUR cable 4 Operating status display, green LED

SIM-M12-...WD-...-...L-PU

1 Angled socket, M12x1 3 Switching status display, yellow LED
2 PUR cable 4 Operating status display, green LED

| | D1 ∅ ±0.1 | D2 ∅ ±0.2 | D3 | H1 +0.3/-0.4 | L1 +3% | L2 ±2 | L3 |
|---------------------------|-----------------|-----------------|-------|-----------------|-----------|----------|------|
| SIM-M8-...WD-2,5-...L-PU | 4.5 | 9 | M8x1 | 16.8 | 2,500 | 50 | 26.8 |
| SIM-M8-...WD-5-...L-PU | | | | | 5,000 | | |
| SIM-M12-...WD-2,5-...L-PU | 4.5 | 15 | M12x1 | 26 | 2,500 | 50 | 37.5 |
| SIM-M12-...WD-5-...L-PU | | | | | 5,000 | | |

Connecting cables SIM-M8/M12

Technical data

| Ordering data | | | | | |
|--|----------------|-----------------|------------------|----------|------------------------|
| Electrical connection | | Number of wires | Cable length [m] | Part No. | Type |
| Left-hand end | Right-hand end | | | | |
| Cable property: Standard | | | | | |
| Socket M8x1, straight | Open end | 3 | 2.5 | 159420 | SIM-M8-3GD-2,5-PU |
| | | | 5 | 159421 | SIM-M8-3GD-5-PU |
| | | | 10 | 192964 | SIM-M8-3GD-10-PU |
| | | 4 | 2.5 | 158960 | SIM-M8-4GD-2,5-PU |
| | | | 5 | 158961 | SIM-M8-4GD-5-PU |
| | | | | | |
| Socket M8x1, angled | Open end | 3 | 2.5 | 159422 | SIM-M8-3WD-2,5-PU |
| | | | 5 | 159423 | SIM-M8-3WD-5-PU |
| | | | 10 | 192965 | SIM-M8-3WD-10-PU |
| | | 4 | 2.5 | 158962 | SIM-M8-4WD-2,5-PU |
| | | | 5 | 158963 | SIM-M8-4WD-5-PU |
| | | | | | |
| Socket M12x1, straight | Open end | 3 | 2.5 | 159428 | SIM-M12-3GD-2,5-PU |
| | | | 5 | 159429 | SIM-M12-3GD-5-PU |
| | | 4 | 5 | 164259 | SIM-M12-4GD-5-PU |
| | | | | | |
| | | 5 | 2.5 | 175715 | SIM-M12-5GD-2,5-PU |
| | | | 5 | 175716 | SIM-M12-5GD-5-PU |
| Socket M12x1, angled | Open end | 3 | 2.5 | 159430 | SIM-M12-3WD-2,5-PU |
| | | | 5 | 159431 | SIM-M12-3WD-5-PU |
| | | 4 | 5 | 164258 | SIM-M12-4WD-5-PU |
| | | | | | |
| | | | | | |
| | | | | | |
| With switching status display for sensor with switching output PNP | | | | | |
| Socket M8x1, angled | Open end | 3 | 2.5 | 159424 | SIM-M8-3WD-2,5-PSL-PU |
| | | | 5 | 159425 | SIM-M8-3WD-5-PSL-PU |
| Socket M12x1, angled | Open end | 3 | 2.5 | 159432 | SIM-M12-3WD-2,5-PSL-PU |
| | | | 5 | 159433 | SIM-M12-3WD-5-PSL-PU |
| With switching status display for sensor with switching output NPN | | | | | |
| Socket M8x1, angled | Open end | 3 | 2.5 | 159426 | SIM-M8-3WD-2,5-NSL-PU |
| | | | 5 | 159427 | SIM-M8-3WD-5-NSL-PU |
| Socket M12x1, angled | Open end | 3 | 2.5 | 159434 | SIM-M12-3WD-2,5-NSL-PU |
| | | | 5 | 159435 | SIM-M12-3WD-5-NSL-PU |

Connecting cables SIM-M12-8

Technical data



Connecting cable
SIM-M12,
8-pin



| General technical data | |
|------------------------|----------------|
| Note on materials | RoHS-compliant |

| Electronic components | | |
|-------------------------|--------|----------|
| Operating voltage range | [V AC] | 0 ... 45 |
| Operating voltage range | [V DC] | 0 ... 70 |

| Electromechanical components | | |
|---------------------------------------|-----------------------------------|--------------|
| Connection technology, left-hand end | | |
| Electrical connection | Straight socket M12x1 8-pin | |
| Connection technology, right-hand end | | |
| Electrical connection | Open end 8-wire | |
| Cable length | [m] | 2 5 10 |
| Cable sheath colour | Grey | |
| Cable composition | 8x0.25 mm ² | |
| Information on cable sheath materials | PUR | |
| Acceptable current load at 40 °C | [A] | 1.5 |

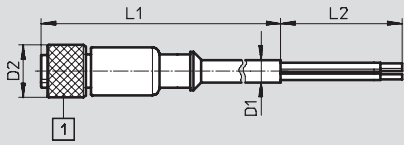
| Immissions/emissions | | |
|----------------------|------|-------------|
| Ambient temperature | [°C] | -25 ... +80 |
| Protection class | IP68 | |

| Pin allocation | | | | | |
|----------------|-----|-------------|-----|-------------|--|
| M12x1 | | | | | |
| Socket, 8-pin | Pin | Wire colour | Pin | Wire colour | |
| | 1 | White | 5 | Grey | |
| | 2 | Brown | 6 | Pink | |
| | 3 | Green | 7 | Blue | |
| | 4 | Yellow | 8 | Red | |

Connecting cables SIM-M12-8

Technical data

Dimensions Download CAD Data → www.festo.com/us/cad



1 Union nut M12x1

| | D1 ∅ ±0.2 | D2 ∅ +0.5 | L1 ±3% | L2 +20 |
|-------------------|-----------------|-----------------|-----------|-----------|
| SIM-M12-8GD-2-PU | 6.2 | 14.6 | 2,000 | 50 |
| SIM-M12-8GD-5-PU | | | 5,000 | |
| SIM-M12-8GD-10-PU | | | 10,000 | |

| Electrical connection | | Number of wires | Cable length [m] | Part No. | Type |
|---------------------------|----------------|-----------------|---------------------|----------|-------------------|
| Left-hand end | Right-hand end | | | | |
| Socket M12x1, straight | Open end | 8 | 2 | 525616 | SIM-M12-8GD-2-PU |
| | | | 5 | 525618 | SIM-M12-8GD-5-PU |
| | | | 10 | 570008 | SIM-M12-8GD-10-PU |

Connecting cables KM12

Technical data

Connecting cable
KM12,
8-pin



| Electronic components | | |
|-------------------------|--------|----------|
| Operating voltage range | [V AC] | 0 ... 30 |
| Operating voltage range | [V DC] | 0 ... 36 |

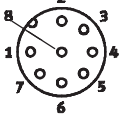
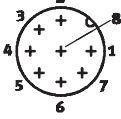
| Electromechanical components | | |
|---------------------------------------|------|--------------------------------------|
| Connection technology, left-hand end | | |
| Electrical connection | | Straight plug |
| | | M1 2x1 |
| | | 8-pin |
| Connection technology, right-hand end | | |
| Electrical connection | | Straight socket |
| | | M1 2x1 |
| | | 8-wire |
| Information on pin contact materials | | Nickel-plated and gold-plated bronze |
| Cable length | [m] | 2 |
| Cable composition | | 8x0.25 mm ² |
| Information on cable sheath materials | | PUR |
| Cable diameter | [mm] | 6.2 |
| Acceptable current load | [A] | 1.5 |

| Mechanical components | | |
|------------------------------------|-----|------------------------|
| Type of mounting | | Via threaded connector |
| | | Via union nut |
| Mounting position | | Any |
| Product weight | [g] | 156 |
| Information on union nut materials | | Nickel-plated brass |

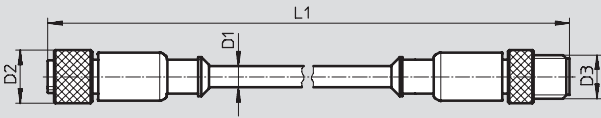
| Immissions/emissions | | |
|----------------------|------|-------------|
| Ambient temperature | [°C] | -25 ... +80 |
| Protection class | | IP68 |

Connecting cables KM12

Technical data

| Pin allocation | | | | | |
|---|---------|-------------|---|---------|-------------|
| M12x1 | | | | | |
| Socket, 8-pin | Pin | Wire colour | Plug, 8-pin | Pin | Wire colour |
|  | 1 | White |  | 1 | White |
| | 2 | Brown | | 2 | Brown |
| | 3 | Green | | 3 | Green |
| | 4 | Yellow | | 4 | Yellow |
| | 5 | Grey | | 5 | Grey |
| | 6 | Pink | | 6 | Pink |
| | 7 | Blue | | 7 | Blue |
| | 8 | Red | | 8 | Red |
| | Housing | Screened | | Housing | Screened |

Dimensions Download CAD Data → www.festo.com/us/cad



| | D1 | D2 | D3 | L1 |
|------------------|-----------|------|-------|-------|
| | ∅ ±0.2 | ∅ | | ±3% |
| KM12-8GD8GS-2-PU | 6.2 | 14.6 | M12x1 | 2,000 |

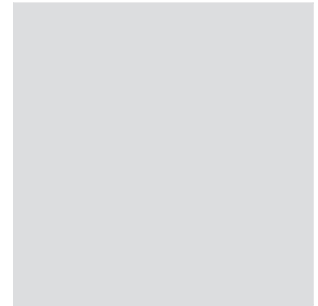
| Ordering data | | | | | |
|------------------------|----------------------|-----------------|------------------|----------|------------------|
| Electrical connection | | Number of wires | Cable length [m] | Part No. | Type |
| Left-hand end | Right-hand end | | | | |
| Straight socket, M12x1 | Straight plug, M12x1 | 8 | 2 | 525617 | KM12-8GD8GS-2-PU |

Connecting cables SIM, welding field immune

Technical data

FESTO

Connecting cable SIM-M12-RS,
3-pin, welding field immune



| Electronic components | | |
|-------------------------|--------|----------|
| Operating voltage range | [V AC] | 0 ... 45 |
| Operating voltage range | [V DC] | 0 ... 70 |

| Electromechanical components | | |
|---------------------------------------|--|-----------------|
| Type | SIM-...-...-3GD | SIM-...-...-3WD |
| Connection technology, left-hand end | | |
| Electrical connection | Straight socket | Angled socket |
| | M12x1 | |
| | 3-pin | |
| Connection technology, right-hand end | | |
| Electrical connection | Open end | |
| | 3-wire | |
| Cable property | Standard | |
| Cable test conditions | Energy chain: 5 million cycles, bending radius 75 mm | |
| | Resistance to bending: to Festo standard | |
| | Test conditions on request | |
| Cable length | [m] | 3 |
| Cable sheath colour | Orange | |
| Cable composition | 3x0.5 mm ² | |
| Information on cable sheath materials | PVC, radiation crosslinking | |
| Acceptable current load | [A] | 4 |

| Mechanical components | |
|------------------------------------|---------------------|
| Information on housing materials | TPE-U(PU) |
| Information on union nut materials | Nickel-plated brass |

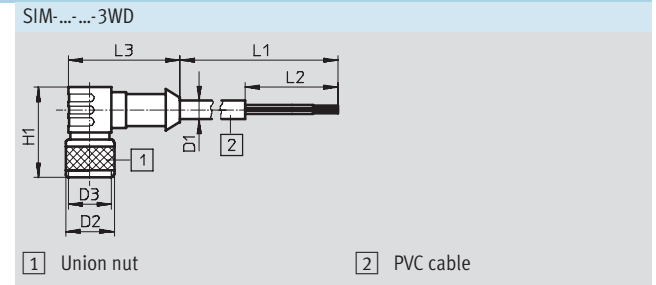
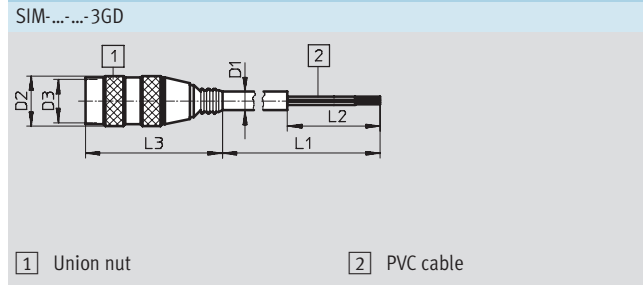
| Immissions/emissions | | |
|--|------------|-------------|
| Ambient temperature | [°C] | -25 ... +80 |
| Ambient temperature with flexible cable installation | [°C] | 0 ... +80 |
| Protection class | IP65, IP67 | |

| Pin allocation to EN 60947-5-2 | | |
|--------------------------------|-----|-------------|
| M12x1 | | |
| Socket, 3-pin | Pin | Wire colour |
| | 1 | Brown |
| | 3 | Blue |
| | 4 | Black |

Connecting cables SIM, welding field immune

Technical data

Dimensions Download CAD Data → www.festo.com/us/cad



| | D1 ∅ ±0.3 | D2 ∅ | D3 | H1 ±0.5 | L1 ±3% | L2 ±8 | L3 ±0.5 |
|------------------|-----------------|-----------|-------|------------|-----------|----------|------------|
| SIM-M12-RS-3GD-3 | 5.2 | 15 ±0.2 | M12x1 | - | 3,000 | 50 | 38 |
| SIM-M12-RS-3WD-3 | 5.2 | 13.5 ±0.3 | M12x1 | 25 | 3,000 | 50 | 31 |

| Electrical connection | | Number of wires | Cable length [m] | Part No. | Type |
|-----------------------------|----------------|-----------------|------------------|----------|------------------|
| Left-hand end | Right-hand end | | | | |
| Welding field immune | | | | | |
| Straight socket, M12x1 | Open end | 3 | 3 | 30450 | SIM-M12-RS-3GD-3 |
| Angled socket, M12x1 | Open end | 3 | 3 | 30451 | SIM-M12-RS-3WD-3 |

Connecting cables SIM, clip-on

Technical data

FESTO

Connecting cable
SIM-K,
3 and 4-pin, clip-on



| General technical data | |
|------------------------|---|
| Conforms to | EN 61076-2-104 EN 61984 |
| Note on materials | Free of copper and PTFE RoHS-compliant |

| Electronic components | | | |
|-------------------------|--------|----------|----------|
| Electrical connection | | 3-pin | 4-pin |
| Operating voltage range | [V AC] | 0 ... 60 | 0 ... 30 |
| Operating voltage range | [V DC] | 0 ... 60 | 0 ... 30 |

| Electromechanical components | | | |
|--|--|------------------------|------------------------|
| Electrical connection | | 3-pin | 4-pin |
| Connection technology, left-hand end | | | |
| Electrical connection | Straight socket | | |
| | Angled socket | | |
| | 3-pin | 4-pin | |
| | Clip-on | | |
| Plug coding | A | | |
| Connection technology, right-hand end | | | |
| Electrical connection | Open end | | |
| | 3-wire | 4-wire | |
| Cable property | Standard | | |
| Cable test conditions | Energy chain: 5 million cycles, bending radius 75 mm | | |
| | Resistance to bending: to Festo standard | | |
| | Test conditions on request | | |
| Cable length | [m] | 2.5 | 2.5 |
| | | 5 | 5 |
| | | 10 | – |
| Cable sheath colour | Grey | | |
| Cable composition | | 3x0.25 mm ² | 4x0.25 mm ² |
| Information on cable sheath materials | TPE-U(PU) | | |
| Information on insulating sheath materials | PVC | | |
| Cable diameter | [mm] | 4.5 | |
| Conductor nominal cross section | [mm ²] | 0.25 | |
| Acceptable current load at 40 °C | [A] | 3 | |

| Mechanical components | |
|----------------------------------|-----------|
| Housing colour | Black |
| Information on housing materials | TPE-U(PU) |

Connecting cables SIM, clip-on

Technical data

| Immissions/emissions | | |
|---|-------------|-------|
| Electrical connection | 3-pin | 4-pin |
| Ambient temperature [°C] | -25 ... +70 | |
| Ambient temperature with flexible cable installation [°C] | -5 ... +70 | |
| Protection class | IP65, IP67 | |
| Surge capacity [kV] | 1.5 | 0.8 |
| Degree of contamination | 3 | |

| Pin allocation to EN 60947-5-2 | | | | | | |
|--------------------------------|---|-----|-------------|---------------|---|-------|
| Socket, 3-pin | | Pin | Wire colour | Socket, 4-pin | | |
| | 1 | 1 | Brown | | 1 | Brown |
| | 3 | 3 | Blue | | 2 | White |
| | 4 | 4 | Black | | 3 | Blue |
| | | | | | 4 | Black |

Dimensions

SIM-K-...-GD-...-PU

1 Straight socket 2 PUR cable

[Download CAD Data → www.festo.com/us/cad](http://www.festo.com/us/cad)

SIM-K-...-WD-...-PU

1 Angled socket 2 PUR cable

| | D1 ∅ | D2 ∅ | H1 | L1 +3% [m] | L2 ±2 | L3 ±0.4 |
|---------------------|---------|---------|------|------------------|----------|------------|
| SIM-K-...-GD-2,5-PU | 4.5 | 8.5 | - | 2.5 | 50 | 33.6 |
| SIM-K-...-GD-5-PU | | | | 5 | | |
| SIM-K-...-GD-10-PU | | | | 10 | | |
| SIM-K-...-WD-2,5-PU | 4.5 | 8.5 | 18.4 | 2.5 | 50 | 26.8 |
| SIM-K-...-WD-5-PU | | | | 5 | | |
| SIM-K-...-WD-10-PU | | | | 10 | | |

| Ordering data | | | | | | |
|-----------------------|----------------|-----------------|------------------|----------|-------------------|--|
| Electrical connection | | Number of wires | Cable length [m] | Part No. | Type | |
| Left-hand end | Right-hand end | | | | | |
| Clip-on | | | | | | |
| Straight socket | Open end | 3 | 2.5 | 164257 | SIM-K-GD-2,5-PU | |
| | | | 5 | 164256 | SIM-K-GD-5-PU | |
| | | | 10 | 192962 | SIM-K-GD-10-PU | |
| Angled socket | Open end | 3 | 2.5 | 164255 | SIM-K-WD-2,5-PU | |
| | | | 5 | 164254 | SIM-K-WD-5-PU | |
| | | | 10 | 192963 | SIM-K-WD-10-PU | |
| Straight socket | Open end | 4 | 2.5 | 164250 | SIM-K-4-GD-2,5-PU | |
| | | | 5 | 164251 | SIM-K-4-GD-5-PU | |
| Angled socket | Open end | 4 | 2.5 | 164252 | SIM-K-4-WD-2,5-PU | |
| | | | 5 | 164253 | SIM-K-4-WD-5-PU | |

Connecting cables SIM, Clean Design

Technical data

Connecting cable
SIM-K-...-CDN,
3-pin, clip-on, Clean Design

Suitable for food, resistant to cleaning
 and disinfecting agents to DIN 11483



| General technical data | |
|------------------------|---|
| Conforms to | EN 61076-2-104 EN 61984 |
| Note on materials | Free of copper and PTFE RoHS-compliant |

| Electronic components | | |
|-------------------------|--------|----------|
| Operating voltage range | [V AC] | 0 ... 60 |
| Operating voltage range | [V DC] | 0 ... 60 |

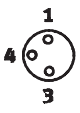
| Electromechanical components | | |
|--|--------------------|--|
| Connection technology, left-hand end | | |
| Electrical connection | | Straight socket |
| | | Angled socket |
| | | 3-pin |
| | | Clip-on |
| Plug coding | | A |
| Connection technology, right-hand end | | |
| Electrical connection | | Open end |
| | | 3-wire |
| Cable property | | Standard |
| Cable test conditions | | Energy chain: 5 million cycles, bending radius 75 mm |
| | | Resistance to bending: to Festo standard |
| | | Test conditions on request |
| Cable length | [m] | 2.5 |
| | | 5 |
| Cable sheath colour | | Grey |
| Cable composition | | 3x0.25 mm ² |
| Information on cable sheath materials | | PVC, radiation crosslinking |
| Information on insulating sheath materials | | PVC, radiation crosslinking |
| Cable diameter | [mm] | 4.5 |
| Conductor nominal cross section | [mm ²] | 0.25 |
| Acceptable current load at 40 °C | [A] | 3 |

| Mechanical components | |
|----------------------------------|-----------|
| Housing colour | Black |
| Information on housing materials | TPE-U(PU) |

Connecting cables SIM, Clean Design

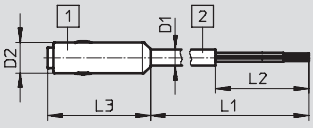
Technical data

| Immissions/emissions | | |
|--|------|-------------------|
| Ambient temperature | [°C] | -25 ... +70 |
| Ambient temperature with flexible cable installation | [°C] | -5 ... +70 |
| Protection class | | IP65, IP67, IP69K |
| Surge capacity | [kV] | 1.5 |
| Degree of contamination | | 3 |

| Pin allocation to EN 60947-5-2 | | |
|---|-----|-------------|
| Socket, 3-pin | Pin | Wire colour |
|  | 1 | Brown |
| | 3 | Blue |
| | 4 | Black |
| | | |

Dimensions

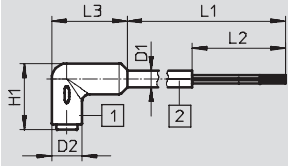
SIM-K-GD-...-CDN



1 Straight socket 2 PUR cable

Download CAD Data → www.festo.com/us/cad

SIM-K-WD-...-CDN



1 Angled socket 2 PUR cable



| | D1 ∅ ±0.1 | D2 ∅ | H1 | L1 +3% [m] | L2 ±2 | L3 |
|------------------|-----------------|---------|------|------------------|----------|------|
| SIM-K-GD-2,5-CDN | 4.5 | 8.5 | - | 2.5 | 50 | 28.5 |
| SIM-K-GD-5-CDN | | | | 5 | | |
| SIM-K-WD-2,5-CDN | 4.5 | 8.5 | 18.4 | 2.5 | 50 | 21 |
| SIM-K-WD-5-CDN | | | | 5 | | |

| Ordering data | | | | | | |
|-----------------------|----------------|-----------------|------------------|----------|------------------|--|
| Electrical connection | | Number of wires | Cable length [m] | Part No. | Type | |
| Left-hand end | Right-hand end | | | | | |
| Clean Design | | | | | | |
| Straight socket | Open end | 3 | 2.5 | 525259 | SIM-K-GD-2,5-CDN | |
| | | | 5 | 525260 | SIM-K-GD-5-CDN | |
| Angled socket | Open end | 3 | 2.5 | 525261 | SIM-K-WD-2,5-CDN | |
| | | | 5 | 525262 | SIM-K-WD-5-CDN | |

Connecting cables, universal

Accessories

FESTO

| Ordering data | | | | | | |
|---|---------------|--|---------|---------------|--------------------|------------------|
| | Material | Use | Size | Part No. | Type | PU ¹⁾ |
| Inscription label | | | | | | |
|  | Polycarbonate | For insertion in the inscription label holder | 23x4 mm | 541598 | ASLR-L-423 | 34 |
| Safety clip | | | | | | |
|  | Polyamide | For protecting against inadvertent disconnection of the union nuts (no tool needed) For captive attachment to the cable | M8 | 548067 | NEAU-M8-GD | 1 |
| | | | M12 | 548068 | NEAU-M12-GD | 1 |

1) Packaging unit per frame

Product Range and Company Overview

A Complete Suite of Automation Services

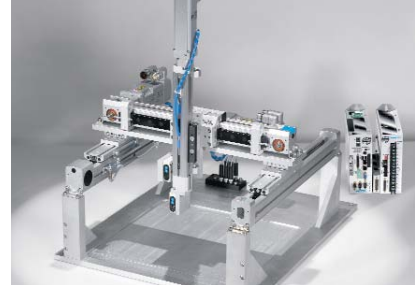
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