

Universal plug connectors, for self-assembly



Universal plug connectors, for self-assembly

Product range overview

FESTO

| Function | Version | Type | Connection technology | Connection cross section [mm ²] | Degree of protection | Bus protocol/ actuation | → Page/ Internet |
|-----------------|--|---------------------|-----------------------------------|--|----------------------|----------------------------|---------------------|
| Plug connectors | Round plug connector M8 | | | | | | |
| | 3-pin | NECU-S-M8G3-HX | Harax® quick connection | 0.1 ... 0.14 0.14 ... 0.34 | IP65, IP67 | – | 4 |
| | 4-pin | NECU-S-M8G4-HX | Harax® quick connection | 0.14 ... 0.34 | IP65, IP67 | – | 6 |
| | | NECU-S-M8G4-C2 | Screw terminal | 0.14 ... 0.5 | IP67 | – | 6 |
| | Round plug connector M12, A-coded | | | | | | |
| | 3-pin | NECU-S-M12G3-HX | Harax® quick connection | 0.14 ... 0.34 0.34 ... 0.75 | IP65, IP67 | – | 8 |
| | 4-pin | NECU-M-S-A12G4 | Spring-loaded terminal | 0.14 ... 0.5 | IP65, IP67 | – | 10 |
| | | NECU-S-M12G4-HX | Harax® quick connection | 0.14 ... 0.34 0.34 ... 0.75 | IP65, IP67 | – | 10 |
| | | NECU-S-M12G4-...-IS | Screw terminal | 0.14 ... 0.5 0.75 | IP65, IP67 | – | 10 |
| | 5-pin | FBS-M12-5GS | Screw terminal | 0.75 | IP67 | – | 14 |
| | Round plug connector M12, B-coded | | | | | | |
| | 5-pin | NECU-M-S-B12G5 | Screw terminal | 0.14 ... 0.75 | IP67 | PROFIBUS | 14 |
| | Round plug connector M12, D-coded | | | | | | |
| | 4-pin | NECU-M-S-D12G4 | Screw terminal, can be screened | 0.14 ... 0.75 | IP67 | Ethernet | 10 |
| | Square plug connector | | | | | | |
| | 4-pin | NECU-S-ECG4 | Insulation displacement connector | 0.14 | IP40 | – | 16 |
| | 7-pin | NECU-L3G7-C1 | Spring-loaded terminal | 0.2 ... 2.5 | – | – | 18 |
| | 8-pin | NECU-L3G8-C1 | Spring-loaded terminal | 0.2 ... 2.5 | – | – | 19 |
| | | NECU-L3G8-C2 | Screw terminal | 0.2 ... 2.5 | – | – | 19 |
| | Sub-D plug connector | | | | | | |
| | 9-pin | NECU-S1W9-C2-APB | IDC terminal | 0.08 ... 0.5 | IP20 | PROFIBUS | 21 |

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Product range overview



| Function | Version | Type | Connection technology | Connection cross section [mm ²] | Degree of protection | Bus protocol/actuation | → Page/Internet |
|----------|--------------------------------------|--------------------------------|---------------------------------|---|----------------------|------------------------|-----------------|
| Socket | Round plug connector M12 | | | | | | |
| | 4-pin | SIE FBSD | Screw terminal | 0.25 ... 0.75 | IP67 | – | 23 |
| | 5-pin | NECU-M-B12G5 FBSD-GD-9-5POL | Screw terminal | 0.14 ... 0.75 | IP67 | – | 25 |
| | Round plug connector 7/8" | | | | | | |
| | 4-pin | NECU-G78G4 | Screw terminal | Max. 1.5 | IP67 | – | 27 |
| | 5-pin | NECU-G78G5 | Screw terminal | Max. 1.5 | IP67 | – | 29 |
| | AIDA push-pull plug connector | | | | | | |
| | 5-pin | NECU-M-PPG5PP | Spring-loaded terminal | 0.75 ... 2.5 | IP65, IP67 | PROFINET | 31 |
| | Sub-D plug connector | | | | | | |
| | 9-pin | NECU-S1W9-C2-ACO | Screw terminal, can be screened | 0.14 ... 0.5 | IP20 | CANopen | 33 |

Plug, M8, 3-pin

Technical data

FESTO

Plug
NECU-S-M8G3

- Plug
- 3-pin
- Can be assembled with any cable lengths



| General technical data | | |
|--|-----------------------------------|----------------|
| Type | NECU-S-M8G3-HX-Q3 | NECU-S-M8G3-HX |
| Electrical connection | Straight plug, M8x1 | |
| | 3-pin | |
| | Insulation displacement connector | |
| Operating voltage range | [V DC] | 0 ... 32 |
| | [V AC] | 0 ... 32 |
| Surge resistance | [kV] | 0.8 |
| Acceptable current load at 40 °C | [A] | 2 |
| | | 4 |
| Based on standard | EN 61076-2-104 | EN 61076-2-104 |
| | EN 61984 | EN 61984 |
| Permissible cable Ø | [mm] | 2.1 ... 3.5 |
| Permissible individual wire Ø | [mm] | ≥ 0.05 |
| Connection cross section | [mm ²] | 0.1 ... 0.14 |
| Permissible wire Ø | [mm] | 0.6 ... 1 |
| Permissible wire insulation | PP | PP |
| | PVC | PVC |
| | – | TPE-E |
| Connection frequency | | 3 |
| Max. tightening torque of locking clip | [Nm] | 0.3 |
| Protection class | | IP65 |
| | | IP67 |

| Materials | |
|-------------------|-----------------------------|
| Housing | Polyamide |
| | Nickel-plated die-cast zinc |
| Seals | Fluoro elastomer |
| | Polyurethane |
| Pin contact | Gold-plated |
| Note on materials | Free of copper and PTFE |
| | RoHS-compliant |

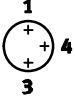
| Operating and environmental conditions | | |
|--|------|-----------------------|
| Ambient temperature | [°C] | –25 ... +85 |
| Corrosion resistance class CRC ¹⁾ | | 1 |
| Degree of contamination | | 3 |
| Certification | | cULus recognized (OL) |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

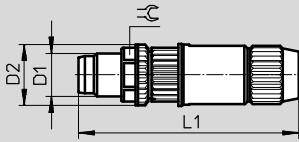
Plug, M8, 3-pin

Technical data

FESTO

| Pin allocation | | |
|---|-----|-------------|
| M8x1 | | |
| 3-pin | Pin | Wire colour |
|  | 1 | Brown |
| | 3 | Blue |
| | 4 | Black |
| | | |

Dimensions Download CAD data → www.festo.com



| Type | D1 | D2 | L1 | ⌀ |
|------------|------|------|------|---|
| NECU-S-M8G | M8x1 | 11.5 | 40.8 | 9 |

| Ordering data | | | | |
|---|---|------------|----------|-------------------|
| Electrical connection | Connection cross section [mm ²] | Weight [g] | Part No. | Type |
| Plug M8x1, 3-pin, straight, insulation displacement connector | 0.1 ... 0.14 | 7.8 | 564945 | NECU-S-M8G3-HX-Q3 |
| | 0.14 ... 0.34 | 7.8 | 562024 | NECU-S-M8G3-HX |

Plug, M8, 4-pin

Technical data

FESTO

Plug
NECU-S-M8G4

- Plug
- 4-pin
- Can be customised with any cable lengths



| General technical data | | | |
|-------------------------------|--|----------------|---------------------------|
| Type code | NECU-S-M8G4-HX | | NECU-S-M8G4-C2 |
| Electrical connection | Straight plug, M8x1, A-coded to EN 61076-2-104 | | |
| | 4-pin | | |
| | Insulation displacement connector | Screw terminal | |
| Type of mounting | - | | Screw-type lock with A/F9 |
| Operating voltage range | [V DC] | 0 ... 32 | 0 ... 30 |
| | [V AC] | 0 ... 32 | 0 ... 30 |
| Surge resistance | [kV] | 0.8 | 0.8 |
| Current rating at 40 °C | [A] | 4 | 4 |
| Based on standard | EN 61076-2-104 | | - |
| | EN 61984 | | - |
| Conforms to standard | - | | EN 61076-2-104 |
| Transmission characteristics | - | | DIN EN 50173/CAT 5 |
| Cable diameter | [mm] | 2.5 ... 5.1 | 3.5 ... 5.0 |
| Individual wire diameter | [mm] | ≥ 0.1 | - |
| Connection cross section | [mm ²] | 0.14 ... 0.34 | 0.14 ... 0.5 |
| Wire diameter | [mm] | 0.9 ... 1.6 | - |
| Permissible insulating sheath | PP | | - |
| | PVC | | - |
| | TPE-E | | - |
| Contact durability | 3 | | 100 |
| Degree of protection | IP65 | | - |
| | IP67 | | IP67 |
| Note on degree of protection | - | | In assembled state |

| Materials | | | |
|-------------------|-----------------------------|--|---------------------|
| Type code | NECU-S-M8G4-HX | | NECU-S-M8G4-C2 |
| Housing | PA | | PA |
| | Nickel-plated die-cast zinc | | - |
| Housing colour | - | | Black |
| Screw-type lock | - | | Nickel-plated brass |
| Seals | FPM | | - |
| | PUR | | - |
| Pin contact | Gold-plated | | Gold-plated brass |
| Note on materials | Free of copper and PTFE | | - |
| | RoHS-compliant | | RoHS-compliant |

Plug, M8, 4-pin

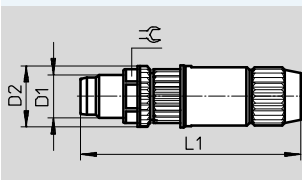
Technical data

| Operating and environmental conditions | | |
|--|---------------------------|----------------|
| Type code | NECU-S-M8G4-HX | NECU-S-M8G4-C2 |
| Ambient temperature [°C] | -25 ... +85 | -25 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 1 | 1 |
| Contamination level | 3 | 3 |
| Certification | c UL us - Recognized (OL) | - |

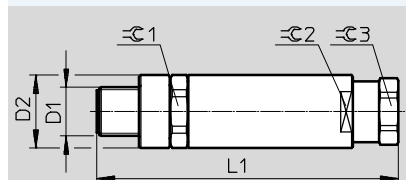
- 1) Corrosion resistance class 1 to Festo standard 940070
 Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

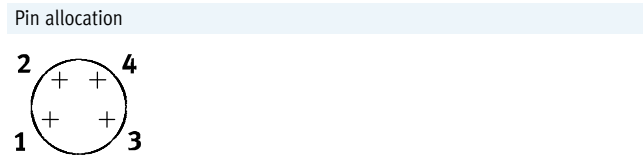
Dimensions Download CAD data → www.festo.com

NECU-S-M8G4-HX



NECU-S-M8G4-C2





| Type code | D1 | D2 | L1 | ⌀ | ⌀ 1 | ⌀ 2 | ⌀ 3 |
|----------------|------|------|------|---|-----|-----|-----|
| NECU-S-M8G4-HX | M8x1 | 11.5 | 40.8 | 9 | - | - | - |
| NECU-S-M8G4-C2 | M8x1 | 12 | 49.6 | - | 12 | 11 | 10 |

| Ordering data | | Connection cross section [mm ²] | Weight [g] | Part No. | Type |
|-----------------------|----------------------------|---|---------------|----------|-------------------------------|
| Electrical connection | Plug M8x1, 4-pin, straight | Insulation displacement connector | 0.14 ... 0.34 | 7.8 | 562025 NECU-S-M8G4-HX |
| | | Screw terminal | 0.14 ... 0.5 | 9.1 | 1068198 NECU-S-M8G4-C2 |

Plug, M12, 3-pin

Technical data

FESTO

Plug
NECU-S-M12G3

- Plug
- 3-pin
- Can be assembled with any cable lengths



| General technical data | | | |
|--|-----------------------------------|---------------|--------------------|
| Type | NECU-S-M12G3-HX | | NECU-S-M12G3-HX-Q7 |
| Electrical connection | Straight plug, M12x1 | | |
| | 3-pin | | |
| | Insulation displacement connector | | |
| Plug coding | A-coded | | |
| Operating voltage range | [V DC] | 0 ... 32 | 0 ... 48 |
| | [V AC] | 0 ... 32 | 0 ... 48 |
| Surge resistance | [kV] | 0.8 | 0.8 |
| Acceptable current load at 40 °C | [A] | 4 | 6 |
| Based on standard | EN 61076-2-101 | | EN 61076-2-101 |
| | EN 61984 | | EN 61984 |
| Permissible cable Ø | [mm] | 2.9 ... 5.1 | 4.7 ... 6.0 |
| Permissible individual wire Ø | [mm] | ≥ 0.1 | ≥ 0.1 |
| Connection cross section | [mm ²] | 0.14 ... 0.34 | 0.34 ... 0.75 |
| Permissible wire Ø | [mm] | 0.9 ... 1.6 | 1.6 ... 2.0 |
| Permissible wire insulation | PP | | – |
| | PVC | | PVC |
| | TPE-E | | – |
| Connection frequency | | 3 | 3 |
| Max. tightening torque of locking clip | [Nm] | 0.5 | 0.5 |
| Protection class | IP65 | | IP65 |
| | IP67 | | IP67 |

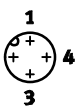
| Materials | |
|-------------------|-----------------------------|
| Housing | Polyamide |
| | Nickel-plated die-cast zinc |
| Seals | Fluoro elastomer |
| | Polyurethane |
| Pin contact | Gold-plated |
| Note on materials | Free of copper and PTFE |
| | RoHS-compliant |

Plug, M12, 3-pin

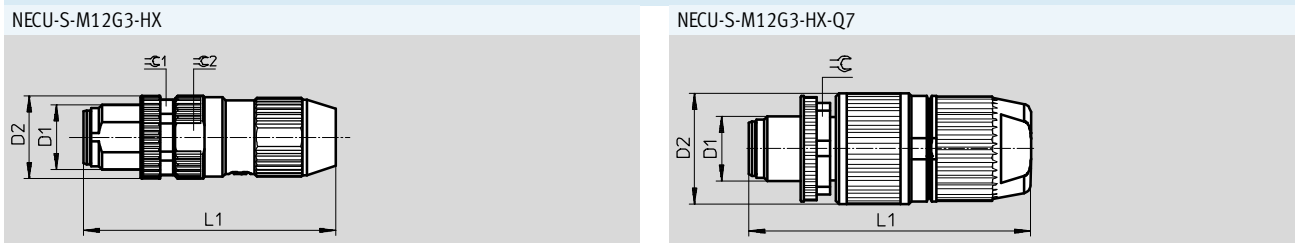
Technical data

| Operating and environmental conditions | |
|--|-----------------------|
| Ambient temperature [°C] | -25 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 1 |
| Degree of contamination | 3 |
| Certification | cULus recognized (OL) |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

| Pin allocation | | |
|---|-----|-------------|
| M12x1 | | |
| 3-pin | Pin | Wire colour |
|  | 1 | Brown |
| | 3 | Blue |
| | 4 | Black |
| | | |

Dimensions Download CAD data → www.festo.com



| Type | D1 | D2 | L1 | Ø | Ø1 | Ø2 |
|--------------------|-------|------|-------|----|----|----|
| NECU-S-M12G3-HX | M12x1 | 15.3 | 46.75 | - | 13 | 14 |
| NECU-S-M12G3-HX-Q7 | M12x1 | 20.5 | 52.2 | 17 | - | - |

| Ordering data | | | | | | |
|-----------------------------|-----------------------------------|---|------------|---------------|---------------------------|--|
| Electrical connection | | Connection cross section [mm ²] | Weight [g] | Part No. | Type | |
| Plug M12x1, 3-pin, straight | Insulation displacement connector | 0.14 ... 0.34 | 17.5 | 562027 | NECU-S-M12G3-HX | |
| | | 0.34 ... 0.75 | 32.8 | 564946 | NECU-S-M12G3-HX-Q7 | |

Plug, M12, 4-pin

Technical data

FESTO

Plug

NECU-M-S-A12G4

NECU-S-M12G4

NECU-M-S-D12G4

- Plug
- 4-pin
- Can be assembled with any cable lengths



| General technical data | | | | |
|--|--------------------|------------------------|-----------------------------------|--------------------|
| Type | | NECU-M-S-A12G4-IS | NECU-S-M12G4-HX | NECU-S-M12G4-HX-Q7 |
| Electrical connection | | Straight plug, M12x1 | | |
| | | 4-pin | | |
| | | Spring-loaded terminal | Insulation displacement connector | |
| Plug coding | | A-coded | A-coded | |
| Operating voltage range | [V DC] | 0 ... 30 | 0 ... 32 | 0 ... 48 |
| | [V AC] | – | 0 ... 32 | 0 ... 48 |
| Surge resistance | [kV] | – | 0.8 | 0.8 |
| Acceptable current load at 40 °C | [A] | 4 | 4 | 6 |
| Based on standard | | EN 61076-2-101 | EN 61076-2-101 | EN 61076-2-101 |
| | | – | EN 61984 | EN 61984 |
| Permissible cable Ø | [mm] | 4.0 ... 8.0 | 2.9 ... 5.1 | 4.7 ... 6.0 |
| Permissible individual wire Ø | [mm] | – | ≥ 0.1 | ≥ 0.1 |
| Connection cross section | [mm ²] | 0.14 ... 0.5 | 0.14 ... 0.34 | 0.34 ... 0.75 |
| Permissible wire Ø | [mm] | – | 0.9 ... 1.6 | 1.6 ... 2.0 |
| Permissible wire insulation | | – | PP, PVC, TPE-E | PVC |
| Connection frequency | | 100 | 3 | 3 |
| Max. tightening torque of locking clip | [Nm] | 0.8 | 0.5 | 0.5 |
| Protection class | | IP65 | IP65 | IP65 |
| | | IP67 | IP67 | IP67 |

| Materials | | | | |
|-------------------|--|-----------------------------|--------------------------------|--------------------------------|
| Type | | NECU-M-S-A12G4-IS | NECU-S-M12G4-HX | NECU-S-M12G4-HX-Q7 |
| Housing | | – | Polyamide | Polyamide |
| | | Nickel-plated die-cast zinc | Nickel-plated die-cast zinc | Nickel-plated die-cast zinc |
| Seals | | – | Fluoro elastomer, polyurethane | Fluoro elastomer, polyurethane |
| Pin contact | | Gold-plated bronze | Gold-plated | Gold-plated |
| Note on materials | | – | Free of copper and PTFE | Free of copper and PTFE |
| | | RoHS-compliant | RoHS-compliant | RoHS-compliant |

| Operating and environmental conditions | | | | |
|--|------|-------------------|-----------------------|-----------------------|
| Type | | NECU-M-S-A12G4-IS | NECU-S-M12G4-HX | NECU-S-M12G4-HX-Q7 |
| Ambient temperature | [°C] | –40 ... +85 | –25 ... +85 | –25 ... +85 |
| Corrosion resistance class CRC ¹⁾ | | – | 1 | 1 |
| Degree of contamination | | 3 | 3 | 3 |
| Certification | | – | cULus recognized (OL) | cULus recognized (OL) |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Plug, M12, 4-pin

Technical data

FESTO

| General technical data | | | | | | |
|--|-----------------------|-------------------|--------------------|--------------------|---------------------------------|-----------|
| Type | NECU-S-M12G4-P1-Q6-IS | NECU-S-M12G4-D-IS | NECU-S-M12G4-P1-IS | NECU-S-M12G4-P2-IS | NECU-M-S-D12G4-C2-ET | |
| Electrical connection | Straight plug, M12x1 | | | | | |
| | 4-pin | | | | | |
| | Screw terminal | | | | Screw terminal, can be screened | |
| Plug coding | A-coded | | | | D-coded | |
| Operating voltage range | [V DC] | 0 ... 30 | | | | 0 ... 250 |
| | [V AC] | – | | | | 0 ... 250 |
| Surge resistance | [kV] | 2.5 | | | | 2.5 |
| Acceptable current load at 40 °C | [A] | 4 | | | | – |
| Based on standard | EN 61076-2-101 | | | | EN 61076-2-101 | |
| | EN 61984 | | | | EN 61984 | |
| Transmission characteristics | – | | | | DIN EN 50173/CAT 5 | |
| Permissible cable Ø | [mm] | 2.5 ... 2.9 | 2x 3.0 or 2x 5.0 | 4.0 ... 6.0 | 6.0 ... 8.0 | |
| Connection cross section | [mm ²] | 0.14 ... 0.5 | 0.75 | 0.75 | 0.14 ... 0.75 | |
| Connection frequency | | 50 | | | | – |
| Max. tightening torque of locking clip | [Nm] | 0.5 | | | | – |
| Protection class | IP65 | | | | – | |
| | IP67 | | | | IP67 | |

| Materials | | |
|-------------------|---------------------|-----------------------------|
| Type | NECU-S-M12G4-...-IS | NECU-M-S-D12G4-C2-ET |
| Housing | Polyamide | Nickel-plated die-cast zinc |
| Pin contact | Brass | Gold-plated brass |
| | Coated white bronze | – |
| Note on materials | – | Free of copper and PTFE |
| | RoHS-compliant | RoHS-compliant |

| Operating and environmental conditions | | | |
|--|---------------------|----------------------|-----------------------------|
| Type | NECU-S-M12G4-...-IS | NECU-M-S-D12G4-C2-ET | |
| Ambient temperature | [°C] | –25 ... +85 | –25 ... +85 |
| Corrosion resistance class CRC ¹⁾ | | – | 1 |
| Degree of contamination | | 3 | 3 |
| CE marking (see declaration of conformity) | | – | To EU Low Voltage Directive |

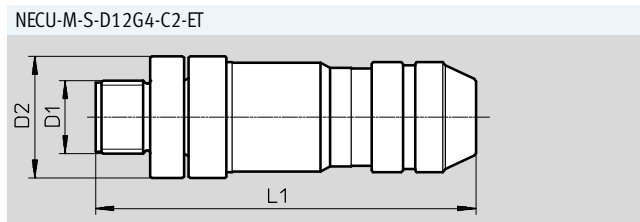
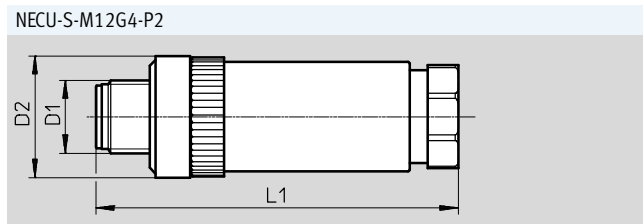
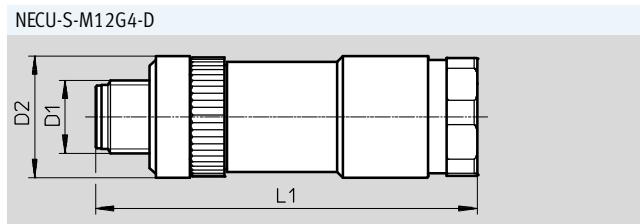
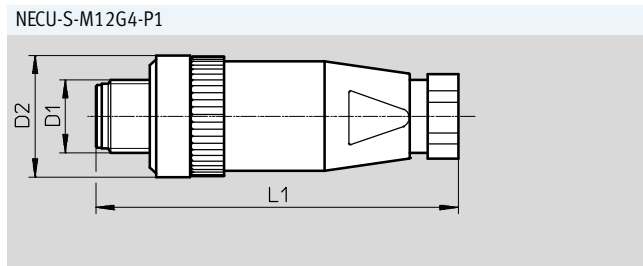
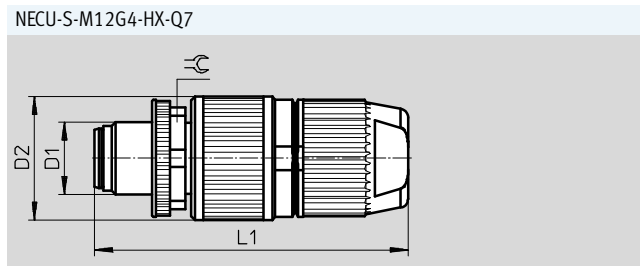
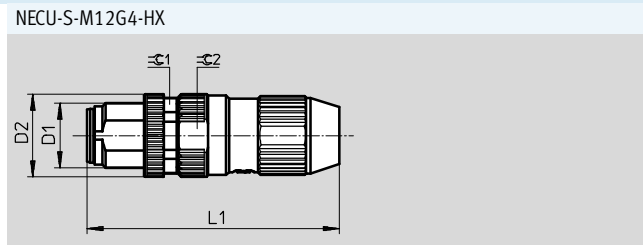
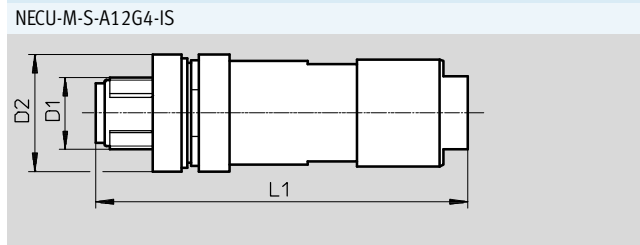
1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Plug, M12, 4-pin

Technical data

| Pin allocation | | | M12x1, A-coded | | | M12x1, D-coded | | | |
|----------------|---|-------|----------------|-------------|-------|----------------|--|-----|-------------|
| 4-pin | | | Pin | Wire colour | 4-pin | | | Pin | Wire colour |
| | 1 | Brown | | 1 | - | | | | |
| | 2 | White | | 2 | - | | | | |
| | 3 | Blue | | 3 | - | | | | |
| | 4 | Black | | 4 | - | | | | |

Dimensions Download CAD data → www.festo.com



| Type | D1 | D2 | L1 | ≅ | ≅1 | ≅2 |
|----------------------|-------|------|-------|----|----|----|
| NECU-M-S-A12G4-IS | M12x1 | 19.2 | 61.1 | - | - | - |
| NECU-S-M12G4-HX | M12x1 | 15.3 | 46.75 | - | 13 | 14 |
| NECU-S-M12G4-HX-Q7 | M12x1 | 20.5 | 52.2 | 17 | - | - |
| NECU-S-M12G4-P1 | M12x1 | 20 | 59.6 | - | - | - |
| NECU-S-M12G4-D | M12x1 | 20 | 62.6 | - | - | - |
| NECU-S-M12G4-P2 | M12x1 | 20 | 59.6 | - | - | - |
| NECU-M-S-D12G4-C2-ET | M12x1 | 20 | 62.5 | - | - | - |

Plug, M12, 4-pin

Technical data

| Ordering data | | | | | |
|--------------------------------------|-----------------------------------|---|------------|----------|-----------------------|
| Electrical connection | | Connection cross section [mm ²] | Weight [g] | Part No. | Type |
| Plug M12x1, 4-pin, straight, A-coded | Spring-loaded terminal | 0.14 ... 0.5 | 38 | 575719 | NECU-M-S-A12G4-IS |
| | Insulation displacement connector | 0.14 ... 0.34 | 17.5 | 562028 | NECU-S-M12G4-HX |
| | | 0.34 ... 0.75 | 33.3 | 564947 | NECU-S-M12G4-HX-Q7 |
| | Screw terminal | 0.14 ... 0.5 | 18 | 570955 | NECU-S-M12G4-P1-Q6-IS |
| | | 0.75 | 24 | 570956 | NECU-S-M12G4-D-IS |
| | | 0.75 | 17 | 570953 | NECU-S-M12G4-P1-IS |
| | | 0.75 | 18 | 570954 | NECU-S-M12G4-P2-IS |
| Plug M12x1, 4-pin, straight, D-coded | Screw terminal, can be screened | 0.14 ... 0.75 | 45.3 | 543109 | NECU-M-S-D12G4-C2-ET |

Plug connector, M12, 5-pin

Technical data

FESTO

Plug connector
NECU-M-S-B12G5
FBS-M12-5GS

- Plug connector
- 5-pin
- B-coded for PROFIBUS
- A-coded for DeviceNet® and CANopen
- Can be customised with any cable lengths



| General technical data | | | |
|---|--------------------------------|----------------|----------|
| Type | NECU-M-S-B12G5 | FBS-M12-5GS | |
| Electrical connection | Straight plug connector, M12x1 | | |
| | 5-pin | | |
| | Screw terminal | | |
| | Can be screened | – | |
| Plug coding | B-coded | A-coded | |
| Operating voltage range | [V DC] | 0 ... 60 | 0 ... 60 |
| | [V AC] | 0 ... 60 | 0 ... 60 |
| Surge resistance [kV] | 1.5 | 1.5 | |
| Current rating at 40 °C [A] | 4 | 4 | |
| Based on standard | EN 61076-2-101 | EN 61076-2-101 | |
| | EN 61984 | EN 61984 | |
| Transmission characteristics | DIN EN 50173/CAT 5 | – | |
| Permissible cable diameter [mm] | 6 ... 8 | 6 ... 8 | |
| Connection cross section [mm ²] | 0.14 ... 0.75 | 0.75 | |
| Cable fitting | – | Pg9 | |
| Degree of protection | IP67 | IP67 | |

| Materials | | |
|-------------------|-----------------------------|-------------------------------------|
| Type | NECU-M-S-B12G5 | FBS-M12-5GS |
| Housing | Nickel-plated die-cast zinc | PA reinforced |
| Housing colour | – | Black |
| Pin contact | Gold-plated brass | Nickel-plated and gold-plated brass |
| Union nut | – | Nickel-plated die-cast zinc |
| Note on materials | Free of copper and PTFE | – |
| | RoHS compliant | RoHS compliant |

| Operating and environmental conditions | | |
|---|-----------------------------|-----------------------------|
| Type | NECU-M-S-B12G5 | FBS-M12-5GS |
| Ambient temperature [°C] | –25 ... +85 | –40 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 1 | 1 |
| Contamination level | 3 | 3 |
| CE marking (see declaration of conformity) ²⁾ | To EU Low Voltage Directive | To EU Low Voltage Directive |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

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

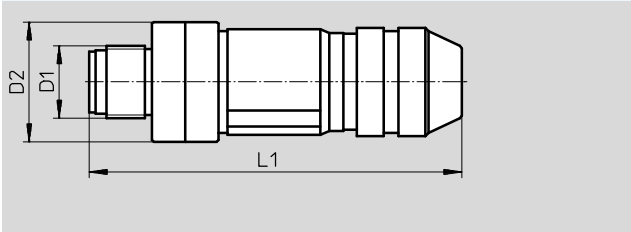
Plug connector, M12, 5-pin

Technical data

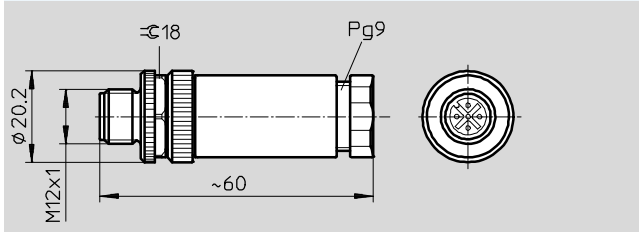
Dimensions

Download CAD data → www.festo.com

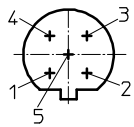
NECU-M-S-B12G5



FBS-M12-5GS



Pin allocation



| Type | D1 | D2 | L1 |
|----------------|-----|----|------|
| NECU-M-S-B12G5 | M12 | 20 | 62.5 |

Ordering data

| Electrical connection | | Connection cross section [mm ²] | Weight [g] | Part No. | Type |
|---------------------------------------|---------------------------------|---|------------|----------------|-----------------------------|
| Plug connector M12x1, 5-pin, straight | Screw terminal, can be screened | 0.14 ... 0.75 | 46 | 1066354 | NECU-M-S-B12G5-C2-PB |
| | Screw terminal | 0.75 | 23.5 | 175380 | FBS-M12-5GS-PG9 |

Plug, square, 4-pin

Technical data

FESTO

Plug
NECU-S-ECG4

- Plug
- 4-pin
- Insulation displacement connector
- Can be assembled with any cable lengths



| General technical data | | |
|----------------------------------|--------------------|-----------------------------------|
| Electrical connection | | Straight plug, square design |
| | | 4-pin |
| | | Insulation displacement connector |
| Operating voltage range | [V DC] | 0 ... 30 |
| Surge resistance | [kV] | 0.8 |
| Acceptable current load at 40 °C | [A] | 3 |
| Permissible individual wire Ø | [mm] | ≥ 0.07 |
| Connection cross section | [mm ²] | 0.14 |
| Permissible wire Ø | [mm] | 0.8 ... 1.0 |
| Permissible wire insulation | | PP |
| | | PVC |
| | | TPE-E |
| Connection frequency | | 1 |
| Type of mounting | | Engaging |
| Protection class | | IP40 |

| Materials | |
|-------------------|----------------------------|
| Housing | Polybutylene terephthalate |
| | Polycarbonate |
| Pin contact | Gold-plated |
| Note on materials | RoHS-compliant |

| Operating and environmental conditions | |
|--|-----------------------|
| Ambient temperature | [°C] -20 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 1 |
| Degree of contamination | 2 |
| Certification | cULus recognized (OL) |

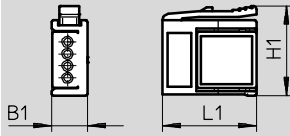
1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Plug, square, 4-pin

Technical data

Dimensions

Download CAD data → www.festo.com



| Type | B1 | H1 | L1 |
|-------------|-----|------|------|
| NECU-S-ECG4 | 5,9 | 14,9 | 15,6 |

Ordering data

| Electrical connection | | Connection cross section [mm ²] | Weight [g] | Part No. | Type |
|-------------------------------------|-----------------------------------|---|------------|---------------|--------------------------|
| Straight plug, square design, 4-pin | Insulation displacement connector | 0.14 | 3.6 | 570922 | NECU-S-ECG4-HX-Q3 |

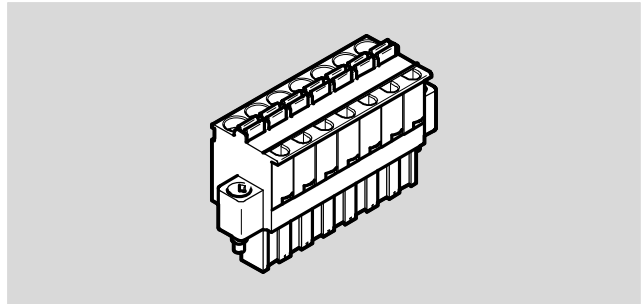
Plug, terminal strip, 7-pin

Technical data

FESTO

Terminal strip
NECU-L3G7

- Plug
- 7-pin
- Can be assembled with any cable lengths



| General technical data | | |
|----------------------------------|--------------------|------------------------|
| Electrical connection | | Straight plug |
| | | 7-pin |
| | | Spring-loaded terminal |
| Operating voltage range | [V DC] | 0 ... 30 |
| Surge resistance | [kV] | 4 |
| Acceptable current load at 40 °C | [A] | 12 |
| Connection cross section | [mm ²] | 0.2 ... 2.5 |
| Connection frequency | | 100 |

| Materials | |
|-------------------|-------------------------|
| Housing | Polyamide |
| Pin contact | Tin-plated copper alloy |
| Note on materials | RoHS-compliant |

| Operating and environmental conditions | |
|--|-------------------|
| Ambient temperature | [°C] -40 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 2 |
| Degree of contamination | 3 |
| Certification | cULus listed (OL) |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

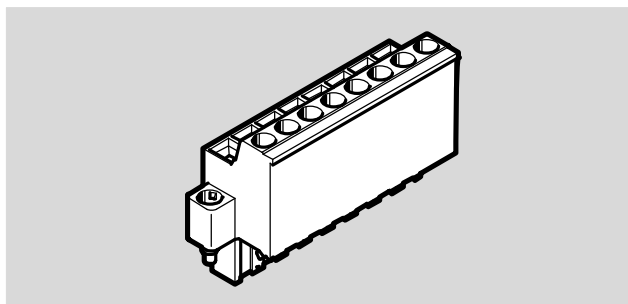
| Ordering data | | | | |
|-----------------------|------------------------|----------------|----------|--------------|
| Electrical connection | | Housing colour | Part No. | Type |
| Plug, 7-pin, straight | Spring-loaded terminal | Black | 576319 | NECU-L3G7-C1 |

Plug, terminal strip, 8-pin

Technical data

Terminal strip
NECU-L3G8

- Plug
- 8-pin
- Can be assembled with any cable lengths
- The plugs meet the requirements of IEC 60079-11 with regard to air, leakage paths and separation distances for the maximum intrinsically safe operating voltage of 30 V DC



| General technical data | | | |
|--|------------------------|----------------|--------------|
| Type | NECU-L3G8-C1 | | NECU-L3G8-C2 |
| Electrical connection | Straight plug | | |
| | 8-pin | | |
| | Spring-loaded terminal | Screw terminal | |
| Operating voltage range | [V DC] | 0 ... 30 | 0 ... 30 |
| Surge resistance | [kV] | 4 | 0.8 |
| Acceptable current load at 40 °C | [A] | 12 | 12 |
| Connection cross section | [mm ²] | 0.2 ... 2.5 | 0.2 ... 2.5 |
| Connection frequency | | 100 | 100 |
| Max. tightening torque of locking clip | [Nm] | – | 0.6 |
| Product weight | [g] | 20 | 20 |

| Materials | |
|-------------------|-------------------------|
| Housing | Polyamide |
| Pin contact | Tin-plated copper alloy |
| Note on materials | RoHS-compliant |

| Operating and environmental conditions | |
|--|------------------|
| Ambient temperature | [°C] –40 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 2 |
| Degree of contamination | 3 |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Plug, terminal strip, 8-pin

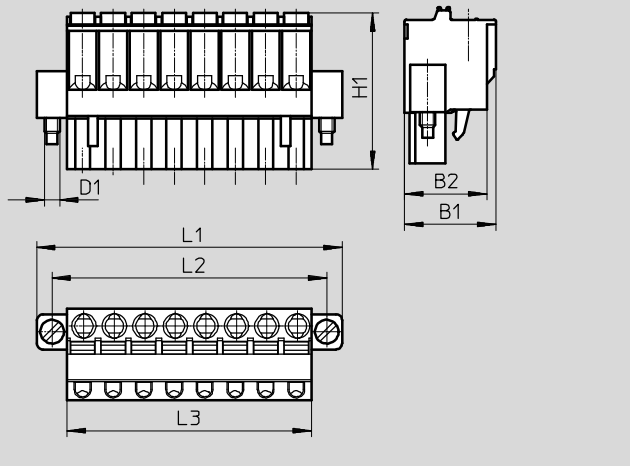
Technical data

FESTO

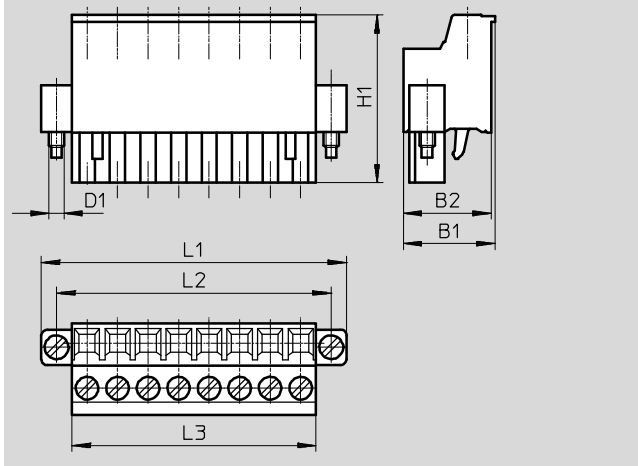
Dimensions

Download CAD data → www.festo.com

NECU-L3G8-C1



NECU-L3G8-C2



| Type | B1 | B2 | D1 | H1 | L1 | L2 | L3 |
|--------------|----|------|------|------|----|----|----|
| NECU-L3G8-C1 | 15 | 13.5 | M2.5 | 25.6 | 50 | 45 | 40 |
| NECU-L3G8-C2 | 15 | 14.4 | M2.5 | 27.5 | 50 | 45 | 40 |

Ordering data

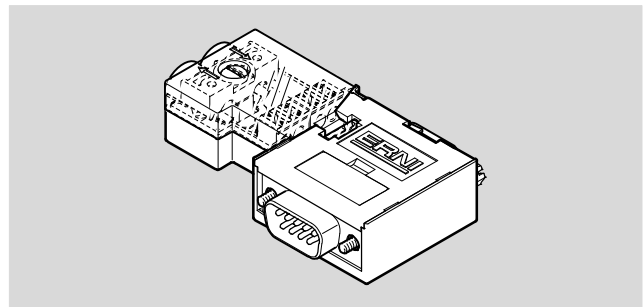
| Electrical connection | Housing colour | Part No. | Type |
|-----------------------|------------------------|-------------------------------|-------------------------------|
| Plug, 8-pin, straight | Spring-loaded terminal | Black | 565712 NECU-L3G8-C1 |
| | Screw terminal | Blue | 565711 NECU-L3G8-C1-IS |
| | | Black | 565710 NECU-L3G8-C2 |
| | Blue | 565709 NECU-L3G8-C2-IS | |

Plug, Sub-D, 9-pin

Technical data

Plug
NECU-S1W9

- Plug
- 9-pin
- Can be assembled with any cable lengths
- Plug for PROFIBUS with terminating resistor and programming interface



| General technical data | | |
|--------------------------|--------------------|--------------|
| Electrical connection | | Sub-D plug |
| | | 9-pin |
| | | IDC terminal |
| Programming interface | | Sub-D socket |
| | | 9-pin |
| Baud rate | [Mbps] | 12 |
| Permissible cable Ø | [mm] | 8 |
| Connection cross section | [mm ²] | 0.08 ... 0.5 |
| Type of mounting | | 4-40 UNC-2B |
| Protection class | | IP20 |

| Materials | |
|-------------------|--------------------------|
| Housing | Reinforced polycarbonate |
| Note on materials | RoHS-compliant |

| Operating and environmental conditions | | |
|--|------|-------------|
| Ambient temperature | [°C] | -20 ... +70 |
| Corrosion resistance class CRC ¹⁾ | | 1 |
| Relative air humidity | [%] | 75 at 25 °C |

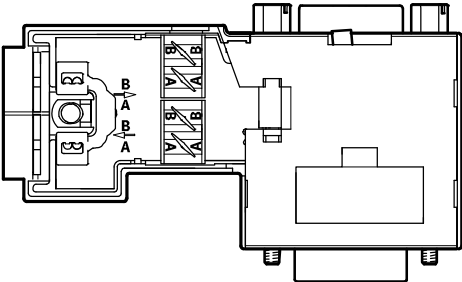
1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Plug, Sub-D, 9-pin

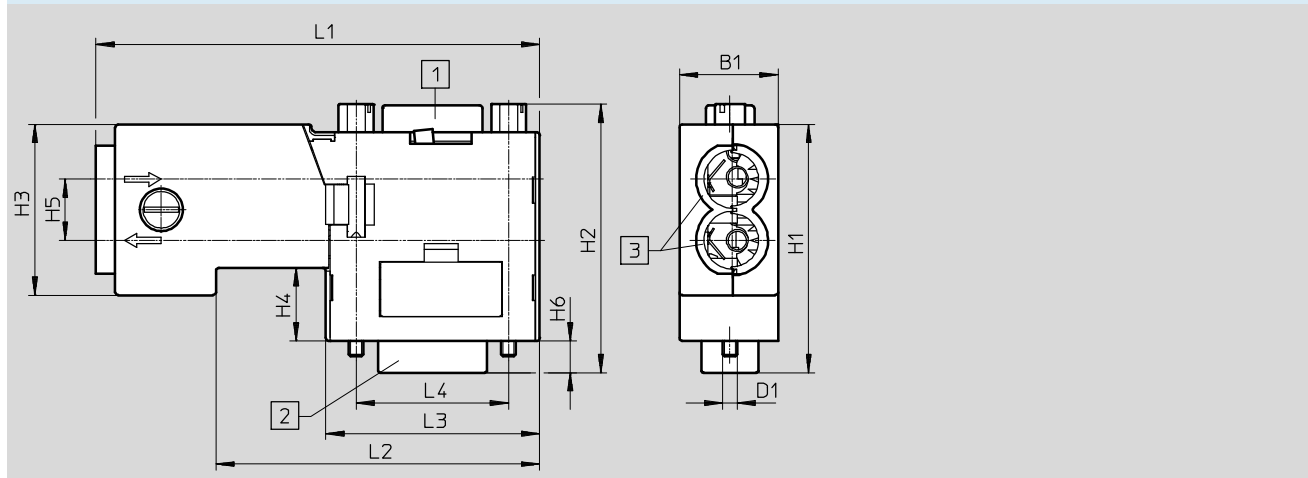
Technical data

FESTO

| Pin allocation | | | | |
|----------------|---------|-------------|---------------------|----------|
| Sub-D | | | | |
| 9-pin | Pin | Wire colour | Signal | Terminal |
| Sub-D plug | | | | |
| | 1 | - | - | - |
| | 2 | - | - | - |
| | 3 | Red | RxD/TxD-P | B |
| | 4 | - | - | - |
| | 5 | - | GND | - |
| | 6 | - | VP (supply voltage) | - |
| | 7 | - | - | - |
| | 8 | Green | RxD/TxD-N | A |
| | 9 | - | - | - |
| | Housing | - | - | - |



Dimensions Download CAD data → www.festo.com



| Type | B1 | D1 | H1 | H2 | H3 | H4 | H5 | H6 | L1 | L2 | L3 | L4 |
|------------------|------|---------|------|------|----|----|----|-----|------|------|------|----|
| NECU-S1W9-C2-APB | 16.2 | 4-40UNC | 40.7 | 44.2 | 28 | 12 | 10 | 5.2 | 72.8 | 53.1 | 35.1 | 25 |

| Ordering data | | | |
|-----------------------|-------------------------------|----------|------------------|
| Electrical connection | Connection cross section [mm] | Part No. | Type |
| Sub-D plug, 9-pin | IDC terminal | 574589 | NECU-S1W9-C2-APB |

Socket, M12, 4-pin

Technical data



Socket

SIE-GD

FBSD-GD

SIE-WD-TR

FBSD-WD

- Socket
- 4-pin
- Can be customised with any cable lengths



| General technical data | | | | | |
|----------------------------|------------------------|----------------|----------------|----------------------|-------------------------|
| Type | SIE-GD | FBSD-GD-9 | FBSD-GD-13,5 | SIE-WD-TR | FBSD-WD-9 |
| Electrical connection | Straight socket, M12x1 | | | Angled socket, M12x1 | |
| | 4-pin | | | 4-pin | |
| | – | Screw terminal | Screw terminal | – | Screw terminal |
| Plug coding | – | A-coded | A-coded | – | A-coded |
| Operating voltage range | [V DC] | 0 ... 250 | | | |
| | [V AC] | 0 ... 250 | | | |
| Surge resistance | [kV] | 2.5 | | | |
| Current rating at 40 °C | [A] | 4 | | | |
| Based on standard | EN 61076-2-101 | | | | |
| | EN 61984 | | | | |
| Permissible cable diameter | [mm] | 4 ... 6 | 8 ... 9.5 | 10 ... 12 | 4 ... 6 6 ... 8 |
| Connection cross section | [mm ²] | 0.25 ... 0.75 | 0.75 | 0.75 | 0.25 ... 0.75 0.75 |
| Cable fitting | – | Pg9 | Pg13.5 | – | Pg9 |
| Degree of protection | IP67 | | | | |

| Materials | | |
|-------------------|----------------|----------------------------------|
| Type | SIE | FBSD |
| Housing | PA | PA reinforced |
| Housing colour | – | Black |
| Pin contact | – | Bronze, coated with white bronze |
| Union nut | PA | Nickel-plated die-cast zinc |
| Note on materials | RoHS compliant | RoHS compliant |

| Operating and environmental conditions | | | |
|---|-----------------------------|-------------|-----------------------------|
| Type | SIE | FBSD | |
| Ambient temperature | [°C] | –25 ... +85 | –40 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 1 |
| Contamination level | 3 | | 3 |
| CE marking (see declaration of conformity) ²⁾ | To EU Low Voltage Directive | | To EU Low Voltage Directive |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).
 Corrosion resistance class CRC 4 to Festo standard FN 940070
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

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

Socket, M12, 4-pin

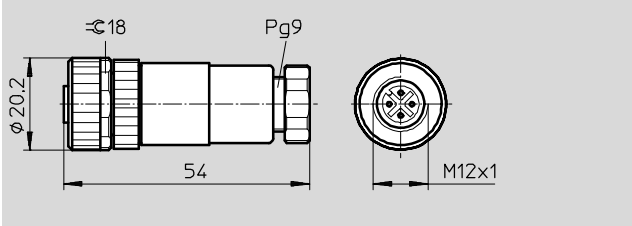
Technical data

FESTO

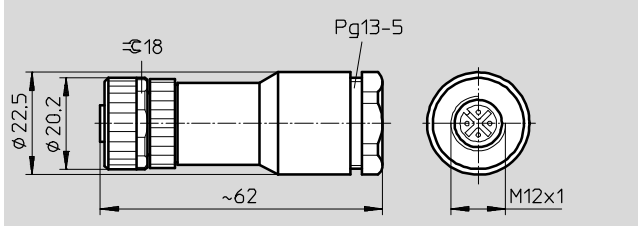
Dimensions

Download CAD data → www.festo.com

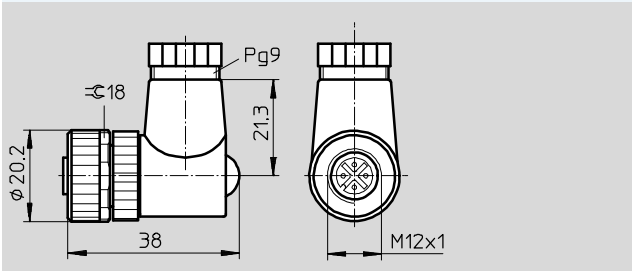
FBSD-GD-9



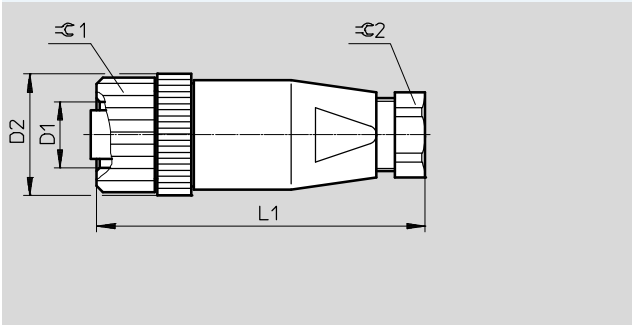
FBSD-GD-13,5



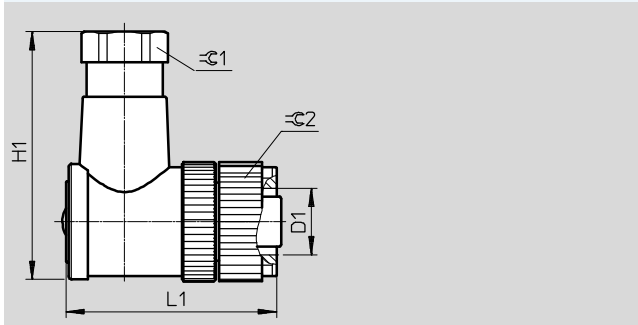
FBSD-WD-9



SIE-GD



SIE-WD-TR



| Type | D1 | D2 | H1 | L1 | ∅1 | ∅2 |
|-----------|-------|----|----|----|----|----|
| SIE-GD | M12x1 | 20 | - | 58 | 18 | 13 |
| SIE-WD-TR | M12x1 | - | 38 | 35 | 13 | 18 |

Ordering data

| Electrical connection | | Permissible cable diameter [mm] | Weight [g] | Part No. | Type |
|-----------------------|----------|---------------------------------|------------|--------------|---------------------|
| Socket M12x1, 4-pin | Straight | 4 ... 6 | - | 18494 | SIE-GD |
| | | 8 ... 9.5 | 29 | 18495 | FBSD-GD-9 |
| | | 10 ... 12 | 40 | 18496 | FBSD-GD-13,5 |
| | Angled | 4 ... 6 | - | 12956 | SIE-WD-TR |
| | | 6 ... 8 | 30 | 18525 | FBSD-WD-9 |

Socket, M12, 5-pin

Technical data

FESTO

Socket

NECU-M-B12G5

FBSD-GD-9-5POL

- Socket
- 5-pin
- Can be customised with any cable lengths



| General technical data | | |
|---|---------------------------------|----------------|
| Type | NECU-M-B12G5 | FBSD-GD-9-5POL |
| Electrical connection | Straight socket, M12x1 | |
| | 5-pin | |
| | Screw terminal, can be screened | Screw terminal |
| Plug coding | B-coded | A-coded |
| Operating voltage range | [V DC] 0 ... 125 | 0 ... 60 |
| | [V AC] 0 ... 125 | 0 ... 60 |
| Surge resistance [kV] | 1.25 | 1.5 |
| Current rating at 40 °C [A] | 4 | 4 |
| Based on standard | EN 61076-2-101 | EN 61076-2-101 |
| | EN 61984 | EN 61984 |
| Transmission characteristics | DIN EN 50173/CAT 5 | – |
| Permissible cable diameter [mm] | 6 ... 8 | 6 ... 8 |
| Connection cross section [mm ²] | 0.14 ... 0.75 | 0.75 |
| Cable fitting | – | Pg9 |
| Degree of protection | IP67 | IP67 |

| Materials | | |
|-------------------|-----------------------------|--------------------------------------|
| Type | NECU-M-B12G5 | FBSD-GD-9-5POL |
| Housing | Nickel-plated die-cast zinc | PA reinforced |
| Housing colour | – | Black |
| Pin contact | Brass, gold-plated | Nickel-plated and gold-plated bronze |
| Union nut | – | Nickel-plated die-cast zinc |
| Note on materials | RoHS compliant | RoHS compliant |

| Operating and environmental conditions | | |
|--|-----------------------------|-----------------------------|
| Type | NECU-M-B12G5 | FBSD-GD-9-5POL |
| Ambient temperature [°C] | –25 ... +85 | –40 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 1 | 1 |
| Contamination level | 3 | 3 |
| CE marking (see declaration of conformity) ²⁾ | To EU Low Voltage Directive | To EU Low Voltage Directive |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

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

Socket, M12, 5-pin

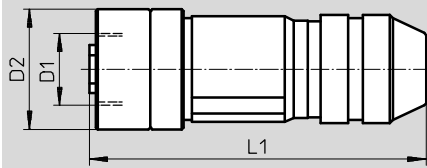
Technical data

FESTO

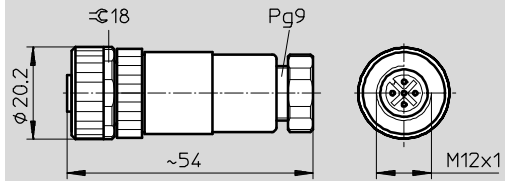
Dimensions

Download CAD data → www.festo.com

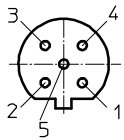
NECU-M-B12G5



FBSD-GD-9-5POL



Pin allocation



| Type | D1 | D2 | L1 |
|--------------|-----|----|----|
| NECU-M-B12G5 | M12 | 20 | 56 |

Ordering data

| Electrical connection | | Connection cross section [mm ²] | Weight [g] | Part No. | Type |
|-------------------------------|----------------|---|---------------|----------|-----------------------------------|
| Socket M12x1, 5-pin, straight | Screw terminal | B-coded | 0.14 ... 0.75 | – | 1067905 NECU-M-B12G5-C2-PB |
| | | A-coded | 0.75 | 33 | 18324 FBSD-GD-9-5POL |

Socket, 7/8", 4-pin

Technical data

Socket
NECU-G78G4

- Socket
- 4-pin
- Can be assembled with any cable lengths



| General technical data | |
|----------------------------------|--|
| Electrical connection | Straight socket, 7/8" 4-pin Screw terminal |
| Plug coding | ODVA AutoSIG |
| Operating voltage range | [V DC] 0 ... 250 |
| | [V AC] 0 ... 250 |
| Surge resistance | [kV] 2.5 |
| Acceptable current load at 40 °C | [A] 10 |
| Based on standard | EN 61984 |
| Permissible cable Ø | [mm] 6 ... 12 |
| Connection cross section | [mm ²] Max. 1.5 |
| Protection class | IP67 |

| Materials | |
|-------------------|-----------------------------|
| Housing | Polyamide |
| Housing colour | Black |
| Seals | Fluoro elastomer |
| | Nitrile rubber |
| Pin contact | Gold-plated copper alloy |
| Union nut | Nickel-plated die-cast zinc |
| Note on materials | Free of copper and PTFE |
| | RoHS-compliant |

| Operating and environmental conditions | |
|---|-----------------------------|
| Ambient temperature | [°C] -25 ... +80 |
| Corrosion resistance class CRC ¹⁾ | 1 |
| Degree of contamination | 3 |
| CE marking (see declaration of conformity) | To EU Low Voltage Directive |
| Certification | c CSA us (OL) |

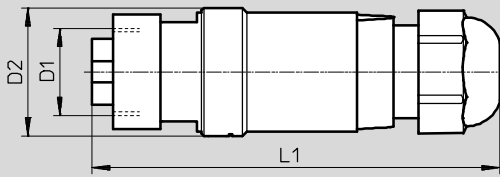
1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Socket, 7/8", 4-pin

Technical data

Dimensions

Download CAD data → www.festo.com



| Type | D1 | D2 | L1 |
|---------------|------|----|----|
| NECU-G78G4-C2 | 7/8" | 28 | 89 |

Ordering data

| Electrical connection | Connection cross section [mm ²] | Part No. | Type |
|------------------------------|---|----------|---------------|
| Socket 7/8", 4-pin, straight | Max. 1.5 | 543108 | NECU-G78G4-C2 |

Socket, 7/8", 5-pin

Technical data

Socket
NECU-G78G5

- Socket
- 5-pin
- Can be assembled with any cable lengths



| General technical data | |
|----------------------------------|--|
| Electrical connection | Straight socket, 7/8" 5-pin Screw terminal |
| Plug coding | NFPA/T3.5.29 R1-2003 |
| Operating voltage range | [V DC] 0 ... 250 [V AC] 0 ... 250 |
| Surge resistance | [kV] 2.5 |
| Acceptable current load at 40 °C | [A] 8 |
| Based on standard | EN 61984 |
| Permissible cable Ø | [mm] 6 ... 12 |
| Connection cross section | [mm ²] Max. 1.5 |
| Protection class | IP67 |

| Materials | |
|-------------------|---|
| Housing | Polyamide |
| Housing colour | Black |
| Seals | Fluoro elastomer Nitrile rubber |
| Pin contact | Gold-plated copper alloy |
| Union nut | Nickel-plated die-cast zinc |
| Note on materials | Free of copper and PTFE RoHS-compliant |

| Operating and environmental conditions | |
|---|-----------------------------|
| Ambient temperature | [°C] -25 ... +80 |
| Corrosion resistance class CRC ¹⁾ | 1 |
| Degree of contamination | 3 |
| CE marking (see declaration of conformity) | To EU Low Voltage Directive |
| Certification | c CSA us (OL) |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

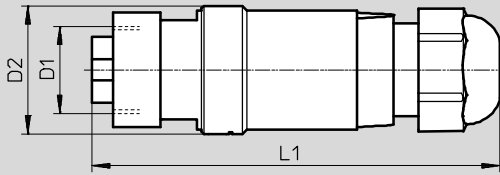
Socket, 7/8", 5-pin

Technical data

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Dimensions

Download CAD data → www.festo.com



| Type | D1 | D2 | L1 |
|---------------|------|----|----|
| NECU-G78G5-C2 | 7/8" | 28 | 89 |

Ordering data

| Electrical connection | Connection cross section [mm ²] | Weight [g] | Part No. | Type |
|------------------------------|---|------------|----------|---------------|
| Socket 7/8", 5-pin, straight | Max. 1.5 | 10.9 | 543107 | NECU-G78G5-C2 |

Socket, push-pull, 5-pin

Technical data

Power supply socket
NECU-M-PPG5PP

- Socket
- 5-pin
- Can be customised with any cable lengths



| General technical data | |
|----------------------------------|---|
| Protocol | PROFINET |
| Additional functions | Fulfils requirements according to AIDA |
| Electrical connection | Straight socket, connection pattern PP, coding on pin 2 and 5 |
| | Push-pull with interlock against unintentional pulling |
| | 5-pin |
| | Spring-loaded terminal |
| Operating voltage range | [V DC] 0 ... 24 |
| Surge resistance | [kV] 4 |
| Acceptable current load at 40 °C | [A] 16 |
| Cable Ø | [mm] 9 ... 13 |
| Nominal conductor cross section | [mm ²] 0.75 ... 2.5 |
| | [AWG] 18 ... 13 |
| Cable fitting | Pg13.5 with hex spanner size 22 |
| Contact durability | 100 |
| Degree of protection | IP65 |
| | IP67 |
| Note on degree of protection | In assembled state |
| Product weight | [g] 109 |

| Materials | |
|-------------------|--|
| Housing | Nickel-plated die-cast zinc |
| Housing colour | Silver |
| Seals | NBR |
| | TPE-V |
| Pin contact | Nickel-plated and gold-plated copper alloy |
| Note on materials | RoHS-compliant |

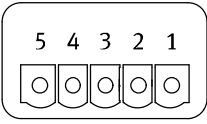
| Operating and environmental conditions | |
|--|------------------|
| Ambient temperature | [°C] -40 ... +85 |
| Storage temperature | [°C] -40 ... +85 |
| Corrosion resistance class CRC ¹⁾ | 1 |
| Contamination level | 3 |
| Fire tested | UL94 V-0 |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Socket, push-pull, 5-pin

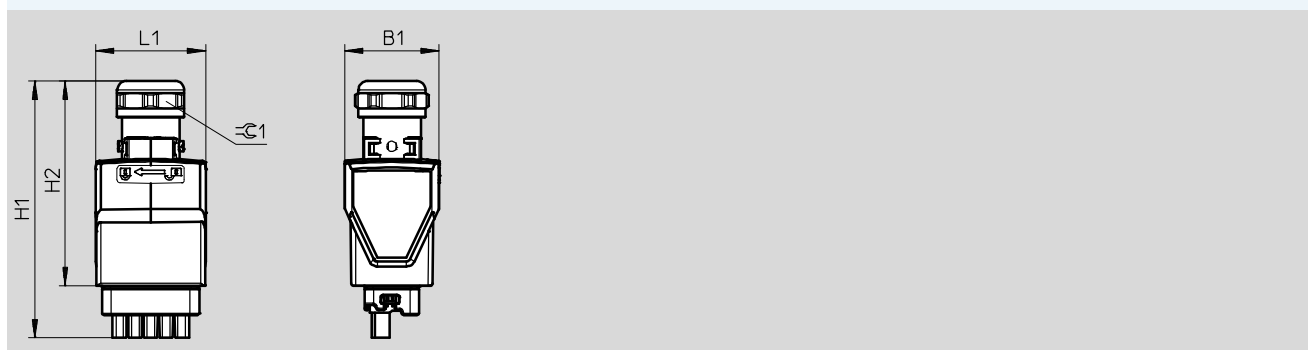
Technical data

FESTO

| Pin allocation | | | |
|---|-----|---|--|
| Push-pull | | | |
| 5-pin | Pin | Wire colour ¹⁾ according to PROFINET colour coding | Function |
|  | 1 | BN | 24 V DC supply voltage for electronics and sensors |
| | 2 | BU | 0 V electronics and sensors |
| | 3 | BK | 24 V DC load voltage supply for valves and outputs |
| | 4 | WH | 0 V valves and outputs |
| | 5 | GY | FE functional earth |


1) To IEC 757

Dimensions Download CAD data → www.festo.com



| Type | B1 | H1 | H2 | L1 | ☞1 |
|---------------------|------|------|------|------|----|
| NECU-M-PPG5PP-C1-PN | 31.1 | 84.4 | 67.3 | 36.2 | 22 |

| Ordering data | | | | | |
|-----------------------------------|--|--|--------------|----------------|----------------------------|
| Electrical connection | | Connection diameter [mm ²] | Part No. | Type | |
| Push-pull socket, 5-pin, straight | | Spring-loaded terminal | 0.75 ... 2.5 | 5195383 | NECU-M-PPG5PP-C1-PN |

| Ordering data – Accessories | | | | | |
|---|--|----------|----------------|-------------------------|---|
| | | Part No. | Type | PE ¹⁾ | |
|  | Cable seal For adapting to cable diameter 6.5 ...9.5 mm | 11x20 mm | 8079860 | NEAU-KD-P4-A1-P5 | 5 |

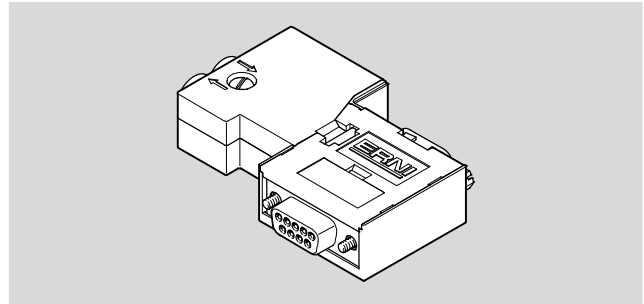
1) Packaging unit.

Socket, Sub-D, 9-pin

Technical data

Socket
NECU-S1W9

- Socket
- 9-pin
- Can be assembled with any cable lengths
- Socket for CANopen with terminating resistor and programming interface



| General technical data | | |
|--------------------------|--------------------|---------------------------------|
| Electrical connection | | Sub-D socket |
| | | 9-pin |
| | | Screw terminal, can be screened |
| Programming interface | | Sub-D plug |
| | | 9-pin |
| Baud rate | [Mbps] | 1 |
| Permissible cable Ø | [mm] | 8 |
| Connection cross section | [mm ²] | 0.14 ... 0.5 |
| Type of mounting | | 4-40 UNC-2B |
| Protection class | | IP20 |

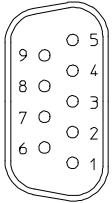
| Materials | |
|-------------------|--------------------------|
| Housing | Reinforced polycarbonate |
| Note on materials | RoHS-compliant |

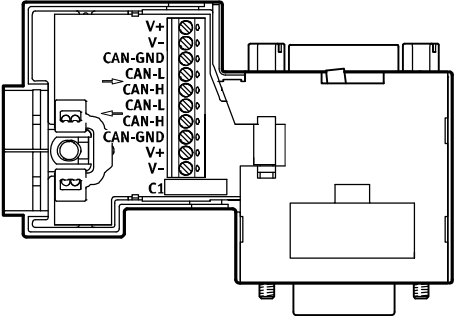
| Operating and environmental conditions | | |
|--|------|-------------|
| Ambient temperature | [°C] | -20 ... +70 |
| Corrosion resistance class CRC ¹⁾ | | 1 |
| Relative air humidity | [%] | 75 at 25 °C |

1) Corrosion resistance class 1 according to Festo standard 940 070
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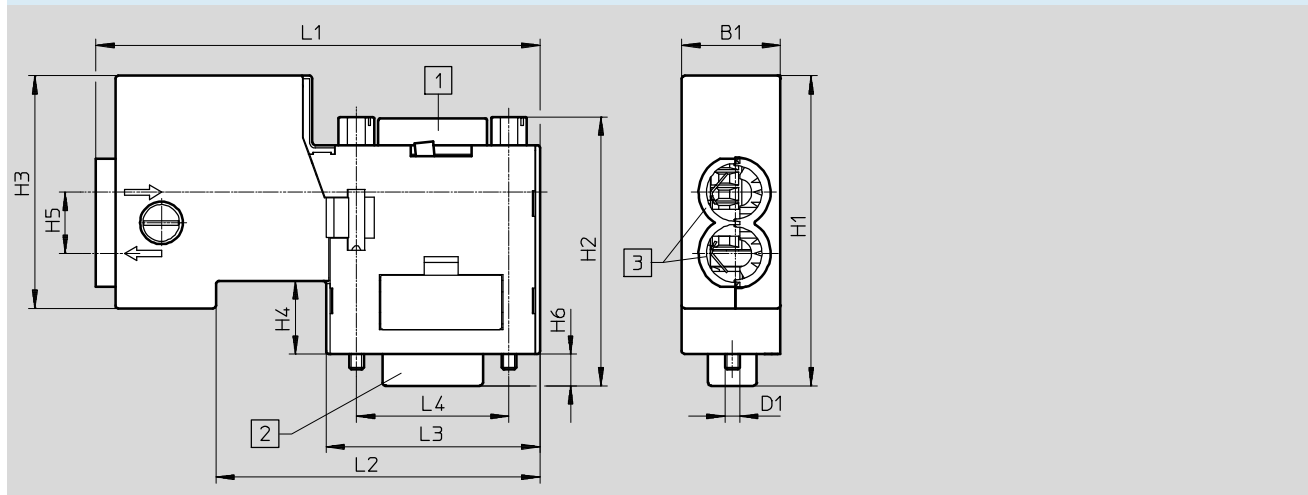
Socket, Sub-D, 9-pin

Technical data

| Pin allocation | | | | |
|---|---------|-------------|--------------------------------|----------|
| Sub-D | | | | |
| 9-pin | Pin | Wire colour | Signal | Terminal |
| Sub-D plug | | | | |
|  | 1 | – | – | – |
| | 2 | White | Received/transmitted data low | C-L |
| | 3 | Screening | 0 V CAN interface | GND |
| | 4 | – | – | – |
| | 5 | – | – | – |
| | 6 | Optional | Optional screened connection | V– |
| | 7 | Brown | Received/transmitted data high | C-H |
| | 8 | – | – | – |
| | 9 | Optional | 24 V DC supply CAN interface | V+ |
| | Housing | – | – | – |



Dimensions Download CAD data → www.festo.com



| Type | B1 | D1 | H1 | H2 | H3 | H4 | H5 | H6 | L1 | L2 | L3 | L4 |
|------------------|------|---------|------|------|------|----|----|-----|------|------|------|----|
| NECU-S1W9-C2-ACO | 16.2 | 4-40UNC | 50.8 | 43.8 | 38.1 | 12 | 10 | 5.2 | 72.8 | 53.1 | 35.1 | 25 |

| Ordering data | | | |
|-----------------------|---------------------------------|--------------|---------------------------------------|
| Electrical connection | Connection cross section [mm] | Part No. | Type |
| Sub-D socket, 9-pin | Screw terminal, can be screened | 0.14 ... 0.5 | 574588 NECU-S1W9-C2-ACO |

Universal plug connectors SIE, for self-assembly

FESTO

Accessories

Operational status indicator SIE-LP-LED-GR

Used to indicate the ready status of a proximity sensor SIE connected via the angled socket SIE-WD-TR. It does this by illuminating a green LED.



| Ordering data | | Part No. | Type |
|-----------------------------------|-----------------------------|----------|---------------|
| Operating voltage range [V DC] | Ambient temperature [°C] | | |
| 10 ... 30 | -25 ... +70 | 12957 | SIE-LP-LED-GR |