

**Universal plug connectors, for self-assembly**

**FESTO**



# Universal plug connectors, for self-assembly

Product range overview

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| Function | Design                          | Type                | Connection technology                | Connection cross section<br>[mm <sup>2</sup> ] | Protection<br>class | Bus protocol/<br>actuation | → Page/<br>Internet |
|----------|---------------------------------|---------------------|--------------------------------------|------------------------------------------------|---------------------|----------------------------|---------------------|
| Plug     | <b>Round plug connector M8</b>  |                     |                                      |                                                |                     |                            |                     |
|          | 3-pin                           | NECU-S-M8G3-HX      | Harax® quick connection              | 0.1 ... 0.14<br>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                   |
|          | <b>Round plug connector M12</b> |                     |                                      |                                                |                     |                            |                     |
|          | 3-pin                           | NECU-S-M12G3-HX     | Harax® quick connection              | 0.14 ... 0.34<br>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<br>0.34 ... 0.75                 | IP65, IP67          | –                          | 10                  |
|          |                                 | NECU-S-M12G4-...-IS | Screw terminal                       | 0.14 ... 0.5<br>0.75                           | IP65, IP67          | –                          | 10                  |
|          |                                 | NECU-M-S-D12G4      | Screw terminal, can be screened      | 0.14 ... 0.75                                  | IP67                | Ethernet                   | 10                  |
|          | 5-pin                           | NECU-M-S-B12G5      | Screw terminal                       | 0.14 ... 0.75                                  | IP67                | PROFIBUS                   | 14                  |
|          | <b>Square plug connector</b>    |                     |                                      |                                                |                     |                            |                     |
|          | 4-pin                           | NECU-S-ECG4         | Insulation displacement<br>connector | 0.14                                           | IP40                | –                          | 16                  |
|          | 8-pin                           | NECU-L8G3-C1        | Spring-loaded terminal               | 0.2 ... 2.5                                    | –                   | –                          | 18                  |
|          |                                 | NECU-L8G3-C2        | Screw terminal                       | 0.2 ... 2.5                                    | –                   | –                          | 18                  |
|          | <b>Sub-D plug connector</b>     |                     |                                      |                                                |                     |                            |                     |
|          | 9-pin                           | NECU-S1W9-C2-APB    | IDC terminal                         | 0.08 ... 0.5                                   | IP20                | PROFIBUS                   | 20                  |

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Product range overview

**FESTO**

| Function | Design                               | Type             | Connection technology           | Connection cross section<br>[mm <sup>2</sup> ] | Protection<br>class | Bus protocol/<br>actuation | → Page/<br>Internet |
|----------|--------------------------------------|------------------|---------------------------------|------------------------------------------------|---------------------|----------------------------|---------------------|
| Socket   | <b>Round plug connector M8</b>       |                  |                                 |                                                |                     |                            |                     |
|          | 4-pin                                | NECU-M8G4        | Screw terminal                  | 0.14 ... 0.5                                   | IP67                | –                          | 22                  |
|          |                                      |                  |                                 |                                                |                     |                            |                     |
|          | <b>Round plug connector M12</b>      |                  |                                 |                                                |                     |                            |                     |
|          | 4-pin                                | SIE              | Screw terminal                  | 0.25 ... 0.75                                  | IP67                | –                          | 24                  |
|          | 5-pin                                | NECU-M-B12G5     | Screw terminal                  | 0.14 ... 0.75                                  | IP67                | –                          | 26                  |
|          |                                      |                  |                                 |                                                |                     |                            |                     |
|          | <b>Round plug connector 7/8"</b>     |                  |                                 |                                                |                     |                            |                     |
|          | 4-pin                                | NECU-G78G4       | Screw terminal                  | Max. 1.5                                       | IP67                | –                          | 28                  |
|          | 5-pin                                | NECU-G78G5       | Screw terminal                  | Max. 1.5                                       | IP67                | –                          | 30                  |
|          |                                      |                  |                                 |                                                |                     |                            |                     |
|          | <b>AIDA push-pull plug connector</b> |                  |                                 |                                                |                     |                            |                     |
|          | 5-pin                                | NECU-M-PPG5      | Spring-loaded terminal          | 0.75 ... 2.5                                   | IP65, IP67          | –                          | 32                  |
|          |                                      |                  |                                 |                                                |                     |                            |                     |
|          | <b>Sub-D plug connector</b>          |                  |                                 |                                                |                     |                            |                     |
|          | 9-pin                                | NECU-S1W9-C2-ACO | Screw terminal, can be screened | 0.14 ... 0.5                                   | IP20                | CANopen                    | 34                  |

# Plug, M8, 3-pin

Technical data

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## 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                       | 2.5 ... 5.1    |
| Permissible individual wire Ø          | [mm]               | ≥ 0.05                            | ≥ 0.1          |
| Connection cross section               | [mm <sup>2</sup> ] | 0.1 ... 0.14                      | 0.14 ... 0.34  |
| Permissible wire Ø                     | [mm]               | 0.6 ... 1                         | 0.9 ... 1.6    |
| Permissible wire insulation            |                    | PP                                | PP             |
|                                        |                    | PVC                               | PVC            |
|                                        |                    | –                                 | TPE-E          |
| Connection frequency                   |                    | 3                                 | 3              |
| Max. tightening torque of locking clip | [Nm]               | 0.3                               | 0.3            |
| 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              |

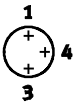
| Operating and environmental conditions       |                       |
|----------------------------------------------|-----------------------|
| Ambient temperature                          | [°C] –25 ... +85      |
| Corrosion resistance class CRC <sup>1)</sup> | 1                     |
| Degree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

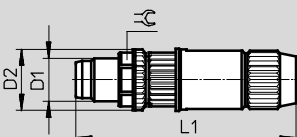
1) Corrosion resistance class 1 according to Festo standard 940 070  
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

# 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 → <a href="http://www.festo.com">www.festo.com</a> |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------|
|  |                                                                      |

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

| Ordering data                                                 |                                                |               |          |                   |
|---------------------------------------------------------------|------------------------------------------------|---------------|----------|-------------------|
| Electrical connection                                         | Connection cross section<br>[mm <sup>2</sup> ] | Weight<br>[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 assembled with any cable lengths



| General technical data                 |                    |                                   |                               |
|----------------------------------------|--------------------|-----------------------------------|-------------------------------|
| Type                                   |                    | NECU-S-M8G4-HX                    | NECU-S-M8G4-C2                |
| Electrical connection                  |                    | Straight plug, M8x1               |                               |
|                                        |                    | 4-pin                             |                               |
|                                        |                    | Insulation displacement connector | Screw terminal                |
| Plug coding                            |                    | –                                 | Coded via contact arrangement |
| Operating voltage range                | [V DC]             | 0 ... 32                          | 0 ... 30                      |
|                                        | [V AC]             | 0 ... 32                          | 0 ... 30                      |
| Surge resistance                       | [kV]               | 0.8                               | 0.8                           |
| Acceptable current load at 40 °C       | [A]                | 4                                 | 4                             |
| Based on standard                      |                    | EN 61076-2-104                    | EN 61076-2-101                |
|                                        |                    | EN 61984                          | EN 61984                      |
| Transmission characteristics           |                    | –                                 | DIN EN 50173/CAT 5            |
| Permissible cable Ø                    | [mm]               | 2.5 ... 5.1                       | 3.5 ... 5.0                   |
| Permissible individual wire Ø          | [mm]               | ≥ 0.1                             | –                             |
| Connection cross section               | [mm <sup>2</sup> ] | 0.14 ... 0.34                     | 0.14 ... 0.5                  |
| Permissible wire Ø                     | [mm]               | 0.9 ... 1.6                       | –                             |
| Permissible wire insulation            |                    | PP                                | –                             |
|                                        |                    | PVC                               | –                             |
|                                        |                    | TPE-E                             | –                             |
| Connection frequency                   |                    | 3                                 | –                             |
| Max. tightening torque of locking clip | [Nm]               | 0.3                               | –                             |
| Protection class                       |                    | IP65                              | –                             |
|                                        |                    | IP67                              | IP67                          |

| Materials         |  |                             |                     |
|-------------------|--|-----------------------------|---------------------|
| Type              |  | NECU-S-M8G4-HX              | NECU-S-M8G4-C2      |
| Housing           |  | Polyamide                   | –                   |
|                   |  | Nickel-plated die-cast zinc | –                   |
| Seals             |  | Fluoro elastomer            | –                   |
|                   |  | Polyurethane                | –                   |
| Pin contact       |  | Gold-plated                 | Gold-plated brass   |
| Union nut         |  | –                           | Nickel-plated brass |
| Note on materials |  | Free of copper and PTFE     | –                   |
|                   |  | RoHS-compliant              | RoHS-compliant      |

# Plug, M8, 4-pin

Technical data

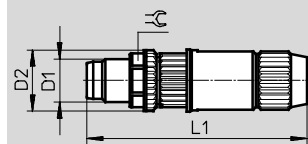
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| Operating and environmental conditions       |                       |                |
|----------------------------------------------|-----------------------|----------------|
| Type                                         | NECU-S-M8G4-HX        | NECU-S-M8G4-C2 |
| Ambient temperature [°C]                     | -25 ... +85           | -25 ... +85    |
| Corrosion resistance class CRC <sup>1)</sup> | 1                     | 1              |
| Degree of contamination                      | 3                     | 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                                                                    |     |             |
|-----------------------------------------------------------------------------------|-----|-------------|
| M8x1                                                                              |     |             |
| 4-pin                                                                             | Pin | Wire colour |
|  | 1   | Brown       |
|                                                                                   | 2   | White       |
|                                                                                   | 3   | Blue        |
|                                                                                   | 4   | Black       |

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



| Type           | D1   | D2   | L1   | ⌄ |
|----------------|------|------|------|---|
| NECU-S-M8G4-HX | M8x1 | 11.5 | 40.8 | 9 |
| NECU-S-M8G4-C2 | M8x1 | 12   | 49.6 | 9 |

| Ordering data              |                                   |                                |            |                                      |
|----------------------------|-----------------------------------|--------------------------------|------------|--------------------------------------|
| Electrical connection      |                                   | Connection cross section [mm²] | Weight [g] | Part No.    Type                     |
| Plug M8x1, 4-pin, straight | Insulation displacement connector | 0.14 ... 0.34                  | 7.8        | <b>562025</b> <b>NECU-S-M8G4-HX</b>  |
|                            | Screw terminal                    | 0.14 ... 0.5                   | 10.9       | <b>1068198</b> <b>NECU-S-M8G4-C2</b> |

# 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 <sup>2</sup> ] | 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              |



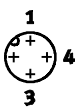
# Plug, M12, 3-pin

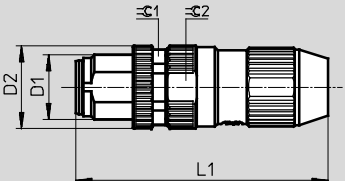
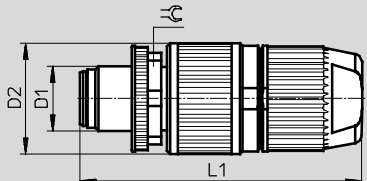
Technical data

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| Operating and environmental conditions       |                       |
|----------------------------------------------|-----------------------|
| Ambient temperature [°C]                     | −25 ... +85           |
| Corrosion resistance class CRC <sup>1)</sup> | 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 → <a href="http://www.festo.com">www.festo.com</a>                |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| NECU-S-M12G3-HX                                                                    | NECU-S-M12G3-HX-Q7                                                                  |
|  |  |

| Type               | D1    | D2   | L1    | ⌀C | ⌀C1 | ⌀C2 |
|--------------------|-------|------|-------|----|-----|-----|
| NECU-S-M12G3-HX    | M12x1 | 15.3 | 46.75 | –  | 13  | 14  |
| NECU-S-M12G3-HX-Q7 | M12x1 | 20.5 | 52.2  | 17 | –   | –   |

| Ordering data               |                                   | Connection cross section [mm²] | Weight [g] | Part No.      | Type                      |
|-----------------------------|-----------------------------------|--------------------------------|------------|---------------|---------------------------|
| Electrical connection       |                                   |                                |            |               |                           |
| Plug M12x1, 3-pin, straight | Insulation displacement connector | 0.14 ... 0.34                  | 17.5       | <b>562027</b> | <b>NECU-S-M12G3-HX</b>    |
|                             |                                   | 0.34 ... 0.75                  | 32.8       | <b>564946</b> | <b>NECU-S-M12G3-HX-Q7</b> |

# 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                  |
|                                        |                      | EN 61076-2-101         | EN 61076-2-101                    | EN 61076-2-101     |
| Based on standard                      |                      | –                      | 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 <sup>2</sup> ]   | 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 <sup>1)</sup> | –                 | 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        | 6.0 ... 8.0                     |
| Connection cross section               | [mm²]  | 0.14 ... 0.5          | 0.75              | 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              |

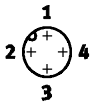
| Operating and environmental conditions       |                     |                             |
|----------------------------------------------|---------------------|-----------------------------|
| Type                                         | NECU-S-M12G4-...-IS | NECU-M-S-D12G4-C2-ET        |
| Ambient temperature                          | [°C]                | –25 ... +85                 |
| Corrosion resistance class CRC <sup>1)</sup> | –                   | 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

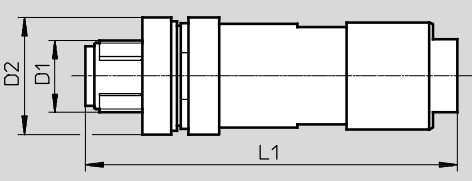
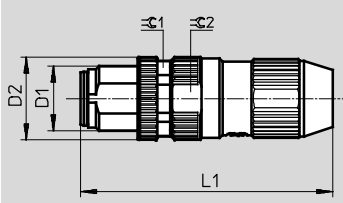
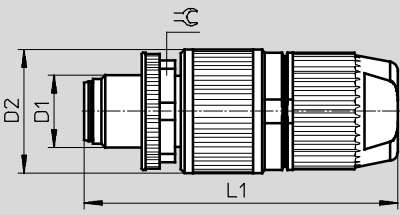
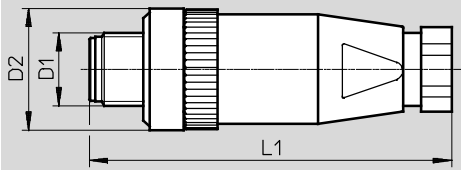
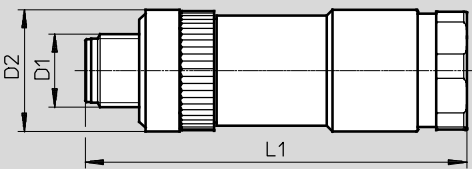
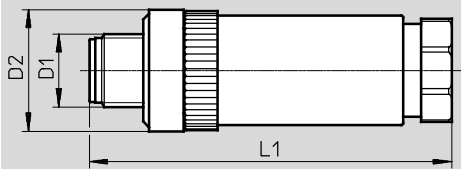
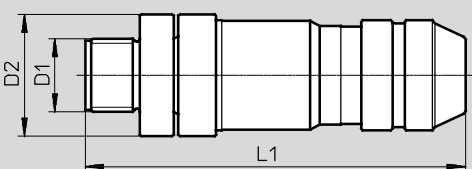
Technical data

FESTO

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

## Dimensions

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

|                                                                                                                 |                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <p>NECU-M-S-A12G4-IS</p>       | <p>NECU-S-M12G4-HX</p>    |
| <p>NECU-S-M12G4-HX-Q7</p>     | <p>NECU-S-M12G4-P1</p>   |
| <p>NECU-S-M12G4-D</p>        | <p>NECU-S-M12G4-P2</p>  |
| <p>NECU-M-S-D12G4-C2-ET</p>  |                                                                                                             |

| 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

**FESTO**

| Ordering data               |                                   |                                                |               |          |                       |
|-----------------------------|-----------------------------------|------------------------------------------------|---------------|----------|-----------------------|
| Electrical connection       |                                   | Connection cross section<br>[mm <sup>2</sup> ] | Weight<br>[g] | Part No. | Type                  |
| Plug M12x1, 4-pin, straight | 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    |
|                             | Screw terminal, can be screened   | 0.14 ... 0.75                                  | 45.3          | 543109   | NECU-M-S-D12G4-C2-ET  |

# Plug, M12, 5-pin

Technical data

FESTO

## Plug

NECU-M-S-B12G5

- Plug
- 5-pin
- B-coded for PROFIBUS
- Can be assembled with any cable lengths



| General technical data           |                                 |               |
|----------------------------------|---------------------------------|---------------|
| Electrical connection            | Straight plug, M12x1            |               |
|                                  | 5-pin                           |               |
|                                  | Screw terminal, can be screened |               |
| Plug coding                      | B-coded                         |               |
| Operating voltage range          | [V DC]                          | 0 ... 60      |
|                                  | [V AC]                          | 0 ... 60      |
| Surge resistance                 | [kV]                            | 1.5           |
| Acceptable current load at 40 °C | [A]                             | 4             |
| Based on standard                | EN 61076-2-101                  |               |
|                                  | EN 61984                        |               |
| Transmission characteristics     | DIN EN 50173/CAT 5              |               |
| Permissible cable Ø              | [mm]                            | 6 ... 8       |
| Connection cross section         | [mm <sup>2</sup> ]              | 0.14 ... 0.75 |
| Protection class                 | IP67                            |               |

| Materials         |                             |
|-------------------|-----------------------------|
| Housing           | Nickel-plated die-cast zinc |
| Pin contact       | Gold-plated brass           |
| Note on materials | Free of copper and PTFE     |
|                   | RoHS-compliant              |

| Operating and environmental conditions        |                             |
|-----------------------------------------------|-----------------------------|
| Ambient temperature                           | [°C] -25 ... +85            |
| Corrosion resistance class CRC <sup>1)</sup>  | 1                           |
| Degree of contamination                       | 3                           |
| CE marking<br>(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, 5-pin

Technical data

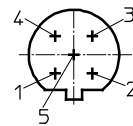
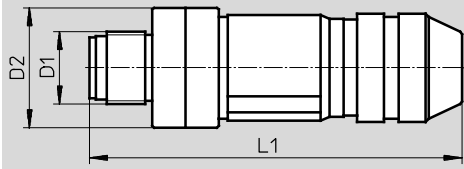
**FESTO**

## Dimensions

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

NECU-M-S-B12G5

Pin allocation



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

## Ordering data

| Electrical connection       |                                 | Connection cross section<br>[mm <sup>2</sup> ] | Weight<br>[g] | Part No.       | Type                        |
|-----------------------------|---------------------------------|------------------------------------------------|---------------|----------------|-----------------------------|
| Plug M12x1, 5-pin, straight | Screw terminal, can be screened | 0.14 ... 0.75                                  | 46            | <b>1066354</b> | <b>NECU-M-S-B12G5-C2-PB</b> |

# 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 <sup>2</sup> ] | 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 <sup>1)</sup> | 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.



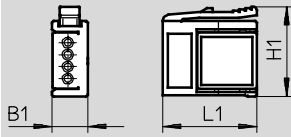
# Plug, square, 4-pin

Technical data

**FESTO**

## Dimensions

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



| Type        | B1  | H1   | L1   |
|-------------|-----|------|------|
| NECU-S-ECG4 | 5.9 | 14.9 | 15.6 |

## Ordering data

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

## Plug, terminal strip, 8-pin

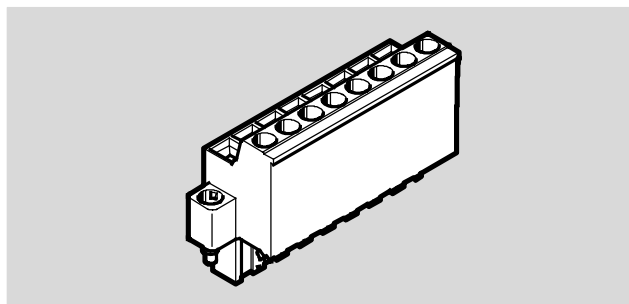
Technical data

**FESTO**

### Terminal strip

NECU-L8G3

- 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-L8G3-C1           |  | NECU-L8G3-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 <sup>2</sup> ] | 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 <sup>1)</sup> | 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

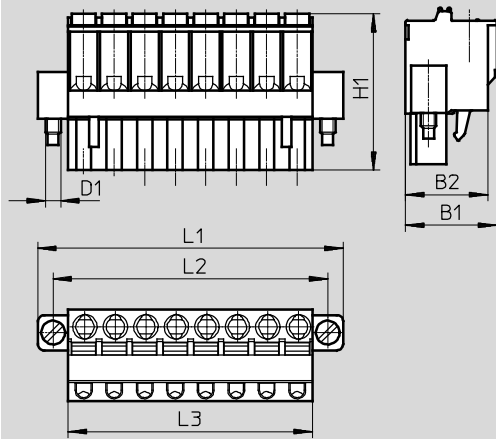
Technical data

**FESTO**

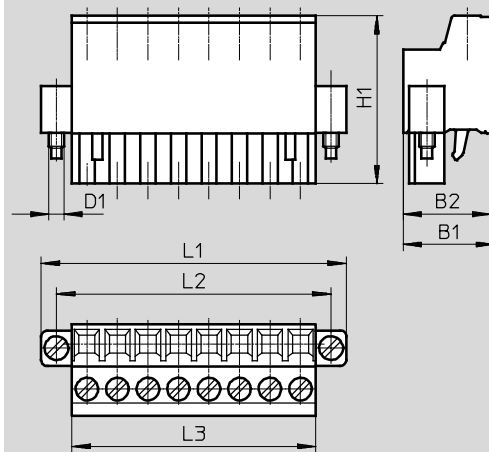
### Dimensions

Download CAD data → [www.festo.com](http://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    |
|                       |                        | Gentian blue | 565711 NECU-L3G8-C1-IS |
|                       | Screw terminal         | Black        | 565710 NECU-L3G8-C2    |
|                       |                        | Gentian blue | 565709 NECU-L3G8-C2-IS |

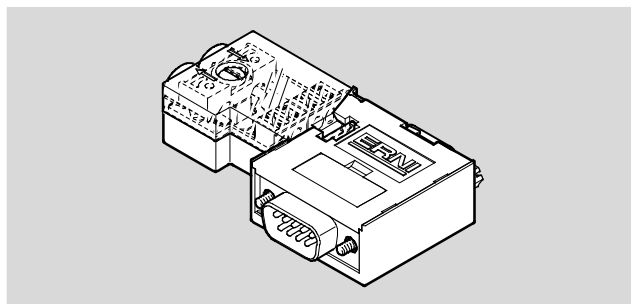
## Plug, Sub-D, 9-pin

Technical data

**FESTO**

**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 <sup>2</sup> ] | 0.08 ... 0.5 |
| Type of mounting         |                    | 4-40UNC      |
| 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 <sup>1)</sup> |      | 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.



# Socket, M8, 4-pin

Technical data

**FESTO**

## Socket

NECU-M8G4

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



| General technical data                 |                    |                       |
|----------------------------------------|--------------------|-----------------------|
| Electrical connection                  |                    | Straight socket, M8x1 |
|                                        |                    | 4-pin                 |
| Operating voltage range                | [V DC]             | 0 ... 30              |
|                                        | [V AC]             | 0 ... 30              |
| Surge resistance                       | [kV]               | 0.8                   |
| Acceptable current load at 40 °C       | [A]                | 3                     |
| Based on standard                      |                    | EN 61984              |
| Permissible cable Ø                    | [mm]               | 3.5 ... 5.0           |
| Connection cross section               | [mm <sup>2</sup> ] | 0.14 ... 0.5          |
| Connection frequency                   |                    | 500                   |
| Max. tightening torque of locking clip | [Nm]               | 0.3                   |
| Protection class                       |                    | IP67                  |

| Materials         |                            |
|-------------------|----------------------------|
| Housing           | Polybutylene terephthalate |
|                   | Nickel-plated brass        |
| Housing colour    | Black                      |
| Pin contact       | Gold-plated brass          |
| Union nut         | Nickel-plated brass        |
| Note on materials | RoHS-compliant             |

| Operating and environmental conditions       |      |             |
|----------------------------------------------|------|-------------|
| Ambient temperature                          | [°C] | -40 ... +80 |
| Storage temperature                          | [°C] | -40 ... +80 |
| Corrosion resistance class CRC <sup>1)</sup> |      | 2           |
| Degree of contamination                      |      | 3           |

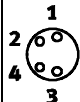
1) Corrosion resistance class 2 according to Festo standard 940 070

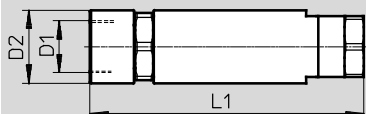
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Socket, M8, 4-pin

Technical data

**FESTO**

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

| Dimensions                                                                        | Download CAD data → <a href="http://www.festo.com">www.festo.com</a> |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------|
|  |                                                                      |

| Type     | D1   | D2 | L1 |
|----------|------|----|----|
| NECU-M8G | M8x1 | 12 | 45 |

| Ordering data                |                                             |              |          |                  |
|------------------------------|---------------------------------------------|--------------|----------|------------------|
| Electrical connection        | Connection cross section [mm <sup>2</sup> ] | Weight [g]   | Part No. | Type             |
| Socket M8x1, 4-pin, straight | Screw terminal                              | 0.14 ... 0.5 | 9.5      | 544392 NECU-M8G4 |

# Socket, M12, 4-pin

Technical data

**FESTO**

Socket

SIE-GD

SIE-WD-TR

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



| General technical data                 |                                  |                               |
|----------------------------------------|----------------------------------|-------------------------------|
| Type                                   | SIE-GD                           | SIE-WD-TR                     |
| Electrical connection                  | Straight socket, M12x1<br>4-pin  | Angled socket, M12x1<br>4-pin |
| Operating voltage range                | [V DC] 0 ... 250                 | 0 ... 250                     |
|                                        | [V AC] 0 ... 250                 | 0 ... 250                     |
| Surge resistance                       | [kV] 2.5                         | 2.5                           |
| Acceptable current load at 40 °C       | [A] 4                            | 4                             |
| Based on standard                      | EN 61076-2-101                   | EN 61076-2-101                |
|                                        | EN 61984                         | EN 61984                      |
| Permissible cable Ø                    | [mm] 4 ... 6                     | 4 ... 6                       |
| Connection cross section               | [mm <sup>2</sup> ] 0.25 ... 0.75 | 0.25 ... 0.75                 |
| Max. tightening torque of locking clip | [Nm] 0.5                         | 0.5                           |
| Protection class                       | IP67                             | IP67                          |

| Materials         |                |
|-------------------|----------------|
| Housing           | Polyamide      |
| Union nut         | Polyamide      |
| Note on materials | RoHS-compliant |

| Operating and environmental conditions        |                             |
|-----------------------------------------------|-----------------------------|
| Ambient temperature                           | [°C] -25 ... +85            |
| Corrosion resistance class CRC <sup>1)</sup>  | 4                           |
| Degree of contamination                       | 3                           |
| CE marking<br>(see declaration of conformity) | To EU Low Voltage Directive |

1) Corrosion resistance class 4 to Festo standard 940 070  
Components subject to high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.



# Socket, M12, 4-pin

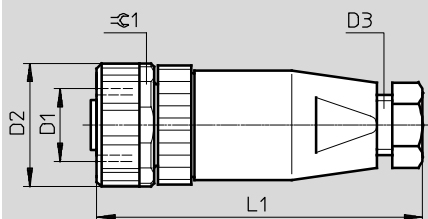
Technical data

**FESTO**

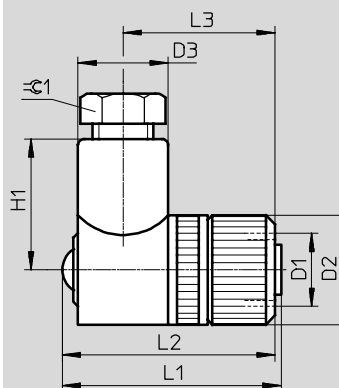
## Dimensions

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

### SIE-GD



### SIE-WD-TR



| Type      | D1    | D2   | D3   | H1   | L1 | L2 | L3 | ≈C1 |
|-----------|-------|------|------|------|----|----|----|-----|
| SIE-GD    | M12x1 | 20.2 | Pg7  | –    | 54 | –  | –  | 18  |
| SIE-WD-TR | M12x1 | 18   | 14.8 | 20.5 | 36 | 35 | 25 | 13  |

## Ordering data

| Electrical connection |          | Connection cross section<br>[mm <sup>2</sup> ] | Part No.     | Type             |
|-----------------------|----------|------------------------------------------------|--------------|------------------|
| Socket M12x1, 4-pin   | Straight | 0.25 ... 0.75                                  | <b>18494</b> | <b>SIE-GD</b>    |
|                       | Angled   | 0.25 ... 0.75                                  | <b>12956</b> | <b>SIE-WD-TR</b> |

# Socket, M12, 5-pin

Technical data

**FESTO**

## Socket

NECU-M-B12G5

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



| General technical data           |                    |                                 |
|----------------------------------|--------------------|---------------------------------|
| Electrical connection            |                    | Straight socket, M12x1          |
|                                  |                    | 5-pin                           |
|                                  |                    | Screw terminal, can be screened |
| Plug coding                      |                    | B-coded                         |
| Operating voltage range          | [V DC]             | 0 ... 125                       |
|                                  | [V AC]             | 0 ... 125                       |
| Surge resistance                 | [kV]               | 1.25                            |
| Acceptable current load at 40 °C | [A]                | 4                               |
| Based on standard                |                    | EN 61076-2-101                  |
|                                  |                    | EN 61984                        |
| Transmission characteristics     |                    | DIN EN 50173/CAT 5              |
| Permissible cable Ø              | [mm]               | 6 ... 8                         |
| Connection cross section         | [mm <sup>2</sup> ] | 0.14 ... 0.75                   |
| Protection class                 |                    | IP67                            |

| Materials         |                             |
|-------------------|-----------------------------|
| Housing           | Nickel-plated die-cast zinc |
| Pin contact       | Gold-plated brass           |
| Note on materials | RoHS-compliant              |

| Operating and environmental conditions        |                             |
|-----------------------------------------------|-----------------------------|
| Ambient temperature                           | [°C] -25 ... +85            |
| Corrosion resistance class CRC <sup>1)</sup>  | 1                           |
| Degree of contamination                       | 3                           |
| CE marking<br>(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.

# Socket, M12, 5-pin

Technical data

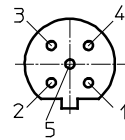
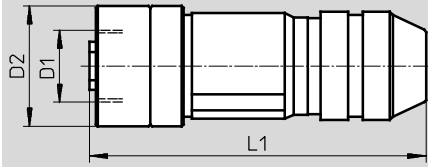
**FESTO**

## Dimensions

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

NECU-M-B12G5

Pin allocation



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

## Ordering data

| Electrical connection         | Connection cross section<br>[mm <sup>2</sup> ] | Part No.      | Type                              |
|-------------------------------|------------------------------------------------|---------------|-----------------------------------|
| Socket M12x1, 5-pin, straight | Screw terminal                                 | 0.14 ... 0.75 | <b>1067905</b> NECU-M-B12G5-C2-PB |

# Socket, 7/8", 4-pin

Technical data

FESTO

## 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 <sup>2</sup> ]    | 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 <sup>1)</sup>  | 1                           |
| Degree of contamination                       | 3                           |
| CE marking<br>(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.

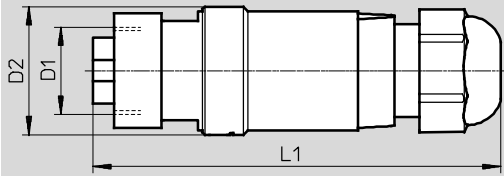
# Socket, 7/8", 4-pin

Technical data

**FESTO**

## Dimensions

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



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

## Ordering data

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

# Socket, 7/8", 5-pin

Technical data

**FESTO**

## 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 <sup>2</sup> ] | 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 <sup>1)</sup>  | 1                           |
| Degree of contamination                       | 3                           |
| CE marking<br>(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.

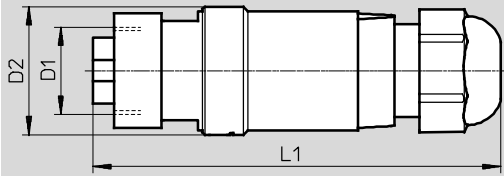
# Socket, 7/8", 5-pin

Technical data

**FESTO**

## Dimensions

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



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

## Ordering data

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

# Socket, AIDA push-pull, 5-pin

Technical data

FESTO

## Plug

NECU-M-PPG5

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



| General technical data           |                                 |              |
|----------------------------------|---------------------------------|--------------|
| Electrical connection            | Straight socket, AIDA push-pull |              |
|                                  | 5-pin                           |              |
|                                  | Spring-loaded terminal          |              |
| Plug coding                      | Black insulator                 |              |
| Operating voltage range          | [V DC]                          | 0 ... 24     |
| Surge resistance                 | [kV]                            | 2.5          |
| Acceptable current load at 40 °C | [A]                             | 16           |
| Based on standard                | EN 61984                        |              |
| Permissible cable Ø              | [mm]                            | 9 ... 13     |
| Connection cross section         | [mm <sup>2</sup> ]              | 0.75 ... 2.5 |
| Protection class                 | IP65                            |              |
|                                  | IP67                            |              |

| Materials         |                                            |
|-------------------|--------------------------------------------|
| Housing           | Nickel-plated die-cast zinc                |
| Seals             | Nitrile rubber                             |
|                   | Thermoplastic elastomer                    |
| Pin contact       | Nickel-plated and gold-plated copper alloy |
| Note on materials | RoHS-compliant                             |

| Operating and environmental conditions       |                   |
|----------------------------------------------|-------------------|
| Ambient temperature                          | [°C] -40 ... +100 |
| Corrosion resistance class CRC <sup>1)</sup> | 1                 |
| Degree of contamination                      | 3                 |
| Fire protection classification to UL 94      | V0                |

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.

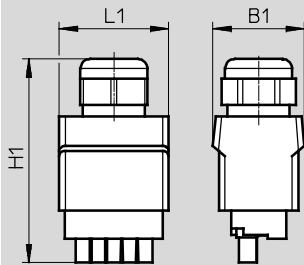


# Socket, AIDA push-pull, 5-pin

Technical data

**FESTO**

## Dimensions



| Type           | B1 | H1   | L1 |
|----------------|----|------|----|
| NECU-M-PPG5-C1 | 30 | 66.9 | 36 |

## Ordering data

| Electrical connection                  |                        | Connection cross section<br>[mm <sup>2</sup> ] | Part No.      | Type                  |
|----------------------------------------|------------------------|------------------------------------------------|---------------|-----------------------|
| AIDA push-pull socket, 5-pin, straight | Spring-loaded terminal | 0.75 ... 2.5                                   | <b>563059</b> | <b>NECU-M-PPG5-C1</b> |

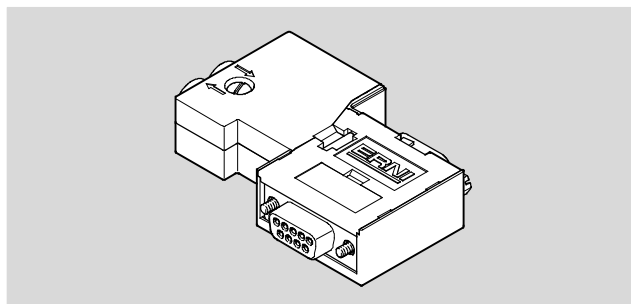
## Socket, Sub-D, 9-pin

Technical data

**FESTO**

**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 <sup>2</sup> ] | 0.14 ... 0.5                    |
| Type of mounting         |                    | 4-40UNC                         |
| Protection class         |                    | IP20                            |

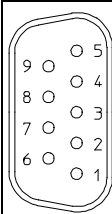
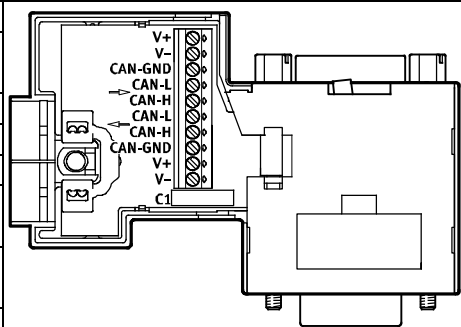
| Materials         |                          |
|-------------------|--------------------------|
| Housing           | Reinforced polycarbonate |
| Note on materials | RoHS-compliant           |

| Operating and environmental conditions       |      |             |
|----------------------------------------------|------|-------------|
| Ambient temperature                          | [°C] | -20 ... +70 |
| Corrosion resistance class CRC <sup>1)</sup> |      | 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.

# 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](http://www.festo.com)

Technical drawing of a Festo valve assembly, showing two views: a front view (left) and a side view (right).

**Front View Dimensions:**

- L1:** Total length of the assembly.
- L2:** Length of the main body.
- L3:** Length of the solenoid coil.
- L4:** Length of the solenoid coil mounting bracket.
- L5:** Length of the solenoid coil.
- L6:** Length of the solenoid coil mounting bracket.
- H1:** Total height of the assembly.
- H2:** Height of the main body.
- H3:** Height of the solenoid coil mounting bracket.
- H4:** Height of the solenoid coil.
- H5:** Height of the solenoid coil mounting bracket.

**Side View Dimensions:**

- B1:** Width of the main body.
- D1:** Diameter of the solenoid coil mounting bracket.

**Callouts:**

- 1:** Solenoid coil.
- 2:** Solenoid coil mounting bracket.
- 3:** Solenoid coil mounting bracket.

## Universal plug connectors SIE, for self-assembly

Accessories

FESTO

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