## Pre-assembled plugs

# Product range overview

| Function   | Electrical connection | Туре           | Cable connector | Design  | → Page/Internet |
|------------|-----------------------|----------------|-----------------|---|-----------------|
| Round plug | Plug                  |                |                 |   |                 |
|            | M8 3-pin              | SEA-3GS-M8-S   | PG7             | Straight  | 2               |
|            |                       |                |                 | Screw terminal  |                 |
|            |                       | SEA-GS-M8      | PG7             | Straight  | 2               |
|            |                       |                |                 | Solder lug  |                 |
|            | M12, 4-pin            | SEA-GS-7       | PG7             | Straight  | 4               |
|            |                       |                |                 | Screw terminal  |                 |
|            |                       | SEA-GS-9       | PG9             | Straight  | 4               |
|            |                       |                |                 | Screw terminal  |                 |
|            |                       | SEA-GS-11-DUO  | PG11            | Straight  | 4               |
|            |                       |                |                 | Screw terminal  |                 |
|            |                       | SEA-GS-HAR     | PG9             | Straight  | 4               |
|            |                       |                |                 | <ul> <li>Insulation displacement connector</li> </ul> |                 |
|            |                       | SEA-4GS-7-2.5  | PG7             | Straight  | 4               |
|            |                       |                |                 | Screw terminal  |                 |
|            | M12, 5-pin            | SAE-M12-5GS    | PG7             | Straight  | 6               |
|            |                       |                |                 | Screw terminal  |                 |
|            |                       | SEA-5GS-11-DUO | PG11            | Straight  | 6               |
|            |                       |                |                 | Screw terminal  |                 |

### Pre-assembled plugs, M8, 3-pin

#### Data sheet

Plug SEA-GS-M8

- Sensor plug for inputs/outputs
- Can be assembled with any cable lengths
- 3-pin

Nickel-plated brass

RoHS-compliant

0.3

[Nm]

- With screw terminals or soldered connection
- Wire cross section up to 0.5  $\mbox{mm}^2$



Nickel-plated/chrome-plated brass

| General technical data                      |        |                            |                  |  |  |  |
|---|--------|----------------------------|------------------|--|--|--|
| Туре  |        | SEA-GS-M8                  | SEA-3GS-M8-S     |  |  |  |
| Electrical connection                       |        | Straight plug, 3-pin, M8x1 |                  |  |  |  |
|   |        | Solder lug                 | Screw terminal   |  |  |  |
| Type of mounting                            |        | Via threaded sleeve        |                  |  |  |  |
| Mounting position                           |        | Any                        |                  |  |  |  |
| Max. tightening torque of [Nm]<br>interlock |        | 0.3                        |                  |  |  |  |
| Permissible cable Ø                         | [mm]   | 3.5 5                      | 2.5 5            |  |  |  |
| Connection cross section [mm <sup>2</sup> ] |        | 0.25                       | 0.14 0.5         |  |  |  |
| Current rating at 40°C                      | [A]    | 3                          |                  |  |  |  |
| Surge resistance                            | [kV]   | 1.5                        |                  |  |  |  |
| Operating voltage range                     | [V AC] | 60                         |                  |  |  |  |
|   | [V DC] | 60                         |                  |  |  |  |
| Degree of protection to EN 605              | 529    | IP67 (assembled)           | IP65 (assembled) |  |  |  |
| Based on standard                           |        | EN 61076-2-101, EN 61984   |                  |  |  |  |
| Materials                                   |        |                            |                  |  |  |  |
| Туре  |        | SEA-GS-M8                  | SEA-3GS-M8-S     |  |  |  |
| Housing colour                              |        | Black                      |                  |  |  |  |
| Information on materials: Hou               | ising  | PA                         |                  |  |  |  |
| Information on materials: Cont              | tacts  | Gold-plated brass          |                  |  |  |  |
|   |        |                            |                  |  |  |  |

| Operating and environmental conditions       |                             |  |  |  |  |  |
|--|-----------------------------|--|--|--|--|--|
| Ambient temperature [°C]                     | -40 +85                     |  |  |  |  |  |
| Corrosion resistance class CRC <sup>1)</sup> | 2                           |  |  |  |  |  |
| CE marking (see declaration of conformity)   | To EU Low Voltage Directive |  |  |  |  |  |
| Pollution degree                             | 3                           |  |  |  |  |  |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Information on materials: Union nut

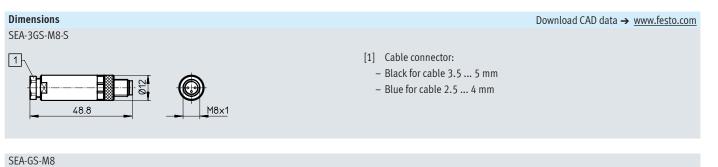
Note on materials

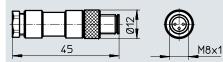
interlock

Max. tightening torque of

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

## Data sheet





| Ordering data<br>Electrical connection    | Cable connector | Product weight<br>[g] | Part no. | Туре         |
|---|-----------------|-----------------------|----------|--------------|
| Straight plug,<br>3-pin<br>Screw terminal | Pg7             | 11                    | 192009   | SEA-3GS-M8-S |
| Straight plug,<br>3-pin<br>Solder lug     | Pg7             | 9                     | 18696    | SEA-GS-M8    |

### Pre-assembled plugs, M12, 4-pin

#### Data sheet

Plug SEA-GS SEA-GS-HAR SEA-4GS

- Sensor plug for inputs/outputs
- Can be assembled with any cable lengths
- 4-pin
- Wire cross section up to 0.75  $\mbox{mm}^2$



#### General technical data

| General technical data                  |                    |                      |                     |                     |                     |                                      |
|---|--------------------|----------------------|---------------------|---------------------|---------------------|--------------------------------------|
| Туре                                    |                    | SEA-GS-7             | SEA-4GS-7-2.5       | SEA-GS-9            | SEA-GS-11-DUO       | SEA-GS-HAR-4POL                      |
| Based on standard                       |                    | EN 61076-2-101       | EN 61076-2-101      | EN 61076-2-101      | EN 61076-2-101      | EN 61076-2-101                       |
|   |                    | -                    | EN 61984            | EN 61984            | EN 61984            | EN 61984                             |
| Type of mounting                        |                    | Via threaded sleeve  | Via threaded sleeve | Via threaded sleeve | Via threaded sleeve | Via thread                           |
| Mounting position                       |                    | -                    | Any                 | Any                 | Any                 | Any                                  |
| Product weight                          | [g]                | 17                   | 18                  | 18                  | 24                  | 11.5                                 |
| Electrical connection 1                 |                    |                      |                     |                     |                     |                                      |
| Connection type                         |                    | Plug                 | Plug                | Plug                | Plug                | Plug                                 |
| Cable outlet                            |                    | Straight             | Straight            | Straight            | Straight            | Straight                             |
| Design type                             |                    | Round                | -                   | _                   | _                   | _                                    |
| Connection technology                   |                    | M12x1, A-coded, to   | M12x1, type A       | M12x1, type A       | M12x1, type A       | M12x1                                |
| connection technology                   |                    | EN 61076-2-101       | mizzi, type A       | MIZAI, type A       | MIZAI, type A       | WIZXI                                |
| Number of pins/wires                    |                    | 4                    | 4                   | 4                   | 4                   | 4                                    |
| Type of mounting                        |                    | Screw-type lock with | -                   | -                   | -                   | -                                    |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                    | longitudinal knurl   |                     |                     |                     |                                      |
|   |                    | -signa and that      |                     |                     |                     |                                      |
| Electrical connection 2                 |                    |                      |                     |                     |                     |                                      |
| Connection technology                   |                    | Screw terminal       | Screw terminal      | Screw terminal      | Screw terminal      | Insulation displacement<br>connector |
| Number of pins/wires                    |                    | 4                    | -                   | -                   | -                   | -                                    |
| Permissible insulating sheath           |                    | -                    | -                   | -                   | -                   | PVC                                  |
| Cable connector                         |                    | Pg7                  | Pg7                 | Pg9                 | Pg11                | Pg9                                  |
| Cable diameter                          | [mm]               | 3.3 6                | -                   | -                   | -                   | -                                    |
| Permissible cable diameter              | [mm]               | 4 6                  | 2.5 2.9             | 68                  | 2 x 3 or 2 x 5      | 4 5.1                                |
| Nominal conductor cross section         | [mm <sup>2</sup> ] | 0.14 0.75            | -                   | -                   | -                   | -                                    |
| Connection cross section                | [mm <sup>2</sup> ] | -                    | 0.14 0.5            | 0.75                | 0.75                | 0.25 0.5                             |
| Wire diameter                           | [mm]               | -                    | -                   | -                   | -                   | 1.2 1.6                              |
| Individual wire diameter                | [mm]               | -                    | -                   | -                   | -                   | 0.1                                  |
|   |                    |                      |                     |                     |                     |                                      |
| Technical data – Electrics              |                    |                      |                     |                     |                     |                                      |
| Туре                                    |                    | SEA-GS-7             | SEA-4GS-7-2.5       | SEA-GS-9            | SEA-GS-11-DUO       | SEA-GS-HAR-4POL                      |
| Operating voltage range                 | [V DC]             | 0 250                | <= 250              | <= 250              | <= 250              | <= 32                                |
|   | [V AC]             | 0 250                | <= 250              | <= 250              | <= 250              | <= 32                                |
| Surge resistance                        | [kV]               | 2.5                  | 2.5                 | 2.5                 | 2.5                 | 0.8                                  |
| Current rating at 40°C                  | [A]                | 4                    | 4                   | 4                   | 4                   | 4                                    |
| 5                                       |                    |                      |                     |                     |                     |                                      |
| Materials                               |                    |                      |                     |                     |                     |                                      |
| Туре                                    |                    | SEA-GS-7             | SEA-4GS-7-2.5       | SEA-GS-9            | SEA-GS-11-DUO       | SEA-GS-HAR-4POL                      |
| Housing                                 |                    | PBT                  | PA                  | PBT                 | PBT                 | Die-cast zinc                        |
|   |                    |                      |                     |                     |                     | Nickel-plated                        |
| Housing colour                          |                    | Black                | Black               | Black               | Black               | -                                    |
| Screw-type lock                         |                    | PBT                  | -                   | -                   | -                   | _                                    |
| Union nut                               |                    | -                    | PA                  | PBT                 | PBT                 | -                                    |
| Seals                                   |                    | CR                   | -                   | -                   | -                   | _                                    |
|   |                    | FPM                  |                     |                     |                     | _                                    |
| Pin contacts                            |                    | Brass                | Brass               | Brass               | Brass               | -                                    |
| in contucto                             |                    | Coated white bronze  | Coated white bronze | Coated white bronze | Coated white bronze | -                                    |
| Note on materials                       |                    | RoHS-compliant       | RoHS-compliant      |                     |                     | PoUS compliant                       |
| Note off filaterials                    |                    | Kons-compliant       | KURS-CUMPLIANC      | RoHS-compliant      | RoHS-compliant      | RoHS-compliant                       |

### Pre-assembled plugs, M12, 4-pin

## Data sheet

#### Operating and environmental conditions

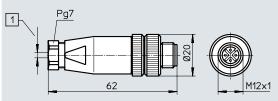
| Operating and environmental conditions          |                   |                   |                   |                   |                 |  |
|---|-------------------|-------------------|-------------------|-------------------|-----------------|--|
| Туре  | SEA-GS-7          | SEA-4GS-7-2.5     | SEA-GS-9          | SEA-GS-11-DUO     | SEA-GS-HAR-4POL |  |
| Ambient temperature [°C]                        | -40 85            | -40 85            | -40 85            | -40 85            | -25 85          |  |
| Corrosion resistance class CRC <sup>1)</sup>    | 2                 | 2                 | 2                 | 2                 | 2               |  |
| CE marking (see declaration of conformity)      | To EU Low Voltage | -               |  |
|   | Directive         | Directive         | Directive         | Directive         |                 |  |
| Pollution degree                                | 3                 | 3                 | 3                 | 3                 | 3               |  |
| Degree of protection IP67                       |                   | IP65              | IP67              | IP67              | IP67            |  |
| Note on degree of protection In assembled state |                   | -                 | -                 | -                 | -               |  |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

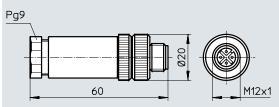
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

| Dimensions<br>SEA-GS-7 |       |         | Download CAD data → <u>www.festo.com</u> |
|------------------------|-------|---------|--|
|                        |       |         |  |
| Туре                   | D1    | D2<br>Ø | L1                                       |
| SEA-GS-7               | M12x1 | 20      | 60                                       |

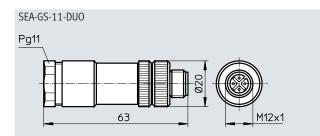




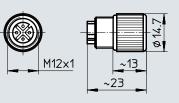
SEA-GS-9



[1] 2.5 ... 2.9 mm



SEA-GS-HAR



#### Ordering data

| Electrical connection 1 | Electrical connection 2 | Cable connector | Permissible cable | Product weight | Part no. | Туре            |
|-------------------------|-------------------------|-----------------|-------------------|----------------|----------|-----------------|
|                         |                         |                 | Ø                 |                |          |                 |
|                         |                         |                 | [mm]              | [g]            |          |                 |
| Plug                    | Screw terminal          | Pg7             | 4 6               | 17             | 18666    | SEA-GS-7        |
| Straight                |                         |                 | 2.5 2.9           | 18             | 192008   | SEA-4GS-7-2.5   |
| M12x1                   |                         | Pg9             | 6 8               | 18             | 18778    | SEA-GS-9        |
| 4-pin,                  |                         | Pg11            | 2 x 3 or 2 x 5    | 24             | 18779    | SEA-GS-11-DUO   |
|                         | Insulation displacement | Pg9             | 4 5.1             | 11.5           | 525928   | SEA-GS-HAR-4POL |
|                         | connector               |                 |                   |                |          |                 |

#### Pre-assembled plugs, M12, 5-pin

#### Data sheet

- Plug SEA-M12-5GS SEA-5GS
- Sensor plug for inputs/outputs
- Can be assembled with any cable lengths
- 5-pin

Nickel-plated die-cast zinc

RoHS-compliant

- Wire cross section up to  $0.75\;\text{mm}^2$ 



| General technical data                      |        |                                 |                          |  |  |  |  |
|---|--------|---------------------------------|--------------------------|--|--|--|--|
| Туре  |        | SEA-M12-5GS-PG7                 | SEA-5GS-11-DUO           |  |  |  |  |
| Electrical connection                       |        | Straight plug (type A), 5-pin   |                          |  |  |  |  |
|   |        | M12, screw terminal             |                          |  |  |  |  |
| Type of mounting                            |        | Via threaded sleeve             |                          |  |  |  |  |
| Max. tightening torque of                   | [Nm]   | 0.5                             |                          |  |  |  |  |
| interlock                                   |        |                                 |                          |  |  |  |  |
| Mounting position                           |        | Any                             |                          |  |  |  |  |
| Permissible cable Ø                         | [mm]   | 4 6                             | 2 x 2.5 2.9 or 2 x 5     |  |  |  |  |
| Connection cross section [mm <sup>2</sup> ] |        | 0.75                            | 0.14 0.5                 |  |  |  |  |
| Current rating at 40°C                      | [A]    | 4                               |                          |  |  |  |  |
| Surge resistance                            | [kV]   | 1.5                             |                          |  |  |  |  |
| Operating voltage range                     | [V AC] | 60                              |                          |  |  |  |  |
|   | [V DC] | 60                              |                          |  |  |  |  |
| Degree of protection to EN 605              | 29     | IP67 (assembled)                | IP65 (assembled)         |  |  |  |  |
| Based on standard                           |        | EN 61076-2-101, EN 61984        | EN 61076-2-101, EN 61984 |  |  |  |  |
| Materials                                   |        |                                 |                          |  |  |  |  |
|   |        | SEA-M12-5GS-PG7                 |                          |  |  |  |  |
| Туре  |        |                                 | SEA-5GS-11-DUO           |  |  |  |  |
| Housing colour                              |        | Black                           |                          |  |  |  |  |
| Housing                                     |        | PBT                             | PA                       |  |  |  |  |
| Contacts                                    |        | Brass, coated with white bronze |                          |  |  |  |  |

#### Operating and environmental conditions

Union nut

Note on materials

| Ambient temperature [°C]                     | -40 +85                     |  |  |  |
|--|-----------------------------|--|--|--|
| Corrosion resistance class CRC <sup>1)</sup> | 2                           |  |  |  |
| CE marking (see declaration of conformity)   | To EU Low Voltage Directive |  |  |  |
| Pollution degree                             | 3                           |  |  |  |

PA

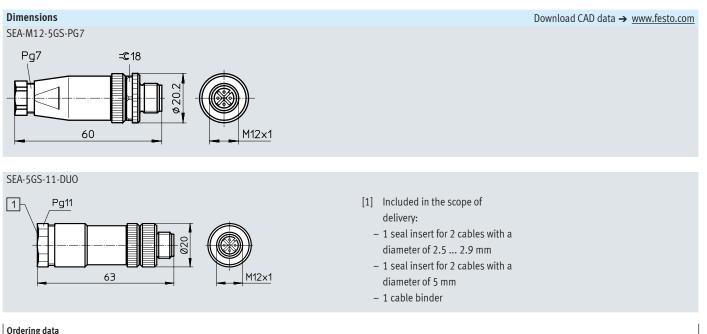
1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

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### Pre-assembled plugs, M12, 5-pin

## Data sheet



| Ordering data           |                 |                |          |                 |
|-------------------------|-----------------|----------------|----------|-----------------|
| Electrical connection   | Cable connector | Product weight | Part no. | Туре            |
|                         |                 | [g]            |          |                 |
| Straight plug (type A), | Pg7             | 21.5           | 175487   | SEA-M12-5GS-PG7 |
| 5-pin                   | Pg11            | 24             | 192010   | SEA-5GS-11-DUO  |
| Screw terminal          |                 |                |          |                 |

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