

# SACC-M12FSX-8QO SH ETH - Data connector



1414586

<https://www.phoenixcontact.com/us/products/1414586>

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Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, halogen-free, shielded, Socket straight M12, coding: X, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

## Your advantages

- Safe use in the field, thanks to a high degree of protection
- Insulation displacement connection: innovative and time-saving assembly without stripping the single wire
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1414586       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF31          |
| Product key                          | AF2CDI        |
| GTIN                                 | 4055626029238 |
| Weight per piece (including packing) | 47.2 g        |
| Weight per piece (excluding packing) | 47.28 g       |
| Customs tariff number                | 85366990      |
| Country of origin                    | DE            |

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## Technical data

### Notes

|               |   |
|---------------|---|
| Assembly note | <b>NOTE:</b> Observe the permissible bending radii when routing cables, since the degree of protection may be at risk if the bending forces are too high. Reduce mechanical loads upstream of the connector, e.g., by using cable ties. |
|---------------|---|

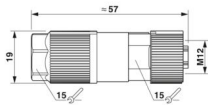
### Product properties

|                      |                                 |
|----------------------|---------------------------------|
| Product type         | Circular connector (cable-side) |
| Application          | Data                            |
| Number of positions  | 8                               |
| No. of cable outlets | 1                               |
| Shielded             | yes                             |
| Coding               | X                               |
| Cable outlet         | straight                        |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 3  |

### Dimensions

|                        |  |
|------------------------|--|
| Dimensional drawing    |  |
| Length                 | 57 mm  |
| Wrench size, union nut | 15 mm  |

### External dimensions

|                  |                 |
|------------------|-----------------|
| Outside diameter | 5 mm ... 9.7 mm |
|------------------|-----------------|

### Housing

|                  |       |
|------------------|-------|
| Diameter housing | 19 mm |
|------------------|-------|

### Material specifications

|  |                              |
|--|------------------------------|
| Flammability rating according to UL 94 | V0                           |
| Seal material                          | NBR                          |
| Material of grip body                  | Zinc die-cast, nickel-plated |
| Contact material                       | CuSn                         |
| Contact surface material               | Ni/Au                        |
| Contact carrier material               | PA 6.6                       |
| Material for screw connection          | Zinc die-cast, nickel-plated |
| Standards/regulations                  | PA 6.6                       |
| Wire insulation material               | PVC / PE / PP / rubber       |

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## Connection data

### Conductor connection

|                              |  |
|------------------------------|--|
| Connection method            | Insulation displacement connection                       |
| Connection cross section     | 0.14 mm <sup>2</sup> ... 0.34 mm <sup>2</sup> (flexible) |
|                              | 0.14 mm <sup>2</sup> ... 0.34 mm <sup>2</sup> (solid)    |
| Connection cross section AWG | 26 ... 22 (flexible)                                     |
|                              | 26 ... 22 (solid)  |
| Tightening torque            | M12 knurl  |
|                              | 5 Nm (Pressure nut)                                      |

### Connection assignment

|   |                |
|---|----------------|
| Contact   Color (signal designation)   Contact (optional) | 1 = WHOG (D1+) |
|   | 2 = OG (D1-)   |
|   | 3 = WHGN (D2+) |
|   | 4 = GN (D2-)   |
|   | 5 = WHBN (D4+) |
|   | 6 = BN (D4-)   |
|   | 7 = WHBU (D3-) |
|   | 8 = BU (D3+)   |

## Electrical properties

|                                |          |
|--------------------------------|----------|
| Rated surge voltage            | 0.8 kV   |
| Insulation resistance          | ≥ 100 MΩ |
| Nominal voltage U <sub>N</sub> | 48 V AC  |
|                                | 60 V DC  |
| Nominal current I <sub>N</sub> | 0.5 A    |
| Transmission speed             | 10 Gbps  |

## Mechanical properties

### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|-------|

## Connector

### Connection 1

|                   |          |
|-------------------|----------|
| Head design       | Socket   |
| Head cable outlet | straight |
| Head thread type  | M12      |
| Coding            | X        |

## Cable/line

|                      |   |
|----------------------|---|
| Signal type/category | Ethernet CAT6 <sub>A</sub> (IEC 11801), 10 Gbps |
|----------------------|---|

## Environmental and real-life conditions

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## Ambient conditions

|   |                                  |
|---|----------------------------------|
| Degree of protection  | IP65                             |
|   | IP67                             |
| Ambient temperature (operation) (male connector/female connector) | -40 °C ... 85 °C (Plug / socket) |
| Ambient temperature (assembly)                                    | -5 °C ... 50 °C                  |

## Standards and regulations

### Testing

|                          |  |
|--------------------------|--|
| Standards/regulations    | PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, R24, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL3) |
| Standard designation     | M12 connector  |
| Standards/specifications | according to IEC 61076-2-109   |
| Standard designation     | Shock, vibration   |
| Standards/specifications | EN 50155:2001  |

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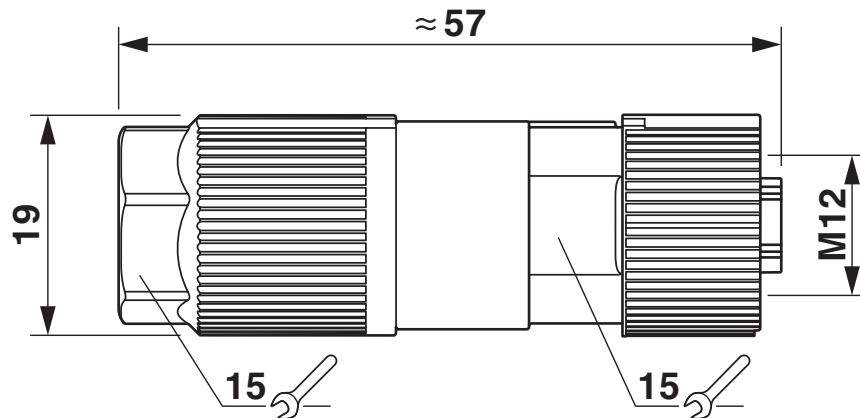


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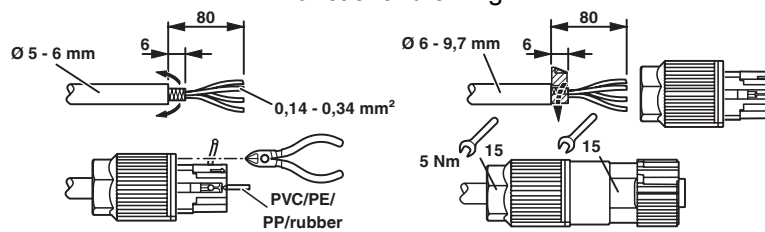
## Drawings

Dimensional drawing



M12 x 1 socket, straight, shielded

Functional drawing



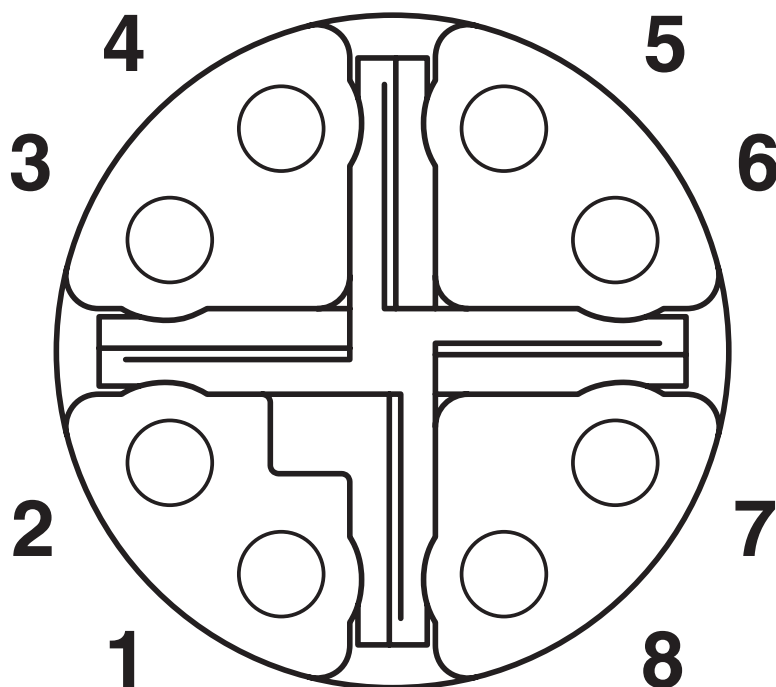
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Schematic diagram



M12 socket pin assignment, 8-pos, view of socket side

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## Approvals

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**UL Listed**

Approval ID: E335024



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440116 |
| ECLASS-15.0 | 27440116 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC002635 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 9.544 kg CO2e |
|---------|---------------|

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