

# Bus system flat-type plug - SACCBP-M12MSB-2CON-M16/1,0-910 - 1534355

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Bus system flush-type plug, PROFIBUS, 2-pos., M12, shielded, B-coded, rear/screw mounting with M16 thread, with 1 m bus cable, 2 x 0.25 mm<sup>2</sup>

## Your advantages

- ✓ Pre-assembled with cables in various standard lengths for immediate use
- ✓ Customer-specific assemblies and cable lengths can be supplied
- ✓ Sealed on the cable side for optimum tightness of seal
- ✓ Cable designs for all common networks and fieldbuses
- ✓ For high transmission safety: shield connection to the housing with optional EMC nut



RoHS

## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 pc  |
| GTIN         | <br>4 046356 026529 |
| GTIN         | 4046356026529   |

## Technical data

### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 1 m |
|-----------------|-----|

### Ambient conditions

|                                 |   |
|---------------------------------|---|
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket)                |
|                                 | -40 °C ... 85 °C (without mechanical actuation) |
| Degree of protection            | IP67 (When plugged in)                          |
|                                 | IP65 (When plugged in)                          |

### General

|      |   |
|------|---|
| Note | The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using |
|------|---|

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## Technical data

### General

|                             |  |
|-----------------------------|--|
|                             | a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration. |
| Rated current at 40°C       | 4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)                               |
| Rated voltage               | 48 V AC<br>60 V DC   |
| Rated surge voltage         | 1.5 kV   |
| Number of positions         | 2  |
| Insulation resistance       | ≥ 100 MΩ   |
| Coding                      | B - inverse  |
| Standards/regulations       | M12 connector IEC 61076-2-101  |
| Signal type/category        | PROFIBUS   |
| Status display              | No   |
| Overvoltage category        | II   |
| Degree of pollution         | 3  |
| Test voltage                | 2500 V   |
| Insertion/withdrawal cycles | > 100  |

### Material

|  |                     |
|--|---------------------|
| Flammability rating according to UL 94 | V0                  |
| Contact material                       | CuZn                |
| Contact surface material               | Ni/Au               |
| Contact carrier material               | PA 6.6              |
| Material, knurls                       | Nickel-plated brass |
| Sealing material                       | FKM                 |

### Standards and Regulations

|  |  |
|--|--|
| Standards/specifications               | M12 connector IEC 61076-2-101  |
| Flammability rating according to UL 94 | V0   |
| Safety note                            | WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.   |
|  | <ul style="list-style-type: none"> <li>• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li> </ul> |
|  | <ul style="list-style-type: none"> <li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li> </ul>  |

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## Technical data

### Standards and Regulations

|  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>Assembled products may not be manipulated or improperly opened.</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at phoenixcontact.com/products).</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>When using the product in direct connection with third-party manufacturers, the user is responsible.</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>Observe the corresponding technical data. You will find information:                             <ul style="list-style-type: none"> <li>On the product</li> <li>On the packing label</li> <li>In the supplied documentation</li> <li>Online at phoenixcontact.com/products under the product</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>Only use tools recommended by Phoenix Contact</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory section of the product at phoenixcontact.com/products</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>Ensure that the protective or functional ground has been properly connected.</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).</li> </ul>   |

### Cable

|                                    |  |
|------------------------------------|--|
| Cable type                         | PROFIBUS   |
| Cable type (abbreviation)          | 910  |
| UL AWM style                       | 21198 (80°C/300 V)   |
| Signal type/category               | PROFIBUS   |
| Cable structure                    | 1x2xAWG24/19   |
| Conductor cross section            | 2x 0.25 mm <sup>2</sup> (Signal line)                      |
| AWG signal line                    | 24   |
| Conductor structure signal line    | 19x 0.13 mm  |
| Core diameter including insulation | 2.55 mm ±0.07 mm   |
| Wire colors                        | Red, green   |
| Overall twist                      | 2 cores with 2 fillers to the core                         |
| Shielding                          | Plastic-coated aluminum foil, tinned copper braided shield |
| Optical shield covering            | 85 %   |
| External sheath, color             | violet RAL 4001  |
| External cable diameter D          | 7.8 mm ±0.2 mm   |

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### Technical data

#### Cable

|   |   |
|---|---|
| Smallest bending radius, fixed installation   | 40 mm   |
| Smallest bending radius, movable installation | 65 mm   |
| Number of bending cycles                      | 4000000   |
| Bending radius                                | 65 mm   |
| Traversing path                               | 4.5 m   |
| Traversing rate                               | 3 m/s   |
| Acceleration                                  | 3 m/s <sup>2</sup>                              |
| Cable weight                                  | 90 kg/km  |
| Outer sheath, material                        | PUR   |
| Material, filler                              | PP  |
| Material conductor insulation                 | Foam-Skin PP                                    |
| Conductor material                            | Tin-plated Cu litz wires                        |
| Insulation resistance                         | ≥ 5 GΩ*km                                       |
| Conductor resistance                          | ≤ 78.6 Ω/km                                     |
| Cable capacity                                | nom. 30 pF/m                                    |
| Wave impedance                                | 150 Ω ±10 % (3 MHz ... 20 MHz)                  |
| Attenuation                                   | ≤ 0.049 dB/m (at 16 MHz)                        |
| Nominal voltage, cable                        | 30 V  |
| Test voltage Core/Core                        | 1500 V (50 Hz, 1 min.)                          |
| Test voltage Core/Shield                      | 1500 V (50 Hz, 1 min.)                          |
| Flame resistance                              | UL 1581, Sec. 1060 (FT-1)                       |
|   | IEC 60332-1-2                                   |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815        |
|   | according to IEC 60754-1                        |
| Other resistance                              | Low adhesion                                    |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)    |
|   | -30 °C ... 80 °C (cable, flexible installation) |
|   | ≤ 70 °C (cable, drag chain applications)        |
| Ambient temperature (storage/transport)       | -40 °C ... 80 °C                                |

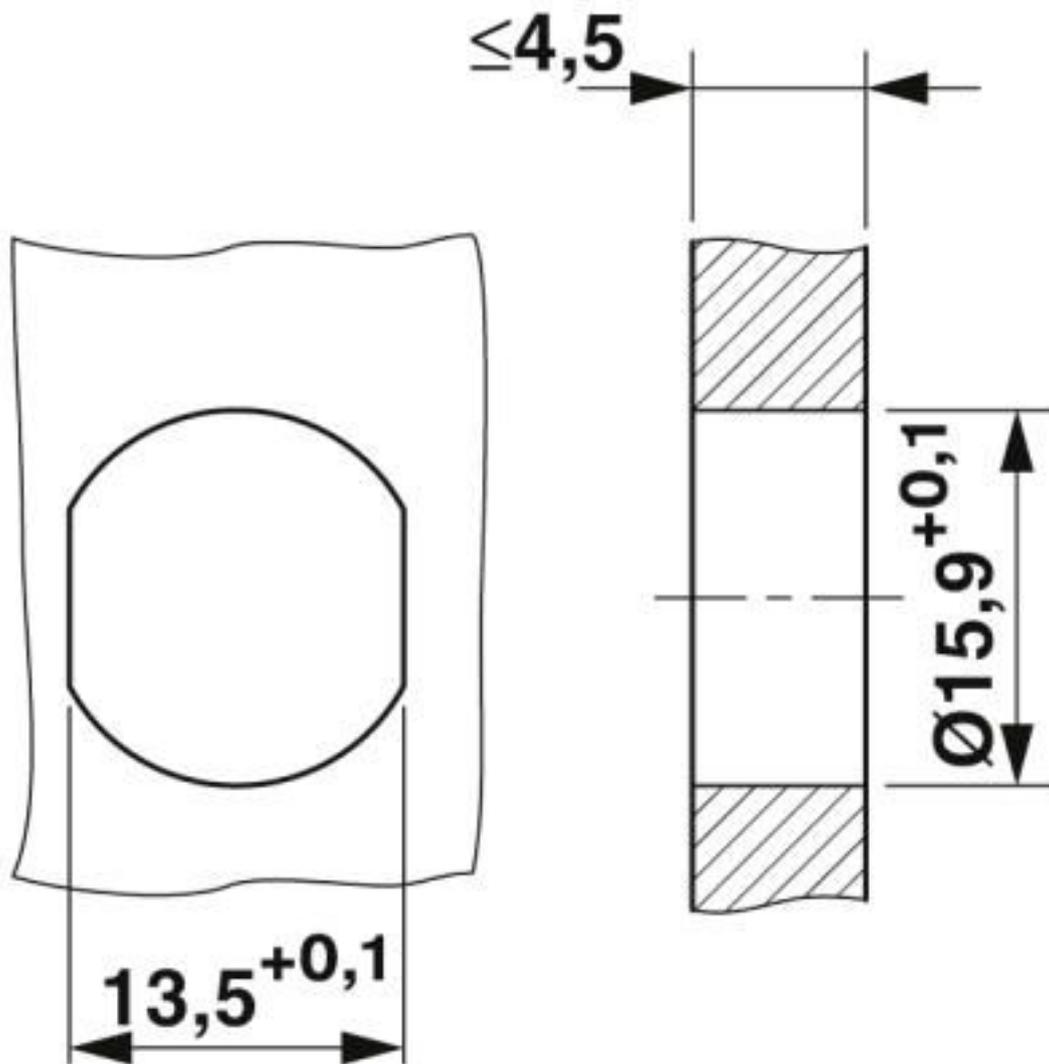
#### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

#### Drawings

# Bus system flat-type plug - SACCBP-M12MSB-2CON-M16/1,0-910 - 1534355

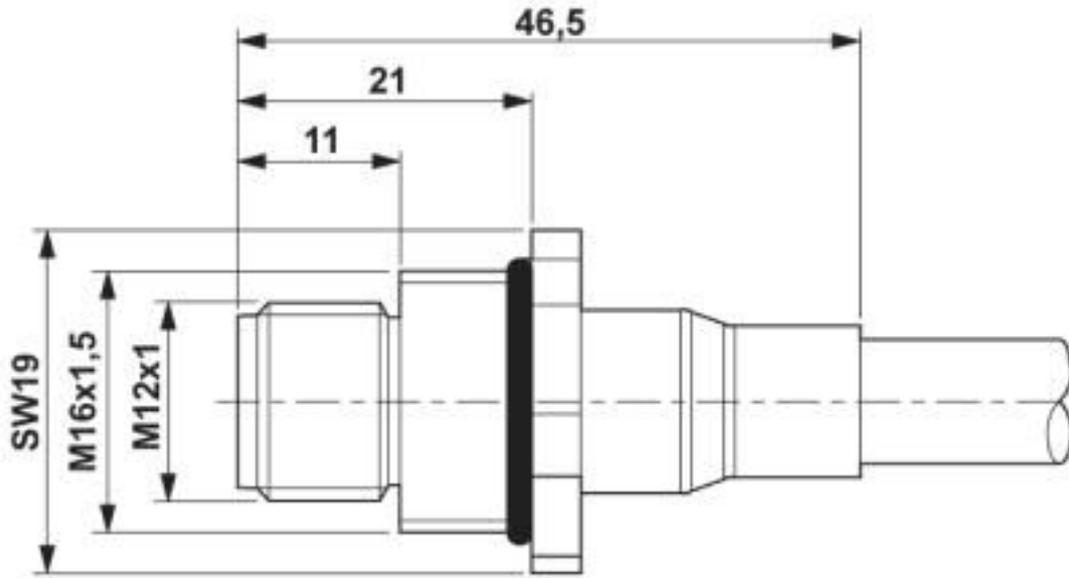
Dimensional drawing



Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

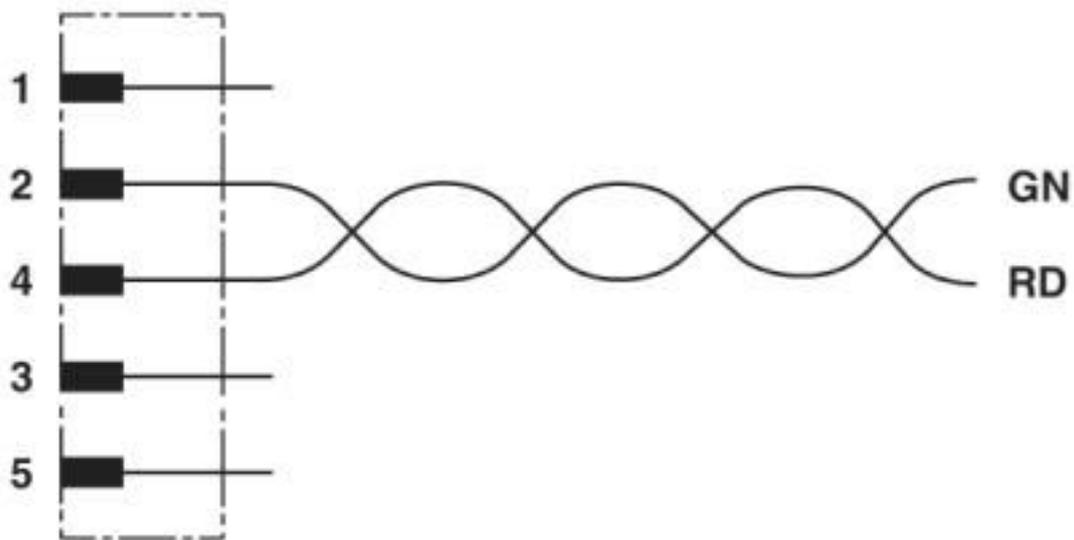
# Bus system flat-type plug - SACCBP-M12MSB-2CON-M16/1,0-910 - 1534355

Dimensional drawing



M12 flush-type plug

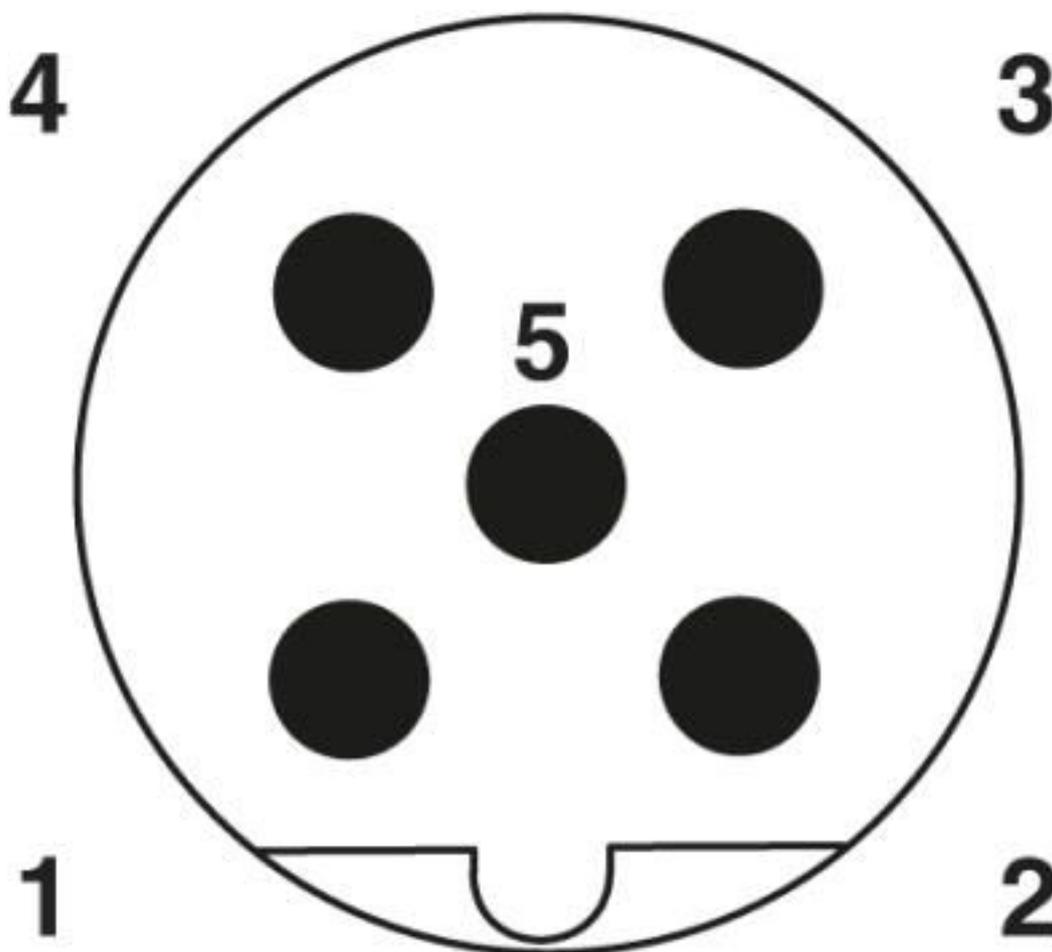
Circuit diagram



Contact assignment of the M12 plug

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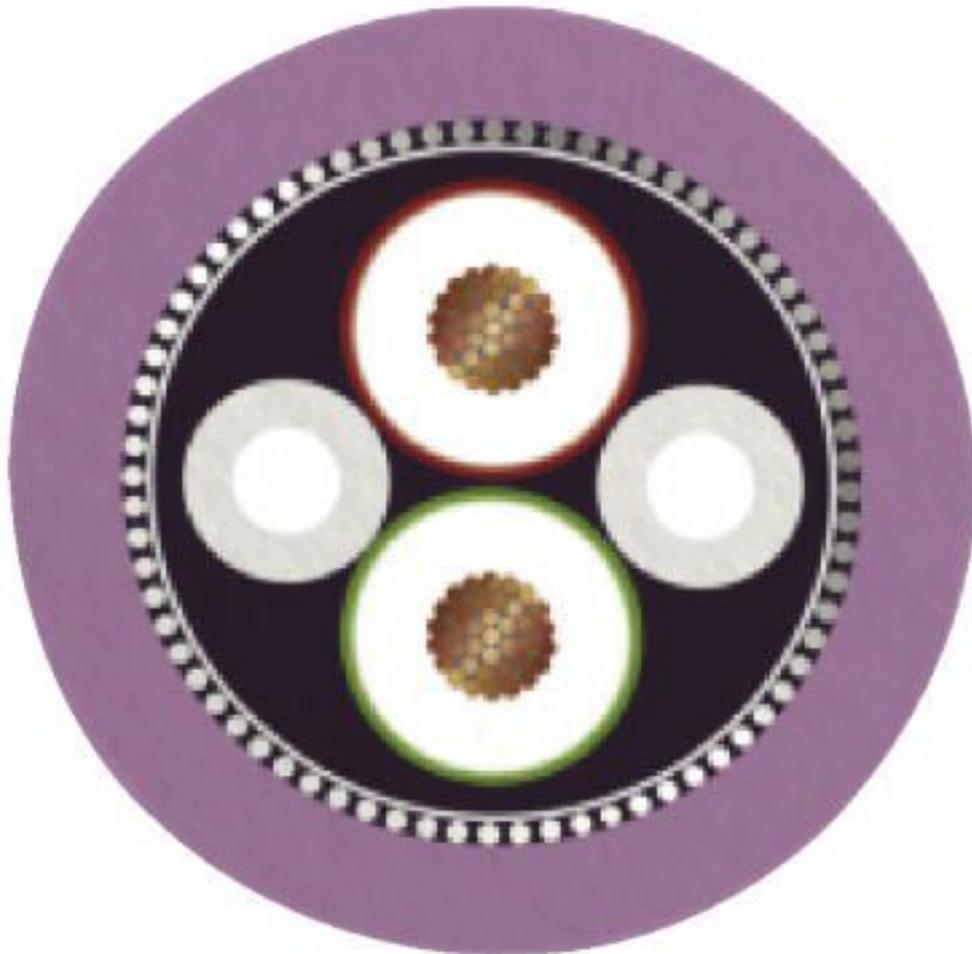
Schematic diagram



Pin assignment M12 male connector, 5-pos., B-coded, male side

# Bus system flat-type plug - SACCBP-M12MSB-2CON-M16/1,0-910 - 1534355

Cable cross section



PROFIBUS [910]

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440102 |
| eCl@ss 4.0    | 27140800 |
| eCl@ss 4.1    | 27140800 |
| eCl@ss 5.0    | 27143400 |
| eCl@ss 5.1    | 27143400 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27440103 |
| eCl@ss 8.0    | 27440103 |
| eCl@ss 9.0    | 27440102 |

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001297 |
| ETIM 3.0 | EC002061 |
| ETIM 4.0 | EC000830 |
| ETIM 5.0 | EC002061 |
| ETIM 6.0 | EC002061 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 39121413 |
| UNSPSC 18.0   | 39121413 |
| UNSPSC 19.0   | 39121413 |
| UNSPSC 20.0   | 39121413 |
| UNSPSC 21.0   | 39121413 |

## Approvals

### Approvals

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Approvals

EAC

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Ex Approvals

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### Approval details

|     |   |         |
|-----|---|---------|
| EAC |  | B.01687 |
|-----|---|---------|

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