


Flush-type connector - SACCBP-FSD-4CON-PG9/16,5-937SC - 1408912

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Key Commercial Data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| Minimum order quantity | 10 pc |
| GTIN |  4 046356 857383 |
| GTIN | 4046356857383 |
| Weight per Piece (excluding packing) | 1,079.000 g |
| Custom tariff number | 85444290 |
| Country of origin | Germany |
| Note | Made to Order (non-returnable) |

Technical data

Dimensions

| | |
|-----------------|------|
| Length of cable | 16.5 |
|-----------------|------|

Ambient conditions

| | |
|---------------------------------|------------------------|
| Degree of protection | IP67 (When plugged in) |
| | IP65 (When plugged in) |
| Ambient temperature (operation) | -25 ... -85 |

General data

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| Note | The cable is 100% electrically tested for continuity. |
| Rated current at 40°C | 4 A |
| Rated voltage | 250 V |
| Number of positions | 4 |
| Signal type/category | PROFINET CAT5 (IEC 11801:2002) |
| Standards/regulations | M12 connector according to IEC 61076-2-101 |

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Technical data

General data

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|----------------------|----------|
| Overvoltage category | II |
| Degree of pollution | 3 |
| Connection method | Bus line |

Standards and Regulations

| | |
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| Standard designation | M12 connector |
| Standards/regulations | according to 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"> • 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. |
| | <ul style="list-style-type: none"> • 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. |
| | <ul style="list-style-type: none"> • The products are suitable for applications in plant, controller, and electrical device engineering. |
| | <ul style="list-style-type: none"> • When operating the connectors in outdoor applications, they must be separately protected against environmental influences. |
| | <ul style="list-style-type: none"> • Assembled products may not be manipulated or improperly opened. |
| | <ul style="list-style-type: none"> • 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). |
| | <ul style="list-style-type: none"> • When using the product in direct connection with third-party manufacturers, the user is responsible. |
| | <ul style="list-style-type: none"> • For operating voltages > 50 V AC, conductive connector housings must be grounded |
| | <ul style="list-style-type: none"> • Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards. |
| | <ul style="list-style-type: none"> • Observe the corresponding technical data. You will find information: <ul style="list-style-type: none"> o On the product o On the packing label o In the supplied documentation o Online at phoenixcontact.com/products under the product |
| | <ul style="list-style-type: none"> • Only use tools recommended by Phoenix Contact |
| | <ul style="list-style-type: none"> • 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 |
| | <ul style="list-style-type: none"> • Ensure that the protective or functional ground has been properly connected. |
| | <ul style="list-style-type: none"> • 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 |
| | <ul style="list-style-type: none"> • The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm |

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Standards and Regulations

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| | up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12). |
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Cable

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| Cable type | PROFINET railway applications |
| Cable type (abbreviation) | 937 |
| Signal type/category | PROFINET CAT5 (IEC 11801), 100 Mbps |
| | EtherCAT® CAT5 (IEC 11801), 100 Mbps |
| Cable structure | 1x4xAWG22/7; SF/TQ |
| Conductor cross section | 4x 0.34 mm ² |
| AWG signal line | 22 |
| Conductor structure signal line | 7x 0.25 mm |
| Core diameter including insulation | approx. 1.5 mm |
| Wire colors | white-blue, orange-yellow |
| Overall twist | Star quad |
| Shielding | Plastic-coated aluminum foil, tinned copper braided shield |
| External sheath, color | black RAL 9005 |
| Outer sheath thickness | approx. 1 mm |
| External cable diameter D | 6.6 mm ±0.4 mm |
| Minimum bending radius, fixed installation | 6 x D |
| Cable weight | 70 kg/km |
| Outer sheath, material | PE-X |
| Material conductor insulation | Foamed PE |
| Conductor material | silver-plated Cu litz wires |
| Conductor resistance | ≤ 54.4 Ω/km |
| Working capacitance | ≤ 65 pF (core-core) |
| | ≤ 100 pF (core-shield) |
| Wave impedance | 100 Ω ±5 Ω (f = 100 MHz) |
| Near end crosstalk attenuation (NEXT) | 73 dB (with 1 MHz) |
| | 70 dB (at 4 MHz) |
| | 65 dB (at 10 MHz) |
| | 57 dB (at 31.5 MHz) |
| | 52 dB (at 62.5 MHz) |
| | 48 dB (at 100 MHz) |
| Remote crosstalk attenuation (FEXT) | 78 dB (with 1 MHz) |
| | 77 dB (at 4 MHz) |
| | 70 dB (at 10 MHz) |
| | 65 dB (at 31.5 MHz) |
| | 56 dB (at 62.5 MHz) |
| | 48 dB (at 100 MHz) |
| Attenuation | 2 dB (with 1 MHz) |

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Cable

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| | 4.4 dB (at 4 MHz) |
| | 7.4 dB (at 10 MHz) |
| | 14 dB (at 31.5 MHz) |
| | 20 dB (at 62.5 MHz) |
| | 26 dB (at 100 MHz) |
| Return loss (RL) | 25 dB (at 4 MHz) |
| | 30 dB (at 10 MHz) |
| | 30 dB (at 31.5 MHz) |
| | 30 dB (at 62.5 MHz) |
| | 28 dB (at 100 MHz) |
| Signal speed | 75 c |
| Shield attenuation | 40 dB (30 MHz ≤ f ≤ 100 MHz) |
| Coupling resistance | 200.00 mΩ/m (f ≤ 30 MHz) |
| Nominal voltage, cable | 300 V AC |
| Test voltage, cable | 2000 V AC (50 Hz, 5 minutes) |
| Fire protection in rail vehicles | BS 6853 (Category Ia, Ib, II) |
| | GM/RT 2130 (Category Ia, Ib, II) |
| | EN 45545 (Risk level HL1 - HL3) |
| | DIN 5510 (Fire protection level 1, 2, 3, 4) |
| | NF F16-101 (Category A1, A2, B) |
| | NF F16-101 (Class C/F0) |
| | NFPA 130 |
| | UNI CEI 11170 (Risk level LR1 - LR4) |
| Flame resistance | EN 60332-1-2 |
| | EN 50266 |
| | EN 60332-3-25 |
| | NF C32-070, 2.1 |
| | NF C32-070, 2.2 |
| | UL 1685, 12 (FT4) |
| | in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01) |
| Halogen-free | According to EN 50267-2-1 |
| Resistance to oil | according to IRM 902, 72 h at 100 °C |
| Other resistance | Resistance to fuels according to IRM 903, 168 h at 70 °C |
| Concentration of fumes | BS 6853 D.8.7 |
| | EN 61034-2 |
| | UL 1685, 12 (FT4) |
| Fume corrosiveness | EN 50267-2-2 |
| Fume toxicity | BS 6853 B.1 |
| | EN 50305, 9.2 |
| Ambient temperature (operation) | -50 °C ... 90 °C (cable, fixed installation) |

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Technical data

Cable

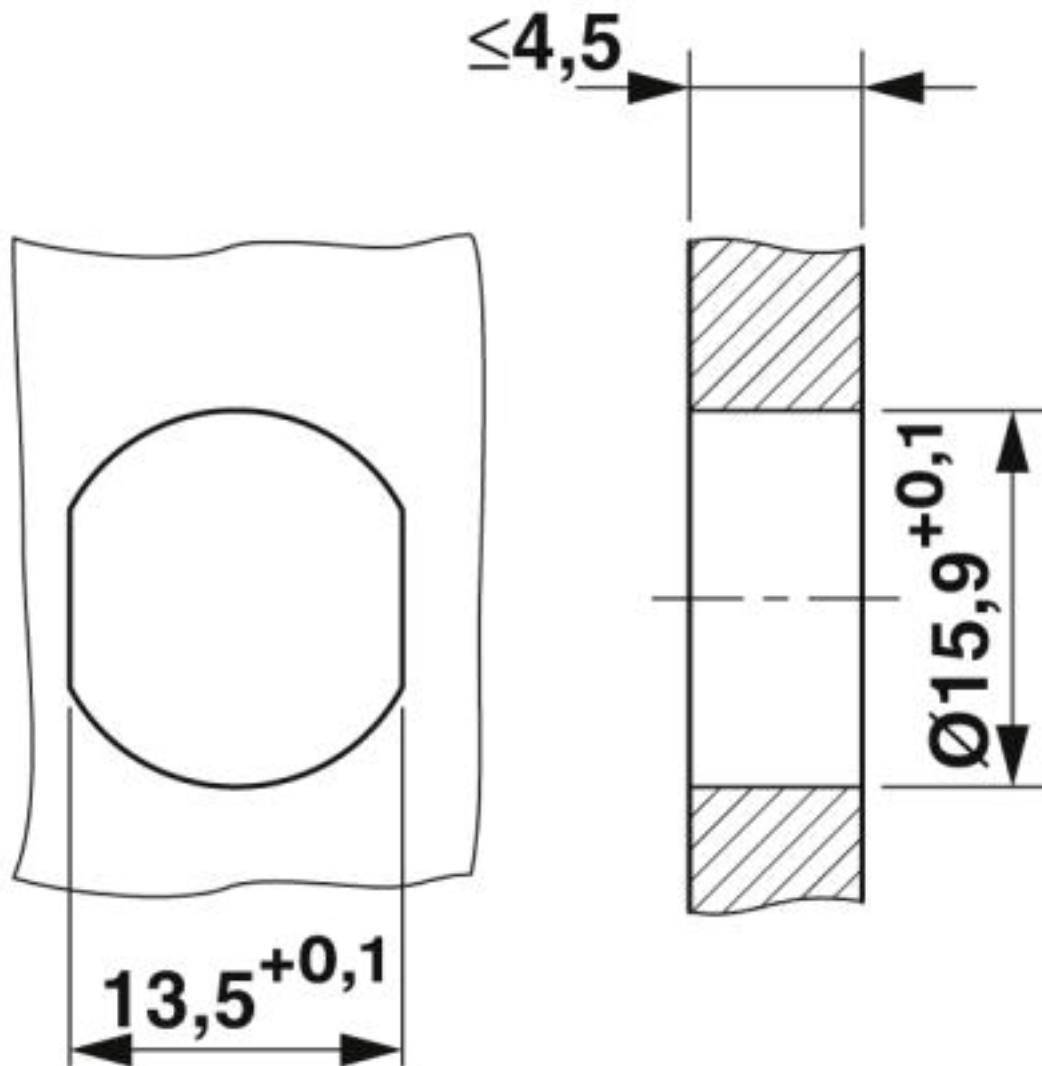
| | |
|------------------------------------|---|
| | -40 °C ... 90 °C (cable, flexible installation) |
| Ambient temperature (installation) | -25 °C ... 90 °C |

Environmental Product Compliance

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

Drawings

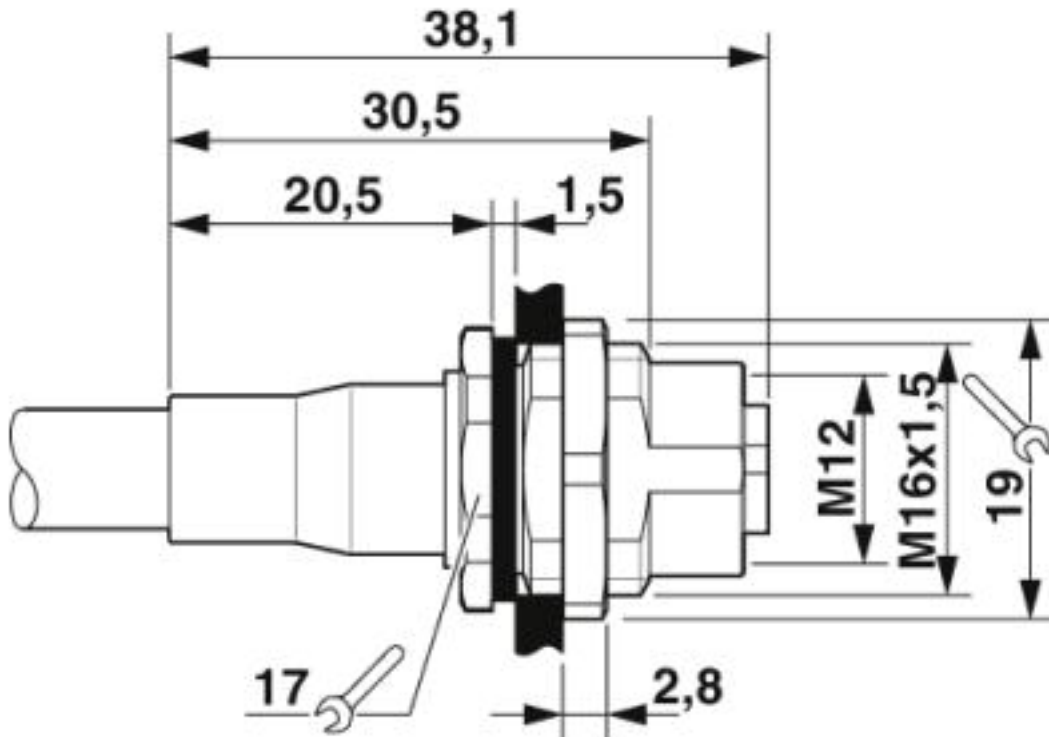
Dimensional drawing



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

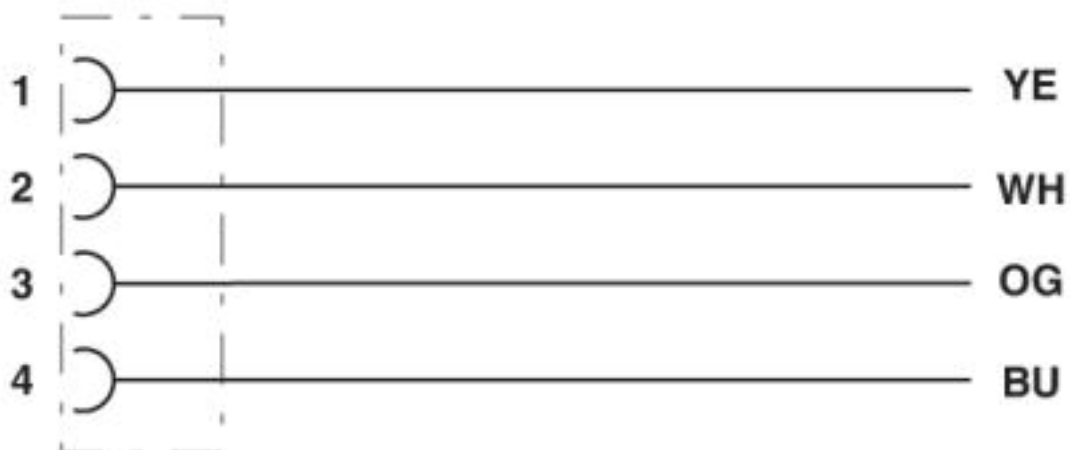
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Dimensional drawing



M12 flush-type connector

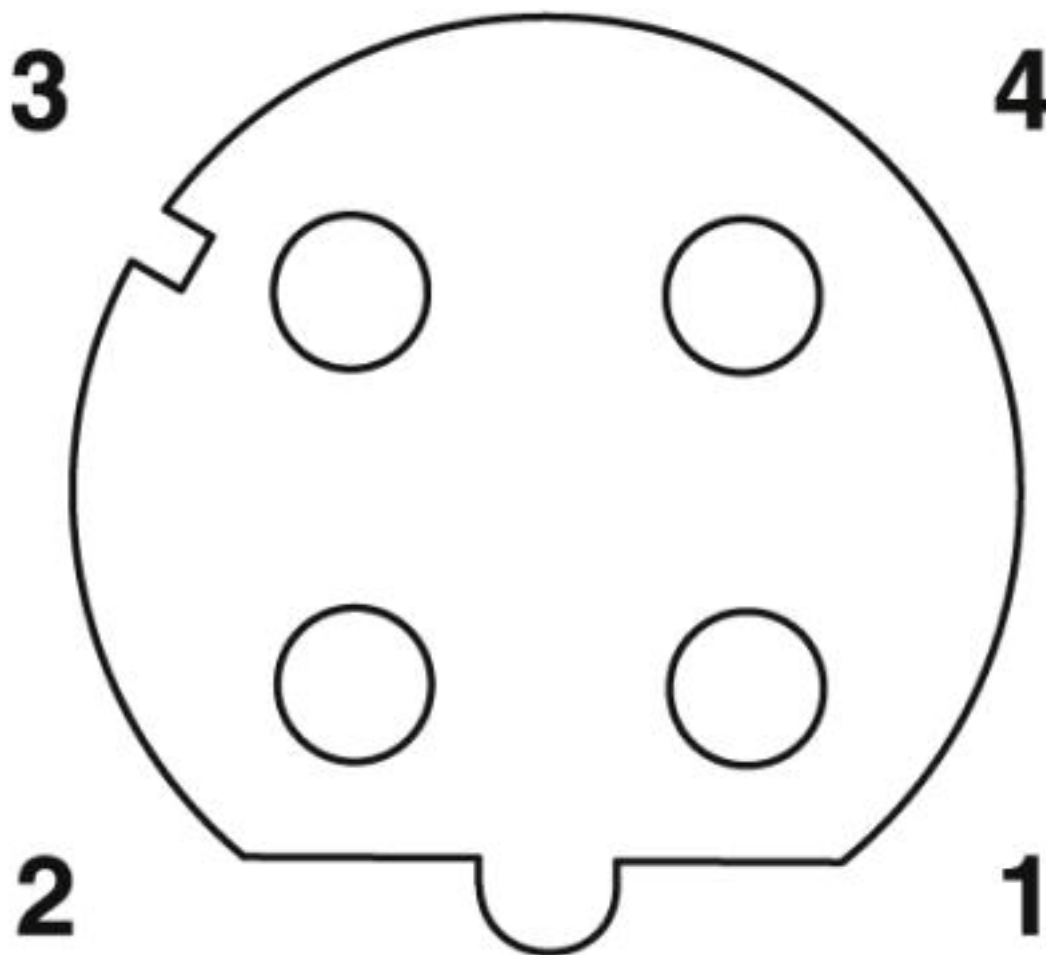
Circuit diagram



Contact assignment of the M12 socket

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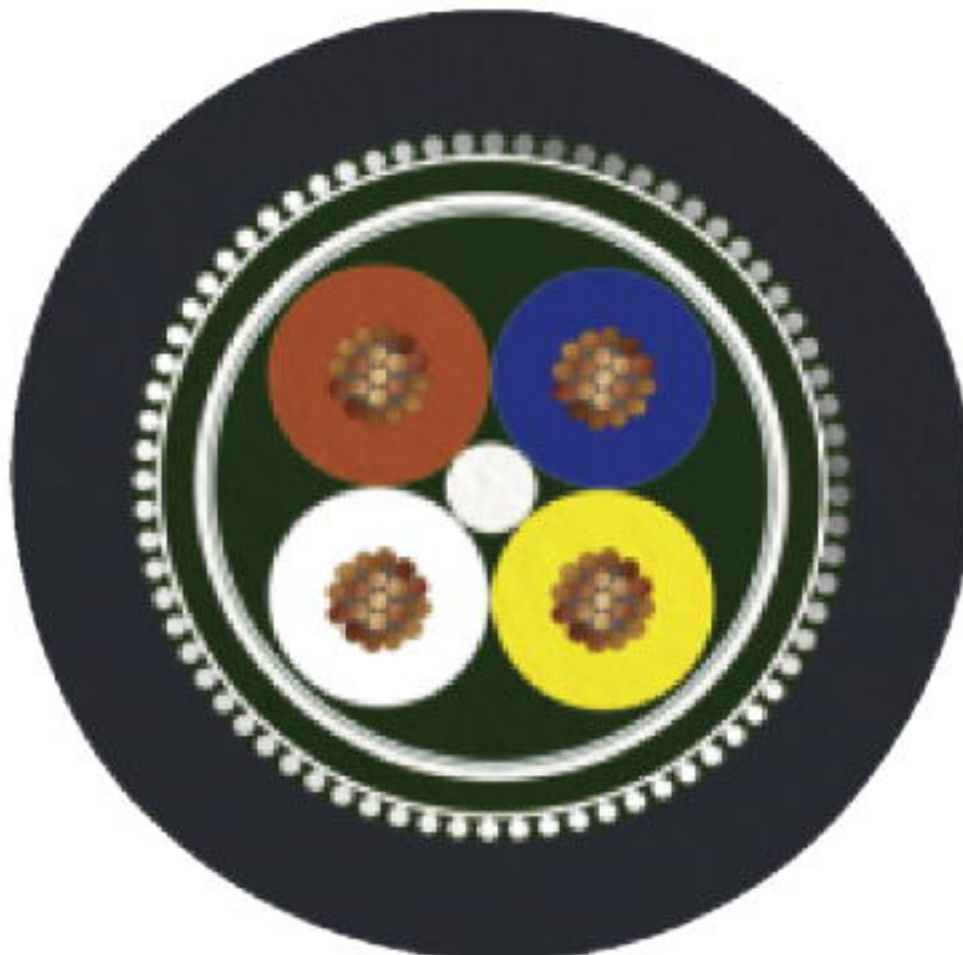
Schematic diagram



Pin assignment M12 socket, 4-pos., D-coded, female side

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Cable cross section



PROFINET railway applications [937]

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27140800 |
| eCl@ss 4.1 | 27140800 |
| eCl@ss 5.0 | 27143400 |
| eCl@ss 5.1 | 27143400 |
| eCl@ss 6.0 | 27143400 |
| eCl@ss 7.0 | 27060308 |
| eCl@ss 8.0 | 27060308 |
| eCl@ss 9.0 | 27060308 |

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Classifications

ETIM

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|----------|----------|
| ETIM 3.0 | EC002061 |
| ETIM 4.0 | EC002599 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001262 |

UNSPSC

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|---------------|----------|
| UNSPSC 6.01 | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11 | 31251501 |
| UNSPSC 12.01 | 31251501 |
| UNSPSC 13.2 | 26121604 |
| UNSPSC 18.0 | 26121604 |
| UNSPSC 19.0 | 26121604 |
| UNSPSC 20.0 | 26121604 |
| UNSPSC 21.0 | 26121604 |

Approvals


Approvals

Approvals

EAC

Ex Approvals

Approval details

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|-----|---|---------|
| EAC |  | B.00767 |
|-----|---|---------|
