CABLE TERMINATIONS

# SCREW FIT

## 4-WAY JUNCTION BOX - Ex eb I, Ex eb IIC, Ex ec IIC, Ex tb IIIC for Hazardous Area Installations

UV RESISTANT · LSOH · 2m IP68 · Ex · P.E. · IK10 IMPACT

### Features and Benefits

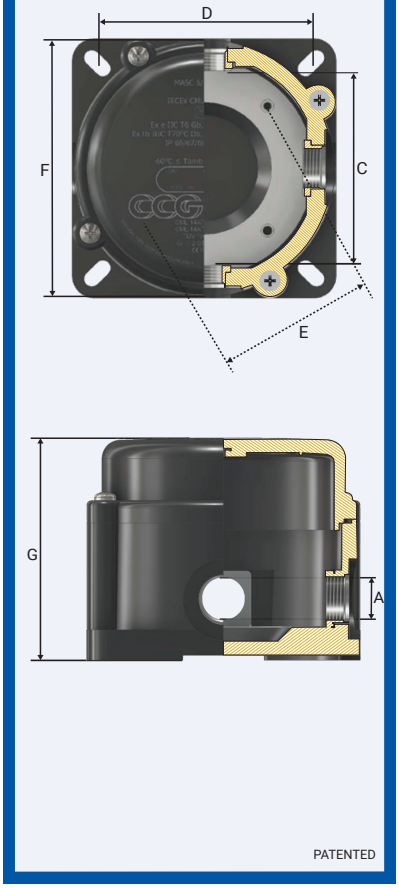
- Screw Fit 4-Way Box for use in Group I mining (low impact areas), Group II and Group III applications.
- High-temperature resistance, corrosion resistant and anti-static properties.
- 20mm Box supplied complete with safety securing lid lanyard.
- Raised domed lid facilitates connections to be made outside of the box.
- Only approved CCG cable glands and terminals must be used. No exposed metal parts.
- Dust and waterproof to IP66/68, when used with CCG sealed cable glands.
- No drilling or tapping of cable entries required.
- Mounting studs provided for DIN rail if using Terminal Blocks.
- Internal earthing to all entries and rail provided.
- Screw Fit 4-Way Box can be buried for extended periods.
- Red Fire Rated Box for emergency circuits available (925°C for 3-hours).

### Technical Data

| | |
|---|---|
| Type: | Screw Fit 4-Way - Ex |
| Box Material: | Impact corrosion and UV resistant glass reinforced polyester compound<br>Polycarbonate (see-through adapt-a-lids)<br>O ring seals: Silicone or Sarlink seals. Terminals: Wellamid or Wemidd |
| Optional Accessories: | Ex Certified Terminals (see conditions on safe use-x), Box Spanner (Lid Locking Key). Blanking plugs are provided. |
| Note: | The installer should check that the materials are suitable for the installation environment |

### Standards and Certifications

| | | | |
|---|---|---|---|
| Equipment Protection Levels: | SANS: (Finished)Ex e IIC T6 Gb / Ex nA IIC T6 Gc / Ex tb IIIC T70°C Db<br>SANS: (Unfinished) Ex e IIC Gb / Ex nA IIC Gc / Ex tb IIIC Db<br>IECEx/INMETRO: (Finished) Ex eb I Mb / Ex eb IIC T6 Gb / Ex ec IIC T6 Gc / Ex tb IIIC T70°C Db / Ex tc IIIC T70°C Dc<br>IECEx/INMETRO: (Unfinished) Ex eb I Mb / Ex eb IIC Gb / Ex ec IIC Gc / Ex tb IIIC Db / Ex tc IIIC Dc<br>ATEX/UKEX: (Finished) Ⓔx I M2, Ⓔx II 2GD / 3G Ex eb I Mb / Ex eb IIC T6 Gb / Ex ec IIC T6 Gc / Ex tb IIIC T70°C Db / Ex tc IIIC T70°C Dc<br>ATEX/UKEX: (Unfinished) Ⓔx I M2, Ⓔx II 2GD / 3G Ex eb I Mb /Ex eb IIC Gb / Ex ec IIC Gc / Ex tb IIIC Db / Ex tc IIIC Dc<br>CCC: (Finished) Ex eb IIC T6 Gb, Ex tb IIIC T70°C Db, Ex tc IIIC T70°C Dc<br>CCC: (Unfinished) Ex eb IIC Gb, Ex tb IIIC Db, Ex tc IIIC Dc | | |
| Ambient Temperature: | -60°C to +55°C (Finished) | | |
| Service Temperature: | -60°C to +110°C (Unfinished) | | |
| Conformance: | Standard: | Certificate: | |
| IECEx | IEC 60079 Part 0, 7, 31, IEC 60529 | IECEx MSC 20.0003X | (Finished) |
| | IEC 60079 Part 0, 7, 31, IEC 60529 | IECEx MSC 20.0004U | (Unfinished) |
| ATEX | EN 60079 Part 0, 7, 31 | CML 14ATEX3036X | (Finished) |
| | EN 60079 Part 0, 7, 31 | CML 14ATEX4038X | (Finished) |
| | EN 60079 Part 0, 7, 31 | CML 14ATEX3037U | (Unfinished) |
| | EN 60079 Part 0, 7, 31 | CML 14ATEX4039U | (Unfinished) |
| UKEX | EN/BS 60079 Part 0, 7, 31 | CML 21UKEX3008X | (Finished) |
| | EN/BS 60079 Part 0, 7, 31 | CML 21UKEX4010X | (Finished) |
| | EN/BS 60079 Part 0, 7, 31 | CML 21UKEX3007U | (Unfinished) |
| | EN/BS 60079 Part 0, 7, 31 | CML 21UKEX4009U | (Unfinished) |
| INMETRO (Brazil) | ABNT NBR IEC 60079 Part 0, 7, 31, IEC 60529 | TÜV 15.0481X | (Finished) |
| | ABNT NBR IEC 60079 Part 0, 7, 31, IEC 60529 | TÜV 15.0482U | (Unfinished) |
| CCC/CNEx (Chinese) | GB/T3836.1, 3, 31-2021 | CNEx 21.3507X | (Finished) |
| | GB/T3836.1, 3, 31-2021 | CCC 2021312303000506 | (Finished) |
| | GB/T3836.1, 3, 31-2021 | CNEx 21.3390X | (Unfinished) |
| | GB/T3836.1, 3, 31-2021 | CCC 2021312313000393 | (Unfinished) |
| SANS | SANS/IEC 60079 Part 0, 7, 31 | MASC S/21-9001X | (Finished) |
| | SANS/IEC 60529 | MASC S/21-9002U | (Unfinished) |
| IP66/68 2m Protection | IEC 60529 | IECEx CML 15.0071U | |
| Marine ABS | IEC 60529 | ABS 20-SG1952738-1-PDA | |
| DNV | IEC 60529 | TAE0000011 | |
| Deluge Protection | DTS-01 | CML 14CA370-1 | |
| Short Circuit/ Cont.Current | IEC 60947-7-2, IEC 62444 | CATAPULT OR/15/11677_2 | |




### Conditions for safe use

- In Group I applications, the junction box must only be used in low impact areas and where it is not exposed to oils or greases.
- Only the terminal blocks as per the description may be utilised in the junction box. Specific installation conditions as set by the terminal manufacturer/terminal certification must be considered. This includes considering the use of the applicable partitions and end plates for terminal blocks, conductor installation, tightening down of terminal block screws etc.
- Terminal blocks may only be utilized on the applicable rail and must allow sufficient space to make connections and to close the cover/lid.
- IP66/68 glands/plugs must be used in the threaded entries. Information in relation to entries is indicated in the instructions.

| Product Code | Entry Thread 'A' | Distance Between Inserts 'C' | Mounting Centres 'D' | Rail Mounting Centres Holes 'E' | Outer Diameter 'F' | Overall Height 'G' |
|---|---|---|---|---|---|---|
| 1003-0-M16-SF | M16 | 71.0 | 79.0 | 65.0 | 100.0 | 78.0 |
| 1003-0-SF | M20 | 71.0 | 79.0 | 65.0 | 100.0 | 78.0 |
| 100301-M16-SF | M16 | 88.0 | 92.0 | 80.0 | 118.0 | 98.0 |
| 100301-SF | M20 | 88.0 | 92.0 | 80.0 | 118.0 | 98.0 |
| 100302-M16-SF | M16 | 108.0 | 107.0 | 98.0 | 140.0 | 114.0 |
| 100302-M20-SF | M20 | 108.0 | 107.0 | 98.0 | 140.0 | 114.0 |
| 100302-SF | M25 | 108.0 | 107.0 | 98.0 | 140.0 | 114.0 |
| 100303-M16-SF | M16 | 166.0 | 167.0 | 150.0 | 206.0 | 142.0 |
| 100303-M20-SF | M20 | 166.0 | 167.0 | 150.0 | 206.0 | 142.0 |
| 100303-M25-SF | M25 | 166.0 | 167.0 | 150.0 | 206.0 | 142.0 |
| 100303-SF | M32 | 166.0 | 167.0 | 150.0 | 206.0 | 142.0 |
| 100303-M40-SF | M40 | 166.0 | 167.0 | 150.0 | 206.0 | 170.0 |

All dimensions are in mm.

# SCREW FIT
# 4 WAY JUNCTION BOX

## Conditions for Safe Use - X

- The current in the junction box is limited by the size of the conductor and shall not exceed as per the table below.
- Only the terminals listed below may be used, following the specific installation conditions set down by the terminal manufacturer/terminal certification.

| Manufacturer | Certificate No. | Ex Coding | Type | Conductor / Terminal Block Size | Maximum Current | |
|---|---|---|---|---|---|---|
| | | | | | ≤ 55°C Ambient | ≤ 40°C Ambient |
| Weidmuller | IEC Ex ULD14.0005U<br>Demko 14ATEX1338U<br>CCC 2021312303000506 | Ex eb IIC | WDU 2.5, 4, 6, 10, 16, 35 and 70N<br>WPE 2.5, 4, 6, 10, 16, 35 and 70N | 2,5 mm² | 8,34 A | 11,90 A |
| | | | | 4 mm² | 11,12 A | 15,86 A |
| | | | | 6 mm² | 14,25 A | 20,33 A |
| | | | | 10 mm² | 19,81 A | 28,26 A |
| | | | | 16 mm² | 26,42 A | 37,68 A |
| | | | | 35 mm² | 43,46 A | 61,98 A |
| | | | | 50 mm² | 52,50 A | 74,88 A |
| | | | | 75 mm² | 66,75 A | 95,21 A |
| Weidmuller | IECEx TUR18.0024U<br>TÜV 18 ATEX 8221U<br>CCC 2021312313000393 | Ex eb IIC | AKZ4 and AKE4 | 4mm² | - | - |

## Wiring and installation instructions for Screw Fit 4-Way Box with components

- Installation must be carried out by a competent person.
- Do not install under live current conditions.
- The box must not be modified in any way, as it may compromise the certification rating.
- All wiring must be carried out in accordance with the relevant Codes of Practice.
- The wiring insulation must not extend by more than 1.0mm from the metal face of the terminal as shown in Figure 1.
- The voltage and current value of the terminals in Table 2 must not be exceeded.
- Only those terminals shown in the terminal schedule may be incorporated in the box, refer Table 1.
- Inner cable bedding must protrude into the box by a minimum of 20mm past the cable entry point.
- Not more than one single or multiple strand lead shall be connected to either side of the terminals.
- Only earth conductors of equal size shall be connected with rail mounted terminals.
- All terminal screws used and unused shall be tightened.
- A parallel shaft screwdriver of the correct size should be used for rail mounted terminals screws.
- Where cables enter the box they must be secured by CCG Cable Glands appropriate to the makeup of the cable.
- Unused entry apertures must be blanked with CCG Non Metallic Plugs.
- To maintain IP66/68 a thread seal gasket between the box and cable gland must be installed.
- Before replacing the lid, ensure the lid gasket is in place.

## TABLE 1

| Box Type | Box Size | Terminal Type and Size | Max Quantity | Rail Size |
|---|---|---|---|---|
| Screw Fit 4 Way | 1 | 2.5mm² | 12 | 35 |
| Screw Fit 4 Way | 1 | 4mm² mini terminal | 11 | 15 |
| Screw Fit 4 Way | 1 | 4mm² | 11 | 35 |
| Screw Fit 4 Way | 1 | 6mm² | 9 | 35 |
| Screw Fit 4 Way | 1 | 10mm² | 7 | 35 |
| Screw Fit 4 Way | 1 | 16mm² | 5 | 35 |
| Screw Fit 4 Way | 2 | 2.5mm² | 16 | 35 |
| Screw Fit 4 Way | 2 | 4mm² mini terminal | 14 | 15 |
| Screw Fit 4 Way | 2 | 4mm² | 13 | 35 |
| Screw Fit 4 Way | 2 | 6mm² | 11 | 35 |
| Screw Fit 4 Way | 2 | 10mm² | 8 | 35 |
| Screw Fit 4 Way | 2 | 16mm² | 7 | 35 |
| Screw Fit 4 Way | 2 | 35mm² | 5 | 35 |

## TABLE 2

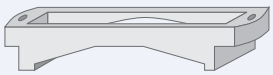
**VOLTAGE PER TERMINAL CONFIGURATION**

| Terminals | Volt | Earth Terminals |
|---|---|---|
| AKZ 4 | 275V | AKE 4 |
| WDU 2.5 | 550V | WPE 2.5 |
| WDU 4 | 550V | WPE 4 |
| WDU 6 | 550V | WPE 6 |
| WDU 10 | 550V | WPE 10 |
| WDU 16 | 550V | WPE 16 |
| WDU 35 | 550V | WPE 35 |
| WDU 70 N | 550V | WPE 70 N |

## Tools /Accessories

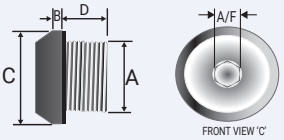
for general, industrial and mining electrical installations

### Pole Mounting Bracket



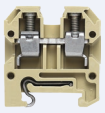
| Product Code | Box Size Reference |
|---|---|
| 401800 | M20 |
| 401801 | M20 |
| 401802 | M25 |

### Non Metallic Plugs IP66/68 complete with washer



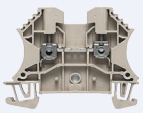

| Product Code | Metric Dia 'A' | Dia Max 'B' | Dia Max 'C' | Dia Min 'D' | Hex Size Max A/F | Torque Value Nm |
|---|---|---|---|---|---|---|
| 352720 | M20x1.5 | 28.0 | 22.0 | 12.0 | 10.0 | 7.0 |
| 352725 | M25x1.5 | 33.0 | 25.0 | 15.0 | 10.0 | 9.0 |
| 352732 | M32x1.5 | 40.0 | 35.0 | 15.0 | 10.0 | 12.0 |

TS 15 Mini Rail



Mini Terminals for conductor sizes 0.5 to 4mm²

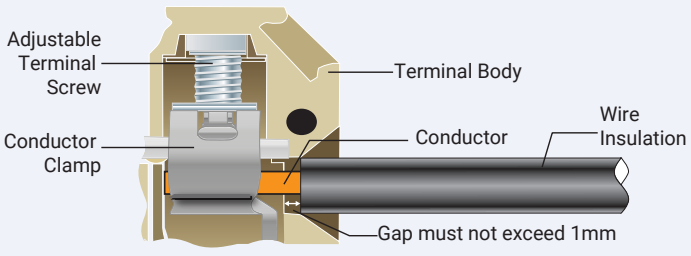
TS 35 Top Hat Rail



Terminals for conductor sizes 0.5 to 70mm²

## FIGURE 1

The wiring insulation must not extend by more than 1.0mm from the metal face of the terminal as shown below.

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