

# SCREW FIT

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

### 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 Polycarbonate (see-through adapt-a-lids) 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 IIC T70°C Db  
SANS: (Unfinished) Ex e IIC Gb / Ex nA IIC Gc / Ex tb IIC Db  
IECEX/INMETRO: (Finished) Ex eb I Mb / Ex eb IIC T6 Gb / Ex ec IIC T6 Gc / Ex tb IIC T70°C Db / Ex tc IIC T70°C Dc  
IECEX/INMETRO: (Unfinished) Ex eb I Mb / Ex eb IIC Gb / Ex ec IIC Gc / Ex tb IIC Db / Ex tc IIC Dc  
ATEX/UKEX: (Finished) I M2, II 2GD / 3G Ex eb I Mb / Ex eb IIC T6 Gb / Ex ec IIC T6 Gc / Ex tb IIC T70°C Db / Ex tc IIC T70°C Dc  
ATEX/UKEX: (Unfinished) I M2, II 2GD / 3G Ex eb I Mb / Ex eb IIC Gb / Ex ec IIC Gc / Ex tb IIC Db / Ex tc IIC Dc  
CCC: (Finished) Ex eb IIC T6 Gb, Ex tb IIC T70°C Db, Ex tc IIC T70°C Dc  
CCC: (Unfinished) Ex eb IIC Gb, Ex tb IIC Db, Ex tc IIC Dc

Ambient Temperature: -60°C to +55°C (Finished)

Service Temperature: -60°C to +110°C (Unfinished)

Conformance:

IECEX

ATEX

UKEX

INMETRO (Brazil)

CCC/CNEx (Chinese)

SANS

IP66/68 2m Protection

Marine ABS

DNV

Deluge Protection

Short Circuit/Cont Current IEC 60947-7-2, IEC 62444

Standard:

IEC 60079 Part 0, 7, 31, IEC 60529

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IEC 60079 Part 0, 7, 31, IEC 60529

EN 60079 Part 0, 7, 31

EN 60079 Part 0, 7, 31

EN 60079 Part 0, 7, 31

EN 60079 Part 0, 7, 31

EN/BS 60079 Part 0, 7, 31

EN/BS 60079 Part 0, 7, 31

EN/BS 60079 Part 0, 7, 31

EN/BS 60079 Part 0, 7, 31

ABNT NBR IEC 60079 Part 0, 7, 31

IEC 60529

GB/T3836.1, 3, 31-2021

GB/T3836.1, 3, 31-2021

GB/T3836.1, 3, 31-2021

GB/T3836.1, 3, 31-2021

SANS/IEC 60079 Part 0, 7, 31

SANS/IEC 60529

IEC 60529

IEC 60529

IEC 60529

DTS-01

IEC 60947-7-2, IEC 62444

Certificate:

IECEX CML 15.0072X (Finished)

IECEX CML 15.0071U (Unfinished)

IECEX TSA 25.0012X (Finished)

IECEX TSA 25.0011U (Unfinished)

CML 14ATEX3036X (Finished)

CML 14ATEX4038X (Finished)

CML 14ATEX3037U (Unfinished)

CML 14ATEX4039U (Unfinished)

CML 21UKEX3008X (Finished)

CML 21UKEX4010X (Finished)

CML 21UKEX3007U (Unfinished)

CML 21UKEX4009U (Unfinished)

TÜV 15.0481X (Finished)

TÜV 15.0482U (Unfinished)

CNEx 21.3507X (Finished)

CCC 2021312303000506 (Finished)

CNEx 21.3390X (Unfinished)

CCC 2021312313000393 (Unfinished)

MASC S/21-9001X (Finished)

MASC S/21-9002U (Unfinished)

IECEX CML 15.0071U

25-0167226-PDA

TAE0000011

CML 14CA370-1

CATAPULT OR/15/11677\_2



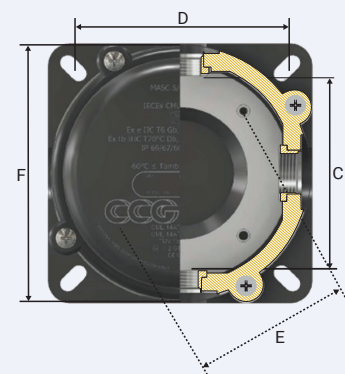
### Conditions for safe use

- 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	Box Size Ref	Entry Thread 'A'	Distance Between Inserts 'C'	Mounting Centres 'D'	Rail Mounting Centres 'E'	Outer Diameter 'F'	Overall Height 'G'
1003-0-M16-SF	0	M16	71.0	79.0	65.0	100.0	78.0
1003-0-SF	0	M20	71.0	79.0	65.0	100.0	78.0
100301-M16-SF	1	M16	88.0	92.0	80.0	118.0	98.0
100301-SF	1	M20	88.0	92.0	80.0	118.0	98.0
100302-M16-SF	2	M16	108.0	107.0	98.0	140.0	114.0
100302-M20-SF	2	M20	108.0	107.0	98.0	140.0	114.0
100302-SF	2	M25	108.0	107.0	98.0	140.0	114.0
100303-M16-SF	3	M16	166.0	167.0	150.0	206.0	142.0
100303-M20-SF	3	M20	166.0	167.0	150.0	206.0	142.0
100303-M25-SF	3	M25	166.0	167.0	150.0	206.0	142.0
100303-SF	3	M32	166.0	167.0	150.0	206.0	142.0
100303-M40-SF	3	M40	166.0	167.0	150.0	206.0	170.0

All dimensions are in mm.

CCG reserves the right to make alterations to the technical data, dimensions, designs and products available without notice. The illustrations cannot be considered binding. Please contact CCG for assistance. SCREWFITEX-HB140625



PATENTED

# 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 Demko 14ATEX1338U CCC 2020322313001819	Ex eb IIC	WDU 2.5, 4, 6, 10, 16, 35 and 70N WPE 2.5, 4, 6, 10, 16, 35 and 70N	2,5 mm <sup>2</sup>	8,34 A	11,90 A
				4 mm <sup>2</sup>	11,12 A	15,86 A
				6 mm <sup>2</sup>	14,25 A	20,33 A
				10 mm <sup>2</sup>	19,81 A	28,26 A
				16 mm <sup>2</sup>	26,42 A	37,68 A
				35 mm <sup>2</sup>	43,46 A	61,98 A
Weidmuller	IECEx TUR18.0024U TÜV 18 ATEX 8221U CCC 2020322313002230	Ex eb IIC	AKZ4 and AKE4	4mm <sup>2</sup>	11,12 A	15,86 A

## 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 Ref.	Terminal Type and Size	Max Quantity	Rail Size
Screw Fit 4 Way	0	4mm <sup>2</sup> mini terminal	8	15
Screw Fit 4 Way	1	2.5 mm <sup>2</sup>	10	35
Screw Fit 4 Way	1	4mm <sup>2</sup> mini terminal	8	15
Screw Fit 4 Way	1	4mm <sup>2</sup>	8	35
Screw Fit 4 Way	1	6mm <sup>2</sup>	6	35
Screw Fit 4 Way	1	10mm <sup>2</sup>	5	35
Screw Fit 4 Way	1	16mm <sup>2</sup>	4	35
Screw Fit 4 Way	2	2.5 mm <sup>2</sup>	12	35
Screw Fit 4 Way	2	4mm <sup>2</sup> mini terminal	10	15
Screw Fit 4 Way	2	4mm <sup>2</sup>	10	35
Screw Fit 4 Way	2	6mm <sup>2</sup>	8	35
Screw Fit 4 Way	2	10mm <sup>2</sup>	7	35
Screw Fit 4 Way	2	16mm <sup>2</sup>	6	35
Screw Fit 4 Way	2	35mm <sup>2</sup>	3	35
Screw Fit 4 Way	3	2.5 mm <sup>2</sup>	20	35
Screw Fit 4 Way	3	4mm <sup>2</sup> mini terminal	16	15
Screw Fit 4 Way	3	4mm <sup>2</sup>	16	35
Screw Fit 4 Way	3	6mm <sup>2</sup>	12	35
Screw Fit 4 Way	3	10mm <sup>2</sup>	12	35
Screw Fit 4 Way	3	16mm <sup>2</sup>	10	35

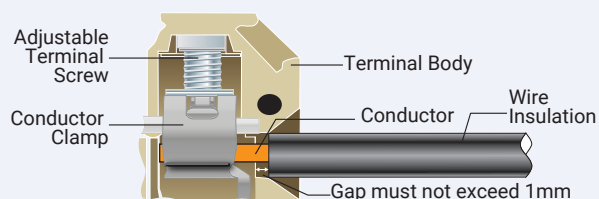
**TABLE 2**

### 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

**FIGURE 1**

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



## Tools /Accessories

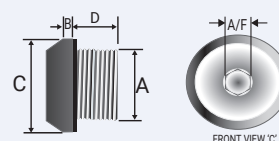
for general, industrial and mining electrical installations

### Pole Mounting Bracket



Product Code	Box Size Reference
401800	M20
401801	M20
401802	M25

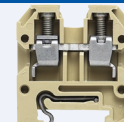
### Non Metallic Plugs IP66/68 complete with washer



Product Code	Box Size Ref.	Metric Dia 'A'	Dia Max 'B'	Dia Max 'C'	Dia Min 'D'	Hex Size Max A/F	Torque Value Nm
352720	0 / 1	M20x1.5	7.0	28.0	12.0	10.0	7.0
352725	2	M25x1.5	7.0	33.0	15.0	10.0	9.0
352732	3	M32x1.5	7.0	40.0	15.0	10.0	12.0
352740	4	M40x1.5	7.0	48.0	15.0	14.0	20.0



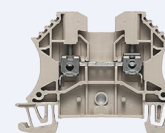
TS 15 Mini Rail



Mini Terminals for conductor sizes 0.5 to 4mm<sup>2</sup>



TS 35 Top Hat Rail



Terminals for conductor sizes 0.5 to 70mm<sup>2</sup>