

BOTTOM ENTRY ANGLE™

JUNCTION BOX - Ex eb I, Ex eb IIC, Ex ec IIC, Ex tb IIC

for Hazardous Area Installations

Features and Benefits

- Bottom Entry Angle™ Box for use in Group I mining (low impact areas), Group II and Group III applications.
- Bottom Entry Angle™ Box for hazardous area lighting applications.
- Screw-on lid provides ease of installation. Lid locking with a special key prevents unauthorized tampering.
- Supplied complete with safety securing lid lanyard.
- Bottom Entry Angle™ Box is angled to allow ease of termination and inspection.
- Only approved CCG cable glands and Ex e terminals must be used.
- DIN Rail mounting studs are provided for use with terminal blocks.
- Dust and watertight to IP66/68, when fitted with CCG sealed cable glands.
- No drilling of the cable entries required.
- Internal earthing to all entries and rail.



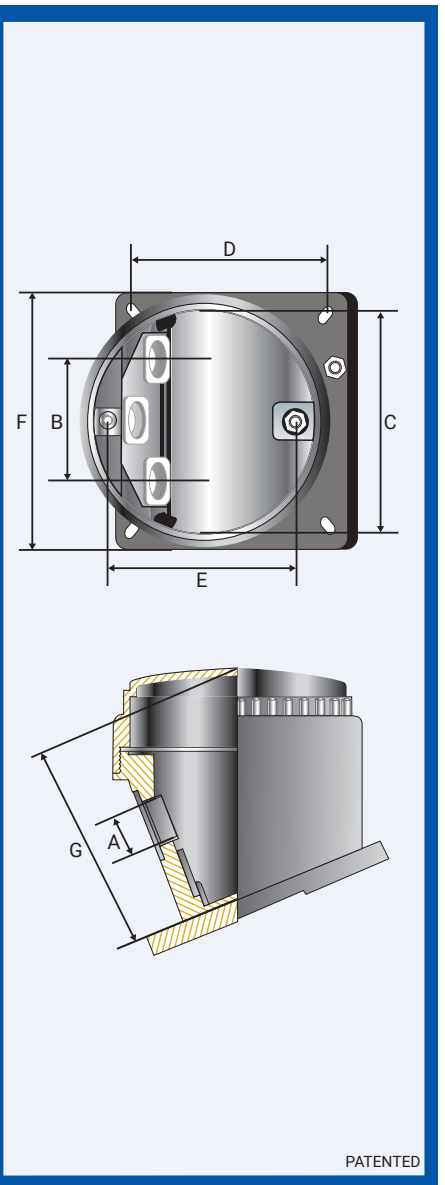
Technical Data

| | |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type: | Bottom Entry Angle™ Box |
| 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 |
| Inserts: | Brass, internal earth continuity ring and earth stud provided |
| Optional Accessories: | Ex Certified Terminals, Box Spanner (Lid Locking Key) 3-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) Ex I M2 / II 2 GD / II 3 GD 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) Ex I M2 / II 2 GD / II 3 GD 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: | 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 |
| | IEC 60529 | TAE0000011 |
| DNV ClassNK | IEC 60079 Part 0, 7, 31 | TA20268M |
| Deluge Protection | DTS-01 | CML 14CA370-1 |
| Short Circuit/ Cont.Current | IEC 60947-7-2, IEC 62444 | CATAPULT OR/15/11677_2 |



Conditions and limitations 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 CCG tool supplied shall be used for opening / closing the enclosure.
- Suitably certified cable glands and/or plugs shall be used in the enclosure threaded entries.
- Terminal blocks shall only be used on the applicable rail and shall allow sufficient space to make connections and to close the cover / lid.
- Only the Weidmuller terminals shown in Table 2 may be used.
- The creepage and clearance between terminal blocks and from the terminal block to any earthed / bonded metallic part shall comply with the EN60079-7 requirements for the acceptable voltage of the terminal blocks.

| Product Code | Entry Thread 'A' | Inner Diameter 'B' | Distance Between Centres 'C' | Mounting Centres 'D' | Rail Mounting Centres 'E' | Outer Diameter 'F' | Overall Height 'G' |
|--------------|------------------|--------------------|------------------------------|----------------------|---------------------------|--------------------|--------------------|
| 100921-BE | M20 | 66.0 | 101.0 | 92.0 | 81.0 | 118.0 | 105.0 |
| 100922-BE | M25 | 52.0 | 123.0 | 104.0 | 78.0 | 140.0 | 105.0 |
| 100923-BE | M32 | 110.0 | 181.0 | 165.0 | 156.0 | 202.0 | 140.0 |

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. BEANGLEX-HB010424

BOTTOM ENTRY ANGLE™ JUNCTION BOX

Conditions and limitations for safe use

- 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 2021312303000506 | 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 ² | 8,34 A | 11,90 A |
| | | | | 4 mm ² | 11,12 A | 15,86 A |
| | | | | 6 mm ² | 14,25 A | 20,33 A |
| | | | | 10 mm ² | 19,81 A | 28,26 A |
| | | | | 16 mm ² | 26,42 A | 37,68 A |
| | | | | 35 mm ² | 43,46 A | 61,98 A |
| | | | | 50 mm ² | 52,50 A | 74,88 A |
| Weidmuller | IECEX TUR18.0024U TÜV 18 ATEX 8221U CCC 2021312313000393 | Ex eb IIC | AKZ4 and AKE4 | 4mm ² | - | - |
| | | | | 75 mm ² | 66,75 A | 95,21 A |

Wiring and Installation instructions for Bottom Entry Angle™ Box without components

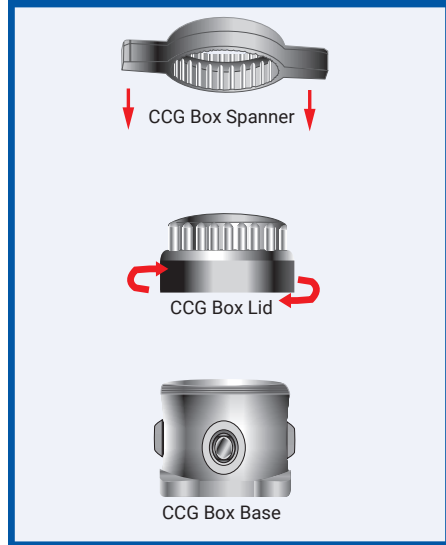
- Installation must be carried out by a competent person.
- The box must not be modified in any way, as this will invalidate the certification.
- Where cables enter the box they must be secured by CCG Cable Glands appropriate to the make up of the cable.
- Unused entry apertures must be blanked with certified CCG Blanking Plugs.
- To maintain IP 66/68 a thread seal gasket between the box and cable gland must be installed.
- Before replacing the lid, ensure the lid gasket is in place.
- The use of a CCG Box Spanner (Lid Locking Key) is required to maintain the tamper proof integrity of the box, refer Figure 1.

Wiring and Installation instructions for Bottom Entry Angle™ 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 this will invalidate the certification.
- 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 2.
- The voltage and current value of the box must not be exceeded.
- See relevant certificate for current limitations for conditions of use / schedule of limitations.
- 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 into 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 screw driver 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 make up of the cable.
- Unused entry apertures must be blanked with certified CCG Blanking 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.
- The use of a CCG Box Spanner (Lid Locking Key) is required to maintain the tamper proof integrity of the box, refer Figure 1.

FIGURE 1

To ensure the box apparatus is tamper proof: Screw on, tighten and lock lid in place by means of a CCG Box Spanner (Lid Locking Key).



CCG Box Spanner

| Product Code | Box Size |
|--------------|----------|
| 4012-0 | 0 |
| 401201 | 1 |
| 401202 | 2 |

TABLE 1

| Box Type | Box Size | Terminal Type and Size | Max Quantity | Rail Size |
|--------------|----------|--------------------------------|--------------|-----------|
| BE Angle Box | 1 | 4mm ² mini terminal | 8 | 15 |
| BE Angle Box | 2 | 2.5mm ² | 12 | 35 |
| BE Angle Box | 2 | 4mm ² mini terminal | 8 | 15 |
| BE Angle Box | 2 | 4mm ² | 10 | 35 |
| BE Angle Box | 2 | 6mm ² | 8 | 35 |
| BE Angle Box | 2 | 10mm ² | 7 | 35 |
| BE Angle Box | 3 | 2.5mm ² | 20 | 35 |
| BE Angle Box | 3 | 4mm ² mini terminal | 14 | 15 |
| BE Angle Box | 3 | 4mm ² | 16 | 35 |
| BE Angle Box | 3 | 6mm ² | 12 | 35 |
| BE Angle Box | 3 | 10mm ² | 12 | 35 |
| BE Angle Box | 3 | 16 mm ² | 10 | 35 |
| BE Angle Box | 3 | 35mm ² | 6 | 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 |

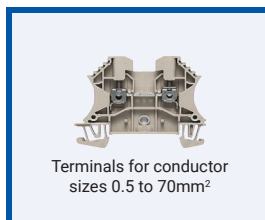
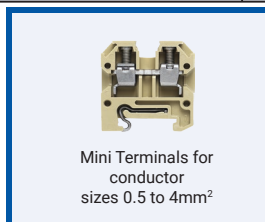
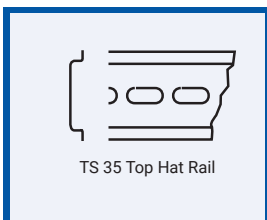
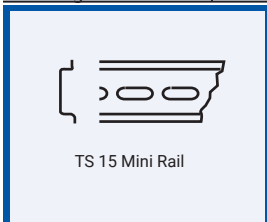


FIGURE 2

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

