



Certificate Number: MASC 16-1787
Issue: 03 February 2020
Expire: 05 July 2027
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CERTIFICATE

(R1 – Additional terminal blocks and rectangular box configuration)

Certificate number: **MASC 16-1787**
Equipment: Non-metallic Industrial Junction Box series
Serial No: (See "Conditions of Certification")

Manufacturer: CCG Cable Terminations Pty Ltd
Address: 33-37 Forge Road, Spartan Industrial Area,
Kempton Park, 1619, South Africa

The evaluation was conducted according to the requirements of:

- IEC 62208, Ed. 2 (2011): Empty enclosures for low-voltage switchgear and control gear assemblies— General requirements
- IEC62262, Ed. 1.0 (2002): Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (code IK)

DESCRIPTION:

See end of document.

CONDITIONS OF CERTIFICATION / MANUFACTURE:

1. The apparatus must be additionally marked in a clear, legible, visible and indelible manner with the marking details as described above.
2. All production units must be conducted under a third party quality system.
3. This certificate relates only to the equipment specified herein as executed to the samples supplied for evaluation.
4. In affixing the marking to the component, the manufacturer attests on its own responsibility that the equipment conforms to the documents listed herein.
5. It is a condition of certification that a copy of the certificate and instructions must be made available for the equipment. The instructions must comply with the requirements of the standard.

SPECIAL CONDITIONS FOR SAFE USE:

- Terminal blocks and glands as prescribed by CCG must be used inside the junction boxes with a maximum voltage rating up to 690Vrms.
- The box with the clear lid option must be installed to prevent direct UV exposure to internal component(s).
- The end user must comply with installation rules / de-ratings of conductors / cables as applicable to general installations as per instructions.

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COMPLIANCE:

Samples of the non-metallic Industrial Junction Box Series as described above / below have been tested and assessed according to the relevant clauses of above standard(s) and therefore are deemed to be in compliance with above standard(s).

DESCRIPTION:

All Junction boxes:

- Are manufactured from DMC (Dough Moulding Compound).
- Comprises pressed metallic inserts in the side of the enclosure with threaded entries for sufficiently IP rated glands or plugs.
- Have an o-ring(s) which is utilized between the housing and the cover of the enclosure to maintain the IP rating.
- Can be manufactured in various types and sizes. (See table below).
- Are intended to be used for terminal blocks located on the internal rail, fitted to the base of the junction box.

Handifit boxes:

The Handifit enclosures have a cylindrical shaped body with a screw on cover, secured / opened with a special tool that engages into splines on the cover of the enclosure.

An optional polycarbonate / DMC cover (Adaptalid) may be screwed on with four M5 countersink screws into metallic inserts in a DMC adaptor, which is threaded to replace the normal threaded cover.

An o-ring is utilised between the polycarbonate section and adaptor to maintain the IP rating.

Handifit Screw Fit boxes:

The Screw Fit non-metallic junction box enclosure has a cylindrical shaped body with a cover, secured with four M5 stainless steel pan-pozi screws in metallic threaded inserts moulded in the base of the enclosure.

An o-ring is utilised with the cover to maintain the IP rating.

Multi Boxes:

The Multi non-metallic box enclosure has a rectangular shaped body with a cover, secured with four M6 stainless steel pan-pozi screws in metallic threaded inserts moulded in the base of the enclosure. Internal earth plates are used to secure the glands in threaded entries in the plates. All internal plates are electrically connected. The external earth stud is threaded into the internal earthing plate and fitted with an o-ring to maintain the IP rating. An o-ring is utilised with the cover to maintain the IP rating.

The range of enclosures consists of the following:

Type	Box size	Dimensions (Dia. X height) (mm)	Gland entry sizes	Maximum Gland entry amount and arrangement
Handifit Junction box	0	100 x 78	M16-M20	Four entries positioned orthogonal around the side walls with multiple gland entry sizes.
	1	118 x 91	M16- M20	
	2	140 x 114	M16-M25	
	3	203 x 142	M16-M32	
	4	298 x 186	M16-M40	
Handifit Bottom entry angle Box	1	118 x 98	M20- M25	Three entries positioned at the bottom of the box: - one entry closest to the base of the box and two entries closest to the rim of the box.
	2	140 x 105	M16- M32	
	3	202 x 140		
	1	128 x 112	M16- M20	

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Non-metallic Industrial Junction Box series

Handifit 3 Way Bottom entry box	2	162 x 160	M16-M25	Three entries positioned at the bottom of the box: - one entry closest to the base of the box and two entries closest to the rim of the box.
Handifit Y Box	0	102 x 81	M16-M20	Two entries positioned on the side of the box and one entry positioned on the opposite side of the box.
	1	118 x 111	M16-M20	
	2	138 x 123	M16-M25	
	3	200 x 150	M16-M32	
Handifit H Box	1	118 x 94	M16- M20	Two entries positioned on the side of the box and two entries positioned on the opposite side of the box.
	2	138.5 x 100	M16- M25	
Handifit ST Box strut box	1	158 x 104	M16- M20	Four entries positioned on opposite sides with multiple gland entry sizes.
Handifit Angle Box	2	121 x 100	M20-M25	Two entries on flat section and two on cylindrical side.
Handifit Screw Fit Box	All	Similar to above	As above	Same options as for above types.
Multi Box	B	196 x 132 x 109	Various Sizes up to M40	Entries positioned in the side walls of the base.
Multi Box	C	278 x 200 x 117	Various Sizes up to M40	Entries positioned in the side walls of the base.

The earthing construction of the junction boxes were tested:

- Max continuous current (Catapult test report OR/15/11677_1, dated March 2016, according to IEC 60947-7-2)

Item	Plate thickness	Rated Current (Amps)
Box size No. 0	0.3mm brass	32.8
Box size No. 1	0.3mm brass	76.1
Box size No. 2	0.3mm brass	127.0
Box size No. 3	N/A	192.8
Box size No. 4	N/A	192.8

- Short circuit current (Catapult test report OR/15/11677_2, dated March 2016, according to IEC 62444 and IEC 60947-7-2)

Box size	Plate thickness	Continuous current	IEC 62444 Short circuit (1 sec)	IEC 60947 Short Circuit (1 sec)
No. 0	0.5mm brass	32A	500A	480A
No. 1	0.5mm brass	76A	500A	1920A
No. 2	0.5mm brass	125A	500A	1920A
No. 3	N/A	192A	500A	1920A
No. 4	N/A	192A	500A	1920A

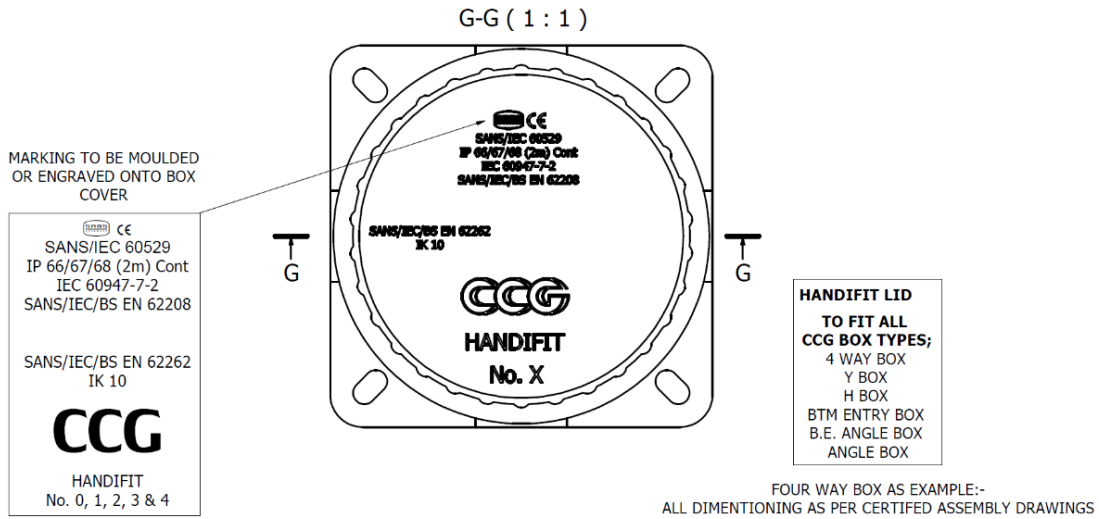
The internal configurations are directly correlated to volume when comparing the "B" size Multi box with the original number 3 box and then the "C" size multi box is comparable with the original number 4 box.

MARKING:

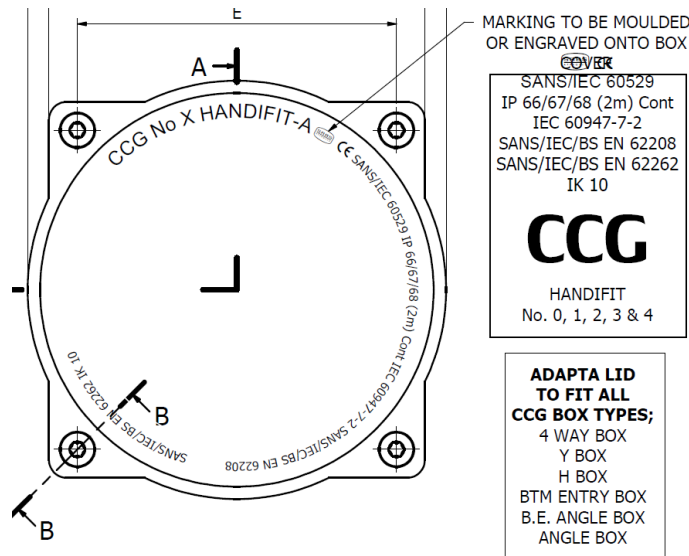
Note: The marking of the IEC 60947 does not form part of this approval

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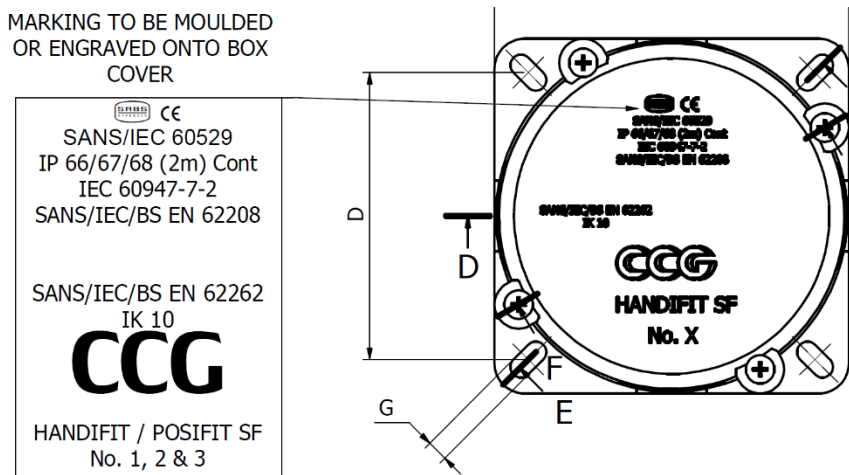
General boxes:



Adaptalid:



Screw fit Boxes:



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Multi boxes:



MARKING TO BE MOULDED OR
ENGRAVED ONTO BOX COVER

C (1 : 1.25)

Yours faithfully

Regardt Zeelie
TECHNICAL SPECIALIST

Mining and Surface Certification

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