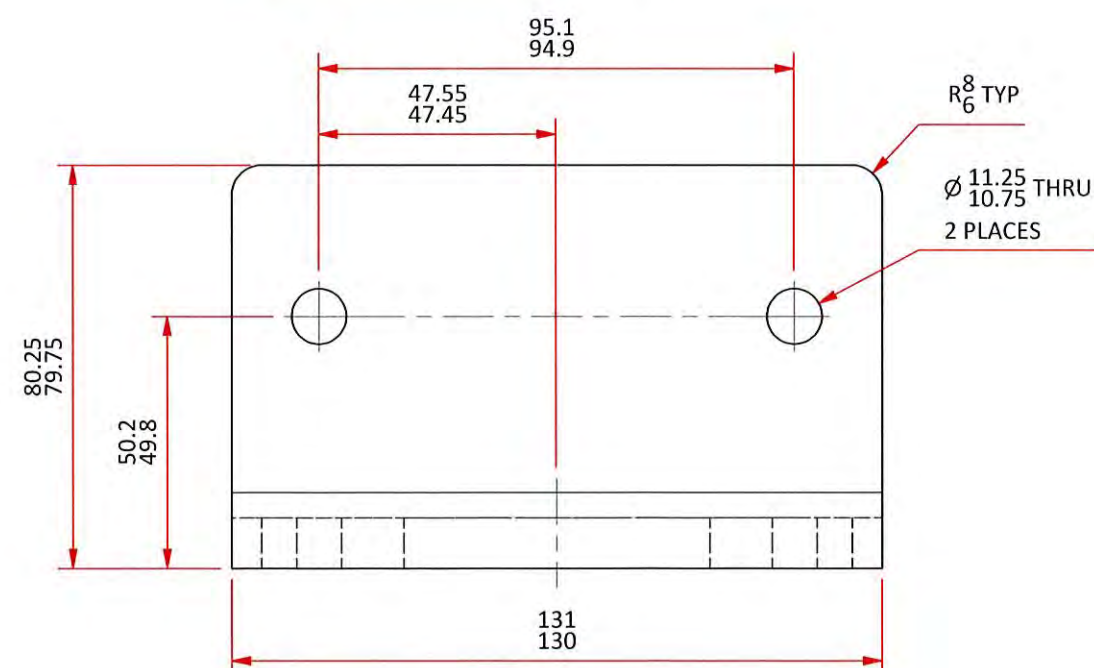


SECTION VIEW A-A



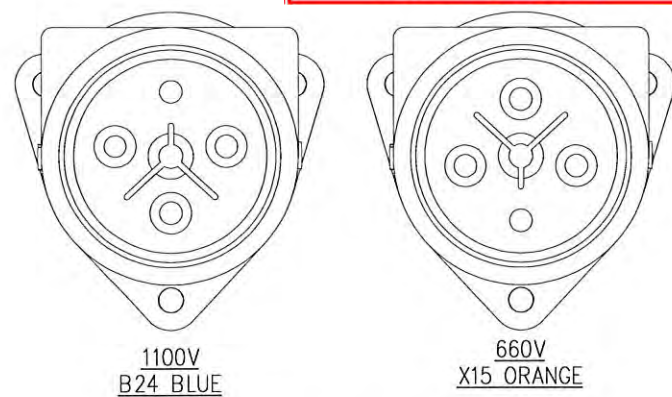
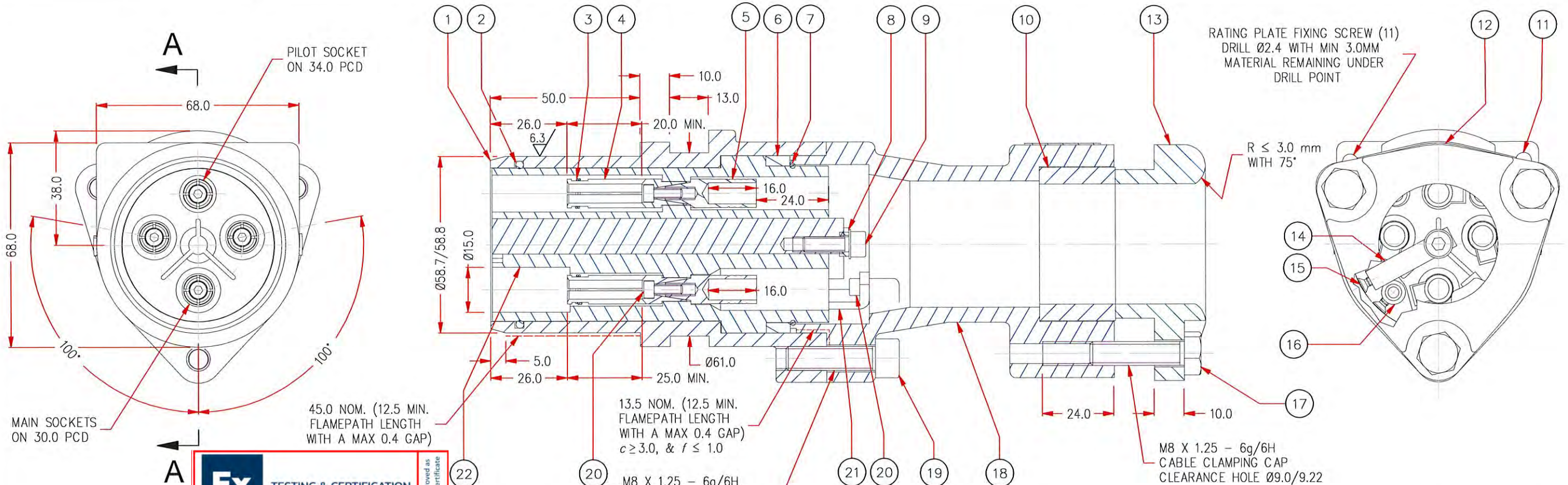
NOTES:

1. CLEARANCE HOLES NOT GREATER THAN MEDIUM SERIES: H13 (ISO 273)
2. FLAMEPATH LENGTH (BOTH SIDES): 12.5 (MIN) WITH A GAP 0.4 (MAX) WHEN ASSEMBLED
3. THE SPECIFICATIONS AND DIMENSIONS COMPLY WITH AS/NZS 1299 ELECTRICAL EQUIPMENT FOR MINES AND QUARRIES
4. MACHINED FLAMEPATH SURFACES AVERAGE Ra DOES NOT EXCEED 6.µm (ISO 468)
5. REFERENCE DIMENSIONS ( ) ARE INFORMATIVE ONLY



A		DRAWING CREATED.	31/01/2023	<i>PM</i>
REV	ZONE	DESCRIPTION	DATE	APPROVED

THIS DRAWING REMAINS THE PROPERTY OF CMI ELECTRICAL PRODUCTS AND MUST NOT BE LENT OR COPIED.	 <div>Electrical Products</div>	MINTO INDUSTRIAL PRODUCTS			
		A division of CMI Operations Pty Ltd			
	GENERAL TOLERANCE $\pm 0.25$ ANGULAR TOLERANCE $\pm 0.5^\circ$		DESCRIPTION 60A MOUNTING BRACKET		
	MATERIAL MILD STEEL				
DO NOT SCALE DRAWING DIMENSIONS IN MILLIMETRES	FINISH ZINC PLATED	SCALE 1:1	DATE 21/11/2022	A3	DRAWING No. F-890
		DRAWN EL	CHECKED 		



## CONFIGURATION

NEOPRENE GROMMETS	
PART No.	CABLE ACCEPTANCE
89197-13	9.0-13.0
89197-16	12.0-16.0
89197-19	15.0-19.0
89197-22	18.0-22.0
89197-25	21.0-25.0
89197-29	24.0-29.0
89197-32	28.0-32.0
89197-35	31.0-35.0
89197-37	34.0-37.0
89197-40	36.0-40.0

## MARKING DETAILS

M.I.P.  
AF6#4S  
60A  
# VOLTS 6=660V  
1=1100V  
IP66/68  
Ex db I Mb  
IECEx ExTC 22.0036X  
ANZEx 22.4180  
TYPE A  
S.O xxxxx-xx  
DO NOT SEPERATE WHEN ENERGISED

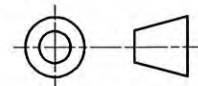
## NOTES

- MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED ON THE DRAWING.
- IN CASE OF BLIND HOLES FOR SCREWS, THE REMAINING THICKNESS OF MATERIAL UNDER THE HOLE IS A MINIMUM OF ONE-THIRD OF THE SCREW DIAMETER OR 3MM, WHICHEVER IS GREATER.
- THE SPECIFICATIONS, DIMENSIONS AND RATINGS COMPLY WITH AS/NZS 1299 ELECTRICAL EQUIPMENT FOR MINES AND QUARRIES.
- SPECIAL FASTENERS COMPLY WITH ISO 262 WITH A TOLERANCE FIT 6g/6H AND THREAD ENGAGEMENT IS ≥ THE MAJOR DIAMETER AND THE CLEARANCE HOLE IS NOT > H13 (ISO 286-2).
- ALL MACHINED FLAMEPATH SURFACES AVERAGE  $R_a$  DOES NOT EXCEED 6.3µm (ISO 468).
- MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
- TERMINATION FOR CONNECTION BETWEEN THIMBLE AND CABLE IS BY UTILUX CRIMP DIE'S AS PER AS/NZS 4325 (IEC 1238) OR SOLDER.
- TESTING ACCORDING TO IEC60079-0 USING MANDRELS REQUIRES A TIGHTENING TORQUE ON THE CABLE CLAMPING SCREWS OF 10Nm.
- MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A\*-70.
- MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.

THIMBLES			
PART No.	CSA mm <sup>2</sup>	I.D.	UTILUX DIE No.
3758	2.5	Ø3.0	38-44 Cu
3758-1	6	Ø3.7	38-44 Cu
3758-2	10	Ø4.7	38-57 Cu
3758-3	16	Ø5.5	38-63 Cu
3758-4	25	Ø7.1	38-77 Cu

THIS DRAWING REMAINS THE PROPERTY OF MINTO INDUSTRIAL PRODUCTS AND MUST NOT BE LENT OR COPIED.

PART No. AF614S  
AF664S



DO NOT SCALE DRAWING. DIMENSIONS IN MILLIMETRES.

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL
22	1	3757-1	INTERIOR MOULDING	DMC 6804G7B
21	1	4574	EARTH LINK STRAP	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
20	5	AH009006	6-32 UNC X 3/8" CAP SREW	ST. STEEL
19	3	AH115095	M8 X 30 SKT HD CAP SCREW (ISO4762)	STEEL-ZINC PL.
18	1	3493B	GLAND BODY CASTING	HIGH TENSILE BRASS - NOTE 6 C86500 TO AS 1565-1996
17	3	AH113096	M8 X 30 HEX HD SCREW (ISO4017)	ST. STEEL
16	3	4650	EARTH THIMBLE	SULFUR BEARING COPPER C14700 TO AS/NZS 1567-1997
15	5	AH151035	M3 X 10 CSK PHILLIPS HD SCREW	ST. STEEL
14	1	4573	EARTH STRAP	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
13	1	3444-1B	CAP CASTING	HIGH TENSILE BRASS - NOTE 6 C86500 TO AS 1565-1996
12	1	AX004076	RATING PLATE	BRASS
11	2	AH009788	No.4 GAUGE X 3/16" U-DRIVE SCREW	STEEL-ZINC PL.
10	1	89197 SERIES	GROMMET	NEOPRENE RUBBER
9	1	AH151033	M5x16 SKT HD CAP SCREW	ST. STEEL
8	1	AH009380	3/16" STAR WASHER	STEEL-ZINC PL.
7	1	A019026	O'RING ID 50.52 SECT 1.78	NITRILE
6	1	4572	EARTH LOCATION RING	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
5	4	3758 SERIES	MAIN & PILOT THIMBLE	SULFUR BEARING COPPER C14700 TO AS/NZS 1567-1997
4	4	3759	MAIN & PILOT SOCKET	SILVER PL. TO AS 1856-2004 CuAg 08
3	4	AH201132	CONTACT SOCKET SPRING	SULFUR BEARING COPPER C14700 TO AS/NZS 1567-1997
2	1	A019015	O'RING ID 50.47 SECT 2.62	SILVER PL. TO AS 1856-2004 CuAg 08
1	1	3487B	BODY CASTING	ST. STEEL
				NITRILE
				HIGH TENSILE BRASS - NOTE 6 C86500 TO AS 1565-1996
				MATERIAL

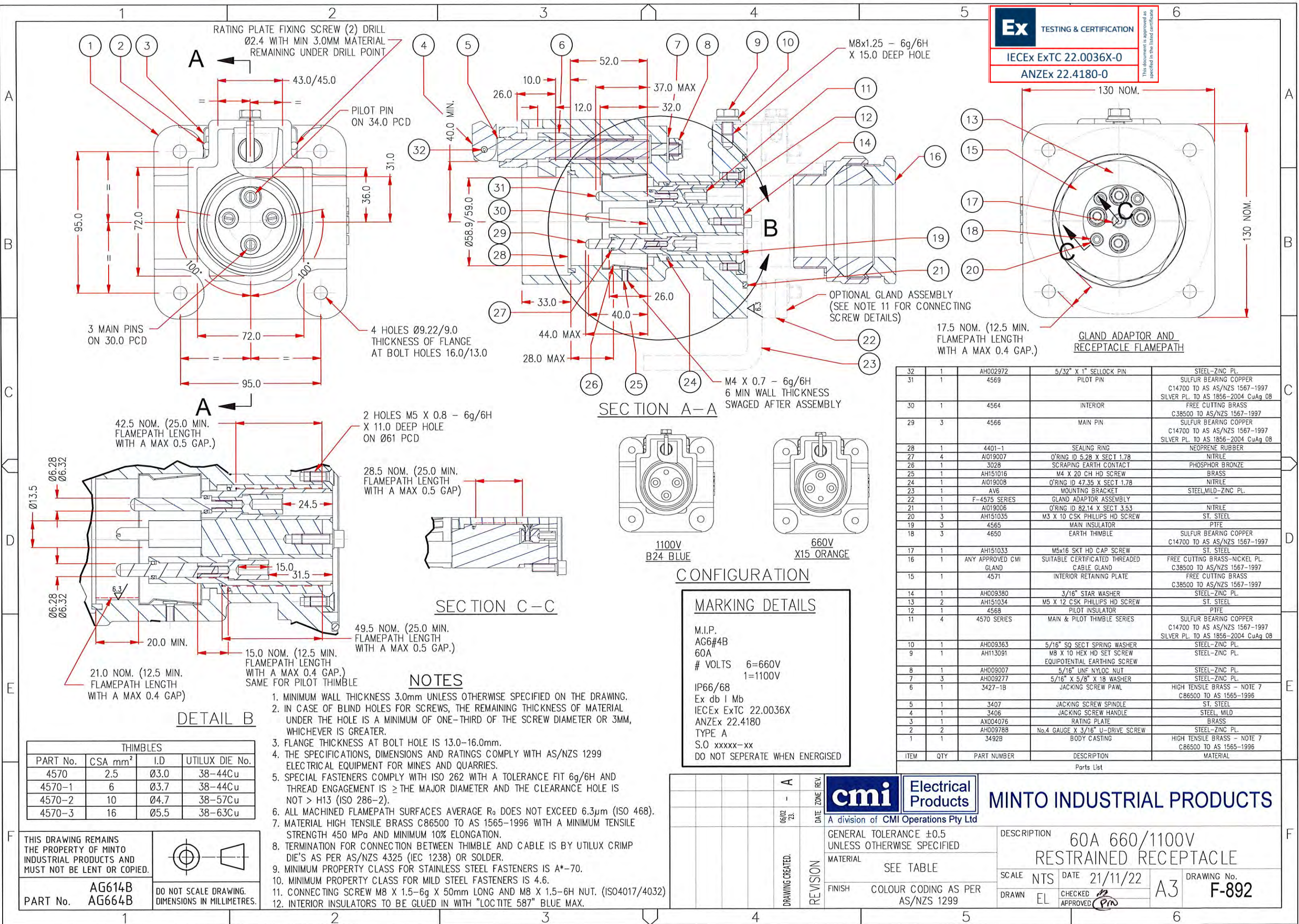
Parts List

**cmi** Electrical Products  
A division of CMI Operations Pty Ltd

**MINTO INDUSTRIAL PRODUCTS**

GENERAL TOLERANCE ±0.5 UNLESS OTHERWISE SPECIFIED  
MATERIAL SEE TABLE  
FINISH COLOUR CODING AS PER AS/NZS 1299

DESCRIPTION  
60A 660/1100V RESTRAINED PLUG  
SCALE NTS DATE 21/11/22  
DRAWN EL CHECKED APPROVED  
DRAWING No. F-891



THIMBLES			
PART No.	CSA mm <sup>2</sup>	I.D	UTILUX DIE No.
4570	2.5	Ø3.0	38-44Cu
4570-1	6	Ø3.7	38-44Cu
4570-2	10	Ø4.7	38-57Cu
4570-3	16	Ø5.5	38-63Cu

THIS DRAWING REMAINS THE PROPERTY OF MINTO INDUSTRIAL PRODUCTS AND MUST NOT BE LENT OR COPIED.

**AG614B**  
PART No. **AG664B**

- ### NOTES
1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED ON THE DRAWING.
  2. IN CASE OF BLIND HOLES FOR SCREWS, THE REMAINING THICKNESS OF MATERIAL UNDER THE HOLE IS A MINIMUM OF ONE-THIRD OF THE SCREW DIAMETER OR 3MM, WHICHEVER IS GREATER.
  3. FLANGE THICKNESS AT BOLT HOLE IS 13.0-16.0mm.
  4. THE SPECIFICATIONS, DIMENSIONS AND RATINGS COMPLY WITH AS/NZS 1299 ELECTRICAL EQUIPMENT FOR MINES AND QUARRIES.
  5. SPECIAL FASTENERS COMPLY WITH ISO 262 WITH A TOLERANCE FIT 6g/6H AND THREAD ENGAGEMENT IS ≥ THE MAJOR DIAMETER AND THE CLEARANCE HOLE IS NOT > H13 (ISO 286-2).
  6. ALL MACHINED FLAMEPATH SURFACES AVERAGE R<sub>a</sub> DOES NOT EXCEED 6.3µm (ISO 468).
  7. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
  8. TERMINATION FOR CONNECTION BETWEEN THIMBLE AND CABLE IS BY UTILUX CRIMP DIE'S AS PER AS/NZS 4325 (IEC 1238) OR SOLDER.
  9. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A\*-70.
  10. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.
  11. CONNECTING SCREW M8 X 1.5-6g X 50mm LONG AND M8 X 1.5-6H NUT. (ISO4017/4032)
  12. INTERIOR INSULATORS TO BE GLUED IN WITH "LOCTITE 587" BLUE MAX.

### MARKING DETAILS

M.I.P.  
AG6#4B  
60A  
# VOLTS 6=660V  
1=1100V  
IP66/68  
Ex db I Mb  
IECEx ExTC 22.0036X  
ANZEx 22.4180  
TYPE A  
S.O xxxxx-xx  
DO NOT SEPERATE WHEN ENERGISED

DATE ZONE REV.

06/02 23. A

DRAWING CREATED.

REVISION

GENERAL TOLERANCE ±0.5 UNLESS OTHERWISE SPECIFIED

MATERIAL SEE TABLE

FINISH COLOUR CODING AS PER AS/NZS 1299

DESCRIPTION

60A 660/1100V RESTRAINED RECEPTACLE

SCALE NTS DATE 21/11/22

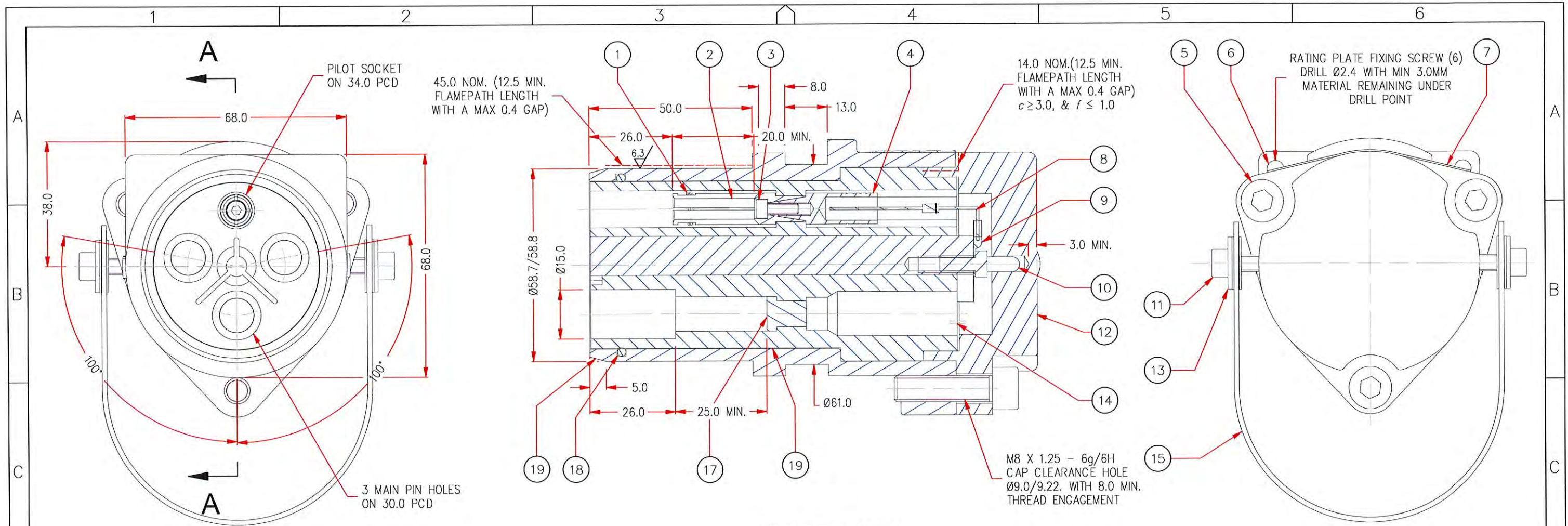
DRAWN EL CHECKED APPROVED

DRAWING No. **F-892**

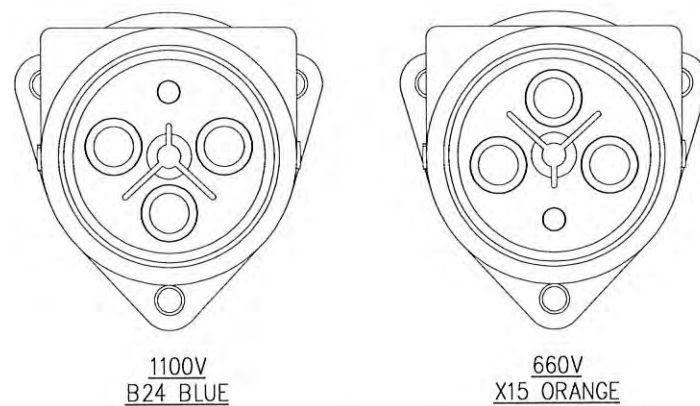
**cmi** Electrical Products

A division of CMI Operations Pty Ltd

**MINTO INDUSTRIAL PRODUCTS**



SECTION A-A



CONFIGURATION



**MARKING DETAILS**

M.I.P.  
AR6#1S  
60A  
# VOLTS 6=660V  
1=1100V

IP66  
Ex db I Mb  
IECEx ExTC 22.0036X  
ANZEx 22.4180  
TYPE A  
S.O xxxxx-xx  
DO NOT SEPERATE WHEN ENERGISED

NOTES

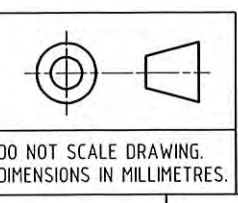
1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED ON THE DRAWING.
2. IN CASE OF BLIND HOLES FOR SCREWS, THE REMAINING THICKNESS OF MATERIAL UNDER THE HOLE IS A MINIMUM OF ONE-THIRD OF THE SCREW DIAMETER OR 3MM, WHICHEVER IS GREATER.
3. THE SPECIFICATIONS, DIMENSIONS AND RATINGS COMPLY WITH AS/NZS 1299 ELECTRICAL EQUIPMENT FOR MINES AND QUARRIES.
4. SPECIAL FASTENERS COMPLY WITH ISO 262 WITH A TOLERANCE FIT 6g/6H AND THREAD ENGAGEMENT IS  $\geq$  THE MAJOR DIAMETER AND THE CLEARANCE HOLE IS NOT  $> H13$  (ISO 286-2).
5. ALL MACHINED FLAMEPATH SURFACES AVERAGE  $R_a$  DOES NOT EXCEED  $6.3\mu m$  (ISO468).
6. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
7. MINIMUM TORQUE OF 10.0 Nm FOR CAP SCREWS.
8. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A\*-70.
9. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.

19	1	3487B	BODY CASTING	HIGH TENSILE BRASS - NOTE 6 C86500 TO AS 1565-1996
18	1	AI019015	O'RING ID 50.47 SECT 2.62	NITRILE
17	3	4579	BUNG	DELRIN
16	1	3757	INTERIOR MOULDING	DMC 1313
15	1	F-AX000400	HANDLE	NYLON
14	1	AH002968	3/32" X 1/2" SELLOCK PIN	ST. STEEL
13	2	AH009251	3/16" X 5/8" X 18 WASHER	STEEL-ZINC PL.
12	1	3912	CAP	FREE CUTTING BRASS C38500 TO AS 1567-1997
11	2	AH151033	M5x16 SKT HD CAP SCREW	ST. STEEL
10	1	3925	EARTH PIN	FREE CUTTING BRASS C38500 TO AS 1567-1997
9	1	CH3931ET	RING TERMINATION	BRASS-TIN PL.
8	1	AX022400	IN4007 DIODE	-
7	1	AX004076	RATING PLATE	BRASS
6	2	AH009788	No.4 GAUGE X 3/16" U-DRIVE SCREW	STEEL-ZINC PL.
5	3	AH115095	M8 X 30 SKT HD SCREW (ISO 4762)	STEEL-ZINC PL.
4	1	3758	PILOT THIMBLE	SULFUR BEARING COPPER C14700 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
3	1	AH009006	No 6-32 UNC X 1/2" SKT HD SCREW	ST. STEEL
2	1	3759	PILOT SOCKET	SULFUR BEARING COPPER C14700 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
1	1	AH201132	CONTACT SOCKET SPRING	ST. STEEL
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL

Parts List

THIS DRAWING REMAINS THE PROPERTY OF MINTO INDUSTRIAL PRODUCTS AND MUST NOT BE LENT OR COPIED.

PART No. AR611S  
AR661S



DATE

06/02/23

ZONE

A

REV.

-

REVISION

1

2

3

4

5

6

cmi

Electrical Products

A division of CMI Operations Pty Ltd

GENERAL TOLERANCE  $\pm 0.5$  UNLESS OTHERWISE SPECIFIED

MATERIAL SEE TABLE

FINISH COLOUR CODING AS PER AS/NZS 1299

DESCRIPTION

60A 660/1100V RESTRAINED DUMMY PLUG

SCALE NTS

DATE 21/11/22

DRAWN EL

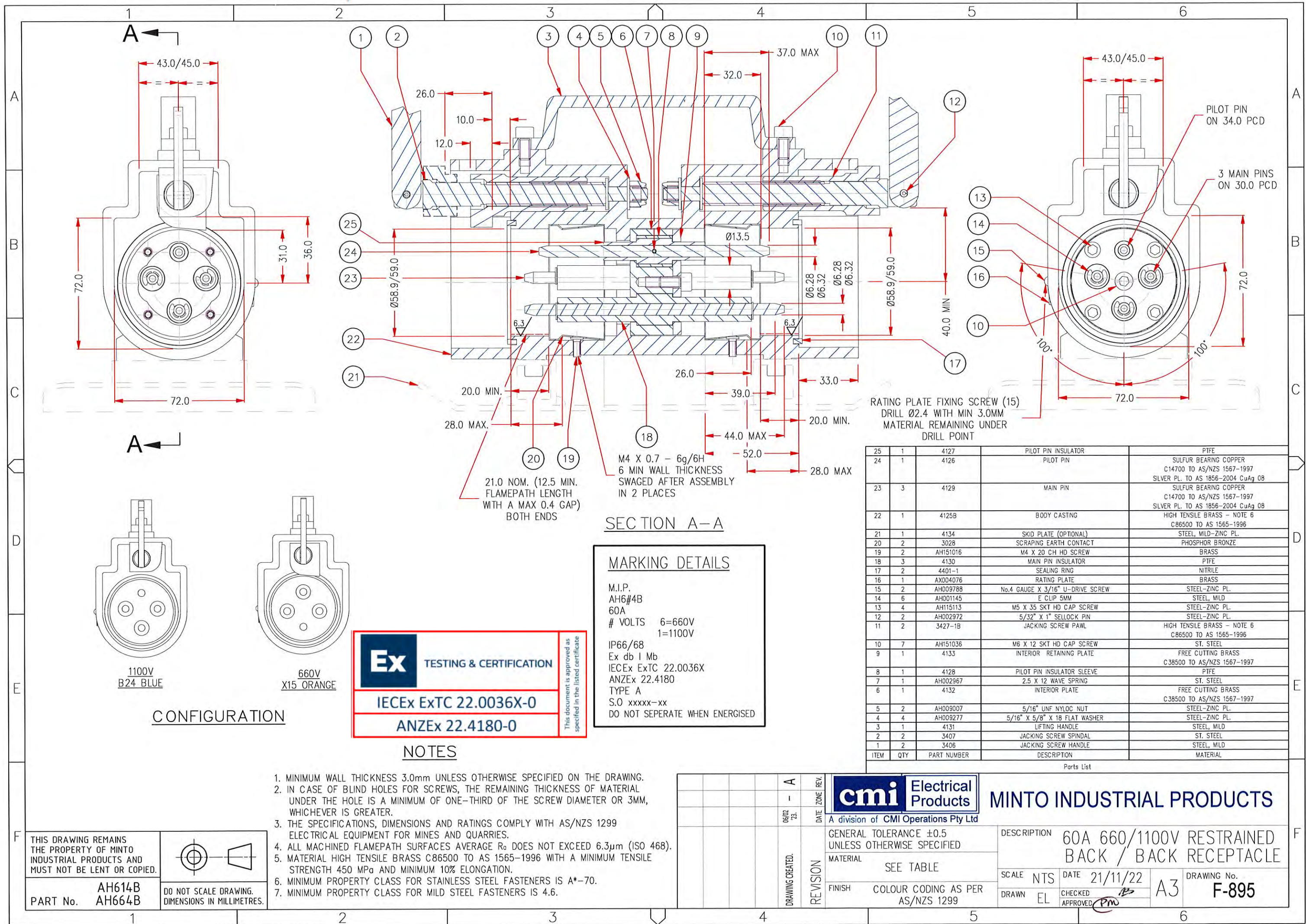
CHECKED

APPROVED

A3

DRAWING No. F-893





THIS DRAWING REMAINS THE PROPERTY OF MINTO INDUSTRIAL PRODUCTS AND MUST NOT BE LENT OR COPIED.

**AH614B**  
**AH664B**

PART No.

DO NOT SCALE DRAWING. DIMENSIONS IN MILLIMETRES.

- NOTES**
1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED ON THE DRAWING.
  2. IN CASE OF BLIND HOLES FOR SCREWS, THE REMAINING THICKNESS OF MATERIAL UNDER THE HOLE IS A MINIMUM OF ONE-THIRD OF THE SCREW DIAMETER OR 3MM, WHICHEVER IS GREATER.
  3. THE SPECIFICATIONS, DIMENSIONS AND RATINGS COMPLY WITH AS/NZS 1299 ELECTRICAL EQUIPMENT FOR MINES AND QUARRIES.
  4. ALL MACHINED FLAMEPATH SURFACES AVERAGE  $R_a$  DOES NOT EXCEED  $6.3\mu m$  (ISO 468).
  5. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
  6. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A\*-70.
  7. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.

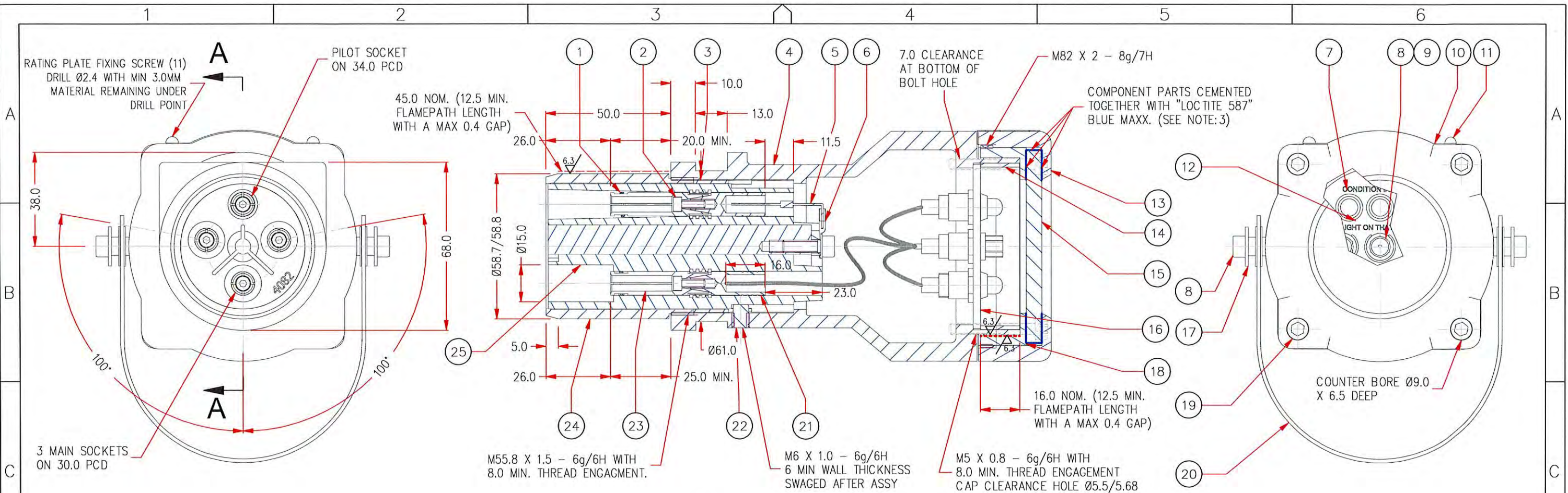
DATE		06/02/23	REV.	A
DRAWING CREATED		REVISION		
GENERAL TOLERANCE $\pm 0.5$ UNLESS OTHERWISE SPECIFIED		DESCRIPTION		
MATERIAL		SEE TABLE		
FINISH		COLOUR CODING AS PER AS/NZS 1299		
SCALE		NTS	DATE	21/11/22
DRAWN		EL	CHECKED	APPROVED
DRAWING No.		F-895		

**cmi Electrical Products**  
A division of CMI Operations Pty Ltd

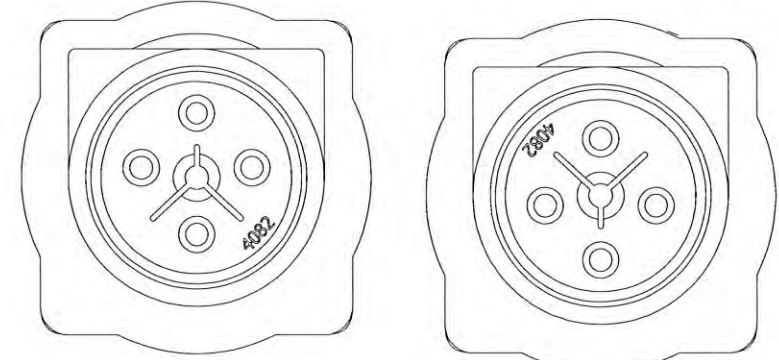
**MINTO INDUSTRIAL PRODUCTS**

60A 660/1100V RESTRAINED BACK / BACK RECEPTACLE

A3



SECTION A-A



CONFIGURATION

**MARKING DETAILS**

M.I.P.  
AT6#4R  
60A  
# VOLTS 6=660V  
1=1100V

IP66  
Ex db I Mb  
IECEx ExTC 22.0036X  
ANZEx 22.4180  
TYPE A  
S.O xxxxx-xx  
DO NOT SEPERATE WHEN ENERGISED

**Ex**

TESTING & CERTIFICATION

IECEx ExTC 22.0036X-0

ANZEx 22.4180-0

This document is approved as specified in the listed certificate

NOTES

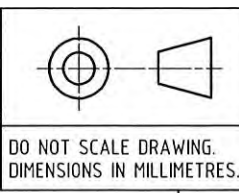
1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED ON THE DRAWING.
2. IN CASE OF BLIND HOLES FOR SCREWS, THE REMAINING THICKNESS OF MATERIAL UNDER THE HOLE IS A MINIMUM OF ONE-THIRD OF THE SCREW DIAMETER OR 3MM, WHICHEVER IS GREATER.
3. ITEM No. 19 COATED BOTH SIDES APPROX 12.0mm FROM OUTER EDGE (WITH 10.0mm MIN.) BEFORE ASSEMBLY, ITEMS CLAMPED TOGETHER DURING ASSEMBLY.
4. THE SPECIFICATIONS, DIMENSIONS AND RATINGS COMPLY WITH AS/NZS 1299 ELECTRICAL EQUIPMENT FOR MINES AND QUARRIES.
5. SPECIAL FASTENERS COMPLY WITH ISO 262 WITH A TOLERANCE FIT 6g/6H AND THREAD ENGAGEMENT IS ≥ THE MAJOR DIAMETER AND THE CLEARANCE HOLE IS NOT > H13 (ISO 286-2).
6. ALL MACHINED FLAMEPATH SURFACES AVERAGE R<sub>a</sub> DOES NOT EXCEED 6.3µm (ISO 468).
7. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
8. MINIMUM TORQUE OF 10.0 Nm FOR CAP SCREWS.
9. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A\*-70.
10. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.

25	1	4082	INTERIOR MOULDING	NEOPRENE RUBBER
24	1	4080SS	EARTH SLEEVE	ST. STEEL 304 MIN.
23	4	3759	MAIN & PILOT SOCKET	SULFUR BEARING COPPER C14700 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
22	1	3685-2	POLARISING RIVET	BRASS
21	4	3758 SERIES	MAIN & PILOT THIMBLE	SULFUR BEARING COPPER C14700 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
20	1	F-AX000400	HANDLE	NYLON
19	4	AH115113	M5 X 35 SKT HD CAP SCREW (ISO 4762)	STEEL-ZINC PL.
18	1	3198-1	INSPECTION WINDOW RETAINING RING	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
17	2	AH009251	3/16" X 5/8" X 18 WASHER	STEEL-ZINC PL.
16	1	3103	INDICATOR LIGHT PANEL	-
15	1	3105	INSPECTION WINDOW	LEXAN MR10
14	1	3115	SPACER	PVC
13	1	3197-1	CAP CASTING	HIGH TENSILE BRASS - NOTE 7 C86500 TO AS 1565-1996
12	1	4099	EARTH STRAP	FREE CUTTING BRASS
11	2	AH009788	No.4 GAUGE X 3/16" U-DRIVE SCREW	STEEL-ZINC PL.
10	1	AX004076	RATING PLATE	BRASS
9	1	AH009380	3/16" STAR WASHER	STEEL-ZINC PL.
8	3	AH151033	M5x16 SKT HD CAP SCREW	ST. STEEL
7	1	AH151035	M3 X 10 CSK PHILLIPS HD SCREW	ST. STEEL
6	1	CH430ET	RING TERMINATION	BRASS-TIN PL.
5	1	AX022400	IN4007 DIODE	-
4	1	4180B	BODY CASTING	HIGH TENSILE BRASS - NOTE 7 C86500 TO AS 1565-1996
3	1	4081	EARTH RING	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
2	4	AH009006	No 6-32 UNC X 3/8" SKT HD SCREW	ST. STEEL
1	4	AH201132	CONTACT SOCKET SPRING	ST. STEEL
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL

Parts List

THIS DRAWING REMAINS THE PROPERTY OF MINTO INDUSTRIAL PRODUCTS AND MUST NOT BE LENT OR COPIED.

PART No. AT614R  
AT664R



DATE 06/02/23

REVISION A

DRAWING CREATED

DATE 06/02/23

REVISION A

DRAWING CREATED

**cmi**

Electrical Products

A division of CMI Operations Pty Ltd

GENERAL TOLERANCE ±0.5 UNLESS OTHERWISE SPECIFIED

MATERIAL SEE TABLE

FINISH COLOUR CODING AS PER AS/NZS 1299

DESCRIPTION 60A 660/1100V RESTRAINED PHASE CONDITION INDICATOR

SCALE NTS

DATE 21/11/22

DRAWN EL

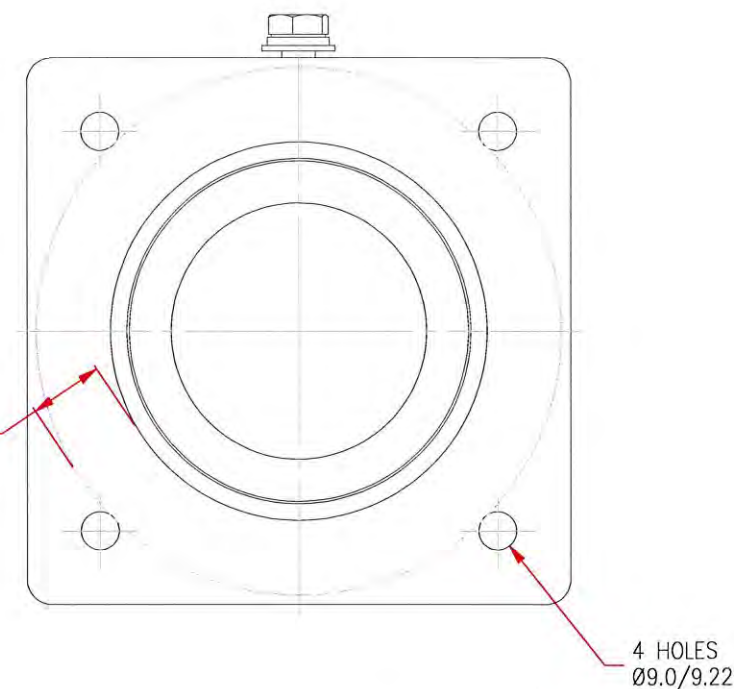
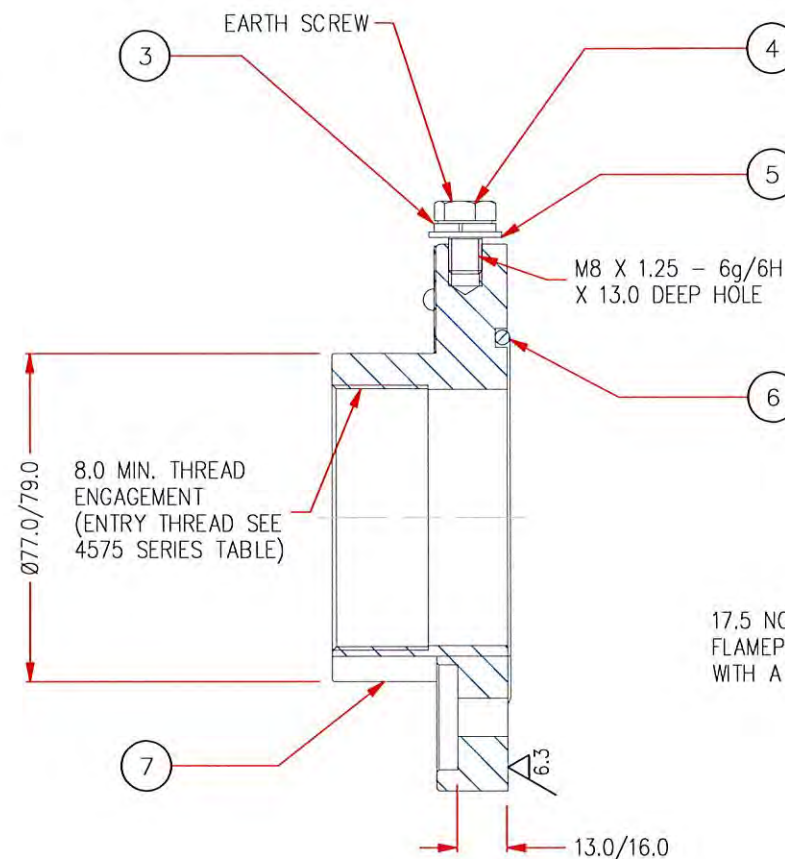
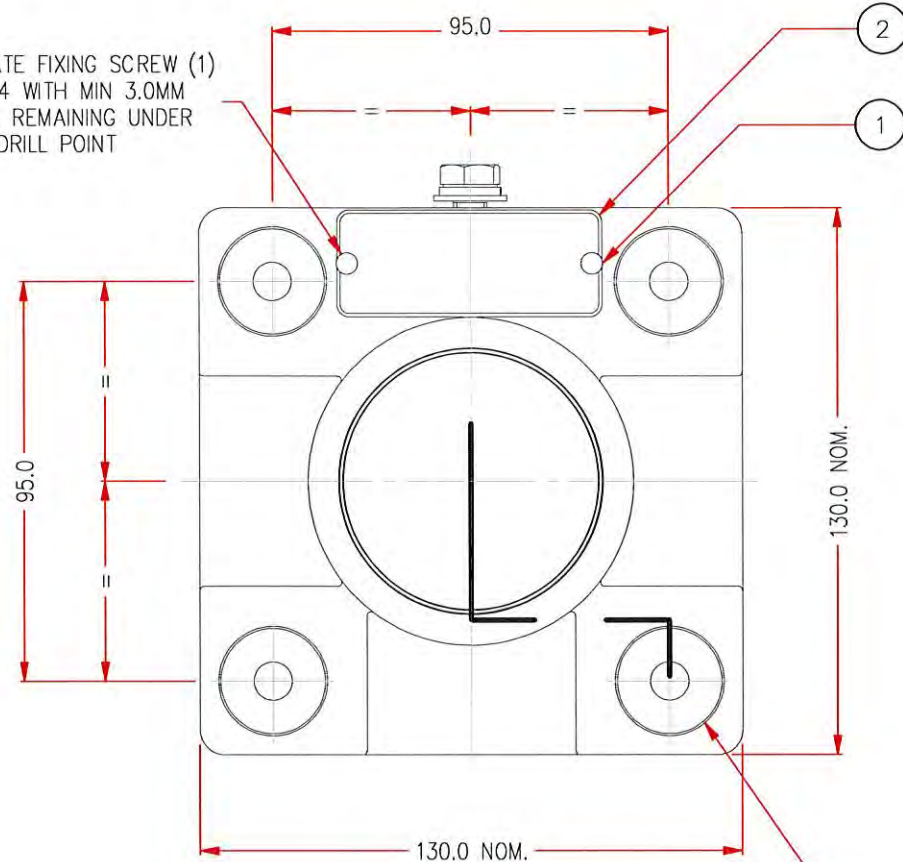
CHECKED

APPROVED

A3

DRAWING No. F-896

RATING PLATE FIXING SCREW (1)  
DRILL Ø2.4 WITH MIN 3.0MM  
MATERIAL REMAINING UNDER  
DRILL POINT



SECTION A-A

### MARKING DETAILS

M.I.P.  
F-4575-##  
## ENTRY THREAD  
IP66/68  
Ex db I Mb  
IECEx ExTC 22.0036X  
ANZEx 22.4180  
TYPE A  
S.O. xxxxx-xx  
DO NOT SEPERATE WHEN ENERGISED

4575 SERIES		
PART No.	DESCRIPTION	ENTRY THREAD
F-4575-20	M20 GLAND ADAPTOR	M20 X 1.5-6H
F-4575-25	M25 GLAND ADAPTOR	M25 X 1.5-6H
F-4575-32	M32 GLAND ADAPTOR	M32 X 1.5 6H
F-4575-40	M40 GLAND ADAPTOR	M40 X 1.5 6H
F-4575-50	M50 GLAND ADAPTOR	M50 X 1.5-6H
F-4575-63	M63 GLAND ADAPTOR	M63 X 1.5-6H

### NOTES

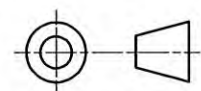
1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED ON THE DRAWING.
2. IN CASE OF BLIND HOLES FOR SCREWS, THE REMAINING THICKNESS OF MATERIAL UNDER THE HOLE IS A MINIMUM OF ONE-THIRD OF THE SCREW DIAMETER OR 3MM, WHICHEVER IS GREATER.
3. SPECIAL FASTENERS COMPLY WITH ISO 262 WITH A TOLERANCE FIT 6g/6H AND THREAD ENGAGEMENT IS  $\geq$  THE MAJOR DIAMETER AND THE CLEARANCE HOLE IS NOT  $>$  H13 (ISO 286-2).
4. ALL MACHINED FLAMEPATH SURFACES AVERAGE  $R_a$  DOES NOT EXCEED  $6.3\mu m$  (ISO 468).
5. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
6. MINIMUM TORQUE OF 10.0 Nm FOR GLAND ADAPTOR NUTS.
7. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A\*-70.
8. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.



ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL
7	1	4575 SERIES	GLAND ADAPTOR CASTING	HIGH TENSILE BRASS - NOTE 5 C86500 TO AS 1565-1997
6	1	AI019006	O'RING ID 82.14 X SECT 3.53	NITRILE
5	1	AH009277	5/16" X 5/8" X 18 WASHER	STEEL-ZINC PL.
4	1	AH113091	M8 X 10 HEX HD SET SCREW EQUIPOTENTIAL EARTHING SCREW	STEEL-ZINC PL.
3	1	AH009363	5/16" SQ SECT SPRING WASHER	STEEL-ZINC PL.
2	1	AX004076	RATING PLATE	BRASS
1	2	AH009788	No.4 GAUGE X 3/16" U-DRIVE SCREW	STEEL-ZINC PL.
Parts List				

THIS DRAWING REMAINS  
THE PROPERTY OF MINTO  
INDUSTRIAL PRODUCTS AND  
MUST NOT BE LENT OR COPIED.

PART No. SEE TABLE



DO NOT SCALE DRAWING.  
DIMENSIONS IN MILLIMETRES.

06/02/23

DATE

ZONE REV.

A

06/02/23

DATE

ZONE REV.

A

06/02/23

DATE

ZONE REV.

A

06/02/23

DATE

ZONE REV.

A

**cmi**  
Electrical  
Products

A division of CMI Operations Pty Ltd

GENERAL TOLERANCE  $\pm 0.5$   
UNLESS OTHERWISE SPECIFIED

DESCRIPTION  
60A GLAND ADAPTOR

MATERIAL  
SEE TABLE

SCALE NTS

DATE 21/11/22

DRAWN EL

CHECKED  
APPROVED

A3

DRAWING No.  
F-897

## **Instructions for 60 AMP 660/1100 VOLT Restrained Range**

### **TRP-4**

Catalogue Number	Description	Ex TESTING & CERTIFICATION
AF614S	60A 1100V RESTRAINED PLUG	IECEx ExtC 22.0036X-0
AF664S	60A 660V RESTRAINED PLUG	ANZEx 22.4180-0
AF614R	60A 1100V RESTRAINED PLUG WITH INTEGRAL GLAND	
AF664R	60A 660V RESTRAINED PLUG WITH INTEGRAL GLAND	
AG614B	60A 1100V RESTRAINED RECEPTACLE	
AG664B	60A 660V RESTRAINED RECEPTACLE	
AH614B	60A 1100V RESTRAINED BACK TO BACK RECEPTACLE	
AH664B	60A 660V RESTRAINED BACK TO BACK RECEPTACLE	
AR611S	60A 1100V RESTRAINED DUMMY PLUG	
AR661S	60A 660V RESTRAINED DUMMY PLUG	
AT614R	60A 1100V RESTRAINED PHASE CONDITION INDICATOR	
AT664R	60A 660V RESTRAINED PHASE CONDITION INDICATOR	
F-4575-20	M20x1.5 Gland Adaptor	
F-4575-25	M25x1.5 Gland Adaptor	
F-4575-32	M32x1.5 Gland Adaptor	
F-4575-40	M40x1.5 Gland Adaptor	
F-4575-50	M50x1.5 Gland Adaptor	
F-4575-63	M63x1.5 Gland Adaptor	

This document is approved as specified in the listed certificate

### **Installation**

- Confirm components suitable for application e.g. thimbles and grommets suitable for the conductors and cable.
- Plug fitting cable preparation.
  1. Slide the gland cap, grommet and plug body along the cable.
  2. Prepare the cable to the dimensions given in the strip back table.
  3. Crimp or solder the thimbles to the phase, pilot and earth cores.
- **Plug fitting**
  4. Fit the conductors to the appropriate location securing in place with screw through socket where appropriate
  5. Assemble the plug, ensuring the interior rotation conforms to AS/NZS1299
  6. Then fit dust cap (F-420L). Care should be taken not to damage the earth sleeve flamepath.
  7. Slide the grommet into position and bolt the gland cap firmly to the body.

Note: The certified drawings form a part of the user instructions. Refer to them for further details.
- **Receptacle fitting**
  - a. For Receptacle mounting dimensions refer to AS/NZS1299. The flange flamepath used to assemble the receptacle and Exd enclosure with minimum width 12.5mm and maximum gap 0.4mm.
  - b. Attach to enclosure via special fasteners.  
The special fasteners and/or nuts shall be minimum grade 4.6 (yield stress 240MPa) or for stainless steel minimum grade A\*-70 (Yield stress 450MPa)
  - c. Terminate conductors as per points 3 and 4 above
- **Connection of Protective Earthing Conductors**
  - This range of plugs and receptacles has facility for earthing conductors up to 95 mm<sup>2</sup>.
  - It is the responsibility of the installer to determine and fit the correct sized earth conductors.

This brochure is distributed with the understanding that the authors and editors are not responsible for the results of any actions taken on the basis of the information in this work, or any errors or omission. Further, Minto Industrial Products is not engaged in rendering professional services. Minto Industrial Products expressly disclaims all and any liability to any person in respect of anything and of the consequences of anything done or omitted to be done by any such person in reliance whether whole or partial of the whole or any part of the contents of this publication. All rights reserved. No part of this work covered by copyright may be reproduced or copied in any form or by any means without the written permission of Minto Industrial Products.

**TRP-4 60A Restrained Termination & Maintenance Instruction Page 1 of 3**

Rev D 20230315



## Use

- Isolate power before connecting or disconnecting.
- **Assembly**
  - Ensure sockets are clean and serviceable.
  - Correct pin alignment.
  - Insert plug using receptacle operating mechanism
- **Disassembly**
  - To remove plug from receptacle utilise the operating mechanism.
  - Fit dust cover to plug and receptacle.
- **Conditions of Use**
  - Some flameproof joint (flamepath) have dimensions that are different than the values given in table1 of IEC60079.1:2007. Refer to the certification drawings for details.
  - The special fasteners used to assemble the plug and gland shall be minimum grade 4.6 (yield stress 240MPa) or for stainless steel minimum grade A\*-70 (Yield stress 450MPa)
- **Maintenance**
  - Inspection shall include cleanliness and compliance with certification documentation.
  - Check as per AS/NZS 2290.1
- **Overhaul and Repair**
  - To be carried out by suitable workshop.
  - It is recommended that the equipment is overhauled at intervals that do not exceed the requirements of AS/NZS2290.1
- **Operating Temperature**
  - Operating temperature range -20°C to +40°C and average temperature over 24 hours is not to exceed 35°C
- **Certification Details:**

Certified to: IEC 60079-0:2017; IEC 60079-1:2007 and AS/NZS 1299:2009 (incorporating amendment No.1)

Certificate of Conformity: IECEx ExTC 22.0036X and ANZEx 22.4180

Type of Protection: Ex db I Mb

Type (AS/NZS 1299) Type A

Ingress Protection: IP66/68 (2 metres for 30 minutes) For Restrained Plug, Restrained Back to Back Receptacle, Restrained Receptacle, Gland Adaptor and Restrained Plug with Integral Gland

IP66 only For Dummy Plug and Phase Condition Indicator



A division of **CMI Operations Pty Ltd**  
ABN 87 088 279 270

□ **Sydney** 18-20 Railway Road Meadowbank NSW 2114  
Postal Address: Locked Bag M3 Meadowbank NSW 2114  
Telephone: (02) 9807 6155 Facsimile: (02) 9808 2033  
□ **Melbourne** 3-5 Dissik Street Cheltenham Vic 3192  
Telephone: (03) 9532 1233 Facsimile: (03) 9553 3502  
□ **Perth** 36 Division Street Welshpool WA 6106  
Telephone: (08) 9358 1788 Facsimile: (08) 9358 1733

□ **Brisbane** 485A Zillmere Road Zillmere QLD 4034  
Postal Address: PO Box 642 Virginia Qld 4014  
Telephone: (07) 3865 4745 Facsimile: (07) 3865 7494  
□ **Rockhampton** Shop 3, 76 Hollingsworth Street  
North Rockhampton QLD 4701  
Postal Address: PO Box 1124 North Rockhampton QLD 4701  
Telephone: (07) 4921 0978 Facsimile: (07) 4921 0981

For all account enquiries **Phone** (02) 8878 1320 **Fax** (02) 9808 4977



## • Certification Nameplate Details

TYPICAL 60A MOUNTING BRACKET RATING PLATE DETAILS	TYPICAL 60A RESTRAINED PLUG RATING PLATE DETAILS	TYPICAL 60A RESTRAINED PLUG (INT GLAND) RATING PLATE DETAILS
CMI AV6 60A Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A BATCH. xxxxx	M.I.P. AF6#4S 60A # VOLTS 6 = 660V 1 = 1100V IP66/68 Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED	M.I.P. AF6#4R 60A # VOLTS 6 = 660V 1 = 1100V IP66/68 Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED
TYPICAL 60A RESTRAINED RECEPTACLE RATING PLATE DETAILS	TYPICAL 60A RESTRAINED BACK TO BACK RATING PLATE DETAILS	TYPICAL 60A RESTRAINED DUMMY PLUG RATING PLATE DETAILS
M.I.P. AG6#4B 60A # VOLTS 6 = 660V 1 = 1100V IP66/68 Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED	M.I.P. AH6#4B 60A # VOLTS 6 = 660V 1 = 1100V IP66/68 Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED	M.I.P. AR6#1S 60A # VOLTS 6 = 660V 1 = 1100V IP66 Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED
TYPICAL 60A RESTRAINED PHASE CONDITION INDICATOR RATING PLATE DETAILS	TYPICAL 60A GLAND ADAPTOR RATING PLATE DETAILS	
M.I.P. AT6#4R 60A # VOLTS 6 = 660V 1 = 1100V IP66 Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED	M.I.P. F-4575-## ## ENTRY THREAD IP66/68 Ex db I Mb IECEX ExTC 22.0036X ANZEx 22.4180 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED	

**Refer to Instruction TRP-4-2 for additional detailed instructions**

This brochure is distributed with the understanding that the authors and editors are not responsible for the results of any actions taken on the basis of the information in this work, or any errors or omission. Further, Minto Industrial Products is not engaged in rendering professional services. Minto Industrial Products expressly disclaims all and any liability to any person in respect of anything and of the consequences of anything done or omitted to be done by any such person in reliance whether whole or partial of the whole or any part of the contents of this publication. All rights reserved. No part of this work covered by copyright may be reproduced or copied in any form or by any means without the written permission of Minto Industrial Products.

**TRP-4 60A Restrained Termination & Maintenance Instruction Page 3 of 3**

Rev D 20230315



minto industrial products



**Afex Cables**



**XLPE cables**



**HARTLAND CABLES**



Global-Mark.com.au®

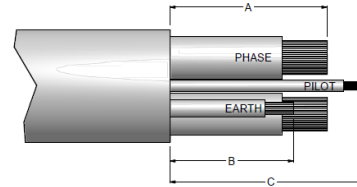
## **Additional Instructions for 60 AMP 660/1100 VOLT**

### **Restrained Range**

#### **TRP-4-2**

#### **Cable Strip Back Dimensions**

<b>Strip Back Dimensions (mm)</b>			
	<b>A (Phase)</b>	<b>B (Earth)</b>	<b>C (Pilot)</b>
<b>AF614S / AF664S</b>	80	75	100
<b>AF614R / AF664R</b>	65	70	90



*Note- Cables with semi conductive phase screening shall have the semi conductive screen removed back to the outer sheath.*

#### **Fitting of Cables**

- Cable fitting and testing shall be in compliance with AS/NZS 1747
- AS/NZS 1747:2022 sets out the method of cable installation and subsequent testing.
- Selection of thimbles
  - a. Thimbles shall be sized so that the internal diameter of the thimble is within 1mm of the stripped conductor diameter.
- Grommet sizing
  - a. Grommets shall be sized to the cable being used
  - b. The grommet shall preferably be a conformal fit that fits tightly onto the cable.
  - c. Grommets that fit loosely, will prevent the cable been effectively sealed in the gland.
- For guidance only, CMI recommend minimum torque settings for fitting cables to the range of 60A Restrained Plugs and Receptacle, Gland & Bracket
  - a. This recommended minimum torque for the gland nuts is: 8NM.

#### **Note:**

- A suitable calibrated Torque Wrench shall be used for this process
- Initial testing of cable installation to gland:
  - a. Undertake a "Twist Test" as outlined in AS/NZS 1747:2022.
  - b. Undertake other tests as outlined in AS/NZS 1747:2022.
- Testing of plug/ cable complete.
  - a. Undertake the required tests as outlined in AS/NZS 1747:2022.

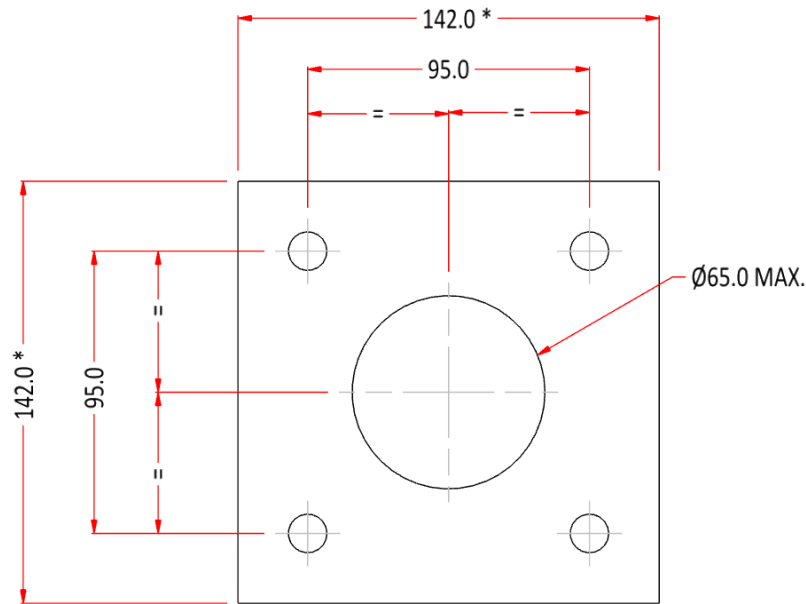
#### **Fitting of Sockets to Cable Thimbles**

- The following maximum torques shall be applied when screwing the sockets to the cable thimbles
  - Main (Phase) Sockets
    - 6.5 ~ 8Nm torque
  - Pilot Socket
    - 2.5 ~ 3Nm torque

#### **Note:**

- A suitable calibrated Torque Wrench (recommended ¼ inch size) shall be used for this process

## 60A Receptacle Mounting Details



\* Dimensions shown is the Enclosure Machining Area.  
Untoleranced dimensions  $\pm 0.25$