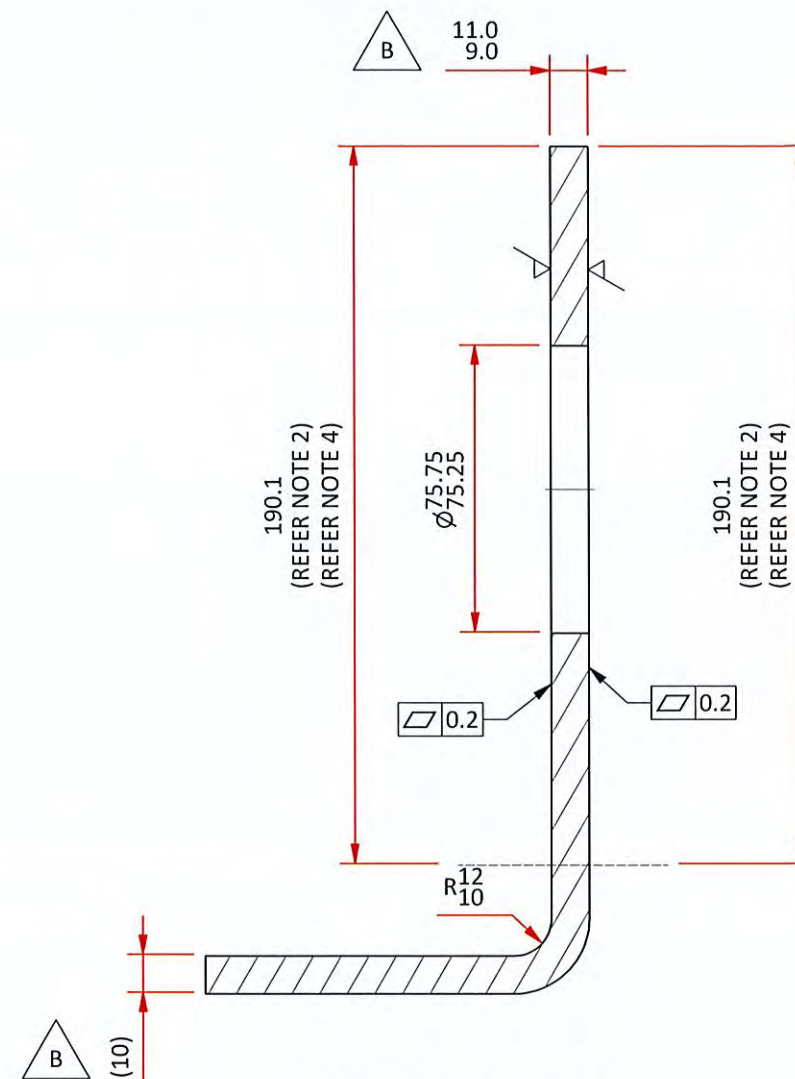
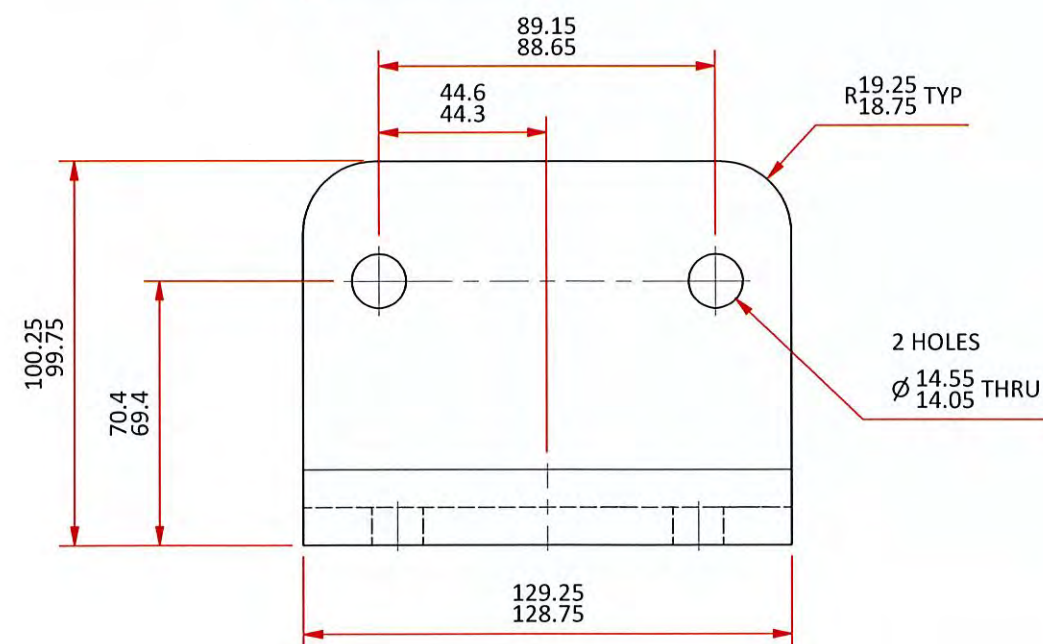
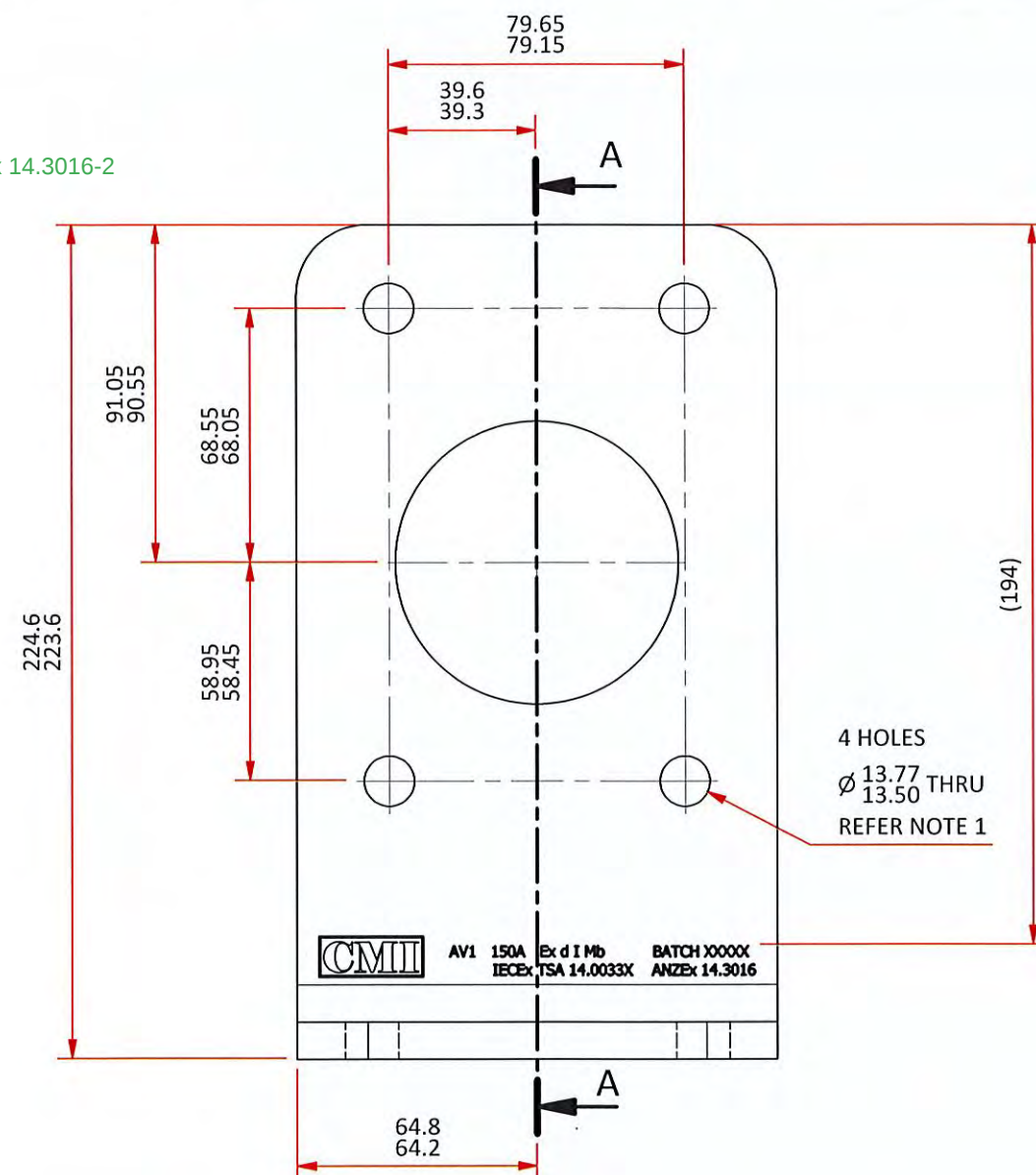
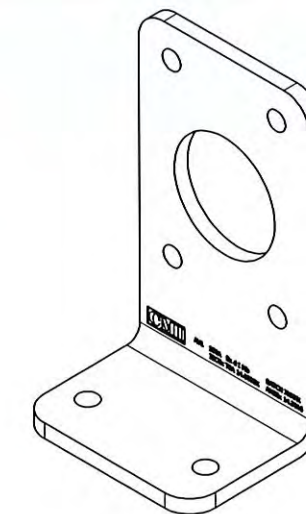


This document forms part of the
certification package issued by
TestSafe Australia.
Certificate Numbers:
IECEX TSA 14.0033X-2 & ANZEx 14.3016-2



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 6.3um (ISO 468)
5. REFERENCE DIMENSIONS () ARE INFORMATIVE ONLY

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PRODUCTS AND MUST NOT
BE LENT OR COPIED.



DO NOT SCALE DRAWING
DIMENSIONS IN MILLIMETRES

cmi Electrical
Products
A division of CMI Operations Pty Ltd

GENERAL TOLERANCE ± 0.25
ANGULAR TOLERANCE $\pm 0.5^\circ$
MATERIAL STEEL-ZINC PL.

FINISH

MINTO INDUSTRIAL PRODUCTS

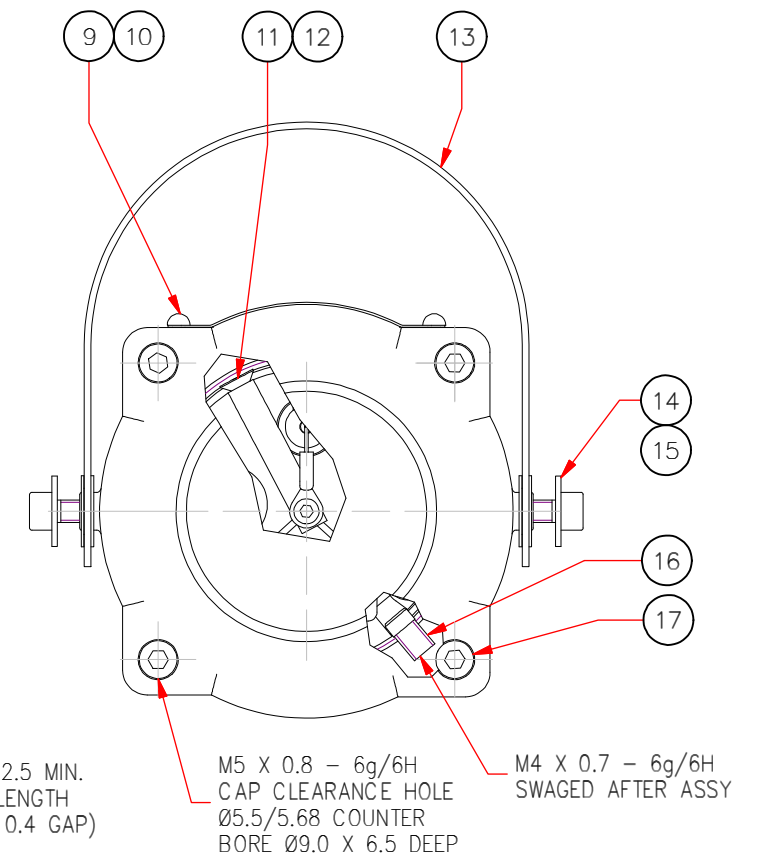
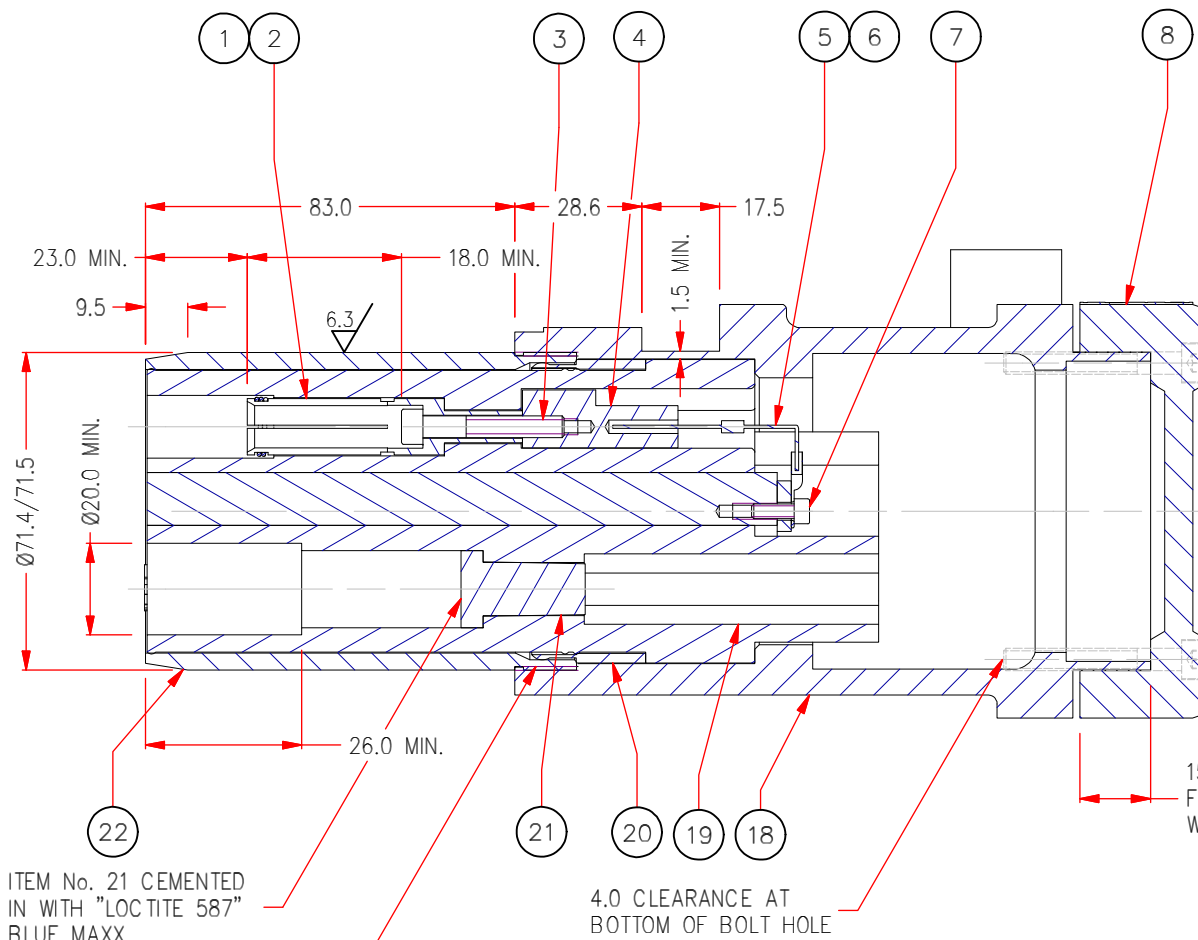
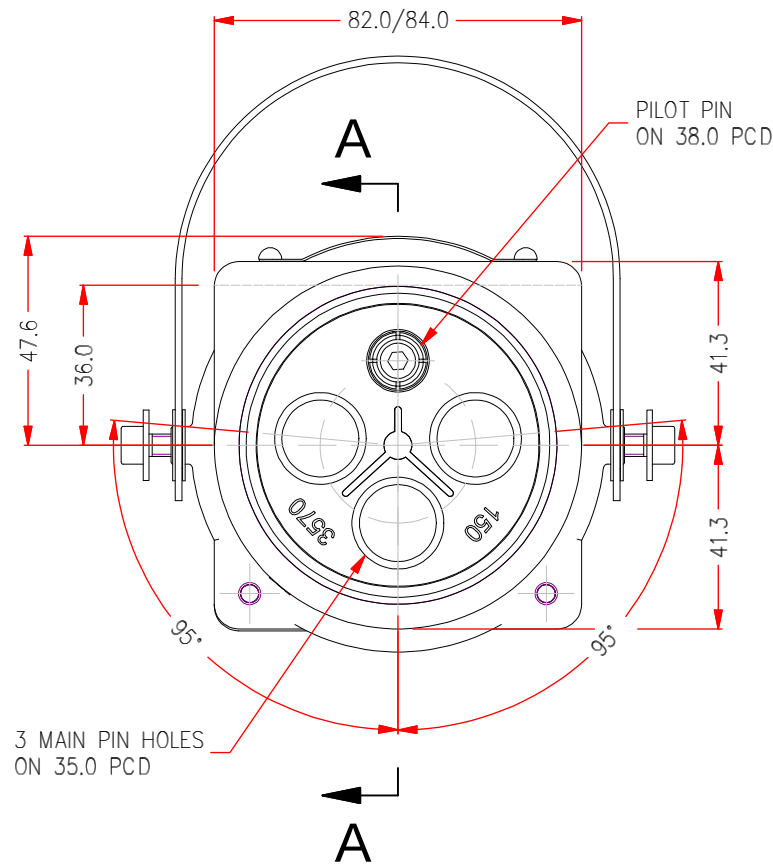
DESCRIPTION 150A ANGLE MOUNTING BRACKET

SCALE 1:2 DATE 30/10/2017
DRAWN SL CHECKED

A3 DRAWING No. AV1

B	D4	DRA 17053:	30/10/2017	
	A5	DIM (10) WAS 9.75/10.25		
		DIM 9.0/11.0 WAS 9.75/10.25		
A		DRAWING ISSUED	22/02/2017	
REV	ZONE	DESCRIPTION	DATE	APPROVED

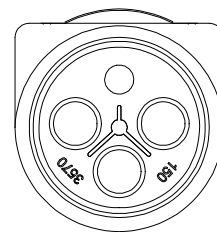
G		F		E		D		C		DATE		ZONE REV.		cmi Electrical Products		MINTO INDUSTRIAL PRODUCTS																		
22/02 '17.		01/09 '14.		01/07 '96.		01/09 '89.		01/02 '88.						A division of CMI Operations Pty Ltd																				
DRAWING No. 16033 - TYPE CORRECTED COPPER VARIANTS ADDED DRAWING AMENDMENTS DRAWING No. 08026 - RE-DRAWN ON NEW CMI TEMPLATE. REMOVED NOTES. ADDED NEW NOTES. CHANGED PART No.S. DRAWING No. 9650 - ADDED MATERIAL OR INTERIOR, NOTE 2 SCREW ITEM 5 WAS 5/8" LG. ITEM 29 ADDED RE-DRAWN FROM DWG F-045 REVISION "B" DATED 27/7/77															GENERAL TOLERANCE ± 0.5 UNLESS OTHERWISE SPECIFIED MATERIAL SEE TABLE					DESCRIPTION 150A 660/1100V RESTRAINED PHASE CONDITION INDICATOR														
															FINISH COLOUR CODING AS PER AS/NZS 1299					SCALE NTS					DATE 18/08/96					A3 DRAWING No. F-045				
																				DRAWN DMC					CHECKED APPROVED 									



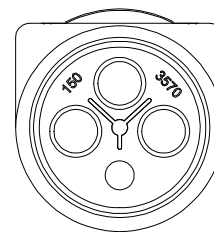
This document forms part of the certification package issued by TestSafe Australia Certificate Numbers ANZEx 14.3016-1 and IECEx TSA 14.0033X-1

MARKING DETAILS

M.I.P.
AR1#1R
150A
VOLTS 6=660V
1=1100V
IP66
Ex d I Mb
IECEx TSA 14.0033X
ANZEx 14.3016
TYPE A
S.O xxxxx-xx
WARNING
DO NOT SEPARATE WHEN ENERGIZED



1100V
B24 BLUE



660V
X15 ORANGE

NOTES

1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED.
2. IN CASE OF HOLES FOR SCREWS, THE REMAINING THICKNESS OF THE FLAMEPROOF ENCLOSURE WILL BE AT LEAST ONE-THIRD OF THE NOMINAL DIAMETER OF THE SCREW WITH A MINIMUM OF 3.0mm.
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.

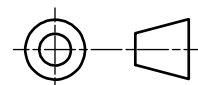
SECTION A-A

CONFIGURATION

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL
22	1	3558SS	EARTH SLEEVE	ST. STEEL (304 MIN. GRADE)
21	3	4578	MAIN PORT BUNG	ERTACETAL C
20	1	3559	EARTH RING	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
19	1	3570	INTERIOR MOULDING	NEOPRENE RUBBER
18	1	3096B	BODY CASTING	HIGH TENSILE BRASS - NOTE 6 C86500 TO AS 1565-1996
17	4	AH151015	M5 X 40 SKT HD CAP SCREW (ISO4762)	ST. STEEL
16	1	3685-2	POLARISING RIVET	BRASS
15	2	AH151033	M5 X 16 SKT HD CAP SCREW	ST. STEEL
14	2	AH009251	3/16" X 5/8" X 18 WASHER	STEEL-ZINC PL.
13	1	F-AX000400	DUMMY / PHASE PLUG HANDLE	NYLON
12	1	3571-3	EARTH STRAP (6mm ² MIN.)	BRASS
11	1	AH151040	M4 X 8 CSK HD SCREW	ST. STEEL
10	1	AX004076	RATING PLATE	BRASS
9	2	AH009788	3/16" X No.4 U-DRIVE SCREW	STEEL-ZINC PL.
8	1	3173	DUMMY PLUG CAP CASTING	HIGH TENSILE BRASS - NOTE 6 C86500 TO AS 1565-1996
7	1	AH009006	6-32 UNC X 3/8" SKT HD SCREW	ST. STEEL
6	1	CH3931ET	TERMINAL LUG	BRASS-TIN PL.
5	1	AX022400	127/800 DIODE	-
4	1	3589-1	PILOT THIMBLE	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997
3	1	AH009834	10-24 UNC X 11/4" SKT HD SCREW	ST. STEEL
2	1	3138-2	PILOT SOCKET	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
1	1	AH201405	CONTACT SOCKET SPRING	ST. STEEL
Parts List				

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

AR111R
PART No. AR161R



DO NOT SCALE DRAWING.
DIMENSIONS IN MILLIMETRES.

REVISION	DATE	ZONE	REV.
1	22/02/17	G	1
2	01/09/14	F	1
3	01/07/96	E	1
4	01/09/89	D	1
5	01/02/88	C	1

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

MINTO INDUSTRIAL PRODUCTS

DESCRIPTION		150A 660/1100V RESTRAINED DUMMY PLUG	
SCALE	NTS	DATE	18/07/96
DRAWN	DMC	CHECKED	APPROVED
DRAWING No.		A3	
F-046			

150A PLUGS

F-3587 RANGE - MAIN PHASE THIMBLE 150A 4 PIN PRODUCTS

PART No.	I.D.	UTILUX DIE No.	INSERTION DEPTH
F-3587	3.7	38-44 Cu	20 MIN
F-3587-0	6.2	38-74 Cu	20 MIN
F-3587-1	8.0	38-92 Cu	20 MIN
F-3587-2	9.1	38-115 Cu	20 MIN
F-3587-3	10.2	38-115 Cu	20 MIN
F-3587-4	12.7	38-127 Cu	20 MIN
F-3587-5	14.3	SOLDER ONLY	20 MIN

PILOT THIMBLE

PART No.	I.D.	CRIMP DIE No.	INSERTION DEPTH
F-3589-1	3	SOLDER	10 MIN

PLUG DRAWING REFERENCE

DWG MAIN PILOT
F-235 F-3587 F-3589-1

150A RECEPTACLES

F-4626 RANGE - MAIN PHASE THIMBLE 150A 4 PIN 660/1100 PRODUCTS

PART No.	I.D.	UTILUX DIE No.	INSERTION DEPTH
F-4626	3.7	38-44 Cu	20 MIN
F-4626-0	5.5	38-63 Cu	20 MIN
F-4626-1	7.1	38-77 Cu	20 MIN
F-4626-2	8.4	38-92 Cu	20 MIN
F-4626-3	9.5	38-104 Cu	20 MIN
F-4626-4	11.2	38-115 Cu	20 MIN
F-4626-5	13.4	38-142 Cu	20 MIN

F-4611 RANGE - PILOT THIMBLE 150A 4 PIN 660/1100 PRODUCTS

PART No.	ID	UTILUX CRIMP DIE	INSERTION DEPTH
4611	3.0	SOLDER	10 MIN
4611-1	3.7	SOLDER	10 MIN
4611-2	4.7	SOLDER	10 MIN

RECEPTACLE DRAWING REFERENCE

DWG MAIN PILOT
F-234 F-4626 F-4611
F-467 F-4626 F-4611

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TestSafe Australia Certificate Numbers
ANZEx 14.3016-1 and IECEx TSA 14.0033X-1

NOTE:

1. MATERIAL:
(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997
SILVER PLATED TO AS 1856-2004 CuAg 08 (IF APPLICABLE)

A		DRA 16033: DRAWING ISSUED	22/02/2017	MPP
REV	ZONE	DESCRIPTION	DATE	APPROVED

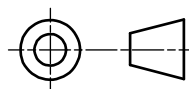
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Electrical
Products

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MINTO INDUSTRIAL PRODUCTS



GENERAL TOLERANCE ± 0.25
ANGULAR TOLERANCE $\pm 0.5^\circ$
MATERIAL

DO NOT SCALE DRAWING
DIMENSIONS IN MILLIMETRES

FINISH

DESCRIPTION

MAIN PHASE/PILOT THIMBLES
RESTRAINED PRODUCT RANGE

SCALE

DATE

22/02/2017

DRAWN

ASB

CHECKED

A4

DRAWING No.

F-234-1



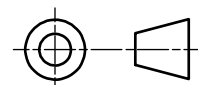
NEOPRENE GROMMETS	
PART No.	CABLE ACCEPTANCE
3137-25	21.0-25.0
3137-28	24.0-28.0
3137-32	27.0-32.0
3137-35	31.0-35.0
3137-38	34.0-38.0
3137-41	37.0-41.0
3137-44	40.0-44.0
3137-48	43.0-48.0
3137-51	47.0-51.0
3137-54	50.0-54.0
3137-57	53.0-57.0

MARKING DETAILS

M.I.P.
AF1#4R
150A
VOLTS 6=660V
1=1100V
IP66/68
Ex d I Mb
IEC Ex TSA 14.0033X
ANZEx 14.3016
TYPE A
S.O xxxxxx
WARNING
DO NOT SEPARATE WHE

THIS DRAWING REMAINS
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INDUSTRIAL PRODUCTS AND
MUST NOT BE LENT OR COPIED.

PART No.	AF114R
	AF164R

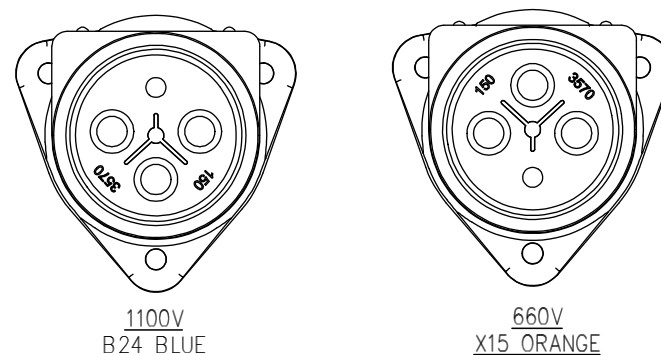


DO NOT SCALE DRAWING.
DIMENSIONS IN MILLIMETRES.

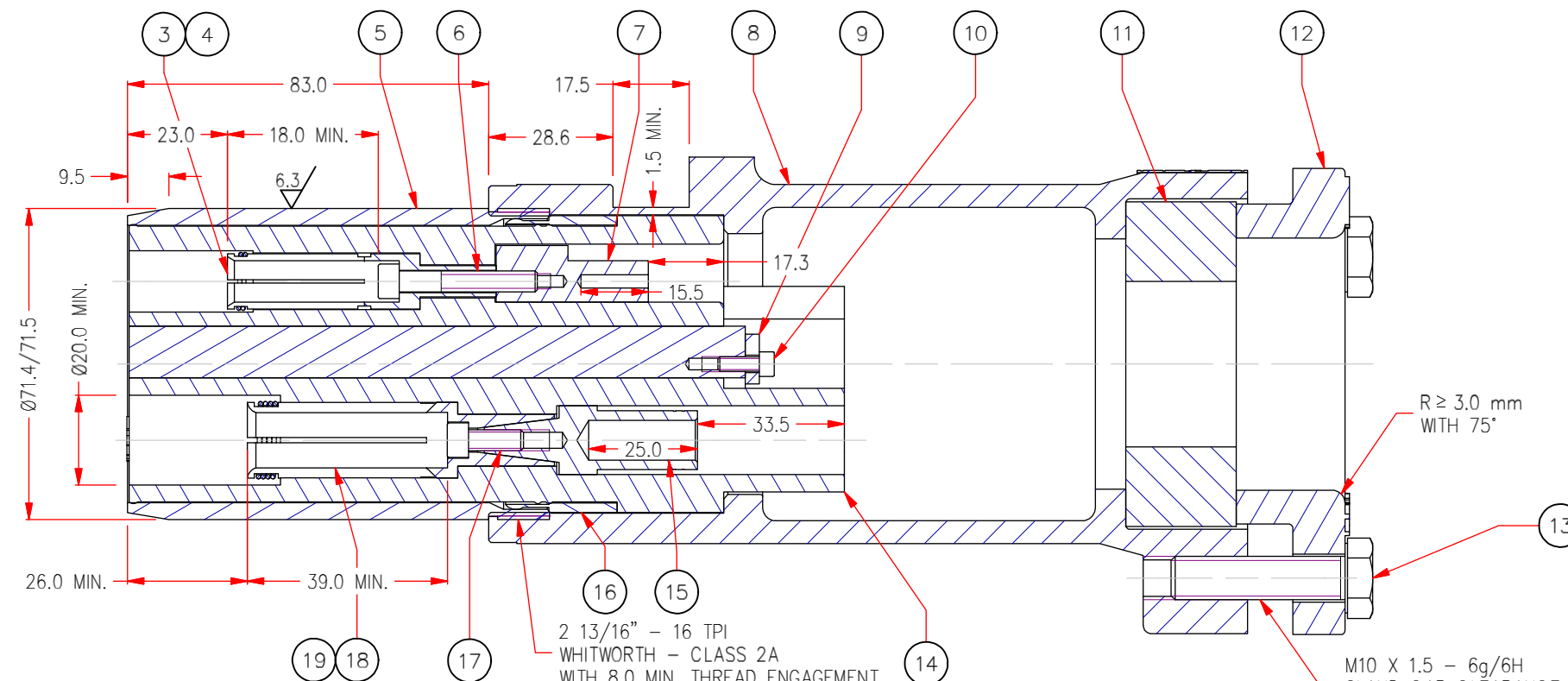
This document forms part of the
certification package issued by
TestSafe Australia Certificate Numbers
ANZEx 14.3016-1 and IECEx TSA 14.0033X-1

NOTES

1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED.
2. IN CASE OF HOLES FOR SCREWS, THE REMAINING THICKNESS OF THE FLAMEPROOF ENCLOSURE WILL BE AT LEAST ONE-THIRD OF THE NOMINAL DIAMETER OF THE SCREW WITH A MINIMUM OF 3.0mm.
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 $6.3\mu\text{m}$ (ISO 468).
6. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
7. TERMINATION FOR CONNECTION BETWEEN THIMBLE AND CABLE IS BY UTILUX CRIMP DIE'S AS PER AS/NZS 4325 (IEC 1238) OR SOLDER.
8. MINIMUM TORQUE OF 25.0 Nm FOR CABLE CLAMPING CAP SCREWS.
9. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A*-70.
10. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.



CONFIGURATION



SECTION A-A

22	3	4667 SERIES	EARTH THIMBLE	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997
21	4	AH151040	M4 X 8 CSK HD SCREW	ST. STEEL
20	1	3685-2	POLARISING RIVET	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
19	6	AH201361	CONTACT SOCKET SPRING	ST. STEEL
18	3	3139	MAIN SOCKET	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
17	3	AH009852	10-24 UNC X 1/2" SKT HD SCREW	ST. STEEL
16	1	3559	EARTH RING	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
15	3	3587 SERIES	MAIN THIMBLE	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
14	1	3570	INTERIOR MouldING	NEOPRENE RUBBER
13	3	AH113115	M10 X 40 HEX HD SCREW (ISO4017)	STEEL-ZINC PL.
12	1	3136	CABLE CLAMPING CAP CASTING	HIGH TENSILE BRASS - SEE NOTE 6 C86500 TO AS 1565-1996
11	1	3137 SERIES	CABLE GLAND GROMMET	NEOPRENE RUBBER
10	1	AH009006	6-32 UNC X 3/8" SKT HD SCREW	ST. STEEL
9	1	3571-3	EARTH STRAP (6mm ² MIN.)	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
8	1	3135-1B	BODY CASTING	HIGH TENSILE BRASS - SEE NOTE 6 C86500 TO AS 1565-1996
7	1	3589-1	PILOT THIMBLE	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997
6	1	AH009834	10-24 UNC X 11/4" SKT HD SCREW	ST. STEEL
5	1	3558SS	EARTH SLEEVE	ST. STEEL
4	1	AH201405	CONTACT SOCKET SPRING	ST. STEEL
3	1	3138-2	PILOT SOCKET	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
2	1	AX004076	RATING PLATE	BRASS
1	2	AH009788	3/16" X No.4 U-DRIVE SCREW	STEEL-ZINC PL.
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL

Parts List

REVISION	DATE	ZONE	REV.
01/07/96	ADDED C/BARS TO SUPERMAN. ADD STEEL FOR ROSE CONE	H	
20/09/99	REMOVED GRUB SCREW DROUDED STEEL FOR ROSE CONE	I	
1/04/02	CHANGED NOTE REF. FROM 4.0 MIN WAS 5.0 MIN.	J	
01/09/14	ADDED NEW NOTES. CHANGE PART NO.'S	K	
22/02/17	ADDED CORRECTED UPPER VARIANTS ADDED DRAINING AMENDMENTS	L	

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

MINTO INDUSTRIAL PRODUCTS

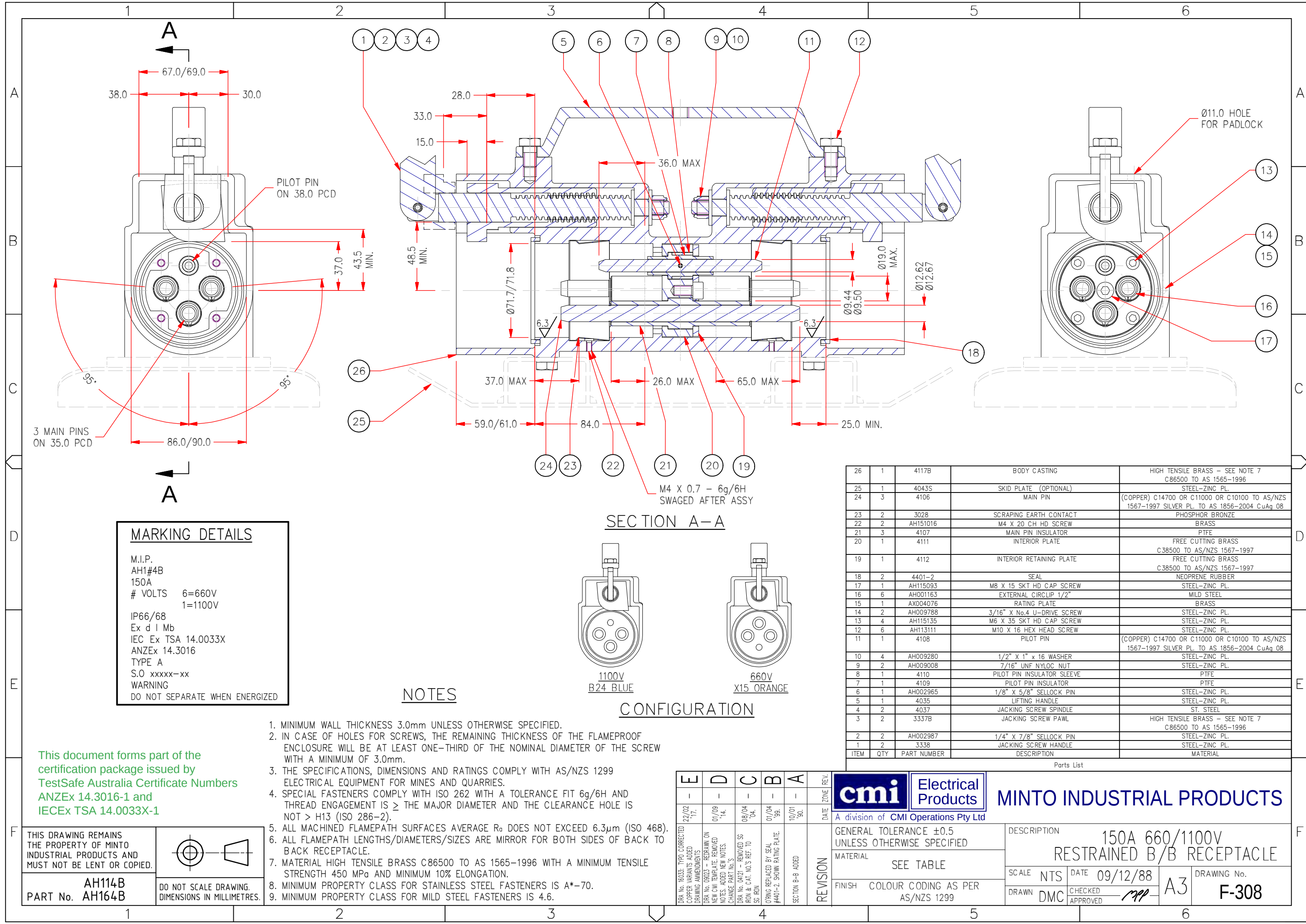
GENERAL TOLERANCE ± 0.5
UNLESS OTHERWISE SPECIFIED

MATERIAL	SEE TABLE
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DESCRIPTION	150A 660/1100V RESTRAINED PLUG
-------------	--------------------------------

SCALE	NTS	DATE	18/08/89
DRAWN	DMC	CHECKED	<i>[Signature]</i>
		APPROVED	<i>[Signature]</i>

9	A3	DRAWING No. F-235
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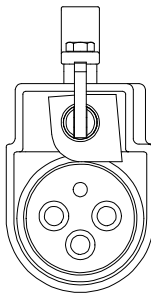
MARKING DETAILS

M.I.P.
AH1#4B
150A
VOLTS 6=660V
1=1100V
IP66/68
Ex d I Mb
IEC Ex TSA 14.0033X
ANZEx 14.3016
TYPE A
S.O xxxxx-xx
WARNING
DO NOT SEPARATE WHEN ENERGIZED

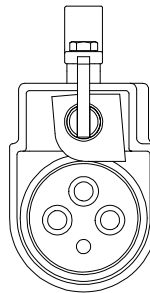
NOTES

1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED.
2. IN CASE OF HOLES FOR SCREWS, THE REMAINING THICKNESS OF THE FLAMEPROOF ENCLOSURE WILL BE AT LEAST ONE-THIRD OF THE NOMINAL DIAMETER OF THE SCREW WITH A MINIMUM OF 3.0mm.
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 μ m (ISO 468).
6. ALL FLAMEPATH LENGTHS/DIAMETERS/SIZES ARE MIRROR FOR BOTH SIDES OF BACK TO BACK RECEPTACLE.
7. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
8. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A*-70.
9. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.

SECTION A-A



1100V
B24 BLUE



660V
X15 ORANGE

CONFIGURATION

26	1	4117B	BODY CASTING	HIGH TENSILE BRASS - SEE NOTE 7 C86500 TO AS 1565-1996
25	1	4043S	SKID PLATE (OPTIONAL)	STEEL-ZINC PL.
24	3	4106	MAIN PIN	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
23	2	3028	SCRAPING EARTH CONTACT	PHOSPHOR BRONZE
22	2	AH151016	M4 X 20 CH HD SCREW	BRASS
21	3	4107	MAIN PIN INSULATOR	PTFE
20	1	4111	INTERIOR PLATE	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
19	1	4112	INTERIOR RETAINING PLATE	FREE CUTTING BRASS C38500 TO AS/NZS 1567-1997
18	2	4401-2	SEAL	NEOPRENE RUBBER
17	1	AH115093	M8 X 15 SKT HD CAP SCREW	STEEL-ZINC PL.
16	6	AH001163	EXTERNAL CIRCLIP 1/2"	MILD STEEL
15	1	AX004076	RATING PLATE	BRASS
14	2	AH009788	3/16" X No.4 U-DRIVE SCREW	STEEL-ZINC PL.
13	4	AH115135	M6 X 35 SKT HD CAP SCREW	STEEL-ZINC PL.
12	6	AH113111	M10 X 16 HEX HEAD SCREW	STEEL-ZINC PL.
11	1	4108	PILOT PIN	(COPPER) C14700 OR C11000 OR C10100 TO AS/NZS 1567-1997 SILVER PL. TO AS 1856-2004 CuAg 08
10	4	AH009280	1/2" X 1" x 16 WASHER	STEEL-ZINC PL.
9	2	AH009008	7/16" UNF NYLOC NUT	STEEL-ZINC PL.
8	1	4110	PILOT PIN INSULATOR SLEEVE	PTFE
7	1	4109	PILOT PIN INSULATOR	PTFE
6	1	AH002965	1/8" X 5/8" SELLOCK PIN	STEEL-ZINC PL.
5	1	4035	LIFTING HANDLE	STEEL-ZINC PL.
4	2	4037	JACKING SCREW SPINDLE	ST. STEEL
3	2	3337B	JACKING SCREW PAWL	HIGH TENSILE BRASS - SEE NOTE 7 C86500 TO AS 1565-1996
2	2	AH002987	1/4" X 7/8" SELLOCK PIN	STEEL-ZINC PL.
1	2	3338	JACKING SCREW HANDLE	STEEL-ZINC PL.
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL

Parts List

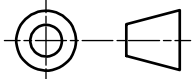
E	D	C	B	A	DATE	ZONE	REV.
22/02 '17.	01/09 '14.	08/04 '04.	01/04 '99.	10/01 '90.			
DRA No. 16033- TYP0 CORRECTED COPPER VARIANTS ADDED DRAWING AMENDMENTS	DRA No. 08023 - REDRAWN ON NEW CMI TEMPLATE REMOVED NOTES. ADDED NEW NOTES. CHANGE PART No.'S	DRA No. 04121 - REMOVED S: RON & CAT. NO.'S REF. TO SC IRON	O'RING REPLACED BY SEAL #4401-2, SHOWN RATING PLATE.	SECTION B-B ADDED			

cmi Electrical Products
A division of CMI Operations Pty Ltd

MINTO INDUSTRIAL PRODUCTS

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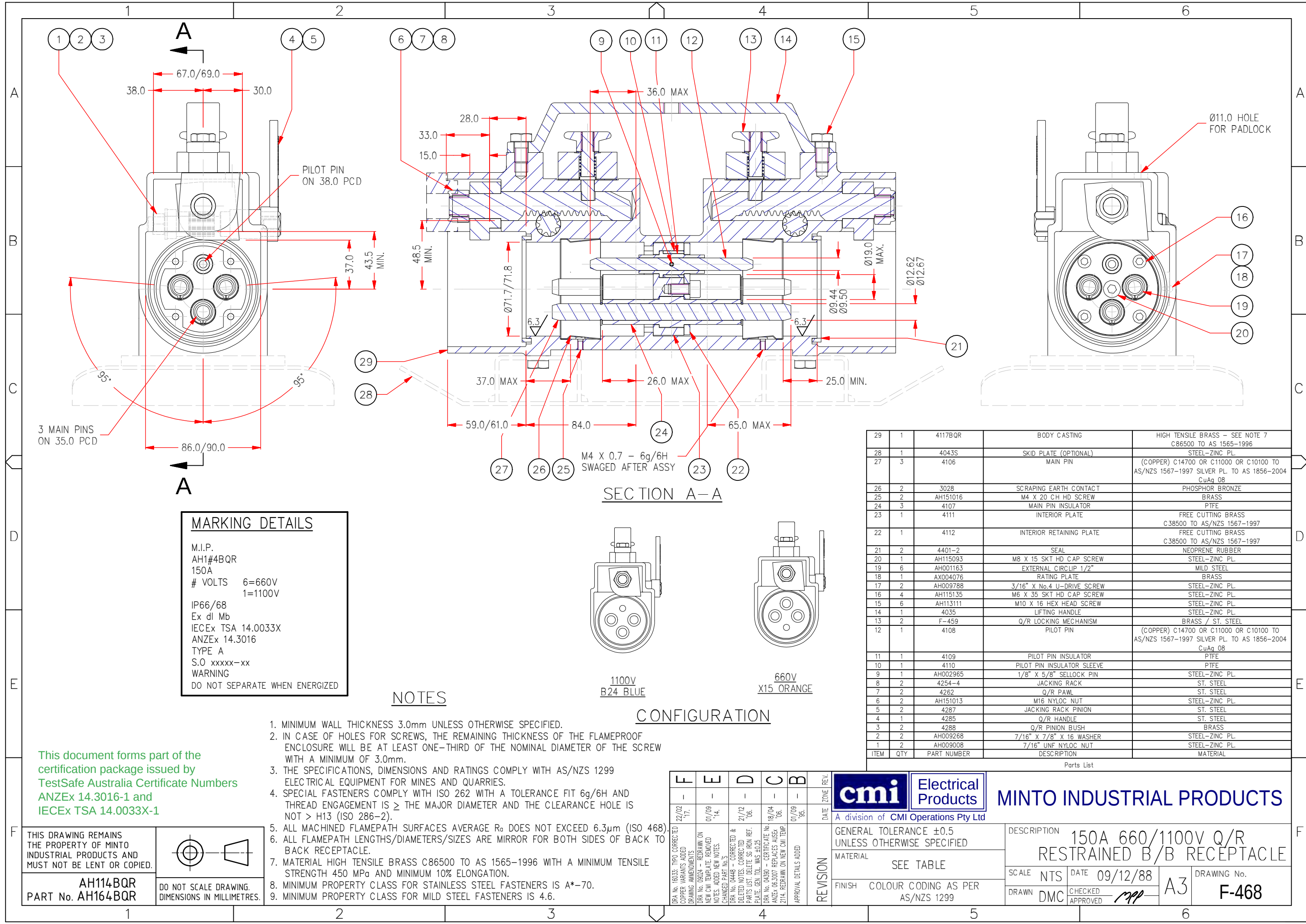
AH114B
PART No. AH164B



DO NOT SCALE DRAWING.
DIMENSIONS IN MILLIMETRES.

GENERAL TOLERANCE ± 0.5 UNLESS OTHERWISE SPECIFIED	DESCRIPTION
MATERIAL SEE TABLE	150A 660/1100V RESTRAINED B/B RECEPTACLE
FINISH COLOUR CODING AS PER AS/NZS 1299	SCALE NTS DATE 09/12/88 DRAWN DMC CHECKED APPROVED

DATE	09/12/88	DRAWING No.	F-308
CHECKED			
APPROVED			



MARKING DETAILS

M.I.P.
AH1#4BQR
150A
VOLTS 6=660V
1=1100V

IP66/68
Ex dI Mb
IECEX TSA 14.0033X
ANZEx 14.3016
TYPE A
S.O xxxxx-xx
WARNING
DO NOT SEPARATE WHEN ENERGIZED

NOTES

1. MINIMUM WALL THICKNESS 3.0mm UNLESS OTHERWISE SPECIFIED.
2. IN CASE OF HOLES FOR SCREWS, THE REMAINING THICKNESS OF THE FLAMEPROOF ENCLOSURE WILL BE AT LEAST ONE-THIRD OF THE NOMINAL DIAMETER OF THE SCREW WITH A MINIMUM OF 3.0mm.
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 μ m (ISO 468).
6. ALL FLAMEPATH LENGTHS/DIAMETERS/SIZES ARE MIRROR FOR BOTH SIDES OF BACK TO BACK RECEPTACLE.
7. MATERIAL HIGH TENSILE BRASS C86500 TO AS 1565-1996 WITH A MINIMUM TENSILE STRENGTH 450 MPa AND MINIMUM 10% ELONGATION.
8. MINIMUM PROPERTY CLASS FOR STAINLESS STEEL FASTENERS IS A*-70.
9. MINIMUM PROPERTY CLASS FOR MILD STEEL FASTENERS IS 4.6.

CONFIGURATION

REV	DATE	ZONE	REV.
1	22/02	17	
2	01/09	14	
3	21/12	06	
4	18/04	06	
5	01/09	95	

GENERAL TOLERANCE ± 0.5 UNLESS OTHERWISE SPECIFIED	DESCRIPTION
MATERIAL SEE TABLE	150A 660/1100V Q/R RESTRAINED B/B RECEPTACLE
FINISH COLOUR CODING AS PER AS/NZS 1299	SCALE NTS
	DATE 09/12/88
	DRAWN DMC
	CHECKED APPROVED

MINTO INDUSTRIAL PRODUCTS	
A division of CMI Operations Pty Ltd	
DESCRIPTION 150A 660/1100V Q/R RESTRAINED B/B RECEPTACLE	
SCALE NTS	DATE 09/12/88
DRAWN DMC	CHECKED APPROVED
A3	DRAWING No. F-468

This document forms part of the certification package issued by TestSafe Australia Certificate Numbers ANZEx 14.3016-1 and IECEX TSA 14.0033X-1

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AH114BQR
PART No. AH164BQR

DO NOT SCALE DRAWING. DIMENSIONS IN MILLIMETRES.

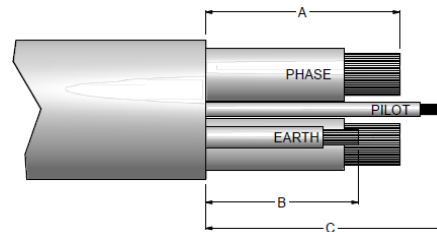
Termination and Maintenance Instructions for 150 AMP 660/1100/ VOLT Restrained Range

The equipment is certified IECEx TSA 14.0033X and ANZEx 14.3016 (maximum operating temperature 150°C) and is designed to AS/NZS1299, IEC 60079-0 & 60079-1. It is recommended that the equipment is overhauled at intervals that do not exceed the requirements of AS/NZS2290.1. Maintain to the requirements of AS/NZS3800 and AS/NZS1747 by suitably competent persons.

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, neoprene cone and plug body along the cable.
 2. Prepare the cable to the dimensions given in the strip back table (below).
 3. Crimp or solder the thimbles to the phase, pilot and earth cores.

Strip Back Dimensions (mm)			
	A (Phase)	B (Earth)	C (Pilot)
AF114R /AF164R	100	90	110



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

- 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-274L). Care should be taken not to damage the earth sleeve flamepath.
 7. Slide the neoprene cone into position and bolt the gland cap firmly to the body.
Minimum torque of gland cap and nuts screws is 25.0Nm.
 8. Test as per the requirements of AS/NZS1747.
- Connection of Protective Earthing Conductors
 - This range of plugs & receptacles has facility for earthing conductors up to 50² mm.
 - It is the responsibility of the installer to determine and fit the correct sized earth conductors.

NB. Consideration should be given to using a strain relief anchor on the cable to prevent the cable from being pulled from the back of the plug, if cable is subjected to tension.

- Receptacle fitting
 - a. For Receptacle mounting dimensions refer to AS/NZS1299. The flange flamepath used to assemble the receptacle and Exd enclosure shall have a minimum width 12.5mm and maximum gap 0.4mm.
 - b. Terminate conductors as per point 3 above.
 - c. Fit the conductors to the appropriate location securing in place the phase thimble with screw provided through the main pin and securing in place the pilot thimble with the threaded pilot pin.
 - d. Attach to enclosure via special fasteners.
The special fasteners and/or nuts shall be of minimum grade 4.6 (yield stress 240MPa)

Use

- Isolate power before connecting or disconnecting.

Assembly

- Ensure sockets are clean and serviceable.
 - Correct pin alignment.
 - Insert plug using receptacle operating mechanism.
- NB. For quick release mechanism, ensure the locking button is fully home.

Disassembly

- To remove plug from receptacle utilise the operating mechanism.
- NB. For quick release, lift the locking button first.
- Fit dust cover to plug and receptacle.

Maintenance

- Inspection shall include cleanliness and compliance with certification documentation.
- Check as per AS/NZS2290.1

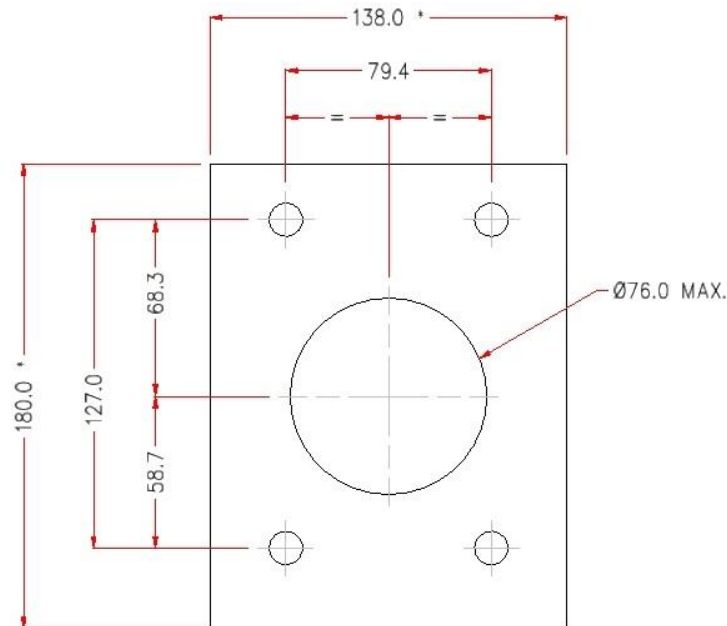
Overhaul and Repair

- To be carried out by suitable workshop.

Conditions of use

- Some flameproof joint (flamepath) have dimensions that are different than the values given in table1 of IEC60079.1. Refer to the manufacture's 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).
- Operating temperature range -20°C to +40°C and average temperature over 24 hours is not to exceed 35°C.

Mounting Details



* Dimensions shown is the Enclosure Machining Area.
Untoleranced dimensions ± 0.25

NB. Receptacle and Gland Adaptor mounting fasteners are to comply with AS/NZS 60079.0 and 1.

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