

5 4 6 300/425A PLUGS PLUG F-3962 RANGE - MAIN PHASE THIMBLE F-4789 RANGE - MAIN PHASE THIMBLE F-3838 RANGE - MAIN PHASE THIMBLE F-3347 RANGE - MAIN PHASE THIMBLE **DRAWING** 300/425A 4 PIN 3300V SOLID INTERIOR PRODUCTS 300/425A 4 & 6 PIN 660/1100/3300V SS INTERIOR REFERENCE 300A 4 PIN 660/1100V SOLID INTERIOR PRODUCTS 300/425A 4 PIN 660/1100V RUBBER INTERIOR PRODUCTS 300/425A 6 PIN 1100/3300V RUBBER INTERIOR PRODUCTS PART No. I.D. CRIMP DIE No. INSERTION DEPTH PART No. UTILUX DIE No. **INSERTION DEPTH INSERTION DEPTH** I.D. PART No. I.D. UTILUX DIE No. PART No. CRIMP DIE No. DWG MAIN PILOT INSERTION DEPTH I.D. F-3347-000 6.2 38-74 Cu **25 MIN** 8.0 38-92 Cu 10.0 F-3838-1 5.5 38-57 Cu 25 MIN F-4789-25 **25 MIN** F-3962-1 38-115 Cu 25 MIN F-3347-00 8.0 38-92 Cu 25 MIN F-911 F-3347 F-3589-1 25 MIN F-4789-35 10.0 38-115 Cu **25 MIN** F-3962-2 11.0 38-115 Cu 25 MIN F-3838-2 6.2 38-74 Cu F-914 F-3962 F-3984 F-3347-0 10.0 38-115 Cu **25 MIN** 25 MIN F-4789-50 11.0 38-115 Cu 25 MIN F-3962-3 13.5 38-142 Cu **25 MIN** F-3838-3 8.0 38-92 Cu F-916 F-3838 F-3984 F-3347-1 11.0 38-115 Cu **25 MIN** F-4789-70 13.5 38-142Cu **25 MIN** F-3962-4 14.5 38-165 Cu 25 MIN F-3838-4 10.0 38-115 Cu **25 MIN** F-920 F-3347 F-3589-1 F-3347-2 13.5 38-142 Cu **25 MIN** F-4789-95 14.5 38-165 Cu **25 MIN** F-3962-5 16.6 38-165 Cu 25 MIN F-3838-5 11.0 38-115 Cu **25 MIN** F-929 F-3962 F-3589-1 F-3347-3 14.5 38-165 Cu **25 MIN** F-4789-120 16.6 38-165 Cu **25 MIN** F-3962-6 18.0 38-183 Cu 25 MIN F-3838-6 13.5 38-142 Cu **25 MIN** F-941 F-3962 F-3589-1 F-3347-4 16.6 38-165 Cu **25 MIN** F-3962-7 F-4789-150 18.5 38-200 Cu **25 MIN** F-945 F-3962 F-3984 20.7 SOLDER ONLY 25 MIN F-3838-7 14.5 38-165 Cu **25 MIN** F-951 F-4789 F-3347-5 18.0 38-183 Cu **25 MIN** F-4791 F-4789-185 20.5 38-200Cu **25 MIN** F-3838-8 16.6 38-165 Cu **25 MIN** 20.7 F-952 F-4789 F-4791 F-3347-6 SOLDER ONLY **25 MIN** F-3838-9 18.0 38-183 Cu 25 MIN F-4789 F-953 F-4791 F-3838-10 20.7 SOLDER ONLY 25 MIN F-4789 F-4791 F-955 F-4789 F-4791 PILOT THIMBLE F-956 F-4789 F-4791 F-4791 RANGE - PILOT SOCKET/THIMBLE PART No. ID CRIMP DIE No. **INSERTION DEPTH** 300/425A 4 & 6 PIN 660/1100/3300V SS INTERIOR SOLDER 10 MIN F-3589-1 3 PART No. CRIMP DIE No. **INSERTION DEPTH** F-3589-1W 3 **SOLDER** 10 MIN F-4791 3.0 38-44 CU 15 F-3984 12.7 SOLDER 10 MIN 300/425A RECEPTACLES RECEPTACLE DRAWING REFERENCE DWG MAIN PILOT **TESTING & CERTIFICATION** F-915 F-4606 F-853-3

F-	4606 RAN	GE - MAIN PHASE	THIMBLE
300/4	25A 4/6 P	IN 660/1100/3300	V PRODUCTS
PART No.	I.D.	UTILUX DIE No.	INSERTION DEPTH
F-4606-1	8.4	38-92 Cu	25 MIN
F-4606-2	9.5	38-104 Cu	25 MIN
F-4606-3	11.2	38-115 Cu	25 MIN
F-4606-4	13.4	38-142 Cu	25 MIN
F-4606-5	15.5	38-165 Cu	25 MIN
F-4606-6	16.3	38-183 Cu	25 MIN
F-4606-7	18.4	38-200 Cu	25 MIN
F-4606-8	21.0	SOLDER ONLY	25 MIN

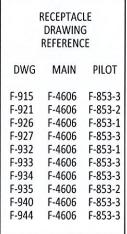
300/42		RANGE - PILOT THIM PIN 660/1100/3300\		
PART No. ID UTILUX CRIMP DIE INSERTION DEPTH				
F-853-1	3.0	38-44 CU	15 MIN	
F-853-2	3.0	38-44 CU	15 MIN	
F-853-3	3.0	38-44 CU	15 MIN	

DRAWING CREATED.

DESCRIPTION

REV ZONE





NOTE:

1. MATERIAL:

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





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TECHNICAL DOCUMENTATION



Instructions for 300/425 AMP 660/1100/3300 VOLT Restrained Range

Catalogue Number	Description	
AF3#4&@*	300A 660/1100V Restrained Plug	
AF3#6&@*	300A 1100/3300V 6P Restrained Plug	
AF334%@*	300A 3300V Restrained Plug	
AF4#4&@*	425A 660/1100V Restrained Plug	
AF4#6%@*	425A 1100/3300V 6P Restrained Plug	
AF434%@*	425A 3300V Restrained Plug.	
AG3#4B	300A 660/1100/3300V Restrained Receptacle	
AG3#4BQR	300A 660/1100/3300V Q/R Restrained Receptacle	
AG3#6B	300A 1100/3300V 6P Restrained Receptacle	
AG3#6BQR	300A 1100/3300V Q/R 6P Restrained Receptacle	
AG334B	300A 3300V Restrained Receptacle	
AG334BQR	300A 3300V Q/R Restrained Receptacle	
AG4#4B	425A 660/1100V Restrained Receptacle	
AG4#4BQR	425A 660/1100V Q/R Restrained Receptacle	
AG4#6BQR	425A 1100/3300V Q/R 6P Restrained Receptacle	
AG434BQR	425A 3300V Q/R Restrained Receptacle	
AH3#4B	300A 660/1100V Restrained Back to Back Receptacle	
AH3#4BQR	300A 660/1100V Q/R Restrained Back to Back Receptacle	
AH3#6B	300A 1100/3300V 6P Restrained Back to Back Receptacle	
AH3#6BQR	300A 1100/3300V Q/R 6P Restrained Back to Back Receptacle	
AH334B	300A 3300V Restrained Back to Back Receptacle	
AH334BQR	300A 3300V Q/R Restrained Back to Back Receptacle	
AH4#4B	425A 660/1100V Restrained Back to Back Receptacle	
AH4#4BQR	425A 660/1100V Q/R Restrained Back to Back Receptacle	
AH4#6BQR	425A 1100/3300V Q/R 6P Restrained Back to Back Receptacle	
AH434BQR	425A 3300V Q/R Restrained Back to Back Receptacle	
AR3#1R@	300A 660/1100V Restrained Dummy Plug	
AR3#6R@	300A 1100V/3300 6P Restrained Dummy Plug	
AR331S@	300A 3300V Restrained Dummy Plug	
AR4#1R@	425A 660/1100V Restrained Dummy Plug	
AR4#6R@	425A 1100V/3300 6P Restrained Dummy Plug	
AR431S@	425A 3300V Restrained Dummy Plug	

Note:

Marking:

6=660V, 1=1100V, 3=3300V # Volts: 1.

S = Solid DMC, T = Teflon/Stainless 2. % Interior: 3. & Interior R = Rubber, T = Teflon/Stainless 4. @ Nose Cone: S=ST. Steel, Blank=Bronze.

5. * Gland: 3=Small, 4=large.

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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-264L). 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.
- 8. Note: The certified drawings form a part of the user instructions. Refer to them for further details.

Receptacle fitting

- 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
- 10. Attach to enclosure via special fasteners.
- 11. 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)

• Connection of Protective Earthing Conductors

- This range of plugs and receptacles has facility for earthing conductors up to 95 mm²
- It is the responsibility of the installer to determine and fit the correct sized earth conductors

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.

Conditions of Use

- Some flameproof joints (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).

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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.

Certification Details:

Certified to: IEC 60079-0:2017: IEC 60079-1:2015;

AS/NZS 1299:2009 (incorporating amendment No.1)

Certificate of Conformity: IECEx ExTC 22.0037X and ANZEx 22.4181

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 Adapter.

IP66 only for Dummy Plug

Certification Nameplate Details:

TYPICAL 300/425A MOUNTING BRACKET RATING PLATE DETAILS	TYPICAL 300/425A RESTRAINED PLUG RATING PLATE DETAILS		TYPICAL 300/425A 6 PIN RESTRAINED PLUG RATING PLATE DETAILS	
CMI AV3 300/425A	M.I.P. AF%@* & AMPS	3 = 300A	M.I.P. AF%@* & AMPS	3 = 300A
Ex db I Mb		4 = 425A		4 = 425A
IECEx ExTC 22.0037X ANZEx 22.4181	# VOLTS	6 = 660V 1 = 1100V	# VOLTS	1 = 1100V 3 = 3300V
TYPE A BATCH. xxxxx	% INTERIOR	3 = 3300V R = RUBBER	% INTERIOR	R = RUBBER T =
BATCH. XXXXX	% INTERIOR	S = SOLID DMC	TEFLON/STAINLES	SS
	TEFLON/STAINLES	T = SS	@ NOSE CONE	S = St, Steel BLANK = BRONZE
	@ NOSE CONE	S = St, Steel BLANK = BRONZE	* GLAND	3 = SMALL 4 = LARGE
	* GLAND	3 = SMALL 4 = LARGE	IP66/68 Ex db I Mb	
	IP66/68		IECEx ExTC 22.0037X	
	Ex db I Mb IECEx ExTC 22.0037X		ANZEx 22.4181 TYPE A	
	ANZEx 22.4181		S.O. XXXXX-XX	
	TYPE A S.O. xxxxx-xx WARNING		WARNING DO NOT SEPARATE WHEN ENERGIZED	
	DO NOT SEPARATE WHEN ENERGIZED			

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TESTING & CERTIFICATION IECEx ExTC 22.0037X-0 ANZEx 22.4181-0

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		T
TYPICAL 300/425A RESTRAINED PLUG	TYPICAL 300/425A RESTRAINED	TYPICAL 300/425A 6 PIN RESTRAINED
(INT GLAND) RATING PLATE DETAILS	RECEPTACLE RATING PLATE DETAILS	RECEPTACLE RATING PLATE DETAILS
M.I.P. AFS & AMPS	M.I.P. AGB & AMPS</td><td>M.I.P. AGB & AMPS</td></tr><tr><td>DO NOT SEPARATE WHEN ENERGIZED</td><td>WARNING DO NOT SEPARATE WHEN ENERGIZED</td><td>DO NOT SEPARATE WHEN ENERGIZED</td></tr><tr><td></td><td>DO NOT SEPARATE WHEN ENERGIZED</td><td></td></tr><tr><th>TYPICAL 300/425A RESTRAINED BACK TO BACK RECEPTACLE RATING PLATE DETAILS</th><th>TYPICAL 300/425A 6 PIN RESTRAINED BACK TO BACK RECEPTACLE RATING PLATE DETAILS</th><th>TYPICAL 300/425A RESTRAINED DUMMY PLUG RATING PLATE DETAILS</th></tr><tr><td>M.I.P. AHB & AMPS</td><td>M.I.P. AHB & AMPS</td><td>M.I.P. AR%@ & AMPS</td></tr><tr><td>TYPICAL 300/425A 6 PIN RESTRAINED</td><td></td><td></td></tr><tr><td>DUMMY PLUG RATING PLATE DETAILS</td><td></td><td></td></tr><tr><td>M.I.P. ARR@ & AMPS 4 = 425A # VOLTS 1 = 1100V 3 = 3300V @ NOSE CONE BLANK = BRONZE IP66 Ex db I Mb IECEX EXTC 22.0037X</td><td></td><td></td></tr></tbody></table>	

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

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DO NOT SEPARATE WHEN ENERGIZED

ANZEx 22.4181 TYPE A S.O. xxxxx-xx WARNING











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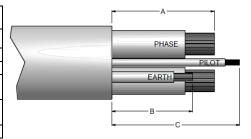
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Additional Instructions for 300/425 AMP 660/1100/3300 VOLT Restrained Range

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Cable Strip Back Dimensions

Strip Back Dimensions (mm)			
	A (Phase)	B (Earth)	C (Pilot)
AF314R3 /AF364R3 / AF414R3 / AF464R3	110	1 55	155
AF314R4 /AF364R4 / AF414R4 / AF464R4	130	180	120
AF334S3 / AF434S3 / AF316R3 / AF336R3 AF416R3 / AF436R3	128	120	130
AF334S4 / AF434S4 / AF316R4 / AF336R4 AF416R4 / AF436R4	158	150	100
AF314S / AF364S	145	165	120



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

Fitting of Cables

Note: The torque specified in the certification drawings is for the sealing test where the gland is tightened onto a steel mandrel.

- 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 300/425A
 Restrained Plugs and Receptacle, Gland & Bracket
 - a. This recommended minimum torque for the gland bolt / screw is: 18NM

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.
- 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
 - o 6.5 ~ 8Nm torque
 - Pilot Socket
 - 2.5 ~ 3 Nm torque

Note:

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

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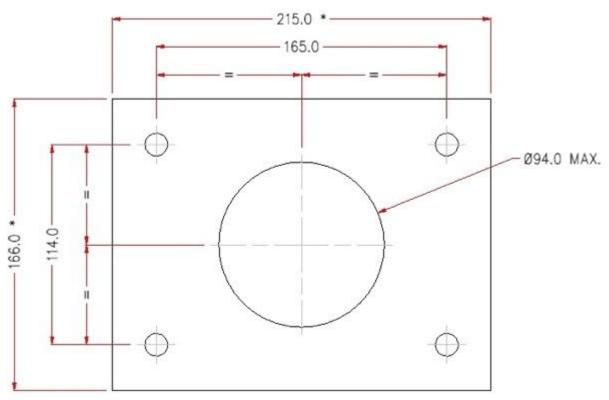




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300/425A Receptacle Mounting Details



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

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