



A division of CMI Operations Pty Ltd ABN 87 088 279 270 www.cmielectrical.com.au

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:

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

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

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

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-2 300/425A Restrained Termination & Maintenance Instruction Page 1 of 4













A division of CMI Operations Pty Ltd ABN 87 088 279 270 www.cmielectrical.com.au

TECHNICAL DOCUMENTATION



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).

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-2 300/425A Restrained Termination & Maintenance Instruction Page 2 of 4













A division of CMI Operations Pty Ltd ABN 87 088 279 270 www.cmielectrical.com.au

TECHNICAL DOCUMENTATION



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 =
		S = SOLID DMC	TEFLON/STAINLESS	
	T = TEFLON/STAINLESS		@ 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 Mb IECEx ExTC 22.0037X ANZEx 22.4181 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED		ANZEX 22.4181 TYPE A S.O. xxxxx-xx WARNING DO NOT SEPARATE WHEN ENERGIZED	

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-2 300/425A Restrained Termination & Maintenance Instruction Page 3 of 4













TECHNICAL DOCUMENTATION

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

A division of CMI Operations Pty Ltd ABN 87 088 279 270 www.cmielectrical.com.au

		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 colspan=2>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 colspan=2>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

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-2 300/425A Restrained Termination & Maintenance Instruction

Page 4 of 4

Rev J 20230331



DO NOT SEPARATE WHEN ENERGIZED

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











TECHNICAL DOCUMENTATION

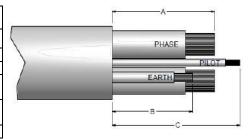
A division of **CMI Operations Pty Ltd** ABN 87 088 279 270 www.cmielectrical.com.au

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

TRP-2-2

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

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-2-2 300/425A Restrained Termination & Maintenance Instruction Additional Instructions Page 1 of 2

Rev B 20230331









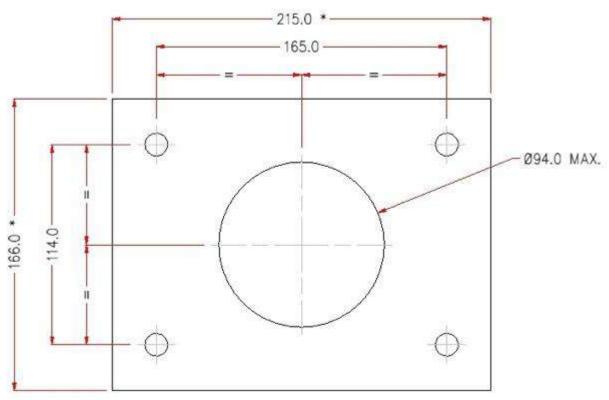




TECHNICAL DOCUMENTATION

A division of CMI Operations Pty Ltd ABN 87 088 279 270 www.cmielectrical.com.au

300/425A Receptacle Mounting Details



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

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-2-2 300/425A Restrained Termination & Maintenance Instruction Additional Instructions Page 2 of 2

Rev B 20230331









