CERTIFICATE NUMBER	20-2022051-PDA
EFFECTIVE DATE	20-Aug-2020
EXPIRY DATE	19-Aug-2025
ABS TECHNICAL OFFICE	Rio de Janeiro Engineering - Machinery

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

CMP PRODUCTS LTD.

located at

36 NELSON WAY, NELSON PARK EAST, CRAMLINGTON, United Kingdom, NE23 1WH

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product **Cable, Glands and Accessories**

Model **TC, TCCG, TMC2 and TMC2X.**

This Product Design Assessment (PDA) Certificate remains valid until 19/Aug/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

João Claudio Machado

Joao C. Bastos Machado,Engineer/Consultant

CMP PRODUCTS LTD.
36 NELSON WAY
NELSON PARK EAST
CRAMLINGTON
United Kingdom NE23 1WH
Telephone: +44 191 265 7411
Fax: +44 1670 715 646
Email: customerservices@cmp-products.com
Web: www.cmp-products.com

Tier: 3 - Type Approved, unit certification not required

Product: **Cable, Glands and Accessories**
Model: **TC, TCCG, TMC2 and TMC2X.**
Intended Service:
For use on ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International Standards.

Description:
Cable Glands Certified for Flameproof, Increased Safety, and Dust:
- Model TC: The TC range of cable gland devices are designed to be threaded into suitably certified enclosures to permit the entry of unarmored cables. Each gland comprises a threaded front item housing an elastomeric sealing ring assembly. The assembly is compressed by a threaded rear nut.
- Model TCCG: The TCCG type gland is a lighter weight version of the TC type gland and does not include an O-ring on the front entry item.
- Model TMC2: The TMC2 range of cable gland devices are designed to be threaded into suitably certified enclosures to permit the entry of metal clad (MC) cables. Each gland comprises a threaded front item and a nut housing an elastomeric sealing ring and clamping spring assembly. The assembly is compressed by a threaded rear nut.
- Model TMC2X: The TMC2X range of cable gland devices are designed to be threaded into suitably certified enclosures to permit the entry of metal clad (MC) cables. Each gland comprises a threaded front item and a nut housing an elastomeric sealing ring and clamping spring assembly. The assembly is compressed by the threaded rear nut. TMC2X types are provided with a compound seal and tube arrangement effectively sealing the cable cores.

Rating:
Sizes:
TC / TCCG: ½" to 4" & M20S to M100
TMC2 / TMC2X: ½" to 4" & M20 to M115

Hazardous Area:
Series TC and TCCG:
cCSA (C441805): Class I, Div. 2, Groups A, B, C, and D; Class II, Div 2, Groups E, F, and G; Class III, Div 2; Encl. Type 4X. Ex e; Class I, Zone 1, AEx e.
CSAus (C441885): Class II, Div 2, Groups E, F, and G; Class III, Div 2; Encl. Type 4X. Ex e; Class I, Zone 1, AEx e.
IECEx: Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da
Continuous operating temperature: -60°C to +110°C

Series TMC2:
cCSA (C441805): Class I, Div. 2, Groups A, B, C, and D; Class II, Div 1 & 2, Groups E, F, and G; Class III, Div 1 & 2; Encl. Type 4X. Ex e II; Class I, Zone 1, AEx e II; AEx ta IIC.
CSAus (C441885): Class II, Div 1 & 2, Groups E, F, and G; Class III, Div 1 & 2; Encl. Type 4X. Ex e II; Class I, Zone 1, AEx e II; AEx ta IIC.
IECEx: Ex eb IIC Gb, Ex ta IIIC Da
Continuous operating temperature: -60°C to +110°C

Series TMC2X:
cCSA (C441805): Class I, Div. 1 & 2, Groups A, B, C, and D; Class II, Div 1 & 2, Groups E, F, and G; Class III, Div 1 & 2; Encl. Type 4X. Ex d IIC; Ex e II; Class I, Zone 1, AEx d IIC; AEx e II; AEx ta IIC.
CSAus (C441885): Class I, Div. 1 & 2, Groups A, B, C, and D; Class II, Div 1 & 2, Groups E, F, and G; Class III, Div 1 & 2; Encl. Type 4X. Ex d IIC; Ex e II; Class I, Zone 1, AEx d IIC; AEx e II; AEx ta IIC.
IECEx: Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da
Continuous operating temperature: -60°C to +85°C

Ingress Protection: Nema 4X & IP 66/67/68.
See attached "pdf" for additional details.

CMP PRODUCTS LTD.
36 NELSON WAY
NELSON PARK EAST
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United Kingdom NE23 1WH
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Web: www.cmp-products.com

Tier: 3 - Type Approved, unit certification not required

Service Restriction:
1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. The restriction for the products are according to the requirement of “Notes" in CSA certificates (2194053, 2220601) and "Specific Conditions of Use" in IECEx CML Certificates (18.0191X, 18.0192X, 18.0193X).

Comments:
The Manufacturer has provided a declaration about the control of, the lack of Asbestos in this product.

Notes/Drawing/Documentation:
Drawing No. 2194053, Certificate of Compliance, Revision: -, Pages: 1
Drawing No. 2194053 Ed 3, Descriptive Report and Test Results Edition 3, Revision: -, Pages: 1
Drawing No. 2220601, Certificate of Compliance, Revision: -, Pages: 1
Drawing No. 2220601 Ed 5, Descriptive Report and Test Results Edition 5, Revision: -, Pages: 1
Drawing No. IECEx CML 18.0191X, IECEx Certificate of Conformity, Revision: -, Pages: 1
Drawing No. IECEx CML 18.0192X, IECEx Certificate of Conformity, Revision: -, Pages: 1
Drawing No. IECEx CML 18.0193X, IECEx Certificate of Conformity, Revision: -, Pages: 1
Drawing No. R12060G/00, Transfer of Cable Glands, Thread Adaptors and Breathing/Draining Devices, Revision: -, Pages: 1
Drawing No. TDS562, Datasheet - TC (CMP-01-011 - TDS562 - 1 - 17) - 1 (1), Revision: 17, Pages: 1
Drawing No. TDS564, Datasheet - TMC2 NPT (CMP-01-011 - TDS564 - 1 - 14) - 1, Revision: 14, Pages: 1
Drawing No. TDS565, Datasheet - TMC2X NPT (CMP-01-011 - TDS565 - 1 - 12) - 1, Revision: 12, Pages: 1

Support documentation from previous review:
Drawing No. 2194053, Certificate of compliance, Revision: -, Pages: 1
Drawing No. 2220601, Certificate of compliance, Revision: -, Pages: 1
Drawing No. CMP_CSA-US_Certificate_2194053_Type_TMC2_TMC2X ed 2 supplement, CMP_CSA-US_Certificate_2194053_Type_TMC2_TMC2X ed 2 supplement, Revision: -, Pages: -
Drawing No. IECEx SIR 09.0042x, IECEx CERTIFICATE OF CONFORMITY, Revision: -, Pages: 1
Drawing No. IECEx SIR 09.0068x, IECEx CERTIFICATE OF CONFORMITY, Revision: -, Pages: 1
Drawing No. IECEx SIR 09.0069x, IECEx CERTIFICATE OF CONFORMITY, Revision: -, Pages: 1
Drawing No. TC Technical Data Sheet - April 14 - Issue 6, TC Technical Data Sheet - April 14 - Issue 6, Revision: -, Pages: -

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 19/Aug/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

CMP PRODUCTS LTD.
36 NELSON WAY
NELSON PARK EAST
CRAMLINGTON
United Kingdom NE23 1WH
Telephone: +44 191 265 7411
Fax: +44 1670 715 646
Email: customerservices@cmp-products.com
Web: www.cmp-products.com

Tier: 3 - Type Approved, unit certification not required

ABS Rules:
- Rules for Conditions of Classification (2020): 1-1-4/7.7, 1-1-A3 & A4
- Marine Vessels Rules (2020): 4-8-3/1.7, 4-8-3/13, 4-8-4/27.5

- Rules for Conditions of Classification - Offshore Units and Structures (2020): 1-1-4/9.7, 1-1-A2 & A3
- Mobile Offshore Units Rules (2020): 6-1-1/9, 6-1-1/13, 4-3-1/11, 4-3-1/3.17

- Rules for Conditions of Classification - High-Speed Craft Rules (2020): 1-1-4/11.9, 1-1-A2, 1-1-A3
- High-Speed Craft Rules (2020): 4-6-1/11, 4-6-1/3.17, 4-6-3/9.1.1(a)

National:
TC and TCCG:
CAN/CSA-C22.2 No 0-M91, No 18.3-04, No 174-M1984, No 94-M91;
CAN/CSA E60079-0:2007, E60079-7:2007, E61241-1-1;
ANSI/UL - 514B: Ed 5, 50: Ed 11, 60079-0: 2007, 60079-7:2007.

TMC2 and TMC2X:
CAN/CSA-C22.2 No 0-10, No 18-04, No 25-1966, No 30-M1984, No 94-M91, No 60079-0:2007, No 60079-1:2007, No 60079-7:2007;
CAN/CSA E61241-1-1;
ANSI/UL 2225: Ed 4, 50: Ed 11, 514B: Ed 5.

International:
TC and TCCG:
IEC 60079-0:2017, IEC 60079-1:2014, IEC 60079-7:2015, IEC 60079-31:2013.

TMC2:
IEC 60079-0:2017, IEC 60079-7:2015, IEC 60079-31:2013.

TMC2X:
IEC 60079-0:2017, IEC 60079-1:2014, IEC 60079-7:2015, IEC 60079-31:2013.

Government:
NA

EUMED:
NA

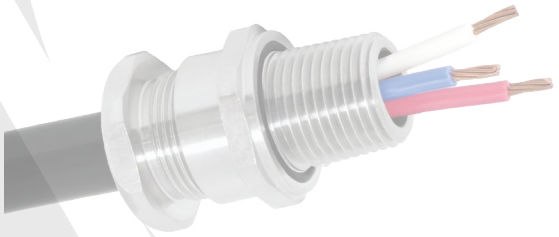
OTHERS:
NA

TC

TC GLOBALLY APPROVED, HAZARDOUS (CLASSIFIED) LOCATION CABLE GLAND

FOR ALL TYPES OF UNARMORED TRAY CABLES, FLEXIBLE CABLES & CORD

- Aluminum, nickel plated brass or stainless steel design
- Increased cable range with removable insert
- Optional thread sizes
- -76˚F to 230˚F
- Globally marked, cCSAus, IECEx & ATEX
- Heavy duty design
- Entry thread seal as standard



CMP Products LTD.
Model: TC
20-2022051-PDA
Date of issue: 20/08/2020
Date of validity: 19/08/2025

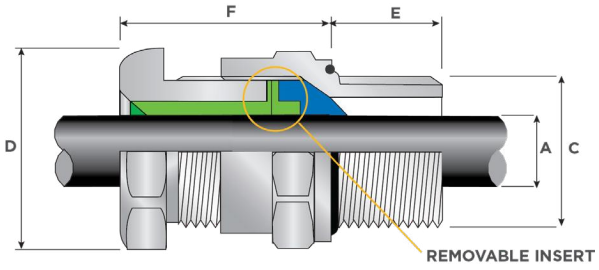
IP66 IP67 IP68 NEMA 4X

+230 ˚F
-76 ˚F

AEx e Ex e | AEx d Ex d | AEx t Ex t

TECHNICAL CLASSIFICATION	
DESIGN SPECIFICATION	BS 6121:Part 1:1989, IEC 62444, EN 62444
MECHANICAL CLASSIFICATION*	Impact = Level 8, Cable Anchorage = Class D
ENCLOSURE PROTECTION	IK10 to IEC 62262 (20 joules) Brass & Stainless Steel only
INGRESS PROTECTION RATING**	IP66, IP67 & IP68***
NEMA RATING**	NEMA 4X
CABLE GLAND MATERIAL	Copper Free (<0.4%) Aluminum, Nickel Plated Brass, Stainless Steel
CABLE TYPE	Tray Cable & Cords, Unarmored / Braid (IEC)
SEALING TECHNIQUE	CMP Displacement Seal with Removable Insert
SEALING AREA(S)	Cable Outer Jacket

* Mechanical & Electrical Classifications applied as per IEC 62444 & EN 62444 ** When CMP installation accessories are used. Refer to www.cmp-products.com for further information. *** IP68 tested to a minimum depth of 30 metres for 12 hours, alternate depths / durations can be provided upon request



GLOBAL PRODUCT CERTIFICATION			
ATEX CERTIFICATE	CML18ATEX1334X	IECEx CERTIFICATE	IECEx CML 18.0191X
CODE OF PROTECTION	II 2G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da	CODE OF PROTECTION	Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da
COMPLIANCE STANDARDS	EN 60079-0,1,7, 31	COMPLIANCE STANDARDS	IEC 60079-0,1,7, 31
cCSAus CERTIFICATE	2220601		
CSAus CODE OF PROTECTION	Class II, Div. 2, Groups E, F, and G; Class III, Div. 2; Encl. Type 4X. Class I, Zone 1, AEx e:		
cCSA CODE OF PROTECTION	Class I, Div. 2****, Groups A, B, C and D; Class II, Div. 2, Groups E, F, and G; Class III, Div. 2; Encl. Type 4X. Ex e;		
COMPLIANCE STANDARDS	CAN/CSA-C22.2 Various Sections (See Certificate) CAN/CSA-60079-0,7, CAN/CSA-E6124111, ANSI/UL 514B Ed 5, ANSI/UL 50Ed 11, ANSI/UL 60079-0,7		
EAC CERTIFICATE	TC RU C-GB.AA87.B.00487	UkrSEPRO	СЦ 19.0371X
CODE OF PROTECTION	1Ex d IIC Gb X, 1Ex e IIC Gb X, Ex ta IIC Da X IP66		
RETIE APPROVAL NUMBER	03866	ECAS CERTIFICATE	20-02-05627
MARINE APPROVALS	LRS: 01/00172 DNV: TAE000000Y ABS: 15-LD1410479-PDA BV: 43180 A1 BV		

**** When installed as per the requirements of the NEC and CEC

PATENT GRANTED: US 8440919

ORDER REFERENCE (NPT)			ENTRY THREAD 'C'		MINIMUM THREAD LENGTH 'E'	CABLE RANGE 'A'				ACROSS FLATS 'D'	ACROSS CORNERS 'D'	NOMINAL ASSEMBLY LENGTH 'F'	SHROUD	APPROX WEIGHT ALUMINUM (0zs)
						INSERT		NO INSERT						
ALUMINUM	NICKEL PLATED BRASS	STAINLESS STEEL	NPT	NPT OPTION		MIN	MAX	MIN	MAX	MAX	MAX			
TC-050A028	TC-050NB028	TC-050SS028	½"	-	0.78	0.13	0.28	-	-	1.20	1.32	1.20	PVC05	1.94
TC-075A028	TC-075NB028	TC-075SS028	-	¾"	0.80					1.48	1.59	1.24		1.69
TC-050A055	TC-050NB055	TC-050SS055	½"	-	0.78	0.26	0.41	0.41	0.55	1.20	1.32	1.20	PVC06	1.94
TC-075A055	TC-075NB055	TC-075SS055	-	¾"	0.80					1.48	1.63	1.24		1.69
TC-075A079	TC-075NB079	TC-075SS079	¾"	-	0.80	0.44	0.61	0.61	0.79	1.48	1.63	1.24	PVC09	1.69
TC-100A079	TC-100NB079	TC-100SS079	-	1"	0.98					1.81	1.96	1.65		3.17
TC-100A104	TC-100NB104	TC-100SS104	1"	-	0.98	0.67	0.85	0.85	1.04	1.81	1.99	1.65	PVC11	3.88
TC-125A104	TC-125NB104	TC-125SS104	-	1¼"	1.01					2.05	2.21			
TC-125A127	TC-125NB127	TC-125SS127	1¼"	-	1.01	0.93	1.10	1.10	1.27	2.05	2.25	1.65	PVC13	4.94
TC-150A127	TC-150NB127	TC-150SS127	-	1½"	1.03					2.36	2.55			
TC-150A150	TC-150NB150	TC-150SS150	1½"	-	1.03	1.22	1.37	1.37	1.50	2.36	2.60	1.65	PVC21	6.00
TC-200A150	TC-200NB150	TC-200SS150	-	2"	1.06					2.95	3.19			
TC-200A174	TC-200NB174	TC-200SS174	2"	-	1.06	-	-	1.40	1.74	2.76	2.98	1.63	PVC21	8.64
TC-250A174	TC-250NB174	TC-250SS174	-	2½"	1.57					3.54	3.83			
TC-200A197	TC-200NB197	TC-200SS197	2"	-	1.06	-	-	1.63	1.97	2.76	3.03	1.74	PVC28	8.29
TC-250A197	TC-250NB197	TC-250SS197	-	2½"	1.57					3.54	3.83			
TC-250A220	TC-250NB220	TC-250SS220	2½"	-	1.57	-	-	1.86	2.20	3.54	3.83	1.74	PVC28	13.58
TC-300A220	TC-300NB220	TC-300SS220	-	3"	1.63					4.33	4.68			
TC-250A244	TC-250NB244	TC-250SS244	2½"	-	1.57	-	-	2.13	2.44	3.54	3.90	1.79	PVC31	13.58
TC-300A244	TC-300NB244	TC-300SS244	-	3"	1.63					4.33	4.68			
TC-300A268	TC-300NB268	TC-300SS268	3"	-	1.63	-	-	2.41	2.68	4.33	4.68	1.79	PVC31	23.63
TC-350A268	TC-350NB268	TC-350SS268	-	3½"	1.69					4.84	5.23			
TC-350A315	TC-350NB315	TC-350SS315	3½"	-	1.69	-	-	2.62	3.15	4.84	5.23	2.50	LSF33	34.22
TC-400A315	TC-400NB315	TC-400SS315	-	4"	1.73					5.25	5.67			
TC-400A354	TC-400NB354	TC-400SS354	4"	-	1.73	-	-	2.99	3.54	5.25	5.67	2.36	LSF34	38.80

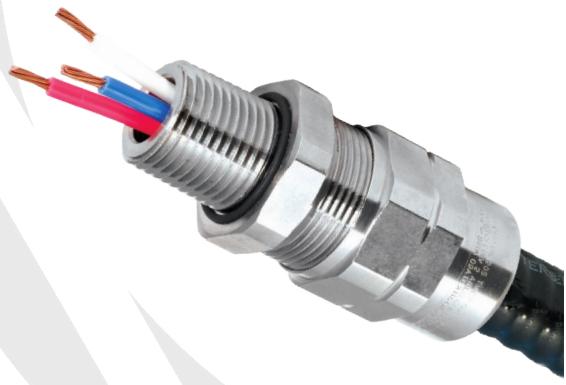
Order Code Example: TC-050A028 - "TC" (Type Gland) - "050" (½" NPT Thread) - 'A' (Material Aluminum) - "028" (Max Cable Diameter 0.28")

Dimensions are displayed in inches unless otherwise stated

Electronically published by ABS London.
Reference T2022051, dated 27-AUG-2020.

TMC2

TMC2 ALUMINUM GLOBALLY APPROVED, HAZARDOUS (CLASSIFIED) LOCATION CABLE GLAND



FOR MC, MC-HL, INTERLOCKED & TECK ARMORED CABLES

- Simplified two part design
- Compact slim profile
- Independent sealing & armor clamping
- Simple, sequential installation process
- No disassembly required
- Equipment interface 'O' ring seal as standard
- Hub not required
- 360˚ grounding spring (non-magnetic)
- -76˚F to 230˚F
- Globally marked, cCSAus, IECEx & ATEX

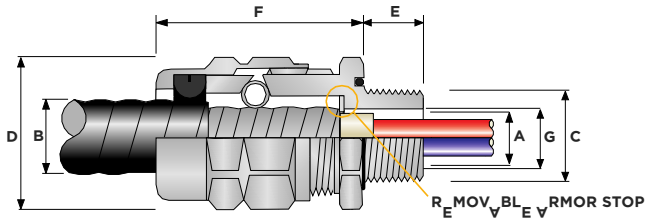
CMP Products LTD.
Model: TMC2
20-2022051-PDA
Date of issue: 20/08/2020
Date of validity:
19/08/2025

IP66 | NEMA 4X | EMC | +230˚F / -76˚F | AEx e | AEx t | Ex e | Ex t

TECHNICAL CLASSIFICATION	
DESIGN SPECIFICATION	BS 6121:Part 1:1989, IEC 62444, EN 62444
MECHANICAL CLASSIFICATION*	Impact = Level 8, Cable Anchorage = Class D
ENCLOSURE PROTECTION	IK10 to IEC 62262 (20 joules) Brass & Stainless Steel only
INGRESS PROTECTION RATING**	IP66
NEMA RATING**	NEMA 4X

CABLE GLAND MATERIAL	Copper Free (<0.4%) Aluminum, Stainless Steel, Electroless Nickel Plated Brass
SEAL MATERIAL	CMP SOLO LSF Halogen Free Thermoset Elastomer
CABLE TYPE	Corrugated & Interlocked Metal Clad Armor (MC) or TECK90, Continuously Welded Metal Clad Armor (MCHL), ACIC-HL, ACWU90-HL, RC90-HL, RA90-HL
ARMOR CLAMPING	360° Stainless Steel Grounding Spring (non-magnetic)
JACKET SEALING TECHNIQUE	CMP Load Retention Seal
SEALING AREA(S)	Cable Outer Jacket

* Mechanical & Electrical Classifications applied as per IEC 62444 & EN 62444
** When CMP installation accessories are used. Refer to www.cmp-products.com for further information.



GLOBAL PRODUCT CERTIFICATION			
ATEX CERTIFICATE	CML 18ATEX1335X	IECEx CERTIFICATE	IECEx CML 18.0192X
CODE OF PROTECTION	Ex II 2G 1D, Ex eb IIC Gb, Ex ta IIIC Da	CODE OF PROTECTION	Ex eb IIC Gb, Ex ta IIIC Da
COMPLIANCE STANDARDS	EN 60079-0,7,31	COMPLIANCE STANDARDS	IEC 60079-0,1,7,31
cCSAUS CERTIFICATE	2194053		
CSAus CODE OF PROTECTION	Class II, Division 1 and 2, Groups E, F, and G; Class III, Division 1 and 2; Encl. Type 4X. Ex e II, Class I, Zone 1, AEx e II; AEx ta IIC		
cCSA CODE OF PROTECTION	Class I, Division 2, Groups A, B, C and D; Class II, Division 1 and 2, Groups E, F, and G; Class III, Division 1 and 2; Encl. Type 4X. Ex e II; Class I, Zone 1, AEx e II; AEx ta IIC:		
COMPLIANCE STANDARDS	CAN/CSA-C22.2 Various Sections (See Certificate) CAN/CSA-E60079-0,7, CAN/CSA-E6124111, ANSI/UL 514B Ed 5, ANSI/UL 50 Ed 11		
EAC CERTIFICATE	TC RU C-GB.AA87.B.00487	UkrSEPRO	UA.TR.047.C.0644-15
CODE OF PROTECTION	1Exe IIC Gb X, Exta IIC Da X IP66		
RETIE APPROVAL NUMBER	03866		
CCOE / PESO (INDIA) CERTIFICATE	P333688		
MARINE APPROVALS	LRS: 01/00172 DNV: TAE000000Y ABS: 15-LD1410479-PDA BV: 43180 A1 BV		

ORDER REFERENCE (NPT SUFFIX REQUIRED)			ENTRY THREAD 'C'		MINIMUM THREAD LENGTH 'E'	CABLE ARMOR DIAMETER 'A'				CABLE JACKET DIAMETER 'B'		THRU BORE 'G'	ACROSS FLATS 'D'	ACROSS CORNERS 'D'	NOMINAL ASSEMBLY LENGTH 'F'	SHROUD	APPROX WEIGHT ALUMINUM (OZS)
						ARMOR STOP IN		ARMOR STOP OUT									
ALUMINUM	NICKEL PLATED BRASS	STAINLESS STEEL	NPT	NPT OPTION		MIN	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX			
TMC2050A075	TMC2050NB075	TMC2050SS075	½"	-	0.78	0.42	0.55	0.55	0.63	0.50	0.75	0.51	1.20	1.32	2.44	PVC06	2.29
TMC2075A075	TMC2075NB075	TMC2075SS075	-	¾"	0.80	0.42	0.55	0.55	0.63			0.51					
TMC2050A099	TMC2050NB099	TMC2050SS099	½"	-	0.78	0.60	0.65	0.65	0.89	0.69	0.99	0.61	1.48	1.63	2.96	PVC09	3.00
TMC2075A099	TMC2075NB099	TMC2075SS099	-	¾"	0.80	0.60	0.78	0.78	0.89			0.75					
TMC2075A118	TMC2075NB118	TMC2075SS118	¾"	-	0.80	0.79	0.86	0.86	1.10	0.87	1.18	0.82	1.81	1.99	3.15	PVC11	5.11
TMC2100A118	TMC2100NB118	TMC2100SS118	-	1"	0.98	0.79	0.98	0.98	1.10			0.95					
TMC2100A137	TMC2100NB137	TMC2100SS137	1"	-	0.98	0.94	1.08	1.08	1.28	1.02	1.37	1.04	2.05	2.26	3.55	PVC15	6.70
TMC2125A137	TMC2125NB137	TMC2125SS137	-	1¼"	1.01	0.94	1.18	1.18	1.28			1.14					
TMC2125A162	TMC2125NB162	TMC2125SS162	1¼"	-	1.01	1.22	1.35	1.35	1.50	1.30	1.62	1.31	2.36	2.60	3.59	PVC18	8.82
TMC2150A162	TMC2150NB162	TMC2150SS162	-	1½"	1.03	1.22	1.42	1.42	1.50			1.38					
TMC2125A190	TMC2125NB190	TMC2125SS190	1¼"	-	1.01	-	-	1.51	1.72	1.57	1.90	1.37	2.56	2.82	3.59	PVC37	9.45
TMC2150A190	TMC2150NB190	TMC2150SS190	-	1½"	1.03	-	-	1.51	1.72			1.54					
TMC2150A200	TMC2150NB200	TMC2150SS200	1½"	-	1.03	1.57	1.70	1.70	1.88	1.65	2.00	1.61	2.75	3.03	3.76	PVC21	11.06
TMC2200A200	TMC2200NB200	TMC2200SS200	-	2"	1.06	1.57	1.70	1.70	1.88			1.65					
TMC2150A233	TMC2150NB233	TMC2150SS233	-	1½"	1.03	-	-	1.81	2.21	1.90	2.33	1.61	2.95	3.25	3.97	PVC23	12.77
TMC2200A233	TMC2200NB233	TMC2200SS233	2"	-	1.06	-	-	1.81	2.21			2.03					
TMC2250A233	TMC2250NB233	TMC2250SS233	-	2½"	1.57	-	-	1.81	2.21			2.03					
TMC2200A272	TMC2200NB272	TMC2200SS272	-	2"	1.06	2.14	2.46	2.17	2.61	2.27	2.72	2.07	3.54	3.89	4.10	PVC28	24.69
TMC2250A272	TMC2250NB272	TMC2250SS272	2½"	-	1.57	2.14	2.46	2.46	2.61			2.40					
TMC2300A272	TMC2300NB272	TMC2300SS272	-	3"	1.63	2.14	2.46	2.46	2.61			2.40					
TMC2300A325	TMC2300NB325	TMC2300SS325	3"	-	1.63	2.49	2.78	2.78	2.97	2.62	3.25	2.72	4.33	4.76	4.67	PVC32	42.68
TMC2350A325	TMC2350NB325	TMC2350SS325	-	3½"	1.69	2.49	2.78	2.78	2.97			2.72					
TMC2350A376	TMC2350NB376	TMC2350SS376	3½"	-	1.69	2.95	3.45	3.45	3.54	3.16	3.76	3.38	4.84	5.32	4.95	LSF33	53.44
TMC2400A376	TMC2400NB376	TMC2400SS376	-	4"	1.73	2.95	3.45	3.45	3.54			3.38					
TMC2400A425	TMC2400NB425	TMC2400SS425	4"	-	1.73	-	-	3.56	3.94	3.70	4.25	3.59	5.23	5.75	5.16	LSF34	59.19

Order Code Example: TMC2050A075 - "TMC2" (Type Gland) - "050" (½" NPT Thread) - 'A' (Material Aluminum) - "075"(Max Cable Diameter 0.75")

Dimensions are displayed in inches unless otherwise stated

TMC2X RAPID Ex

GLOBALLY APPROVED, HAZARDOUS (CLASSIFIED) LOCATION BARRIER CABLE GLAND

FOR MC, MC-HL, INTERLOCKED & TECK ARMORED CABLES

- RapidEx liquid pour sealing system
  - Enhances reliability, reduces risk
  - Reduces man hours
  - Reduces cost
- Simplified two part design
- Compact slim profile
- Independent sealing & armor clamping
- Simple, sequential installation process
- 360˚ grounding spring (non-magnetic)
- Disconnectable, union design feature
- -76˚F to 185˚F / -60°C to 85°C
- Globally marked, cCSAus, IECEx & ATEX

CMP Products LTD.
Model: TMC2X
20-2022051-PDA
Date of issue: 20/08/2020
Date of validity: 19/08/2025

IP66 NEMA 4X EMC +185˚F -76˚F

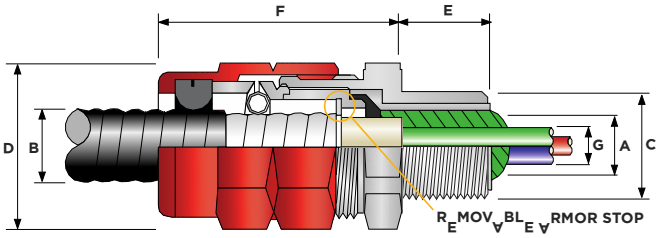
AEx e AEx d AEx t
Ex e Ex d Ex t

SUPPLIED IN PACK WITH RAPIDEX RESIN

TECHNICAL CLASSIFICATION

DESIGN SPECIFICATION	BS 6121:Part 1:1989, IEC 62444, EN 62444
MECHANICAL CLASSIFICATION	Impact = Level 8, Cable Anchorage = Class D
ENCLOSURE PROTECTION	IK10 to IEC 62262 (20 joules) Brass & Stainless Steel only
INGRESS PROTECTION RATING**	IP66
NEMA RATING**	NEMA 4X
CABLE TYPE	Corrugated & Interlocked Metal Clad Armor (MC) or TECK90, Continuously Welded Metal Clad Armor (MCHL), ACIC-HL, ACWU90-HL, RC90-HL, RA90-HL
ARMOR CLAMPING	360° Stainless Steel Grounding Spring (non-magnetic) (berylium copper optional)
JACKET SEALING TECHNIQUE	CMP Load Retention Seal
SEALING AREA(S)	RapidEx Liquid Resin, Cable Outer Jacket
CABLE GLAND MATERIAL	Copper Free (<0.4%) Aluminum, Stainless Steel, Electroless Nickel Plated Brass

* Mechanical & Electrical Classifications applied as per IEC 62444 & EN 62444 ** When CMP installation accessories are used. Refer to www.cmp-products.com for further information.



GLOBAL PRODUCT CERTIFICATION

ATEX CERTIFICATE	CML 18ATEX1336X	IECEx CERTIFICATE	IECEx CML 18.0193X
CODE OF PROTECTION	Ex II 2G 1D, Ex db IIC, Ex eb IIC Gb, Ex ta IIIC Da	CODE OF PROTECTION	Ex db IIC Gb / Ex eb IIC Gb, Ex ta IIIC Da
COMPLIANCE STANDARDS	EN 60079-0,1,7,31	COMPLIANCE STANDARDS	IEC 60079-0,1,7,31
cCSAus CERTIFICATE	2194053		
CSAus CODE OF PROTECTION	Class I, Division 1 and 2, Groups A, B, C and D; Class II, Division 1 and 2, Groups E, F, and G; Class III, Division 1 and 2; Encl. Type 4X. Ex d IIC; Ex e II; Class I, Zone 1, AEx d IIC; AEx e II; AEx ta IIC:		
cCSA CODE OF PROTECTION	Class I, Division 1 and 2, Groups A, B, C and D; Class II, Division 1 and 2, Groups E, F, and G; Class III, Division 1 and 2; Encl. Type 4X. Ex d IIC; Ex e II; Class I, Zone 1, AEx d IIC; AEx e II; AEx ta IIC:		
COMPLIANCE STANDARDS	CAN/CSA-C22.2 No 0-M91, CAN/CSA-C22.2 No 18-04, CAN/CSA-C22.2 No 25-1966, CAN/CSA-C22.2 No 30-M1986, CAN/CSA-C22.2 No.174-M1984, CAN/CSA-C22.2 No.94-M91, CAN/CSA-E60079-0:07, CAN/CSA-E60079-7:07, CAN/CSA-E60079-1:07, CAN/CSA-E61241111, ANSI/UL 514B Edition 5, ANSI/UL 50 Edition 11, ANSI/UL 2225 Edition 4		
EAC CERTIFICATE	TC RU C-GB.AA87.B.00487	UkrSEPRO	UA.TR.047.C.0644-15
CODE OF PROTECTION	1Exd IIC Gb X, 1Exe IIC Gb X, Exta IIC Da X IP66		
CCOE / PESO (INDIA) CERTIFICATE	P333688	RETIE APPROVAL NUMBER	03866
MARINE APPROVALS	LRS: 01/00172 DNV: TAE000000Y ABS: 15-LD1410479-PDA BV: 43180 A1 BV		

ORDER REFERENCE (NPT WITH RAPIDEX RESIN)			ENTRY THREAD 'C'		MINIMUM THREAD LENGTH 'E'	CABLE ARMOR DIAMETER 'A'				CABLE JACKET DIAMETER 'B'		MAX OVER CONDUCTORS 'G'	ACROSS FLATS 'D'	ACROSS CORNERS 'D'	NOMINAL ASSEMBLY LENGTH 'F'	SHROUD	APPROX WEIGHT ALUMINUM (OZS)
						ARMOR STOP IN		ARMOR STOP OUT									
ALUMINUM	NICKEL PLATED BRASS	STAINLESS STEEL	NPT	NPT OPTION		MIN	MAX	MIN	MAX	MIN	MAX		MAX	MAX			
TMC2X-050A075X	TMC2X-050NB075X	TMC2X-050SS075X	½"	-	0.78	0.42	0.55	0.55	0.63	0.500	0.750	0.51	1.20	1.32	2.44	PVC06	2.29
TMC2X-075A075X	TMC2X-075NB075X	TMC2X-075SS075X	-	¾"	0.80	0.42	0.55	0.55	0.63			0.51					
TMC2X-075A099X	TMC2X-075NB099X	TMC2X-075SS099X	¾"	-	0.80	0.60	0.65	0.65	0.89	0.690	0.990	0.71	1.48	1.63	2.96	PVC09	3.00
TMC2X-050A099X	TMC2X-050NB099X	TMC2X-050SS099X	-	½"	0.78	0.60	0.78	0.78	0.89			0.51					
TMC2X-100A118X	TMC2X-100NB118X	TMC2X-100SS118X	1"	-	0.98	0.79	0.86	0.86	1.10	0.870	1.180	0.94	1.81	1.99	3.15	PVC11	5.11
TMC2X-075A118X	TMC2X-075NB118X	TMC2X-075SS118X	-	¾"	0.80	0.79	0.98	0.98	1.10			0.71					
TMC2X-125A137X	TMC2X-125NB137X	TMC2X-125SS137X	1¼"	-	1.00	0.94	1.08	1.08	1.28	1.020	1.370	1.20	2.05	2.26	3.55	PVC15	6.70
TMC2X-100A137X	TMC2X-100NB137X	TMC2X-100SS137X	-	1"	0.98	0.94	1.18	1.18	1.28			0.94					
TMC2X-150A162X	TMC2X-150NB162X	TMC2X-150SS162X	1½"	-	1.03	1.22	1.35	1.35	1.50	1.300	1.620	1.46	2.36	2.60	3.59	PVC18	8.82
TMC2X-125A162X	TMC2X-125NB162X	TMC2X-125SS162X	-	1¼"	1.00	1.22	1.42	1.42	1.50			1.20					
TMC2X-150A190X	TMC2X-150NB190X	TMC2X-150SS190X	1½"	-	1.03	-	-	1.51	1.72	1.570	1.900	1.46	2.56	2.82	3.59	PVC37	9.45
TMC2X-125A190X	TMC2X-125NB190X	TMC2X-125SS190X	-	1¼"	1.00	-	-	1.51	1.72			1.20					
TMC2X-200A200X	TMC2X-200NB200X	TMC2X-200SS200X	2"	-	1.53	1.57	1.70	1.70	1.88	1.650	2.000	1.63	2.75	3.03	3.76	PVC21	11.06
TMC2X-150A200X	TMC2X-150NB200X	TMC2X-150SS200X	-	1½"	1.03	1.57	1.70	1.70	1.88			1.46					
TMC2X-250A233X	TMC2X-250NB233X	TMC2X-250SS233X	2½"	-	1.63	-	-	1.81	2.21	1.910	2.330	2.13	2.95	3.25	3.97	PVC28	12.77
TMC2X-200A233X	TMC2X-200NB233X	TMC2X-200SS233X	-	2"	1.53	-	-	1.81	2.21			1.90				PVC23	
TMC2X-150A233X	TMC2X-150NB233X	TMC2X-150SS233X	-	1½"	1.03	-	-	1.81	2.21			1.46					
TMC2X-300A272X	TMC2X-300NB272X	TMC2X-300SS272X	3"	-	1.63	2.14	2.46	2.17	2.61	2.270	2.720	2.55	3.54	3.89	4.10	PVC31	24.69
TMC2X-250A272X	TMC2X-250NB272X	TMC2X-250SS272X	-	2½"	1.63	2.14	2.46	2.46	2.61			2.13				PVC28	
TMC2X-200A272X	TMC2X-200NB272X	TMC2X-200SS272X	-	2"	1.53	2.14	2.46	2.46	2.61			1.90					
TMC2X-350A325X	TMC2X-350NB325X	TMC2X-350SS325X	3½"	-	1.68	2.49	2.78	2.78	2.97	2.620	3.250	2.98	4.33	4.76	4.67	PVC32	42.68
TMC2X-300A325X	TMC2X-300NB325X	TMC2X-300SS325X	-	3"	1.63	2.49	2.78	2.78	2.97			2.98					
TMC2X-400A376X	TMC2X-400NB376X	TMC2X-400SS376X	4"	-	1.73	2.95	3.45	3.45	3.54	3.160	3.760	3.38	4.84	5.32	4.95	LSF33	53.44
TMC2X-350A376X	TMC2X-350NB376X	TMC2X-350SS376X	-	3½"	1.68	2.95	3.45	3.45	3.54			3.38					
TMC2X-400A425X	TMC2X-400NB425X	TMC2X-400SS425X	4"	-	1.73	-	-	3.56	3.94	3.700	4.250	3.38	5.23	5.75	5.16	LSF34	59.19

*Order Code Example: TMC2X-050A075 - "TMC2X" (Gland Type) - "050" (½" NPT Thread) - 'A' (Material Aluminum) - "075" (Max Cable Diameter 0.75")

Dimensions are displayed in inches unless otherwise stated