Brass

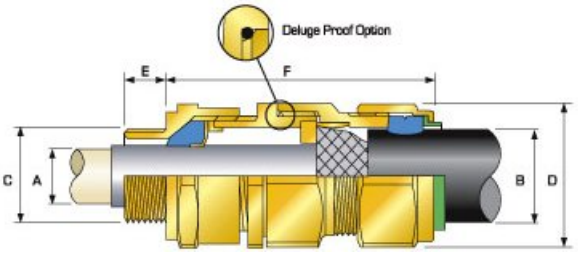
E2FX Tri-Star Flameproof Ex d, Increased Safety Ex e and Restricted Breathing Ex nR Cable Gland

CMP Type E2FX Tri-Star Triple Certified Flameproof (Type 'd'), Increased Safety (Type 'e') and Restricted Breathing (Type 'nR') cable gland for use in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous Areas with Lead Covered or Lead Sheathed and Braided, Pliable Wire Armour (PWA), Strip Armour, or Steel Tape Armour (STA) cable. This cable gland provides a Flameproof seal on the cable inner lead covering and in addition the gas tight seal has been tested to prove compatibility with restricted breathing equipment.

All CMP Cable Glands are EMC Tested.

The cable gland allows mechanical cable retention and earth continuity via the cable armour termination, and also earth bonding of the inner lead covering or lead sheath. Separate tightening actions for the inner displacement seal and the armour termination afford maximum control over the pressure applied to cable inner lead covering, and also allows the effectiveness of the gas tight seal to be tested. A detachable armour cone and AnyWay clamping ring arrangement facilitates remote make off and enables the cable to be disconnected from the equipment. An environmenta / load retention seal is provided on the cable outer sheath.

The CMP E2FX Tri-Star Cable Gland is suitable for use with all forms of equipment protection permitted in Zone 1, Zone 2, Zone 21 & Zone 22 provided always that the prevailing code of practice for selection and installation is observed, e.g. IEC 60079-14.



Note: Deluge Proof version available, ferrule colour coded "white" for ease of identification

Cable Gland Selection Table

Cable Gland Size	Available Entry Threads "C"			Min Thread Length "E"	Cable Lead Sheath Diameter "A"		Overall Cable Diameter "B"		Armour Range +		Across Flats "D"	Across Corners "D"	Protrusion Length "F"	Ordering Reference (Brass Metric) #	PVC Shroud Ref *	Cable Gland Weight (Kgs)
	Standard		Option		Min	Max	Min	Max	Min	Max	Max	Max				
	Metric	NPT	NPT													
20S/16	M20	1/2"	3/4"	15.0	3.1	8.6	6.1	13.2	0.0	1.0	24.0	25.9	58.5	20S16E2FX1RA	PVC04	0.158
20S	M20	1/2"	3/4"	15.0	6.1	11.6	9.5	15.9	0.0	1.0	24.0	25.9	58.5	20SE2FX1RA	PVC04	0.158
20	M20	1/2"	3/4"	15.0	6.5	13.9	12.5	20.9	0.0	1.0	30.5	32.9	60.5	20E2FX1RA	PVC06	0.208
25S	M25	3/4"	1"	15.0	11.1	19.9	14.0	22.0	0.0	1.0	37.5	40.5	67.5	25SE2X1RA	PVC09	0.330
25	M25	3/4"	1"	15.0	11.1	19.9	18.2	26.2	0.0	1.0	37.5	40.5	67.5	25E2FX1RA	PVC09	0.330
32	M32	1"	1 1/4"	15.0	17.0	26.2	23.7	33.9	0.0	1.0	46.0	49.7	69.5	32E2FX1RA	PVC11	0.463
40	M40	1 1/4"	1 1/2"	15.0	22.0	32.1	27.9	40.4	0.0	1.0	55.0	59.4	78.0	40E2FX1RA	PVC15	0.671
50S	M50	1 1/2"	2"	15.0	29.5	38.1	35.2	46.7	0.0	1.0	60.0	64.8	75.5	50SE2FX1RA	PVC18	0.760
50	M50	2"	2 1/2"	15.0	35.6	44.0	40.4	53.1	0.0	1.0	70.0	75.6	80.5	50E2FX1RA	PVC21	0.777
63S	M63	2"	2 1/2"	15.0	40.1	49.9	45.6	59.4	0.0	1.0	75.0	81.0	91.5	63SE2FX1RA	PVC23	1.369
63	M63	2 1/2"	3"	15.0	47.2	55.9	54.6	65.9	0.0	1.0	80.0	86.4	92.0	63E2FX1RA	PVC25	1.472
75S	M75	2 1/2"	3"	15.0	52.8	61.9	59.0	72.1	0.0	1.0	89.0	96.1	99.0	75SE2FX1RA	PVC28	2.119
75	M75	3"	3 1/2"	15.0	59.1	67.9	66.7	78.5	0.0	1.0	99.0	106.9	102.0	75E2FX1RA	PVC30	2.688
90	M90	3 1/2"	4"	15.0	66.6	79.9	76.2	90.4	0.0	1.6	114.0	123.1	120.0	90E2FX1RA	PVC32	4.281
100	M100	-	-	15.0	76.0	90.9	86.1	101.5	0.0	1.6	123.0	132.8	148.0	100E2FX1RA	LSF33	4.674
115	M115	-	-	15.0	86.0	97.9	101.5	110.3	0.0	1.6	133.4	144.1	169.0	115E2FX1RA	LSF34	7.085
130	M130	-	-	15.0	97.0	114.9	114.2	123.3	0.0	1.6	146.1	157.8	183.0	130E2FX1RA	LSF35	8.382
Dimensions are displayed in millimetres unless otherwise stated																

NOTE: *CMP SOLO LSF Halogen Free Shrouds also available on request. + Alternative armour clamping range available for non-standard armour sizes. # Other thread forms, materials and finishes are available. IEC Ex, ATEX & CSA hazardous area certification marking included as standard.

Cable Gland Size	Available Entry Threads "C"			Min Thread Length "E"	Cable Lead Sheath Diameter "A"		Overall Cable Diameter "B"		Armour Range +		Across Flats "D"	Across Corners "D"	Protrusion Length "F"	Ordering Reference (Brass Metric) #	PVC Shroud Ref *	Cable Gland Weight (Ozs)
	Standard		Option		Min	Max	Min	Max	Min	Max	Max	Max				
	Metric	NPT	NPT													
20S/16	M20	1/2"	3/4"	0.591	0.122	0.399	0.240	0.519	0.000	0.039	0.945	1.020	2.303	20S16E2FX1RA	PVC04	5.57
20S	M20	1/2"	3/4"	0.591	0.240	0.457	0.374	0.626	0.000	0.039	0.945	1.020	2.303	20SE2FX1RA	PVC04	5.57
20	M20	1/2"	3/4"	0.591	0.256	0.547	0.492	0.823	0.000	0.039	1.201	1.295	2.382	20E2FX1RA	PVC06	7.34
25S	M25	3/4"	1"	0.591	0.437	0.783	0.551	0.866	0.000	0.039	1.476	1.594	2.657	25SE2X1RA	PVC09	11.64
25	M25	3/4"	1"	0.591	0.437	0.783	0.717	1.031	0.000	0.039	1.476	1.594	2.657	25E2FX1RA	PVC09	11.64
32	M32	1"	1 1/4"	0.591	0.669	1.031	0.933	1.335	0.000	0.039	1.811	1.957	2.736	32E2FX1RA	PVC11	16.33
40	M40	1 1/4"	1 1/2"	0.591	0.866	1.264	1.098	1.591	0.000	0.039	2.165	2.339	3.071	40E2FX1RA	PVC15	23.67
50S	M50	1 1/2"	2"	0.591	1.161	1.500	1.386	1.839	0.000	0.039	2.362	2.551	2.972	50SE2FX1RA	PVC18	26.81
50	M50	2"	2 1/2"	0.591	1.402	1.732	1.591	2.091	0.000	0.039	2.756	2.976	3.169	50E2FX1RA	PVC21	27.41
63S	M63	2"	2 1/2"	0.591	1.579	1.965	1.795	2.339	0.000	0.039	2.953	3.189	3.602	63SE2FX1RA	PVC23	48.29
63	M63	2 1/2"	3"	0.591	1.858	2.201	2.150	2.594	0.000	0.039	3.150	3.402	3.622	63E2FX1RA	PVC25	51.92
75S	M75	2 1/2"	3"	0.591	2.079	2.437	2.323	2.839	0.000	0.039	3.504	3.783	3.898	75SE2FX1RA	PVC28	74.75
75	M75	3"	3 1/2"	0.591	2.327	2.673	2.626	3.091	0.000	0.039	3.898	4.209	4.016	75E2FX1RA	PVC30	94.82
90	M90	3 1/2"	4"	0.591	2.622	3.146	3.000	3.559	0.000	0.063	4.488	4.846	4.724	90E2FX1RA	PVC32	151.01
100	M100	-	-	0.591	2.992	3.579	3.390	3.996	0.000	0.063	4.843	5.228	5.827	100E2FX1RA	LSF33	164.87
115	M115	-	-	0.591	3.386	3.854	3.996	4.343	0.000	0.063	5.252	5.673	6.654	115E2FX1RA	LSF34	249.92
130	M130	-	-	0.591	3.819	4.524	4.496	4.854	0.000	0.063	5.752	6.213	7.205	130E2FX1RA	LSF35	295.67
Dimensions are displayed in inches unless otherwise stated																

NOTE: *CMP SOLO LSF Halogen Free Shrouds also available on request. + Alternative armour clamping range available for non-standard armour sizes. # Other thread forms, materials and finishes are available. IEC Ex, ATEX & CSA hazardous area certification marking included as standard.

TECHNICAL DATA

CSA Approval Certificate No.	1310517
CSA Code of Protection Category	Ex d IIC; Ex e II
CSA 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
GOST R Certificate Number	POCC GB.HO06.B00207
GOST R Code of Protection Category	Ex d IIC / Ex e II / DIP A21
GOST R Compliance Standards	ГОСТ Р 52350.0-2005, ГОСТ Р 52350.1-2005, ГОСТ Р 52350.7-2005, ГОСТ МЭК 61241-1-1-99
GOST GGTN Permit	PPC 00-40706
GOST K Certificate Number	KZ 75000361_01_01_14761
RoK Permit For Use Number	19-02-UL-1957
INMETRO Approval Certificate No.	MC, AEX-7618-X
INMETRO Code of Protection Category	BR - Ex d IIC / BR - Ex e II / IP66W
INMETRO Compliance Standards	ABNT NBR IEC 60079-0:2006, ABNT NBR IEC 60079-1:2007, IEC 60079-7:2001 e ANBT NBR IEC 60529:2005
NEPSI Certificate Number	GYJ081070
NEPSI Code of Protection Category	Ex d IIC, Ex e II, Ex nR II, DIP A21 TA
NEPSI Compliance Standards	GB3836.1/2/3, GB3836.8-2003, GB12476.1-2000
Lloyds Approval No.	01/00172
DNV Approval No.	E-10496
ABS Approval No.	01-LD234401A/2-PDA
RETIE Approval Number	03866
Type	E2FX Tri-Star
Design Specification	BS 6121:Part 1:1989, EN 50262:1999
ATEX Certification Detail	SIRA06ATEX1097X, SIRA07ATEX4326X
ATEX Code of Protection Category	ATEX II 2 GD, Ex d IIC, Ex e II, Ex tD A21 IP66, ATEX II 3 G Ex nR II
ATEX Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-15, IEC 61241-0, EN 61241-1
IEC Ex Certification Detail	IECEx SIR 06.0043X
IEC Ex Code of Protection Category	Ex d IIC, Ex e II, Ex nR II, Ex tD A21 IP66
IEC Ex Compliance Standards	IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60079-15:2005, IEC 61241-0, IEC 61241-1
Continuous Operating Temperature	-60°C to +130°C
Ingress Protection Rating	IP66, IP67, IP68 #
Cable Gland Material	Brass, Electroless Nickel Plated Brass, Stainless Steel, Aluminium
Seal Material	CMP SOLO LSF Thermoplastic Elastomer
Cable Type	Lead Sheathed & Wire Braid Armour (LC/SWB), Lead Sheathed & Pliable Wire Armour (LC/PWA), Lead Sheathed & Steel Tape Armour (LC/STA), Lead Sheathed & Strip Armour (LC/ASA)
Armour Clamping	Detachable Armour Cone & AnyWay Universal Clamping Ring
Sealing Technique	CMP Inner Displacement Seal & Unique CMP "LRS" TM Outer Load Retention Seal
Sealing Area(s)	Cable Inner Lead Sheath & Outer Sheath
Accessories	Adaptor/Reducer, Earth Tag, Locknut, Serrated Washer, Entry Thread Seal, Shroud

IP66 as standard, IP67/IP68 available on request. Deluge Proof when fitted with optional CMP O-ring in the cable gland body joint.

Note: Ingress Protection and Deluge Protection are essentially different and should not be confused with each other.

If Tape Armour is to be used please contact CMP for advice.