



Brass

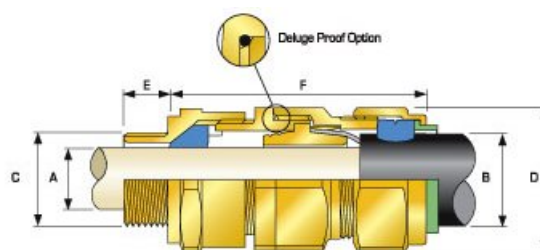
E1FU Tri-Star Flameproof Ex d, Increased Safety Ex e and Restricted Breathing Ex nR Cable Gland

CMP Type E1FU Tri-Star Triple Certified Flameproof (Type 'd'), Increased Safety (Type 'e') and Restricted Breathing (Type 'nR') indoor and outdoor cable gland for use in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous Areas with all types of armoured cable

All CMP Cable Glands are EMC Tested.

This cable gland provides a Flameproof seal on the cable inner bedding and in addition the gas tight seal has been tested to prove compatibility with Restricted Breathing equipment. The cable gland allows mechanical cable retention and earth continuity via the cable armour termination. Separate tightening actions for the inner Displacement Seal and the Armour Termination afford maximum control over the pressure applied to the cable bedding, and also allows the effectiveness of the gas tight seal to be tested. A reversible armour cone and AnyWay clamping ring arrangement facilitates remote make off and enables the cable to be disconnected from the equipment. An environmental / load retention seal is provided on the cable outer sheath.

The CMP E1FU 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.

Note: Stepped Cone is suitable for SWA cables, Grooved Cone is suitable for all other approved armoured cables

Cable Gland Selection Table

Cable Gland Size	Available Entry Threads "C"			Min Thread Length "E"	Cable Bedding Diameter "A"		Overall Cable Diameter "B"		Armour Range +				Across Flats "D"	Across Corners "D"	Protusion Length "F"	Ordering Reference (Brass Metric) #	PVC Shroud Ref*	Cable Gland Weight (Kgs)
	Standard		Option		Min	Max	Min	Max	Grooved Cone		Stepped Cone		Max	Max				
	Metric	NPT	NPT						Min	Max	Min	Max						
20S/16	M20	1/2"	3/4"	15.0	3.1	8.6	6.1	13.2	0.0	1.0	0.9	1.0	24.0	25.9	58.5	20S16E1FU1RA	PVC04	0.163
20S	M20	1/2"	3/4"	15.0	6.1	11.6	9.5	15.9	0.0	1.0	0.9	1.25	24.0	25.9	58.5	20SE1FU1RA	PVC04	0.163
20	M20	1/2"	3/4"	15.0	6.5	13.9	12.5	20.9	0.0	1.0	0.9	1.25	30.5	32.9	60.5	20E1FU1RA	PVC06	0.217
25S	M25	3/4"	1"	15.0	11.1	19.9	14.0	22.0	0.0	1.0	1.25	1.6	37.5	40.5	67.5	25SE1FU1RA	PVC09	0.345
25	M25	3/4"	1"	15.0	11.1	19.9	18.2	26.2	0.0	1.0	1.25	1.6	37.5	40.5	67.5	25E1FU1RA	PVC09	0.345
32	M32	1"	1 1/4"	15.0	17.0	26.2	23.7	33.9	0.0	1.0	1.6	2.0	46.0	49.7	69.5	32E1FU1RA	PVC11	0.484
40	M40	1 1/4"	1 1/2"	15.0	22.0	32.1	27.9	40.4	0.0	1.0	1.6	2.0	55.0	59.4	78.0	40E1FU1RA	PVC15	0.700
50S	M50	1 1/2"	2"	15.0	29.5	38.1	35.2	46.7	0.0	1.0	2.0	2.5	60.0	64.8	75.5	50SE1FU1RA	PVC18	0.800
50	M50	2"	2 1/2"	15.0	35.6	44.0	40.4	53.1	0.0	1.0	2.0	2.5	70.0	75.6	80.5	50E1FU1RA	PVC21	0.830
63S	M63	2"	2 1/2"	15.0	40.1	49.9	45.6	59.4	0.0	1.0	2.0	2.5	75.0	81.0	91.5	63SE1FU1RA	PVC23	1.415
63	M63	2 1/2"	3"	15.0	47.2	55.9	54.6	65.9	0.0	1.0	2.0	2.5	80.0	86.4	92.0	63E1FU1RA	PVC25	1.514
75S	M75	2 1/2"	3"	15.0	52.8	61.9	59.0	72.1	0.0	1.0	2.0	2.5	89.0	96.1	99.0	75SE1FU1RA	PVC28	2.199
75	M75	3"	3 1/2"	15.0	59.1	67.9	66.7	78.5	0.0	1.0	2.5	3.0	99.0	106.9	102.0	75E1FU1RA	PVC30	2.770
90	M90	3"	3 1/2"	15.0	66.6	79.9	76.2	90.4	0.0	1.6	3.0	3.5	114.0	123.1	120.0	90E1FU1RA	PVC32	4.350
100	M100	-	-	15.0	76.0	90.9	86.1	101.5	0.0	1.6	3.15	4.0	123.0	132.8	148.0	100E1FU1RA	LSF33	4.750
115	M115	-	-	15.0	86.0	97.9	101.5	110.3	0.0	1.6	3.15	4.0	133.4	144.1	169.0	115E1FU1RA	LSF34	7.300
130	M130	-	-	15.0	97.0	114.9	114.2	123.3	0.0	1.6	3.15	4.0	146.1	157.8	183.0	130E1FU1RA	LSF35	8.600

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 Bedding Diameter "A"		Overall Cable Diameter "B"		Armour Range +				Across Flats "D"	Across Corners "D"	Protusion Length "F"	Ordering Reference (Brass Metric) #	PVC Shroud Ref*	Cable Gland Weight (Ozs)
	Standard		Option		Min	Max	Min	Max	Grooved Cone		Stepped Cone		Max	Max				
	Metric	NPT	NPT						Min	Max	Min	Max						
20S/16	M20	1/2"	3/4"	0.591	0.122	0.339	0.240	0.519	0.000	0.039	0.035	0.039	0.945	1.020	2.303	20S16E1FU1RA	PVC04	5.75
20S	M20	1/2"	3/4"	0.591	0.240	0.457	0.374	0.626	0.000	0.039	0.035	0.049	0.945	1.020	2.303	20SE1FU1RA	PVC04	5.75
20	M20	1/2"	3/4"	0.591	0.256	0.547	0.492	0.823	0.000	0.039	0.035	0.049	1.201	1.295	2.382	20E1FU1RA	PVC06	7.65
25S	M25	3/4"	1"	0.591	0.437	0.783	0.551	0.866	0.000	0.039	0.049	0.063	1.476	1.594	2.657	25SE1FU1RA	PVC09	12.17
25	M25	3/4"	1"	0.591	0.437	0.783	0.717	1.031	0.000	0.039	0.049	0.063	1.476	1.594	2.657	25E1FU1RA	PVC09	12.17
32	M32	1"	1 1/4"	0.591	0.669	1.031	0.933	1.335	0.000	0.039	0.063	0.079	1.811	1.957	2.736	32E1FU1RA	PVC11	17.07
40	M40	1 1/4"	1 1/2"	0.591	0.866	1.264	1.098	1.591	0.000	0.039	0.063	0.079	2.165	2.339	3.071	40E1FU1RA	PVC15	24.69
50S	M50	1 1/2"	2"	0.591	1.161	1.500	1.386	1.839	0.000	0.039	0.079	0.098	2.362	2.551	2.972	50SE1FU1RA	PVC18	28.22
50	M50	2"	2 1/2"	0.591	1.402	1.732	1.591	2.091	0.000	0.039	0.079	0.098	2.756	2.976	3.169	50E1FU1RA	PVC21	29.28
63S	M63	2"	2 1/2"	0.591	1.579	1.965	1.795	2.339	0.000	0.039	0.079	0.098	2.953	3.189	3.602	63SE1FU1RA	PVC23	49.91
63	M63	2 1/2"	3"	0.591	1.858	2.201	2.150	2.594	0.000	0.039	0.079	0.098	3.150	3.402	3.622	63E1FU1RA	PVC25	53.40
75S	M75	2 1/2"	3"	0.591	2.079	2.437	2.323	2.839	0.000	0.039	0.079	0.098	3.504	3.783	3.898	75SE1FU1RA	PVC28	77.57
75	M75	3"	3 1/2"	0.591	2.327	2.673	2.626	3.091	0.000	0.039	0.098	0.118	3.898	4.209	4.016	75E1FU1RA	PVC30	97.71
90	M90	3"	3 1/2"	0.591	2.622	3.146	3.000	3.559	0.000	0.063	0.118	0.138	4.488	4.846	4.724	90E1FU1RA	PVC32	153.44
100	M100	-	-	0.591	2.992	3.579	3.390	3.996	0.000	0.063	0.124	0.157	4.843	5.228	5.827	100E1FU1RA	LSF33	167.55
115	M115	-	-	0.591	3.386	3.854	3.996	4.343	0.000	0.063	0.124	0.157	5.252	5.673	6.654	115E1FU1RA	LSF34	257.50
130	M130	-	-	0.591	3.819	4.524	4.496	4.854	0.000	0.063	0.124	0.157	5.752	6.213	7.205	130E1FU1RA	LSF35	303.36

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.

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 P 52350.0-2005, ГОСТ P 52350.1-2005, ГОСТ P 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	E1FU Tri-Star
Design Specification	BS 6121:Part 1:1989 , EN 50262:1999
ATEX Certification Detail	SIRA 06ATEX1097 X , SIRA07ATEX4326 X
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
EN 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 06.0043 X
IEC Code of Protection Category	Ex d IIC, Ex e II, Ex nR II, Ex tD A21 IP66, Ex d I, Ex e I
IEC Compliance Standards	IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60079-15, 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	Single Wire Armour (SWA), Aluminium Wire Armour (AWA), Steel Tape Armour (STA), Wire Braid Armour (e.g. SWB), Aluminium Strip Armour (ASA), Pliable Wire Armour (PWA), Screened Flexible Wire Braid (e.g. CY / SY), Armored & Jacketed
Armour Clamping	Reversible 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 Bedding & Outer Cable 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.

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