

## EC DECLARATION OF CONFORMITY

We declare that the products designed to be placed on the market for use in the explosive atmospheres described below:

Cable glands type E1RU in execution:

II 2GD Ex d IIC Gb; Ex e IIC Gb; Ex tb IIIC Db IP66/68

Temperature range for E1RU:

-40°C to +100°C with Neoprene (Chloroprene) sealing rings

-60°C to +130°C with Silicon sealing rings

restricted use up to -20°C for cable glands made of galvanized carbon steel.

-40°C to +80°C for cable glands with fiber flat washer.

Certificate number : CESI 15 ATEX 058X

IECEX CES 15.0020X

Satisfy

The dispositions applied of them directive ATEX 2014/34/EU

The harmonized standards applied :

EN 60079-0; EN 60079-1; EN 60079-7; EN 60079-31

These products has been designed, manufactured and controlled within the guidelines of a quality insurance system which is certificated to be conform with ISO 9001 and EN ISO 80079-34:2011.

### Tightening torque values, Metric

Thread Size	Tightening torque for torque & impact test	Tightening torque for Fig. C.1b exaple 2 stopping plug Nm
< 16	2d <sup>3</sup>	3,5 d <sup>3</sup>
16	40	65
20	40	65
25	55	95
32	65	110
40	80	130
50	100	165
63	115	195
75	140	230
> 75	2d <sup>3</sup>	3,5 d <sup>3</sup>

a the variable d is the measure diameter of thread in mm

## CERTIFICATE

### CABLE GLANDS TYPE UL..(E1RU)

### SAFETY, MAINTENENCE AND MOUNTING INSTRUCTIONS

#### CERTIFICATE

RRPL & E1RU CE 0539 II2GD Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db IP66/68  
CESI 15 ATEX 058X, IECEx CES 15.0020X

#### APPLICABLE STANDARDS

IEC 60079-0; EDITION-6.0; IEC 60079-1; EDITION-6;  
IEC 60079-31; EDITION-1; IEC 60079-7; EDITION-04

#### TEMPERATURE OF INSTALLATION

##### For E1RU -UL

-40°C to +100°C with Neoprene (Chloroprene) sealing ring  
-60°C to +130°C with with Silicon sealing ring

Cable glands made of galvanized steel can be used up to -20°C.  
Green fiber washer can be used from -40°C to +80°C.

Notified body  
UL International  
DEMKO A/5/0539

## SAFETY, MAINTENANCE AND MOUNTING INSTRUCTIONS FOR CABLE GLANDS – TYPE : UL.. (E1RU)

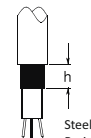
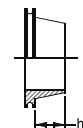
### SAFETY INSTRUCTIONS

- They are destined to qualified personnel in compliance with the national laws and where applicable, in accordance with IEC 60079-17 Standard, concerning electrical appliances to products are not allowed.
- Changes to products are not allowed.
- Only Raychem spare parts must be used.
- Everyday and extraordinary maintenance operations must be carried out only by qualified personnel after approval from expert technicians.
- The maintenance operations cut of from mains or from the related electrical appliance.
- The following instructions must be strictly followed in order to get a perfect assembling, must be carried out only after the engine has been
- The national safety rules and accident prevention this technical booklet, must be strictly respected, regulations, specified as in
- These cable glands may be used with steel wire armoured cables, with braide cables, with metal tape shielded cables.
- Ex-d IIC Gb and Ex-e II Gb cable glands, can be used with Ex-i circuits.
- Please refer to the figure below, for details about the preparation of steel wire armour, braided and tape shielded cables for fitting into the cable gland.
- The coupling of the cable glands to the enclosure and torque values of cap clamping shall be made as indicated by the manufacturer in the documents annexed to this certificate in order to respect the type of protection of the electrical apparatus on which cable glands are mounted.
- The cable gland installation shall be done in such a way that the temperature at the mounting point will remain within the service temperature ranges declared in this certificate.



#### Composition of armour:

-  
h min  
=  
Heigh h1 of armour  
tightening cone  
+  
2 mm max



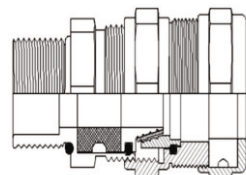
Steel wire armour  
Braided/tape wire armour

### Non Threaded enclosure applications (Exe and Extb)

Recommended Hole Diameters For Non Threaded enclosure applications in relation with the used thread types are shown below.

Metric Threads (EN 60423)		G Threads (GASUNI ISO 228/1)		PG Threads (DIN 40430)	
Thread	Hole Diameter (min. - max. mm)	Thread	Hole Diameter (min. - max. mm)	Thread	Hole Diameter (min. - max. mm)
M16 x 1.5	ø16.0 - 16.3	G 3/8"	ø16.6 - 16.9	PG 9	ø15.2 - 15.5
M20 x 1.5	ø20.0 - 20.3	G 1/2"	ø21.0 - 21.3	PG 11	ø18.6 - 18.9
M25 x 1.5	ø25.0 - 25.3	G 3/4"	ø26.4 - 26.7	PG 13.5	ø20.4 - 20.8
M32 x 1.5	ø32.0 - 32.3	G 1"	ø33.3 - 33.6	PG 16	ø22.5 - 22.8
M40 x 1.5	ø40.0 - 40.3	G 1 1/4"	ø41.0 - 42.2	PG 21	ø28.3 - 28.6
M50 x 1.5	ø50.0 - 50.3	G 1 1/2"	ø47.8 - 48.1	PG 29	ø37.0 - 37.3
M63 x 1.5	ø63.0 - 63.3	G 2"	ø59.6 - 59.9	PG 36	ø47.0 - 47.3
M75 x 1.5	ø75.0 - 75.3	G 2 1/2"	ø75.2 - 75.5	PG 42	ø54.0 - 54.3
M90 x 1.5	ø90.0 - 90.3	G 3"	ø87.9 - 88.2	PG 48	ø59.3 - 59.6

- For non-threaded enclosure applications, min 3 threads should be engaged with the lock nut.
- For non-threaded enclosures it is recommended to use flat washer (fiber, chloroprene, silicon) between the gland body and enclosure. During the assembly it is recommended to rotate the locknut. If the assembly needs to be done by rotating the gland, then oring should be preferred.
- For oring material Chloroprene (neoprene) and silicon rubber can be used. For flat washer material Fiber, chloroprene (neoprene) or silicon rubber can be used.



### CableGlandTypeE1RU

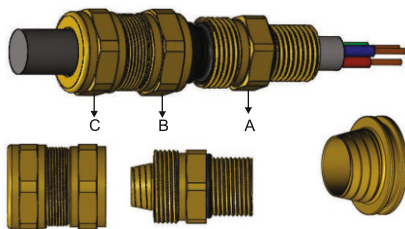
Execution Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db  
Composition of cable gland: Assembled A-body; sealing ring; grounding cone; and armour tightening ring/shielding cone Assembled B-Middle body; armour tightening ring  
Assembled C-nut; external sealing ring

### Tightening torque values, NPT

Thread Size	Tightening torque NM
1/2 - 3/4	90 <sup>B</sup>
1 - 1 1/2	113
2 & Larger	181

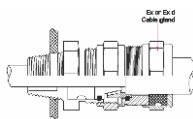
### Assembling Instructions:

- Fit assembled C and B on the cable, prepared as detailed above.
- Fit the assembled A in the entry of the electric equipment.
- After having slipped the under armour sheath of the cable in to assembled A, tighten the assembly with the assembled B. Keep the cable pushed towards the inside of the apparatus, so that the armour is always in contact with the conical part of the armour tightening section.
- Complete the installation, by tightening the assembled C, with assembled B.



### IP protection mode for Ex d - Ex e - Ex tb cable glands with tapered thread

For E1RU and type cable gland



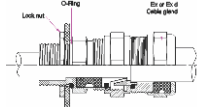
### NOTE:

Ingress Protection: In order to guarantee the specified IP66/68 rating, sealant agent shall be applied on at least two full threads before fitting the gland to the box. In any case you must pay attention to guarantee the metallic continuity.

Assembling on Ex d enclosures:

The enclosure wall has to be thick enough to engage at least 5 full threads.

### IP protection mode for Ex d - Ex e - Ex tb cable glands with cylindrical thread



### NOTE:

To ensure that the specified IP66/68 protection mode is achieved with the installation (threaded or non-threaded holes), please follow the steps detailed hereafter:

### Enclosures Ex d:

Assembling with o-ring on the thread of gland through a threaded hole. The wall has to be thick enough to engage at least 5 full threads.

### Enclosures Ex e:

Tighten with locknut inside and o-ring on the thread of the gland. You have to respect a minimum wall thickness of 1,5 mm.

Type cable glands	Sealings range	
	Inner min-max	Outer min-max
UL_16S1	3,0-8,5	6,0-12,0
UL_16S2	6,0-12,0	8,5-16,0
UL_20S1	3,0-8,5	6,0-12,0
UL_20S2	6,0-12,0	8,5-16,0
UL_20S3	12,0-14,5	16,0-20,0
UL_25X1	3,0-8,5	6,0-12,0
UL_25S1	6,0-12,0	8,5-16,0
UL_25S2	12,0-16,0	16,0-21,0
UL_25S3	12,0-20,0	16,0-26,0
UL_32X1	6,0-12,0	8,5-16,0
UL_32S1	12,0-20,0	16,0-26,0
UL_32S2	15,0-26,0	20,0-33,0
UL_40X1	12,0-20,0	16,0-26,0
UL_40S1	15,0-26,0	20,0-33,0
UL_40S2	20,0-32,0	29,0-41,0
UL_50X1	15,0-26,0	20,0-33,0
UL_50X2	20,0-32,0	29,0-41,0
UL_50S1	22,0-35,0	33,0-48,0
UL_50S2	27,0-41,0	36,0-52,0
UL_63X1	22,0-35,0	33,0-48,0
UL_63X2	27,0-41,0	36,0-52,0
UL_63S1	35,0-45,0	43,0-57,0
UL_63S2	40,0-52,0	47,0-60,0
UL_75X1	35,0-45,0	43,0-57,0
UL_75S1	40,0-52,0	47,0-60,0
UL_75S2	45,0-60,0	54,0-70,0
UL_90X1	40,0-52,0	47,0-60,0
UL_90S1	45,0-60,0	54,0-70,0
UL_90S2	60,0-72,0	63,0-80,0
UL_1101	45,0-60,0	54,0-70,0
UL_1102	60,0-72,0	63,0-80,0