IECEx Certificate of Conformity

Prot: B3023601

Annex to certificate: **IECEx CES 13.0014X Issue No.:0 of 2013-08-30**

Applicant: **Cable Management Products Ltd,** (A Thomas and Betts Company)
CMG House, Station Road, Coleshill, Birmingham, B46 1HT, United Kingdom

Apparatus: **Cable Glands type EX..C1 and EX..C3**

Description of the equipment:

The cable glands series EX..C1 and EX..C3 are suitable for inserting circular cables into Ex d enclosures having threaded entries and Ex e or Ex tb enclosures having either threaded or plane entries. Attachment of the glands to an enclosure is by means of the male threaded portion on the male body. An elastomeric inner sealing ring is used in each gland type to facilitate sealing between the cable and gland body and to clamp the cable to prevent pulling or twisting forces being transmitted to the conductor connections. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the glands are installed in accordance with the manufacturer's instructions.
The cable glands should be also used for intrinsically safe circuits Ex-i. These cable glands should have a part painted light blue.

The types EX..C3 glands are designed for non-armoured cables while the types EX..C1 glands are designed for steel wire armour or shielded cables.

The cable glands standard threads types are NPT ANSI ASME B1.20.1 from 3/8" up to 3" and cylindrical ISO Metric 965/1 and ISO 965/3 from M20x1.5 up to M90X1.5. Alternative available tapered threads are GAS UNI ISO 7/1 while cylindrical threads are GAS UNI ISO 228/1, N.P.S.M. and type PG DIN 40430. Thread type PG DIN 40430 can be used for "Ex e" execution only.

To guarantee the IP 66/68 degree of protection the cable glands series EX..C1 and EX..C1 with cylindrical threads have a sealing edge machined for fitting an elastomeric gasket, while for all other threads the IP 66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

The cable glands are generally made in Brass (CuZn39Pb3 EN 12164). The alternative materials Nickel brass plated (CuZn39Pb3 EN 12164), Galvanized carbon steel (type FE36, FE37 UNI 10233/4) or Stainless steel (type AISI316, AISI304 and AISI303) can be supplied on demand.

The sealing rings can be made of Chloroprene with operating temperature range from -40℃ to +100℃ or Silicon rubber with operating temperature range from -60℃ to +130℃, with the exception of cable glan ds made of galvanized carbon steel which are restricted to the lower temperature range of -20℃.

Constructional characteristics

Degree of protection (IEC 60529):	IP 66 / IP 68 (50 m for 30 min.).
Service temperature range:	- 40 ÷ + 100 ℃ for models with sealing rings made of Chl oroprene rubber. - 60 ÷ + 130 ℃ for models with sealing rings made of Sil icon rubber. up to -20 ℃ for models made of Galvanized carbon steel.

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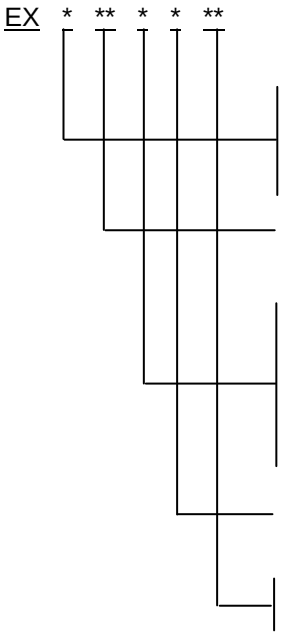
Identification of cable glands



Manufacturing material:
- **Blank**: brass
- **N**: nickel plated brass
- **S**: stainless steel
- **Z**: galvanized carbon steel

Size 03, … 11 (*see table 1 and 2*)

Type of thread:
- **A**: NPT ANSI/ASME B1.20.1
- **S**: NPSM
- **P**: PG DIN 40430 *(assessed for Ex e protection mode only)*
- **M**: UNI ISO 261 passo 1,5
- **C**: GAS UNI ISO 228-1
- **G**: GAS UNI ISO 7-1

Size **S** or **M** or **L** (*see table 1 and 2*)

Code which identifies the type:
- **C1**: cable gland for armoured or shielded cable
- **C3**: cable gland for non-armoured cable

Part number and thread types and sizes of cable glands are listed on the followings Table 1 and Table 2:

Table 1:

EX..C1				
Cable glands type / size	**NPT**	**ISO pitch 1,5**	**Cable Dia. ranges** (mm)	
			Inner sheath	Armour sheath
EX 03..S	3/8”	M16	3-8,5	6-12
EX 03..M	3/8”	M16	6-12	8,5-16
EX 04..S	1/2”	M 20	3-8,5	6-12
EX 04..M	1/2”	M 20	6-12	8,5-16
EX 04..L	1/2”	M 20	12-14,5	16-20
EX 05..S	3/4”	M 25	6-12	8,5-16
EX 05..M	3/4”	M 25	12-16	16-21
EX 05..L	3/4”	M 25	12-20	16-26
EX 06..S	1”	M 32	12-20	16-26
EX 06..M	1”	M 32	15-26	20-33
EX 07..S	1 ¼”	M 40	15-26	20-33
EX 07..M	1 ¼”	M 40	20-32	29-41
EX 08..S	1 ½”	M 50	22-35	33-48
EX 08..M	1 ½”	M 50	27-41	36-52
EX 09..S	2”	M 63	35-45	43-57
EX 03..S	2”	M 63	40-52	47-60
EX 10..S	2 ½”	M 75	40-52	47-60
EX 10..M	2 ½”	M 75	45-60	54-70
EX 11..S	3“	M 90	45-60	54-70
EX 11..M	3“	M 90	60-72	63-80

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Apparatus: **Cable Glands type EX..C1 and EX..C3**

Table 2:

EX..C3			
Cable glands type / size	**NPT**	**ISO pitch 1,5**	**Cable Dia. ranges** (mm)
EX 03..S	3/8”	M16	3-8,5
EX 03..M	3/8”	M16	6-12
EX 04..S	1/2”	M 20	6-12
EX 04..M	1/2”	M 20	12-14,5
EX 05..S	3/4”	M 25	6-12
EX 05..M	3/4”	M 25	12-16
EX 05..L	3/4”	M 25	12-20
EX 06..S	1”	M 32	12-20
EX 06..M	1”	M 32	15-26
EX 07..S	1 ¼”	M 40	15-26
EX 07..M	1 ¼”	M 40	20-32
EX 08..S	1 ½”	M 50	22-35
EX 08..M	1 ½”	M 50	27-41
EX 09..S	2”	M 63	35-45
EX 09..M	2”	M 63	40-52
EX 10..S	2 ½”	M 75	40-52
EX 10..M	2 ½”	M 75	45-60
EX 11..S	3“	M 90	45-60
EX 11..M	3“	M 90	60-72