



EU Type Examination Certificate CML 19ATEX1367X Issue 0

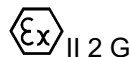
- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Type EX-20**, EE-21** and EX-22** Range of Cable Glands**
- 3 Manufacturer **Amphenol EEC, Inc.**
- 4 Address 1701 Birchwood Ave, Des Plaines,
Illinois 60018, United States of
America
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018
EN IEC 60079-7:2015+A1:2018
EN 60079-1:2014
EN 60079-31:2014

- 10 The equipment shall be marked with the following:

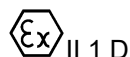
EX-20 & EX-22



II 2 G

Ex db IIC Gb

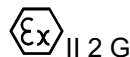
Ex eb IIC Gb



II 1 D

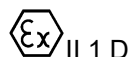
Ex ta IIIC Da

EE-21



II 2 G

Ex eb IIC Gb



II 1 D

Ex ta IIIC Da



CML 19ATEX1367X
Issue 0

11 Description

The type EX-20**, EE-21** and EX-22** ranges of cable glands may be supplied in gland size 16 to 100 with entry thread sizes M20 to M100 or with the equivalent size NPT, NPSM, BSPP, BSPT, PG or ET entry thread forms. They are intended for use with effectively filled and circular armoured, unarmoured, braided, tape or screened sheathed cables and comprise the following components:

- a. An entry component
- b. An elastomeric inner sealing ring
- c. A metal inner skid washer
- d. A compression nut
- e. An armour clamping cone
- f. A tapered clamp ring
- g. A middle nut
- h. An elastomeric outer sealing ring
- i. A nylon outer skid washer
- j. A back nut
- k. An O-ring entry body seal

Design options

- i. EX-20 Only - The use of a brass continuity washer to enable the glands to be used with lead inner sheathed cables. An optional reduced bore outer seal may also be fitted.
- ii. EX-22 Only - Replacement of the middle nut and back nut, outer seal and outer skid washer with an alternative middle cap component, for indoor use.
- iii. EE-21 Only - Removal of the inner sealing ring and inner skid washer, to permit the glands to be used with armoured, non-lead sheathed cables. An optional reduced bore outer seal may also be fitted.
- iv. Marking of EX-22 and EX-20 Cable glands IP68. The EE-21 Cable glands are marked IP66.
- v. Sealing rings are available in either neoprene or silicone rubber.

Notes:

Certificate Sira 05ATEX1120X / IECEx SIR 07.0110X is superseded by certificate CML 19ATEX1367X / IECEx CML 19.0114X.

The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 05ATEX1120X / IECEx SIR 07.0110X.

Where Sira 05ATEX1120X / IECEx SIR 07.0110X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.



CML 19ATEX1367X
Issue 0

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	22 Apr 2021	R12631A/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

None.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. Glands fitted with neoprene sealing rings (black) shall not be used in enclosures where the temperature, at the point of mounting, is outside the range of -35°C to +90°C.
- ii. Glands fitted with silicone sealing rings (white or red) shall not be used in enclosures where the temperature, at the point of mounting, is outside the range of -60°C to +180°C.
- iii. When the gland is used with increased safety and/or dust protected equipment, the entry thread shall be suitably sealed to maintain the ingress protection rating of the associated enclosure.
- iv. If the EX-20**, EE-21** and EX-22** types of cable glands only grip the cable sheath of the cable and do not clamp the cable armour or if they are used to terminate unarmoured, braided or screened cables, then they shall only be used for fixed installations, hence, the cables shall be effectively clamped to prevent pulling or twisting.
- v. The EX-20** and EX-22** cable glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66 and IP68 (50 metres 7 days).
- vi. The EE-21** range of cable glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66.
- vii. The threaded entry component threads without interface O-ring seals installed in an explosive dust atmosphere, within threaded entries, shall only be fitted into enclosures that have either:
 - parallel entries that will ensure that a minimum of 5 full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014.
 - tapered entries that will ensure that a minimum of 3 ½ full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014.

Certificate Annex

Certificate Number CML 19ATEX1367X
Equipment Type EX-20**, EE-21** and EX-22** Range of Cable Glands
Manufacturer Amphenol EEC, Inc.



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AMP/ATX/CR	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-20 Cable Gland Range
AMP/ATX/CRD	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-22 Cable Gland Range
AMP/ATX/CRO	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EE-21 Cable Gland Range



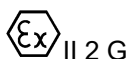
EU Type Examination Certificate CML 19ATEX1368X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Type EX-50* and EX-55* Range of Cable Glands**
- 3 Manufacturer **Amphenol EEC, Inc.**
- 4 Address 1701 Birchwood Ave, Des Plaines,
Illinois 60018, United States of
America
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

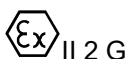
EN IEC 60079-0:2018	EN 60079-1:2014
EN IEC 60079-7:2015+A1:2018	EN 60079-31:2014

- 10 The equipment shall be marked with the following:



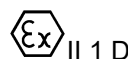
II 2 G

Ex db IIC Gb



II 2 G

Ex eb IIC Gb



II 1 D

Ex ta IIIC Da



CML 19ATEX1368X
Issue 0

11 Description

These cable glands are intended for use with flat profile cables.

The EX-55 may be used with any cable type where sealing and retention is required by gripping the outer sheath (this includes armoured/screened/braided cables, the armour/screen/braid being clamped inside the terminating equipment).

The EX-50 model has an additional clamp to grip copper braid and woven steel wire armour, which seals and grips the inner and outer sheaths.

Construction materials are brass, mild steel or stainless steel. In all cases, the seal materials are silicone. Glands are available in the size range 20S, 20R and 20 with an M20 x 1.5 and M25 X 1.5 metric entry thread. Alternative equivalent size entry thread forms are available. The glands have an ingress protection rating of IP66 and IP68 (50 metres 7 days).

The EX-55F and EX-55M model series variant to the EX-55 series additionally provides, via an alternative cap component, male or female connection to solid rigid conduit or flexible metallic conduit. The EX-55C model series variant to the EX-55 series additionally provides, via an alternative compression bush component, male connection to galvanised steel or stainless steel, unsheathed or protective sheathed, flexible metallic conduit.

The EX-50F and EX-50M model series variant to the EX-50 series additionally provide, via an alternative cap component, male or female connection to solid rigid conduit or flexible metallic conduit.

Type EX-55 / EX-55F and EX-55M Cable Glands

Gland Size	Standard Entry Threads		Outer Sheath Data			
	Metric	NPT	Min		Max	
			A	B	A	B
20S	M20	1/2"	6.3	4.0	11.7	7.0
20	M20	1/2"	10.3	5.6	13.5	9.0
20R	M20	1/2"	8.1	5.8	13.5	6.2
25	M25	3/4"	10.6	4.0	16.2	7.0



**CML 19ATEX1368X
Issue 0**

Type EX-55C Cable Glands:

Gland Size	Standard Entry Threads		Outer Sheath and Conduit Data					
	Metric	NPT	Cable Sheath Data				Conduit Data	
			Min		Max		Typical Conduit ID	Max Conduit OD
			A	B	A	B		
20S-1	M20	½"	6.3	4.0	11.2	7.0	13.0	17.1
20S-2	M20	½"	6.3	4.0	11.7	7.0	15.0	19.3
20S-3	M20	½"	6.3	4.0	11.7	7.0	16.9	21.5
20-1	M20	½"	10.3	5.6	11.2	9.0	13.0	17.1
20-2	M20	½"	10.3	5.6	13.5	9.0	15.0	19.3
20-3	M20	½"	10.3	5.6	13.5	9.0	16.9	21.5
20R-1	M20	½"	8.1	5.8	11.2	6.2	13.0	17.1
20R-2	M20	½"	8.1	5.8	13.5	6.2	15.0	19.3
20R-3	M20	½"	8.1	5.8	13.5	6.2	16.9	21.5
25-1	M25	¾"	10.6	4.0	16.2	7.0	16.9	23.8
25-2	M25	¾"	10.6	4.0	16.2	7.0	18.7	24.8
25-3	M25	¾"	10.6	4.0	16.2	7.0	21.1	26.8
25-4	M25	¾"	10.6	4.0	16.2	7.0	20.7	27.8

Type EX-50 / EX-50F and EX-50M Cable Glands:

Gland Size	Standard Entry Threads		Inner Sheath Range				Outer Sheath Range				Armour Wire Dia.	
	Metric	NPT	Min		Max		Min		Max		Min	Max
			A	B	A	B	A	B	A	B		
20S	M20	½"	6.3	4.0	11.7	7.0	7.9	4.5	11.7	7.0	0.1	0.3
20	M20	½"	10.3	5.6	13.5	9.0	11.0	4.5	13.5	9.0	0.1	0.3
20R	M20	½"	8.1	5.8	13.5	6.2	10.7	5.4	16.1	8.3	0.1	0.3

Note: A = width and B = thickness

Notes:

Certificate Sira 05ATEX1121X / IECEx SIR 07.0106X is superseded by certificate CML 19ATEX1368X / IECEx CML 19.0110X.

The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 05ATEX1121X / IECEx SIR 07.0106X.

Where Sira 05ATEX1121X / IECEx SIR 07.0106X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.



CML 19ATEX1368X
Issue 0

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	22 Apr 2021	R12631B/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

None.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. The EX-55, EX-55F, EX-55M, EX-55C, EX-50, EX-50F and EX-50M ranges of cable glands shall not be used in enclosures where the temperature, at the point of mounting, is outside the range of -60°C to +180°C.
- ii. The EX-55, EX-55F, EX-55M, EX-55C, EX-50, EX-50F and EX-50M ranges of cable glands shall only be used for fixed installations, in addition, the cables shall be effectively clamped to prevent pulling or twisting.
- iii. The EX-55, EX-55F, EX-55M, EX-55C, EX-50, EX-50F and EX-50M ranges of cable glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66 and IP68 (50 metres 7 days).
- iv. The threaded entry component threads without interface O-ring seals installed in an explosive dust atmosphere, within threaded entries, shall only be fitted into enclosures that have either:
 - parallel entries that will ensure that a minimum of 5 full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014
 - tapered entries that will ensure that a minimum of 3 ½ full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014

Certificate Annex

Certificate Number CML 19ATEX1368X
Equipment Type EX-50* and EX-55* Range of Cable Glands
Manufacturer Amphenol EEC, Inc.



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AMP/ATX/UF	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-55 Cable Gland Range
AMP/ATX/BF	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-50 Cable Gland Range



EU Type Examination Certificate CML 19ATEX1369X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Type EX-25* and EE-30* Range of Cable Glands**
- 3 Manufacturer **Amphenol EEC, Inc.**
- 4 Address 1701 Birchwood Ave, Des Plaines,
Illinois 60018, United States of
America
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014
EN 60079-7:2015	EN 60079-31:2014

- 10 The equipment shall be marked with the following:

EX-25*:



II 2 G

Ex db IIC Gb

Ex eb IIC Gb



II 1 D

Ex ta IIIC Da

EE-30*:



II 2 G

Ex eb IIC Gb



II 1 D

Ex ta IIIC Da

A Snowden

A Snowden MIET
Assistant Certification Manager



CML 19ATEX1369X
Issue 0

11 Description

The EX-25* and EE-30* Ranges of Cable Glands are intended for use with SWA/Woven Steel Wire/Steel Tape/Braid armoured cables. Each comprises a threaded entry body, elastomeric sealing ring, armour cone, clamp ring and compression cap. The entry body is available with an optional outer deluge seal or an integral earthing clamp. The EX-25* glands have a double seal arrangement of flameproof and outer IP seal with extra compression cap and skid washer to suit. EE-30* glands have only the outer IP seal arrangement. Seals are available in silicone and neoprene. Each gland type is available with an optional earth clamp arrangement on the entry body.

Glands are available in the size range 16 to 100 with ISO metric entry threads of M16 to M100 respectively. Alternative threadforms and sizes, NPT, NPSM, BSPT, BSPP, PG and ET are available. The EX-25* glands have an ingress protection rating of IP66 and IP68 (50 m 7 days) and the EE-30* glands have an IP66 rating.

Design options:

1. Cable glands can be fitted with multi-clamping clamp ring for all armour types. These glands are not available in aluminium material
2. When fitted with neoprene seals the service temperature range of the glands is: -35°C to +90°C. When fitted with silicone seals the service temperature range of the glands is: -60°C to +180°C.
3. All gland types with parallel threaded entry threads may have a modified thread length of a minimum of 10 mm and be marked suitable only for 'Ex eb' applications.
4. All gland types with parallel threaded entry threads to be manufactured with a longer than 'standard' thread length to suit the end use application.
5. All gland types can be manufactured with larger than the 'standard' entry threads as listed within the product description.
6. All gland types with parallel threaded entry threads may optionally be modified and fitted with an O-ring seal.
7. All cable glands may be fitted with alternative component on the rear back to allow connection of conduits.

Notes:

Certificate Sira 05ATEX1122X / IECEx SIR 07.0108X is superseded by certificate CML 19ATEX1369X / IECEx CML 19.0112X.

The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 05ATEX1122X / IECEx SIR 07.0108X.

Where Sira 05ATEX1122X / IECEx SIR 07.0108X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	22 Apr 2021	R12631C/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.



CML 19ATEX1369X
Issue 0

13 Conditions of Manufacture

None.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. The Ranges of EX-25* and EE-30* Cable Glands shall not be used in enclosures where the temperature, at the point of contact exceeds the following temperatures:
 - 35°C to +90°C for neoprene seal variants.
 - 60°C to +180°C for the silicone seal variants.
- ii. The ranges of EX-25* Cable Glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66 and IP68 (50 meters 7 days).
- iii. The Ranges of EE-30* Cable Glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66.
- iv. The threaded entry component threads without interface O-ring seals installed in an explosive dust atmosphere, within threaded entries, shall only be fitted into enclosures that have either:
 - parallel entries that will ensure that a minimum of 5 full threads of contact will be maintained, this is in accordance with clause 5.1.2 of IEC 60079-31:2013 / EN 60079 31:2014,
 - tapered entries that will ensure that a minimum of 3 ½ full threads of contact will be maintained, this is in accordance with clause 5.1.2 of IEC 60079-31:2013 / EN 60079-31:2014
- v. If the EX-25*, and EE-30* type cable glands only grip the cable sheath and do not clamp the armour, or if they are used to terminate unarmoured, braided or screened cables, then they shall only be used for fixed installations, hence the cables shall be effectively clamped to prevent pulling or twisting.

Certificate Annex

Certificate Number CML 19ATEX1369X
Equipment Type EX-25* and EE-30* Range of Cable Glands
Manufacturer Amphenol EEC, Inc.



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AMP/ATX/E1WF	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-25 Cable Gland Range
AMP/ATX/CWLE	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EE-30 Cable Gland Range



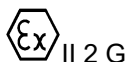
EU Type Examination Certificate CML 19ATEX1370X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Type EX-35*, EX-40* and EX-45* Range of Cable Glands**
- 3 Manufacturer **Amphenol EEC, Inc.**
- 4 Address 1701 Birchwood Ave, Des Plaines,
Illinois 60018, United States of
America
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

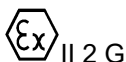
EN IEC 60079-0:2018	EN 60079-1:2014
EN IEC 60079-7:2015+A1:2018	EN 60079-31:2014

- 10 The equipment shall be marked with the following:



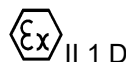
II 2 G

Ex db IIC Gb



II 2 G

Ex eb IIC Gb



II 1 D

Ex ta IIIC Da



**CML 19ATEX1370X
Issue 0**

11 Description

The type EX-35*, EX-40* and EX-45* range of cable glands is intended for use with any cable type where sealing and retention is required by gripping the outer sheath (this includes armoured/screened/braided cables, the armour/screen/braid being clamped inside the terminating equipment). Construction materials are brass, mild steel, stainless steel or aluminium alloy. Glands are available in a single or double seal configuration and utilise a silicone or neoprene seal. The single seal configuration is available with a compression nut, which will accept either male or female conduit.

Glands are available in the size range 12 to 100 mm with ISO metric entry threads of M12 to M100 respectively. Alternative thread forms are available.

Notes:

Certificate Sira 05ATEX1123X / IECEx SIR 07.0107X is superseded by certificate CML 19ATEX1370X / IECEx CML 19.0111X.

The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 05ATEX1123X / IECEx SIR 07.0107X.

Where Sira 05ATEX1123X / IECEx SIR 07.0107X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	22 Apr 2021	R12631D/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

None.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. The EX-35*, EX-40* and EX-45* Range of Cable Glands shall not be used in enclosures where the temperature at the point of entry/mounting exceeds the following:
 - -35°C to +90°C for the Neoprene (black) seal variants
 - -60°C to +180°C for the Silicone (white) seal variants
- ii. The cable entries are only suitable for fixed installations. Cables shall be effectively clamped to prevent pulling or twisting.
- iii. The EX-35*, EX-40* and EX-45* range of cable glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66 and IP68 (50 metres, 7 days).



**CML 19ATEX1370X
Issue 0**

- iv. The threaded entry component threads without interface O-ring seals installed in an explosive dust atmosphere, within threaded entries, shall only be fitted into enclosures that have either:
- parallel entries that will ensure that a minimum of 5 full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014,
 - tapered entries that will ensure that a minimum of 3 ½ full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014.

Certificate Annex

Certificate Number CML 19ATEX1370X
Equipment Type EX-35*, EX-40* and EX-45* Range of Cable Glands
Manufacturer Amphenol EEC, Inc.



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AMP/ATX/A2L	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-35, EX-40 and EX-45 Cable Gland Range



EU Type Examination Certificate CML 19ATEX1371X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Type EX-60*, EX-65*, EX-70* and EX-75* Range of Barrier Cable Glands and Stopper Boxes**
- 3 Manufacturer **Amphenol EEC, Inc.**
- 4 Address 1701 Birchwood Ave, Des Plaines,
Illinois 60018,
United States of America
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018	EN 60079-1:2014
EN IEC 60079-7:2015+A1:2018	EN 60079-31:2014

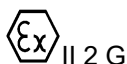
- 10 The equipment shall be marked with the following:



Ex db I Mb

Ex eb I Mb

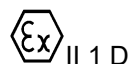
(-60°C to 135°C)



Ex db IIC Gb

Ex eb IIC Gb

(-60°C to 135°C)



Ex ta IIIC Da

(-60°C to 135°C)

A Snowden

A Snowden MIET
Assistant Certification Manager



CML 19ATEX1371X
Issue 0

11 Description

The **EX-60***, **EX-65***, **EX70*** and **EX-75*** Range of Barrier Cable Glands & Stopper Boxes are metallic and are intended for use with differing cables or conductors dependent on their type. They allow the entry of the cable or conductors into flameproof, increased safety, restricted breathing and dust protected enclosures without compromising the explosion protection provided by the enclosure, in accordance with relevant codes of practice. All types comprise of various entry thread sizes, which are dependent upon gland size and their cable sealing ability range.

The EX-60*, EX-65*, EX70* and EX-75* Range of Barrier Cable Glands & Stopper Boxes, when installed with the silicone O-ring provided by the manufacturer, have an ingress protection rating of IP66 and IP68 (tested at a depth of 100 m for 7 days).

Design Options for all Type EX-60*, EX-65*, EX70* and EX-75* Barrier Cable Glands and Stopper Boxes

The entry component and EX-75* conduit nut internal thread forms:

- ISO Metric to BS3643-1:2007 and BS 3643-3:2007 6g fit (male) 6H (female)
- NPT to ANSI/ASME B1.20.1:1983, gauging to clause 8
- NPSM to ANSI/ASME B1.20.1:1983, gauging to clause 9
- BSPT to BS 21:1985 (ISO 7/1) standard threads only clause 5.4, gauging to clause 5A, system A
- BSPP to BS 2779:1986 (ISO 228/1) class A full from external threads'
- PG to DIN 40430:1971
- ET to BS 31:1940 (1979) Table 'A'

Alternative material of construction is as follows and denoted by letter designation in the type number:

- Brass to BS EN 12164 / BS EN 12165 / BS EN 12168 CW614N CuZn39Pb3
- Ecobrass to C69300
- Stainless Steel to EN 10088-3 grades 316S11, 316S31 316L

Additionally, all metallic materials may be surface coated to limit electrolytic reaction between dissimilar materials, providing the coating does not alter the dimensions of the component part.



CML 19ATEX1371X
Issue 0

The EX-70* Range of Barrier Cable Glands are suitable for use with unarmoured, braided and screened, circular cables; they comprise:

- A threaded entry body to tighten into an associated enclosure; this is fitted with a silicone O-ring and internally coated with a release agent.
- A ferrule, fitted with an external nitrile O-ring, which fits into the entry body to make a part chamber into which a two-part epoxy putty setting compound is applied to provide an inner seal around the conductors.
- A union nut that couples the entry body and ferrule together.
- A seal housing, enclosing a white silicone, elastomeric, cable outer sheath seal and a plastic skid washer, that is screwed and secured into the ferrule with adhesive.
- A back nut that screws into the seal housing to compress the outer sheath seal.

Type EX-70* Compound – Filled Cable Glands:

Gland Size	Standard Entry Threads		Max Diameter Over Cores	Max No. of Cores	Outer Sheath	
	Metric	NPT			Min	Max
16	M20	1/2"	10.4	15	3.4	8.4
20S	M20	1/2"	10.4	35	4.8	11.7
20	M20	1/2"	12.5	40	9.5	14.0
25	M25	3/4"	17.8	60	11.7	20.0
32	M32	1"	23.5	80	18.1	26.3
40	M40	1 1/4"	28.8	130	22.6	32.2
50S	M50	1 1/2"	34.2	200	28.2	38.2
50	M50	2"	39.4	400	33.1	44.1
63S	M63	2"	44.8	400	39.3	50.1
63	M63	2 1/2"	50.0	425	46.7	56.0
75S	M75	2 1/2"	55.4	425	52.3	62.0
75	M75	3"	60.8	425	58.0	68.0
80	M80	3"	64.4	425	61.9	72.0
85	M85	3"	69.8	425	69.1	78.0
90	M90	3 1/2"	75.1	425	74.1	84.0
100	M100	3 1/2"	80.5	425	81.8	90.0

Design options:

A brass continuity washer may be fitted in the 20S to 100 sizes that are used with lead inner sheathed cables, glands with this modification are designated with a '2' in their type number.



CML 19ATEX1371X
Issue 0

The EX-65* Range of Barrier Cable Glands are suitable for use with, unarmoured, braided and screened, circular and non-circular cables. They may also be used as a line bushing for terminating flying leads or for the direct inter-connection of associated enclosures; they comprise:

- A threaded entry body to tighten into an associated enclosure; this is fitted with a silicone O-ring and internally coated with a release agent
- A ferrule, fitted with an external nitrile O-ring, which fits into the entry body to make a part chamber into which a two-part epoxy putty setting compound is applied to provide an inner seal around the conductors.
- A union nut that couples the entry body and ferrule together
- A back nut that is screwed and secured into the ferrule with adhesive.

Type EX-65* Compound filled Cable Glands

Gland Size	Standard Entry Threads		Max Diameter Over Cores	Max No. of Cores	Outer Sheath Max
	Metric	NPT			
20S	M20	½"	10.4	35	11.7
20	M20	½"	12.5	40	14.0
25	M25	¾"	17.8	60	20.0
32	M32	1"	23.5	80	26.3
40	M40	1 ¼"	28.8	130	32.2
50S	M50	1 ½"	34.2	200	38.2
50	M50	2"	39.4	400	44.1
63S	M63	2"	44.8	400	50.1
63	M63	2 ½"	50.0	425	56.0
75S	M75	2 ½"	55.4	425	62.0
75	M75	3"	60.8	425	68.0
80	M80	3"	64.4	425	72.0
85	M85	3"	69.8	425	78.0
90	M90	3 ½"	75.1	425	84.0
100	M100	3 ½"	80.5	425	90.0

Design option:

A brass continuity washer may be fitted in the 20S to 100 sizes that are used with lead inner sheathed cables, glands with this modification are designated with a '2' in their type number.



CML 19ATEX1371X
Issue 0

The **EX-60* Range of Barrier Cable Glands** are suitable for use with circular, pliable wire, single wire and steel tape armoured cables along with braided/screened and unarmoured cables; they comprise:

- A threaded entry body to tighten into an associated enclosure, this fitted with a silicone O-ring and internally coated with a release agent.
- A cone, fitted with an external nitrile O-ring, which fits into the entry component to make a part chamber into which a two part epoxy putty setting compound is applied to provide an inner seal around the conductors.
- A clamp ring that secures cable armour to the cone and also provides earth protection.
- A mid-cap component that fastens to the entry body to captivate the clamp ring, cone and epoxy putty.
- A back nut, enclosing a white, silicone, elastomeric, cable outer sheath seal and skid washer, that screws onto the external thread of the mid cap.

Type EX-60* Compound-Filled Cable Glands:

Gland Size	Standard Entry Threads		Max Ø Over Cores	Max No. of Cores	Inner Sheath Max	Outer Sheath		Reduced Bore		Armour Dia/Thickness (Universal)
	Metric	NPT				Min	Max	Min	Max	
16	M20	½"	10.4	15	11.7	8.4	13.5	6.7	10.3	0.15 – 1.25
20S	M20	½"	10.4	35	11.7	11.5	16.0	9.4	12.5	*0.15 – 1.25
20	M20	½"	12.5	40	14.0	15.5	21.1	12.0	17.6	**0.15 – 1.25
25	M25	¾"	17.8	60	20.0	20.3	27.4	16.8	23.9	0.15 – 1.6
32	M32	1"	23.5	80	26.3	26.7	34.0	23.2	30.5	0.15 – 2.0
40	M40	1 ¼"	28.8	130	32.2	33.0	40.6	28.6	36.2	0.2 – 2.0
50S	M50	1 ½"	34.2	200	38.2	39.4	46.7	34.8	42.4	0.2 – 2.5
50	M50	2"	39.4	400	44.1	45.7	53.2	41.1	48.5	0.2 – 2.5
63S	M63	2"	44.8	400	50.1	52.1	59.5	47.5	54.8	0.3 – 2.5
63	M63	2 ½"	50.0	425	56.0	58.4	65.8	53.8	61.2	0.3 – 2.5
75S	M75	2 ½"	55.4	425	62.0	64.8	72.2	60.2	68.0	0.3 – 2.5
75	M75	3"	60.8	425	68.0	71.1	78.0	66.5	73.4	0.3 – 2.5
80	M80	3"	64.4	425	72.0	77.0	84.0	71.9	79.4	0.45 – 3.15
85	M85	3"	69.8	425	78.0	79.6	90.0	75.0	85.4	0.45 – 3.15
90	M90	3 ½"	75.1	425	84.0	88.0	96.0	82.0	91.4	0.45 – 3.15
100	M100	3 ½"	80.5	425	90.0	92.0	102.0	87.4	97.4	0.45 – 3.15

Design options:

A brass continuity washer may be fitted in the 20S to 100 sizes that are used with lead inner sheathed cables, glands with this modification are designated with a '2' in their type number.



CML 19ATEX1371X
Issue 0

The EX-60* size 20s and 20 cable glands to be used with an alternative, cone component; in this form, the glands are designated CX-C** (see details below) and are only suitable for braided cables.

Entry thread size	Gland Size	Max Ø Over Cores (mm)	Max No. of Cores	Max Inner Sheath (mm)	Outer Sheath (standard) (mm)		Braid dia.	
					Min	Max	Min	Max
M20 x 1.5	20S	10.4	8	11.7	11.5	16.0	0.15	0.35
M20 x 1.5	20	12.5	14	14.0	15.5	21.1	0.15	0.5

The EX-60* may be used with an alternative outer sheath seal that is red in colour and has a reduced bore size that accommodates an alternative range of outer sheath cable sizes; in this form, the glands are designated EX-60*R (see details below):

Entry thread size	Gland Size	Max Ø Over Cores (mm)	Max No. of Cores	Max Inner Sheath (mm)	Outer Sheath (standard) (mm)		Braid dia.	
					Min	Max	Min	Max
M20 x 1.5	20S	10.4	8	11.7	9.4	12.5	0.15	0.35
M20 x 1.5	20	12.5	14	14.0	12.0	17.6	0.15	0.5

The EX-75* Range of Conduit Stopper Boxes are suitable for use with circular cables, non-circular cables or conductors carried in conduit, providing a flameproof barrier entry into enclosures. Additionally, they may be used as a line bushing for terminating flying leads or for the direct inter-connection of associated enclosures; they comprise:

- a threaded entry body to tighten into an associated enclosure, this is fitted with a silicone O-ring and internally coated with a release agent.
- a ferrule, fitted with an external nitrile O-ring, which fits into the entry body to make a part chamber into which a two-part epoxy putty setting compound is applied to provide an inner seal around the conductors or flying leads.
- a union nut that couples the entry body and ferrule together
- a conduit nut that is screwed and secured into the ferrule with adhesive.

Stopper Box Size	Standard Entry Threads		Max Cable Diameter	Max Ø over cores	Max no of Cores	Standard male connection thread size		Standard female connection thread sizes	
	Metric	NPT				Metric	NPT	Metric	NPT
20	M20	1/2"	14.0	12.5	40	M20	1/2"	M20	1/2"
25	M25	3/4"	20.0	17.8	60	M25	3/4"	M25	3/4"
32	M32	1"	26.3	23.5	80	M32	1"	M32	1"
40	M40	1 1/4"	32.2	28.8	130	M40	1 1/4"	M40	1 1/4"
50S	M50	1 1/2"	38.2	34.2	200	M50	1 1/2"	M50	1 1/2"
50	M50	2"	44.1	39.4	400	M50	2"	M50	2"
63S	M63	2"	50.1	44.8	400	M63	2"	M63	2"



**CML 19ATEX1371X
Issue 0**

Stopper Box Size	Standard Entry Threads		Max Cable Diameter	Max Ø over cores	Max no of Cores	Standard male connection thread size		Standard female connection thread sizes	
	Metric	NPT				Metric	NPT	Metric	NPT
63	M63	2 ½"	56.0	50.0	425	M63	2 ½"	M63	2 ½"
75S	M75	2 ½"	62.0	55.4	425	M75	2 ½"	M75	2 ½"
75	M75	-	68.0*	60.8*	425	M75	-	M75	2 ½" *
75	-	3"	68.0	60.8	425	-	3"	-	3"
80	M80	3"	72.0	64.4	425	M80	3"	M80	3"
85	M85	3"	78.0	69.8	425	M85	3"	M85	3"
90	M90	3 ½"	84.0	75.1	425	M90	3 ½"	M90	3 ½"
100	M100	3 ½"	90.0	80.5	425	M100	3 ½"	M100	3 ½"
Note: 2 ½" NPT thread option (Max Cable Diameter = 65.0) (Max Diameter over Cores = 58.1) * 2 ½" NPSM thread option (Max Cable Diameter = 67.0) (Max Diameter over Cores = 59.9) *									

Notes:

Certificate Sira 05ATEX1124X / IECEx SIR 07.0109X is superseded by certificate CML 19ATEX1371X / IECEx CML 19.0113X.

The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 05ATEX1124X / IECEx SIR 07.0109X.

Where Sira 05ATEX1124X / IECEx SIR 07.0109X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	22 Apr 2021	R12631E/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

None.



CML 19ATEX1371X
Issue 0

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. The cable glands/stopper boxes shall not be used in enclosures where the temperature, at the point of entry/mounting, is outside of the range -60°C to +135°C.
- ii. The interface seals comply with the requirements of the standards listed on this certificate when the cable glands are fitted to a representative enclosure having a smooth flat mounting surface. In practice the interface between the male thread of the glands and their associated enclosure cannot be defined, therefore it is the users' responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.
- iii. The threaded entry component threads without interface O-ring seals installed in an explosive dust atmosphere, within threaded entries, shall only be fitted into enclosures that have either:
 - parallel entries that will ensure that a minimum of 5 full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079 31:2014
 - tapered entries that will ensure that a minimum of 3 ½ full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014

Certificate Annex

Certificate Number CML 19ATEX1371X
Equipment Type EX-60*, EX-65*, EX-70* and EX-75* Range of Barrier Cable Glands and Stopper Boxes
Manufacturer Amphenol EEC, Inc.



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AMP/ATX/CRC	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-60 Cable Gland Range
AMP/ATX/CRU	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-65 and EX-70 Cable Gland Ranges
AMP/ATX/CRS	1 of 1	7	22 Mar 2021	Trade Agent Label Drawing EX-75 Cable Gland Range