



EU Type Examination Certificate CML 16ATEX1398X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment Geo-Beam Ex
- 3 Manufacturer Cinch Connectivity Solutions, Ltd
- 4 Address 11 Bilton Road, Chelmsford,
 Essex, CM1 2UP, UK
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, 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:

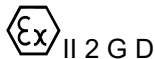
EN 60079-0:2012 / A11:2013

EN 60079-28:2015

EN 60079-1:2014

EN 60079-31:2014

- 10 The equipment shall be marked with the following:



Ex db op pr IIC T4 Gb

Ex tb op pr IIIC T135°C Db

Ta= -30°C to +60°C



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11 Description

Cinch Connectivity Solutions explosion proof series Geo-Beam™ EX has been designed in accordance with the ATEX directive, and IECEx 60079, for use in Zone 1 Hazardous Areas.

The Geo-Beam™ EX product range includes an inline plug and box mount bulkhead and is manufactured using Stainless Steel 316, making it able to withstand the most extreme environments. The inline plug is self-explanatory and can be used with variable Ex d cable glands. The box mount bulkhead is, as it suggests mountable to an Ex d enclosure via the M32 threaded section at the rear. In addition to this, the connector can also be used as an Inline Bulkhead when linking cables through a system. The product uses a Tri-Start Trapezoidal coupling method, giving a reduce turn and an additional locking mechanism, giving positive mating and an audible click to ensure full engagement.

A standard ATEX approved metric cable gland can be used and will fit all of the Geo-Beam™ EX connector types. The wide array of cable gland offerings allows for termination to varied cable constructions.

The range has been designed using an 8-way copper connector, focusing around a standard #16 MIL-C-39029 contact, with maximum ratings of 13A per pin and a Maximum 600V the product can be placed in a T4 (gas) & T135°C (dust) operating class. Alternatively, the Geo-Beam™ EX range can be used with a variable range of fiber optic configurations.

In addition to this the Geo-Beam™ Ex is also able to offer Hybrid version (power/signal/optical) within the same connector, below is a list of configurations available within the Geo-Beam Ex Connector Range: -

Configurations & Inserts Types.

- 2, 4, 6 and 8 Expanded Beam Channels (Lensed Optical)
- Hybrid –expanded beam and electrical (using #16 and/or #20 pin and socket contacts).
- Up to 8 #16 Pin or Socket Contacts (all copper MIL-C-39029, all fiber MIL-PRF-29504, or mixed copper & fiber)

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	19/09/2017	R674A/00	Issue of prime certificate

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



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13 Conditions of manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- 13.1 Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

14 Special Conditions for Safe Use (Conditions of Certification)

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

- 14.1 Do not separate when energised.
- 14.2 Do not disconnect / connect connectors unless all electrical/optical power is isolated at the source.
- 14.3 Do not disconnect / connect the connectors when a gas or dust atmosphere is present.
- 14.4 Do not energise an unmated connector even when dust caps are fitted.
- 14.5 The current and voltage parameters of the electrical circuits are limited to 600V r.m.s, 13 Amps per pin [maximum 8 pin electrical connector]. These shall not be exceeded.
- 14.6 The cable glands used with Free Plugs and Free Receptacles shall be an appropriately approved Ex d and Ex tb type which is suitably for the type of cable used. The cable gland selection shall not affect the compliance of the connector arrangements.
- 14.7 The cable glands and cable insulation may reach up to 47°C above the ambient temperature. Consideration shall be given to the temperature rating of the cable and glands at high ambient.
- 14.8 User gland entries shall be fitted with suitable ingress seals to maintain the overall ingress protection of the connectors to IP66/7.
- 14.9 Optical power levels of more than 5mW/mm² and 35mW shall not be used.
- 14.10 Ensure that the M5 captive locking screws are in place and are fully tightened before energised. Torque the screw to 1Nm.
- 14.11 The M5 captive locking screws are required to protect the user from un-insulated live parts, any damage to these parts means they will need replacing. Only the Cinch Connectivity Solutions, part (Part # 4513) shall be used and dis-assembly will be required and should only be carried out by an appropriately trained person in accordance with the relevant codes of practice.
- 14.12 The dimensions of the flamepaths shall not be modified. In the event that the unit requires repair, it must be returned to the manufacturer.
- 14.13 Use associated dust caps when the plug and socket are not in use.
- 14.14 The plug and socket shall be inspected prior to connection to remove any foreign objects/dust/moisture.

Certificate Annex



Certificate Number CML 16ATEX1398X
Equipment Geo-Beam Ex
Manufacturer Cinch Connectivity Solutions, Ltd

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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
4500C	1 to 5	1	19/09/2017	Geo-Beam EX #15 Plug - Outline
4500-XX	1 to 6	1	19/09/2017	Geo-Beam EX #15 Plug Assembly
4502C	1 to 5	1	19/09/2017	Geo-Beam EX #15 BH Box Mount - Outline
4502-XX	1 to 6	1	19/09/2017	Geo-Beam EX #15 BH Box Mount Assembly
4503-XX-Y	1 to 2	1	19/09/2017	Geo-Beam EX #15 Plug Dust Cap Assembly
4504-XX	1 to 2	1	19/09/2017	Geo-Beam EX #15 BH Dust Cap Assembly
4770	1 to 2	1	19/09/2017	Geo-Beam EX Plug & BH - FLAME PATH
4770-COLOUR	1 to 2	1	19/09/2017	Geo-Beam EX Plug & BH - FLAME PATH
4770-VOLUME	1 to 2	1	19/09/2017	Geo-Beam EX Plug & BH - INTERNAL VOLUME
4992	1 of 1	1	19/09/2017	Geo-Beam EX Plug & BH - INCREASED FLAME PATH
4505-SS	1 to 2	1	19/09/2017	Geo-Beam EX #15 Plug Housing Inner (Key - N)
4506-SS	1 to 2	1	19/09/2017	Geo-Beam EX #15 Plug Grip Ring
4507-SS	1 of 1	1	19/09/2017	Geo-Beam EX #15 Gland Adapter
4507-MARKING	1 of 1	1	19/09/2017	Geo-Beam EX #15 Gland Adapter MARKING
4509-MARKING	1 of 1	1	19/09/2017	Geo-Beam EX #15 BH Housing Box Mount MARKING
4509-SS	1 to 2	1	19/09/2017	Geo-Beam EX #15 BH Housing Box Mount (Key - N)
4510-MARKING	1 of 1	1	19/09/2017	Geo-Beam EX #15 Plug Dust Cap MARKING
4510-SS	1 to 2	1	19/09/2017	Geo-Beam EX #15 Plug Dust Cap (Key - N)
4511-SS	1 of 1	1	19/09/2017	Geo-Beam EX #15 BH Dust Cap Inner
4512-SS	1 of 1	1	19/09/2017	Geo-Beam EX #15 BH Dust Cap Adapter
4513	1 of 1	1	19/09/2017	Geo-Beam EX Captive Locking Screw - M5
4530	1 of 1	1	19/09/2017	Geo-Beam EX #15 BH Insert 8CH 29504-39029 Pin
4531	1 of 1	1	19/09/2017	Geo-Beam EX #15 Plug Insert 8CH 29504-39029 Socket
4535	1 of 1	1	19/09/2017	Geo-Beam EX #15 Cover Plate 8CH Insert 29504
4595	1 of 1	1	19/09/2017	Geo-Beam EX Rear Sleeve 29504-39029 Pin
4596	1 of 1	1	19/09/2017	Geo-Beam EX Rear Sleeve 29504-39029 Socket
5095-SS	1 of 1	1	19/09/2017	Geo-Beam EX #15 Panel Nut
5098-SS	1 of 1	1	19/09/2017	Geo-Beam EX #15 Saddle Clamp
Geo-Beam EX CABLE ASSEMBLY	1 of 1	05	19/09/2017	Geo-Beam EX CABLE ASSEMBLY part numbering scheme

Certificate Annex



Certificate Number CML 16ATEX1398X
Equipment Geo-Beam Ex
Manufacturer Cinch Connectivity Solutions, Ltd

Drawing No	Sheets	Rev	Approved date	Title
Geo-Beam EX CONNECTOR	1 of 1	05	19/09/2017	Geo-Beam EX CONNECTOR part numbering scheme
4503-SS-N	1 of 1	-	19/09/2017	BOM 4503-SS-N
4504-SS	1 of 1	-	19/09/2017	BOM 4504-SS
EX15BM08(16)SB	1 of 1	-	19/09/2017	BOM EX15BM08(16)SB
EX15BM8E62A01SB	1 of 1	-	19/09/2017	BOM EX15BM8E62A01SB
EX15P08(16)SB	1 of 1	-	19/09/2017	BOM EX15P08(16)SB
EX15P8E62A01SB	1 of 1	-	19/09/2017	BOM EX15P8E62A01SB