1169

EU Type Examination Certificate CML 16ATEX3163X Issue 2

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **Series SA..., CTB..., CSTB... and CTBE... Enclosures with Equipment**

3 Manufacturer **Cortem S.p.A**

4 Address **Via Aquileia 10**

34070 Villesse, Gorizia, Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins CML B.V., Chamber of Commerce No 67386717, 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 60079-31:2024	EN 60079-28:2015

10 The equipment shall be marked with the following:

Ⓔx II 2 G D	Ⓔx II 2 (1) G D
Ex eb* IIC T** Gb	Ex eb ib mb* [ia Ga] IIC T4 Gb
Ex tb IIIC T**°C Db	Ex tb [ia Da] IIIC T85°C Db
	(when Fieldbus Barrier type R4D0-FB-IA is installed)

T_{amb} = -40°C, -50°C or -60°C *** to +40°C, +55°C, +65°C or +85°C **

* Marking to also include the symbols for all protection concepts applied, see section 13.

** T6/T85°C corresponds with +40°C ambient. T5/T100°C corresponds with +55°C ambient. Where previously certified parts with a T4 temperature class are fitted, the overall equipment shall be marked T4 with +40°C maximum ambient temperature, see section 13.

*** Minimum and maximum ambient are dependent on the enclosure material and gasket used, and the separately certified parts.

11 Description

The Series SA..., CTB..., CSTB... and CTBE... Enclosures with Equipment are a range of enclosures, as previously certified under a general-purpose junction box certification, certificate CESI 03ATEX333, which may be fitted with additional parts/components.

Standard Range of Temperature:

Enclosure Material	Model	Type of Gasket	Ambient Temperature	Temp. Class	Max Surface Temp.	Max. Service temp. of terminals
Aluminium alloy Stainless steel Polyester resin	SA**, SA**/P	VMQ SPS 060	-40°C +40°C	T6	T75°C	+80°C
			-40°C +55°C	T5	T75°C	+95°C
	CTB**, CTBE** covers, SA**SS, CTB** gland plates	SILICONCELL	-40°C +40°C	T6	T75°C	+80°C
			-40°C +55°C	T5	T75°C	+95°C
	SA**SS bodies	EPDM/SBR	-40°C +40°C	T6	T75°C	+80°C
			-40°C +55°C	T5	T75°C	+95°C

Range for low and high temperatures admitted

Enclosure Material	Model	Type of Gasket	Ambient Temperature	Temp Class	Max Surface Temp	Max service temp of terminals
Aluminium alloy Stainless steel	SA**	VMQ SPS 060	-60°C +40°C	T6	T75°C	+80°C
			-60°C +55°C	T5	T75°C	+95°C
			-60°C +65°C (*)	T5	T75°C	+95°C
	SA**SS bodies	VMQ MG1077N40	-60°C +40°C	T6	T75°C	+80°C
			-60°C +55°C	T5	T75°C	+95°C
			-60°C +65°C (*)	T5	T75°C	+95°C
	CTB**, CTBE** covers, SA**SS, CTB** gland plates	SILICONCELL	-60°C +40°C	T6	T75°C	+80°C
			-60°C +55°C	T5	T75°C	+95°C
			-60°C +65°C (*)	T5	T75°C	+95°C
Polyester resin	SA**/P	VMQ SPS 060	-40°C +65°C (*)	T5	T75°C	+95°C

High temperature:

Enclosure Material	Model	Type of Gasket	Ambient Temperature	Temp Class	Max Surface Temp	Max service temp of terminals
Stainless steel	SA**SS bodies	VMQ MG1077N40	-60°C +85°C	T4	T110°C	+120°C
	CTB**, CTBE** covers, SA**SS, CTB** gland plates	SILICONCELL	-60°C +85°C	T4	T110°C	+120°C

* The equipment shall be marked with a T4 temperature class when are installed components that increase the ambient temperature. The maximum dissipated power and rated current admitted for these temperature ranges should be decreased applying the decreasing factors as specified in the table.

The additional parts / components which may be fitted in the Enclosures with Equipment covered by this certificate are as follows:

Part	Certificate Numbers	Coding
Series 3300XL Proximitor	Sira 16ATEX2299X	Ex ia IIC
Splice Cassette Type 8186/.	PTB 10ATEX2015U	Ex op pr IIC
Enclosure Heater (TEF Series)	NEMKO 11ATEX1098X	Ex e IIC Ex e mb IIC
Heater, Type SL ... THERM D... T...	PTB 02ATEX1116X	Ex db IIC Ex tb IIIC
Heater, Type CP ...Therm D ... T...	PTB 02ATEX1041X	Ex db IIC Ex tb IIIC
Fieldbus Segment protector Type R-SP-E***	PTB 04ATEX2100X	Ex e mb IIC Ex eb mb IIC
Temperature Transmitter Model IPAQ C202X	KIWA 15ATEX0033X	Ex ia IIC
Temperature Transmitter Model IPAQ C520X	KIWA 14ATEX0003X	Ex ia IIC
Fieldbus Barrier type R4D0-FB-IA*	BVS 13 ATEX E 121 X	Ex e ib mb [ia Ga] IIC T4 Gb Ex e ib mb [ia IIIC Da] IIC T4 Gb
Heating Resistor, Type: CREx 020	LCIE 01ATEX6073X	Ex d IIC Ex tb IIIC
Regulating thermostat Type: REx	LCIE 01ATEX6074	Ex d IIC Ex tb IIIC
Interconnection block for field bus Types: F240 to F273	KEMA 03ATEX1555X	Ex ia IIC

Part	Certificate Numbers	Coding
Fieldbus XE Megablock and Terminator	KEMA 05ATEX2006	Ex eb mb IIC
Model 644R HART Temperature Transmitter	BAS 00ATEX1033X	Ex ia IIC
Model 644H Fieldbus Temperature Transmitter	Baseefa 03ATEX0499X	Ex ia IIC
Enhanced model 644 Temperature Transmitter	Baseefa 12ATEX0101X	Ex ia IIC
Transmitter Type T32.**.*-*	BVS 08ATEXE019 X	Ex ia IIC
Load Isolation Switch Module CZ0513 Series	CML 19ATEX1179U	Ex db eb IIC Gb
Handle of switch CZ8000	CML 17ATEX3102U	Ex eb IIC Ex tb IIIC
Operators M-0603, M-0604, M-0605	CESI 09ATEX075U	Ex e IIC Ex tb IIIC
Pilot LED M-0612 and M-0487	CESI 00ATEX060U	Ex db IIC Ex db eb IIC Ex tb IIIC
Contact blocks type M-0530 and M-0531	CESI 09ATEX016U	Ex de IIC
AMMETER type B-0140A and VOLTMETER type B-0140V	CESI 04ATEX128U	Ex e IIC Ex tb IIIC
Temperature transmitter iTEMP type TMT82-**A1/2/*** and TMT82-**A3/4/5***	EPS 17ATEX1074X	Ex ia IIC
Surge protector type BlitzductorConnect BCO *L2 BD EX 24	TUV 19ATEX8476X	Ex ia [ia Ga] IIC Ex ib IIC [Ex ia Da] IIIC

Each enclosure produced may be fitted with a mixture of any of the above parts, in any quantity, providing the total power dissipation of the complete assembly is within the limits described under CESI 03ATEX333, for the applicable enclosure size. All previously certified enclosure sizes are included.

Equivalent certified parts to those specified above, which meet the criteria specified in the manufacturer's documentation, may be installed as alternative options.

The coding of the complete assemblies is to include the symbol for the protection concept(s) of all previously certified parts installed.

The enclosures used are constructed in cast or sheet steel, aluminium alloy, sheet stainless steel (or mild steel for the CTB models) or polyester resin. The cover is fixed to the body with four or six anti-loosening screws. Between the body and cover there is a gasket which maintains the ingress protection

rating. There is also the presence in some boxes of the hinges and two anti-loosening screws for the closing of the cover.

Cable entries are provided in the enclosure walls. The number, size and location of entries are in accordance with those defined under CESI 03ATEX333. The stainless-steel enclosures may be provided with gland plates.

Four or six holes are provided on the base of the enclosure to enable mounting. Stainless steel enclosures are provided with wall mounting brackets.

Variation 1

This variation introduces the following modifications:

i. To increase the upper ambient temperature,
ii. To update to the latest harmonized standards: EN IEC 60079-0:2018
iii. To reduce the lower ambient temperature.

Variation 2

This variation introduces the following modifications:

i. Update of the certificate number of Series 3300XL Proximitor,
ii. Addition of 12 new parts to the existing certificate,
iii. Update to the latest harmonized standards.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	09 Nov 2016	R1292A/00	Report for the Prime Certificate issue
1	27 Apr 2023	R16440A/00	Issue of Variation 1
2	04 Nov 2024	R18151A/00	Issue of Variation 2

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

13 Conditions of Manufacture

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

i. 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. This includes monitoring the status of the general-purpose junction box certification (certificate CESI 03ATEX333).

ii. The marking shall include the symbol for each protection concept covering all previously certified parts fitted in an enclosure.

Where the Fieldbus Barrier type R4D0-FB-IA* (BVS 13 ATEX E 121 X), or any alternative part using associated I.S. is fitted, the marking shall also include the applicable associated I.S. symbols in square brackets.

The dust coding when this fieldbus barrier is installed shall be as defined on this certificate.

iii. The maximum power dissipation of any arrangement of parts fitted into an enclosure shall not exceed the maximum power figure assigned to the particular enclosure size, defined under CESI 03ATEX333.

The maximum power figure assigned under CESI 03ATEX333 depends on the upper ambient temperature, temperature class and enclosure size; this shall be taken into account in defining the relevant power figure.

iv. The manufacturer shall take all reasonable steps to ensure the items fitted within the enclosure are used within their minimum and maximum service/ambient temperatures, as stated in the schedule of limitations/conditions for safe use for each of these previously certified parts.

v. The ATEX certificate and instruction manual for each previously certified part fitted into the enclosure shall be provided with the equipment to the end-user.

vi. All parts fitted in the enclosures shall be installed in accordance with their ATEX certificate, their instruction manual and with EN 60079-14.

vii. The minimum ambient temperature marked on the equipment shall be no lower than the minimum ambient or service temperature assigned to any of the previously certified fitted parts.

viii. Any increased safety terminals fitted are to be selected in accordance with the certificates for the general-purpose junction boxes, CESI 03ATEX333, taking into consideration their rated service temperature range and any other limitations defined by the terminal certification.

ix. Information shall be provided to the end-user which determines the supply ratings of each part installed within the enclosure, as well as the power dissipation limit defined for the enclosure.

x. When the following parts are installed, the maximum ambient marked on the equipment shall be no higher than +40°C (with corresponding T6 temperature class):

- Enclosure heater (NEMKO 11ATEX1098X)
- Heater Type SL (PTB 02ATEX1116X)
- Heater Type CP (PTB 02ATEX1041X)
- Regulating thermostat, Type: Rex (LCIE 01ATEX6074)

xi. When the following heaters are installed, they shall be set to switch of at a temperature of no more than +30°C:
- Enclosure heater (NEMKO 11ATEX1098X)
- Heater Type SL (PTB 02ATEX1116X)
- Heater Type CP (PTB 02ATEX1041X)
- Heating Resistor Type CREx 020 (LCIE 01ATEX6073X)

Where a separate thermostat is relied on to limit the temperature, this shall be ATEX equipment certified.

Any conditions on the certificates for the thermostat shall be addressed by the manufacturer.

xii. The following heaters shall only be installed in the metal options of the external enclosure and not in the polyester enclosure:
- Heater Type SL (PTB 02ATEX1116X)
- Heater Type CP (PTB 02ATEX1041X)

xiii. When the following parts are installed, the equipment shall be marked with a maximum ambient temperature of +40°C and T4 / T85°C:
- Segment protector Type R-SP-E*** (PTB 04ATEX2100X)
- Fieldbus Barrier type R4D0-FB-IA* (BVS 13 ATEX E 121 X)
- Interconnection block for fieldbus, Types: F240 to F273 (KEMA 03ATEX1555X)
- Fieldbus XE Megablock and Terminator, Types: F244-XE to F273-XE and FCS-MBT-XE (KEMA 05ATEX2006)

xiv. When the following parts are installed, the maximum ambient marked on the equipment shall be no higher than +60°C (with corresponding T6 temperature class):
- Splice cassette type 8186/. (PTB 10ATEX2015U)

14 Specific Conditions of Use (Special Conditions)

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

i. Once wiring has been completed, each unit shall be subjected to a routine dielectric strength test in accordance with EN 60079-7, clause 7.1. The test voltage applied shall be based on the assigned maximum supply voltage, which is dependent on the parts installed.

The relevant test voltage safety factor shall be applied in accordance with EN 60079-7, clause 6.1. The voltage shall be applied for 60 seconds. No flashover or breakdown shall occur.

ii. The limits of the supply ratings of each previously certified part installed and the power limit defined for the enclosure shall be observed during installation and operation.

There may be parts installed which employ intrinsic safety; the ratings and entity parameters of these parts shall also be observed.

iii. The enclosure may employ several protection concepts, in addition to increased safety ('e') and dust protection by enclosure ('t').

The coding includes the symbol(s) for each protection concept employed. All parts installed inside the enclosure are previously certified.

The certificate and instructions for each previously certified part shall be observed during installation and operation.

iv. When fitted with 'op pr' splice case (certificate PTB 10ATEX2015U), the fibre cable outside the enclosure shall be installed such that mechanical damage is prevented and shall satisfy the requirements of EN 60079-28 'op pr'.

v. This condition applies when the equipment is marked 'Ex eb op pr'. The fibre ST connectors contained within the increased safety enclosure shall not be separated whilst energised if an explosive atmosphere may be present.

vi. If not used, ST connectors within the increased safety enclosure must have dust covers fitted.

vii. The maximum optical power rating of the 'op pr' splice case (certificate PTB 10ATEX2015U) is 100 mW.

viii. When the heater covered by certificate NEMKO 11ATEX1098X is fitted, the heater shall be connected to a fuse with the following ratings:

Maximum current: 16 A

Minimum breaking capacity: 1500 A

ix. When the heater covered by certificate NEMKO 11ATEX1098X is fitted, the heating element supply circuit shall include an electrical protection device in conformity with clause 4.4 of EN 62086-1 / EN 60079-30-1.

This heater shall be set to switch off at a temperature of no greater than +30°C.

x. When the Temperature Transmitter, Model IPAQ C202X (KIWA 15ATEX0033X) or Temperature Transmitter, Models IPAQ C520X / Model IPAQ C520XS (KIWA 14ATEX0003X) are installed, the following condition applies:

The communication port (USB connection) may only be connected to the associated ICON Interface if the temperature transmitter is outside the hazardous area and with no sensor connected to it that is in the hazardous area.

xi. Cable glands and entry devices, whether selected by the equipment manufacturer or end user, shall be suitably ATEX certified, suitable for the service temperature range and shall be installed in accordance with EN 60079-14.

xii. The cable used with the Heating Resistor, Type: CREx 020 (LCIE 01ATEX6073X) shall have an operating temperature rating of greater than +131°C.

xiii. The Interconnection block for field bus, Types: F240 to F273 (KEMA 03ATEX1555X) shall only be connected to intrinsically safe certified apparatus.

xiv. The overall equipment shall comply with the temperature ranges for the enclosure material and gasket type, and with the temperature range determined by the Ex-Components installed within the equipment.

Certificate Annex

Certificate Number	CML 16ATEX3163X
Equipment	Series SA..., CTB..., CSTB... and CTBE... Enclosures with Equipment
Manufacturer	Cortem S.p.A.

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

Issue 0

Drawing No	Sheets	Rev	Approved Date	Title
A3-6564	1 to 2	0	09 Nov 2016	SA.. and CTB.. Series Used as Devices Assembly. Examples of Typical Assembly
A4-6565	1 to 13	0	09 Nov 2016	Technical Note

Issue 1

Drawing No	Sheets	Rev	Approved Date	Title
A4-6565	1 to 13	1	27 Apr 2023	Technical Note

Issue 2

Drawing No	Sheets	Rev	Approved Date	Title
A3-6564	1 to 4	1	30 Oct 2024	SA.. and CTB.. Series Used as Devices Assembly. Examples of Typical Assembly
A4-6565	1 to 19	2	30 Oct 2024	Technical Note