



EU-TYPE EXAMINATION CERTIFICATE

- 1 Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/UE
- 2 EU-Type Examination Certificate Number **LOM 17ATEX1012** issue **1**
- 3 Product Connection boxes/control stations
Types TBCS***EX
- 4 Manufacturer Delvalle Global Solution S.L.U.
- 5 Address Paso El Prao, 6
01320 - Oyón (Álava)
SPAIN
- 6 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 7 Laboratorio Oficial J.M. Madariaga (LOM), Notified Body number 0163, 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 product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential Report No **16.760Q**
- 8 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
Standards **EN 60079-0:2012/A11:2013** **EN 60079-7:2007** **EN 60079-31:2014**
except in respect of those requirements listed at item 18 of the schedule.
- 9 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
- 10 This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- 11 The marking of the product shall include the following:



(See schedule)

Getafe,

Head of certification committee

(This document may only be reproduced in its entirety and without any change)

Page 1/3





LABORATORIO OFICIAL J. M. MADARIAGA

13 SCHEDULE

14 EU-Type Examination Certificate number: **LOM 17ATEX1012**

15 Description of product

Terminal boxes made in stainless steel sheet based on the empty boxes TRIBEX, with component certificate nr. LOM 14ATEX3027U. The boxes may be used with increased safety type of protection "Ex e" which includes certified increased safety terminals and/or protection mode by enclosure "Ex t".

The boxes are designed for a maximum voltage up to 1100 V and maximum ambient temperature of 60 °C, depending on temperature class and rated currents.

Type codification: GEOTB***EX, where *** is the code for external dimensions.

Variant	Number of rails for mounting terminals	Maximum number of terminals											
		Wire cross section (mm ²)											
		1,5	2,5	4	6	10	16	35	70	95	120	240	300
TBCS126040EX	4	950	760	640	500	400	320	240	70	70	70	54	48
TBCS166040EX	4	1340	1080	920	700	560	460	348	100	100	100	70	60
TBCS186040EX	4	1550	1260	1040	800	640	520	400	120	120	120	88	70

Ambient temperature: $-25\text{ °C} \leq T_a \leq 40\text{ °C}$ or $-25\text{ °C} \leq T_a \leq 60\text{ °C}$

Maximum power dissipated in each box based on the maximum ambient temperature, temperature class and surface temperature:

Variant	T6 T85 °C		T5 T100 °C	
	$T_a \leq 40\text{ °C}$	$T_a \leq 60\text{ °C}$	$T_a \leq 40\text{ °C}$	$T_a \leq 60\text{ °C}$
TBCS126040EX	227 W	114 W	313 W	199 W
TBCS166040EX	359 W	180 W	494 W	314 W
TBCS186040EX	408 W	204 W	561 W	357 W

For boxes used solely with protection by enclosure the maximum power dissipated based on the maximum ambient temperature and surface temperature:

Variant	T85 °C		T100 °C	
	$T_a \leq 40\text{ °C}$	$T_a \leq 60\text{ °C}$	$T_a \leq 40\text{ °C}$	$T_a \leq 60\text{ °C}$
TBCS126040EX	409 W	205 W	563 W	358 W
TBCS166040EX	646 W	324 W	889 W	565 W
TBCS186040EX	734 W	367 W	1010 W	643 W

These boxes can also be used as control stations incorporating certified components of manoeuvre, connection, and signalling on cover and in lateral walls of the boxes.

Variant	Maximum number of:		
	Measure instruments	Switches	Sockets mounted on cover
TBCS126040EX	36	80	36
TBCS166040EX	64	144	48
TBCS186040EX	68	160	52

Components included on the cover are switching elements, signalling and measuring instruments and plug sockets.

The switching elements push buttons and rotary actuators. The signalling elements correspond to and pilot lights, and instrument boxes, ammeters and voltmeters.

Each of the incorporated components accounted for purposes of heat dissipation and temperature class just as if they were terminals.

The type of protection and maximum ambient or operating temperature of the incorporated components determine the application of these control stations. The ambient temperature will correspond to the worst case ambient temperature of all included components.



LABORATORIO OFICIAL J. M. MADARIAGA

13 SCHEDULE

14 EU-Type Examination Certificate number: **LOM 17ATEX1012**

15 Description of product (continued)

Only are valid for combustible dust environments control stations where all incorporated components are appropriate for the group III.

These control stations may be used for connection of intrinsically safe circuits but not in combination with non-intrinsically safe circuits.

Marking codes according included components

Type of protection of include component	Marking code for group II
Just as junction boxes	II 2G Ex eb IIC T.. Gb
Flameproof	II 2G Ex db eb II.. T.. Gb
Encapsulated	II 2G Ex eb mb II.. T.. Gb
Flameproof + encapsulated	II 2G Ex db eb mb II.. T.. Gb

Gas group IIA, IIB or IIC correspond to the most restrictive among the included components.

The temperature class shall be the highest among the included components or as junction box equipped with terminals

Additional marking code for the group III applicable if all of the components are valid for group III

Type of protection of include component	Marking code for group III
Protection by enclosure	II 2D Ex t III... T... °C Db

Dust group IIIA, IIIB or IIIC correspond to the most restrictive among the included components

The surface temperature shall be the highest among the included components or as junction box equipped with terminals.

Marking code when used with intrinsic safety type of protection, groups II and III

II 1/2G Ex ia/ib II* T6 Ga/Gb
II 1/2D Ex ia/ib IIIC T85°C Da/Db

16 Report number **16.760Q**

17 Specific conditions of use

None

18 Essential Health and Safety Requirements

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9.

19 Drawings and documents

Number	Sheets	Issue	Date	Description
PV1617BMCSC	102	1	2017-02-13	Technical dossier, includes user manual