



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx EPS 14.0104 Issue No: 0 Certificate history:  
Status: Current Page 1 of 3 Issue No. 0 (2015-03-20)  
Date of Issue: 2015-03-20  
Applicant: COELBO S.r.l.  
V. Santa Margherita, 83  
20861 Brugherio (MB)  
Italy  
Electrical Apparatus: Pushbuttons and signaling units Series EFD... and PB...  
*Optional accessory:*  
Type of Protection: "d", "tb"  
Marking:  
Ex d IIC (or IIB or IIB+H2) T6...T4 Gb  
Ex d I Mb (stainless steel, brass or cast iron versions only)  
Ex tb IIIC T85°C...T135°C Db IP66

Approved for issue on behalf of the IECEx  
Certification Body:

Dieter Zitzmann

Position:

Certification manager

Signature:  
(for printed version)

Date:



1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH  
Businesspark A96  
86842 Türkheim  
Germany





# IECEX Certificate of Conformity

Certificate No: IECEx EPS 14.0104 Issue No: 0  
Date of Issue: 2015-03-20 Page 2 of 3  
Manufacturer: COELBO S.r.l.  
V. Santa Margherita, 83  
20861 Brugherio (MB)  
Italy

Additional Manufacturing  
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

#### Test Report:

DE/EPS/ExTR14.0103/00

#### Quality Assessment Report:

IT/CES/QAR10.0009/04



# IECEX Certificate of Conformity

Certificate No: IECEx EPS 14.0104

Issue No: 0

Date of Issue: 2015-03-20

Page 3 of 3

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Pushbuttons and signaling units Series EFD and PB enclosures can be used in combination with certified command and signaling units IECEx INE 14.0023U.

For details see Annex to this certificate.

CONDITIONS OF CERTIFICATION: NO

### Annex:

[Annex to IECEx CoC 14.0104.pdf](#)


**BUREAU  
VERITAS**

## Description:

Pushbuttons and signaling units Series EFD, made in Aluminum light alloy (Mg+Ti+Zirconium < 6%) with stainless steel external bolts, are available according to all different requirements because of their big choice of control and signaling units series D... covered by component certificate IECEx INE 14.0023U (or of other control and signaling units with equivalent certification). Local control stations are available in four different sizes: pushbuttons equipped with one ("EFD 1"), two ("EFD 2"), three ("EFD 3") and four ("EFD 4") units. In addition, versions of pushbutton series EFD in Stainless Steel AISI 316L (letter "I" is added to code - "EFDI"), Brass CW608N CuZn38Pb2 (OT58) (letter "B" is added to code - "EFDB") or Cast Iron (letter "C" is added to code - "EFDC") are available. It is also available a special model of EFD 1 (for every materials) with an emergency button and break glass, complete of external accessories (chain, hammer, glass stop ring, etc.) in stainless steel and RAL 3000 external coating. Standard external coating is grey color RAL 7000. Other colors are available upon request by customer. The thickness of the external paint must be < 0.2 mm for gas groups IIC-IIB+H2 and < 2 mm for gas group IIB. Beside the EFD series, in addition, pushbutton series PB is provided. The latter equipment has the same features of the pushbuttons series EFD described above, but they shall be completed with the installation of the control and / or signaling units of the series RX... (in which there is also a luminous push button and an acoustic signaler - available also the version with flashing light) covered by the certificate IECEx INE 14.0023U (or of other control and signaling units with equivalent certification). In addition, versions of pushbutton series PB in Stainless Steel AISI 316L (letter "S" is added to code - "PBS"), Brass CW608N CuZn38Pb2 (OT58) (letter "B" is added to code - "PBB") or Cast Iron (letter "C" is added to code - "PBC") are available. It is also available, as per EFD series, a special model of PB 1 (for every materials) with an emergency button and break glass, complete of external accessories (chain, hammer, glass stop ring, etc.) in stainless steel and RAL 3000 external coating.

## Electrical characteristics:

	Maximum Voltage		Standard Current	Maximum Power	Standard Frequency
	V ac	V dc	A	W	Hz
Signaling with socket E10, E14, BA9s, BA15s, BA15d	380	380	10	5	50/60
Manipulators	690	440	10	0.5	50/60

## Gas groups and temperature classification:

(°) the gas group is as follows:

Model	EFD 1 – PB 1	EFD 2 – PB 2	EFD 3 – PB 3	EFD 4 – PB 4
Gas Group	IIC	IIC	IIB or IIB+H2	IIB or IIB+H2

(\*) temperature class and maximum surface temperature are as follows:

Command/Signaling Units Type	Temperature class		Max ambient temp. (A.T. <sub>max</sub> )
	GAS	DUST	
With Incandescent Lamps	T6	T85°C	Up to +50°C
	T5	T100°C	+50°C < A.T. <sub>max</sub> ≤ +65°C
	T4	T135°C	+65°C < A.T. <sub>max</sub> ≤ +80°C
With LED Lamps	T6	T85°C	Up to +60°C
	T5	T100°C	+60°C < A.T. <sub>max</sub> ≤ +80°C
Command Units Only	T6	T85°C	Up to +80°C

Minimum ambient temperature : -50 °C



**Special conditions for manufacturing and installation :**

All IECEx certified and tested components that are built into the enclosure's walls need to fulfill the requirements of types of explosion protection used as well as the IP level and operation range shown on the type label.

Any openings that are not used shall be closed as specified in IEC 60079-1, section 11.

Manufacturer must assure that the various of internal and external components do not exceed the maximum power dissipation and temperature class limit of the enclosure.

For use in presence of combustible dusts user must regularly clean external surface of enclosure due to avoid any accumulation of dust on the surface (the maximum allowed thickness of dust is equal to 5 mm).

All damaged parts must be changed or repaired exclusively by manufacturer (where not differently specified).