

CESI



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Schema di certificazione

CESI-ATEX



PRD N. 018B
Membro degli Accordi di Mutuo
Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

CERTIFICATE



[1] EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use
in potentially explosive atmospheres
Directive 2014/34/EU**

[3] EU-Type Examination Certificate number:

CESI 24 ATEX 027X

[4] Product: **Self powered LCD indicator models E0028, ST0028, E4210 and E4210D**

[5] Manufacturer: **Officine Orobiche S.r.l.**

[6] Address: **Via G. Paglia, 22; I-24050 Zanica (BG) - Italy**

[7] This Product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] CESI, notified body n. 0722 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and Council of 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 equipment or protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report n. **EX-C4016083**.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-11:2012 EN 60079-31:2014

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the Product is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified Product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this Product. These are not covered by this certificate.

[12] The marking of the Product shall include the following:

	II 1G	Ex ia IIC T5 Ga	models E0028, ST0028
	II 1G	Ex ia IIC T5 Ga	model E4210
	II 1D	Ex ia IIIC T80 °C Da	
	II 2G	Ex db IIC T5 Gb	model E4210D
	II 2D	Ex tb IIIC T80 °C Db	

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 20.12.2024 - Translation issued the 20.12.2024

Prepared
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Verified
Alessandro Fedato

Approved
Roberto Piccin

[13]

Schedule

[14]

EU-TYPE EXAMINATION CERTIFICATE n. CESI 24 ATEX 027X

[15] **Description of Product**

Self-powered LCD indicators are suitable to display as engineering units the value of a current in a 4÷20 mA loop. The equipment is self-powered by means of a low drop voltage on the 4÷20 mA loop.

The equipment is available in several models based on the same electronic circuits, with different arrangements:

- Models **E0028** and **ST0028**: LCD indicators with type of protection "Ex ia", designed to be placed in an enclosure having minimum degree of protection IP54 or in an environment having pollution degree 2 (or better) with an enclosure having minimum degree of protection IP20.
- Model **E4210**: LCD indicator with type of protection "Ex ia" in a separately certified dust-tight enclosure rated IP66.
- Model **E4210D**: LCD indicator contained in an enclosure, with types of protection "Ex db, Ex tb" and rated IP66. The enclosure is the same as the one for model **E4210**.

Electrical characteristics

Models E0028 , ST0028 , E4210 :	$U_i: \leq 30 \text{ V}$	$I_i: \leq 100 \text{ mA}$	$P_i: \leq 1 \text{ W}$
	$C_i: \leq 20 \text{ nF}$	$L_i = 0 \text{ mH}$	
Model E4210D :	$V_{\max}: 50 \text{ V}$	$I_{\max}: 0.5 \text{ A}$	

Characteristics common to all models:

- Input signal: 4 ÷ 20 mA
- Operating range: 3.6 ÷ 22 mA
- Maximum voltage drop: 2.5V (@ 22mA)

Ambient temperature: -20°C ÷ +60°C

Installation conditions

The power supply of the models **E0028**, **ST0028**, **E4210** shall be made by associated apparatus, subject of a separate ATEX certification according to EN 60079-11 standard, suitable for Group IIC (all models) and Group IIIC (model **E4210** only). The evaluation of the system compatibility shall be performed according to EN 60079-25 standard.

Warning labels

None

[16] **Report n. EX-C4016083**

Routine tests

None

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[13]

Schedule

[14]

EU-TYPE EXAMINATION CERTIFICATE n. CESI 24 ATEX 027X

[17] **Special conditions for safe use (X)**

- The end user shall connect the power supply cables to the equipment in accordance with the manufacturer's installation manual and the Standard EN 60079-14. The connection shall guarantee the integrity of the equipment's type of protection.
- The unused openings in the enclosure shall be fitted with blanking elements in accordance with the type of protection of the equipment. In addition:
 - models **E0028** and **ST0028**: the equipment is designed to be placed in an enclosure having minimum degree of protection IP54 or in an environment having pollution degree 2 (or better) with an enclosure having minimum degree of protection IP20
 - model **E4210**: the cable entry into the enclosure, shall be made with accessories, subject to separate certification, that guarantee a minimum degree of protection of IP66
 - model **E4210D**: the cable entry into the enclosure, shall be made with accessories, subject to separate certification, that guarantee the types of protection Ex db and Ex tb.

[18] **Essential Health and Safety Requirements**

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

[19] **Descriptive documents** (prot. EX- C4016087)

- SEG-7670 Technical note	dated	13/11/2024
- SEG-7669-ATEX Marking plate	dated	11/11/2024
- E0028-NT02I02 Technical note, rev.02 (pag.3)	dated	27/09/2021
- E0028-NT01I03 Technical note, rev.03 (pag.11)	dated	27/09/2021
- E4210-LP01X00 Part List, rev.0 (pag.2)	dated	27/09/2021
- E0028-IS01I01 SAFETY INSTRUCTIONS, rev.01 (pag.4)	dated	13/09/2021
- E4210-IS01I0101 SAFETY INSTRUCTIONS, rev.01 (pag.4)	dated	29/09/2021
- E4210DIS01I0000 SAFETY INSTRUCTIONS, rev.0 (pag.4)	dated	27/09/2021
- ST0028SB01E Block diagram ST0028, rev.3	dated	21/02/2005
- E0028-DM02X Standard assembly drawing ST0028, rev.0	dated	21/02/2005
- E4210-DM02X Standard assembly drawing E4210, 4210D, rev.0	dated	21/02/2005
- ST0028TC01X *ST0028 Components setup, rev.0	dated	29/09/2004
- ST0028SE01X Wiring diagram ST0028, rev.7	dated	07/09/2004
- E0028-LP01X Part List E0028, ST0028, rev.6 (pag.3)	dated	14/01/2002
- EN0216 E4210&E4210D File Gerber, rev.2	dated	-
- ST0028 E0028&ST0028 File Gerber, rev.6	dated	-

One copy of all documents mentioned above is kept in CESI files.