Physical-Technical Testing Institute
Ostrava - Radvanice

(1) Supplementary EU - Type Examination Certificate No. 2

(2) **Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres (Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 15 ATEX 0018X

(4) Product: **Flow Switch type FS xy Exia**

(5) Manufacturer: **COMAC CAL s.r.o.**

(6) Address: **Třanovice 239, 739 53 Třanovice, Czech Republic**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 15 ATEX 0018X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, 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.

(9) In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20.04.2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20.04.2016.

(10) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018, EN 60079-11:2012, EN 50303:2000

If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) The marking of the product shall include the following:

I M1 Ex ia I Ma
II 1G Ex ia IIC T6..T4 Ga
II 2D Ex ia IIIC T85 °C...T135 °C Db

(12) This certificate is valid till: **30.06.2029**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

Date of issue: 16.06.2024

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.

Physical-Technical Testing Institute, s.p., Pikartská 1337/7, 716 07 Ostrava - Radvanice, Czech Republic
tel.: +420 595 223 111, +420 604 203 525, e-mail: ftzu@ftzu.cz, www.ftzu.cz

(13) **Schedule**

(14) # Supplementary EU - Type Examination Certificate No. 2 to FTZÚ 15 ATEX 0018X

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Modification of marking of certified product.
- Evaluation according to the newest standards.
- Extension of certificate validity.

The subject of this supplementary certificate is extension of certificate validity, evaluation of product according to the newest standards and modification of marking of product, when the Equipment category is changed to 2D and the equipment protection level (EPL) is changed to Db. The construction and electrical parameters of certified product remain unchanged.

Description of product (recapitulation):

The product Flowswitch type FS xy Exia is designed to monitor the flow of liquid media by calorimetric principle. The product is designed for fixed installation into pipeline system. Electronics of product is placed on PCBs, which are placed into stainless steel enclosure with degree of protection IP66/IP67. All electronics parts are casted with compound. The product is supplied by intrinsically safe power supply and contains galvanically separated passive output type "open collector" and active current loop 4 – 20 mA. Connecting to external apparatuses is done by connector.

The product is produced in the following variants:

FS10 Exia: single switching contact
FS11 Exia: two switching contacts
FS15 Exia: switching contact and temperature monitoring
FS20 Exia: switching contact and current loop 4 - 20 mA

Intrinsically safe parameters:

Power supply: pins 1, 3
U_i = 28.5 V, C_i = 0, L_i = 0
Output impulse, passive: pins 2, 4; 2, 3; 4, 3:
U_i = 28.5 V, I_i = 115 mA, P_i = 0.330 W, C_i = 0, L_i = 0
Current loop 4 - 20 mA, active: pins 2, 3
Group I
U_o = 10.8 V, I_o = 196 mA, P_o = 0.529 W, C_o = 10 µF, L_o = 0.2 mH
Group IIC, IIIC
U_o = 10.8 V, I_o = 196 mA, P_o = 0.529 W, C_o = 1 µF, L_o = 15 µH

Degree of protection by enclosure: IP66/IP67

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ Ex NB 1026

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(13) **Schedule**

(14) # Supplementary EU - Type Examination Certificate No. 2 to FTZÚ 15 ATEX 0018X

(16) Report Number: 15/0018/2

(17) Specific Conditions of Use:

1. Relationship between ambient temperature, temperature class (surface temperature) and temperature of the measured medium.

Ambient temperature: Ta[°C]	Equipment Category 1G Temperature class	Equipment Category 2D Surface temperature without dust layer [°C]	Temperature of the medium Tm [°C]
-20°C to +40°C	T6	T85°C	≤ +40°C
-20°C to +80°C	T4	T135°C	≤ +80°C
-20°C to +80°C	**Equipment Category M1**		≤ +80°C

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (10) of this supplementary certificate.

(19) Drawings and Documents:

Number	Revision	Sheets	Date	Description
FS Exia SM	A	1	04.06.2024	Schematic diagram Flowswitch Exia
Navod FS 10/11/15/20	-	9	05.06.2024	Assembly and technical conditions (Addendum for non-explosion-proof version)
FS Exia SS	A	3	04.06.2024	List of Components
FS Exia VZS	A	2	04.06.2024	Samples of labels

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

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