



EU - Type Examination Certificate

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

(3) EU - Type Examination Certificate number:

FTZÚ 23 ATEX 0040X

- (4) Product: **Flow Control Instrument type FOCUS-1 Ex**
- (5) Manufacturer: **FOCUS-ON VoF**
- (6) Address: **Kerkeplaat 12, 3313 LC Dordrecht, The Netherlands**
- (7) This product and any acceptable variation thereto is specified in the schedule 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 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 number:

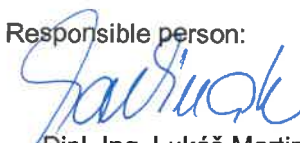
23/0040 dated 21.12.2023

- (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 60079-7:2015+A1:2018,
EN 60079-11:2012, EN 60079-28:2015**
- (10) 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) This 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.
- (12) The marking of the product shall include the following:

Ex II 2G Ex db eb ia [ia Ga] op is IIB+H₂ T3...T4 Gb

This certificate is valid till: **31.12.2028**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 22.12.2023

Page: 1/3



Physical-Technical Testing Institute
Ostrava - Radvanice

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 23 ATEX 0040X**

(15) Description of Product:

The product FOCUS-1 Ex is flow control instrument with the measurement of the flow, pressure and the temperature at the inlet and at the outlet of the valve. User communication with the FOCUS-1 is over Wi-Fi. Flow is measured by ultrasonic transducer which is connected to the Ex certified signal converter UFM 400 (KIWA 14 ATEX 0021U) located inside Ex "eb db" enclosure. Direct entries into "db" enclosure through certified Ex "db" cable glands HSK-M-Ex-d, M12x1.5 (KEM 99 ATEX 6968X) and M16x1.5 Peppers cable glands type E1UBFR/NP/16/M16 (CML 19 ATEX 1106X).

UFM 400 is supplied from "eb" terminals Phoenix Contact MPT 2,5 series 3248 (SEV 14 ATEX 0140U) and sends data to the second compartment of Ex "db" enclosure with the electronics with the intrinsically safe input/output terminals to which are connected three LED modules, button, Wi-Fi coupler (TÜV CY 18 ATEX 0206158X) + antenna, Ex certified P&T sensors (FTZU 20 ATEX 0071U), positioner Trovis 3793-110 (BVS 16 ATEX E 117) and terminals Phoenix Contact MPT 1,5 series 3248 (SEV 14 ATEX 0140U) for user current loop.

Technical parameters:

Ambient temperature: $-20\text{ °C} \leq T_a \leq +55\text{ °C}$

Process media temperature: $-40\text{ °C} \leq T_m \leq +180\text{ °C}$

Power supply:

Mains Power:

AC model: $U = 100\text{-}250\text{ VAC}$, 50/60 Hz, 30 VA; $U_n = 230\text{ VAC}$

DC model: $U = 18\text{-}32\text{ VDC}$, 30 W; $U_n = 24\text{ VDC}$, 500 mA

Input current:

AC model: 0.2 A VRMS @230 VAC

DC model: 0.5 A @24 VDC

Intrinsically safe parameters:

Power supply:

AC model (terminals L and N): $U_m = 250\text{ VAC}$, $I_{sc} = 1500\text{ A}$

DC model (terminals L+ and L-): $U_m = 30\text{ VDC}$

Input or Output:

User IO current loop (terminals X1001, X1002 and X1003):

$U_i = 26\text{ V}$, $I_i = 100\text{ mA}$, $P_i = 700\text{ mW}$, $C_i = 0\text{ F}$, $L_i = 0\text{ H}$

(16) Report Number: 23/0040

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 22.12.2023

Page: 2/3



**Physical-Technical Testing Institute
Ostrava - Radvanice**

(13)

Schedule

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(17) Specific Conditions of Use:

1. For information about dimension of flameproof joints it is necessary to contact manufacturer.
2. The Ex "eb" enclosure may be equipped with Ex equipment cable glands or Ex equipment blanking elements with type of Ex protection according to Ex marking in certificate.
3. The product enclosure includes accessible non-metallic parts. Due to the possibility of the electrostatic charging while subjected to a prolific charge generating mechanism, the end user shall determine suitability in the specific application.
4. Temperature class depends on the ambient temperature T_a and process media temperature T_m :

Temperature class	T_m (°C)	
	$-20\text{ °C} \leq T_a \leq +50\text{ °C}$	$-20\text{ °C} \leq T_a \leq +55\text{ °C}$
T4	121 °C	121 °C
T3	180 °C	140 °C

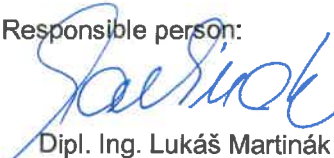
(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this certificate.

(19) Drawings and Documents:

Number:	Issue:	Date:	Description:
TD-121	5.0	18.12.2023	Ex Supplementary instructions
FCS-D79000-920	00	20.12.2023	IECEX & ATEX type approvals-Technical Assessment Document (TAS)
FCS-D79001-912	1.0	15.11.2023	Ex HDD Hardware design description (DEMCON)
FCS-D79000-914	-	11.12.2023	Ex Temperature measurements
FCS-D79002-920	00	20.12.2023	Technical documentation FCS_Electronics
FCS-D79003-920	00	02.08.2023	Technical documentation – Cables
FCS-M79105	00	20.12.2023	ATEX Label
FCS-M79106	00	20.12.2023	ATEX Label
FCS-M39003	-	12.10.2022	Electronics housing

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Page: 3/3