

[1]

EU-TYPE EXAMINATION CERTIFICATE

[2] Product Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

[3] EU-Type Examination Certificate Number: **DNV 20 ATEX 42348X** **Issue 0**

[4] Product: **Monitoring Unit (Feedback unit)**

[5] Manufacturer: **PMV Automation AB**

[6] Address: **Korta Gatan 9
S-17514 Solna
Sweden**

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

[8] DNV Product Assurance AS, notified body number 2460, in accordance with Article 17 and Article 21 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 reports listed in item 16.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: **EN 60079-0:2018 and EN 60079-11:2012**

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

[10] 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.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design and construction 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 1 G Ex ia IIC T4 Ga -40°C ≤Ta≤+80°C**



Date of issue:
2022-10-07



Bjørn Spongsveen
For DNV Product Assurance AS
The Certificate has been digitally signed.
See www.dnv.com/digitalsignatures for info

[13] **Schedule**

[14] **EU-Type Examination Certificate No:** **DNV 20 ATEX 42348X** **Issue 0**

[15] **Description of Product**

The monitoring unit detects the position and the direction of displacement from a disk or a shaft. In relation to the integral sensors, there are eleven models. Some of these models include a 4-20 mA transmitter. The inductive sensors, intrinsically safe certified, connected to terminals 2-3 and 5-6 by PEPPERL & FUCHS, type NJ2-V3-N

Type designation

F5IA and F5IE

F5 Switch box ATEX IEC Model Code

AA = Product Type

F5 Switch box type F5

BB = Certificate

IA intrinsically safe ATEX (Control drawing F5A-001C)
 IE intrinsically safe IEC (Control drawing F5A-001C)
 IB intrinsically safe InMetro (reserved for future use)
 IN Intrinsically safe CCC (China)

C = Electrical Connection

G 2 x M20 x 1.5
 N 2 x 1/2" NPT

D = Surface Treatment

U Epoxy, ED
 M Tufram

EEE = Switches

XXX No Switches
 MEC 2 x SPDT Switches
 NAM 2 x NAMUR sensors
 PXY 2 x SPDT proximity Switches

FFF = Feedback

XXX No Feedback
 POT Potentiometer, 5 kOhms
 P1K Potentiometer, 1 kOhms
 P18 Potentiometer, 180 deg
 420 4-20 transmitter
 T18 4-20 transmitter, 180 deg
 T27 4-20 transmitter, 270 deg

GG = Spindle

00 For installation on P5/EP5
 23 Rotary, Namur, VDE 3845
 xx More spindles available

HHH = Front Cover (3 positions; different options available)

I = Function

D Direct
 R Reverse

J = Indicator

A Indicator
 B No Indicator
 H Dome Style

K = Temperature

Z Nitrile, NBR -40°C to + 85°C
 Q Silicon, Q -40°C to + 85°C

Product	Manufacturer	Type	Certificate no.
Capteur inductif Inductive sensor	PEPPERL+FUCHS	NJ2-V3-N	PTB 00 ATEX 2032 X + suppléments

These products are declared compliant by their manufacturers and their conformity does not fall under the responsibility of this certificate.

Intrinsic safety parameters:	Ui	Ii	Pi	Li	Ci
Transmitter Terminals	28 V	100 mA	700mW	1 µH	68 nF
Potentiometer Terminals 7-8-9	16.8 V	50 mA	: 210mW	1 µH	1 nF
Terminals 1-2-3	28 V	45 mA	315mW	negligible low	negligible low
Terminals 4-5-6	28 V	45 mA	315mW	negligible low	negligible low
NAM switch terminal 1-2 and 4-5	16 V	52 mA	169mW	50 µH;	40 nF

Ambient temperature:
 -40°C ... +80°C

Routine tests
 None.

Warning marking:
 WARNING – POTENTIAL ELECTROSTATIC CHARGING, SEE INSTRUCTIONS

[16] **Report No.:** 176867-42348

- The various circuits of the electrical equipment must only be connected to intrinsically safe certified electrical apparatus or to intrinsically safe accessories, and these combinations must be compatible with the rules of intrinsic safety.
- The marking stickers and the potentiometer is not tested by the clause 7.4.2 of EN 60079-0 :2012. All precautions shall be taken to avoid all electrostatic charges – see instruction
- The Equipment contains more than 15% of aluminium. It must be mounted in a such a manner as to eliminate the risk of sparks caused by friction or impact.
- Type 'IA' and 'IE' Intrinsic Safety Parameters must not exceed the values indicated in the control drawing, F5A-001C
- HAZARD – TO AVOID ELECTROSTATIC HAZARD, CLEAN THE DEVICE WITH A WET CLOTH – SEE INSTRUCTIONS

[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	Title	Rev.	Date
Mechanical and other			
*F5 Mandatory IOM Content	Required manual content	4	2022-07-08
F5-As001C	Assembly drawing	0	2022-04-22
F5-As001Cm	Material drawing	0	2022-04-22
*F5A-010C-A	Marking plate for ATEX cert	0	2022-07-07
IS-General-Thick film lacquer	thick film lacquer use	0	2012-09-13
F5IS ATEX IEC model code	ATEX IEC Model code	0	2020-02-16
Electronics			
F5A-005C	Coating instructions	0	2018-12-18
*F5A-001C	Control drawing	1	2022-06-29
BOM			
F5C9401b	4-20mA Position Transmitter	2	1999-01-08
F5C9501b	Mechanical Switches	3	1999-01-08
F5C9502b	Mechanical Switches + 4-20mA	3	1999-01-08
F5C9503b	Mechanical Switches + Potentiometer	3	1999-01-08
F5C9504c	Inductive Sensors	4	1999-01-08
F5C9505c	Inductive Sensors + 4-20mA	4	1999-01-08
F5C9506c	Inductive Sensors + Potentiometer	4	1999-01-08
F5C9507b	Potentiometer 5k	3	1999-01-08
F5C9508b	4-20mA	3	1999-01-08
F5C9509b	Reed Switches	2	1999-01-08
F5C9510b	Reed Switches + 4-20mA	2	1999-01-08
F5C9511b	Reed Switches + Potentiometer	2	1999-01-08
Wiring and Layout			
F5-2-4-9401	4-20mA position transmitter	3	1999-01-08
F5-2-4-9501	F5 Feedback unit mechanical switch	3	1995-02-22
F5-2-4-9502	F5 Feedback unit mechanical switch F5-SW/ MEC -420	5	1995-01-12
F5-2-4-9503	F5 Feedback unit mechanical switch F5-SW/ MEC -POT	3	1995-01-12
F5-2-4-9504	F5 Feedback unit Inductive sensor F5-SW/ NAM	2	1995-02-03
F5-2-4-9505	F5 Feedback unit Inductive sensor F5-SW/ NAM- 420	6	1995-02-22
F5-2-4-9506	F5 Feedback unit Inductive sensor F5-SW/ NAM -POT	4	1995-01-12
F5-2-4-9507	F5 Feedback unit potentiometer F5- -POT	3	1995-01-12
F5-2-4-9508	F5 Feedback unit 4-20mA F5-420	4	1995-01-13
F5-2-4-9510	Component Layout F5 Module Board PMV 94002431	2	1995-05-10
F5-2-4-9511	Component layout F5-Module Board PMV 94001813	2	1999-01-08
F5-2-4-9512	Layout module back side F5-Module Board 94001813	2	1999-01-08
F5-2-4-9513	Layout component F5-module PMV 94002431	1	1999-05-10
F5-2-4-9514	Layout solder side Fr -Main board PMV 94001431	2	1999-05-10
F5-2-4-9515	Layout component F5-module board PMV 94001813	2	1999-01-08

[20] **Certificate History**

Issue	Description	Issue date	Report no.
0	Original issue -certificate moved from LCI 03 ATEX 6103X	2022-10-07	176867- 42348

END OF CERTIFICATE

