



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX PRE 20.0112X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2021-04-20
Applicant: **PMV Automation AB**
Korta gatan 9
S17154 Solna
Sweden
Equipment: **Ultraswitch WS/WM**
Optional accessory:
Type of Protection: **Ex ia**
Marking: Ex ia IIB T4/T5/T6 Ga
Ex ia IIC T4/T5/T6 Ga
Ex ia IIIC T₂₀₀85°C Da

Approved for issue on behalf of the IECEx
Certification Body:

Asle Kaastad

Position:

Certification Manager

Signature:
(for printed version)

Date:

2021-04-20

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 www.iecex.com or use of this QR Code.



Certificate issued by:

DNV GL Presafe AS
Veritasveien 3
1363 Høvik
Norway





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Certificate No.: **IECEX PRE 20.0112X**

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Date of issue: 2021-04-20

Issue No: 0

Manufacturer: **PMV Automation AB**
Korta gatan 9
S17154 Solna
Sweden

Additional
manufacturing
locations:

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with 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:

[NO/PRE/ExTR20.0113/00](#)

Quality Assessment Report:

[NO/NEM/QAR08.0008/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The equipment is a switchbox type to mount on the top of valve packages to indicate the valve position. The switchbox shows a visual indication of the valve position and a discrete electrical indication of the valve position, indicated by different types of limit switches.

see the Annex for the detail of type.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The Rotary Limit Switch Box is marked with the following warning marking: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS".
- Enclosure material limits for EPL Ga are exceeded, as aluminium content is greater than 10%. User must determine the suitability of the equipment for the particular application, for example, to avoid an ignition hazard due to impact or friction
- The Intrinsic Safety Parameters must not exceed the values indicated in the control drawing, W-43C.
- The ambient temperature is indicated in the control drawing, W-43C.
- The T classification is indicated in the control drawing, W-43C.
- All switches are intended for gas Group IIC. The FE (NS5002) and FK (NS5003) are intended for Gas group IIB. It is indicated in the control drawing, W-43C.

Annexes:

[ANNEX TO IECEx_PRE_20.0112X.pdf](#)
[ANNEX TO IECEx_PRE_20.0112X_1.pdf](#)



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Safety Data

Gas: All switches are intended for Group II subdivision IIC, except from NS5002 and NS5003 that are intended for subdivision IIB.

The total electrical ratings for electrical switches depend on rating of the switch type mounted and maximum permissible ambient temperature for use in temperature class, and shall not exceed the following values:

Model code	Namur Switch Option Type	Ui	li	Pi	Ci	Li	Amb-min	T6	T5	T4	T3	T2 -T1
		V	mA	mW	nF	μH	°C	°C	°C	°C	°C	°C
FE	NS5003	15	50	120	80	110	-20	70	70	70	70	70
FK	NS5002	15	50	120	80	110	-20	70	80	80	80	80
N2	NJ2-12GK-N	16	52	169	45	50	-25	51	66	80	80	80
N3	SJ3,5-S1N	16	52	169	30	100	-25	28	40	68	68	68
N4	NJ2-12GK-SN	16	52	169	50	150	-40	34	46	74	74	74
N8	NJ 2-V3-N...	16	52	169	40	50	-25	28	40	68	68	68
NB	NJ2-12GM-N	16	52	169	30	50	-25	45	57	80	80	80
NC	NJ4-12GM-N	16	52	169	45	50	-25	32	44	67	67	67
NE	NCB2-12GM35-N0	16	52	169	90	100	-25	45	57	80	80	80
NF	NCN4-12GM35-N0	16	52	169	95	100	-25	45	57	80	80	80
NG	NJ5-11-N-G	16	52	169	45	50	-25	42	57	80	80	80
NH	NCB4-12GM40-N0	16	52	169	120	50	-25	34	46	74	74	74
NL	NCB2-V3-N0...	16	52	169	100	100	-25	45	60	80	80	80
NM	NJ2-11-SN-G	16	52	169	50	150	-40	45	57	80	80	80
NP	SJ3.5-N	16	52	169	50	250	-25	28	40	68	68	68
NQ	NJ4-12GK-N	16	52	169	45	50	-25	51	66	80	80	80
NV	NJ2-11-N-G	16	52	169	30	50	-25	45	57	80	80	80
NW	SJ3,5-SN	16	52	169	30	100	-40	28	40	68	68	68
NY	NJ4-12GK-SN	16	52	169	70	150	-40	34	46	74	74	74



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Model code	Mechanical and Reed Switch Option Type	Ui	li	Pi	Ci	Li	Amb-min	T6	T5	T4	T3	T2 – T1
		V	mA	mW	nF	µH	°C	°C	°C	°C	°C	°C
M1	Mechanical switch silver	28	45	31,5	Neg	Neg	-40	45	60	78	78	78
MG	Mechanical switch gold	28	45	31,5	Neg	Neg	-40	45	60	78	78	78
P4	Aleph PS-6132	28	45	31,5	Neg	Neg	-10	-	-	40	40	40
P5	Hamlin 59135-030	28	45	31,5	Neg	Neg	-40	-	-	80	80	80
PE	Sabre	28	45	31,5	Neg	Neg	-40	55	70	80	80	80
PT	Phazer BRS	28	45	31,5	Neg	Neg	-40	55	70	80	80	80

The dots in the labelling represent free definable parameters. These free definable parameters can be omitted or replaced by letters or digits, and are covered by this certificate.

When assigning the actual sensor to the table uses the model description which describes the sensor best. Letters and digits describe the different types according to the model description key.

The sum of all capacitances and inductances, including tolerance and a 10 m cable, result to the given values for Ci and Li shown above.

Dust: All switches are intended for Group II subdivision IIIC.
 Ambient temperature: $-40^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$
 Electrical parameters: Equal to parameters for gas certification.

Ingress protection code
 IP66/67 according to IEC 60529



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Type Designation

1	2	3	4	5	6	7	8	9	10
A	B	CC	D	E	F	G	H	II	JJ

A= Brand sticker

x One position where x =any character

B= Shaft type, external interface does not affect certification

x where x= any character

C= Body style

WS General Purpose/I.S. Enclosure / 1/2" NPT Conduit entries

WM General Purpose/I.S. Enclosure / M20x1,5mm Conduit entries

D= Number of conduit entries

2 2 conduit entries

3 3 conduit entries. (2 acc. to "C" + entry opposite side with second option C.)

4 4 conduit entries. (2 acc. to "C" + entries opposite side with second option C.)

E= Body material

A Aluminum

R Engineered resin Not ATEX II 1D Ex ia IIIC Da

F= Cover material

A Aluminum

R Engineered resin Not ATEX II 1D Ex ia IIIC Da

P Polycarbonate Cover (clear) Not ATEX II 1D Ex ia IIIC Da

G= Indicator (Specifies if indicator is present, flat or dome shaped, and the colour of the indicator.

x where x= any character

H= Number of switch elements

0 0 Switches

1 1 Switch

2 2 Switches

I= Switch type 1 x 2 x

FE NS5003 IS-2002-N

FK NS5002 IS-2002-N

M1 SPDT Mechanical 15A @ 250VAC ; 0,5A@125VDC

MG SPDT Mechanical - Gold Contacts

N2 NJ2-12GK-N

N3 SJ3,5-S1N

N4 NJ2-12GK-SN

N8 NJ2-V3-N

NB NJ2-12GM-N

NC NJ4-12GM-N

NE NCB2-12GM35-N0

NF NCN4-12GM35-N0

NG NJ5-11-N-G

NH NCB4-12GM40-N0

NL NCB2-V3-N0

NM NJ2-11-SN-G

NP SJ3.5-N

NQ NJ4-12GK-N

NV NJ2-11-N-G

NW SJ3,5-SN

NY NJ4-12GK-SN

P4 SPST Proximity



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- P5 SPDT Proximity
 - PE Sabre™ SPDT Proximity
 - PT Phazer BRS™ SPST Proximity
- J= Certificate
- 14 General Purpose
 - 15 Atex Ex ia
 - 21 IECEx ia
 - 27 FM IS
 - 28 CSA Ni
 - 29 CSA IS
 - 40 Atex Ex ia, FM IS, CSA IS
 - 41 Inmetro Ex ia
 - 42 Kosha Ex ia
 - 43 CCC/Nepsi Ex ia
 - 45 TR CU Ex ia
 - 60 Certificate according to position G

Safety Data

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