



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx PRE 17.0046X

Issue No: 0

Certificate history:

[Issue No. 0 \(2017-12-12\)](#)

Status: **Current**

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Date of Issue: **2017-12-12**

Applicant: **PMV Automation AB**
Korta Gatan 9
S17154 Solna
Sweden

Equipment: **Digital Valve Positioner**

Optional accessory: *Remote Control Unit*

Type of Protection: **Intrinsic safety "ia"**

Marking:
Ex ia IIC T4 Ga -40°C ≤ Ta ≤ + 85°C

Approved for issue on behalf of the IECEx
Certification Body:

Asle Kaastad

Position:

Certification Manager

Signature:
(for printed version)

Date:

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 the [Official IECEx Website](#).

Certificate issued by:

DNV GL Nemko Presafe AS
Veritasveien 3
1363 Høvik
Norway





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

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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

*This Certificate **does not** indicate compliance with electrical 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/ExTR17.0041/00](#)

Quality Assessment Report:

[NO/NEM/QAR08.0008/08](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The PMV D30 is a digital positioner designed primarily to control modulating valves.

The positioner can be used with single or double action actuators with either rotary or linear movement.

Enclosure material of painted aluminium, display and indicator windows of plastic material. Threaded entries for separate cable glands M20 or ½" NPT.

The D30 positioner comprises: -electronic board with microprocessor, Hart modem interface, display, key board -pneumatic valve block, -positional feedback with potentiometer -compartment for electrical connections. -the positioner D30 can also be equipped with modules for feedback, limit switches, and a pressure gauge block. The modules can be factory assembled before delivery or fitted later. The modules for feedback and limit switches can contain the following. Feedback 4-20mA and one of the following functions: Two mechanical switches: Two reed switches: Two inductive sensors. Remote unit, an external unit containing the position potentiometer and indicator.

Further information and data in the ANNEX to this certificate

SPECIFIC CONDITIONS OF USE: YES as shown below:

Specific Conditions of Use

1. The enclosure is made of aluminium and impact or friction caused by external objects shall be avoided in the application.
2. The surface area of the plastic parts on the cover exceeds the limits specified in EN 60079-0 for II 1G (EPL Ga) for gas group IIC and intensive rubbing or brush charging should be avoided when used in an IIC explosive atmosphere.
3.
The cable connection of the Remote Unit with the D30 –unit shall be type A or B in accordance with IEC 60079-25. The cable must be adequately mechanically protected in all instances and have a temperature rating for the ambient temperature range at the site.
4. Control Drawing D4-086C contains the parameters for intrinsic safety
5. The intrinsic safe circuits of D30 is insulated from earth and complies with the dielectric strength test of 500 V ac

Annex:

[ANNEX TO PRE_17.0046X_00.pdf](#)

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Type designation

D30 Model code

1 2 3 4 5 6 7 - 8 9 10 11 12 13 - 14 15 16 17 18 19
A A A B C D E - F G G H H H - I J K L M N

Position B designates certification

Position J designates communication protocol Position K designates switch type

Position H 13 designates Indicator type.

A = Model no

D 3 0 Full 5 button LCD menu, LED status
D 3 1 Single button interface, LED status and LCD
D 3 3 Single button interface, LED status

B = Approval, Certificate

E IEC
A ATEX
B INMETRO

C = Function

S SA D20 E/P (poppet valve)
H DA (High Flow)

D = Connections Air, Electrical

G 1/4" G air, M20 x 1,5 electrical
M 1/4" NPT air, M20x1,5 electrical
N 1/4" NPT air, 1/2"NPT electrical

E = Connection feature

2 2 Electrical conduits
4 4 Electrical conduits
T 2 Electrical conduits, threaded Aux. ventilation
F 4 Electrical conduits, threaded Aux ventilation

F = Housing material/ Surface treatment

x *Material (always Aluminium) and treatment Powder epoxy different colours or Tuffram*

G = Mounting options / Spindle

R x Unit prepared for remote mounting (x any other character)
x x *Any other combination are with different spindle shafts*

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H = Cover and Indicator

- x x x *Combination indicates lid colour and indicator type*
- x x D *Domed indicator not suitable for Da, Db and Dc environments)*

I = Temperature/seals

- x *(Any character not S and V) ambient working temperature range NBR seals*
- S *ambient working temperature range Silicone seals*
- V *ambient working temperature range FPM seals*

J = Input signal/Protocol

- 4 4-20 mA / none
- 5 4-20 mA / HART

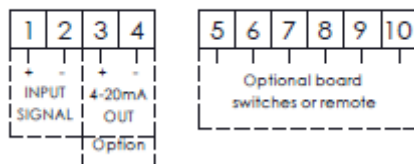
D30 Remote Unit

A separately certified Remote Unit, type F5ISxx-.....for connection to the D30 with this option.
The Remote Unit is connected to terminals 8, 9 and 10, for models with remote board, type indication GG=Rx.

Parameters for Intrinsic Safety

The transmitter must be connected to safety barriers or isolators according to the Control Drawing D4-086C and corresponding to the stated input values of the positioner.

D30 series terminal configuration



Power, 4-20mA input signal. Terminals no. 1- 2

Maximum input voltage. Ui: 28 V

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Maximum input current.	Ii:	93 mA
Maximum input power.	Pi:	653 mW
Maximum internal capacitance.	Ci:	11,3 nF
Maximum internal inductance.	Li:	11,3 µH

4-20mA Output. Terminals no. 3-4

Maximum input voltage.	Ui:	28 V
Maximum input current.	Ii:	75 mA
Maximum input power.	Pi:	525 mW
Maximum internal capacitance.	Ci:	22 nF
Maximum internal inductance.	Li:	11,3 µH

Switches, Mechanical or Proximity. Terminals 5-6-7-8-9-10 (2 circuits 3 wire)

Maximum input voltage.	Ui:	28 V
Maximum input current.	Ii:	45 mA
Maximum input power.	Pi:	315 mW
Maximum internal capacitance.	Ci:	1 nF
Maximum internal inductance.	Li:	1 µH

Namur switch and isolator barrier. Terminals 5-6-7-8-9-10 (2 circuits 3 wire)

Maximum input voltage.	Ui:	16 V
Maximum input current.	Ii:	25 mA
Maximum input power.	Pi:	34 mW
Maximum internal capacitance.	Ci:	150 nF / 100 nF / 30 nF Depending on the type of switch
Maximum internal inductance.	Li:	50 µH / 100 µH / 150 µH Depending on the type of switch

Specific safety parameters for the different types of switches according to
Control Drawing D4-086C (derived from Certificates PTB 00 ATEX 2032 X, PTB 00 ATEX 2049 X, PTB 99 ATEX 2219 X)

Degrees of protection (IP Code)

IP 66

Ambient temperature:



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-40°C to +85°C

Routine tests

None