


# EU-TYPE EXAMINATION CERTIFICATE

- [2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU
- [3] EU-Type Examination Certificate Number: **Presafe 17 ATEX 11142X** **Issue 1**
- [4] Product: **D20 and D30 Digital Valve Positioners**
- [5] Manufacturer: **PMV Automation AB**
- [6] Address: **Korta Gatan 9  
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 GL Presafe AS, notified body number 2460, in accordance with Article 17 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 section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN IEC 60079-0:2018 and EN 60079-11: 2012**
- [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. 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 1G Ex ia IIC T4 Ga -40°C ≤ Ta ≤ + 85°C

Date of issue:  
2020-02-28



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Bjørn Spongsveen  
For DNV GL Presafe AS  
The Certificate has been digitally signed.  
See [www.dnvgl.com/digitalsignatures](http://www.dnvgl.com/digitalsignatures) for info



[13] **Schedule**

[14] **EU-Type Examination Certificate No:** Presafe 17 ATEX 11142X **Issue 1**

[15] **Description of Product**

The PMV Type D20 and Type D30 are digital positioners 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 D20-D30 positioners comprise:

-electronic board with microprocessor, Hart modem interface , display , key board

-pneumatic valve block,

-positional feedback with potentiometer

-compartment for electrical connections.

-the positioner 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.

**Type designations**

**D20 and D30 series digital positioners type key.**

D	2	A	B	C	D	E	-	F	G	G	H	H	H	-	I	J	K	L	M	N
D	3	A	B	C	D	E	-	F	G	G	H	H	H	-	I	J	K	L	M	N

**A = Model no**

- D 2 0 Single button interface, LED status
- D 2 1 Single button interface, LED status and LCD
- D 2 2 Full 5 button LCD menu, LED status
- 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*
- 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  
 P Profibus PA  
 F Foundation Fieldbus

*Added Rev1*

*Added Rev1*

**K = Feedback option, switches**

- X No feedback option
- T 4-20 mA transmitter, no switches
- 5 Slot type Namur sensor, P+F SJ2-SN
- 6 Slot type Namur sensor, P+F SJ2-N
- 7 Slot type Namur sensor, P+F SC2-N0-GN
- 8 Slot type Namur sensor, P+F SC2-N0-YE
- G Limit switches Mechanical SPDT ,Gold
- N Namur V3 type sensor, P+F NJ2-V3-N
- P Limit switches Proximity SPDT
- S Limit switches Mechanical SPDT
- U Namur V3 type sensor, P+F NCN4-V3-N0

**L = Options, Add in electronics**

- 0 No pressure sensor board
- 3 Added pressure sensors
- 2 Added pressure sensors (alternative code)

**M = Accessories**

- x *External accessories not effecting ia certification*

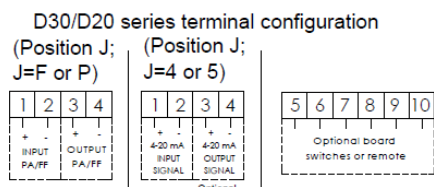
**N= Special Options**

- x *Special options not effecting ia certification*

**A A A B C D E - F G G H H H - I J K L M N**

### Electrical Parameters for Intrinsic Safety

The transmitters 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.



#### Profibus PA, Fieldbus Foundation, FISCO field device, input signal. Terminals no. 1, 2, 3, 4

Maximum input voltage.	Ui:	17,5V
Maximum input current.	Ii:	380mA
Maximum input power.	Pi:	5,32W
Maximum internal capacitance.	Ci:	5nF
Maximum internal inductance.	Li:	10µH

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

Maximum input voltage.	Uj:	28 V
Maximum input current.	Ij:	93 mA
Maximum input power.	Pj:	653 mW
Maximum internal capacitance.	Cj:	11,3 nF
Maximum internal inductance.	Lj:	11,3 µH

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

Maximum input voltage.	Uj:	28 V
Maximum input current.	Ij:	93 mA
Maximum input power.	Pj:	653 mW
Maximum internal capacitance.	Cj:	22 nF
Maximum internal inductance.	Lj:	11.3 µH

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

Maximum input voltage.	Uj:	28 V
Maximum input current.	Ij:	45 mA
Maximum input power.	Pj:	315 mW
Maximum internal capacitance.	Cj:	1 nF
Maximum internal inductance.	Lj:	1 µH

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

Maximum input voltage.	U <sub>i</sub> :	16 V
Maximum input current.	I <sub>i</sub> :	25 mA
Maximum input power.	P <sub>i</sub> :	34 mW
Maximum internal capacitance.	C <sub>i</sub> :	150 nF / 100 nF / 30 nF Depending on the type of switch
Maximum internal inductance.	L <sub>i</sub> :	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 according to EN 60529

**Ambient temperature:**

-40°C Ta to +85°C

**Routine tests**

None

[16] **Report No.:** D0003122

[17] **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 D20-D30 –units shall be type A or B in accordance with EN 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 D20-D30 are insulated from earth and complies with the dielectric strength test of 500 V ac.

[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
D30 ATEX-IEC Technical File list, 3 pages	1	2020-03-20

[20] **Certificate History**

Issue	Description	Issue date	Report no.
0	Original issue	2017-12-12	D0003122
1	Extended with model D20 and Fisco models, update of standard and modified electronics	2020-05-28	D0003122-01

END OF CERTIFICATE

