




# DET NORSKE VERITAS

## EC-TYPE EXAMINATION CERTIFICATE

- [2] **EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**
- [3] EC-Type Examination Certificate Number: **DNV 11 ATEX 92846X**
- [4] Equipment or Protective System: **Ex proof / Weather-proof Limit switch**
- [5] Applicant – Manufacturer or Authorized representative: **DelVal Flow Controls Pvt. Limited**
- [6] Address: **Gat No 625/1/2, Kuruli, Tal:Khed,  
Pune 410501, India**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems 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 14.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0: 2009 and EN 60079- 1: 2007, EN 61241-0: 2006 and EN 61241-1: 2004**
- [10] If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following:

 **II 2 GD Ex d IIC T6 Gb  
Ex tD A21 T85°C IP67**

Høvik, 2011-05-13  
for Det Norske Veritas AS

  
**Marianne Spæren**  
*Certification Manager*



Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

The digitally signed and electronically distributed document is the original and valid certificate. Ref.: [www.dnv.com/digitalsignatures](http://www.dnv.com/digitalsignatures)

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 300.000. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



[13]

## Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No.: DNV 11 ATEX 92846X

### Certificate History

Revision	Description	Report no.	Issue date
-	Original certificate	2011-50546	2011-05-13

[15] Description of Equipment or Protective System

The Limit Switch is designed to operate the valve and provides indications "Open/Close" position as well as intermediate position. Limit switch box comprises of types four switches and are connected to the terminal strip. Switches are preset to indicate 'Open' and 'Close' position of the valve. Bottommost switch is set to indicate 'Close' position of the valve while topmost switch is set to indicate 'Open' position of the valve. Intermediate two switches are set to indicate desired intermediate position of the valve.

Initially, when valve is in closed position, the bottommost cam presses the bottom switch & switch get activated by completing the circuit. Thus signal of valve 'CLOSE' position will be sent to control panel as well as the dome indicator will also show 'CLOSE' position of the valve.

When the actuator opens the valve, it in turn will rotate the shaft of limit switch box in anticlockwise direction. Thus the topmost cam which is set to indicate 'OPEN' position of the valve, will press the topmost switch & switch get activated by completing the circuit. Thus the signal of valve 'OPEN' position will be sent to control panel as well as the indicator will show 'OPEN' position of the valve.

Similarly, During 'OPEN' to 'CLOSE' operation, two intermediate cams will be pressed against intermediate switches to generate the signal for intermediate positions between 0° to 90° as per user requirement.

There are Limit switches may be with type having two switches which provides indication for 'Open or Close' of the valve with variants in electrical parameters.

### Type Identification

No	Switches/sensors	Current	Voltage
1	SPDT switch	10A	125V/250V AC
2	DPDT Switch	10A	250V AC
3	DPDT switch	0.3A	125 VDC
4	DPDT Switch	0.15A	250 V DC
5	Proximity sensors	0.2A	5-60V DC

### Electrical Data

Listed under type identification

### Degrees of protection (IP Code)

IP 67

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**[16] Project No.:** PRJC-54506-2008-PRC-IND

**Descriptive Documents**

Number	Title	Rev.	Date
83.D2.A.4.4.A.2.1.A.0	Ex- Proof/ Weather Proof Limit Switch Box (Sheet 1 of 2)	0	15.07.2010
83.D2.A.4.4.A.2.1.A.0	Ex- Proof/ Weather Proof Limit Switch Box (Sheet 2 of 2)	0	15.07.2010
83.D2.NP.x.0.0.0	Name Plate for Ex Proof limit Switch Box D2- Ex proof	0	15.07.2010

**Routine test**

None. The relative pressure applied has been four times the reference pressure of the enclosure.

**[17] Special Conditions for Safe Use**

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 1 and 2 of EN 60079-1.

**[18] Essential Health and Safety Requirements**

See part 9 of this certificate

END OF CERTIFICATE

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 300.000. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.