



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 NEM 11.0012X** Page 1 of 5 [Certificate history:](#)
Status: **Current** Issue No: 2 [Issue 1 \(2011-09-23\)](#)
[Issue 0 \(2011-05-31\)](#)
Date of Issue: 2011-11-01
Applicant: **Flowserve Sweden/Palmstierna International AB**
Korta Gatan 9
SE-171 54 SOLNA, SWEDEN
Sweden
Equipment: **UltraSwitch Position Indicator**
Optional accessory:
Type of Protection: **Intrinsic safety**
Marking: Ex ia IIC T4/T5/T6
IP 66

Approved for issue on behalf of the IECEx
Certification Body:

Asle Kaastad

Position:

Certification Manager, Ex-products

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



Certificate issued by:

NEMKO
Gaustadelleen 30
Oslo N-0314
Norway





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Manufacturer: **Flowsolve Sweden/Palmstierna International AB**
Korta Gatan 9
SE-171 54 SOLNA, SWEDEN
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 60079-0:2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:5

IEC 60079-11:2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:5

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 Reports:

[NO/NEM/ExTR11.0006/00](#)

[NO/NEM/ExTR11.0006/01](#)

[NO/NEM/ExTR11.0006/02](#)

Quality Assessment Report:

[NO/NEM/QAR08.0008/03](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The UltraSwitch, model xx-x-PS/PM-x-x-xx-15-x-x-x-x is a position indicator provided with several limit switch options. The function of these rotary limit switches is to provide visual local and remote position for automated valves. The whole assembly is contained in a plastic enclosure with three threaded holes for entry devices.

Safety electrical data

Maximum input voltage.	Ui: 16Va
Maximum input current.	Ii: 52mA
Maximum input power.	Pi: 169mW
Maximum input capacitance	Ci: See enclosed Annex.
Maximum input inductance	Li: See enclosed Annex.

For switch option type, T-class and T-ambient, please see enclosed Annex to Certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The Rotary Limit Switch Box is marked with the following warning marking: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS".
2. The total electrical ratings must not exceed the values indicated in this Schedule.
3. For nomenclature breakdown please see the installation instructions.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Name type correction of Mechanical switch Honeywell V7-1D19D8-201.



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Additional information:

Ingress protection

IP66

Annex:

[ANNEX TO IECEx NEM 11.0012X issues 2.pdf](#)

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

Namur Switch Option Type	Ci /	Li /	T6	T5	T4	T3	T2 –T1
	nF	µH					
			Maximum permissible ambient temperature in °C				
NCB1,5-...M...N0...	90	100	34	46	74	74	74
NCB2-12GM...-N0...	90	100	45	57	80	80	80
NCN4-12GM...-N0...	95	100	45	57	80	80	80
NCB5-18GM...-N0...	95	100	45	57	80	80	80
NCN8-18GM...-N0...	95	100	45	57	80	80	80
NCB10-30GM...-N0...	105	100	45	57	80	80	80
NCN15-30GM...-N0...	110	100	45	57	80	80	80
NJ 0,8-5GM-N...	30	50	32	44	67	67	67
NJ 1,5-6,5...-N...	30	50	32	44	67	67	67
NJ 1,5-8GM-N...	30	50	32	44	67	67	67
NJ 1,5-10GM-N-Y...	20	50	32	44	67	67	67
NJ 1,5-18GM-N-D...	50	60	45	57	80	80	80
NJ 2-11-N...	45	50	28	40	68	68	68
NJ 2-11-N-G...	30	50	45	57	80	80	80
NJ 2-12GM-N...	30	50	45	57	80	80	80
NJ 4-30GM-N-200... (oscillator)	70	100	28	40	68	80	80
NJ 4-30GM-N-200... (amplifier)	70	100	28	40	68	68	68
NJ 4-12GM-N...	45	50	32	44	67	67	67
NJ 5-18GM-N...	70	50	45	57	80	80	80
NJ 5-18GK-N...	70	50	34	46	74	74	74
NJ 5-18GK-N-150...	70	50	34	46	74	80	80
NJ 8-18GK-N...	70	50	34	46	74	74	74
NJ 8-18GK-N-150...	70	50	34	46	74	80	80
NJ 8-18GM-N...	70	50	45	57	80	80	80
NJ 10-30GM-N...	140	100	45	57	80	80	80
NJ 15-30GK-N...	140	100	34	46	74	74	74
NJ 15-30GK-N-150...	140	100	34	46	74	80	80
NJ 15-30GM-N...	140	100	45	57	80	80	80
NCB4-12GM...-N0...	120	50	34	46	74	74	74
NCB8-18GM...-N0...	120	50	34	46	74	74	74
NCB15-30GM...-N0...	120	150	34	46	74	74	74
FJ6-110-N...	150	110	45	57	81	81	81
FJ7-N...	65	220	45	57	81	81	81

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NCB2-F1-N0...	90	100	28	40	68	68	68
NCB2-V3-N0...	100	100	28	40	68	68	68
NCN2-F56-N1...	100	100	37	49	77	77	77
NBN3-F69-NO...	100	100	24	36	63	63	63
NBN4-V3-N0...	100	100	28	40	68	68	68
NBN4-V3-NOY189289	120	100	24	36	63	63	63
NBB15-U.K-N0...	110	200	28	40	68	68	68
NBB20-U.K-N0...	110	200	28	40	68	68	68
NBN30-U.K-N0...	105	300	28	40	68	68	68
NBN40-U.K-N0...	105	300	28	40	68	68	68
NCN4-V3-N0...	100	100	28	40	68	68	68
NCB15+U...+N0...	110	160	28	40	68	68	68
NCB40-FP-N0..	220	360	28	40	68	68	68
NCN15-M...-N0..	100	100	28	40	68	68	68
NCB20-L2-N0...	110	200	28	40	68	68	68
NCN20+U...+N0...	110	160	28	40	68	68	68
NCN30+U...+N0...	110	160	28	40	68	68	68
NCN40+U...+N0...	120	130	28	40	68	68	68
NCN40-L2-N0...	105	300	28	40	68	68	68
NCN50-FP-NO...	220	360	28	40	68	68	68
NJ0,8-F-N...	30	50	28	40	68	68	68
NJ1,5-F-N...	30	50	28	40	68	68	68
NJ2,5-F-N...	40	50	28	40	68	68	68
NJ2-F1-N...	30	50	28	40	68	68	68
NJ2-V3-N...	40	50	28	40	68	68	68
NJ3-V3-N...	40	50	28	40	68	68	68
NJ4-F-N...	150	100	28	40	68	68	68
NJ 6-F-N	70	100	28	40	68	68	68
NJ 10-F-N...	85	100	28	40	68	68	68
NJ 15+U.+N...	140	130	28	40	68	68	68
NJ 15-M1.-N...	140	100	28	40	68	68	68
NJ 20+U.+N...	150	130	28	40	68	68	68
NJ 30+U.+N...	160	130	28	40	68	68	68
NJ 30P+U.+1N...	150	170	28	40	68	68	68
NJ 40+...+N...	180	130	28	40	68	68	68
NJ 50-FP-N...	320	360	28	40	68	68	68
FJ6-110-N...	150	110	45	57	81	81	81

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The dots in the labeling represent free definable parameters. These free definable parameters can be omitted or replaced by letters or digits.

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 C_i and L_i shown above.

Mechanical and reed switches

Maximum input voltage.

U_i : 28 V

Maximum input current.

I_i : 45 mA

Maximum input power.

P_i : 31,5mW

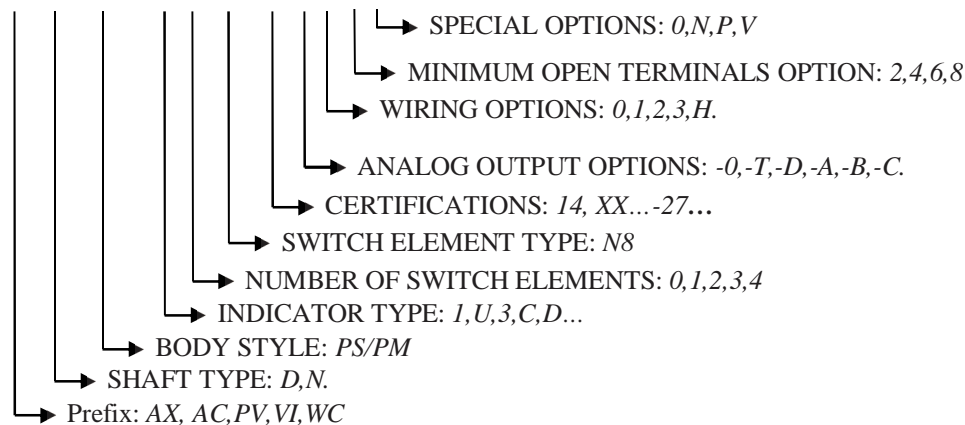
C_i and L_i are negligible low

Mechanical and Reed Switch Option Type
Honeywell V7-1D19D8-201
Aleph PS-6132
Hamlin 59135-030
Sabre SPDT
Phazer II SPDT
BRSII SPST

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Product Nomenclature:

xx-x-PS/PM-x-x-N8-15-x-x-x-x



Prefix

- AX - Automax
- AC - Accord Controls
- PV - PMV
- VI - Valtek Industries
- WC - Worcester Controls

SHAFT TYPE

- D - Double "D" Shaft (1/4" flats)
- N - NAMUR Shaft (VDI/VDE 3845 Shaft)

BODY STYLE

- PS - Engineered Resin Housing, (3) 3/4" NPT Conduit Entries
- PM - Engineered Resin Housing, (3) M25 Conduit Entries

INDICATOR TYPE

- 1 - Flat Top Cove, No Indicator
- U - Standard Ultradome (Green / Red)
- 3 - Four Window Ultradome
- C - 90° 3-Way Ultradome
- D - 180° 3-Way Ultradome
- E - 180° 3-Way Center Blocked Ultradome
- F - 120° Thru / Divert Ultradome
- H - Black / Gray / Yellow Ultradome
- K - Green / Red with Ektar Ultradome
- R - Reverse – Red = Open / Green = Closed Ultradome
- W - White (=closed) / Blue (=open) Ultradome
- X - Three Position Type 6 White (=closed) / Blue (=open) Ultradome



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NUMBER OF SWITCH ELEMENTS

- 0 - 0 Switch Elements
- 1 - 1 Switch Element
- 2 - 2 Switch Elements
- 4 - 4 Switch Elements

SWITCH ELEMENT TYPE

- N8 - P&F NJ2-V3-N-V5 (NAMUR)
- MG, P4, P5, PE, PP, PT (Mechanical)

CERTIFICATIONS

- 14 - General Purpose
- XX - (CSA/FM) Class I, Div 2 Gr. A, B, C, D / Class II Div 2 Gr. E,F,G /Class III
- XX - ATEX/IECEX Ex nA IIC
- XX - ATEX/IECEX Ex ia IIC/ Ex iaD IIIC
- XX - ATEX/IECEX Ex mb IIC
- XX - CSA/FM Class I, Div 2 Gr. A, B, C, D / Class II Div 2 Gr. E, F, G /Class III
- ATEX/IECEX Ex nA IIC
- XX - CSA/FM/ATEX/IECEX Intrinsically Safe Class Class I,II,III Div 1 Gr A,B,C,D,E,F,G T5
- Ex ia IIC/ Ex iaD IIIC
- 27 - Factory Mutual/CUS Intrinsically Safe Class I,II,III Div 1 Gr A,B,C,D,E,F,G T5 (See Note 6)

ANALOG OUTPUT OPTIONS

- 0 - None
- T - 4-20mA Transmitter (40' to 100' travel)
- D - 180' Travel 4-20mA Transmitter
- A - 0-1k Ohm Potentiometer
- B - 0-5k Ohm Potentiometer
- C - 0-10k Ohm Potentiometer

WIRING OPTIONS

- 0 - None
- 1 - Brad Harrison Connectors -3 pins
- 2 - Brad Harrison Connectors -5 pins
- 3 - Brad Harrison Connectors - 7 pins
- H - Heavy Duty Terminal Block

MINIMUM OPEN TERMINALS OPTION

- 2 - 2 (standard)
- 4 - 4
- 6 - 6
- 8 - 8

SPECIAL OPTIONS

- 0 - None
- N - No Silicone
- P - 180' Potentiometer Gears (for analog options A, B, or C)
- V - Viton O-Rings