



# Certificate of Compliance

**Certificate:** 70014336 (069005\_0\_000)

**Master Contract:** 176847

**Project:** 70014336

**Date Issued:** 2015-12-04

**Issued to:** Flowserve Corporation/EMA Palmstierna International AB  
Korta Gatan 9  
Solna, 171 54  
SWEDEN

**Attention:** Linda Hoijer

*The products listed below are eligible to bear the CSA Mark shown*



**Issued by:** Sorin Tat  
Sorin Tat

## **PRODUCTS**

**CLASS - C225802 - PROCESS CONTROL EQUIPMENT-For Hazardous Locations-**

Class I, Division 1, Groups B,C,D; Class II, Division 1, Groups E, F, G; Class III.

-Ultraswitch DS/DM switch box with suffixes: DS/DMxxxxxxxxxxxx, rated based on the type of limit switches installed inside with maximum ratings of 10A at 125/250Vac, see table below. Aluminum or Stainless Steel Enclosure Type 4X; Tamb: -55°C to +70°C; T4.

**CLASS - C225882 - PROCESS CONTROL EQUIPMENT-For Hazardous Locations - Certified to US Standards**

Class I, Division 1, Groups A,B,C,D; Class II, Division 1, Groups E, F, G; Class III.

-Ultraswitch DS/DM switch box with suffixes: DS/DMxxxxxxxxxxxx, rated based on the type of limit switches installed inside with maximum ratings of 10A at 125/250Vac, see table below. Aluminum or Stainless Steel Enclosure Type 4X; Tamb: -55°C to +70°C; T4.

Notes: Suffixes denote mechanical, variations and switch ratings.

Switch types and their ratings are showed in this table:



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No	Type	Contact Rating	Ambient temperature ratings
M1	SPDT Mechanical switches 150°C (V7-1C13D8-201)	125/250Vac 10A, 125Vdc 0.5A, 250Vdc 0.25A	-40°C to +85°C
MG	SPDT Mechanical - Gold Contacts (V7-1D19D8-201)	1A @ 125 Vac	-40°C to +85°C
P5	SPDT Proximity Hamlin 59150-3-S-02-F	120Vac 0.25A, 28Vdc 0.25A	-40°C to +150°C
PE	Flowserve Sabre SPDT Proximity	120Vac 1A 24Vdc 1A	-40°C to +85°C
PP	Flowserve Phazer SPDT Proximity	120Vac 3A 24Vdc 2A	-40°C to +85°C
PT	Flowserve Phazer BRS SPST Proximity	120Vac 3A 24Vdc 0.5A	-40°C to +85°C
N8	P&F NJ2 V3 N (NAMUR)	NAMUR standard 5-25Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +100°C
N9	P&F NBB3-V3-Z4	Max.100mA, 5-60 V	-25°C to +100°C
NM	NJ2-11-SN-G	NAMUR standard 5-25Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-40°C to +100°C
NG	NJ5-11-N-G	NAMUR standard 8.2Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +100°C
NP	P&F SJ3.5-N (NAMUR)	NAMUR standard 5-25Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +100°C
NW	P&F SJ3.5-SN (NAMUR)	NAMUR standard 8Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-50°C to +100°C



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No	Type	Contact Rating	Ambient temperature ratings
N3	P&F SJ3.5-S1N (NAMUR)	NAMUR standard 8Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +100°C
NQ	P&F NJ4-12GK-N (NAMUR)	NAMUR standard 5-25Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +100°C
NR	NJ4-12GM40-E1, NPN NC	10-60 V, Max.200mA	-25°C to +75°C
NS	NJ4-12GM40-E2, PNP NO	10-60 V, Max.200mA	-25°C to +70°C
NT	NJ4-12GK40-E2, PNP NO	10-60 V, Max.200mA	-25°C to +70°C
NK	P&F NCN4- 12GM40-Z0 Proximity 2-wire DC NO	5-60 V, max.100mA,	-25°C to +70°C
ND	P&F NCB2- 12GM40-Z1 Proximity inductive 2-wire DC NC	5-60 V, max.100mA,	-25°C to +70°C
N1	P&F NJ4-12GM40- E Proximity 3-wire NPN NO 10-60 VDC	10-60 V, max.200mA,	-25°C to +70°C
NF	P&F NCN4- 12GM35-N0 NAMUR with LED	NAMUR standard 8.2Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +100°C
NE	P&F NCB2- 12GM35-N0 NAMUR with LED	NAMUR standard 8Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +100°C
NA	P&F NBN4- 12GM40-E2 Inductive. 3 wires PNP NO 10-30VDC	NAMUR standard 8.2Vdc, ≤1mA(w/ target) ≥3mA(w/out target)	-25°C to +70°C



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No	Type	Contact Rating	Ambient temperature ratings
F9	IFM IN0097 20-250V AC/DC NO 2-Wire	20-250 V, max.5mA	-25°C to +80°C

**APPLICABLE REQUIREMENTS**

- CAN/CSA-C22.2 No. 0-M91 - General Requirements – Canadian Electrical Code, Part II
- CAN/CSA-C22.2 No. 61010-1-12 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
- UL Std. No. 61010-1 (3<sup>rd</sup> Edition) - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
- CSA C22.2 No.25-1996 - Enclosures for Use in Class II Groups E, F and G Hazardous Locations
- CSA C22.2 No. 30-M1986 - Explosion-Proof Enclosures for Use in Class Hazardous Locations
- FM 3616:2011 - Dust-Ignitionproof Electrical Equipment General Requirements
- FM 3615:2006 - Explosionproof Electrical Equipment General Requirements
- CAN/CSA-C22.2 No. 60529:05 - Degrees of protection provided by enclosures (IP Code)
- CSA C22.2 No.94.2-07/UL50E - Enclosures for electrical equipment, environmental considerations



## *Supplement to Certificate of Compliance*

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*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### **Product Certification History**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
70014336	2015-12-04	Original certification of Ultraswitch DS/DM switch box with suffixes.