

# [1] EC-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use  
in Potentially explosive atmospheres  
Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **Nemko 13ATEX1537X** Issue 1

[4] Equipment or Protective System: **Ultraswitch WS/WM**

[5] Applicant/ Manufacturer: **Palmstierna International AB**

[6] Address: **Korta Gatan 9  
SE-171 54  
SOLNA, SWEDEN**

[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] Nemko AS, notified body number 0470 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 report no. **242717**




[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**CENELEC EN 60079-0 : 2009, CENELEC EN 60079-11 : 2007 and CENELEC EN 60079-31: 2009**

[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, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

	<b>II 1G</b>	<b>Ex ia IIB T4/T5/T6</b>
	<b>II 1G</b>	<b>Ex ia IIC T4/T5/T6</b>
	<b>II 1D</b>	<b>Ex ta IIIC T80°C T<sub>500</sub>85°C Da IP66/67</b>

Oslo, 2013-12-19

**Ståle Sandstad**  
Certification Manager, Ex-products

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**[13] Schedule****[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 13ATEX1537X Issue 0****[15] Description of Equipment or Protective System**

The equipment is a switchbox type to mount on the top of valve packages to indicate the valve position. The switchbox shows a visual indication of the valve position and a discrete electrical indication of the valve position, indicated by different types of limit switches.

**Type Designation**

1	2	3	4	5	6	7	8	9	10
A	B	CC	D	E	F	G	H	II	JJ

- A = Brand sticker
- B = Shaft type
- C = Body style
- D = Number of conduit entries (2, 3 or 4)
- E = Body material
- F = Cover material
- G = Indicator
- H = Number of switch elements
- I = Switch type
- J = Certificate

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## Safety Data

**Gas:** All switches are intended for Group II subdivision IIC, except from NS5002 and NS5003 that are intended for subdivision IIB.

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

Model code	Namur Switch Option Type	Ui	li	Pi	Ci	Li	Amb-min	T6	T5	T4	T3	T2-T1
		V	mA	mW	nF	µH	°C	°C	°C	°C	°C	°C
FE	NS5003	15	50	120	80	110	-20	70	70	70	70	70
FK	NS5002	15	50	120	80	110	-20	70	80	80	80	80
N2	NJ2-12GK-N	16	52	169	45	50	-25	51	66	80	80	80
N3	SJ3,5-S1N	16	52	169	30	100	-25	28	40	68	68	68
N4	NJ2-12GK-SN	16	52	169	50	150	-40	34	46	74	74	74
N8	NJ 2-V3-N...	16	52	169	40	50	-25	28	40	68	68	68
NB	NJ2-12GM-N	16	52	169	30	50	-25	45	57	80	80	80
NC	NJ4-12GM-N	16	52	169	45	50	-25	32	44	67	67	67
NE	NCB2-12GM35-N0	16	52	169	90	100	-25	45	57	80	80	80
NF	NCN4-12GM35-N0	16	52	169	95	100	-25	45	57	80	80	80
NG	NJ5-11-N-G	16	52	169	45	50	-25	42	57	80	80	80
NH	NCB4-12GM40-N0	16	52	169	120	50	-25	34	46	74	74	74
NL	NCB2-V3-N0...	16	52	169	100	100	-25	45	60	80	80	80
NM	NJ2-11-SN-G	16	52	169	50	150	-40	45	57	80	80	80
NP	SJ3.5-N	16	52	169	50	250	-25	28	40	68	68	68
NQ	NJ4-12GK-N	16	52	169	45	50	-25	51	66	80	80	80
NV	NJ2-11-N-G	16	52	169	30	50	-25	45	57	80	80	80
NW	SJ3,5-SN	16	52	169	30	100	-40	28	40	68	68	68
NY	NJ4-12GK-SN	16	52	169	70	150	-40	34	46	74	74	74

Model code	Mechanical and Reed Switch Option Type	Ui	li	Pi	Ci	Li	Amb-min	T6	T5	T4	T3	T2-T1
		V	mA	mW	nF	µH	°C	°C	°C	°C	°C	°C
M1	Mechanical switch silver	28	45	31,5	Neg	Neg	-40	45	60	78	78	78
MG	Mechanical switch gold	28	45	31,5	Neg	Neg	-40	45	60	78	78	78
P4	Aleph PS-6132	28	45	31,5	Neg	Neg	-10	-	-	40	40	40
P5	Hamlin 59135-030	28	45	31,5	Neg	Neg	-40	-	-	80	80	80
PE	Sabre	28	45	31,5	Neg	Neg	-40	55	70	80	80	80
PT	Phazer BRS	28	45	31,5	Neg	Neg	-40	55	70	80	80	80

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The dots in the labelling represent free definable parameters. These free definable parameters can be omitted or replaced by letters or digits, and are covered by this certificate.

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 Ci and Li shown above.

**Dust:** All switches are intended for Group II subdivision IIIC.  
Ambient temperature:  $-40^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$   
Electrical parameters: Equal to parameters for gas certification.

### Ingress protection code

IP66/67 according to IEC 60529

### [16] Report No. 242717

#### Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2013.07.05	231635	Prime Certificate released
1	2013.12.19	242717	"ta" certification added.

#### Descriptive Documents

DRAWING NO	Title/Description	Rev.	Date	Sheets
W-TFC-ia	WSWM Ex ia Scheduled files list	2	2013-12-16	1

### [17] Special Conditions for Safe Use

- The Rotary Limit Switch Box is marked with the following warning marking: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS".
- Enclosure material limits for EPL Ga are exceeded, as aluminium content is greater than 10%. User must determine the suitability of the equipment for the particular application, for example, to avoid an ignition hazard due to impact or friction
- The total electrical ratings must not exceed the values indicated in the control drawing, W-43C.

### [18] Essential Health and Safety Requirements

See item 9

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