

[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 11ATEX1065X** Issue **3**

[4] Equipment or Protective System: **UltraSwitch Position Indicator**

[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. **226869**

[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

[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:



II 1G

II 1G

Ex ia IIB T4/T5/T6

Ex ia IIC T4/T5/T6

Oslo, 2013-06-11



Asle Kaastad
Certification Manager, Ex-products

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[13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No **Nemko 11ATEX1065X Issue 3**

[15] Description of Equipment or Protective System

The UltraSwitch is a position indicator provided with several limited 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.

Type Designation

1	2	3	4	5	6	7	8	9		10	11		12	13	14	15
A	B	C	C	D	E	F	G	G	-	H	H	-	I	J	K	L

- A = Brand sticker
- B = Shaft
- CC = Connections (cable entry)
 - PS: Resin Housing 1/2" NPT
 - PM: Resin Housing M20x1,5
 - PN: Resin Housing 3/4" NPT
 - PG: Resin Housing M25x1,5
- D = Number of open cable entries (1, 2 or 3)
- E = Indicator option
- F = Quantity of switches (0 to 4)
- GG = Switch options (see below for details)
- HH = Certifications
 - I = Analog output
 - J = Wiring options
- K = Minimum extra terminals
- L = Special options

The additional letters and digits in the type reference concern different accessories and functions of the instrument.

Alternative Type Designation

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

- A = Brand sticker
- B = Rating selection
- C = Housing selection
- D = Indicator option
- E = Language
- F = Switch options (see below for details)
- G = Area selection (type of protection)
- H = Mounting selection

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Safety Data

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:

Namur Switch Option Type	Ui	Ii	Pi	Ci	Li	Amb- min	T6	T5	T4	T3	T2 –T1
	V	mA	mW	nF	µH	°C	°C	°C	°C	°C	°C
NJ 2-V3-N...	16	52	169	40	50	-25	28	40	68	68	68
NCB2-V3-N0...	16	52	169	100	100	-25	45	60	80	80	80
NCN4-V3-N0...	16	52	169	100	100	-25	28	40	68	68	68
NS5003	15	50	120	80	110	-20	70	70	70	70	70
NS5002	15	50	120	80	110	-20	70	80	80	80	80
SJ3,5-S1N	16	52	169	30	100	-25	28	40	68	68	68
NJ2-12GK-SN	16	52	169	50	150	-40	34	46	74	74	74
NJ2-12GM-N	16	52	169	30	50	-25	45	57	81	81	81
NJ4-12GM-N	16	52	169	45	50	-25	32	44	67	67	67
NCB2-12GM35-N0	16	52	169	90	100	-25	45	57	80	80	80
NCN4-12GM35-N0	16	52	169	95	100	-25	45	57	80	80	80
NCB4-12GM40-N0	16	52	169	120	50	-25	34	46	74	74	74
NJ2-11-SN-G	16	52	169	50	150	-40	45	57	80	80	80
SJ3.5-N	16	52	169	50	250	-25	28	40	68	68	68
NJ4-12GK-N	16	52	169	45	50	-25	51	66	80	80	80
NJ2-11-N-G	16	52	169	30	50	-25	45	57	80	80	80
SJ3,5-SN	16	52	169	30	100	-40	28	40	68	68	68
NJ2-12GK-N	16	52	169	45	50	-25	51	66	80	80	80
NJ5-11-N-G	16	52	169	45	50	-25	42	57	80	80	80
NJ4-12GK-SN	16	52	169	70	150	-40	34	46	74	74	74

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.

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Mechanical and reed switches

Ratings:

Maximum input voltage.	Ui: 28 V
Maximum input current.	Ii: 45 mA
Maximum input power.	Pi: 31,5mW
	Ci and Li are negligible low

Ambient temperature	Temperature class
-40°C ≤ Ta ≤ +80°C	T5
-40°C ≤ Ta ≤ +60°C	T6

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

Ingress Protection Code
IP 66, according to EN 60529.

[16] Report No.226869

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2011-03-28	157200	Prime Certificate released
1	2011-09-13	182555	Minor changes and additional switches added.
2	2011-11-02	190348	Name correction of Mechanical switch from Honeywell V7-1C19D8-201 to Honeywell V7-1D19D8-201
3	2013-06-11	226869	New switches, ambient temperature, additional alternative model code and new cable entries sizes.

Descriptive Documents

DRAWING NO	Title/Description	Rev.	Date	Sheets
PRS-TFC-ia	PS/PM Ex ia Scheduled files list	3	2013-06-10	1

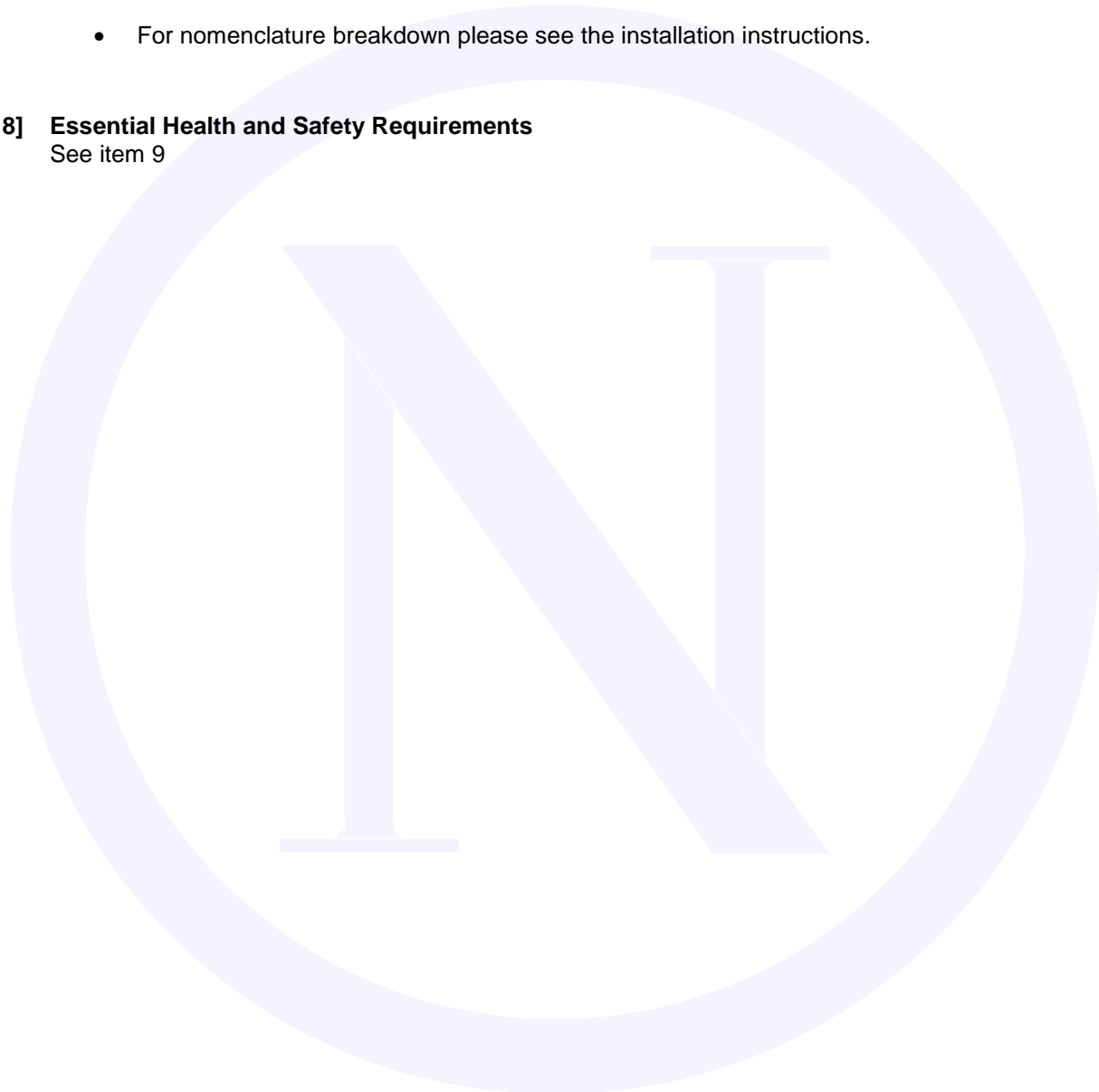
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[17] Special Conditions for Safe Use

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

[18] Essential Health and Safety Requirements

See item 9



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