



(1) **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: **ISSeP01ATEX027X**

(4) Equipment or protective system:
Level and flow switches type XXX-XXXX-XXX

(5) Applicant – Manufacturer – ~~Authorized representative in the Community:~~

(6) Address: **MAGNETROL INTERNATIONAL N.V.
Heikensstraat 6
B - 9240 ZELE**

(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) ISSeP, notified body n° 492 in accordance with article 9 of the 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 n° 01103.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014, ed. 1997 + amendments 1 and 2 of 1999
EN 50020, ed. 1994
EN 50284, ed. 1999

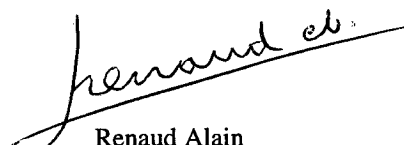
(10) The symbol "X" placed after the certificate number indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If necessary, other requirements of this directive may apply to the manufacture and supply of this equipment or protective system.

(12) The marking of the equipment or protective system shall include the following indications:

 II 1 G EEx ia II C T6

Colfontaine, the 27.08.2001.


Renaud Alain
Manager of Colfontaine division

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(13)

SCHEDULE

(14)

EC TYPE EXAMINATION CERTIFICATE N^R ISSeP01ATEX027X

(15) Description of the equipment or protective system

Level switches (float type and displacer type) and flow switches (vane type and disc type) consist of one or two changeover microswitches actuated by a mechanism using a magnet and of one enclosing tube. The switch action of microswitches is obtained through the displacement of a magnetic sleeve into the enclosing tube.

The magnetic sleeve and its associated mechanical devices are not included in this certificate.

The enclosure can be either in aluminium A360 or A413, or in cast iron.

The different versions are coded as follows :

XXX - XXXX - X XX

Level switches _____
(float type and displacer type)
or

Flow switches _____
(vane type and disc type)

Building materials _____
Process connection dimensions an type
Float material etc.

Type of microswitch _____
C = microswitch with silver contacts
U = microswitch with gold contacts
W = hemetically sealed microswitch with silver contacts
X = hemetically sealed microswitch with gold contacts

See table hereafter _____

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Codification for the two last digits	Input type for the electrical connections	Microswitches number	Magnet type	Enclosure dimension
2L	M20 x 1.5	1 x SPDT	Red	Small
8L	M20 x 1.5	1 x DPDT	Red	Small
2X	M20 x 1.5	1 x SPDT	Red	Tall
8X	M20 x 1.5	1 x DPDT	Red	Tall
2S	M20 x 1.5	1 x SPDT	Yellow	Small
8S	M20 x 1.5	1 x DPDT	Yellow	Small
2T	M20 x 1.5	1 x SPDT	Yellow	Tall
8T	M20 x 1.5	1 x DPDT	Yellow	Tall
4X	M20 x 1.5	2 x SPDT	Red	Tall
1X	M20 x 1.5	2 x DPDT	Red	Tall
4T	M20 x 1.5	2 x SPDT	Yellow	Tall
1T	M20 x 1.5	2 x DPDT	Yellow	Tall
3L	PG16	1 x SPDT	Red	Small
9L	PG16	1 x DPDT	Red	Small
3X	PG16	1 x SPDT	Red	Tall
9X	PG16	1 x DPDT	Red	Tall
3S	PG16	1 x SPDT	Yellow	Small
9S	PG16	1 x DPDT	Yellow	Small
3T	PG16	1 x SPDT	Yellow	Tall
9T	PG16	1 x DPDT	Yellow	Tall
5X	PG16	2 x SPDT	Red	Tall
ZX	PG16	2 x DPDT	Red	Tall
5T	PG16	2 x SPDT	Yellow	Tall
ZT	PG16	2 x DPDT	Yellow	Tall
AL	1" NPT	1 x SPDT	Red	Small
DL	1" NPT	1 x DPDT	Red	Small
AX	1" NPT	1 x SPDT	Red	Tall
DX	1" NPT	1 x DPDT	Red	Tall
AS	1" NPT	1 x SPDT	Yellow	Small
DS	1" NPT	1 x DPDT	Yellow	Small
AT	1" NPT	1 x SPDT	Yellow	Tall
DT	1" NPT	1 x DPDT	Yellow	Tall
BX	1" NPT	2 x SPDT	Red	Tall
EX	1" NPT	2 x DPDT	Red	Tall
BT	1" NPT	2 x SPDT	Yellow	Tall
ET	1" NPT	2 x DPDT	Yellow	Tall

Electrical parameters :

- Max. power supply parameters : $U_i = 30 \text{ V}$
 $I_i = 0.5 \text{ A}$
- Equivalent characteristics for 1 microswitch :
 $C_i = 4 \text{ pF}$
 $L_i = 3 \text{ } \mu\text{H}$

Routine tests :

The manufacturer shall make the routine verifications and tests necessary to ensure that the electrical apparatus produced complies with the specification submitted to the testing station together with the prototype.

Eventual prescriptions : None.

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(16) Report nr 01103

Composed in total of 19 pages, completed by the following documents :

"CODIFICATION Commutateurs de niveau ou débit ATEX EEx ia" (2pages)

"OPERATING PRINCIPLES" BE 41-325 (4 pages)

"INSTRUCTION MANUAL AND PART LIST" (16 pages)

"HAZARDOUS AREA INSTALLATION INSTRUCTIONS"

The drawings :

Number	Rev.	Date	Description
09-3121	B	15.07.1986	MICRO SWITCH GOLD ALLOY CONTACTS
09-3122	C	29.05.1984	MICRO SWITCH GOLD PLATED CONTACTS
09-3129	E	09.1988	SPDT SWITCH HIGH TEMPERATURE 400°F AMBIENT CONTINUOUS (15 AMPS)
09-3131	A	08.1985	SWITCH
09-3133	J	11.2000	HERMETICALLY SEALED MICROSWITCH
09-6104	G	06.1986	TERMINAL STRIP
09-6158	D	02.1999	TERMINAL BLOCK "BARTEK"
C-09-7111	P	11.05.1992	COPPER LEAD WIRE SILICONE INSULATED
09-7167	H	19.10.1995	LEAD WIRE
99-7084	A	15.08.1995	ENCLOSING TUBES
03-7710	H	20.01.1994	TERMINAL BLOCK (DPDT)
99-7197	A	18.06.2001	IS SWITCH ASSEMBLIES
99-7115	B	12.06.2001	HOUSING FLOATS AND DISPLACERS

(17) Special conditions for safe use :

Symbol X

- When the material is equipped with an aluminium enclosure, all precautions shall be taken in order to avoid all frictions or impacts which can cause the potentially explosive atmosphere ignition.

(18) Essential Health and Safety Requirements : None

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