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Métrologie environnementale Recherche - Analyses Essais - Expertises

VARIATION

EC TYPE EXAMINATION CERTIFICATE N^{R} ISSeP08ATEX016X/1

(14) Equipment or protective system:
Temperature, pressure and level switches

(15) Object of the variation:
To permit the certificate updating following the last editions of the Standards in force
EN 60079-0 : 2012 (IEC 60079-0 : 2011)
EN 60079-11 : 2012 (IEC 60079-11 : 2011)
EN 60079-26 : 2007 (IEC 60079-26 : 2006)

Electrical parameters: Unchanged

Eventual prescriptions: Unchanged

(16) Report n^{r}: 13001 of 12.02.2013

Composed in total of 24 pages, completed with the following documents:

- "Operating Instructions Level Switche type UNS"
- "Operating Instructions Single/Dual Metal Diaphragm Pressure Switches Type D1S/D2S and D1X/D2X"
- "Operating Instructions Single/Dual Metal Diaphragm Pressure Switches D1T/D2T Single/Dual Metal Differential Pressure Switches DPD1T/DPD2T"
- "Operating Instructions Metal Diaphragm Pressure Switches D1T/D2T and DPD1T/DPD2T"
- "Operating Instructions Single/Dual Bourdon Tube Pressure Switches BS/BT/BX"
- "Operating Instructions Diaphragm Seal Piston Pressure Switches type E1S/E1H/P1H/P1X/MSPS"
- "Operating Instructions Compact Pressure Switches Type Series 8000"
- "Operating Instructions Compact Pressure Switches Type X1T.../XTM.../XTK..."
- "Operating Instructions Compact Pressure Switches Type KD1.../KLK.../KLM..."
- "Operating Instructions Compact Pressure Switches Type 9671X/9681X/9692X"
- "Operating Instructions Mechanical Temperature Switches Type MTH/TH/TX/MLH/LH/LX"
- "Operating Instructions Limit Switch for Bypass Level Indicator GK03"
- "Operating Instructions Flow monitor Type BFS-10 N / N-Air and Flow monitor Type BFS-10-O / O-Air"
- "Operating Instructions Flow monitor Type BFS-20 O and Flow monitor Type BFS-20-OL"
- "Operating Instructions Flow monitor Type BFS-30 N / L and Flow monitor Type BFS-30-O"
- "Operating Instructions Flow monitor Type BFS-40 N and Flow monitor Type BFS-40-O"

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VARIATION

EC TYPE EXAMINATION CERTIFICATE N^{R} ISSeP08ATEX016X/1

(16) - The drawings

Number	Rev.	Date	Description
918-0437	E	24.01.2013	-V- Typenschild Ex ia G Zul. II 1 G, Ex ia IIC T6 Ga
918-0438	H	24.01.2013	-V- Typenschild Ex ia GD Zul. II 1 GD, Ex ia IIC T6 Ga, Ex ia IIIC T100°C Da
918-0440	E	24.01.2013	-V- Typenschild Ex ia G Zul. II 1 G, Ex ia IIB T6 Ga
918-0441	D	24.01.2013	-V- Typenschild Ex ia GD Zul. II 1 GD, Ex ia IIB T6 Ga, Ex ia IIIC T100°C Da
918-0461	D	24.01.2013	-V- Typenschild BFS-EXI 40x37 auf 918-0296
918-0462	A	24.01.2013	-V- Typenschild EXI Temp O88 T1X/L1X
918-0500	A	24.01.2013	-V- Typenschild EXI Temp O80 T2X
918-0517	A	24.01.2013	-V- Typenschild EXI Druck O80 D.X/B.X
918-0571	C	24.01.2013	-V- Typenschild Ex ia GD Zul. 40x37 Temperatur EXI
918-0727	-	28.01.2013	-V- Typenschild Ex ia G Zul. II 1 G, Ex ia IIB T6 Ga

(17) Special conditions for safe use: Unchanged

(18) Essential Health and Safety Requirements: Covered by the Standards listed in (9)

Colfontaine, 22.02.2013

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(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: **ISSeP08ATEX016X**

(4) Equipment or protective system:
Temperature, pressure and level switches.

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

(6) Address: Dorn-Assenheimer Str. 27
D – 61203 REICHELSHEIM

(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^{r} 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^{r} 07148.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006 (CEI 60079-0 : 2004)
EN 60079-11 : 2007 (CEI 60079-11 : 2006)
EN 60079-26 : 2004 (CEI 60079-26 : 2004)
EN 61241-0 : 2006 (CEI 61241-0 : 2004 + corrigendum 2005)
EN 61241-11 : 2006 (CEI 61241-11 : 2005 + corrigendum 2006)

(10) If the symbol "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 equipement or protective system in accordance to the Directive 94/9/EC. Further requirements of this Directive may 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 indications:
Ex II 1 G Ex ia II C T6 – Ex ia II B T6
Ex II 1 GD Ex iaD 20 T100

Colfontaine, the 02.04.2008

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Lambert Marcel,
Director.

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RÉGION WALLONNE

(13) **SCHEDULE**

(14) **EC TYPE EXAMINATION CERTIFICATE N^{R} ISSeP08ATEX016X**

(15) Description of the equipment or protective system:
Temperature, pressure and level switches.

The possible and admissible variations are the following :

- Level switches:

UNS-Ms 1/8--BN25, UNS-VA 1/8--VA27, UNS-Ms 1/4--BN30, UNS-VA 1/4--VA52, UNS-Ms 3/8--BN30, UNS-VA 3/8--VA52, Bilge Guard, UNS-1000-VA/Ms-BN, UNS-1000-VA/Ms-VA, UNS1000-G/X, UNS1000-VA--VA44, UNS-2000-S, UNS2000 VA/Ms-BN, UNS2000 VA/Ms-VA, UNS2100-VA/MS-VA et UNS Bilge Switch

- Option : all level switches of the type UNS can be equipped with a bimetallic switch acting with temperature. In the type number, is added the –TP –extension.
- The floats can be in stainless steel, in Burna-N or in other plastic materials such as PP, PE, PVC, PTFE or PA.

- Pressure switches:

D1T, D2T, B1T, B2T, P1H, P1X, KLM/KLK---K, KLM/KLK---S1, E1H---GE12, E1H---PLS, E1S, XTM, X1T, XTK, B1X, B2X, D1X, D2X, MSPS, DPD1T, DPD2T, 9671X, 9681X, 9692X, « compact X » series and 8000 series.

- Temperature switches:

MT1H, T2H, ML1H, L2H, T1X, T2X, L1X, TH, TX and T9692X.

- Flow switch

BFS

- By-pass switch

GK03-EXI

Electrical parameters
Ui = 28 V
Ii = 110 mA
Ci = 40 pF
Li = 4 µH

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 or sample (CEI 60079 : clause 27).
Eventual prescriptions : Tamb : -40°C to +75°C
IP6X

(16) Report n^{r} 07148 of 28.02.2008
Composed in total of 39 pages, completed by the following descriptive documents :
- "Operating Instructions Metal Diaphragm Pressure Switches D1S/D2S and D1X/D2X"
- "Operating Instructions Single/Dual Metal Diaphragm Pressure Switches D1T/D2T Single/Dual Metal Differential pressure switch DPD1T/DPD2T"
- "Operating Instructions Single/Dual Bourdon Tube Pressure Switches BS/BT/BX"
- "Operating Instructions Diaphragm Seal Piston Pressure Switches type E1S/E1H/P1H/P1X/MSPS"
- "Operating Instructions Compact Pressure Switches Type Series 8000"
- "Operating Instructions Compact Pressure Switches Type X1T…/XTM…/XTK…"
- "Operating Instructions Compact Pressure Switches Type KD1…/KLK…/KLM…"
- "Operating Instructions Compact Pressure Switches Type 9671X/9681X/9692X"
- "Operating Instructions Mechanical Temperature Switches Type MTH/TH/TX/MLH/LH/LX"
- "Operating Instructions for Level Switches"
- "Operating Instructions for Bypass Level Indicator"
- "Operating Instructions Flow monitor Type BFS-40 N and Flow monitor Type BFS-40-O"

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EC TYPE EXAMINATION CERTIFICATE N^{R} ISSeP08ATEX016X

The drawings:

Number	Rev.	Date	Pages	Description
D1T-150	H	18.03.1997	2	Pressure Switch - Diaphragm Single Setting
D2T-150	M	12.10.1992	2	Pressure Switch - Diaphragm Dual Setting
930-0102	-	29.08.2007		Sales drawing D1T/D2T pressure and vacuum Switch
B2T-12SS-CS	A	29.10.2006		Spcl. Press. Switch – Bourdon Tube
B2T-32SS-CS	A	29.10.2007		Spcl. Press. Switch – Bourdon Tube
B2T-48SS-CS	B	29.10.2006		Spcl. Press. Switch – Bourdon Tube
B2T-65SS-CS	C	29.10.2006		Spcl. Press. Switch – Bourdon Tube
B2T-72SS-CS	A	29.10.2006		Spcl. Press. Switch – Bourdon Tube
922-0309	A	08.12.2003		Zusammenbauzeichnung Bourdonrohrschalter 04
E1H	AH	09.09.1999	2	Pressure Switch, Econ-o-trol single setting
903-0094	A	14.02.2007		Gehäuse E1H
903-0174	B	28.09.2005		Deckel E1H
E1S	AA	19.01.2000		Pressure Switch, Econ-o-trol single setting
MSPS-100	K	09.06.1999		Pressure Switch Single Setting
P1H	N	29.11.1994		Pressure Switch - Piston Single Set
P1H-1600	D	18.02.1985		Pressure Switch – Piston Single Set
923-1571	-	31.08.2007	2	Serie 8000
922-0072	B	12.03.2004		Zusammenbauzeichnung Kolbendruckschalter X1T
922-0213	D	04.04.2006		Zusammenbauzeichnung XTM-…-G1-S1-1
923-0542	B	20.10.2005		XTK-…-G1-S1
922-0544	B	10.09.2004		Zusammenbauzeichnung KLM
922-0018	E	11.09.2004		Zusammenbauzeichnung KLM-..-..-K2-1[..2]
930-0103	-	29.08.2007		Sales Drawing DPD1T/DPD2T
DPD2T-80	K	03.06.1999	2	Pressure Difference Switch, Diaphragm Dual Setting
B1X	B	09.10.2006		Pressure Switch - Bourdon Tube Single Setting
B2X	B	09.10.2006		Pressure Switch - Bourdon Tube Dual Setting
D1X	A	17.03.2004		Pressure Switch - Diaphragm Single Setting
D2X	A	17.03.2004		Pressure Switch - Diaphragm Dual Setting
C9671X	N	03.03.2005		Compact Vacuum Switch, Vacuum
C9681X	N	03.03.2005		Compact Pressure Switch, Low Pressure
C9692X	T	03.03.2005		Compact Pressure Switch, High Pressure
923-1532	-	22.02.2007		Compact pressure switch 9681X/9692X
P1X	Q	18.12.1997	2	Pressure Switch, Piston Single Setting
P1X 1600	G	16.12.1992		Pressure Switch, Piston Single Setting
MT1H-25	K	04.10.1993	2	Temperature Switch - Single Setting
T2H-25	J	16.02.1993	2	Temperature Switch, Dual Setting
ML1H-20	G	07.05.1997	2	Temperature Switch-local Mount
L2H-20	E	06.04.1988	2	Temperature Switch - Local Mount Dual Setting
T1X-25	D	12.11.1986	2	Temperature Switch - Single Setting
T2X	A	03.06.2004	2	Temperature Switch - Dual Setting
L1X	A	03.06.2004	2	Temperature Switch - Single Setting Local Mnt
TH-Q10	G	25.08.2006		Temperature Switch
TX-Q10	E	21.03.2006		Temperature Switch
T9692X	-	07.04.2007	2	Temperature switch single Setting
923-1107	C	18.07.2007		Datenblatt UNS-Ms 1/8-Kx-BN25/3
923-1119	A	18.07.2007		Datenblatt UNS-VA 1/8-Kx-VA27/1(2)
923-1133	B	18.07.2007		Datenblatt UNS-Ms1/4-Kx-BN30/1(2)
923-1128	A	18.07.2007		Datenblatt UNS-VA1/4-Kx-VA52/1(2)
923-1116	C	18.07.2007		Datenblatt UNS-Ms3/8-Kx-BN30/1(2)

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EC TYPE EXAMINATION CERTIFICATE N^{R} ISSeP08ATEX016X

923-1112	B	18.07.2007		Datenblatt UNS-VA3/8-Kx-VA52/1(2)
922-0774	A	19.07.2007		Übersichtszeichnung Standard UNS1000 VA/Ms
14-1.512.1	1	29.08.1995		Schwimmerschalter Float Chamber UNS1000-G/X
12-1.426.1	1	28.09.1994		Schwimmerschalter UNS1000-VA/FL4-KL12
922-0871	B	19.07.2007		Übersichtszeichnung Standard UNS2000 VA/Ms
923-1261	A	19.07.2007		Datenblatt UNS2100-EX-...
923-1232	B	19.07.2007		Datenblatt Reedeinsatz
923-1231	C	19.07.2007		Datenblatt UNS...
923-1384	-	09.11.2005		Limit Switch GK03-EXI
13- 1. 187. 2	2	23.01.1996		Schwimmerschalter Float switch Type: UNS2000-S
923-1086	A	18.07.2007		Datenblatt Bilge Guard Standard
923-1398	B	22.08.2006		Datenblatt UNS-Bilgenschalter
923-1414	-	22.05.2006		Datenblatt UNS-Bilgenschalter
923-1265	B	19.07.2007		Datenblatt BFS
918-0529		22.11.2007		Typenschild Allgemein Ex II 1 GD, Ex ia IIB T6
918-0530		22.11.2007		Typenschild Allgemein Ex II 1 GD, Ex ia IIC T6
918-0531		22.11.2007		Typenschild Allgemein Ex II 1 G, Ex ia IIC T6
918-0532		22.11.2007		Typenschild Allgemein Ex II 1 G, Ex ia IIB T6

(17) Special conditions for safe use :

Symbol X.

- The following models are coded Ex ia IIB T6 : E1S, MSPS, KLM/KLK...S1, XTM, X1T, XTK, UNS-Ms 1/8 - - BN25, UNS-Ms 1/4 - - BN30, UNS-Ms 3/8 - - BN30, Bilge Guard, UNS-1000-VA/Ms-BN, UNS2000 VA/Ms-BN, UNS Bilge Switch (with Buna float), 8XXX-PL1-XX, 8XXX-PL4-XX, UNS-2000-S-VA----BN, UNS-2000-S-VA----PE and BFS as well as level switches having a plastic material float (PP, PE, PVC, PTFE or PA)

- For the model E1H...PLS, all precautions shall be taken during their use in category 1 (zones 0) zones in order to avoid all ignition of the explosive atmosphere by electrostatic hazards. Furthermore, this model is also coded Ex ia IIB T6.

- The other models are coded Ex ia IIC T6

- For the models with –TP- extension, the temperature switch shall be supplied by a separte associated apparatus

- The following models can be use only in gas atmospheres (dust atmospheres not allowed): E1H---GE12, E1H---PLS

- The models E1S and MSPS shall be installed in an additional enclosure. The ingress protection of this enclosure shall be at least IP6X when using these models in dust atmosphere.

- The cable entries shall be of a certified type and kept the IP6X degree when using in Dust atmosphere. They are not a part of this certificate.

- The models having a light alloy enclosure or part of enclosure shall be protected against all impact or friction which can ignite the explosive atmosphere.

- The metallic enclosures shall be connected to earth.

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(18) Essential Health and Safety Requirements: covered by the Standards listed in (9).

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