



MARINE DIVISION

Certificate number: 22435/A0 BV

File number: AP 4047

Product code: 3843H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Barksdale GmbH
Reichelsheim - GERMANY

for the type of product

PRESSURE SWITCH

X1T and 9000 Series.

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 27 Oct 2014

For BUREAU VERITAS,

At BV HAMBURG, on 27 Oct 2009,

Dirk Hoepfner

A handwritten signature in black ink, appearing to read 'Hoepfner'.



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

X1T and 9000 Series Pressure Switches for Marine Applications.

1.1 - Main Characteristics:

	X 1 T	9000 Series
Pressure Range:	15...100 to 30...400	10...50 to 40... 400 bar
Rated Voltage:	250 VAC / 250 V DC	250V AC / 24 V DC
Operating Temperature:	-25°C to 55°C	-25°C to 55°C
Electrical Connection:	Plug (DIN 43650)	EN 175301-8013-A plug (formerly DIN 43650)
Pressure Connection:	G1/4" internal/female or flange	G1/4" female thread DIN ISO 228-1
Ingress Protection Index:	IP 65	IP 65
Intrinsically Safe:	Ex ia IIB/IIC T6	None
Housing:	Aluminium (see 4.4)	Aluminium (see 4.4)

1.2 - Electrical Ratings:

Type	Silver contacts	Inductive load	Resistive load	Gold-plated contacts	Ex
X1T	30 V=	3.0 A	10.0 A	U _{max} = 30 V= I _{max} = 400 mA (U.I) _{max} = 0.12 VA	U _{max} = 28 V I _{max} = 50 mA
	250 V=	0.03 A	0.25 A		
	250 V~	5.0 A	10.0 A		
9000 Series	250 V~	2.5 A	10.0 A	N/A	N/A
	24 V=	1.0	6.0 A		

2. DOCUMENTS AND DRAWINGS :

Barksdale Inc./ Barksdale GmbH:

"Compact Series 9000, Compact Pressure Switch" N° 923-1647, undated.

"Operating Instructions, Compact Pressure Piston Switches Type Series 9000" N° 923-1650, Index A, dated 24.09.2008

Data Sheet "Compact Pressure Switches X1T (Piston)" N° 02/02 KDM-ENG 02/2.

"Operating Instructions, Compact Pressure Piston Switches X1T and XTK/XTM" N° 923-0168, Index B, dated 01.08.2002.

3. TEST REPORTS :

3.1 - Test Reports issued by Institut für Beratung.Forschung.Systemplanung.Verpackungsentwicklung und-prüfung and der Hochschule für Angewandte Wissenschaften Hamburg (BFSV):

- "R+D -Project, Sine Sweep & Shock Test Report" N° 6761/09, dated 02.07.2009.
- "Product Testing on a Pressure Switch Type X1T-4100-40, Test Report" N° 4945/02, dated 26.07.2002.

3.2 - EC Type Examination Certificate for X1T Nr. ISSeP08ATEX016X issued on 02.04.2008 by ISSeP, Colfontaine, Belgium

4. APPLICATION / LIMITATION :

4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.

4.3 - BUREAU VERITAS Environmental Category, EC Code: 33/43.

4.4 - To be installed on piping systems for which Aluminium is accepted.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The X1T and 9000 Series Pressure Switches are to be manufactured, examined and tested by Barksdale GmbH in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end Barksdale GmbH has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 - **Barksdale GmbH** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following production site:

**Barksdale GmbH
Dorn-Assenheimer Strasse 27
D - 61203 Reichelsheim
GERMANY**

6. MARKING OF PRODUCT :

- Trade name,
- Date of manufacture and serial number,
- Equipment type number or model identification under which it was type-tested.
- Ex marking, as relevant.

7. OTHERS :

This approval is given with the understanding that **Barksdale GmbH - 61203 Reichelsheim, GERMANY** will accept full responsibility for informing shipbuilders, ship-owners or their sub-contractors of the proper methods of use and general maintenance of the transmitters and the conditions of this approval.

***** END OF CERTIFICATE *****