

# Smooth Sailing

Monitoring and Control in Marine Applications







# Partnership in Focus

Barksdale is your flexible and dynamic partner, integrating reliably into customer processes with innovative products, efficient process management, and comprehensive service. For over 75 years, we have offered a unique product portfolio for pressure, level, flow, and temperature monitoring. The high quality standard and operational reliability provide ideal conditions for demanding measurement tasks, even under extreme conditions such as in the maritime industry.

# Full speed ahead

It requires a lot of experience and power to navigate successfully on a global scale. We offer the right advantages:

- ► Country-specific approvals
- ▶ Worldwide availability through global presence
- ► Application specific, customized solutions
- ► Extensive market experience
- ▶ Durable products



# With no limits

Our portfolio offers diverse solutions for a multitude of applications:

## ► Tank gauging

Level monitoring on fuel tanks, ballast tanks, cargo hold, bilges systems, fresh and wastewater systems

### ▶ Propulsion systems

Pressure and temperature monitoring on engine, gear boxes, steering and cooling systems

#### ▶ Hydraulic systems

Hydraulic oil pressure and level monitoring on cranes, winches, davits and deck machinery

### ► Exhaust gas scrubber systems

Pressure and level monitoring on scrubber tanks, filtration systems

### Auxiliary systems

Pressure and temperature monitoring on pumps, compressors, firefighting systems

# Wherever you are

Engineered for precision and resilience, our solutions help you sail smoothly – even in stormy times.













# Marine approvals at a glance



		Bureau Veritas	DNV	RINA	Lloyd's register  Lloyd's Register	EX Ex	MED
Mechanical Pressure Switches	B1T / B2T						
	D1T / D2T		•				
	DPD1T / DPD2T		•				
	E1H		•				
	KLK / KLM*	•	•		•		
	Series 8000*		•	•			
	Series 9000*	•	•	•	•		
Mechanical Temperature Switches	MT1H		•			•	
	ML1H		•				
	T2H		•				
	L2H		•				
Electronics	BPS3000	•					
	BDS3000						
	BiT		•				
	ВоТ						

<sup>\*</sup> EU RO MR Type Approval Certificate



		Bureau Veritas	DNV	RINA	Lloyd's register  Register	EX Ex	MED
Level Control	BNA-S21/S22				BNA-S22-S only		
	BNA-S31/S32				BNA-S32-S only		
	BNA-S35/S36				BNAS36-S only		
	BNA-S41/S42						
	BNA-S45/S46						
	BNA-S51/S52						
	UNS-S-VA						
	UNS-VA/SB-VA52						
	UNS-VA/SB1-VA52						
	UNS-VA/SB4						
	UNS-VA/SB5						
	UNS1000-S						
	UNS2000-S						
	USE3000					USE3200, 6200	
	BLP1		•			•	
Flow	BFS-10-N	•				•	
	BFS-30						
	BFS-40	•	•				
BNA Accessories	XM/Xmi						
	XT/Xti						
	GK03				•	•	

# Pressure



### **Features**

- ► Adjustable ranges: 1 600 bar
- ► Adjustable or fixed set points
- Nema 1, 4, 4X, 7, 9
- ► Compact, rugged, economical
- ► Approved models available:

















# **High Pressure**

- ► Adjustable ranges: up to 950 bar
- ► High proof pressure
- ► Rugged, economical
- ► Approved models available:





# Pressure / Temperature



# Low Pressure

### **Features**

- ► Adjustable ranges: up to 34 bar
- ► Accurate and reliable switch
- ► Adjustable during operation with corresponding reference device
- ► Approved models available:







# **Mechanical Temperature Switches**

E1H

**DPDT Series** 

- ► Adjustable ranges: -45°C ... 316°C
- ► Capillary or local sensor
- ▶ 1 or 2 set points
- ► Rugged construction
- ► Approved models available:





# Electronics



- ▶ Measuring ranges: Vacuum and 0 to 1400 bar
- ▶ Operating temperature: -40 °C to 100 °C
- ▶ Rugged 316L and17-4 stainless steel construction
- ► Modular design platform enables a wide range of options
- ► Approved models available:







# Pressure Switch, electronic

### **Features**

- ► Measuring ranges: Vacuum, 0...200 mbar up to 0...600 bar
- ▶ 1 or 2 switch points, adjustable
- ► Records and stores peak pressure
- ► Digital multifunction display
- ➤ State-of-the-art micro processor control
- ► Easy-to-use menu control

- ► Easy programmable
- Self diagnostics
- ➤ Option: Analog output 4 - 20 mA/0 - 10 VDC
- ▶ IP65/67
- ► Approved models available:







# **Differential Pressure Switch**

- Measuring ranges:Differential pressure:0 − 350 mbar to 0 − 35 bar
- System of protection:Type 4X (IP65) / Type 6 (IP67)
- ▶ 2 switch points
- ► Analog output 4 20 mA or 0 10 V

- ► Superior EMI protection
- ➤ Rotatable 320° display & electronical connection
- ► Approved models available:



# Level Control

# Single Level Switches

### **Features**

- ▶ One switchpoint (SPST or SPDT reed contacts)
- ► Vertical or horizontal mounting
- ▶ Protection class IP54 / IP68
- ► Approved models available:

















# **Tank Level Gauging**

## Features

- ► Continuous level measurement
- ► Accuracy: 4 16 mm version (grid)
- ▶ Mounting: vertical or custom made
- ► Integrated transmitter
- ▶ Optional: Interface level measurement
- ▶ Output: 4 20 mA, 0 10 V or ohmic
- ► Max length from mating surface: max. 6000 mm
- ► Approved models available:









# Multi Level Switches

- ▶ Up to 6 levels SPST or SPDT reed contacts
- ► Metal and non-metal versions
- ▶ Protection class IP54 / IP68
- Max. length from mating surface: 3000 mm
- ▶ Optional with temperature sensor (Pt100) or temperature switch
- ► Approved models available:













# Level/Flow



**Electronic Level Probes** 

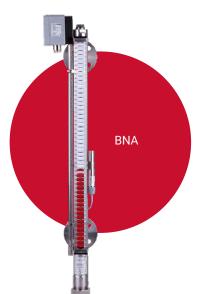
### **Features**

- ► Continuous level measurement
- Probe material CuNiFe alloy or stainless steel
- Measuring height: 0 − 200 m water (0 − 656 ft WS)
- ► Signal output: 0 10 V or 4 20 mA
- ► Approved models available:









# **Bypass Level Indicators**

#### **Features**

- Continuous level indication, purely mechanical, no power needed
- ► Temperature up to 320 °C
- ▶ Operating pressure up to 250 bar
- ► Stainless steel versions
- ▶ Mounting tankside or from top to down
- ► Max. measuring length: 5700 mm (one piece)

- Optional:
- Transmitter 4 20 mA
- Interface
- Bi-stable reed switch usable as limit switch
- Approved models available:













- ▶ Pipe size: G1/4"...G1 1/2"
- ► Stainless steel or nickel plated brass
- ► Variable area flow meter
- ▶ Calibrated scale with viscosity compensation up to 600 cSt available
- ► Optional visual indication
- ▶ SPST or SPDT output
- ► Approved models available:









# Design with Us

# Leverage our Engineering Expertise to Make Exactly What You Need

# Modify Standard Products for Your Project

Barksdale offers more than 50 product families and millions of configured options to measure, monitor and control processes essential to the industrial, power and transportation markets. We can make basic modifications to these standard products and options to ensure they are exactly matched to the project requirements.

#### Market-focused. Technology-driven. Customer-intimate.

These elements at the heart of the company philosophy have made Barksdale a synonym for advanced measurement and control solutions since 1949. We continuously adapt our innovations to market requirements and offer customized solutions thanks to our global presence. With facilities in North America, Europe and Asia, we are a leading provider that combines close customer relationships with the highest level of technological expertise. Barksdale is part of the global Crane Co. Group By utilizing synergy effects, growth and customer orientation are always the focus of all business units. Control every move.



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Visit Barksdale.de to view our complete product portfolio. Subject to technical change. Art-No.: 923-1416 Index:D