

# Product overview

Experts for monitoring and control

- ▶ Pressure
- ▶ Level
- ▶ Temperature
- ▶ Flow



# The business of critical controls

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.

Our program covers the entire range of mechanical and electronic monitoring of pressure, temperature, level and flow for liquid and gaseous media. As the inventor of Shear-Seal® technology, Barksdale is the right partner for high standards and functional reliability of demanding measurement tasks, even under extreme operating conditions.

## Proven Quality

To ensure the highest quality, our processes are ISO 9001:2015 certified - from the control of the materials used, the monitoring of the production facilities through to manufacturing. Barksdale offers a wide range of certificates for selected products.



## In the heartbeat of time

Barksdale develops customer-oriented solutions for hydraulics, commercial vehicles and industrial equipment with a focus on:

- ▶ Machine building
- ▶ Energy
- ▶ Marine and shipbuilding
- ▶ Rail vehicle engineering
- ▶ Commercial vehicles



# Customer focused

As diverse as your requirements are, as flexible is our know-how, because in addition to standard components, we also implement customized solutions through individual modifications and new developments.

# Strong alliance

Barksdale is part of the global Crane Co. Group – one of the world's largest manufacturers of technical products with a history of almost 170 years. By utilizing synergy effects, growth and customer orientation are always the focus of all business units.



Hydrogen



Rail vehicle technology



Marine



Industry



Energy

# Pressure



## Pressure Transducers

### Features

- ▶ Measuring ranges: Vacuum and 0 to 1400 bar
- ▶ Operating temperature: -40 °C to 100 °C
- ▶ Rugged 316L and 17-4 stainless steel construction
- ▶ Up to 23X rating over-pressure protection
- ▶ Modular design platform enables a wide range of options
- ▶ HART® communication protocol
- ▶ Approved models available:
  - UL and CSA
  - ATEX / IECEx



BoT Series

### Industries & Applications

- ▶ General industrial equipment
- ▶ Pumps and compressors
- ▶ Mobile hydraulics
- ▶ Off-highway-vehicles
- ▶ Medical gas systems
- ▶ Hydrogen systems



BiT Series

## Pressure Switches, electronic

### Features

- ▶ Measuring ranges: Vacuum, 0...200 mbar up to 0...600 bar
- ▶ 1, 2 or 4 switch points, adjustable
- ▶ Records and stores peak pressure
- ▶ Digital multifunctional display
- ▶ State-of-the-art microprocessor control
- ▶ Easy-to-use menu control
- ▶ Easy programmable
- ▶ Self diagnostics
- ▶ Option: Analog output 4 – 20 mA / 0 – 10 VDC
- ▶ IP65/67
- ▶ Approved models available:
  - UL and CSA
  - Shipbuilding
  - BPS1000: developed in accordance with railroad standard EN50155

### Industries & Applications

- ▶ Shipbuilding
- ▶ General Machine building
- ▶ Rail vehicle technology
- ▶ Hydraulics & pneumatics
- ▶ Cooling systems
- ▶ Lubrication systems



UDS3V3



BPS1000



BPS3000

## Differential Pressure Switch

### Features

- ▶ Measuring ranges: Differential pressure: 0 – 350 mbar to 0 – 35 bar
- ▶ System of protection: Type 4X (IP65) / Type 6 (IP67)
- ▶ Two switch points
- ▶ Analog output 4 – 20 mA or 0 – 10 V
- ▶ Superior EMI protection
- ▶ Rotatable 320° display & electrical connection
- ▶ IO-Link communication interface

- ▶ Approved models available:
  - Shipbuilding

### Industries & Applications

- ▶ Filtration
- ▶ Machine tool industry
- ▶ Factory Automation
- ▶ Lubrication monitoring
- ▶ Pumps and compressors



BDS3000

# Pressure

## Compact Pressure Switches

### Features

- ▶ Adjustable ranges: 1...600 bar
- ▶ Adjustable or fixed set points
- ▶ Nema 1, 4, 4X, 7, 9
- ▶ Compact, rugged, economical
- ▶ Approved models available:
  - UL and CSA
  - ATEX / IECEx
  - Shipbuilding

### Industries & Applications

- ▶ Mobile and stationary applications
- ▶ Machine and vehicle construction
- ▶ Shipbuilding
- ▶ Heavy industry
- ▶ Pumps and compressors
- ▶ Railway brake systems
- ▶ Test equipment



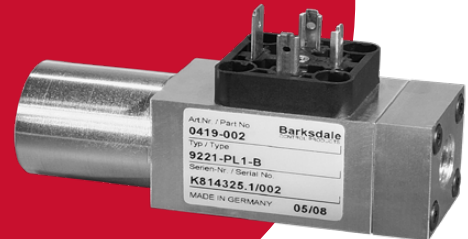
Series 8000



Series 9000



KLK / KLM



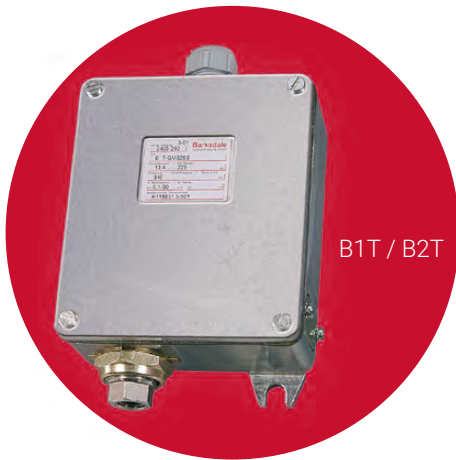
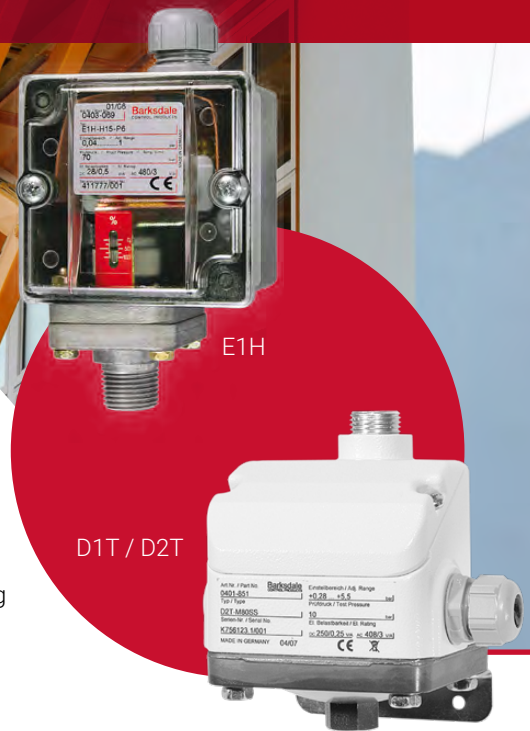
## Low Pressure

### Features

- ▶ Adjustable ranges: vacuum to 34 bar
- ▶ Accurate and reliable switch
- ▶ Adjustable during operation with corresponding reference device
- ▶ Available with / without housing
- ▶ Compact, rugged, economical
- ▶ Approved models available:
  - UL and CSA
  - ATEX / IECEx
  - Suitable for SIL2/3 (IEC 61508) acceptance
  - Shipbuilding

### Industries & Applications

- ▶ Machine and tool engineering
- ▶ Pump control
- ▶ Refrigerant monitoring



## High Pressure

### Features

- ▶ Adjustment ranges: up to 950 bar
- ▶ High proof pressure
- ▶ Rugged, economical
- ▶ Approved models available:
  - UL and CSA
  - ATEX / IECEx
  - Shipbuilding

### Industries & Applications

- ▶ Pump control
- ▶ Die-casting machines
- ▶ Press-control
- ▶ Power plants
- ▶ Alarm functions



## Explosion-Proof (Ex d)

### Features

- ▶ Adjustable ranges: vacuum up to 690 bar
- ▶ High proof pressure: up to 1035 bar
- ▶ Compact, Bourdon-tube-, Membrane-, or Piston-Pressure Switches
- ▶ Approved models available:
  - ATEX / IECEx
  - Suitable for SIL2/3 (IEC 61508) acceptance
  - NACE conform

### Industries & Applications

- ▶ BOP closing units
- ▶ Safety panels
- ▶ Pipelines
- ▶ Petro-chemical industry
- ▶ Process industry
- ▶ Pulp and paper mills
- ▶ Pumps and gas compressors
- ▶ Turbines
- ▶ Shipbuilding

# Level

## Single Level Switches

### Features

- ▶ SPST or SPDT reed contacts
- ▶ All metal and non-metal versions
- ▶ Vertical or horizontal mounting
- ▶ Protection class IP54 / IP68
- ▶ Approved models available:
  - UL and CSA
  - ATEX / IECEx
  - Shipbuilding

### Industries & Applications

- ▶ Wherever fluids are stored, moved, controlled and processed



UNS Bilge Guard



UNS-PA16-PA18

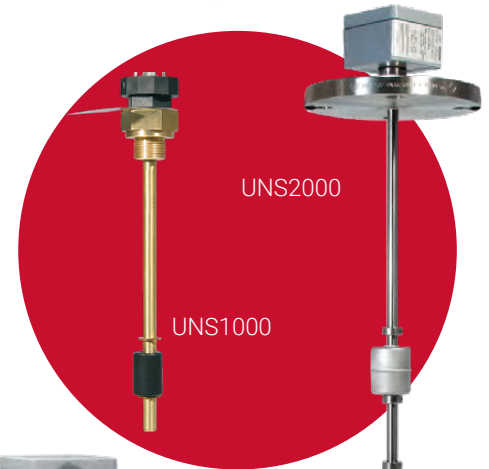
## Multi Level Switches

### Features

- ▶ 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:
  - UL and CSA
  - ATEX / IECEx
  - Shipbuilding

### Industries & Applications

- ▶ Pump controller
- ▶ Level control
- ▶ Machine industry
- ▶ Shipbuilding
- ▶ Mobile and stationary applications



UNS2000

UNS1000

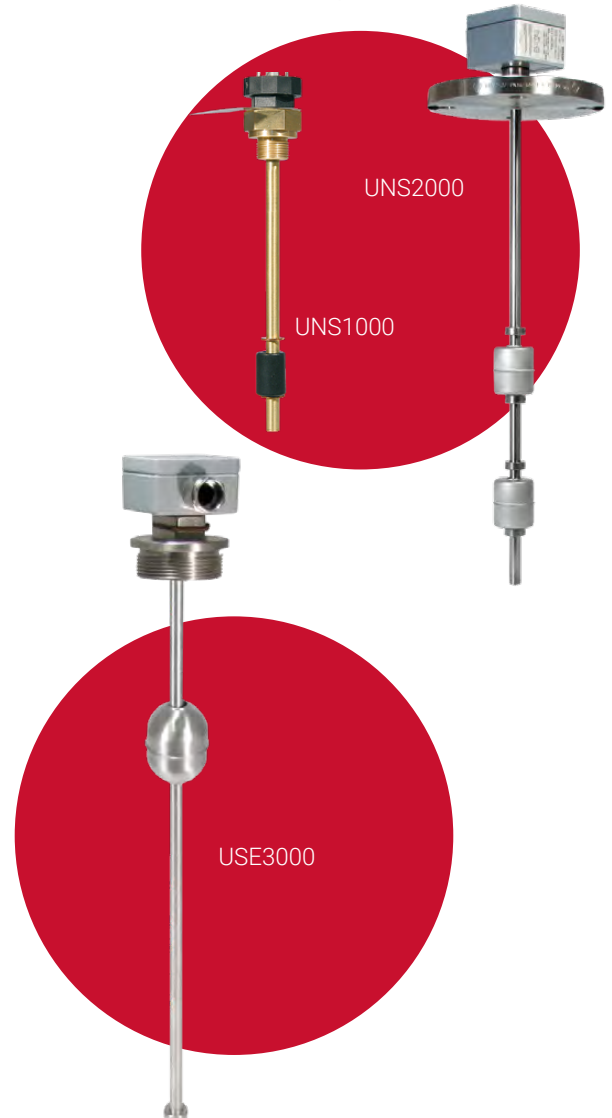
## Tank Level Gauging

### Features

- ▶ Continuous level measurement
- ▶ Accuracy: 4 – 16 mm version (grid)
- ▶ All metal versions
- ▶ 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: 6000 mm
- ▶ Approved models available:
  - ATEX
  - Shipbuilding

### Industries & Applications

- ▶ Industry systems
- ▶ Shipbuilding
- ▶ Chemical plants



USE3000



# Level/Flow

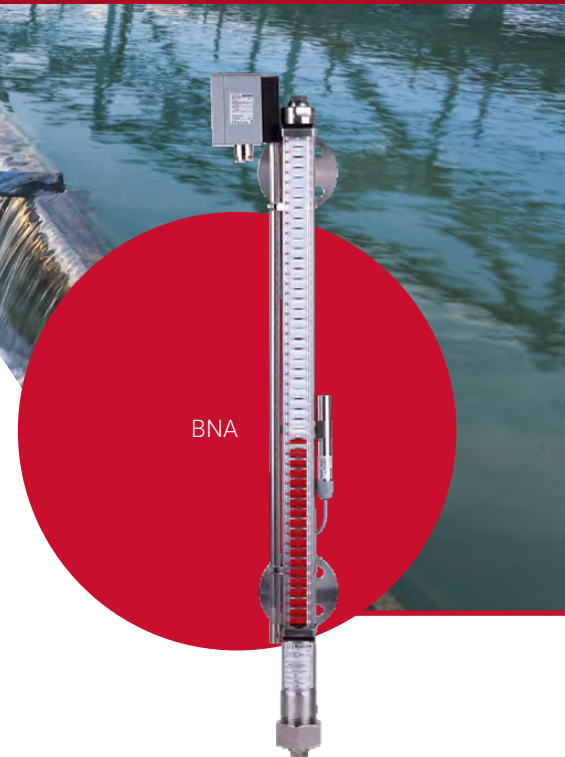
## Bypass Level Indicators

### Features

- ▶ Continuous level indication, purely mechanical, no power needed
- ▶ Temperatures up to 320 °C
- ▶ 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 a limit switch
- ▶ Approved models available:
  - ATEX: Ex c (and Ex i for GK03 and TLI)
  - Shipbuilding
  - UL (for GK03)

### Industries & Applications

- ▶ Replaces sight glasses
- ▶ Level monitoring



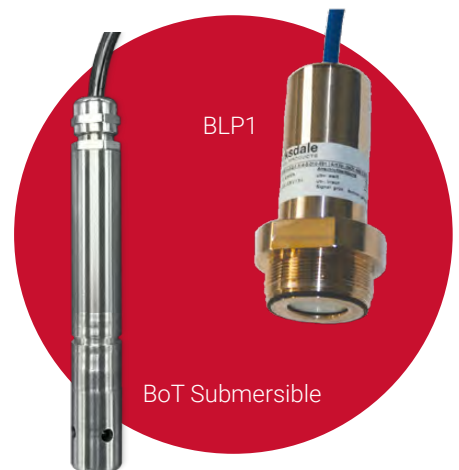
## Electronic Level Probes

### Features

- ▶ Continuous level measurement
- ▶ Probe material CuNiFe alloy or stainless steel
- ▶ Measuring height: 0 – 200 m water (0 – 656 ft Ws)
- ▶ Signal output: 4 – 20 mA/0 – 10 V
- ▶ Different materials and monitoring alternatives
- ▶ Approved models available:
  - UL and CSA
  - ATEX
  - Shipbuilding

### Industries & Applications

- ▶ Bilge monitoring
- ▶ Level indication in wells and open tanks even with low filling level
- ▶ Ballast tank control
- ▶ Offshore-applications
- ▶ Waste-water purification



## Flow Switches

### Features

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

### Industries & Applications

- ▶ Flow control in liquids and gases, lubrication and cooling system protection



# Temperature

## Electronic Temperature Switches

### Features

- ▶ Measuring ranges: -30 °C...+150 °C
- ▶ With integrated Pt100 or external sensor
- ▶ 1 or 2 set points, free adjustable
- ▶ Signal peak recording
- ▶ Self-diagnostic
- ▶ Optional: analog output 4 – 20 mA/0 – 10 V DC
- ▶ Rotatable 320° display & electrical connection
- ▶ Approved models available:
  - UL

### Industries & Applications

- ▶ Machine tool industry
- ▶ Hydraulic and pneumatic systems
- ▶ Injection molding machines
- ▶ Cooling monitoring
- ▶ Lubrications systems
- ▶ Construction machinery
- ▶ Automobile industry

## Electronic Temperature and Level Switches

### Features

- ▶ Adjustment ranges: 0 ... 100°C to -30 ... 140°C
- ▶ Max. 4 outpoints
- ▶ 1 or 2 level setpoints, fixed set points depending on configuration
- ▶ IP65 / IP67
- ▶ Superior EMI protection
- ▶ Menu navigation refers to VDMA standard
- ▶ Rotatable 320° display and electrical connections
- ▶ Approved models available:
  - UL

### Industries & Applications

- ▶ Hydraulics
- ▶ Cooling systems



## Electronic Thermostats

### Features

- ▶ Multi-function controller/limiter
- ▶ Hazardous Europe ATEX/IECEX approved for zone 1 and 2
- ▶ Designed for Class 1 Division 2
- ▶ Temperature setpoint adjustable via rotary switches or optional via bluetooth® app.
- ▶ Remote access via Modbus
- ▶ Alarm-relay optional

### Industries & Applications

- ▶ Control/monitor heat trace systems
- ▶ Process temperature control
- ▶ Freeze protection
- ▶ Over-temperature control
- ▶ Viscosity control
- ▶ Configurable for other applications



Electronic  
Thermostat  
Kelvin

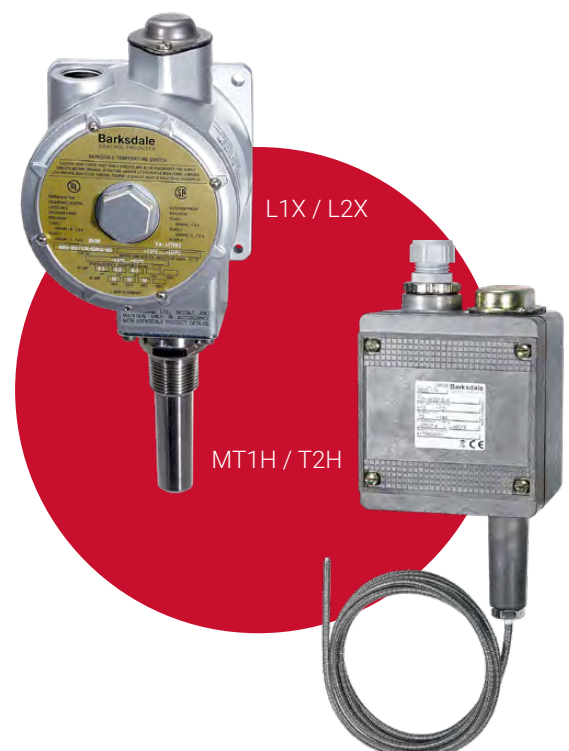
## Mechanical Temperature Switches

### Features

- ▶ Adjustment ranges: -45 °C...+316 °C
- ▶ For fluids and gases
- ▶ Ambient temperatures compensations
- ▶ For low to high contact loads
- ▶ Rugged and very accurate
- ▶ Max. length of capillary tube: 7.5 m
- ▶ Approved models available:
  - UL and CSA
  - ATEX / IECEX
  - Suitable for SIL2/3 (IEC 61508) acceptance
  - Shipbuilding

### Industries & Applications

- ▶ Machine and machine tool industry
- ▶ Shipbuilding
- ▶ Rail applications
- ▶ Compressors
- ▶ Antifreeze
- ▶ Chemical industry
- ▶ Offshore



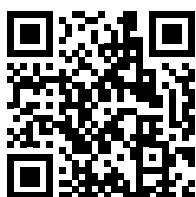
# Design with Us

## 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.

Control Every Move.



Visit [Barksdale.de](http://Barksdale.de) to view our complete product portfolio  
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