BALLUFF

Flexible, smart condition monitoring in 0.00064 sq. meters of space

CONDITION MONITORING SENSOR WITH INTEGRATED DATA PREPROCESSING

COMING SOON

Unscheduled stops and faults in the production process can be avoided using our new multi-functional condition monitoring sensor. This intelligent sensor provides you with condition information which you can use for automating costintensive manual inspections. This condition data is also an essential component for implementing smart and flexible manufacturing – a key to IIoT.

The Balluff condition monitoring sensor detects various physical variables such as vibration, temperature, relative humidity, and ambient pressure, processes them, and provides the desired data to a host system via IO-Link. In addition, the sensor can detect and communicate its condition, keeping you informed continuously of its temperature, number of operating hours, and start cycles.

The standardized IO-Link protocol means you can easily parameterize the sensor and match the processing in the sensor to your specific application. The process data structure permits five measured or preprocessed data types to be freely configured and cyclically transmitted. It is also possible to perform an acyclical request for additional statistical processing variables.

Additionally, you can use automated monitoring of measurement or processing variables to define limit values for pre- or main alarms. This generates warning messages, alerting you when problematic events occur.
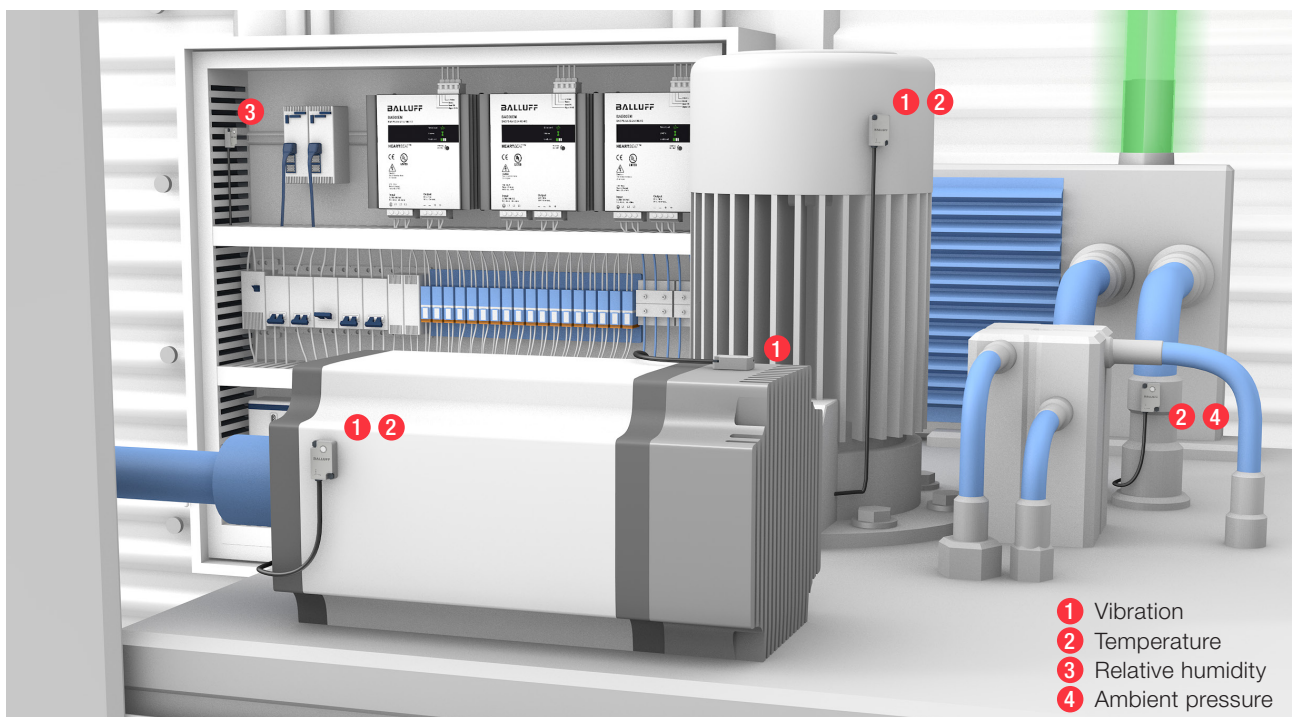
The condition monitoring sensor from Balluff makes an essential contribution to the efficient and faultless operation of any equipment and significantly increases the efficiency of the overall system.

Features

- Multiple measurements in one device: vibration, temperature, relative humidity, ambient pressure
- Integrated processing circuitry with configurable data preprocessing
- Configurable events and status indicators
- Fast connection, and simple to incorporate using IO-Link
- Compact form factor for restricted spaces
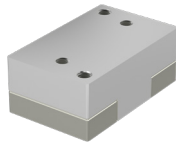
CE IO-Link

1 Vibration
2 Temperature
3 Relative humidity
4 Ambient pressure

CONDITION MONITORING SENSOR WITH MULTIFUNCTION

	BCM0002	BCM0001
Function modules	▪ Vibration, velocity/acceleration ▪ Contact temperature ▪ Relative humidity ▪ Ambient pressure	▪ Vibration, velocity/acceleration ▪ Contact temperature
Vibration, frequency range	2…3200 Hz	2…3200 Hz
Vibration, measuring principle	MEMS	MEMS
Measuring range / Vibration, velocity RMS	0…160 mm/s at 105 Hz (3 measuring axes)	0…160 mm/s at 105 Hz (3 measuring axes)
Measuring range / Vibration, acceleration RMS	0…16 g	0…16 g
Measuring range / Contact temperature	0…70 °C	0…70 °C
Measuring range / Relative humidity	5…95 % RH	
Measuring range / Ambient pressure	300…1100 hPa	
Interface	IO-Link 1.1, COM3 (230.4 kBaud)	IO-Link 1.1, COM3 (230.4 kBaud)
Interface setting options	▪ Flexible process data configuration ▪ Vibration measurement ▪ Setting options for the calculations (statistical values such as min, max, RMS, mean, peak-to-peak, standard deviation) ▪ Definition of events (pre-alarm and main alarm) ▪ Delay times for alarms ▪ Search function with LED display (ping) ▪ Sensor self-awareness functions	▪ Flexible process data configuration ▪ Vibration measurement ▪ Setting options for the calculations (statistical values such as min, max, RMS, mean, peak-to-peak, standard deviation) ▪ Definition of events (pre-alarm and main alarm) ▪ Delay times for alarms ▪ Sensor self-awareness functions
IP rating	IP67	IP69
Housing material	1.4404 stainless steel	1.4404 stainless steel
Dimensions	32 × 20 × 10 mm	32 × 20 × 10 mm
Connection	1.5 m PUR cable with M12 male, 3-pole	1.5 m PUR cable with M12 male, 3-pole

ACCESSORIES

	BAM0362
Description	Magnetic holder, material aluminum, 32 × 20 × 12.3 mm, mounting with M3 screws

CONNECTIVITY

	BCC0372	BCC0374
Cable	PUR black, 2 m, drag chain compatible	PUR black, 5 m, drag chain compatible
For connection 1	M12 female, straight, 5-pole, A-coded	M12 female, straight, 5-pole, A-coded
For connection 2	M12 male, straight, 3-pole, A-coded	M12 male, straight, 3-pole, A-coded