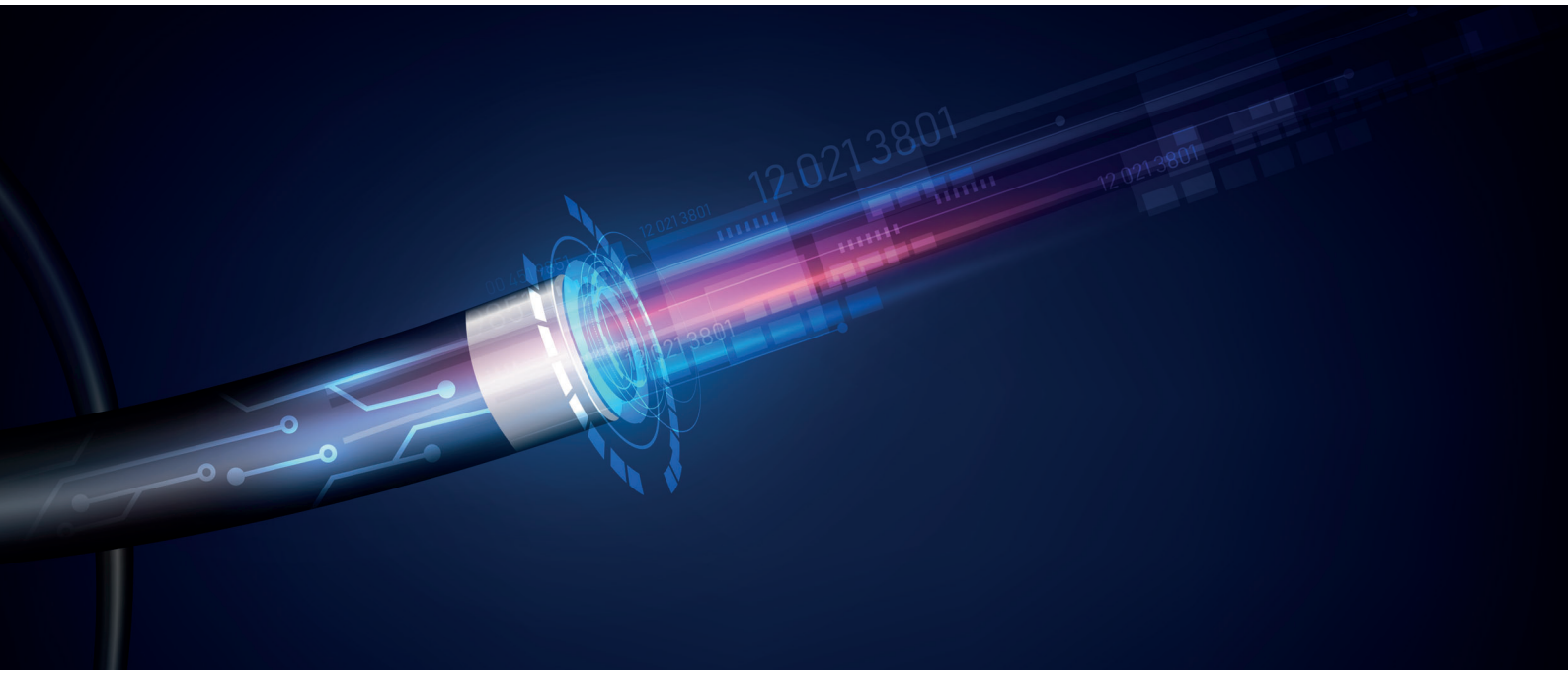
Brüel & Kjær Vibro
a spectris company



The next generation of shaft monitoring

The world's first fully integrated, loop-powered displacement transmitter series DT-12x.

The DT-12x series of integrated displacement transmitters provide accurate, reliable radial and axial shaft displacement and vibration monitoring capability for industrial machines at a fraction of the cost for a normal displacement sensor. A vibration monitor is not even needed for connecting the sensor signal to the DCS/PLC, so the transmitter is not only economical with fewer components compared to a normal sensor, but it has a much smaller small footprint with minimal installation effort.

The DT-12x series are integrated sensors, so the vibration driver (oscillator) and signal conditioning electronics (vibration monitor) are built directly into the sensor. This greatly simplifies installation by eliminating the need and space requirements for a driver, vibration monitor and their protective housing. We have extensive experience here as we have been successfully implementing this technology into the IN-08x displacement sensors for decades now.

The transmitter is loop-powered, meaning the low powered sensor is easy and inexpensive to install with only a two-wire connection. It provides a 4-20 mA signal driven by an inexpensive external DC voltage source on the current loop that – when properly selected – is not affected by long wiring distance, voltage drops or noise.

The transmitter can be connected to the DCS/PLC and to any number of other 4-20 mA receiving devices on the current loop such as digital display, data loggers, etc. Two extra wires on the sensor provide a buffered voltage signal output to a portable monitoring system for external data storage and analysis. Moreover, these transmitters can be used in the harshest industrial environments.
Why invest a fortune for installing a typical condition monitoring system measuring chain on your balance-of-plant and semi-critical sleeve bearing machines when a single sensor is all that is needed for each measurement point?

Vibration Measurements

Axial position

Relative shaft vibration

DT-12x Transmitter

Technical Specifications Summary

DT-12x products:			
DT-121	Continuous thread		
DT-122	Corrugated tube protection		
DT-123	Reverse mount		
Measurement type:			
Eddy current method (inductive)	RV - Radial shaft vibration		
	AP - Axial shaft position		
Radial shaft vibration (DT-12x.RV):			
Full scale (FS) range, nominal	0-100 µm	0-250 µm	0-600 µm
(peak-peak)	0-4 mils	0-10 mils	0-24 mils
Axial shaft position (DT-12x.AP):			
Full scale (FS) range, nominal	0-1,2 mm	0-1,5 mm	
	0-50 mils	0-60 mils	
Loop output:			
Output signal	4-20 mA, live zero		
Signaling (range overshoot error)	As per NAMUR NE43		
Accuracy:			
0 °C … +45 °C, at FS	±0,2 %		
Overall operating temp. range, at FS	±0,5 %		
Pressure tightness:			
Transmitter tip	25 bar		
Transmitter with corrugated tube	25 bar (valid only for DT-122)		
IP protection according to EN 60528	IP68, IP69		
Temperature range:			
Operating temperature range	-40 °C ... +105 °C		
Storage temperature range	-55 °C ... +125 °C		

See Product Specification BPS0157 for a list of all technical specifications and options, or visit our website www.bkvibro.com

The DT-12x series of displacement transmitters is just one product of Brüel & Kjær Vibro's comprehensive monitoring solutions that comprises all kinds of vibration sensors (acceleration, velocity and displacement), vibration monitors, hand-helds and rack-based plant-wide integrated monitoring solutions. These products plus a suite of comprehensive services fulfill the most demanding applications for safety, condition and performance monitoring of rotating machinery. Monitoring in the hydrocarbon processing, conventional power, hydropower and wind power industries is a strategic area of focus.
Based on 60 years of experience and a world-wide sales and support network, Brüel & Kjær Vibro's monitoring solutions have successfully reduced downtime and maintenance costs and increased machine reliability for customers world-wide.

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