

# 01424

## Digital Rotary Shaft Torque Sensor

- Measurement range 0.35 Nm to 2260 Nm
- Max shaft speed 10000 rpm
- Non-linearity 0.1 %
- Output signal  $\pm 5$  V
- Supply voltage 12 ... 15 VDC



These sensors are designed to measure rotating drive torque using a conventional shaft-to-shaft configuration for in-line placement. The unique design incorporates a digital non-contact wireless system that provides power to the rotating electronics mounted on the shaft and transmits the signal back to the receiver in digital format. The torque signal is then represented as a calibrated high level analog voltage. The sensor features high rotational speed, high frequency response, and high accuracy. These sensors can also be supplied with an optical encoder to measure angle or speed.

### ■ Specifications

Capacity:	See chart
Overload capacity:	150 % of FS
Output at FS	$\pm 5$ VDC isolated
Sample rate:	20000 samples per second
Bandwidth:	DC ... 1 kHz
Non-linearity:	0.10 % of FS
Hysteresis:	0.10 % of FS
Zero balance:	1.0 % of FS
Compensated temperature range:	+21 ... +76 °C (+70 ... +170 °F)
Operating temperature range:	-40 ... 85 °C (-40 ... +185 °F)
Temperature effect on zero:	0.002 % of FS/°F (0.004 % of FS/K)
Temperature effect on span:	0.002 % of reading/°F (0.004 % of reading/K)
Supply voltage:	12 ... 15 VDC
Supply current, max.:	350 mA
Maximum shaft speed:	10000 rpm for 2000 in-lbs and less; 7500 rpms for larger capacities

### ■ Options

- Signal amplifier output =  $\pm 10$  V FS
- Integral optical encoder - 512 ppr (10000 rpm)
- Integral optical encoder - 1024 ppr (5800 rpm)
- Foot mount

