

# TorqueTrak SPM-iON

Shaft Torque and Power Monitoring System

## Shaft Power Meter Made Easy.

The TorqueTrak SPM-iON is a state-of-the-art strain gage based solution designed to provide torque, RPM, and power measurements on rotating shafts, without the need for shaft disassembly or modification. The system only includes two primary components and does not require a base mount. The innovative chain link design allows for fast lead times, simplified installation, and easy interchangeability between shaft sizes. Electronics are encased in potting and protected by a strong metallic housing, ensuring reliable long-term operation in the most abusive environments.



Shaft Collar Transmitter

## FEATURES

### Modular

The chain link design of the collar allows for easy change between shaft diameters. Chain links are quickly added or removed using standard hardware.

### Fast Lead Times

Due to the chain link design of the collar, parts are stocked and ready to ship. No time-extensive machining required.

### No Base Mount Required

The stand-alone shaft "clamp-on" collar assembly requires no base mount. This eliminates the need for custom mounting brackets or on-site welding. Installation is dramatically simplified.

### High Accuracy

The use of a strain gage sensor and a 24-bit ADC ensure the most accurate measurements possible.

### Multiplexing

A single receiver can work with up to four shaft collar transmitters, helping reduce install complexity and overall cost.

### Built-In Gyro

Shaft speed is measured with internal gyro, eliminating need for more cable runs. Power is automatically calculated from torque and speed measurements.

### Low Maintenance

Highly optimized electronics ensure minimal electricity consumption for the TX, with battery autonomy of two years. Sleep mode is also available when the shaft is not turning, extending the battery life even longer. Battery replacements take minutes.



Wireless Receiver



# TorqueTrak SPM-iON | SPECIFICATIONS

## TorqueTrak SPM-iON Shaft Collar Transmitter

## TorqueTrak SPM-iON Receiver

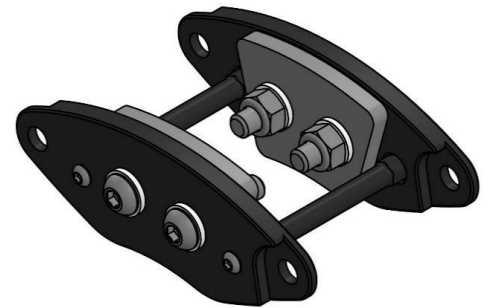
<b>Electrical Consumption:</b>	<1mA @ 3.6 V	<b>Supply Voltage:</b>	9-36VDC
<b>Batteries:</b>	3.6V LiSoCl2 (lowest self-discharge)	<b>Current Consumption:</b>	40mA max
<b>Strain Gage Sensor:</b>	350 $\Omega$ torque pattern, welded or bonded	<b>Electrical Isolation:</b>	500V
<b>Autonomy:</b>	2 years on 10x 3.6AH, 3.6V batteries	<b>Storage Temperature:</b>	-40°C to 85°C (-40°F to 185°F)
<b>ADC Resolution:</b>	24 bits	<b>Operating Temperature:</b>	-40°C to 85°C (-40°F to 185°F)
<b>Torque Accuracy:</b>	$\pm 0.1\%$	<b>Humidity:</b>	10% to 90% non-condensing
<b>RPM Accuracy:</b>	$\pm 1\%$	<b>Vibration:</b>	5 – 50 Hz @ 20 mm/s $\pm 1.0g$ max
<b>Maximum RPM:</b>	3000 rpm	<b>Conformity:</b>	CE Compliant
<b>Protection Rating:</b>	IP 65	<b>Degree of Protection:</b>	IP 65
<b>Minimum Shaft Diameter:</b>	127mm (5.5 in)	<b>Sampling Rate:</b>	4 samples per second
<b>Signal Transmission:</b>	Up to 20m (65 ft) line of sight	<b>Protocol:</b>	Modbus RTU over RS485
		<b>Multiplexing:</b>	Up to 4 TS shaft collar transmitters



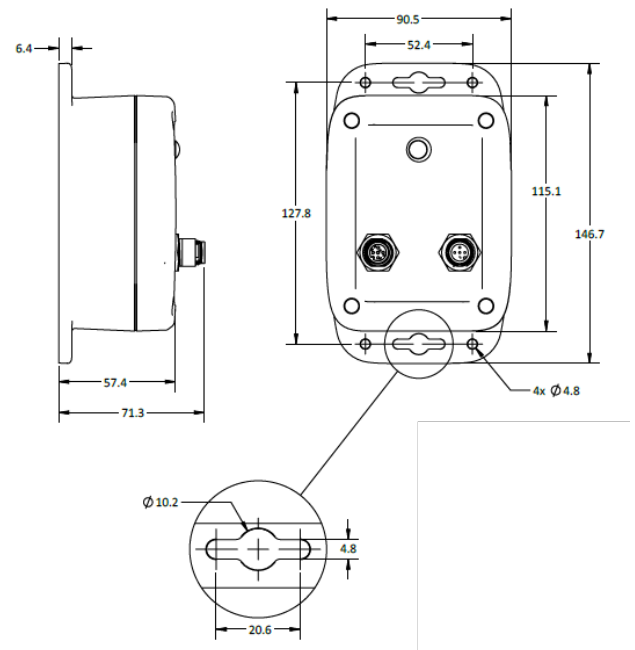
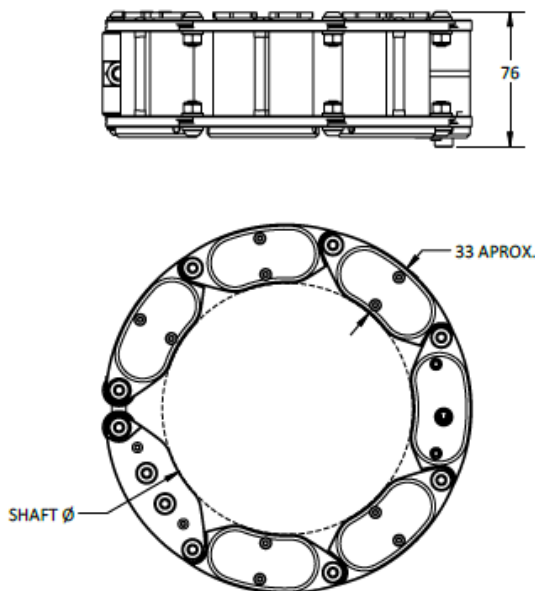
Battery Link



Transmitter Link



Expander Link



Specifications subject to change without notice.

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