

Power Take-Off Telemetry Transducer

Model PTO

- Fits Type 1, 2, and 3 splines
- Measures torque and speed of PTO shaft
- Integrated telemetry and encoder system
- Rugged construction
- Weatherproof
- Convenient anti-rotation eye-hook
- Pre-calibrated



Description

The Michigan Scientific *PTO Telemetry Transducer* is designed to measure the torque and speed of a power take-off (PTO) shaft with no modifications to the machine or implement. The *PTO Telemetry Transducer's* female spline mates directly to the machine's PTO shaft and the transducer's male spline mates directly with the implement. Both splines contain locking mechanisms to keep the transducer in place. The splined ends can be removed and changed to accommodate alternative PTO splines. The rugged weatherproof design allows for in field and long term testing.

The transducer has an integrated telemetry and encoder system. The strain gauge signals are transmitted through the telemetry while a hall effect sensor provides the speed signals. The telemetry transmitter provides excitation to the strain gauges, amplifies, digitizes, and transmits the torque signals via radio frequency. The encoder system is made up of an internal 60 pulse per revolution tone wheel and a hall effect sensor.

A non-rotating aluminum stator is precisely aligned to the rotating transducer and tone wheel by a large sealed bearing. The stator contains the primary induction coil, receiving telemetry antenna, and hall effect sensor.

The *PTO Telemetry Transducer* can fit the agriculture standard spline types; Type 1, 2, and 3.

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Specifications

Full Scale Torque Ranges	$\pm 3,750$ lbf · ft (5 kN · m) or 1,850 lbf · ft (2.5 kN · m)
Non-linearity	<0.5 % FS
Hysteresis	<0.5 % FS
Speed signal	60 ppr Hall Effect
Sampling Rate	3 kHz
Data Bandwidth	1 kHz
Temperature Range, Operating	
Transducer	-40 °F to 221 °F (-40 °C to 105 °C)
Receiver Box	50 °F to 170 °F (10 °C to 77 °C)
Weight *For 1 3/8" spline type	12.8 lb (5.8 kg)
Power Requirements	
Induction Power And Receiver	11 to 15 Vdc, 3.0 A max
Spline options	Type 1: 1 3/8" (35mm) 6 tooth
	Type 2: 1 3/8" (35mm) 21 tooth
	Type 3: 1 3/4" (45mm) 20 tooth