

## THE TS 100 SERIES TORQUE SENSORS FAMILY IS EXPANDING!

MAGTROL INTRODUCES AN EXTENSION TO THE TS 100 SERIES TORQUE TRANSDUCER RANGE. THREE NEW MODELS ARE NOW AVAILABLE: TS 199 (0.02 N·m), TS 112 (200 N·m) AND TS 113 (500 N·m). MAGTROL'S TS SERIES FAMILY OF IN-LINE TORQUE SENSORS NOW INCLUDES 14 STANDARD MODELS COVERING A RANGE FROM 0.02 N·m UP TO 500 N·m.



### MAIN FEATURES

- Torque range: 0.02 N·m... 500 N·m
- Speed range:  $\leq 15000$  rpm
- Speed encoder up to 5000 PPR with index (1 PPR)
- Torque output:  $\pm 5$  VDC ( $\pm 10$  VDC)
- Accuracy:  $< 0.1\%$  (0.05%)
- USB interface & analog connection
- Overload capacity: 200%
- LED operating status control
- Overload limit: 300%
- Non-contact (no slip rings)
- Single DC power supply: 12... 32 VDC

Introduced in 2019, this latest-generation Torque Sensor combines high technology, robustness and reliability. It can be easily integrated into motor test benches as well as standard or customized torque measurement systems. Since its launch, it has enjoyed widespread success and approval from measurement professionals. Its excellent price/performance ratio, flexibility and high reliability are much appreciated by our customers.

Depending on the model, the TS 100 Series Torque Transducer incorporates a 360, 400 or 700 PPR (Pulse Per Revolution) encoder for angular resolution down to  $0.129^\circ$  and a reference index of 1 PPR. Encoders with 1000 or 5000 PPR are available on request for models up to 100 N·m. These further improve angular resolution where necessary, for example in low-speed applications.

The power transmission from the stator to the rotor is provided by a high-frequency rotary transformer with low inertia. An ergonomic display system consisting of three color LEDs continuously informs the user about the operating status of the device. The TORQUE measurement acquisition software is available for free and can be directly downloaded from the Magtrol website. The entire system offers an easy-to-use "Plug & Play" system.

The TS 100 Series Torque Sensors provides a measurement of up to 200% of its nominal value. With 300% of the nominal torque as overload limit, the TS transducer has the highest overload reserve on the market. Its metrology allows the sensor to reach an accuracy of 0.05% (combined error).

This new range of torquemeters strengthens Magtrol's offering in the torque measurement field, providing an excellent complement to the renowned **TM 300 Series** (up to 400% overload limit and high-speed versions up to 50000 rpm), **TF 300 Series** (Torque Flanged Sensors) and **RT Series** (Reaction Torque Sensor).

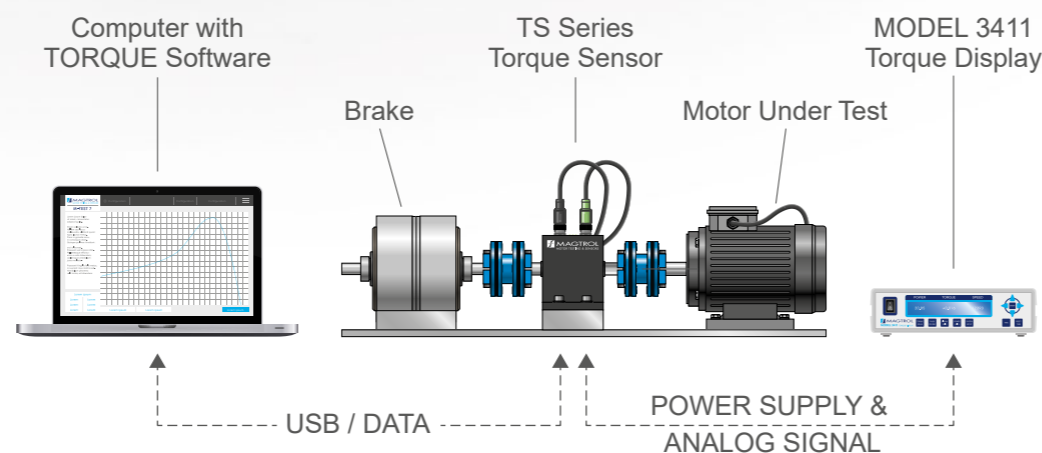
In addition to its activities in torque measurement, Magtrol company is also renowned for its **Customized Motor Test Systems (CMTS)**, **Hysteresis Brakes and Clutches**, **Load Measuring Pins** as well as **Load Cells** and **Displacement Transducers**.

**Do you need specific Motor Testing System ? Do not hesitate to challenge us !**

### SYSTEM CONFIGURATIONS

The TS 100 Series Torque Sensor can be connected in various configurations. It can be used independently (with an external power supply) or in combination with other Magtrol devices (e.g. DSP 70XX - Dynamometer Controller, MODEL 3411 - Torque Display). The sensors can be used with Magtrol software, such as TORQUE (included) or M-TEST, to acquire and display the data. Both software run in the LabVIEW™ environment.

As the direct successor to the renowned TM 300 Series In-Line Torque Transducer, the TS Torque Sensor offers an **Analog & USB** dual signal output that can be used simultaneously. For example, control loop data can be acquired using a computer via the USB interface while fast data acquisition can be performed using the analog output. In addition torque, speed, and angle data can be



acquired using the USB interface while fast control loop data can be acquired using the analog output signals.

The refresh time of the continuous analog signals is  $100 \mu\text{s}$  (10 kHz). The analog signal provides a 0 to  $\pm 5$  VDC output corresponding to the sensor nominal range up to 200% of measuring range (0 to  $\pm 10$  VDC). The USB interface can easily be connected and used with the dedicated software delivered with the sensor.