



# SigPOD™ Torque

## Torque Monitoring System

Sciometric's SigPOD™ Torque is an out-of-the-box torque monitoring system. It is the easiest to use, most comprehensive and highest reliability torque monitoring available. With the most consistent test results and less false failures, the SigPOD™ Torque enables manufacturers to increase yield and improve product quality.

### Confirm 'On Spec' Quality

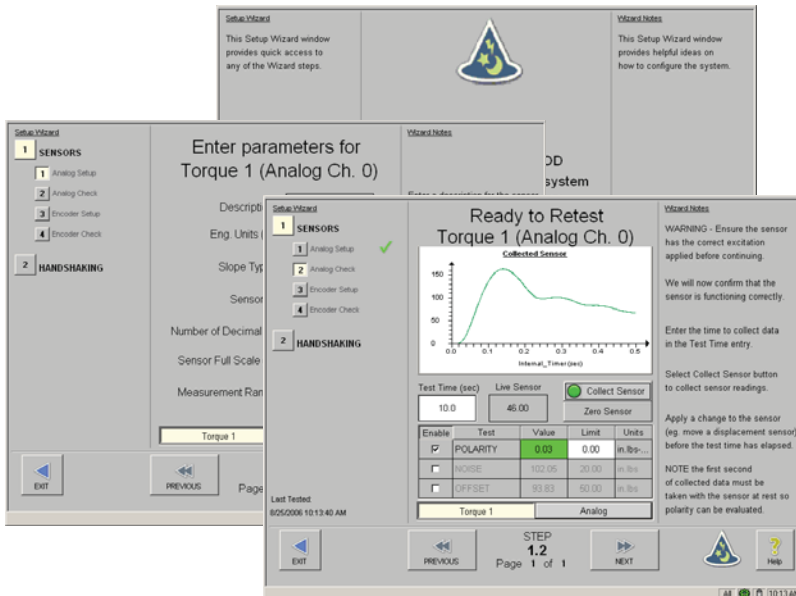
SigPOD Torque does real-time analysis of the manufacturing process using Process Signature Verification (PSV) technology, measuring many points of data to arrive at a fact-based decision on part quality.

The History Channel function provides a full list of test results stored locally. The user can view any history test result with a single button press, get an indication of key part characteristics and test status for each part.

### Unparalleled Ease of Use

#### Easy Configurable Setup

The setup is menu driven by a wizard that guides the user through the setup process. All parameters can be configured through the touch screen. The wizard helps set up the SigPOD Torque Monitoring System for your specific test needs in a matter of minutes.

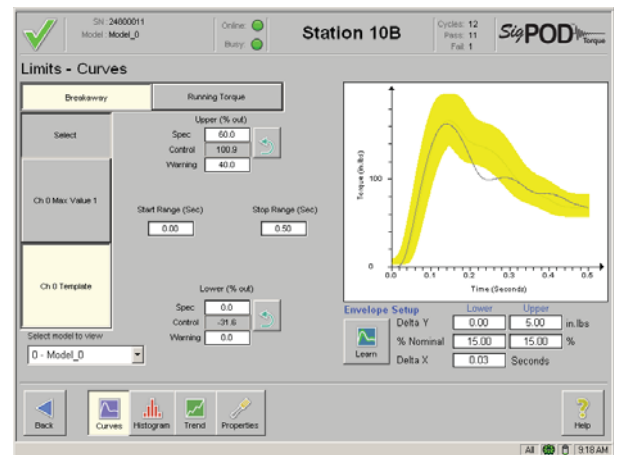


### Industry-leading User Interface

SigPOD Torque software has an intuitive, operator-friendly graphical user interface that is menu-driven through a large color touch-screen display. The display vividly shows live results and presents trends on historical results. During each test cycle the full test waveform is shown along with a grid showing test parameters.

### Improve Yield

By replacing subjective human assessment, SigPOD Torque delivers visibility and control over the position of the pass/fail line. It arms manufacturers with the ability to effect and measure changes such as yield improvements to meet their goals.



### Advanced Limit Management

A monitoring system is only as good as the limits that have been set. If they are too wide, you run the risk of shipping faulty product. If they are too stringent yield is compromised. The limit management functions of SigPOD Torque lead to better limit setting and fewer false rejects. The Auto-learn function "suggests" optimal statistically derived limits. Users can visualize results of proposed limit changes and predict the pass/fail rate before deployment.

## Options

Display	SVGA port or optional 10.4" integrated touch screen display
Mounting	Optional DIN rail, Desk, Machine & Panel mount
PLC Interfaces	Optional Profibus, DeviceNet and Interbus

## System

System Solid State Memory	1 GB*
Data Storage	1 GB* (512 MB available for data)
Optional Data Storage	40 GB* hard disk
Ethernet	10/100 Base-TX
USB (1.1)	2 Ports
RS232 Serial Port	1

## General

<b>Chassis Dimensions</b>	
SigPOD only	7.5 x 9.66 x 4.2 in (191 x 241 x 107 mm), H x W x D
SigPOD with optional TFT screen	8.3 x 11.5 x 6.0 in (211 x 292 x 152 mm), H x W x D
<b>Chassis Weight</b>	
SigPOD only	5 lbs (2.3 kg)
SigPOD with TFT Screen	11 lbs (5 kg)
SigPOD with Desk Mount	17 lbs (7.7 kg) including TFT screen
Operating Humidity	8 to 90% relative, non-condensing
Operating Temperature	5 to 40 °C
Environmental	NEMA 12 (IP52) with NEMA Hood
Paint Finish	Black baked powder

## Power

Supply Voltage	18 to 36 VDC
Power Consumption	48 W maximum, 30 W typical

## Analog Inputs

Number of Channels	2
Input Ranges	±10 V, ±2 V, ±100 mV, ±33 mV
Input Accuracy	0.015 % of full scale (0.05% ±33 mV Range)
Resolution	16 bit A/D, ±32,768 counts
Maximum A/D Sample Rate	60 kHz per channel
Input Impedance	10 MΩ
Input filter	20 kHz 6 pole and 1 kHz 4 pole software selectable
Input Bandwidth	20 kHz maximum 3 dB down (16 kHz ±33 mV Range)
Internal Calibration	Auto-zero
Overload Protection	28 V without damage
Shunt Calibration	Relay contacts per channel
Excitation Voltage	10 VDC ±0.02%
Maximum Current	100 mA per channel
Excitation Noise	100 μV max
Short Circuit Protection	Continuous
Excitation Remote Sense	Separate input per channel

## Encoder Inputs

Number of Channels	1
Sensors	Rotary encoders or N Pulse/Rotation TTL
Input Voltage	5 V TTL or OC (Open Collector)
Signal Type	Quadrature input or single phase pulses
Index Input	Can optionally zero the counter
Frequency	2 MHz maximum pulse rate TTL 50 kHz maximum pulse rate open collector (internal pull-up)
Counter	32-bit (±2 × 10 <sup>9</sup> counts)
Input Protection	+24 V or -18 V without damage
Sensor Power	+5 VDC @ 150 mA, current limited

## Digital Inputs

Number of Channels	8 with common return line
Polarity	Bidirectional
Isolation Voltage	120 VAC or DC (Optically isolated)
Input Current	2.5 mA maximum
Input for low state	8 VDC maximum
Input for high state	16 VDC minimum
Maximum Input Voltage	±60 VDC

## Digital Outputs

Number of Channels	8 with common return line
Polarity	Bidirectional
Isolation Voltage	120 VAC or DC (Optically isolated)
Switching Capability	±1 A @ ±60 VAC peak or DC
Contact Resistance	>100 MΩ off; <0.5 Ω on

## Data Collection

Triggers	Encoder, Analog Input, PLC Handshaking
Trigger Parameters	Threshold Level, Rising or Falling Edge, Pre or Post Trigger Offsets, Timeout
Maximum Data Points	100,000 per channel

## Processing

Analog Input	Low Pass filtering, Smoother, POP Filter, DC Remove
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## Configuration

Number of Models	16
Number of Operations	10 per Model (i.e., 100 RPM Test, 300 RPM Test ...)



\* The exact processor type and speed, memory supplied and other technical specifications are subject to change without prior notice.