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# TSC 401

## Torque/Speed Conditioner

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### DESCRIPTION

The TSC 401 is the Torque/Speed Conditioner used to connect Magtrol Eddy-Current (WB) or Powder (PB) Dynamometers to the DSP6001 Controller. Powered by the DSP6001, and based on a precision instrumentation amplifier, the unit amplifies and filters the torque signal. It also provides power supply and connections for the speed pickup sensor which is located in the dynamometer.

### ORDERING INFORMATION

It is important to specify which dynamometer will be used with the TSC 401 Torque/Speed Conditioner so that it can be delivered with the appropriate cables. Because The TSC 401 also requires calibration with its associated dynamometer, it is suggested that the dynamometer and Torque/Speed Conditioner be ordered together in order for Magtrol to perform this calibration before leaving the factory.

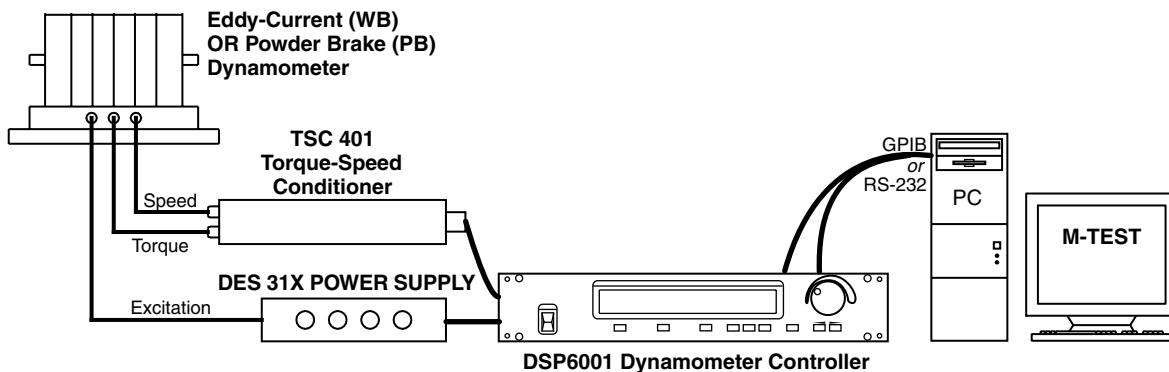
If purchased separately, the part number and serial number of the customer's dynamometer must be specified so that Magtrol can ship a pre-configured TSC 401. The customer must then perform the (Zero, CW & CCW) calibration on site, as outlined in the TSC 401 User's Manual.

Dynamometer	Torque/Speed Conditioner P/N
WB/PB 2.7, 43	234-401-000-11x
WB/PB 65, 115, 15	234-401-000-12x




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### SAMPLE CONFIGURATION



## RATINGS

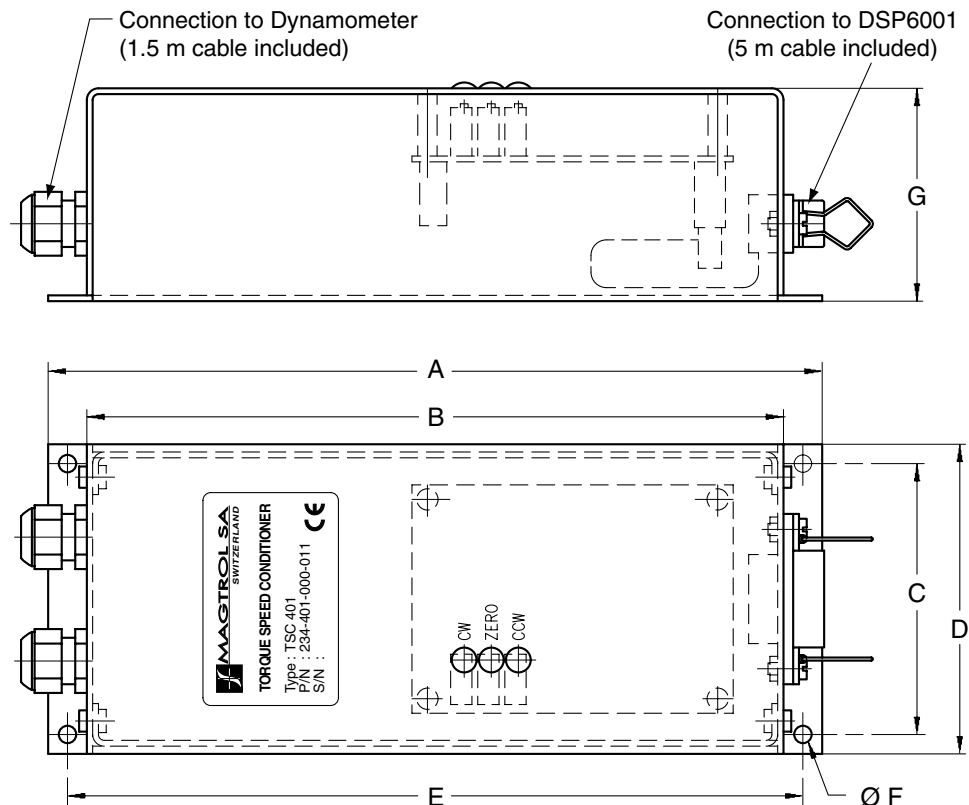
CHARACTERISTIC	VALUE	COMMENT
Supply Voltage	$\pm 20\text{ V to } \pm 30\text{ V}$	---
Supply Current	40 mA nominal; 45 mA max	With a 350 ohm load cell bridge and no O/P load.
Torque O/P Voltage	5 VDC $\pm 0.2\%$	Rated dynamometer torque.
Offset	$\pm 0.2\%$ FSD	---
Symmetry	$\pm 0.1\%$ FSD	---
Bandwidth (3 dB single pole)	20 Hz	---
Max. O/P Current	5 mA	Without distortion.
Min. O/P Load	1 k $\Omega$	---
Offset Drift	< 100 ppm/ $^{\circ}\text{C}$	---
Sensitivity Drift	< 50 ppm/ $^{\circ}\text{C}$	---

## DIMENSIONS

**NOTE:**

Original dimensions are in Metric units. Dimensions converted to English are approximate and have been rounded up to 3 decimal places.

	mm	inches
<b>A</b>	200.0	7.874
<b>B</b>	180.0	7.087
<b>C</b>	70.0	2.756
<b>D</b>	80.0	3.150
<b>E</b>	190.0	7.480
<b>F</b>	$\varnothing 4.5$	$\varnothing 0.177$
<b>G</b>	55.0	2.165



Due to the continual development of our products, we reserve the right to modify specifications without forewarning.



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