M800 Elite Speed Switch

Monitors Rotating Machinery for Dangerous Underspeed Conditions

APPLICATION

The M800 Elite Speed Switch is designed to detect belt slip, belt underspeed, stop motion, low speed or zero speed on bucket elevators, conveyors, airlocks, mixers, fans, grinders and many other rotating machines. Totally sealed and simple to calibrate, the M800 Elite works in the harshest of conditions.

METHOD OF OPERATION

An inductive sensing device located in the nose of the M800 Elite enclosure will detect a metal target. This target can be an existing bolt head or device attached to a shaft. During installation the M800 Elite is set to the normal machine shaft RPM by calibrating with the magnet provided. The internal microprocessor sets the alarm and shutdown relays. Two M800 Elite models are available:

Model M8001V10C may be used either as a dual trip unit with an alarm at 10% below set speed and a shutdown signal at 20% below set speed, or a single trip giving a shutdown signal at 20%.

Model M8002V10C may be used either as a dual trip unit with an alarm at 5% below set speed and a shutdown signal at 10% below set speed, or a single trip giving a shutdown signal at 10%.

A simple calibration facility allows either model to be programmed to give a start up delay of up to 15 seconds, while simultaneously calibrating for normal running speed. If required, the M800 Elite has an additional pulsed output, which can be connected to display actual shaft RPM on a PLC or speed display.

C US APPROVED

ATEX Approved Versions Available

FEATURES

- Universal Voltage (24 – 240 VAC/VDC)
- Dual Set-Points for Alarm and Shutdown
- Totally Sealed Construction: Submersible
- Microprocessor Accuracy & LED Indicators
- Built In Conduit Adaptor (1/2" NPT)
- CSA Class II, Div. 1 Groups E, F & G Approved
- IP67 Protection

M800 Elite Installed on Shaft with Whirligig®

Whirligig® with Optional Mag-Con™ Connector

PART NUMBERS/ACCESSORIES

M8001V10C	M800 Elite (10% and 20% Relays)
M8002V10C	M800 Elite (5% and 10% Relays)
SM2	*Speed*Master™ Sensor Testing Device
WG1-4B-4	Whirligig® Shaft Sensor Mount
MAG2000	Mag-Con™ Magnetic Connector
TACH3V5	Tacho Speed Display

Tacho Speed Display

Whirligig®: U.S. Pat # 6,109,120
Mag-Con™: U.S. Pat # 6,964,209

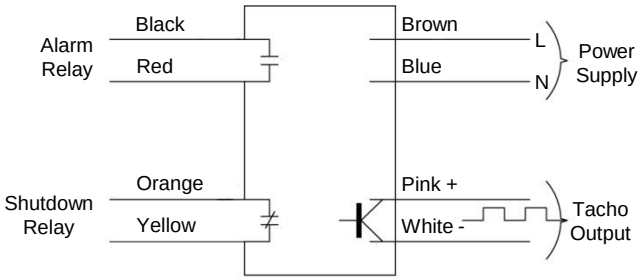
Please refer to instruction manual for correct installation.
Information subject to change or correction. Aug 2016

4B Components Limited

M800 Elite Speed Switch

BETTER BY DESIGN

CONNECTIONS

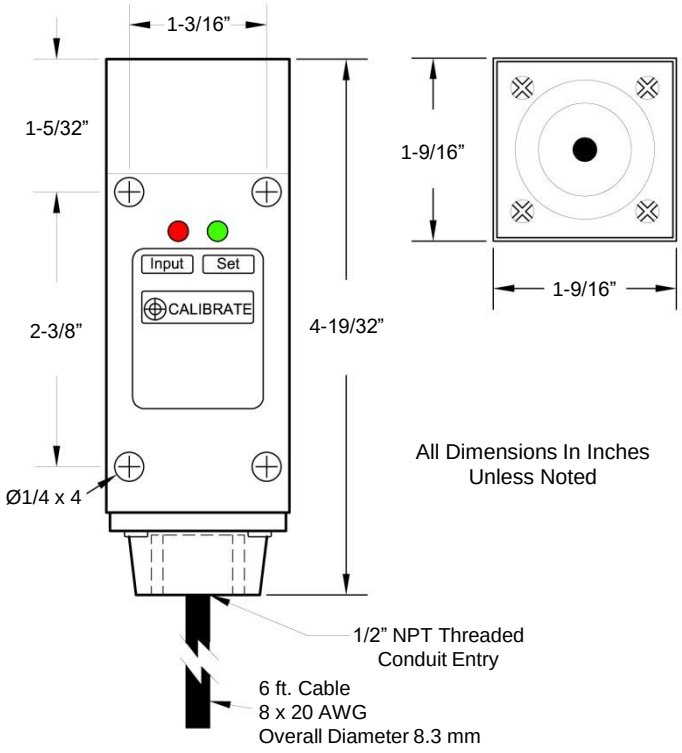


The diagram shows the state of the internal contacts with power applied. See installation manual for wiring procedure. The unit can be used with or without the tacho output.

The *Speed*Master™ is the only device that accurately tests the calibration of a speed switch, and allows testing of the alarm and shutdown features of the sensor while installed on the machine shaft.

To see it in action, visit: www.go4b.com/speedmaster

DIMENSIONS



All Dimensions In Inches Unless Noted

TECHNICAL SPECIFICATIONS

M800 Elite Speed Switch - Underspeed Sensor

M8001V10C and M8002V10C	
Power Supply:	24 - 240 VAC/VDC multi-voltage universal supply
Power Consumption:	6 VA
Fuse:	Supply to be fused at 5A maximum
Speed Range:	10 - 3,600 PPM (pulses per minute)
Sensing Range:	11/32" (9mm) max. ferrous target 7/32" (6mm) max. non-ferrous target
Start Up Delay:	User selectable 0 - 15 seconds
Operating Temperature:	-13°F (-25°C) to 158°F (70°C)
Calibration:	Magnetic
Trip Point:	10% alarm and 20% shut down - M8001V10C 5% alarm and 10% shut down - M8002V10C
Outputs:	1. Normally open contact closing when speed falls by 10% (M8001V10C) or 5% (M8002V10C) 2. Normally open contact closing on power up, opening when speed falls by 20% (M8001V10C) or 10% (M8002V10C) 3. Tacho output opto-isolated to 30 VDC, 100mA max.
LED Indicator:	Red LED indicates input pulses. Green LED shows output and acts as a calibration aid.
Cable:	6 ft. (2 m) - 8 conductor
Protection:	IP67 dust and water tight (fully encapsulated)
Approvals:	CSA Class II Div 1 Groups E, F & G (US and Canada)

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