

M800 Elite Speed Switch

BETTER BY DESIGN

M800 Elite Speed Switch

Monitors Rotating Machinery for Dangerous Underspeed Conditions

APPLICATION

The M800 Elite Speed Switch is the industry standard inductive proximity sensor for monitoring shaft underspeed conditions. With two underspeed relay contact outputs and a pulse output, the self contained unit provides the user with easy on site installation and consistent reliability. Totally sealed and simple to calibrate, the M800 Elite works in the harshest of conditions. Used on conveyors, bucket elevators, airlocks, mixers, fans, grinders and many other machines.

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 under speed relays to operate at exactly 10% and 20% below normal machine shaft RPM. So users are able to use the relay contacts to provide a warning when the shaft starts to slow down (10% underspeed) and provide an automatic shutdown at 20%. 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.

FEATURES

- ▶ Universal Voltage (24 – 240 VAC/VDC)
- ▶ Dual Set-Points: 10% and 20%
- ▶ Totally Sealed Construction: Submersible
- ▶ Microprocessor Accuracy
- ▶ Built In Conduit Adaptor (1/2" NPT)
- ▶ LED Indication
- ▶ CSA / NRTL Class II, Div. 1 Groups E, F & G Approved
- ▶ IP67 Protection

PART NUMBERS/ACCESSORIES

- ▶ M8001V10C M800 Elite Speed Switch
- ▶ WG1-4B-4 Whirligig® Shaft Sensor Mount
- ▶ MAG2000 Mag-Con™ Magnetic Connector for Whirligig
- ▶ TACH3V5 Tacho Display



**NEW
PRODUCT**



ATEX Approved
Versions Available



Whirligig® with Optional
Mag-Con™ Connector



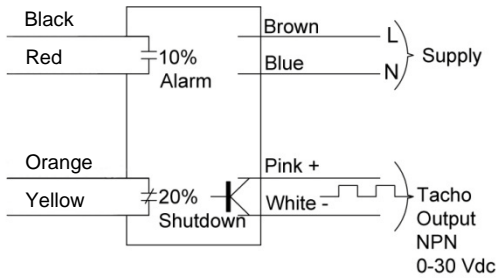
M800 Elite
Installed on Shaft
with Whirligig®

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

M800 Elite Speed Switch

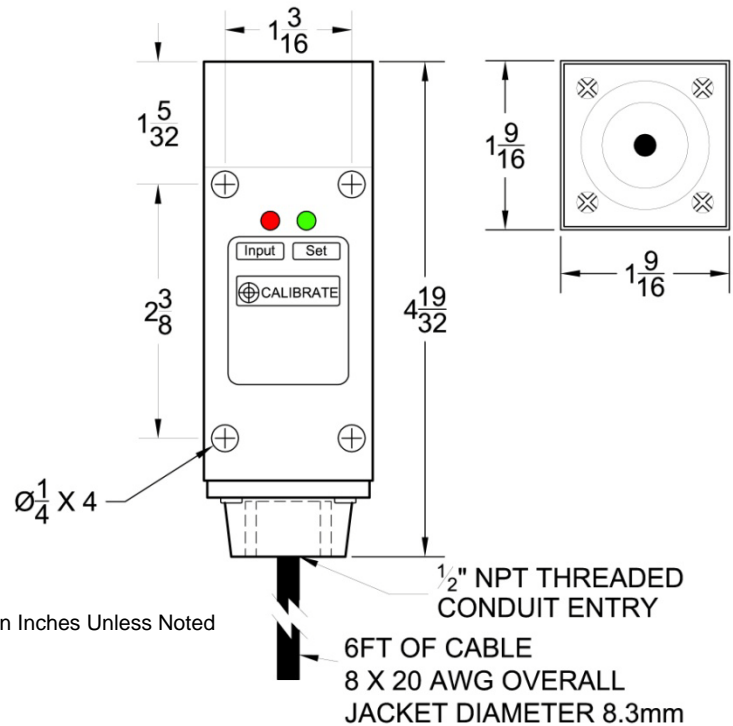
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CONNECTIONS



The diagram above shows the state of the internal contacts when power is applied to the M800. See installation manual for onsite wiring procedure. The alarm contact closes when the speed falls below 10% of set speed. The shutdown contact opens when the speed falls below 20% of set speed or power supply is interrupted. The unit can be used with or without the tacho output. High clarity 6 digit tachometer/speed displays are available for connection to the unit.

DIMENSIONS



All Dimensions In Inches Unless Noted



Front View of M800 Elite Showing :
- Input LED (Red)
- Set LED (Green)
- Calibrate Point (Magnetic)

TECHNICAL SPECIFICATIONS

M800 Elite Speed Switch - Underspeed Sensor

M8001V10C	
Power Supply:	24 - 240 VAC/VDC universal voltage
Power Consumption:	6 VA
Fuse:	5 amp 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
Contact Rating:	3A 240 VAC non-inductive
Calibration:	Magnetic
Trip Point:	10% underspeed alarm, 20% underspeed shutdown. Alternate 5% alarm and 10% shutdown available.
Outputs:	1. Normally open (powered up) contact closing when speed falls by 10% 2. Normally closed contact opening when speed falls by 20% 3. Tacho output opto-isolated to 30v, 100mA max.
LED Indicator:	Red LED indicates input pulses. Green LED shows output at nominal speed and acts as a calibration aid.
Cable:	6' (2m) 8 conductor
Approval:	CSA / NRTL Class II Div 1 Groups E, F & G (US and Canada)
Protection:	IP67