

M300 Slipswitch

BETTER BY DESIGN

M300 Slipswitch

Monitors Rotating Machinery for Dangerous Underspeed Conditions

APPLICATION

The M300 Slipswitch is a simple inductive shaft speed monitoring device. The self-contained unit has a single set point, which signals when the shaft speed has dropped by 20% of normal running speed. It is used for detecting dangerous slow down and underspeed conditions 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 M300 enclosure will detect a metal target. This target can be an existing bolt head or device attached to a shaft. During installation the M300 is set to the normal machine shaft RPM by calibrating with the magnet provided. The internal microprocessor sets the underspeed output to operate at exactly 20% below normal machine shaft RPM. This allows the M300 output to be used for automatic shutdown of machinery during dangerous underspeed or belt slip conditions.

FEATURES

- ▶ Underspeed Detection at 20%
- ▶ Totally Sealed Construction (Submersible)
- ▶ Microprocessor Accuracy
- ▶ LED Indication
- ▶ CSA / NRTL Class II Div 1 Groups E, F & G Approved
- ▶ IP67 Protection

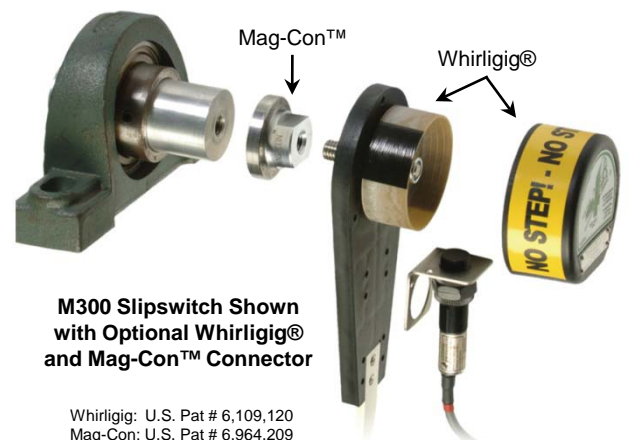
PART NUMBERS/ACCESSORIES

- ▶ M3001V10F M300 Slipswitch (2 Wire)
- ▶ M3005V10CA M300 Slipswitch (5 Wire)
- ▶ A34NPT 3/4" NPT Conduit Adapter
- ▶ WG1-4B-4 Whirligig® Shaft Sensor Mount
- ▶ MAG2000 Mag-Con™ Magnetic Connector for Whirligig
- ▶ CDL1 2 Wire Load Device (110 VAC)
- ▶ CDL4 2 Wire Load Device (24 VDC)

Whirligig® Shown with
M300 Slipswitch Installed



ATEX and IECEx Versions Available



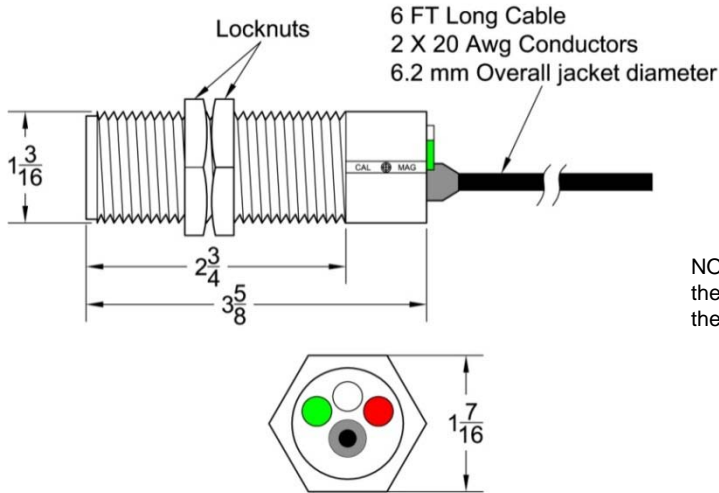
M300 Slipswitch Shown
with Optional Whirligig®
and Mag-Con™ Connector

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

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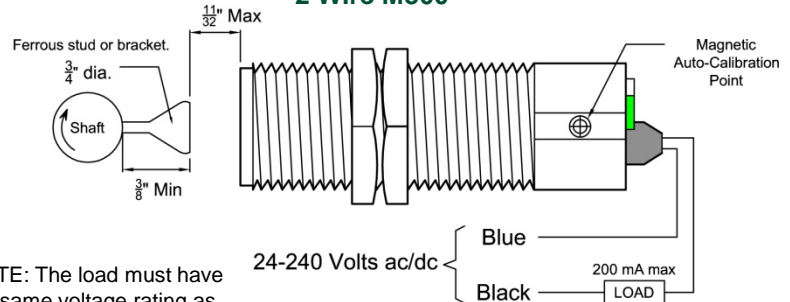
DIMENSIONS



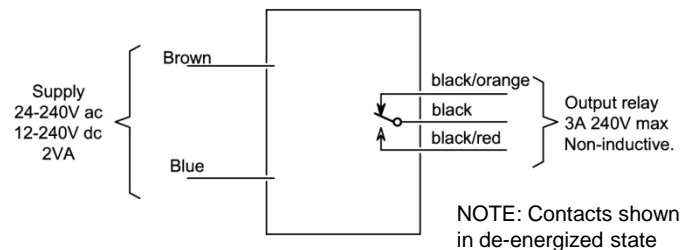
Dimensions in Inches Unless Noted

CONNECTIONS

2 Wire M300



5 Wire M300



TECHNICAL SPECIFICATIONS

M300 Slipswitch - Monitors Rotating Machinery for Dangerous Underspeed Conditions

	M3001V10F (2 Wire)	M3005V10CA (5 Wire)
Power Supply:	24-240 VAC/VDC	12-240 VDC / 24-240 VAC
Power Consumption:	Load dependent (200 mA maximum)	30 mA
Fuse:	5 amp maximum	5 amp maximum
Output:	Triac, normally closed above set speed, normally open at 20% below set speed	Relay, normally energized, closed contact above set speed. Normally de-energized, open contact at 20% below set speed
Relative Humidity:	90% RH	90% RH
Switching Capacity:	200 mA maximum	N/A
Contact Rating:	NA	3 A - 240 VAC (non-inductive)
Saturation Voltage:	8 Volts maximum (output on)	N/A
Leakage Current:	1.6 mA maximum (output off)	N/A
Operating Temperature:	-13°F (-25°C) to +158°F (70°C)	5°F (-15°C) to +122°F (50°C)
Start Up Delay:	0 - 30 seconds (programmable)	0 - 30 seconds (programmable)
Sensing Range:	11/32" (9mm) maximum on ferrous metal	11/32" (9mm) maximum on ferrous metal
Input Pulse Range:	10 - 3,600 ppm	10 - 3,600 ppm
Trip Point:	20% below set speed	20% below set speed
LED Indicator:	Red LED indicates input pulses. Green LED shows output at nominal speed and acts as a calibration aid.	
Calibration:	Magnetic	Magnetic
Cable:	6' (2m) 2 conductor	6' (2m) 5 conductor
Approval:	CSA / NRTL Class II Div 1 Groups E, F, & G (US and Canada)	CSA / NRTL Class II Div 1 Groups E, F, & G (US and Canada)
Protection:	IP67	IP67