

M300 Slipswitch

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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
- ▶ Microprocessor Accuracy
- ▶ LED Indication
- ▶ CSA/NRTL Class II Div 1 Groups E, F and G Approved in US & Canada
- ▶ IP66 Protection

PART NUMBERS/ACCESSORIES

- | | |
|--------------|---------------------------------------|
| ▶ M3003V10C | 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™ Whirligig Magnetic Connector |
| ▶ SM2 | SpeedMaster™ Sensor Testing Device |
| ▶ CDL1 | 2 Wire Load Device (110 VAC) |
| ▶ CDL4 | 2 Wire Load Device (24 VDC) |



IECEx



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

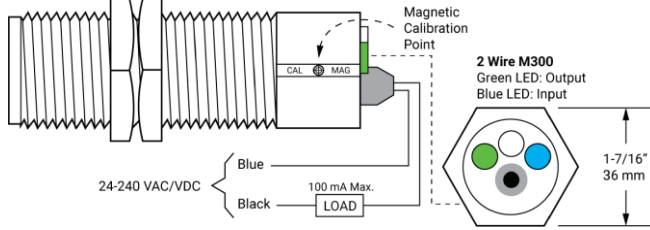
Whirligig® Shown with M300 Slipswitch Installed



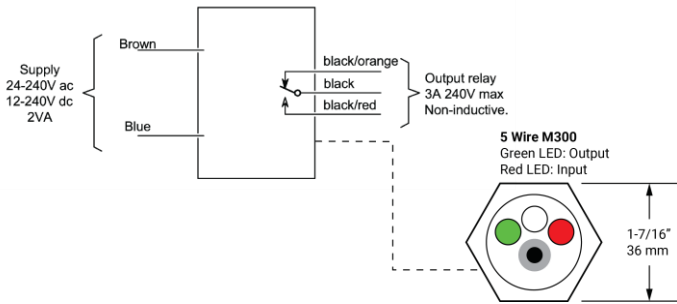
M300 Slipswitch

CONNECTIONS

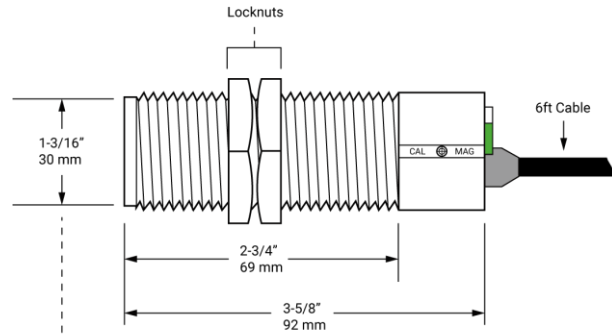
2 Wire M300



5 Wire M300



DIMENSIONS



NOTE: 30 mm to 3/4\" NPT Conduit Adapter Available (Part No. A34NPT)

TECHNICAL SPECIFICATIONS

Part Number	M3003V10C (2 Wire)	M3005V10CA (5 Wire)
Power Supply	24 to 240 VAC/VDC	12 to 240 VDC / 24 to 240 VAC
Fusing	Supply to be fused at 500mA maximum	Supply to be fused at 3A maximum
Relative Humidity	90% RH	
Switching Capacity	100 mA maximum	3A 240V non-inductive maximum
Saturation Voltage	5.5 Volts maximum (output on)	N/A
Output State	FET, normally closed above set speed, normally open at 20% below set speed	Relay, energized above set speed, de-energized at 20% below set speed
Leakage Current	1.6 mA Max (output off)	N/A
Operating Temp.	5°F (-15°C) to +122°F (+50°C)	5°F (-15°C) to +122°F (50°C)
Sensing Range	5/16\" (8 mm) maximum on ferrous metal at 77°F (25°C)	15/32\" (12 mm) maximum on ferrous metal at 77°F (25°C)
Input Pulse Range	10 to 3,600 pulses per minute (PPM) maximum	
Start-up Delay	Adjustable: 0 to 30 seconds	
Trip Point	20% below set speed	
Cable	2 wire, 6 ft (2 meter) long leads. Can be extended with 2 wire lead	5 wire, 6 ft (2 meter) long leads. Can be extended with 5 wire lead
Approvals	CSA Class II Division 1 Groups E, F and G (ATEX available)	
Protection	IP66	