

M300 Slipswitch

Detect Dangerous Underspeed Slow Down 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 downs and underspeeds 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, so users are able to use the M300 output for automatic shutdown during a dangerous underspeed or belt slip condition.

FEATURES

- ▶ Underspeed Detection at 20%
- ▶ Adjustable start-up delay - 0 to 60 seconds
- ▶ Magnetic Calibration of Microprocessor
 - start-up delay
 - normal running speed
- ▶ Universal voltage: 24-240 VAC/12-240VDC
- ▶ Microprocessor Accuracy
- ▶ LED Indication
- ▶ Certified to ATEX & IECEx Zone 20 & CSA Class 2 Division 1 Groups E, F & G
- ▶ IP67 Protection: Totally Sealed Construction

PART NUMBERS/ACCESSORIES

- ▶ M3001V10AI Slipswitch M300 2-Wire
- ▶ M3005V10AI Slipswitch M300 5-Wire
- ▶ WG1-8A-BR Whirligig (target/bracket/guard)
- ▶ MAG2000M Mag-Con Magnetic Connector for Whirligig

Detailed specifications, wiring diagrams and installation / operating instructions available immediately upon request.



M3001V10AI & M3005V10AI

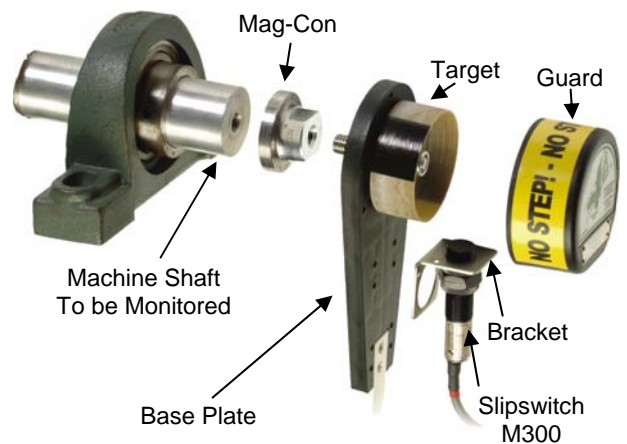


ATEX-Approved
Ex II 1D T100°C-IP 65-ZONE 20

IECEX



CLASS 2 Div. 1
Groups E, F & G

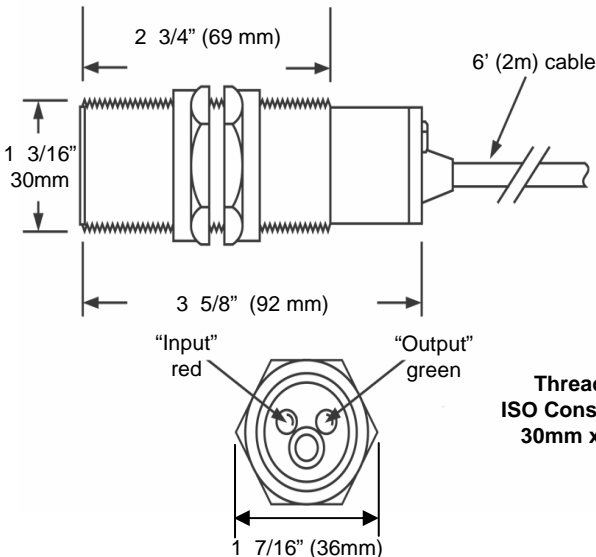


Slipswitch M300 shown with optional Whirligig and Mag-Con

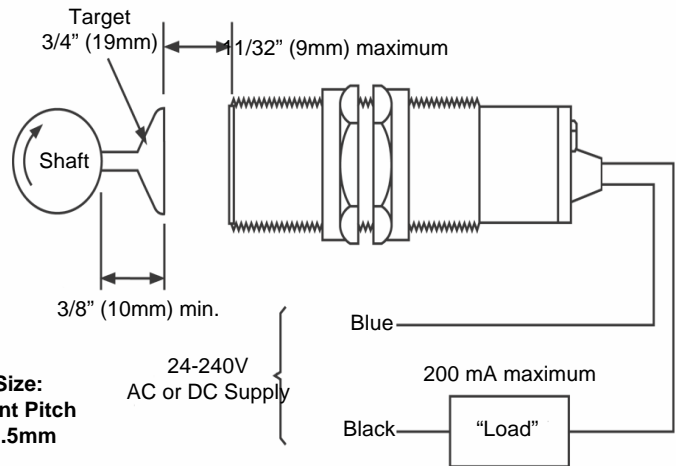
(Used for simple and reliable installation on shaft speed monitoring applications)

Please refer to instruction manual for correct installation .
Information subject to change or correction. May 2007.

M300 Dimensions



M300 Connections



Note: The "Load" must have the same voltage rating as the supply being used.

TECHNICAL SPECIFICATIONS

Slipswitch – Detect Dangerous Underspeed Conditions

	M3001V10AI - (M300 2-Wire)	M3005V10AI - (M300 5-Wire)
Power Supply:	24-240 VAC/DC	12-240 VDC / 24-240 VAC
Power Consumption:	30 mA	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 closed above set speed Normally open at 20% below set speed
Switching Capacity:	200 mA maximum	N/A
Contact Rating:	N/A	3A – 240 VAC
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)	-13°F (-25° C) to +158°F (70° C)
Start Up Delay:	0-60 seconds (programmable)	0-30 seconds (programmable)
Sensing Range:	11/32" (9mm) maximum on ferrous metal	9mm maximum on ferrous metal
Input Pulse Range:	10-3600 ppm maximum	10-3600 ppm maximum
Trip Point:	20% below set speed	20% below set speed
LED Indicator:	Red - "target sensed" Green - "set speed"	Red - "target sensed" Green - "set speed"
Relative Humidity:	90% RH	90% RH
Calibration:	Magnetic	Magnetic
Cable:	6' (2m) 2 conductor	2 m
Approval:	ATEX & IECEx Zone 20, CSA	ATEX & IECEx Zone 20, CSA
Protection:	IP65	IP65

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