INDUCTIVE SPEED DETECTORS

Feature

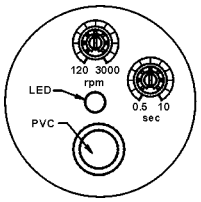
The speed detector is a self contained device incorporating an impulse generator for the detection of rotational speed.
No additional external amplifier or control device is required. The speed monitor gives noncontact rotational speed detection on the principle of an inductive proximity switch and monitors the speed to check that it does not fall below a minimum preset value. This minimum value is adjustable.
The unit contains a fixed time duration override circuit for the start up period,as well as an indicator to show the output state.
When the supply voltage is switched on, the output circuit is on for the start up override period.
If the desired set speed is reached by the end of the start up period then the circuit remains on.
If the set minimum speed is not reached by the end of the start up override period,or if the speed subsequently falls below the set minimum value,then the output is switched off.
Cancellation of this state is achieved by disconnecting the supply voltage.

Application

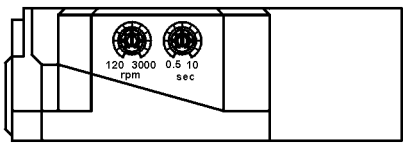
Typical applications include under speed,locked rotor and zero speed detection for shaft,belt or web breakage,sequentional motor starting or runout detection.

■ Panel Face

- **CULINDER M30**



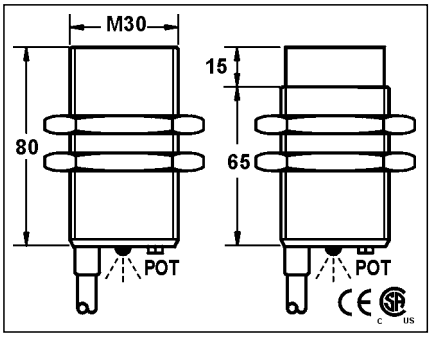
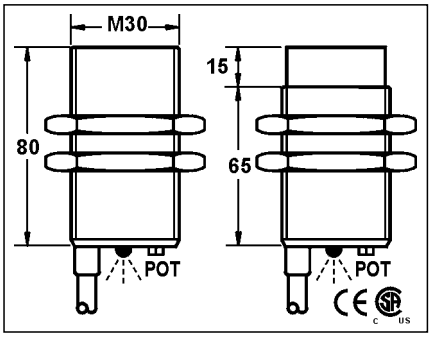
- **5 WAY ROTATIONAL HEAD**



■ Functional Instruction and Adjustment

Front Diagram	Condition	Functional Instruction and Adjustment
 120 3000 rpm	The green LED on the front turns on.	Turn the potentiometer to the point required the speed range is 120 rpm to 3000 rpm.
 0.5 10 sec		The time delay is 0.5 sec to 10 sec, turn the potentiometer to the point required.

INDUCTIVE SPEED DETECTORS

Diameter	M 30			M 30		
● Shielded ○ non-shielded	●		○	●		○
Sensing Distance Sn mm	10 mm		15 mm	10 mm		15 mm
Housing Material	Nickel plated brass			Nickel plated brass		
● LED Have ○ Without LED	●			●		
Dimensions (Unit: mm)						
Speed Range Available(one pulse one turn)	6-150 targets/minute			120-3000 targets/minute		
Power Up Delay	0.5-10 sec			0.5-10 sec		
Supply Voltage	10-30VDC			10-30VDC		
Max. Load Current	200mA			200mA		
Max. Leakage Current	0.01mA			0.01mA		
No Load Current	≤15mA			≤15mA		
Short Circuit Protection	YES			YES		
Hysteresis	<15%			<15%		
Repeat Accuracy	<1.0%(Sn)			<1.0%(Sn)		
Ambient Temperature	-25 °C - +70 °C			-25 °C - +70 °C		
Temperature Drift	<10%(Sn)/ °C			<10%(Sn)/ °C		
Protection Degree	IP67			IP67		
Time Delay Before Availability	-			-		
EMC	RFI>3V/m / EFT>1KV / ESD>4KV (contact)			RFI>3V/m / EFT>1KV / ESD>4KV (contact)		
Shock / Vibration	IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2			IEC 60947-5-2,Part 7.4.1 / IEC 60947-5-2,Part 7.4.2		
Material Active Face	PBT			PBT		
NPN N.O.	FCM1-3010N-A3U2/S	1	FCM2-3015N-A3U2/S	FCM1-3010N-A3U2/F	1	FCM2-3015N-A3U2/F
NPN N.C.	FCM1-3010N-B3U2/S	2	FCM2-3015N-B3U2/S	FCM1-3010N-B3U2/F	2	FCM2-3015N-B3U2/F
PNP N.O.	FCM1-3010P-A3U2/S	3	FCM2-3015P-A3U2/S	FCM1-3010P-A3U2/F	3	FCM2-3015P-A3U2/F
PNP N.C.	FCM1-3010P-B3U2/S	4	FCM2-3015P-B3U2/S	FCM1-3010P-B3U2/F	4	FCM2-3015P-B3U2/F
Changeover PNP (N.O. & N.C.)						
Changeover NPN (N.O. & N.C.)						
DC 2 wire N.O.						
DC 2 wire N.C.						
NAMUR						
Capacitive Mini Size						
DC 3 wire 10-55v NPN N.O.						
DC 3 wire 10-55v NPN N.C.						
DC 3 wire 10-55v PNP N.O.						
DC 3 wire 10-55v PNP N.C.						
AC N.O.						
AC N.C.						
AC N.O. N.C. Changeable						
DC/AC (Short Circuit Protection)						
Remarks	Connector type available			Connector type available		
Cable 2M (PVC)	5.8φ3x0.5			5.8φ3x0.5		
Weight	approx. 264g		approx. 256g	approx. 264g		approx. 256g