

# ROTOLOK

everything under control...



## ROTSPEED SWITCH

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## INTRODUCTION

The Rotospeed Switch was developed initially to economically monitor Rotolok's Rotary Valves around the clock, replacing labour intensive visual supervision.

However, it is more than capable of maintaining the overspeed and underspeed of any rotating shaft with a suitable connection.

## OPERATION

The heart of the switch is its sensing head with its built in switching device. The head detects the blades of a target mounted on the shaft to be monitored. The sensing head switch is activated when the rotor frequency matches or exceeds the switch's setting frequency. The switch will de-activate when the rotor frequency falls below the switch's setting frequency.

The switch is suitable for operation over a range of 2.5 to 200 RPM but this range can be extended if details are given on application.

(Different sensing heads can be used for alternative applications, (Details given on application))

The shaft being monitored should be tapped M12 in accordance with the planning in drawing and to overcome the problem of eccentricity or the hole not being coaxial, an anchor bracket should be fitted to stop rotation of the switch. By locating rather than bolting the Rotospeed firmly to the bracket, bearing overload is prevented.

## CONSTRUCTION

The total unit is housed in a weatherproof cast aluminium housing and can be directly coupled to the monitored shaft and is suitable for running in clockwise or anticlockwise direction.

The proximity switch provides an open circuit when de-energised and operates from a 12-240V DC or 24-240V AC 50/60 Hz supply. Mounting positions can be horizontal, vertical or at any convenient angle.

## SPECIFICATIONS

### SUPPLY

12-240V DC  
24-240V AC

### SWITCHING CAPACITY

200mA max

### SATURATION VOLTAGE

6 volts max (output on)

### AMBIENT TEMP.

-15°C to + 50°C

### RELATIVE HUMIDITY

90% RH

### OUTPUT STATE

Normally closed (Volt drop 6 volts max) above set speed.  
Normally open (leakage current 1.6mA max)

### TRIP LEVEL

20% below set speed

### START UP DELAY

Adjustable to 0 - 60 seconds

## SPEED ADJUSTMENT

If it is necessary to recalibrate the Rotospeed to a new speed or start-up delay, proceed as follows:-

- Switch off the supply to the machinery and Rotospeed.
- Undo the three M6 cap head socket screws located in the base of the rear housing.
- Remove rear housing by sliding down the cable. The gland may need loosening.
- Place the end of the magnet with the black dot against the spot on "Cal Mag" text on the sensor and re-apply the power to both the machinery and the Rotospeed. Continue to hold the magnet in position until the machinery has reached its correct running speed and then remove the magnet. The sensor will self-calibrate for 20% under the monitored speed and the output LED will flash at one second intervals, to confirm start up delay.
- To recalibrate the start up delay; with machinery running reapply the magnet to the "Cal Mag" Text on product label for a period equal to the required start up delay and then remove the magnet.

Note: Whilst the magnet is placed against the "Cal Mag" position the output LED will flash at one second intervals as a guide to time delay. When the magnet is removed the sensor will self calibrate to 20% under the monitored speed and then the output LED will again flash at one second intervals, to confirm the start up delay.

## ROTSPEED MOUNTING REQUIREMENT

