



BAP2 MOTION ALIGNMENT SENSOR

Ex II 1D T120°C & Ex II 2D T80°C

DESCRIPTION

The BAP2 sensor detects moving ferrous material and is designed for use with bucket elevators and conveyors to detect the buckets, for measurement of speed and alignment. It can also detect ferrous bolts which are used to attach non-ferrous buckets. The sensor is used in conjunction with a PLC or with a Watchdog or A400 Elite control unit. Two output signals are provided: one signal is a pulse output, representing each bucket detected: the second signal is a continuous output when moving buckets are detected.

SPECIFICATION

| | | |
|--------------------------------|-----------------|-----------------|
| Model No | BAP21V34 | BAP22V34FC |
| Voltage | 12-24vdc | 12-24vdc |
| Supply current | 40-90ma | 40-90ma |
| Outputs, current sinking | 100ma max | 100ma max |
| Detection range (1" bolt head) | 25mm-75mm | 25mm-75mm |
| Detection rate | 20-2000/min | 20-2000/min |
| Protection | IP65 | IP66 |
| Hazardous area classification | Class 2 Div 2 | Class 2 Div 1 |
| Dimensions | 90mm DIA x 35mm | 90mm DIA x 35mm |
| Fixing centres, M6 | 51mm x 51mm | 51mm x 51mm |
| Cable | 6 core 2m long | 6 core 2m long |
| Conduit entry | - | ½" NPT |
| Weight (shipping weight) | 405g (530g) | 428g (553g) |

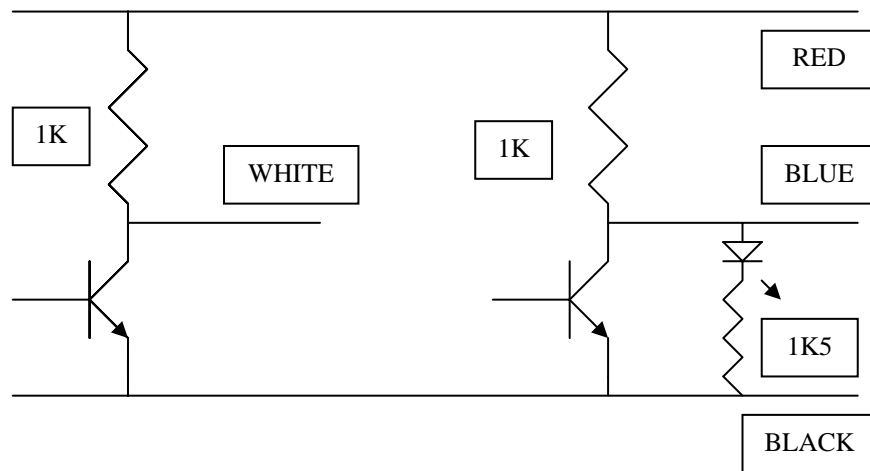
CABLE CONNECTIONS

| | |
|---------------|--|
| RED | +ve supply 12-24v dc |
| BLACK | -ve supply Ov |
| GREEN | Earth (Ground) Connected to case |
| YELLOW/ORANGE | Control 0-24v dc |
| BLUE | Pulsed output, normally low, high when detecting |
| WHITE | Continuous output, normally high, low when detecting |

OUTPUTS

NPN current sinking with pull up resistor





CONTROL

Sensitivity adjustment is achieved with the internal potentiometer and the voltage on the YELLOW/ORANGE wire.

To use the internal potentiometer, connect the YELLOW/ORANGE wire to the RED wire (+ve, 12-24v). Turn the potentiometer clockwise to increase sensitivity.

To use the external control voltage (A400 etc) connect the YELLOW/ORANGE wire to the control voltage from the A400 and turn the potentiometer on the BAP2 fully anti-clockwise. Reduce the control voltage to increase sensitivity.

In both arrangements, reduce the sensitivity if the pulsed output (LED) becomes unstable.

LED INDICATOR

The green LED shows the state of the pulsed output and flashes once for each bucket (bolt) detected. The LED should be off when no buckets (bolts) are detected, if not, reduce the sensitivity.

MOUNTING

When mounting on a steel elevator leg, cut a hole of 50-60mm dia and fix with four M6 screws. Alternatively, cut a larger square hole, fit a polycarbonate window and fix the sensor with four M6 screws in the centre of the window. When fixing to aluminium, plastic or non-magnetic stainless steel panels, it is not necessary to cut a hole as the sensor can 'see' through these materials.

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