

NOTES ON OPERATION OF SPEED RELAYS

The "ROTECH" Speed Relays operate as a speed sensing relay.

- If the speed of the drive shaft is above the speed set on the dial the output relay is **ENERGISED.**
- If the speed of the drive shaft is below the speed set on the dial the output relay is **DE-ENERGISED.**

In most systems when the shaft is rotating at its normal speed, the relay is energised and de-energised if for any reason the shaft slows down or stops. The N.O and N.C change over relay contacts are voltage free i.e. there is no internal connection within the module.

The most common system configuration is to connect the N/O contact in the retaining circuit of the motor starter controlling the drive shaft.

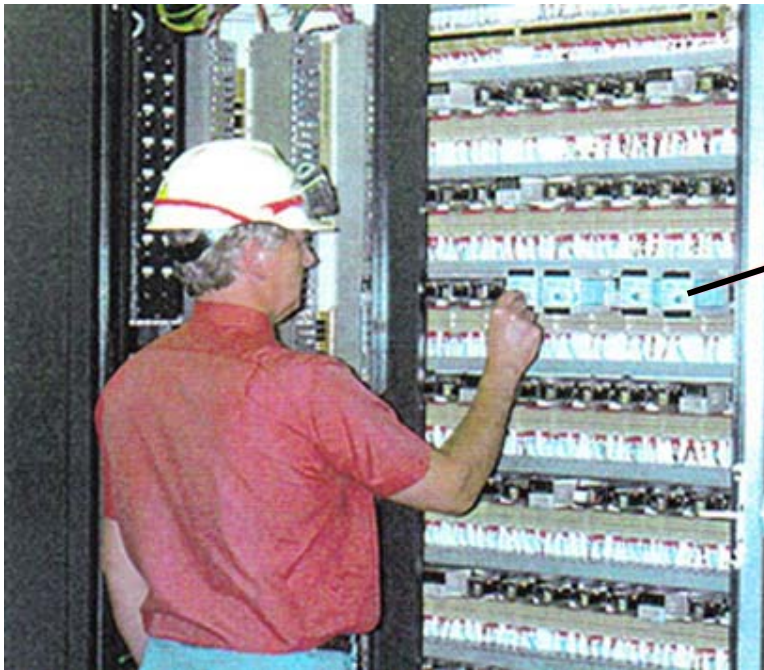
In applications of slow start-up drives where it may take several seconds for the drive to reach its normal running speed the "ROTECH" range of Speed Relays have an optional "start delay" timer keeping the output relay energised for a set period of approximately 5 to 10 seconds.

This feature is automatic when supplied fitted to the SR4000/ASD series of speed relay.

Browse the Rotech Website 'Products Page – Speed Relay's' for further details.

Speed Relay's Selection Information Safety and Reliability

Setting and routine testing of 'Rotech' motion sensors is carried out quickly, and most importantly safely, within your control room environment



Routine testing is carried out by observing a series of L.E.D. Indicators for – power on – delay on – relay on – incoming signal and then simply by starting and stopping the Appropriate drive.

Rotation monitoring for your equipment

Heavy duty motion sensors/encoders together with speed relays

For detecting:-

- SPEED
- DIRECTION
- DISTANCE
- SHAFT STOPPED
- UNDERSPEED
- OVERSPEED
- BELT SLIP
- VIBRATION

Product Descriptions

Speed Relays

Rotech Type AUE400 & SR4000

Rotech offers 2 types of speed relay modules, in the form of:-

Type AUE 400 Speed Relay – Advanced Series

This unit includes as standard:

- Dual AC Supply 110/240VAC 50/60Hz
- Single output relay S.P.C.O. – Volt free Contacts
- 3 Selectable Speed Ranges – Factory Settings – 0 to 10, 100 & 1000 RPM
- Selectable Start Delay – Factory Setting = 10 seconds
- Input signal repeat output – open collector transistor

Type SR 4000 Speed Relay – Standard Series

This unit includes as standard:

- Dual AC Supply 110/240VAC 50/60Hz
- Single output relay S.P.C.O. – Volt free Contacts
- 3 Selectable Speed Ranges – Factory Settings – 0 to 10, 100 & 1000 RPM

Variations to Factory Settings

All Speed Relays can be calibrated to suit Rotech Motion Sensors from 1 to 1000 pulses per revolution dependant upon the sensor type it is being used with.

e.g.. 401, 410, 416, 4120, 4360, 41000 etc.

The part number can be occasionally suffixed with either 'E' or 'W' to indicate it is for use with a type E or type W motion sensor output

e.g. AUE 404W, SR4010E etc.

The part number can also be suffixed with x2, x5, x10 (multiply by) etc. This indicates the unit has been calibrated for a higher than standard speed ranges.

This affects the 'speed ranges' information in the above description.

Thus x2 would change ranges to; 0 to 20, 0 to 200, 0 to 2000 RPM.

x5 would change ranges to; 0 to 50, 0 to 500, 0 to 5000 RPM.

x10 would change ranges to; 0 to 100, 0 to 1000, 0 to 10,000 RPM.

Similarly units can be calibrated for lower than standard speed ranges.

Here the part number is suffixed by /5, /10, /100 (divide by) etc.

e.g. AUE 4360/100, SR4020/10 etc.

Suffix /5 would change the ranges to; 0.2 to 2, 2 to 20, 20 to 200 RPM.

Suffix /10 would change the ranges to; 0.1 to 1, 1 to 10, 10 to 100 RPM.

Suffix /100 would change the ranges to; 0.01 to 0.1, 0.1 to 1, 1 to 10 RPM.

Standard supply voltages is 110/240VAC 50/60 Hz while 12V, 24VDC, 24VAC can be provided upon application.

ROTECH SYSTEMS

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since 1983