

# Type: 45175

## Underspeed Relay

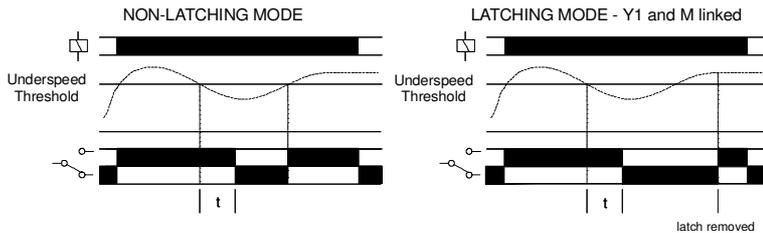
- ❑ Monitors incoming pulses from external NPN sensor or voltage free contact
- ❑ Time delay with adjustable setting and seconds/minutes range switch
- ❑ Latch facility (requires external n/c contact or switch)
- ❑ Built-in "reset" button
- ❑ DIN rail housing
- ❑ 1 x SPDT relay output
- ❑ LED indication for supply and relay status



Dims:  
H. 78mm  
W. 45mm  
L. 99mm

Terminal Protection to IP20

### • TIMING DIAGRAM



### • INSTALLATION AND SETTING

- BEFORE INSTALLATION, ISOLATE THE SUPPLY.
- Connect the unit as shown in the diagram below.
- Connect the proximity switch to the '0V', '24V' and 'O/P' terminals.
- If using an external contact, connect between '0V' and 'O/P' terminals.
- Set the 'range' switch to 'seconds'.
- Set the 'delay' adjustment to minimum.
- Apply power (green 'supply on' and red 'relay' LED's will illuminate, the relay will energise and contacts 15 and 18 will close if the unit receives pulses within the set time period).

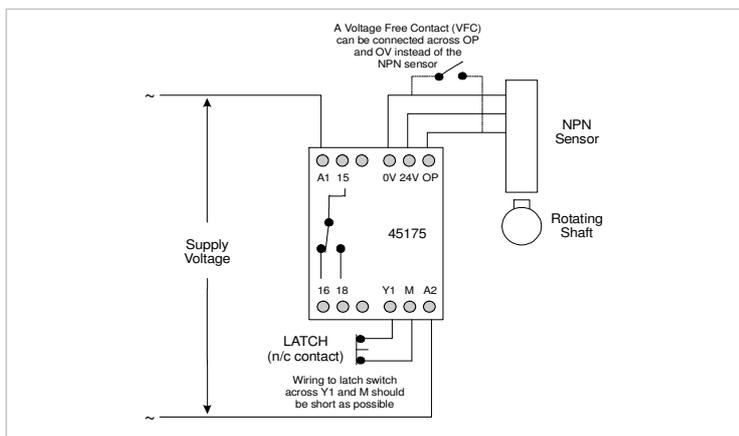
#### To set the unit:

- Set the 'range' switch and the 'delay' adjustment as required.
- **Latch facility:** If the latch is used on the unit, the external contact connected across 'Y1' and 'M' must be normally closed. After the relay de-energises, the unit can be reset by pressing 'reset' button or momentarily removing external contact.

#### Troubleshooting.

- If the unit fails to operate as described, check the wiring and voltages present on the supply terminals.
- Check proximity switch or external contact is connected correctly.

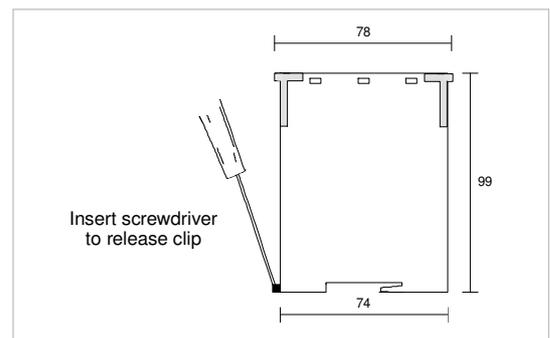
### • CONNECTION DIAGRAM



### • TECHNICAL SPECIFICATION

|                            |   |
|----------------------------|---|
| Supply voltage Un:         | 24, 115, 230V AC 48 - 63Hz<br>(Galvanic isolation by transformer)               |
| Supply variation:          | 85 - 115% of Un   |
| Isolation:                 | Over voltage cat. III (IEC 664)   |
| Power consumption:         | ≈ 3 VA  |
| Monitored input:           | Pulses from an NPN open collector proximity switch or voltage free contact      |
| Minimum pulse width:       | ≈ 17μs (≈ 30kHz frequency with 1:1 ratio)                                       |
| Adjustable time: delay (t) | 0.5 to 30 seconds/minutes (± 20%)   |
| Range switch:              | seconds or minutes  |
| Reset time:                | ≈ 70ms  |
| Ambient temp:              | -20 to +60°C  |
| Relative humidity:         | +95%  |
| Contact rating:            | SPDT<br>AC 1 250V AC 10A (2500VA)<br>AC 15 250V AC 6A<br>DC 1 25V DC 10A (250W) |
| Electrical life:           | ≥ 150,000 ops at rated load   |
| Housing:                   | Orange flame retardant UL94 VO  |
| Weight:                    | ≈ 230g  |
| Mounting option:           | On to 35mm symmetric DIN rail to BS5584:1978 (EN50 002, DIN 46277-3)            |
| Approvals:                 | Conforms to UL, CUL, CSA & IEC<br>CE Compliant                                  |

### • MOUNTING DETAILS



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