

# 1(4)-20mA DC ADJUSTABLE TRIP AMPS

**TYPES: YWRIT, 11WRIT (spco)  
YWRI2T (2 x spco)**



## FEATURES

- Din rail or 11 pin plug in
- Single setpoint or dual setpoint values
- Selectable manual or auto reset
- Low input impedance
- Dual LED indication

## SUMMARY OF UNITS

**YWRIT** - Din rail 1-20mA adjustable single setpoint trip amp.  
**11WRIT** - 11 pin plug in 1-20mA adjustable single setpoint trip amp.  
**YWRI2T** - Din rail 1-20mA two adjustable setpoint trip amp 2 x SPCO outputs "Low" & "High".

## MODE OF OPERATION

### YWRIT, 11WRIT

**"Auto Reset" without latching mode.** This mode is determined by terminals Y1 & Y2 or pins 9 & 11 left open. The output relay is energised when the monitored circuit rises above the level selected via the front potentiometer. The output relay will de-energise when the current falls back below the level selected less the set hysteresis adjustable 5 to 50%, set via a second potentiometer. If the auxiliary supply is lost at any time the relay will also de-energise.

**"Manual Reset" latching mode.** This mode is determined by a wired link between terminals Y1 & Y2 or pins 9 & 11. The output energises when the monitored circuit rises above the level selected by the front potentiometer. Once energised the relay will remain latched even if the monitored current falls below the set level less any selected hysteresis. Resetting is achieved by opening the link between terminals Y1 & Y2 or pins 9 & 11 or by removing the auxiliary supply. If whilst resetting the monitored current is still above the set level a reset will not be achieved. It is normally preferable in the latching mode to have the adjustable hysteresis set at minimum.

### YWRI2T

**Two setpoint trip amp.** Providing two separately controllable trip levels. With R1 selected as the "High" level and R2 as the "Low" level. When the monitored signal current rises above R2 set level R2 relay will energise. If the current continues to rise above R1 set level, relay R1 will energise. Conversely as the monitored current falls R1 will de-energise, if the fall continues R2 will de-energise. The unit has a built in fixed hysteresis of 2% at each setpoint to avoid relay "chatter". **The YWRI2T does not have a latched option and is therefore "auto" reset on both relays.**

## OTHER APPLICATION NOTES

### Adjustable Time Delays

The trip amps YWRIT & 11WRIT have 3 separately adjustable 0.1-10 sec delays, A startup delay activated by the connection of the auxiliary supply, therefore if a control circuit is going to be permanently live the time delay will only ever be active once, A delay on rising current and a delay on falling. The YWRI2T does not have any time delays.

### DC Auxiliary Supply Versions

DC auxiliary supply versions are as standard non isolated. For these versions the supply and the measured current must be isolated from each other and must not exceed 50V DC. On request at extra cost isolated versions can be manufactured utilising internally a DC to DC converter.

## SPECIFICATIONS

### Supply & Measuring

Nominal supply tolerance:	± 15%
Isolation AC versions:	Via transformer
Isolation DC versions:	No as standard or:- Yes via optional internal DC to DC converter
Power consumption:	3VA max
Hysteresis:	Ajustable 5 to 50% of Ie YWRI2T fixed at 2%
Repeat accuracy:	± 2% at constant ambient ± 5% across temperature range
Response time:	100 mSec on make 200mSec on break
Input range:	1-20mA adjustable
Max over current:	1Amp (max 1 sec)
Input impedance:	10 Ohms
Time delays:	0.1-10 secs separately adjustable YWRI2T no delay

### Relay output

Output contacts:	SPCO 10Amps/250V AC1
Mechanical life:	30 Million ops
Electrical life:	200K ops at max rated load

### General

Operating temperature:	-20°C to +65°C
Storage temperature:	-20°C to +65°C
Max cable size:	4mm
CE marked:	Yes
In accordance with:	EN61000-6-1: 2007 EN61000-6-3: 2007 EN61010-1: 2002
Housing material:	Polycarbonate, Auto extinguishable to UL 94 V-0

## ORDERING INFORMATION

TYPE	COIL VOLTAGE		
<b>YWRIT</b> (din rail SPCO)	440VAC	230VAC	*48VDC
<b>11WRIT</b> (11 pin SPCO)	415VAC	110VAC	*24VDC
<b>YWRI2T</b> (din rail 2 x SPCO)	400VAC	48VAC	
	380VAC	24VAC	

\* No isolation on DC versions as standard, on request at extra cost isolated versions are available

