

Description:

This device is used to display and monitor DC voltage. Maximum & Minimum values are logged for 24 hours (updated every 60 min). The latch facility may be de-activated for one or both the relays allowing one relay to be used for control (not latched), and the other as a latched alarm. Use the "SCAL" parameter for calibration purposes, or to change the number of decimal places displayed (see notes). Other features include adjustable signal damping, adjustable start-up and reaction delays, the ability to swap the relay's functionality. All settings may be locked & code protected to avoid changes from being made by unauthorised personnel.

Operation:

The relays remain energised while the input signal is between the upper and lower set points. Once de-energised, the signal must change in the opposite direction by the hysteresis amount before the relay will re-energise. Either relay's action may be swapped to energise when the setpoint is reached.

Menu functionality:

All adjustments are made via the three front mounted buttons. Press the "MENU" button repeatedly until the desired setting is reached, press "SELECT" to display the current value of the selected setting. The "+" and "-" buttons are used to change the value. "ENTER" will return the device to the menu. The "BACK" button will exit the menu.

Adjustable parameters:**· Upper limit for relay 1 "Hi 1" (default: disabled)**

When the input rises above this value, the relay changes state until the signal drops by the hysteresis amount (see "HYS.1" setting)

· Lower limit for relay 1 "Lo 1" (default: disabled)

When the input drops below this value, the relay changes state until the signal rises by the hysteresis amount (see "HYS.1" setting)

· Hysteresis value for relay 1 "HYS.1" (default: 0.5)

Once the set-point is reached, (& relay changed state), the input signal must change (in the opposite direction) by this value before the relay will return to its original state.

· Start-up delay for relay 1 "St.d.1" (default: 0.0 Sec, max: 100.0 Sec)

Delay (after power-up) before monitoring starts (to allow the signal to stabilize).

· Reaction delay for relay 1 "rE.d.1" (default: 0.0 Sec, max: 100.0 Sec)

A fault condition must occur for longer than this period before the relay changes state. (To allow fault conditions for short periods of time)

· Relay 1 function "rE.F.1" (default: De-energise)

Relay state when the setpoint is reached "dE.En"=de-energise, "EnEr"=energise.

· Latch enable for Relay "LAt.1" (default: Enable)

When the setpoint is reached, & the relay has changed state, the relay will NOT revert back to the original state while the **latch pins are shorted** (with this parameter enabled), even if the measured value drops below the setpoint & hysteresis level. The latch pins can also be used to reset relay 1 if enabled. If disabled, the latch pins do NOT affect relay 1's functionality. "En.Ab"=enabled, "diS.A"= disabled.

· Upper limit for relay 2 "Hi 2" (default: disabled)**· Lower limit for relay 2 "Lo 2" (default: disabled)****· Hysteresis value for relay 2 "HYS.2" (default: 0.5)****· Start-up delay for relay 2 "St.d.2" (default: 0 Sec, max: 100.0 Sec)****· Reaction delay for relay 2 "rE.d.2" (default: 0 Sec, max: 100.0 Sec)****· Relay 2 function "rE.F.2" (default: De-energise)****· Latch enable for Relay 2 "LAt.2" (default: Enable)****· Fault indication "indi" (default: on)**

During fault conditions the display indicates whether the value is above or below the set point values ("r1.Hi","r1.Lo", "r2.Hi","r2.Lo"). If a fault condition exists, but the relay is being held energised by the start-up or reaction delay timers, "-r1-" or "-r2-" is displayed. Changing this setting to "off", disables these messages. Note: This setting does not affect the "Er.Hi" and "Er.Lo" messages. (see notes)

· 24 hour Minimum "24h.L"

Display the lowest value measured during the past 24 hours (Press "SELECT" to clear)

· 24 hour Maximum "24h.h"

Display the highest value measured during the past 24 hours (Press "SELECT" to clear)

· Display Span "SCAL" (default value:1500)

This value is displayed when 150V is applied to the input.

· Decimal pointer "dEci" (default value: 150.0)

Use this setting to adjust the decimal point to the desired position.(0.000/0.00/0.0/0)

· Software damping filter "FiLt" (default value:6)

Adjust from 1 to 15 to increase the amount of signal damping.

· Reset "RES"

By selecting this setting, the device is reset to the factory defaults

Example 1: Set the device to de-energise relay 1 when the voltage is below 10.0V and above 140.0V

If all of the following settings are NOT available, exit the menu and activate the advanced menu.

Press "MENU" to display "Hi 1". Press "SELECT" and change the value to "140.0". Press "ENTER". "Lo 1" is displayed. Press "SELECT" and change the value to "10.0". Press "ENTER". Press "BACK" to exit the menu.

Example 2: Set the device to display 0-100% for a voltage of 0-50V

ie: 0V=0%, 50V=100%

Press "MENU" repeatedly until "SCAL" is displayed. Change the value to 3000.

150V (full scale voltage) / 50V (new full scale value) x 100 (display value at new full scale value value)

Menu options:

Exit the menu before making the following adjustments.

1. Lock / unlock parameters: (default: unlocked)

Press "BACK", then "ENTER" and hold the 2 buttons until the desired option is displayed. The display cycles between "Loc" (no changes allowed) & "u.Loc" (parameters may be adjusted)

2. Full / reduced menu (default: Full)

Press "SELECT", then "ENTER" and hold the 2 buttons until the desired option is displayed. The display cycles between "rEdu" (limited menu) & "Full" (all parameters are accessible)

3. Access Code: (default: no code)

Once options 1 & 2 are set as required, Press "BACK" and "SELECT" simultaneously until "CODE" is displayed. Now use the "+" & "-" to enter a code. (1-9999) Once a code is entered, access options 1 & 2 is not permitted. To clear the code, re-enter the same code again. If the code is forgotten. Press and hold "+" & "-" until "CODE" is displayed while re-applying power to the device. To skip code entry, press "Enter" while "CodE" is displayed.

Notes:

- Whenever the input signal is above the rated input value by more than 3%. The display indicates "Er.HI"
- Certain settings are reset to default when the device is re-configured. Re-check all settings to ensure they are correct before commissioning. (use the advanced menu)
- To change the resolution so that the decimal pointer is NOT displayed: Set "SCAL" to 150, and set the decimal pointer parameter so that the pointer is not displayed.
- The maximum & minimum values are NOT updated during the first 30 seconds after power up. This allows the input signal to stabilize first.

Specifications:

Display scale:	10 to 9999
Display resolution:	0.1 to 1 (adjustable)
Max Input voltage:	155V
Measurement resolution:	0.15V
Accuracy	±0.3% @ 25°C (% of full scale)
Supply voltage:	±15% of rated input

12 Month guarantee:

Our product is guaranteed for a 12 (twelve) month period from date of purchase. This guarantee is valid for defects arising from failure during specified conditions. This guarantee does not cover damage due to abuse, tampering or improper installation. Our company does not accept liability for any consequential damage or loss arising from product malfunction. Should this product prove to be defective, kindly return for inspection or repair. For further information contact your nearest distributor.

Relay specifications:

Contact rating:	10A
Mechanical life:	30 million operations
Electrical life:	250 000 operations (at maximum load)

