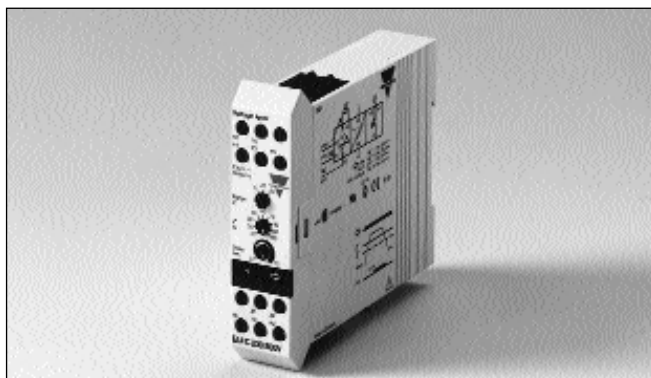


Current and Voltage Controls

1-Phase AC/DC Over Voltage Control

Type EUI



- AC/DC over voltage metering (open circuit) relay
- 3-position rotary switch for selection of measuring range
- Measuring range: 20 V: 40-200 mV, 100-500 mV, 0.4-2 V or 0.4-2 V, 1-5 V, 4-20 V
500 V: 1-5 V, 4-20 V, 10-50 V or 10-50 V, 40-200 V, 100-500 V
- Adjustable voltage limit on relative scale
- Adjustable time function (0.1-10 s)
- Adjustable hysteresis
- Programmable latching at set level
- Output: 5 A SPDT
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 22.5 mm Euronorm housing
- LED-indication for relay and power supply ON
- Galvanically separated power supply

Product Description

EUI is a precise AC/DC over voltage metering relay. The advantage of using the latch function is that the output

relay can be kept energized so e.g. a short voltage variation can be detected.

Ordering Key

EUI C 230 20V

Housing _____
 Function _____
 Type _____
 Output _____
 Power supply _____
 Measuring range _____

Type Selection

Mounting	Output	Measuring range	Supply: 24 VAC	Supply: 115 VAC	Supply: 230 VAC
For DIN-rail	SPDT SPDT	40 mV - 20 V 1 - 500 V	EUI C 024 20V EUI C 024 500V	EUI C 115 20V EUI C 115 500V	EUI C 230 20V EUI C 230 500V

Input Specifications

Input		Range x 1	Range x 10
Through terminals Y1 & Y2		Range x 1	
Through terminals Y1 & Y3		Range x 10	
Measuring ranges		Internal resist. Max. volt.	
20 V type			
x 1 input:			
Rotary	1: 40 - 200 mV	4.7 kΩ	5 V
Switch	2: 100 - 500 mV	4.7 kΩ	5 V
Position	3: 0.4 - 2 V	4.7 kΩ	5 V
x 10 input:			
Rotary	1: 0.4 - 2 V	47 kΩ	50 V
Switch	2: 1 - 5 V	47 kΩ	50 V
Position	3: 4 - 20 V	47 kΩ	50 V
500 V type			
x 1 input:			
Rotary	1: 1 - 5 V	110 kΩ	100 V
Switch	2: 4 - 20 V	110 kΩ	100 V
Position	3: 10 - 50 V	110 kΩ	100 V
x 10 input:			
Rotary	1: 10 - 50 V	1.1 MΩ	500 V
Switch	2: 40 - 200 V	1.1 MΩ	500 V
Position	3: 100 - 500 V	1.1 MΩ	500 V
Max. line voltage		277/480 VAC/DC	
Latching		Interconnection of terminals Z1 & Z2 Latching at set level	

Output Specifications

Output	SPDT relay
Rated insulation voltage	250 VAC (contact/elect.)
Contact ratings (AgCdO)	μ (micro gap)
Resistive loads	AC 1 5 A, 250 VAC
	DC 1 5 A, 24 VDC
Small inductive loads	AC 15 2 A, 250 VAC
	DC 13 3 A, 24 VDC
Mechanical life	≥ 40 x 10 ⁶ operations
Electrical life	≥ 10 ⁵ operations (at max. load)
Operating frequency	≤ 7200 operations/h
Dielectric strength	
Dielectric voltage	2 kVAC (rms)
Rated impulse withstand volt.	4 kV (1.2/50 μs)



Supply Specifications

Power supply	Overvoltage cat. III (IEC 60664) (IEC 60038)
Rated operational voltage	24 VAC $\pm 15\%$, 45 to 65 Hz
Through pins A1 & A2	024 115 VAC $\pm 15\%$, 45 to 65 Hz
	115 230 VAC $\pm 15\%$, 45 to 65 Hz
	230 ≤ 40 ms
Voltage interruption	≥ 2 kVAC (rms)
Dielectric voltage	≥ 2 kVAC (rms)
Rated impulse withstand voltage	4 kV (1.2/50 μ s)
Rated operational power	1.5 VA

General Specifications

Power ON delay	< 2 s
Power OFF delay	> 500 ms
Reaction time	$\tau < 200$ ms worst case reaction time may be up to $5 \times \tau$ Adjustable delay on release built-in (0.1-10 s)
Accuracy	
Input	$\pm 10\%$
ON delay	10 s, -1/+3 s < 0.1 s on min. $\leq 0.2\%/^{\circ}\text{C}$ ($\leq 0.11\%/^{\circ}\text{F}$)
Temperature drift	
Indication for	
Power supply ON	LED, green
Output ON	LED, yellow
Environment	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20° to $+50^{\circ}\text{C}$ (-4° to $+122^{\circ}\text{F}$)
Storage temperature	-50° to $+85^{\circ}\text{C}$ (-58° to $+185^{\circ}\text{F}$)
Weight	140 g
Screw terminals	
Tightening torque	Max. 0.5 Nm acc. to IEC 60947
Approvals	UL, CSA

Mode of Operation

EUI measures both AC and DC voltages.

Example 1

(no connection between terminals Z1 & Z2)

The relay operates when the measured value exceeds the set level for more than the set delay-time.

The relay releases when the voltage drops min. 5% below the set level (see hysteresis) or when power supply is interrupted.

Example 2

(connection between terminals Z1 & Z2)

The relay operates and latches in operating position when the

measured value exceeds the set level for more than the set delay-time.

Provided that the voltage has dropped min. 5% below the set point (see hysteresis), the relay will release when the interconnection between terminals Z1 & Z2 is interrupted, or power supply is interrupted.

If the measured value is above the set level when power supply is applied, the relay will operate immediately with no time delay.

The yellow LED is flashing until the delay-time has expired, or until the measured value drops below the fixed hysteresis (5%) again.

Range/Level/Time Setting

Upper knob:

Setting of voltage range on rotary switch.
When using Y1 & Y3 the scale is multiplied by 10.

Centre knob:

Level setting on relative scale.

Lower knob:

Setting of ON delay on absolute scale (0.1-10 s).

Hysteresis

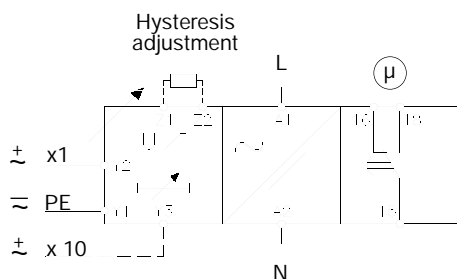
Normally 5%. The hysteresis can be extended by inserting a resistor between terminals Z1 & Z2.

Approx.

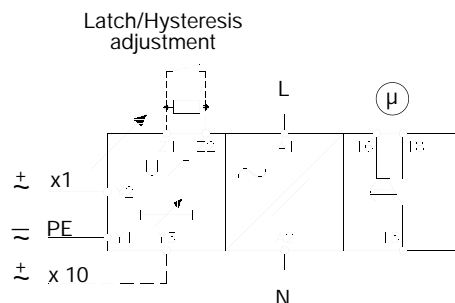
10%: 39 k Ω
25%: 12 k Ω
50%: 4.7 k Ω
75%: 2.2 k Ω
Latch: $< 500 \Omega$

Wiring Diagrams

Example 1



Example 2



Operation Diagrams

