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Monitoring Relays 1-Phase True RMS AC/DC Over or Under Voltage Types DUB03, PUB03

maintained. Inhibit function

can be used to avoid relay

operation when not desired

The LED's indicate the state

of the alarm and the output

(maintenance, transitions).

relay.

Product Description

DUB03

DUB03 and PUB03 are precise TRMS AC/DC over or under voltage (selectable by DIP-switch) monitoring relavs.

Owing to the built-in latch function, the ON-position of the relay output can be

Type Selection

Mounting	Output	Frequency
DIN-rail	SPDT	50 - 400 Hz
Plua-in	SPDT	50 - 400 Hz

Input Specifications

Input (voltage level) DUB03 PUB03	Terminals A1, A2 Terminals 2, 10 Measure their own power supply
Measuring ranges Direct	Level
Selectable by DIP-switch 24 VAC/DC 48 VAC/DC 115 VAC/DC 240 VAC/DC	10 to 26 V50 to 110%10 to 53 V20 to 110%12 to 127 V10 to 110%24 to 264 V10 to 110%
The input voltage cannot raise over 300 VAC/DC with respect to ground	

• TRMS AC/DC over or under voltage monitoring relays

- Selection of measuring range by DIP-switches
- Adjustable voltage on relative scale
- · Adjustable hysteresis on relative scale
- Adjustable delay function (0.1 to 30 s)
- Programmable latching or inhibit at set level
- Output: 8 A SPDT relay N.D. or N.E. selectable
- · For mounting on DIN-rail in accordance with DIN/EN 50 022 (DUB03) or plug-in module (PUB03)
- 22.5 mm Euronorm housing (DUB03) or 36 mm plug-in module (PUB03)
- LED indication for relay, alarm and power supply ON

Ordering Key

Supply: 12 to 240V AC/DC

DUB 03 C W24 PUB 03 C W24

Output Specifications

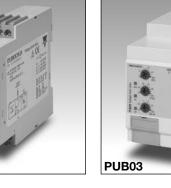
Output Rated insulation voltage	SPDT relay 250 VAC
Contact ratings (AgSnO ₂) Resistive loads AC 1 DC 12	μ 8 A @ 250 VAC 5 A @ 24 VDC
Small inductive loads AC 15 DC 13	2.5 A @ 250 VAC 2.5 A @ 24 VDC
Mechanical life	\geq 30 x 10 ⁶ operations
Electrical life	\geq 10 ⁵ operations (at 8 A, 250 V, cos φ = 1)
Operating frequency	\leq 7200 operations/h
Dielectric strength Dielectric voltage Rated impulse withstand volt.	≥ 2 kVAC (rms) 4 kV (1.2/50 μs)

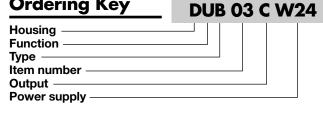
Supply Specifications

(PUB03 only)

Power supply Rated operational voltage through terminals:	Overvoltage cat. III (IEC 60664, IEC 60038)
A1 and A2 (DUB03) or 2 and 10 (PUB03) Dielectric voltage	12 to 240 V AC/DC +10% -15%; 45 to 440 Hz None
Rated operational power	4 VA (AC) 1.5W (DC)

CARLO GAVAZZI





CARLO GAVAZZI

General Specifications

Power ON delay	$1 s \pm 0.5 s \text{ or } 6 s \pm 0.5 s$
Reaction time Alarm ON delay	(input signal variation from -20% to +20% or from +20% to -20% of set value) < 100 ms
Alarm OFF delay	< 100 ms
Accuracy Temperature drift Delay ON alarm	(15 min warm-up time) ± 1000 ppm/°C ± 10% on set value ± 50 ms
Repeatability	\pm 0.5% on full-scale
Indication for	
Power supply ON Alarm ON	LED, green LED, red (flashing 2 Hz during delay time)
Output relay ON	LED, yellow
Environment	
Degree of protection Pollution degree Operating temperature Storage temperature	IP 20 3 (DUB03), 2 (PUB03) -20 to 60°C, R.H. < 95% -30 to 80°C, R.H. < 95%

Housing Dimensions	DUB03 PUB03	22.5 x 80 x 99.5 mm 36 x 80 x 94 mm
Material		PA66 or Noryl
Weight		Approx. 150 g
Screw terminals Tightening torque		Max. 0.5 Nm acc. to IEC 60947
Product standard		EN 60255-6
Approvals		UL, CSA
CE Marking		L.V. Directive 2006/95/EC EMC Directive 2004/108/EC
EMC		
Immunity		According to EN 60255-26 According to EN 61000-6-2
Emissions		According to EN 60255-26 According to EN 61000-6-3

Mode of Operation

DUB03 and PUB03 monitor It releases when the voltage Example 2 The red LED flashes until the both AC and DC over or drops below (or exceeds) the (latch function enabled, NE delay time has expired or the measured value has dropped under voltage. set level (see hysteresis set- relay) ting), or when power supply is below the set point (see hys-Example 1 interrupted. The relay operates and latchteresis setting). (latch function disabled, ND es in operating position when relay) Note the measured value exceeds If the voltage drops below the (or drops below) the set level The relay operates when the minimum power supply volt- for more than the set delay measured value exceeds (or age and the relay is set for time.

drops below) the set level for undervoltage the output con- The relay releases when power supply is interrupted.

Function/Range/Level and Time Delay Setting

more than the set delay time. tact isn't necessarily ON.

Adjust the input range setting the DIP switches 1 and 2 as shown below.

Select the desired function setting the DIP switches 3 to 6 as shown below.

To access the DIP switches open the grey plastic cover as shown below.

Selection of level and time delay:

Upper knob:

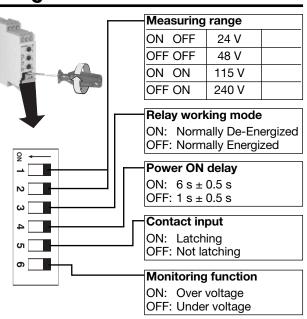
Setting of hysteresis on relative scale: 0 to 30% on set value.

Centre knob:

Voltage level setting on relative scale: 10 to 110% on full scale.

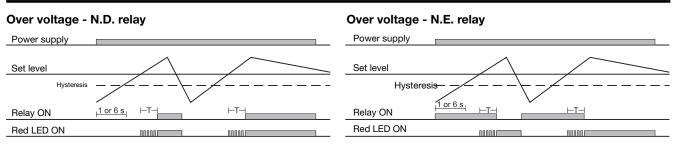
Lower knob:

Setting of delay on alarm time on absolute scale (0.1 to 30 s).

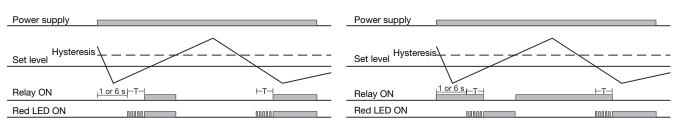




Operation Diagrams

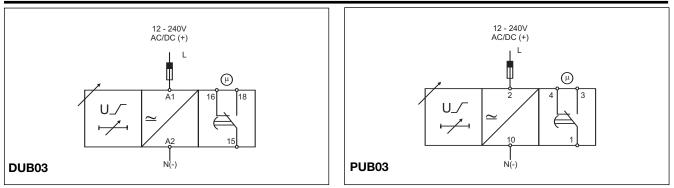






Under voltage - N.E. relay

Wiring Diagrams



Dimensions

