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PA-01U

Analogue relay
with voltage input



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Do not dispose of this device in the trash along with other waste!

According to the Law on Waste, electro coming from households free of charge and can give any amount to up to that end point of collection, as well as to store the occasion of the purchase of new equipment (in accordance with the principle of old-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature, pose a threat to the environment and human health.



Purpose

The PA-01U device is used to convert an analogue $0\div 10$ V signal into a relay output control signal. This allows the use of sensors with analogue output in automation systems.

Functioning

The PA-01U device continuously measures the voltage signal connected to the input terminals (7-9) and, based on the measured value and the selected operation mode, decides whether to switch on the executive relay.

The measuring input is galvanically isolated from the device's power supply and executive contacts, which makes it possible to measure a voltage in the $0\div 10$ V range in a circuit independent of the device's power supply voltage.

The PA-01U relay can operate in four different modes selected by the FUNC knob.



Validation of the new operating mode requires switching off and then switch the power back on.

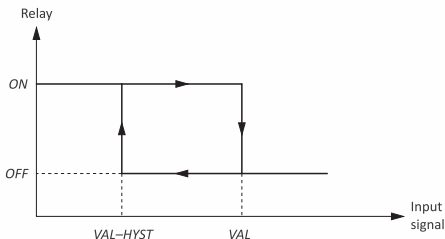
Functions



Applies only to functions A and B! Operation with the hysteresis set to 0, may cause uncontrolled switching of the relay at the setpoint limit.

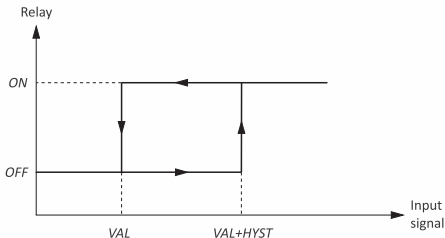
A function

The device operates in 'heating' mode. The relay is switched on if the value of the input signal falls below the VAL-HYST value and is switched off if the value set by the VAL knob is exceeded.



B function

The device operates in ,cooling' mode. The relay is switched on if the value of the input signal rises above the $VAL+HYST$ value, and is switched off if the value falls below the value set by the VAL knob.

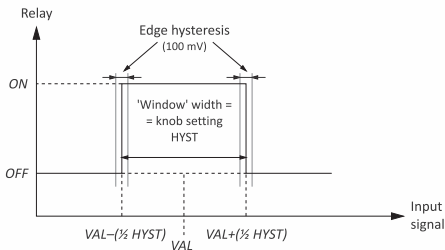


C function

The device operates in 'window' mode. The relay is always switched on if the signal value is within the set 'window', while it is switched off outside the 'window'.

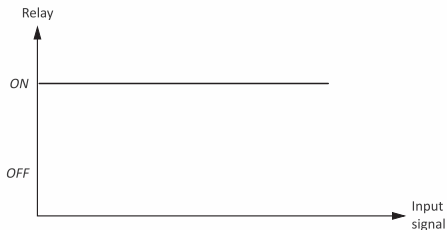
The width of the 'window' is set using the HYST knob, while the position of the 'window' is set using the VAL knob.

A constant hysteresis of 100 mV is added for correct operation at the switching limit.

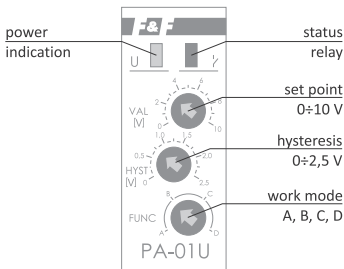


D function

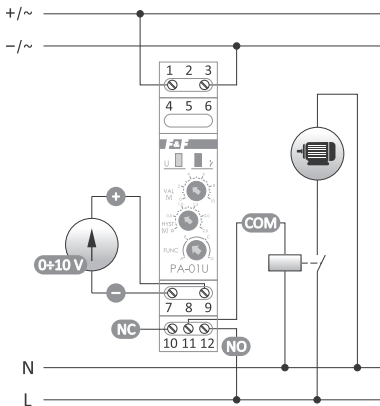
In this mode, the relay is switched on permanently. This option makes it possible to diagnose the correct functioning of the executive part of the device.



Panel description



Wiring diagram



- 1-3 – power supply
- 7-9 – 0÷10 V voltage input
- 10 – NC contact (normally closed)
- 11 – COM common relay
- 12 – NO contact (normally open)

Technical data

power supply	9÷24 V AC 9÷30 V DC
maximum load current (AC-1)	8 A
contact	separated 1×NO/NC
maximum current consumption	100 mA
range of input signals	0÷10 V
hysteresis setting range	0÷2,5 V
input resistance	69 kΩ ± 0,1 %
measurement resolution	2,5 mV
measurement error	1%
hysteresis in the 'window' mode	100 mV
working temperature	-20÷50°C
terminal	1.5 mm ² screw terminals
tightening torque	0.5 Nm
dimensions	1 module (18 mm)
mounting	for TH-35 rail
ingress protection	IP20

Warranty

F&F products are covered by a 24-month warranty from the date of purchase. The warranty is only valid with proof of purchase. Contact your dealer or contact us directly.

CE declaration

F&F Filipowski L.P. declares that the device is in conformity with the essential requirements of The Low Voltage Directive (LVD) 2014/35/EU. The CE Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found at www.fif.com.pl from the product subpage.

