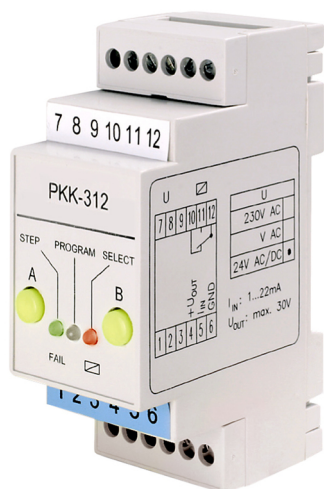


# Multitask relay PKK

- Galvanic isolation
- input 4-20 mA or potential free contact
- Intrinsic safety
- Settings on relay outputs
- Power supply to sensor



## DESCRIPTION

The PKK-312 is a 4-20 mA relay with galvanic isolation. An intrinsic safety version is available. The value of input signal is compared with setting value and change of galvanic insulation status, accordingly with the comparison mode in use.

Outputs are configurable according to various applications:

- Switching limit (high or low)
- Control ON/ OFF with setting on switching differential
- Comparative status mode with relay activation or deactivation
- Monitoring of discontinuity or broken loop

Instead of a 4-20 mA a dry contact can be connected to the input. Status of this contact is copied and the output signal is then galvanically isolated. PKK-312 allows the selection of time delays of 0.1; 1; 2; 5 s

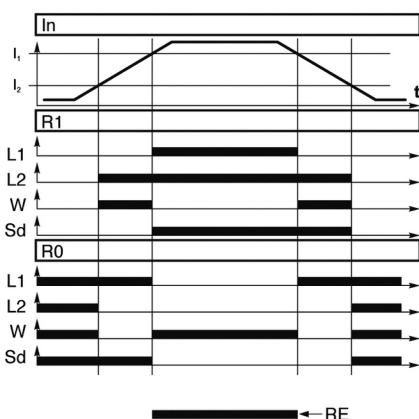
## Relay status diagram:

Operating modes of relay are programmed through the press buttons on the front, following indications of the LEDs. One of the most important parameters is the relay operating mode "R":

When current input value is above the threshold:

- If R = 1, relay output is activated
- If R = 0, relay output is deactivated

Thus, for Drain/Fill or Hold temperature applications, the control mode (normal or reverse) can be assigned to the ON/ OFF function.



## Diagram; Relay status

In: Current input  
 R1: Status / Mode [R=1]  
 R0: Status / Mode [R=0]  
 L1: Threshold S1  
 L2: Threshold S2  
 W: Window  
 SD: Switching differential  
 RE: Actuated relay

## CODE NUMBERS AND REFERENCES

Code	Reference	Description
251 224	PKK-312-1	Relay, 230 V AC
251 227	PKK-312-4	Relay, 24 V AC/ DC
251 228	PKK-312-5-Ex	Relay Ex, 230 V AC
251 230	PKK-312-7-Ex	Relay Ex, 24 V AC/ DC
251 231	PKK-312-8-Ex	Relay Ex, 24 V AC/ DC, for NIVOSWITCH Ex 2-wire

*PKK-312-8 Ex is an intrinsically safe version designed for NIVOSWITCH Ex-certified level detectors.*

## TECHNICAL FEATURES

Ex versions	PKK-312-5 Ex	PKK-312-7 Ex	PKK-312-8 Ex
Power supply	230 V AC $\pm 10\%$ ; 50/60 Hz	24 V AC $\pm 10\%$ ; 50/60 Hz 24 V DC $\pm 15\%$	
Consumption	< 2.5 VA	< 2.5 VA < 2.5 W	
Switching	2 thresholds within range 1 to 22 mA		10.5 mA 12.5 mA
Ex Certs.	II (1) G [EEx ia] IIB	II (1) G [EEx ia] IIC	
Intrinsic safety (max. values)	$U_0 < 28,4\text{ V}$ ; $I_0 < 140\text{ mA}$ ; $P_0 < 1,1\text{ W}$ ; $L_0 < 6\text{ mH}$ ; $C_0 < 50\text{ nF}$	$U_0 < 28,4\text{ V}$ ; $I_0 < 80\text{ mA}$ ; $P_0 < 0,6\text{ W}$ ; $L_0 < 4\text{ mH}$ ; $C_0 < 50\text{ nF}$	
Output capacity	$I_t = 22\text{ mA}$ When $U_{out} = 12\text{ V}$	$I_t = 22\text{ mA}$ When $U_{out} = 15\text{ V}$	
Ex Class	Class II	Class III	
Standard versions	PKK-312-1	PKK-312-4	
Power supply	230 V AC $\pm 10\%$ ; 50/60 Hz	24 V AC $\pm 10\%$ ; 50/60 Hz 24 V DC $\pm 15\%$	
Consumption	< 2.7 VA	< 2.5 W	
Switching	2 thresholds within range 1 to 22 mA		
Output capacity	$U_0 = 30\text{ V}$ $I_{max} = 70\text{ mA}$ ; $U_{out\ min} = 16\text{ V}$	$U_0 = 24\text{ V}$ $I_{max} = 80\text{ mA}$ $U_{out\ min} = 23\text{ V}$	
Class	Class II	Classe III	

### Input: 4-20 mA

Current input, nominal	1 to 22 mA
Accuracy, switching	$\pm 0.1\text{ mA}$
LOW threshold, default	3.7 mA
HIGH threshold, default	22 mA
Input impedance	10 $\Omega$
Permanent Surge Tolerance	100 mA
Time delays	0.1 s; 1 s; 2 s; 5 s

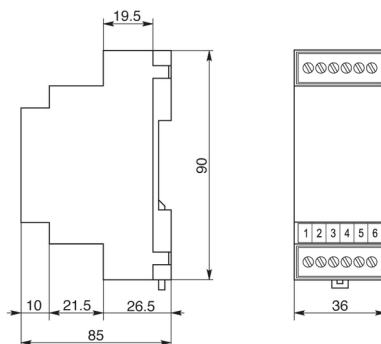
### Relay output:

Contact type	SPDT (1)
Rated	250 V AC, 8 A, AC 1
Galvanic insulation	4000 V - 50 Hz
Lifetimes (Electric/ Mechanical)	$10^5 / 2 \times 10^6$
Connections	4 mm <sup>2</sup> max. or 2.5 mm <sup>2</sup> twisted

### Casing:

Mounting	DIN rail (EN 50022-35)
Protection	IP 20
Ambient temperature	-10 ... +55 °C
Mass	210 g

## DIMENSIONS



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Multitask relay  
**PKK**

RE

251-02/2

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