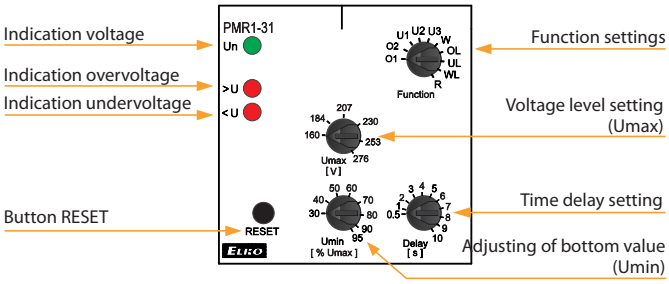
PMR1-31, PMR1-36, PMR1-39 | Multifunction voltage monitoring relay in 3P - AC/DC + DC

EAN kód
PMR1-31: 8595188115636
PMR1-31/2: 8595188115643
PMR1-36: 8595188115650
PMR1-36/2: 8595188130615
PMR1-39: 8595188130622
PMR1-39/2: 8595188130639

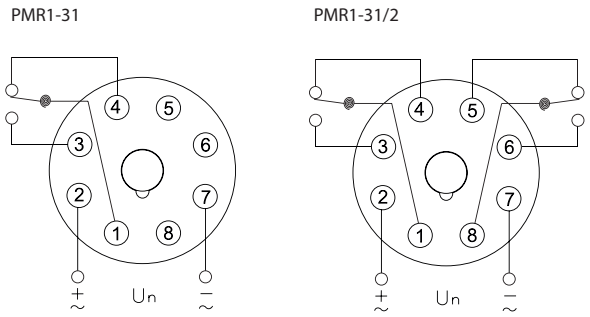
- Used to monitor the size of DC or AC voltage in single-phase circuits
- Powered from a monitored circuit
- Measurement of monitored voltage TRUE RMS
- Monitors the exceeded upper limit of stress (Umax) and falling below the lower limit of stress (Umin) – according to the selected function
- Continuous adjustment of both voltage limits – the lower level Umin is set in % of the upper level Umax
- Adjustable reaction delay (to eliminate short-term voltage peaks)
- Option to select functions with error state memory (Latch)

Technical parameters	PMR1-31 PMR1-31/2	PMR1-36 PMR1-36/2	PMR1-39 PMR1-39/2
Supply and measuring			
Power and measuring terminals:	A1-A2	A1-A2	A1-A2
Supply and monitored voltage:	AC/DC 48 - 276 V (AC 50-60 Hz)	DC 6 - 30 V -	AC/DC 24 - 150 V (AC 50-60 Hz)
Consumption AC (max.):	3.6 VA/0.66 W	-	3.6 VA/0.66 W
Consumption DC (max.):	0.85 W	0.4 W	0.85 W
Upper level (Umax):	AC 160 - 276 V	DC 12 - 30 V	AC 80-150 V
Bottom level (Umin):	30-95 % Umax	50 - 95 % Umax	30-95 % Umax
Max. permanent overload:	AC 276 V	DC 36 V	AC 276 V
Peak overload (1 s):	AC 290 V	DC 48 V	AC 290 V
Time delay (d):	300 ms		
Time delay (t):	adjustable , 0.5 - 10 s		
Accuracy			
Setting accuracy (mechanical):	5 % - in the mechanical setting		
Repeat accuracy:	<1 %		
Dependance on temperature:	< 0.1 %/°C		
Tolerance of limit values:	5 %		
Hysteresis (from fault to normal):	5 % (functions O1, U1, W) Umax – Umin (functions O2, U2, U3)		
Output			
Number of contacts:	1x changeover (AgNi) 2x changeover (AgNi)	1x changeover (AgNi) 2x changeover (AgNi)	1x changeover (AgNi) 2x changeover (AgNi)
Current rating:	16 A/AC1		
Breaking capacity:	4000 VA/AC1, 384 W/DC1		
Inrush current:	250 V AC/24 V DC		
Power loss (max.):	1.2 W		
Mechanical life:	10.000.000 ops.		
Electrical life (AC1):	100.000 ops.		
Other information			
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)		
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F)		
Dielectrical strength:	4 kV (supply - output)		
Operating position:	any		
Mounting:	DIN rail EN 60715		
Protection degree:	IP40 from front panel, IP20 terminals		
Overvoltage category:	III.		
Pollution degree:	2		
Dimensions:	90 x 17.6 x 64 mm (3.5˝ x 0.7˝ x 2.5˝)		
Weight:	94 g (3.32 oz) 105 g (3.7 oz)	94 g (3.32 oz) 105g (3.7 oz)	94 g (3.32 oz) 105g (3.7 oz)
Standards:	EN 60255-1, EN 60255-26, EN 60255-27		

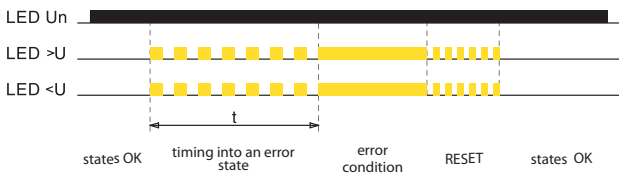
Device description



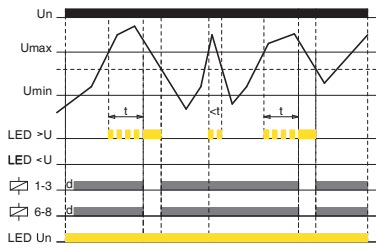
Connection



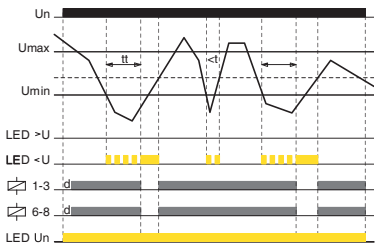
Indication of operating states



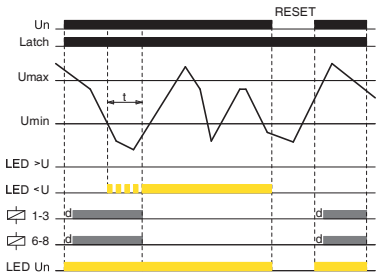
O1 **OVER (hysteresis 5%)**



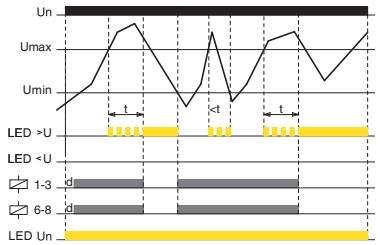
U1 **UNDER (hysteresis 5%)**



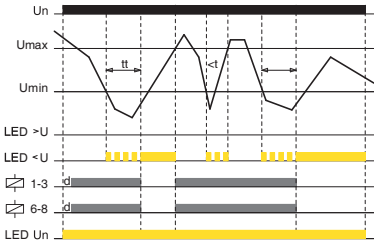
UL **UNDER + Latch**



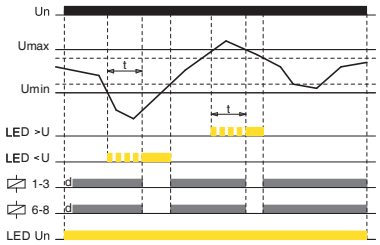
O2 **OVER (hysteresis to Umin)**



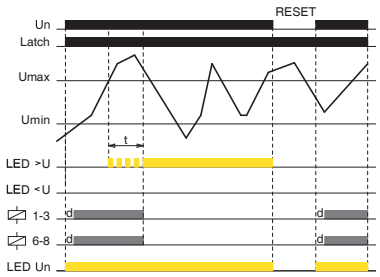
U2 **UNDER (hysteresis to Umax)**



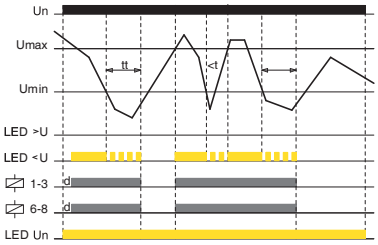
W **WINDOW (hysteresis 5%)**



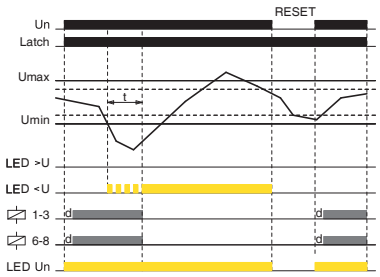
OL **OVER + Latch**



U3 **UNDER (hystereze to Umax)**



WL **WINDOW + Latch**



OVER:

If the size of the monitored voltage is lower than the set limit Umax, the output relay is switched on. If the Umax relay is exceeded, it opens after the set delay (error state).

If the voltage drops below the fixed hysteresis (O1 function) or below the set lower limit (O2 function), the relay switches on again.

If the OL function (OVER + Latch) is selected, when the voltage value is exceeded, the relay remains open even when the voltage returns from the error state.

Reset memory errors can be done in two ways:

- Short-term interruption of supply voltage
- By short-term interruption of the supply voltage
  By setting the function switch to position R (RESET) or any function without error memory.
- The RESET state lasts for 3 s after switching the function switch from the R position to a function with an error memory (UL, OL, WL). When moving to any other function from the R position, this delay does not apply.

Indication of operating states (red >U, <U):

- LED off - status OK (relay closed)
- LED flashes - timing to error state (relay closed)
- LED on - error condition (relay open)
- The LED flashes quickly – the motion state RESET function is set (relay opened)
- In the U3 function, the LED lights up in the OK state (relay closed), flashes during timing

UNDER:

If the amount of the monitored voltage is higher than the set limit Umin, the output relay is switched on. At poccles voltage below Umin relay after the set delay starts (error state).

If the voltage exceeds the fixed hysteresis (function U1) or the set upper limit (function U2), the relay closes again.

If the function UL (UNDER + Latch) is selected, when the voltage drops below Umin, the relay remains open even when the voltage returns from the error state. Resetting the error memory can be done as in the previous case.

WINDOW:

If the size of the monitored voltage is lower than Umax and at the same time higher than Umin, the output relay is switched on. If Umax is exceeded or decreases below Umin, the relay opens after the set delay (error state).

A fixed hysteresis is applied to recover from an error condition.

If the WL function (WINDOW + Latch) is selected, the error state is stored in memory again even when the voltage returns from the error state. Reset the error memory can be done as in the previous cases.