



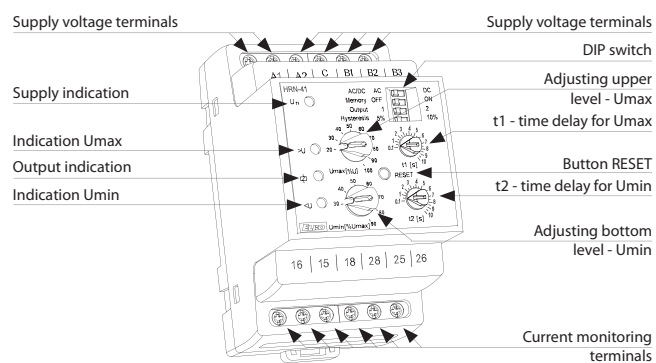
EAN code
HRN-41 /110V: 8595188140430
HRN-41 /230V: 8595188140409
HRN-41 /400V: 8595188140423
HRN-41 /24V: 8595188140416
HRN-42 /110V: 8595188140478
HRN-42 /230V: 8595188140447
HRN-42 /400V: 8595188140461
HRN-42 /24V: 8595188140454

Technical parameters		HRN-41	HRN-42
Supply			
Supply terminals:	A1 - A2		
Voltage range:	AC 110 V, AC 230 V, AC 400 V or AC/DC 24 V (AC 50-60Hz)		
Burden max.:	2.5 W / 5 VA (AC 110 V, AC 230 V, AC 400 V), 1.4 W / 2 VA (AC/DC 24 V)		
Supply voltage tolerance:	-15 %; +10 %		
Measuring			
Ranges:*	AC/DC 10 - 50 V (AC 50 - 60 Hz)	AC/DC 32 - 160 V (AC 50 - 60 Hz)	AC/DC 100 - 500 V (AC 50 - 60 Hz)
Terminals:	C - B1	C - B2	C - B3
Input resistance:	212 kΩ	676 kΩ	2.12 MΩ
Max. permanent overload:	100 V	300 V	600 V
Peak overload <1ms:	250 V	700 V	1 kV
Time delay for Umax:	adjustable 0.1 -10 s		
Time delay for Umin:	adjustable 0.1 -10 s		
Accuracy			
Setting accuracy (mechanical):	5 %		
Repeat accuracy:	<1 %		
Dependence on temperature:	< 0.1 % / °C (°F)		
Tolerance of limit values:	5 %		
Hysteresis (from fault to normal):	selectable 5 % / 10 % from range		
Output			
Number of contacts:	2x changeover/ SPDT (AgNi / Silver Alloy)		
Current rating:	16 A / AC1		
Breaking capacity:	4000 VA / AC1, 384 W / DC		
Inrush current:	30 A / < 3 s		
Switching voltage:	250 V AC1 / 24 V DC		
Output indication:	yellow LED		
Mechanical life:	3x10 ⁷		
Electrical life (AC1):	0.7x10 ⁵		
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)		
Electrical 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		
Max. cable size (mm²):	solid wire max. 1x 2.5 or 2x 1.5 / with sleeve max. 1x 1.5 (AWG 12)		
Dimensions:	90 x 52 x 65 mm (3.5" x 2" x 2.6")		
Weight:	246 g (110V, 230 V, 400 V) (8.7 oz.), 146 g (24 V) (5.1 oz.)		
Standards:	EN 60255-6, EN 61010-1		

* Only one of the inputs can be connected.

- Relay designed for monitoring DC and AC voltage in three ranges.
- The relay controls the size of the voltage in two independent levels (Umin, Umax).
- Setting the monitored level Umax (in % of range.)
- Setting the monitored level Umin (in % of range - for HRN-42 -function WINDOW), (in % of the set upper limit - for HRN-41 - function HYSTERESIS).
- Adjustable function "MEMORY".
- Function of second relay (independently / in parallel).
- Adjustable delay for eliminating short-term outages and surges for every level independently.
- Galvanically separated power supply from monitoring inputs.
- Output contact 2x switching 16 A / 250 V AC1 for each monitored voltage level.
- In 3-MODULE design, fixing to DIN rail.

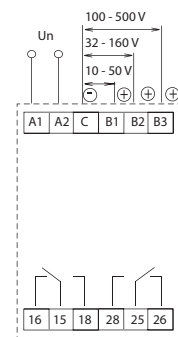
Description



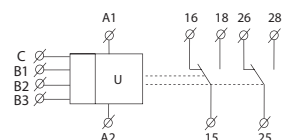
Description and importance of DIP switches

AC/DC AC	DC	Measured AC / DC voltage
Memory OFF	ON	MEMORY function
Output 1	2	Relay function setting
Hysteresis 5%	10%	Hysteresis setting

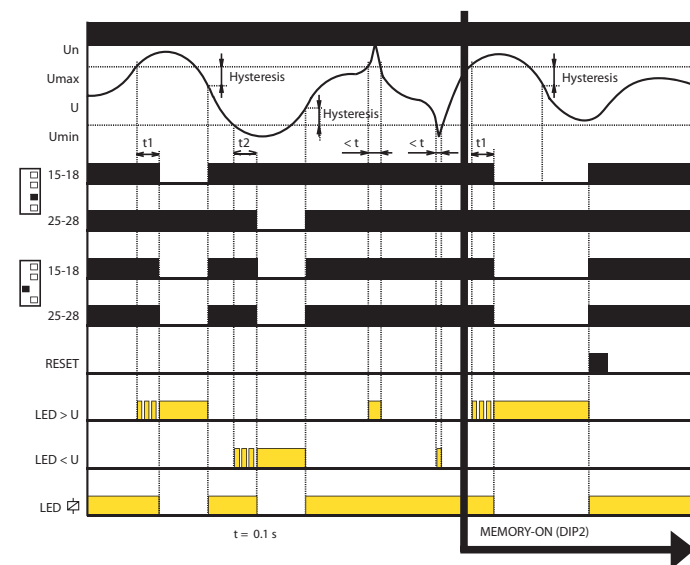
Connection



Symbol



Function



- if the value of the monitored voltage is in the zone between the set upper and lower levels, the status OK occurs - both relays are closed and the yellow LED illuminates. If the value of the monitored voltage is outside the set limits ($> U_{max}$ or $< U_{min}$), an error state occurs.
- when moving to an error state $U > U_{max}$, it times the delay $t1$ and a red LED $> U$ simultaneously flashes. After the $t1$ time elapses, the red LED $> U$ illuminates and the relevant relay opens.
- when moving to an error state $U < U_{min}$, it times the delay $t2$ and a red LED $< U$ simultaneously flashes. After the time $t2$ elapses, the red LED $< U$ illuminates and the relevant relay opens.
- when moving from the error status to the OK status, the relevant red LED immediately goes out, and the corresponding relay closes.