



# THE DATASHEET OF HRN-41/UNI





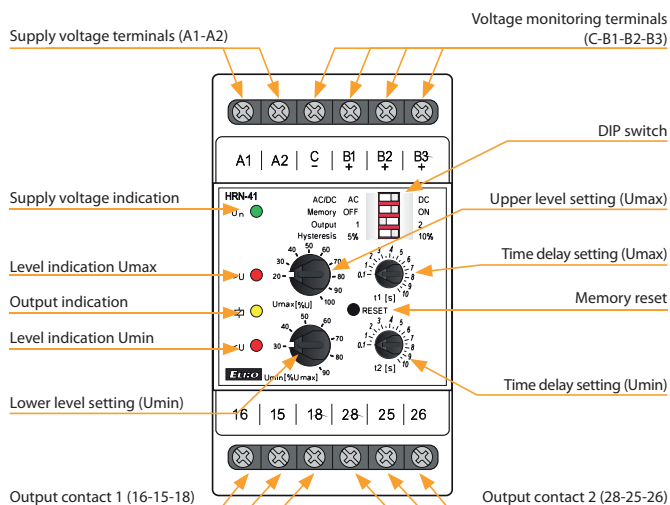
EAN code  
 HRN-41/UNI: 8595188185295  
 HRN-41/400V: 8595188140423  
 HRN-42/UNI: 8595188185301

Technical parameters		HRN-41	HRN-42	
<b>Supply</b>				
Supply terminals:		A1-A2		
Supply voltage:	UNI	AC/DC 24 – 240 V (AC 50-60 Hz)		
Consumption (max.):		3 VA/1 W		
Supply voltage:	400V	AC 400 V (50-60 Hz)		
Consumption (max.):		5 VA/2.5 W		
Supply voltage tolerance:		-15 %; +10 %		
<b>Measuring</b>				
Monitored terminals:		C-B1	C-B2	C-B3
Monitored 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)
Input resistance:		212 kΩ	676 kΩ	2.12 MΩ
Max. permanent voltage:		100 V	300 V	600 V
Peak overload (1 s):		250 V	700 V	1 kV
Time delay Umax (t1):		adjustable, 0.1 – 10 s		
Time delay Umin (t2):		adjustable, 0.1 – 10 s		
<b>Accuracy</b>				
Setting accuracy (mech.):		5 %		
Repeat accuracy:		< 1 %		
Temperature dependance:		< 0.1 %/°C (°F)		
Limit values tolerance:		5 %		
Hysteresis (fault to OK):		selectable, 5 %/10 % from the upper range value		
<b>Output</b>				
Contact type:		2x changeover/SPDT (AgNi)		
Current rating:		16 A/AC1		
Breaking capacity:		4000 VA/AC1, 384 W/DC1		
Inrush current:		30 A/< 3 s		
Switching voltage:		250 V AC/24 V DC		
Power dissipation (max.):		2.4 W		
Mechanical life:		10.000.000 ops.		
Electrical life (AC1):		100.000 ops.		
<b>Other information</b>				
Operating temperature:		-20 °C .. +55 °C (-4 .. 131 °F)		
Storage temperature:		-30 °C .. +70 °C (-22 .. 158 °F)		
Dielectric strength:		supply – output AC 4 kV output 1 – output 2 AC 4 kV		
Operating position:		any		
Mounting:		DIN rail EN 60715		
Protection degree:		IP40 front panel / IP20 terminals		
Overvoltage category:		III.		
Pollution degree:		2		
Cross-wire section – solid/ stranded with ferrule (mm²):		max. 1x 2.5, 2x 1.5/ max. 1x 2.5 (AWG 14)		
Dimensions:		90 x 52 x 65 mm (3.5" x 2" x 2.6")		
Weight:		UNI – 148 g (5.2 oz), 400 V – 249 g (8.8 oz)		
Standards:		EN 60255-1, EN 60255-26, EN 60255-27		

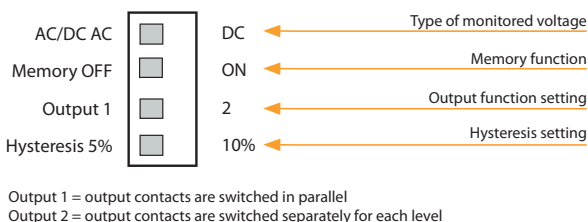
\* Only one input can be monitored at a time.

- Relay is used for monitoring AC or DC voltage in three ranges.
- Monitors level of voltage in two independent levels (Umin, Umax).
- Setting the monitored upper level (Umax) in % of range.
- Setting the monitored lower level (Umin):  
in % of the set upper limit (HRN-41, function HYSTERESIS)  
in % of range (HRN-42, function WINDOW)
- Selectable function of output contacts (independently/in parallel).
- Independent adjustable time delay of both levels (eliminating short-term drops and spikes).
- Galvanically separated power supply from monitoring inputs.
- Output contact for each monitored voltage level.

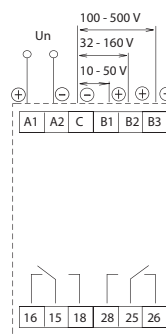
**Description**



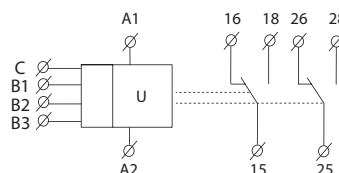
**Description of DIP switch**



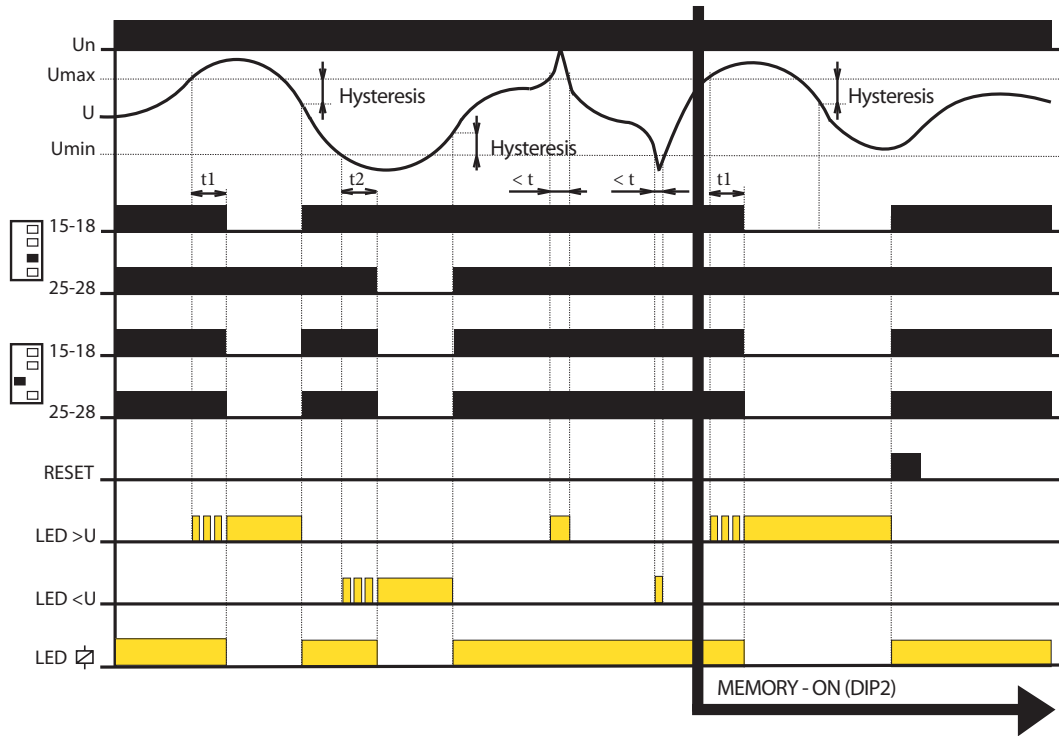
**Connection**



**Symbol**





Function



- If the value of the monitored voltage is in the zone between the set upper and lower levels, the OK state occurs, both output contacts are closed and the yellow LED illuminates. If the value of the monitored voltage is outside the set limits ( $> U_{max}$  or  $< U_{min}$ ), a fault state occurs.
- When moving to a fault state ( $U > U_{max}$ ), time delay  $t_1$  is running and red LED  $>U$  simultaneously flashes. After the time  $t_1$  elapses, the red LED  $>U$  illuminates and the relevant output contact opens.
- When moving to a fault state ( $U < U_{min}$ ), time delay  $t_2$  is running and red LED  $<U$  simultaneously flashes. After the time  $t_2$  elapses, the red LED  $<U$  illuminates and the relevant output contact opens.
- When moving from a fault state to the OK state, the relevant red LED immediately goes out, and the corresponding output contact closes.
- DIP Switch „Output“
  - Output 1 = output contacts are switched in parallel
  - Output 2 = output contacts are switched separately for each level

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