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Made in Czech Republic

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HRN-55 HRN-55N

Relay for monitoring phase sequence and failure

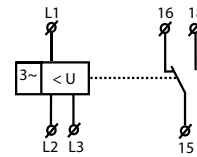


Characteristics

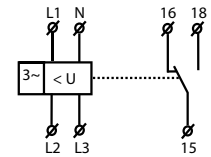
- relay monitors phase sequence and failure, exceeding of monitored voltage in 3 phase main
- HRN-55: supply from all phases, which means that function of relay is applicable also if one phase fails
- HRN-55N: supply L1-N, it means that relay also monitors break of neutral point
- fixed delay T1 (500 ms) and adjustable delay T2 (0.1 - 10 s)
- faulty state is indicated by LED and output contact of relay is OFF
- output contact: 1x changeover / SPDT 8 A / 250 V AC1
- 1-MODULE, DIN rail mounting

Symbol

HRN-55

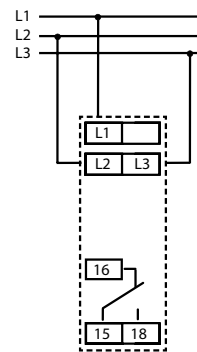


HRN-55N

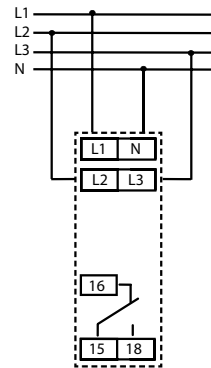


Connection

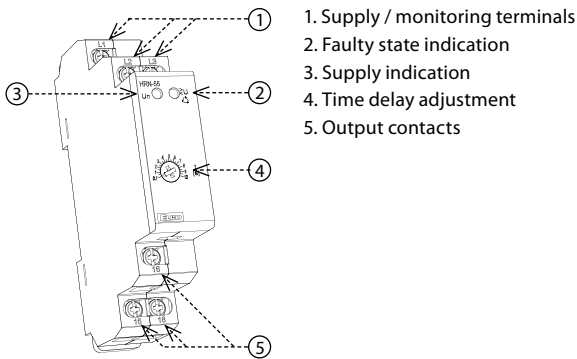
HRN-55



HRN-55N



Description

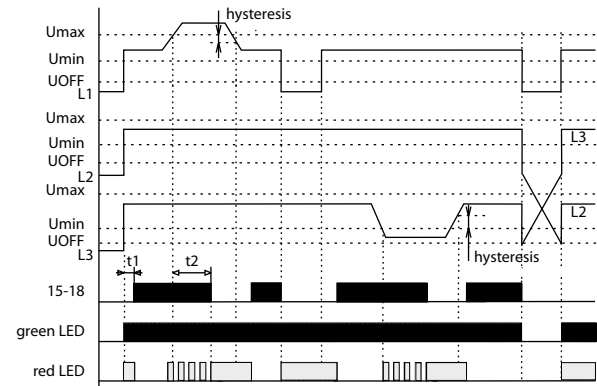


Type of load	$\cos \varphi \geq 0.95$ AC1	AC2	AC3	AC5a uncompensated	AC5a compensated	HAL.230V AC5b	AC6a	AC7b	AC12
Mat. contacts AgNi, contact 8A	250V / 8A	250V / 3A	250V / 2A	230V / 1.5A (345VA)	x	300W	x	250V / 1A	250V / 1A
Type of load	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Mat. contacts AgNi, contact 8A	x	250V / 3A	250V / 3A	24V / 8A	24V / 3A	24V / 2A	24V / 8A	24V / 2A	x

Technical parameters

	HRN-55	HRN-55N
Monitoring terminals:	L1, L2, L3	L1, L2, L3, N
Supply terminals:	L1, L2, L3	L1, L2, L3, N
Supply / measured voltage Un:	3x 400 V / 50 - 60 Hz	3x 400 V / 230 V / 50 - 60 Hz
Level Umax:	125 % Un	
Level Umin:	75 % Un	
Power input:	max. 2 VA	
Hysteresis:	2 %	
Max. permanent overload:	AC 3x 460 V	AC 3x 265 V
Peak overload < 1 ms:	AC 3x 500 V	AC 3x 288 V
Time delay T1:	max. 500 ms	
Time delay T2:	adjustable 0.1 - 10 s	
Output		
Number of contacts:	1x changeover / SPDT (AgNi / Silver Alloy)	
Current rating:	8 A / AC1	
Breaking capacity:	2000 VA / AC1, 240 W / DC	
Inrush current:	10 A	
Switching voltage:	250 V AC1 / 24 VDC	
Output indication:	red LED	
Mechanical life:	1x10 ⁷	
Electrical life (AC1):	1x10 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 / IP10 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm ²):	solid wire max. 2x 2.5 or 1x 4 / with sleeve max. 1x 2.5 or 2x 1.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")	
Weight:	67 g (2.36 oz.)	66 g (2.3 oz.)
Standards:	EN 60255-6, EN 61010-1	

Function



Relay in 3-phase main monitors correct phase sequence and failure of any phase. Green LED is permanently ON and indicates presence of power supply voltage. In case of phase failure, red LED flashes and relay breaks. When changing to faulty state, time delay applies. Time delay setting is set by a potentiometer on front panel of the device. In case of incorrect phase sequence red LED shines permanently and relay is open. In case supply voltage falls below 60 % Un (U_{OFF} lower level) relay immediately opens with no delay and faulty state is indicated by red LED.

HRN-55: thanks to supply from all phases, this relay is able to stay operational also if one phase is out.

HRN-55N: supply L1-N, means that relay monitors also failure in neutral wire.

Warning

Device is constructed for connection in 3-phase 400 / 230V main alternating current voltage and must be installed according to norms valid in the state of application. Connection according to the details in this direction. Installation, connection, setting and servicing should be installed by qualified electrician staff only, who has learnt these instruction and functions of the device. This device contains protection against overvoltage peaks and disturbances in supply. For correct function of the protection of this device there must be suitable protections of higher degree (A, B, C) installed in front of them. According to standards elimination of disturbances must be ensured. Before installation the main switch must be in position "OFF" and the device should be de-energized. Don't install the device to sources of excessive electro-magnetic interference. By correct installation ensure ideal air circulation so in case of permanent operation and higher ambient temperature the maximal operating temperature of the device is not exceeded. For installation and setting use screw-driver cca 2 mm. The device is fully-electronic - installation should be carried out according to this fact. Non-problematic function depends also on the way of transportation, storing and handling. In case of any signs of destruction, deformation, non-function or missing part, don't install and claim at your seller it is possible to dismount the device after its lifetime, recycle, or store in protective dump.