



## Voltage

## 1 phase

## AC/DC



**HRN-41**  
(Hysteresis) monitoring DC and AC voltage 10-500 V, divided into 3 inputs and 3 ranges, 2 independent outputs 16 A, 2x time delay.



**HRN-42**  
(Window) as HRN-41 but function WINDOW. Other functions (applicable for HRN-41): faulty state memory, hysteresis, galv. separated supply.



**HRN-34**  
as HRN-33 but in voltage range DC 6-30 V for monitoring battery circuits (6, 12, 24 V).



**HRN-64**  
as HRN-63 but in voltage range DC 6-30 V for monitoring battery circuits (6, 12, 24 V).

## AC



**HRN-33**  
Supply and monitored voltage in range AC 48-276 V, 1x output for Umax and Umin adjustable level.



**HRN-35**  
As HRN-33 but individual output for each level (Umax/Umin). Adjustable time delay to eliminate voltage peaks.



**HRN-37**  
As HRN-33, but in voltage range AC 24-150 V.



**HRN-63**  
Supply and monitored voltage in range AC 48-276 V, 1x output for Umax and Umin adjustable level.



**HRN-67**  
as HRN-63, but in voltage range AC 24-150 V.

## 3 phase



**HRN-55**  
Supply from all phases.



**HRN-55N**  
Supply L1-N (monitors also disconnection of neutral wire). Time delay to eliminate peaks.



**HRN-57**  
Supply from all phases.



**HRN-57N**  
Supply L1-N (monitors also disconnection of neutral wire). Adjustable voltage level.



**HRN-54**  
Supply from all phases.



**HRN-54N**  
Supply L1-N (monitors also disconnection of neutral wire). All parameters adjustable by potentiometers.



**HRN-56/120**  
Adjustable level Umin.



**HRN-56/208**  
Adjustable level Umin.



**HRN-56/240**  
Adjustable level Umin.



**HRN-56/400**  
Adjustable level Umin.



**HRN-56/480**  
Adjustable level Umin.



**HRN-56/575**  
Adjustable level Umin.



**HRN-43**  
Galvanically separated supply AC 230V, AC 400 or AC/DC 24V, memory, adjustable hysteresis and delay, 2x independent output.



**HRN-43N**  
Galvanically separated supply AC 230V, AC 400 or AC/DC 24V, memory, adjustable hysteresis and delay, 2x independent output.



**MPS-1**  
Optical signaling of three-phase network.



## Frequency



**HRF-10**  
for monitoring the frequency of AC voltage. The monitored frequency 50/60/400 Hz is selected by a switch.



## Power factor



**COS-2**  
monitors and scores power factor (phase shift between current and voltage  $\cos \phi$ ) in 3phase/1phase circuits (motors, pumps etc.).



## Current

## AC/DC



**PRI-41**  
(Hysteresis) 3 inputs divided into 3 ranges (selectable by a switch).



**PRI-42**  
(Window) as PRI-41 but function "WINDOW".

## AC



**PRI-32**  
Monitoring by current transformer (wire through an opening, galv. separated, without heat loss), adjust. current 1-20A, multivoltage AC 24-240 and DC 24V, output 8A changeover.



**PRI-51**  
Monitoring of current by in-built transformer, 5 ranges (in versions 1/2/5/8/16A), range 5A is suitable for current transformer (X/5), supply and output as PRI-32, difference from PRI-32: direct monitoring and finer ranges (higher sensitivity) = higher accuracy in measuring.



**PRI-52**  
For scanning the current up to 25 A. Long distance device diagnostics (black-out, increase of take-off) Priority relay. Supplying voltage AC 230 V. Output 8A/ SPST switching over.



**PRI-53**  
For monitoring the current in three-phase devices. Power supply: 24-240 V AC/DC, galvanically separated from the circuit of the monitored current 2 types depending on the strength of rated current In (1A, 5A).



## Level



**HRH-8**  
8 functions, advanced setting for various combinations, galvanically separated supply AC 230 V or AC/DC 24 V, 2 output contacts / 2PDT 16A.



**HRH-5**  
Simple version, 2 functions, galvanically separated supply voltage UNI 24.. 240 V AC/DC.



**HRH-6**  
Device monitors 5 levels by using six probes. Supply voltage: 12-24 V DC or galvanically separated 230 V AC.

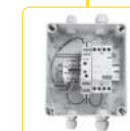


**HRH-6/S**  
Additional signalization to HRH-6 with 6 control lights on the front panel of device.

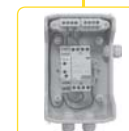


**HRH-7**  
Suitable to operate in harsh conditions due to the high degree of protection IP65. Switch monitors the level changes in wells, reservoirs, tanks, tankers etc.

## Level sets



**HRH-4**  
A set of level relay HRH-5 and a contactor VS425. For automatic operation 1-phase and 3-phase pumps. 2 function. IP55.



**HRH-VS**  
Level sets are used to monitor fluid levels.



**HRH-MS-1A**  
**HRH-MS-1.6A**  
Level sets are used to monitor fluid levels.



**HRH-MS-VS-2.5A**  
**HRH-MS-VS-4A**  
**HRH-MS-VS-6.3A**  
Level sets are used to monitor fluid levels.

## Accessories



**SHR**  
Level sensors  
SHR-1 (M, N) - for monitoring flooding.  
SHR-2 - for level detection.  
SHR-3 - for demanding and industrial environment.



**Cable, wire**  
D03VV-F 3x0.75/3,2 - cable to SHR-1 and SHR-2 probes.  
D05V-K 0.75/3,2 - wire to SHR-1 and SHR-2 probes.