

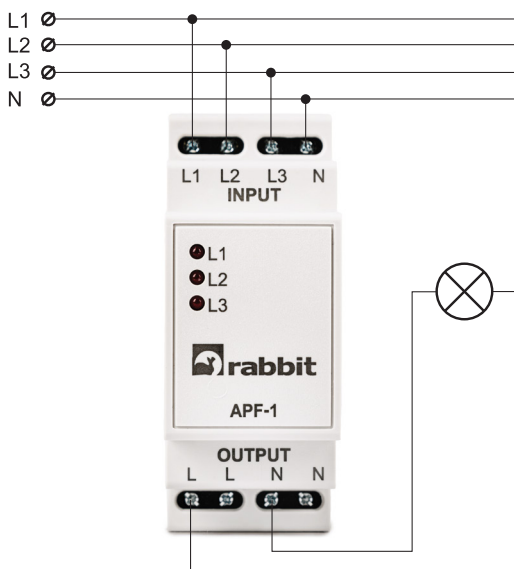
# APF-1

## AUTOMATIC PHASE SWITCH

The APF-1 automatic phase switch is a device whose main task is to maintain the continuity of power supply to a single-phase receiver in the event of a phase failure or a drop in the effective voltage value below the standard.

The main advantage of the device is its low relative voltage measurement error, which does not exceed 1% even for highly distorted waveforms. This was achieved through the software implementation of a True RMS converter. The APF-1 device is powered by three phases L1, L2, L3, with phase L1 being the priority phase. The voltage switching threshold (180 V AC), switching time (150 ms) and voltage hysteresis (10 V AC) are factory-set and cannot be changed by the user. LEDs on the front panel visually indicate the parameters of each phase. The internal layout of the output contacts ensures increased resistance to sticking and protects against phase-to-phase short circuits. The maximum output load should not exceed 16 A for AC1 class receivers.

## WIRING DIAGRAM



## PROPERTIES

- ensuring continuity of power supply to a single-phase receiver
- three-phase power supply L1-L2-L3 (L1-priority phase)
- automatic phase switching in the event of a power failure or a drop in voltage below 180 V AC
- switching time at 150 ms
- voltage switching threshold, switching time and voltage hysteresis set at the factory without the possibility of change
- high voltage measurement accuracy – relative error < 1%
- measurement of distorted signal voltage (True RMS)
- output load capacity – maximum 16 A for AC1 loads
- signalling of individual power supply phase parameters – 3 x LEDs

## TECHNICAL PARAMETERS

- power terminals: L1, L2, L3, N
- rated supply voltage: 3 x 230 V AC + N
- rated frequency: 50 Hz
- rated power consumption: 1.7 W / 3.8 VA - three-phase
- priority phase: L1
- signalling of supply phase parameters: 3 x red LED (L1, L2, L3)
- output terminals: L, L, N, N
- rated output voltage: 230 V AC
- maximum output load capacity: 16 and for devices in class AC1
- switching threshold for L1, L2, L3: <180 V AC
- voltage hysteresis: 10 V AC
- switching time: ~150 ms
- relative voltage measurement error: <1%
- distorted signal measurement: yes – True RMS
- number of connection terminals: 8
- cross-section of connection cables: 0.2 to 2.5 mm<sup>2</sup>
- operating temperature: from -20°C to +45°C
- job position: any
- degree of casing protection: IP20
- protection class: II
- overvoltage category: II
- degree of pollution 2
- surge voltage: 1 kV (PN-EN 61000-4-5)
- dimensions (W/H/D): 35 x 90 x 66 mm
- device width: 2 modules
- DIN rail mounting
- weight: 0.14 kg
- compliance with standards: PN-EN 60669-1, PN-EN 60669-2-1, PN-EN 61000-4-2,3,4,5,6,11