Voltage Monitoring Relay
Ex9JP V-1 3P



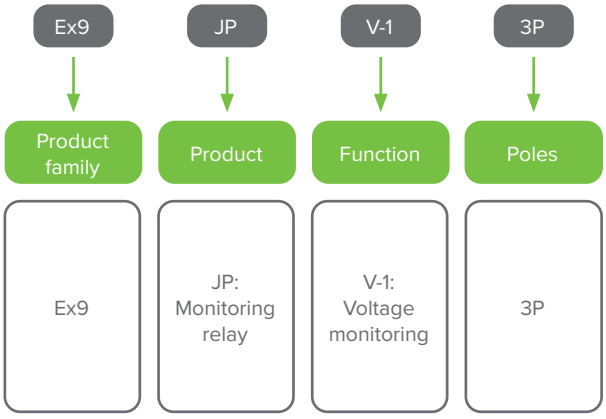
- Voltage Monitoring Relay with LCD display
- 3-phase 3-wire or 3-phase 4-wire connection
- Monitoring of phase
  - sequence
  - failure
  - asymmetry including neutral pole
- Measures real effective value of AC voltage
- Adjustable parameters

The Ex9JP V-1 3P is a voltage monitoring relay compatible with 3-phase 3-wire and 3-phase 4-wire systems. It effectively monitors voltage for 3-wire 155-500 V AC or 4-wire 90-228 V AC. The device offers adjustable parameters: upper and lower voltage levels; asymmetry; voltage and frequency hysteresis levels; delay after supply connection.

Operating within a 155–500 V AC supply voltage range, the relay features two changeover contacts, each rated at 5 A / AC-1, ensuring reliable performance under varying electrical loads. Adjustments are facilitated via front-panel LCD display with controlling buttons.

Designed for 35 mm DIN rail mounting, the Ex9JP V-1 3P boasts an IP40 front panel and IP20 terminal protection, affirming its suitability for the demanding conditions of industrial environments. This combination of versatility, adjustability, and robust protection makes the Ex9JP V-1 3P a highly effective solution for voltage monitoring and management.

Type Key



Certification marks

CE

Voltage Monitoring Relay **Ex9JP V-1 3P**

Voltage Monitoring Relay

- Monitored voltage: 3-wire 155-500 V AC; 4-wire 90-228 V AC
- Optionally monitors upper and lower voltage and frequency in 3-phase circuits
- Possibility of automatic or manual transition from fault state (memory)
- Measures real effective value of AC voltage (True RMS)
- Both output contacts can be set individually
- Password protection against unauthorized changes to settings
- Optional closing or opening of the output contact when measuring a fault state (Fail Safe / Non Fail Safe)



Supply voltage U_e	Function	Contacts	Article No.	Type	Packing
90–500 V AC	Voltage monitoring	2 CO	114568	Ex9JP V-1 3P	1

Technical data **Ex9JP V-1 3P**

Voltage Monitoring Relay

General parameters
Monitored voltage: 3-wire 155-500 V AC; 4-wire 90-228 V AC
Optionally monitors upper and lower voltage and frequency in 3-phase circuits
Possibility of automatic or manual transition from fault state (memory)
Measures real effective value of AC voltage (True RMS)
Both output contacts can be set individually

Electrical parameters		
Tested according to	EN 61812-1, IEC EN 63044	
Connection type	3-wire connection (L-L)	4-wire connection (L-N)
Supply voltage	155–500 V AC	90–288 V AC
Monitored voltage	155–500 V AC	90–288 V AC
Accuracy of measured voltage	+/- 5 V	
Accuracy of measured frequency	+/- 0.3 Hz	
Power consumption	≤ 5 VA	
Dielectric strength	4 kV (supply-output)	
Fixed delay	< 100 ms (phase sequence, failure) < 200 ms (HC, LC), < 500 ms (neutral fail)	
Adjustable parameters:		
Upper (OV) / lower (UV) voltage	90–288 V AC	155–500 V AC
Upper (OF) / lower (UF) frequency	45–65 Hz	
Upper (HC) / lower (LC) limit	535 V AC / 150 V AC	310 V AC / 85 V AC
Asymmetry	Absolute: 5–99 V AC Percentage: 2–50 %	
Voltage and frequency hysteresis	3–20 V AC (OV, UV, HC, LC) 0.5–2 Hz (OF, UF)	
Hysteresis asymmetry	Absolute: 3–99 V AC Percentage: 2–15 %	
Delay after supply connection P_{on}	0–999 s (HW initialization 250 ms)	
Delay T_{on}	0.5–999 s	
Delay T_{off}	0.1–999 s	
Output:		
Output contact	2x changeover (AgSnO2)	
Rated current	5 A/AC1	
Switching power	1200 VA/AC1, 150 W/DC1	
Switching voltage	240 V AC / 30 V DC	
Max. output power dissipation	5 W	

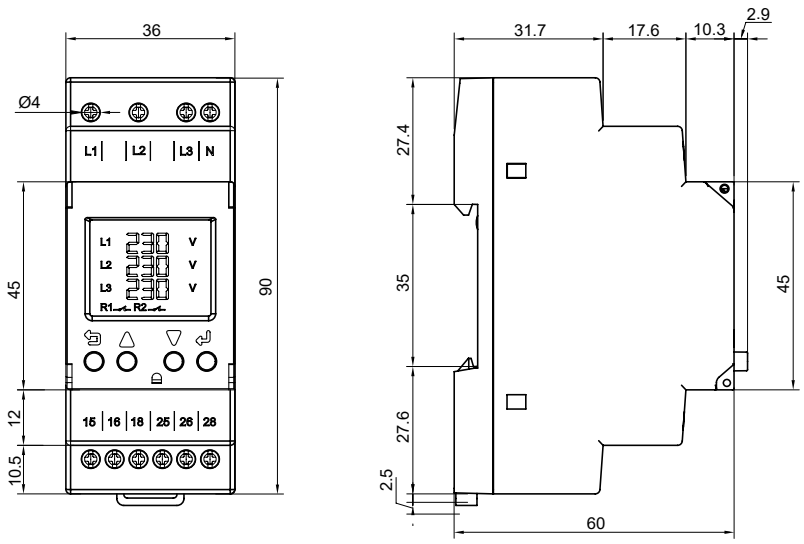
Technical data **Ex9JP V-1 3P**

Voltage Monitoring Relay

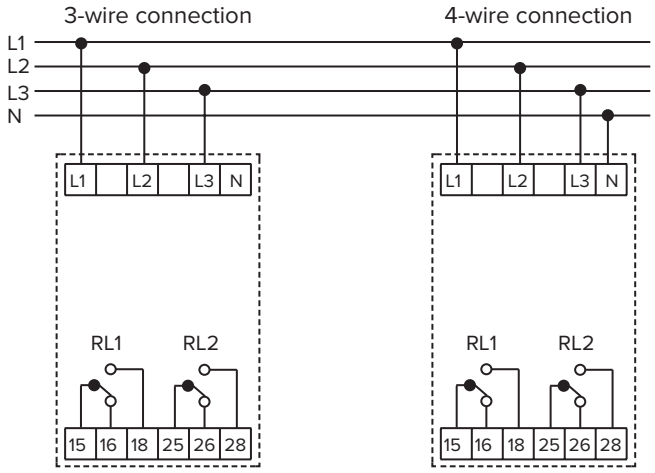
Technical parameters

Device width	36 mm
Device height	90 mm
Frame size	45 mm
Mounting	onto 35 mm device rail (DIN)
Mounting position	any
Degree of protection	IP40 from front panel / IP20 terminals
Terminals	screw terminals
Terminal capacity	1–2.5 mm^2
Fastening torque of terminals	0.5 Nm
Mechanical life	10 000 000 operation cycles
Electrical life (AC1)	100 000 operation cycles
Ambient temperature	-10°C–+60°C
Overvoltage category	III
Pollution degree	2
Weight	0.132 kg

Dimensions



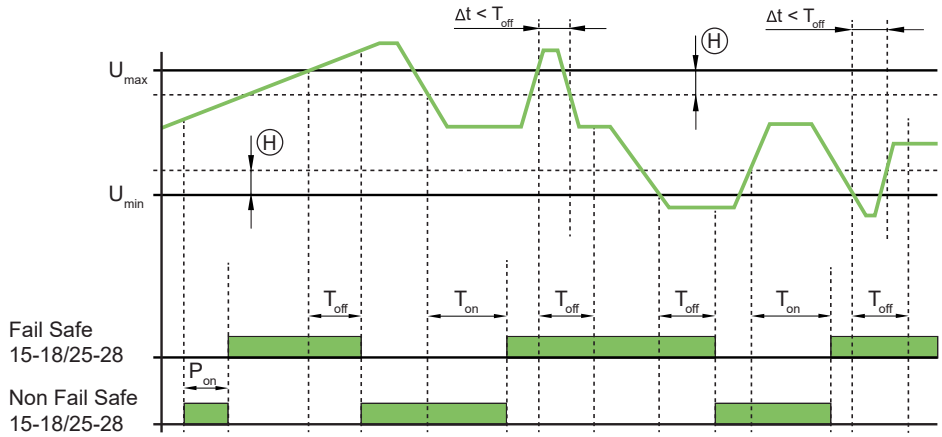
Wiring diagrams



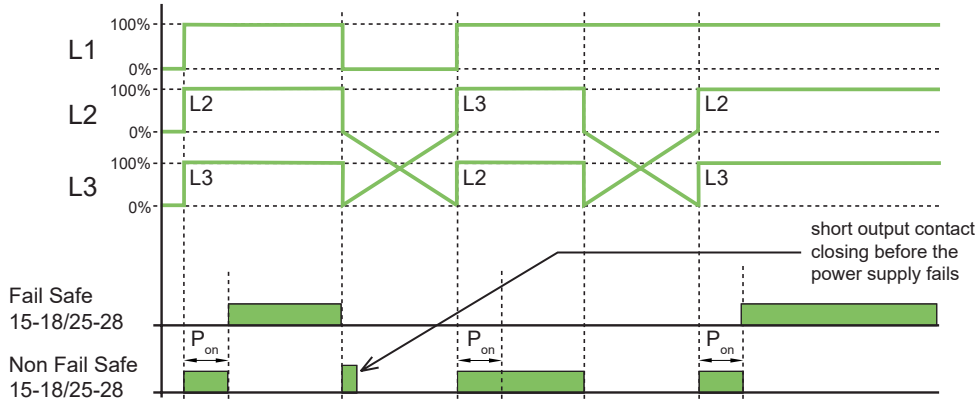
Voltage Monitoring Relay

Function

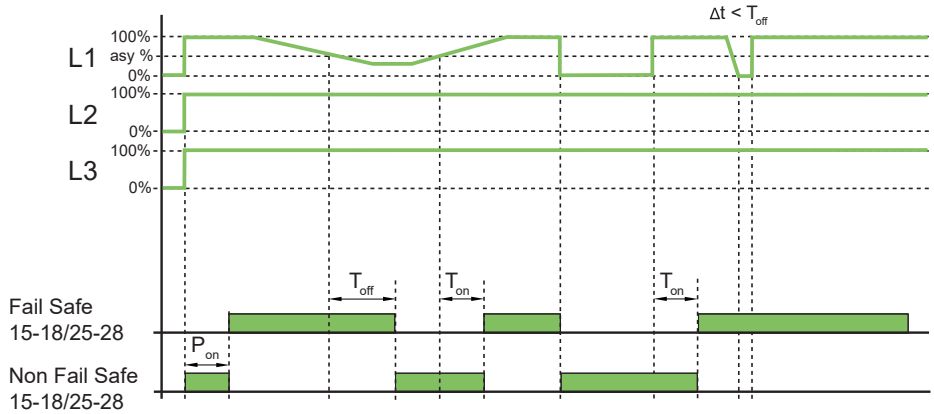
Overvoltage–undervoltage



Phase sequence



Asymmetry, phase failure



P_{on} - Power ON delay (delay after power supply connection)
P_{on} - 0 - 999 s (min. 250ms hardware initialization)
T_{on} - ON delay (delay to OK state)
T_{on} - 0,5 - 999 s
T_{on} - OFF delay (delay to fault state)

T_{off} - Power ON delay (delay after power supply connection)
T_{off} - 0 - 999 s (min. 250ms hardware initialization)
T_{off} - ON delay (delay to OK state)
Δt - 0,5 - 999 s
Ⓗ - Hysteresis