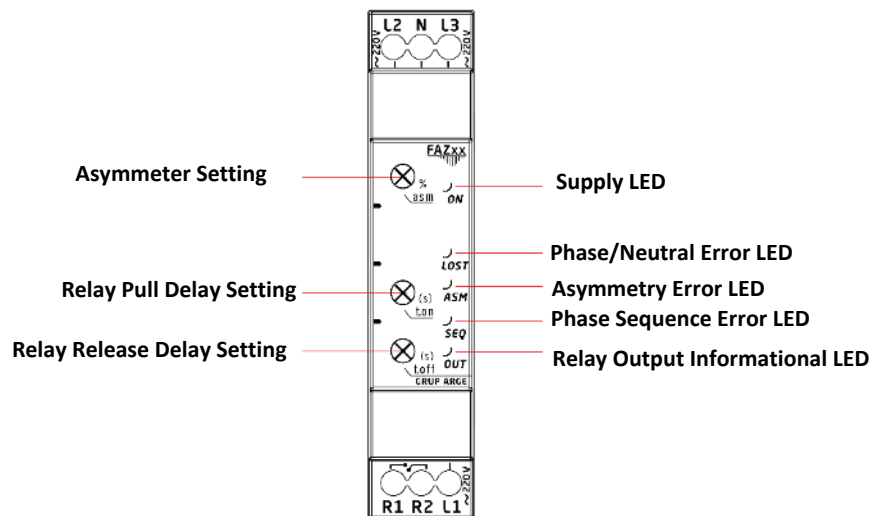


LED Descriptions:



Note: There is no N connection in devices without neutral.

LED Alerts:

1.LED	2.LED	3.LED	4.LED	5.LED	6.LED	
						Insufficient Feed Warning (LEDs flash 1 time per second)
						In-Device Error Alert (LEDs flash 1 time per second)
						Over Feed Warning (LEDs flash 4 times per second)
						Neutral/Phase Reverse Connection Warning (LEDs flash 4 times per second)

Table:1.

Note: Depending on the model, LEDs that are not available on the device will not be taken into account

* Flasher



Technical Features:

Operating Voltage (Un)	3 x 220 V AC and Neutral Phase01, Phase02, Phase03, Phase04 3 x 220 V AC (Phase11, Phase12)
Operating Frequency	50 / 60 Hz.
Asymmetry Adjustment	5-35% (switchable)
Pull / Release Delay (t)	0.1 sec - 20 sec
Relay Output	1N/O, 5A, 1385 VA
Hysteresis	Un x %2
Adjustment Type	Potentiometer
Indicator	5 pieces LED
Ambient Temperature	-5°C ; +50°C
Protection Class	IP20
Connection	DIN rail mounting

Table:2

Use of the Device:

Phase Protection Relays;

These are devices used to prevent damage to motors by overheating due to phase absence or voltage imbalance and to prevent problems that may arise from phase sequence failure.

The maximum asymmetry value that can occur between the phases is set with the "asm" setting knob. When the knob is moved to "off" on the scale, the related function is deactivated. With "t.on" the pull-up delay of the relay is set and with "t.off" the release delay of the relay in case of a fault is set.



Selection Table:

Ürün Modeli	FAZ01	FAZ02	FAZ03	FAZ04	FAZ11	FAZ12
Neutral Connection	✓	✓	✓	✓		
Non-Neutral Connection					✓	✓
Neutral Break Detection	✓	✓	✓	✓		
Phase Sequence Control			✓	✓	✓	✓
Phase Absence Detection	✓	✓	✓	✓	✓	✓
Fixed Asymmetry	%20		%40		%40	
Adjustable Asymmetry		%5-35		%5-35		%5-35
Adjustable Pull Delay		✓		✓		✓
Adjustable Switch-on Delay		✓		✓		✓
Insufficient - Overfeeding Warning	✓	✓	✓	✓	✓	✓
Contact Output	1N/O, 5A, 1385 VA	1N/O, 5A, 1385 VA	1N/O, 5A, 1385 VA	1N/O, 5A, 1385 VA	1N/O, 5A, 1385 VA	1N/O, 5A, 1385 VA
Feeding	3 Phase- Neutral	3 Phase- Neutral	3 Phase- Neutral	3 Phase- Neutral	3 Phase	3 Phase

Table:3

Functions

Neutral Break Detection (PHASE01, PHASE02, PHASE03, PHASE04):

In the case of a neutral disconnection, the relay releases abruptly without waiting for a delay time, the LOST fault LED illuminates. When the connection fault is removed, the LOST LED goes out immediately and the relay pulls out after the set pull-out delay time has elapsed.

Phase Absence Detection (PHASE01, PHASE02, PHASE03, PHASE04, PHASE11, PHASE12):

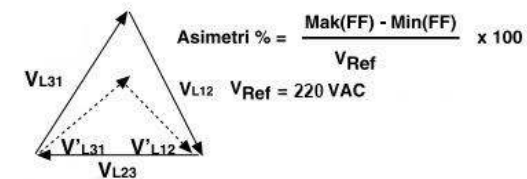
In the case of a break in any of the phases, the relay releases abruptly without waiting for the delay time, the LOST fault LED is illuminated. When the connection fault is removed, the LOST LED goes out immediately and the relay pulls out after the set pull-out delay time has elapsed.

Phase Sequence Control (PHASE03, PHASE04, PHASE11, PHASE12):

When the phase sequence is detected to be incorrect, the relay releases abruptly without waiting for the delay time, the SEQ fault LED illuminates. When the phase sequence is corrected, the SEQ LED goes out immediately and the relay pulls out after the set pull delay time has elapsed.

Asymmetry Control:

When voltage imbalance between phases exceeds the fixed or set asymmetry value, the ASM LED lights up immediately, the relay releases at the end of the delay time. When the asymmetry falls below the fixed or set value, the ASM fault LED turns off immediately, the relay pulls out at the end of the delay time.



Adjustable Pull and Open Delay (PHASE02, PHASE04, PHASE12):

With the "t.on" scale, the pull-up delay of the relay is set and with the "t.off" scale, the release delay of the relay in case of a fault is set.

Under / Oversupply Warning (PHASE01, PHASE02, PHASE03, PHASE04, PHASE11, PHASE12):

When the average of the three phase inputs supplying the device falls below "0.5xUn", the device gives an insufficient supply warning by flashing the LEDs on the device once a second (See Table 1). The relay is released without delay.

When all of the phases supplying the device exceed "1.5xUn", the LEDs on the device are turned on and off 4 times per second and an oversupply warning is given (See Table 1).

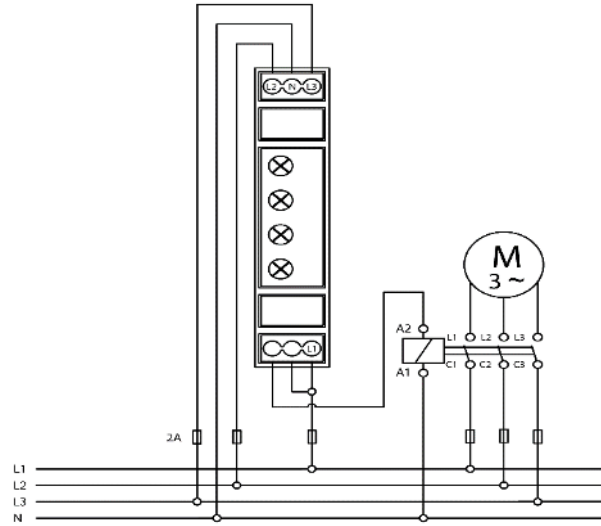
In-Device Error Alert (Phase01, Phase02, Phase03, Phase04, Phase11, Phase12)

When the device detects an error in its hardware, it gives an insufficient supply warning by turning the LEDs on and off once a second (See Table 1). The relay is released without delay.

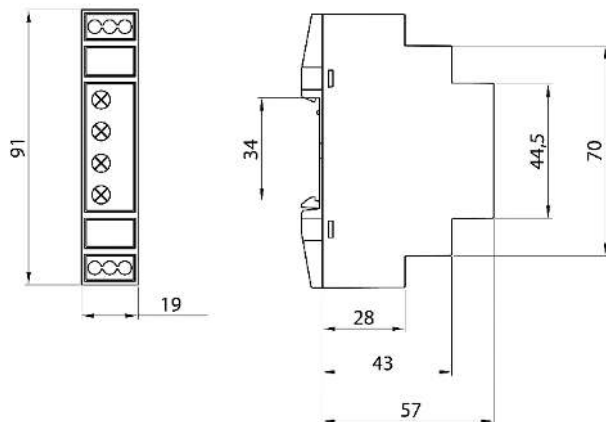


Connection Diagram:

Note: There is no N connection in devices without neutral.

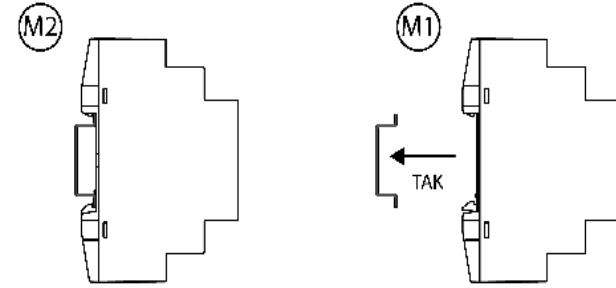


Product Size(mm):



Product Installation:

Phase Protection Relay Installation



Disassembly of the Phase Protection Relay

