SSU34

50 Hz, 3 phase monitoring relay
DIN Rail mounting according to DIN 43 880

Type: SSU34/... V
Monitoring relay for under / over voltage, phase sequence, phase loss, phase angle, frequency, asymmetry. Star or delta operation. 2 change over alarm contacts 6 A 250V

Monitoring function
The SSU34 (50Hz) provide comprehensive monitoring of three-phase mains supplies with or without neutral.
The following mains faults are monitored:
Error signal @U (VA, VA):
Exceeding or dropping below the set voltage values Umin/Umax for L1-N or L1-L3,L (no differential voltage, phase position or frequency fault).
Error signal @U, @φ, @f:
One or more of the three voltages, phase positions, or the mains frequency are diverging from the required value. Depending on the nature of their occurrence Δ-errors are evaluated cumulatively.
Error signal @φ:
Connection polarity reversal (wrong phase-sequence). Any error is signalled by the red LED "fail" and is reported after expiry of the set alarm-delay time (for error signal @undelayed) via 5-6 and 7-8.
In the correct status (ok) the green LED is illuminated (5-6 and 7-8 open, 5-4 and 7-3 closed).

Measuring circuit data
Nominal mains voltage
Under voltage adj. range [V] 1) 40 ... 55 160 ... 225 200 ... 280
Over voltage adj. range [V] 1) 61 ... 70 235 ... 275 300 ... 350
Δ voltage adj. range [V] 1) 5 ... 25 20 ... 100 20 ... 100
Δφ adjustment range [°] 2) 3 ... 15 3 ... 15 3 ... 15
Δf adjustment range [Hz] 2) 3 ... 15 3 ... 15 3 ... 15
1) L - N 2) adjustment with the same rotary knob

Time data
Alarm delay adjustment range 0.2 ... 5 s
Reset time 100 ... 400 ms

Contacts
Type / material 2 CO, micro disconnection / AgNi
Rated operational current 5 A
Max. inrush current (20 ms) 15 A
Max. AC switching voltage AC-1 250 V
Max. AC load AC-1 (Fig.1) 1250 VA
Max. DC load 30 V / 250 V DC-1 150 W / 60 W
Recommended min. contact load 10 mA / 12 V

Power supply data
Nominal mains voltage 100 V 400 V 500 V
Operating voltage range [V] 1) 35 ... 70 140 ... 285 180 ... 360
Power consumption [W] ≤ 1.5 ≤ 1.5 ≤ 1.5
Input current [mA] 150 30 25
Frequency [Hz] 50 50 50

Insulation
Test voltage between contacts and supply 3 kVrms 1 minute (basic insulation)

General specifications
Ambient temperature storage /operation -40 ... +85 °C/-10 ... +60 °C
Mechanical life of contacts 30 x 10⁶ operations
Ingress protection degree Housing: IP 40, terminals: IP 20
Max. screw torque 0.5 Nm
Housing material / Weight Lexan / 350 g

Standard types
50 Hz , AC 100, 400, 500 SSU34/AC...V
"..." enter the voltage for full type designation

Connection diagram

Fig. 1 AC electrical endurance

Fig. 2 DC load limit curve

Dimensions [mm]

Technical approvals, conformities

EN 60947

This issue replaces all previous issues. Availability, errors and specifications subject to change without notice.