

Voltage – Frequency Guard SFW-8

protective function according to
DIN VDE-AR-N 4105:2011-08

monitoring of rate of change of frequency (ROCOF – $\Delta f / \Delta t$)



The SFW-8 is a device for the monitoring of a 1- or 3-phase mains system on frequency, voltage, phase sequence, angular shift, rate of change of frequency (ROCOF) and vector jump. Measurement can be done either with or without neutral connector. The detection of measured values occurs on all measuring paths synchronously by a 12-bit simultaneous ADC. A separate frequency measuring is available for each of the 3 phases. The detection of vector jump can be assigned to a single phase or all phases. Due to a special internal wiring of the terminals, the loss of the neutral conductor can be detected in a 3-wire + N - system.

By setting of the corresponding parameters, the SFW-8 provides the option for monitoring on nominal voltage and frequency in accordance to DIN VDE-AR-N-4105:2011-08 or the dynamic grid support according to the Medium Voltage Guideline of BDEW (Bundesverband der Energie- und Wasserwirtschaft e.V.).

The comfortable configuration of all settings of the SFW-8 is done by means of the parameterisation software 'Geräteverwaltung' (GV2 – Version V2.36 or later required). Alternatively values can be entered directly at the device. The input to the device can be protected by use of a PIN. The output of display-texts at the device standardly takes place in German and English (switching between languages is possible at any time during operation). Alternative languages, suitable to the customer's requirements, can be configured and conveniently made available, by means of our parameterisation software 'Geräteverwaltung'.

Optionally, the SFW-8 is available with two analogue outputs, one of the analogue outputs can be switched between voltage and current (1 x 0(2) V ... 10 V / 0(4) mA ... 20 mA, 1 x 0(2) V ... 10 V).

Technical Data

Auxiliary Voltage

24V DC (18 – 36 V DC)
230 V AC (180 – 265 V AC)
Other auxiliary voltages on request.

Power Consumption

ca. 4 W at 24 V DC,
ca. 6 VA at 230 V AC

Digital Inputs

LowActive
(contact voltage 12 V DC, 5 mA,
opto de-coupled),
cables not longer than 3 m.

Relay Outputs

230 V / 50 cy / 2 A (potential free)

Analogue Outputs (optionally)

0 ... 10 V DC +/- 0.05 V max. 10.5 V
0 ... 20 mA +/- 0.1 mA max. 21 mA

Measurement Ranges:

Voltages:

approx. 20 up to 280 / 400 V AC,
tolerance < 0,1 % of end value
(270 / 480 V AC)

Frequency:

15.0 cy up to 100.0 cy
starts at approx. 10 V L-N
adjustable in 0.01 cy steps
repeat accuracy < 0.01 cy

Climatic Conditions

acc. to DIN EN 60255-1 (09-2010)

ambient temperature:

operation: -20 ... 55 °C
transport / storage: -25 ... 55 °C

Housing Dimensions

B / H / T 100 x 75 x 110 mm
for mounting on 35 mm top-hat rail
according to DIN EN 60715

Ordering Information:

SFW-8 / 100/400 V / 24 V DC: E1477
" with analogue output: E1975
SFW-8 / 100/400 V / 230 V AC: E1976
" with analogue output: E1977

Accessories:

USB A : USB Mini
parameter. cable 1,5 m: KC0215
parameter. cable 3,0 m: KC0329