

Voltage – Frequency Guard SFW-7

protective function according to DIN V VDE V 0126-1-1
and according to DIN VDE-AR-N 4105:2011-08
monitoring of rate of change of frequency
(ROCOF – $\Delta f / \Delta t$)



The SFW-7 is a device for the monitoring of a three-phase mains system on frequency, phase sequence, angular shift, rate of change of frequency (ROCOF - requires firmware V1.09 or later) and vector surge. Measurement can be done either with or without neutral conductor. A separate frequency measuring is available for each of the 3 phases. The detection of vector surge can be assigned to a single phase or all phases. Triggering values are stored and the last 38 triggering events may be retrieved from the device at least. Due to a special internal wiring of the terminals, the loss of the neutral conductor can be detected in a 3-wire + N – system.

The monitoring on nominal voltage and frequency in accordance to DIN V VDE 0126-1-1 (requires firmware version V1.04 and later) and / or DIN VDE-AR-N-4105:2011-08 (requires firmware version V1.09 or later) can be enabled by setting of the corresponding parameters.

The capabilities of microcontroller- and PC database technology provide the conveniently configuration of all settings using our parameterisation software 'device manager' (GV_2.exe - Version V2.31 or later recommended). Values, but not texts, alternatively 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 takes place in 2 languages, default is German and English (switching between languages is possible at any time during operation). Alternative languages, suitable to the customers requirements, can be configured and conveniently made available, by means of our parameterisation software 'device management'.

Note: A separate variant of the SFW-7 is available for measuring voltages ≤ 100 V.

Technical Data

Auxiliary Voltage
24V DC (18 ... 36 V)
optionally 230V AC / 12 V DC

Power Consumption
approx. 4 W at 24 V DC,
approx. 6 VA at 230 V AC

Digital Inputs
LowActive
(Contact Voltage 12 V DC, 5 mA,
opto-decoupled),
cables no longer than 3 m

Relay Outputs
230 V / 50 Hz / 2 A (potential-free)

Analogue Outputs (optionally)
0 ... 10 V DC +/- 0.05 V max. 10,5 V

Measuring Range
approx. 50 up to 230 / 400 V AC,
tolerance < 0,5 % of full scale
(270 / 480 V AC)

Frequency Measurement
35.0 Hz up to 65.0 Hz
about approx. 60 V L-N
adjustable in 0.1 Hz steps
repeatability +/- 0.05 Hz

Ambient Temperature
-20 ... 55 °C

Housing Dimensions
W / H / D 100 x 75 x 110 mm
DIN top-hat rail mounting 35 mm

Ordering Information:

SFW-7 / 100 V / 24V DC:	E1573
SFW-7 / 100 V / 230V AC:	E1574
SFW-7 / 400 V / 24V DC:	E2085
with Analogue Output:	E1079
SFW-7 / 400 V / 230V AC:	E2086