

**Voltage Monitor (Class 1.0)**  
 Release Time < 50ms

**ASW500**



**ASW503**



**Application**

The Voltage Monitor ASW500 (four wires) / ASW503 (three wires) is used to monitor the voltage of three-phase supply networks for generators, gensets and combined heat and power stations. It can for example detect power failures and inadmissible undervoltages / overvoltages, check the generator voltage before connecting in parallel or monitor the mains supply.

The unit measures all 3 phases of the three-phase network independently of one another and evaluates the maximum and minimum voltage using sophisticated rectifiers. The 100% setting corresponds to the rated voltage selected. Two two-way contacts with potential separation are available for outputting the undervoltage or overvoltage. The auxiliary voltage supply is taken from the applied measuring voltages L1-N (ASW500) or L1-L2 (ASW503).

**Function**

The unit compares the maximum or minimum voltage of a 3-phase network with an internal reference voltage and switches on the overvoltage relay >U when the voltage set is exceeded, whereas the undervoltage relay <U switches off when the voltage drops below a mains phase. In normal operation, the undervoltage relay <U is attracted (LED lights up) and the overvoltage relay >U is not attracted.

**Technical Data**

|                           |   |
|---------------------------|---|
| Type                      | Frequency monitor ASW500 (4-wire), ASW503 (3-wire)                              |
| Construction              | Plastic housing on 35mm hat rail as per DIN EN 50022                            |
| Material of housing       | Bayblend FR 1439/0240 modified ABS with burning protection UL 94 VO             |
| Dimension, Weight         | 55x68x110mm (WxHxD), ca. 0,2 kg   |
| Rated Voltages            | 231V 4-Wire L-N (ASW500), 400V 3-Wire L-L (ASW503)                              |
| Frequency Range           | 50 / 60 Hz  |
| Control Range             | +/- 20%   |
| Princip of measuring      | mean value with special low pass filter   |
| Switching Duration        | Appr. 50 ms (Jump dU=20% adjust to 5%)  |
| Hysteresis of switch over | 0,25%   |
| Repeat Accuracy           | 1%  |
| Power Consumption         | 2,5 VA from measuring signal  |
| On Period                 | 100 %   |
| Terminal Load             | 5A/250VAC , 5A/30VDC , 0,015 Ohm contact resistance , 10 <sup>5</sup> life time |
| Voltage Protection        | 3000V (coil-kontakt), 1000V (open kontakt)                                      |
| Connection Terminals      | For wire connection up to 2,5 mm <sup>2</sup> , potentialfree input terminal    |
| Type of Protection        | Housing IP 40 , terminals IP 20 (bzw. VDE 0106T100/VBG4 )                       |
| Operating Temp. Range     | -10 °C bis +55°C, 95% Humidity  |
| Potential Separation      | EN 60 742 (safety transformers)   |
| General Regulations       | EN 50 178 (electrical units in power current installation)                      |
| Noise suppressions        | EN 55 022/B   |
| EMV                       | EN 61000 und EN V 50 140  |
| Installation Position     | Any position  |
| Maintenance               | Free of maintenance   |