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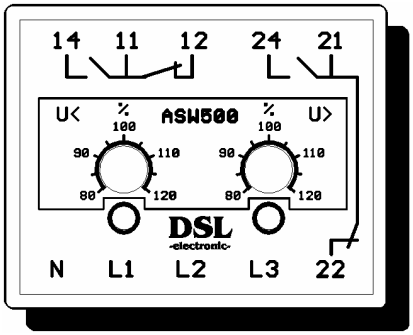
DSL electronic® GmbH

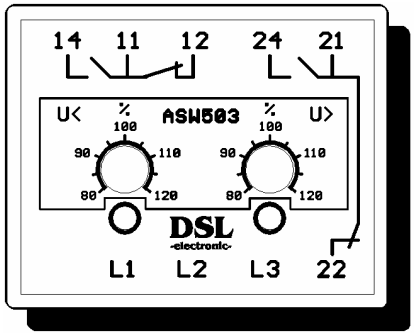
# Voltage Monitor (Class 1.0)

**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 , $10^5$ life time |
| Voltage Protection | 3000V (coil-contakt), 1000V (open contakt) |
| Connection Terminals | For wire connection up to 2,5 mm², 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 |