



Three-phase mains monitor

Type: **DNW 100, DNW 400, DNW 500, DNW 690**



Application

The three-phase mains monitor DNW is used for the comprehensive monitoring of a three-wire or four-wire power supply for phase failure, interruption of neutral, violation of the 3 phase voltages (above/below max/min value), asymmetry of the 3 phase voltages and the phase sequence (rotating field).

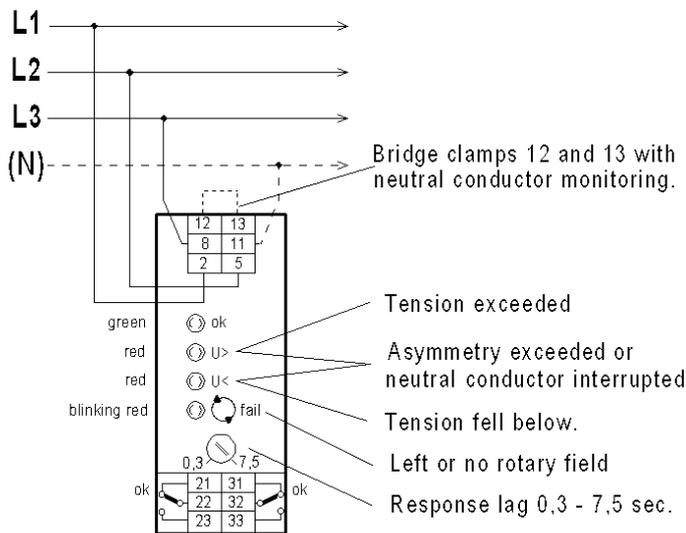


Function

The three-phase mains monitor continuously checks the voltage values of the 3 phases for violation of the set limit values, phase sequence, asymmetry as well as a complete phase failure or interruption of the neutral. If one of these errors occurs, the output relay is deenergized after a selectable delay time; if, however, one of the supply phases L2 or L3 fails completely, the relay is switched off immediately. As soon as all values have returned in the correct range, the output relay is energized without delay. The switching state of the output relay as well as the kind of the error that has occurred are indicated via LEDs. The supply is taken from the measuring voltage, an auxiliary voltage is not required.



Connection



limit values

DIL - switch	
ON	OFF
asymmetry	5 on 6 on = 5% 5 off 6 on = 7.5% 5 on 6 off = 10% 5 off 6 off = 15%
undervoltage	3 on 4 on = -5% 3 off 4 on = -10% 3 on 4 off = -15% 3 off 4 off = -20%
overvoltage	1 on 2 on = +5% 1 off 2 on = +10% 1 on 2 off = +15% 1 off 2 off = +20%

(↔ = factory setting)



Types and variants

Input

DNW 100 / DNW 400 / DNW 500 / DNW 690 three-phase mains monitor

€ 178,50



Technical data

Input	Rated voltages	Type DNW 100 for 3 x 100 V, (without neutral) and 3 x 100/58 V, (with neutral) Type DNW 400 for 3 x 400 V, (without neutral) and 3 x 400/230 V, (with neutral) Type DNW 500 for 3 x 500 V, (without neutral) and 3 x 500/289 V, (with neutral) Type DNW 690 for 3 x 690 V, (without neutral) and 3 x 690/400 V, (with neutral)
	Rated frequency	50 Hz and 60 Hz
	Limit values	for overvoltage adjustable to +5 %, +10 %, +15 % or +20 % of rated value for undervoltage adjustable to -5 %, -10 %, -15 % or -20 % of rated value for asymmetry adjustable to 5 %, 7,5 %, 10 % or 15 % of rated value
	LED indication	U > (red), lights up if overvoltage limit value is exceeded U < (red), lights up if undervoltage limit value is exceeded U > (red) und U < (red), lights up if asymmetry value is exceeded or if neutral is interrupted fail (red), flashes in case of wrong phase sequence (left-hand or missing rotating field) ok (green), lights up if value is correct (relay energized)
	Hysteresis	2 % of rated value
	Relay release time	0,3-7,5 s adjustable
	Relay outputs	2 potential-free changeover contacts 250 V AC, 4 A, 1000 VA
	Test voltage	4 kV between contacts and measuring input
	Temperature range	-15 °C to +20 °C to +30 °C to +55 °C
	Power input	between L2 and L3 1,5 VA (with 3 x 400 V power supply)
Standards	EMC	DIN EN 61326
	Mechanical strength	DIN EN 61 010 part 1
	Electrical safety	DIN EN 61010 part 1, housing insulated, protection class II, pollution degree 2, measuring category CAT III for rated voltages up to 300 V (phase to neutral) measuring category CAT II for rated voltages above 300 V to 600 V (phase to neutral)
	Isolation	DIN EN 61 010 part 1, 3,7 kV 50 Hz 10 s
	Air and creep distances	DIN EN 61 010 part 1
	IP code	DIN EN 60 529 housing IP 30, terminals IP 20
Weight		180 g
Installation	Fastening	Snap-on fastening on top hat rail 35 mm acc. to DIN EN 60 715
	Electrical connection	Screw terminal max. 4 mm ²