

VOLTAGE INDICATOR WN-1 / WNS-1



1.1. APPLICATION.

Voltage indicator is made for luminous signaling of the voltage in MV electric circuit, for example on the busbars in the switchgear. Additionally, it may be used in the switchgear control system, either permitting or blocking its inclusion. Therefore this indicator establishes an additional level of security for the user. Voltage indicator is designed to interact with the MV devices (circuit breakers, disconnectors), when used with capacitive insulators, as well as with devices having similar voltage dividers.

1.2. CHARACTERISTIC FEATURES.

- simple and clear design;
- easy to read indicator status;
- simple maintenance;
- reliability;
- low consumptions of power supply;
- available in two versions: without blokage – WN-2, with blokage - WNS-2.

1.3. CONSTRUCTION.

Voltage indicator consist of the case in which electronic elements are installed. On the front panel there are three luminous indicate points indicating the presence of voltage at each phase and three phase voltage plug-in sockets and one neutral plug-in socket. They give the opportunity to additional control voltage in MV circuits. Indicator also has two LED diodes, indicating the presence or absence of opportunity to MV apparatus control.

On the case back side situated removable 4-poles connector. Used for connection of wires from the post capacitive insulators on the MV side (terminals L1, L2, L3, N), and for version

with blockage 8-poles connector, for the power supply and for connect to pair of changeover contacts interface relay. The condition of contacts are indicates presence of voltage at the busbars. In turn, the quick terminal block, greatly facilitate and speed up the installation of the device. Indicators with lock as standard equipped overload protection and short circuit protection.

1.4. PRINCIPLES OF OPERATION.

That device – WNS-1, used an electronic system that analyzes the presence of voltage at each phase. In case when voltage appear at least one of the phases, the device generate signals of impossibility controlling of MV apparats (RED LED with ⚡ pictograph - light on) and NO auxiliary contacts of the relay are open. The same occurs in the absence of power supply. In turn, in a situation when all phases of the voltage is not present, the indicator shows the ability to manage the MV apparatus is possible (GREEN LED with OK pictograph - light on) and auxiliary contacts NO relay are closed.

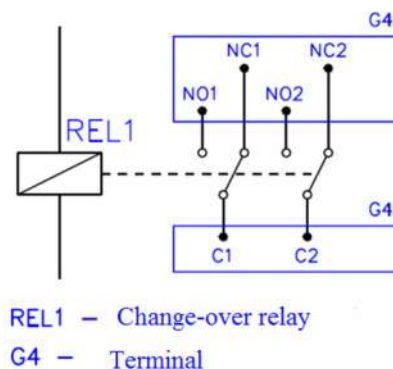


Fig.1. The electrical diagram of the indicator with blockage.

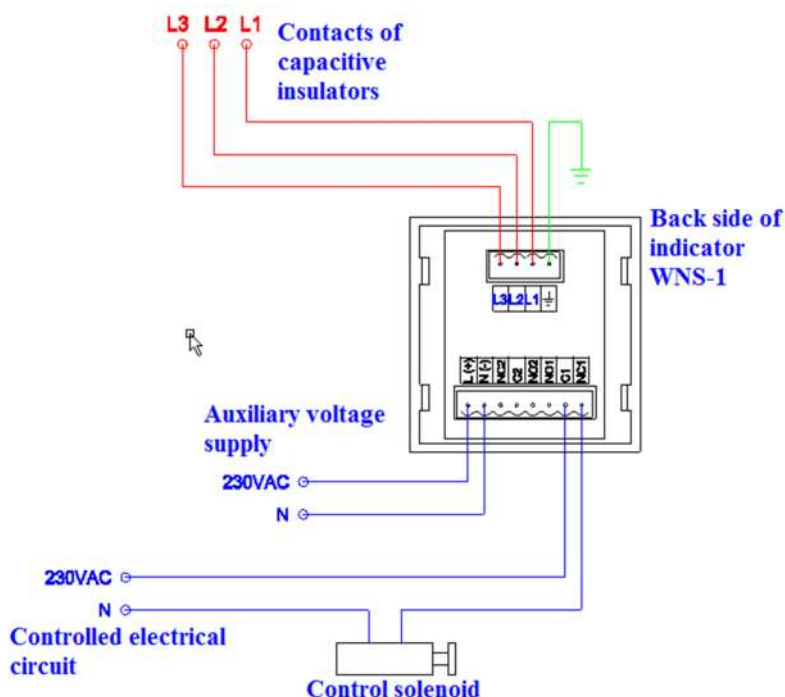


Fig. 2. Wiring of voltage indicator with blockage.

1.5. NOMINAL RATING.

Border (minimal) current of signaling: $I_{min} = 60 \mu A$

Rated currents of signaling: $I_n = 270 \mu A$

Substitute impedance of one phase of the indicator: $Z_n = 220 k\Omega$

Auxiliary contacts - two pairs: 2P

Rated operational current : 8A/230 VAC

Power consumption: <2VA

Auxiliary voltage supply: 85-265 V AC/DC

Wire size fine-strand $2,5mm^2$.

An example of an order:

Voltage indicator type WNS-2

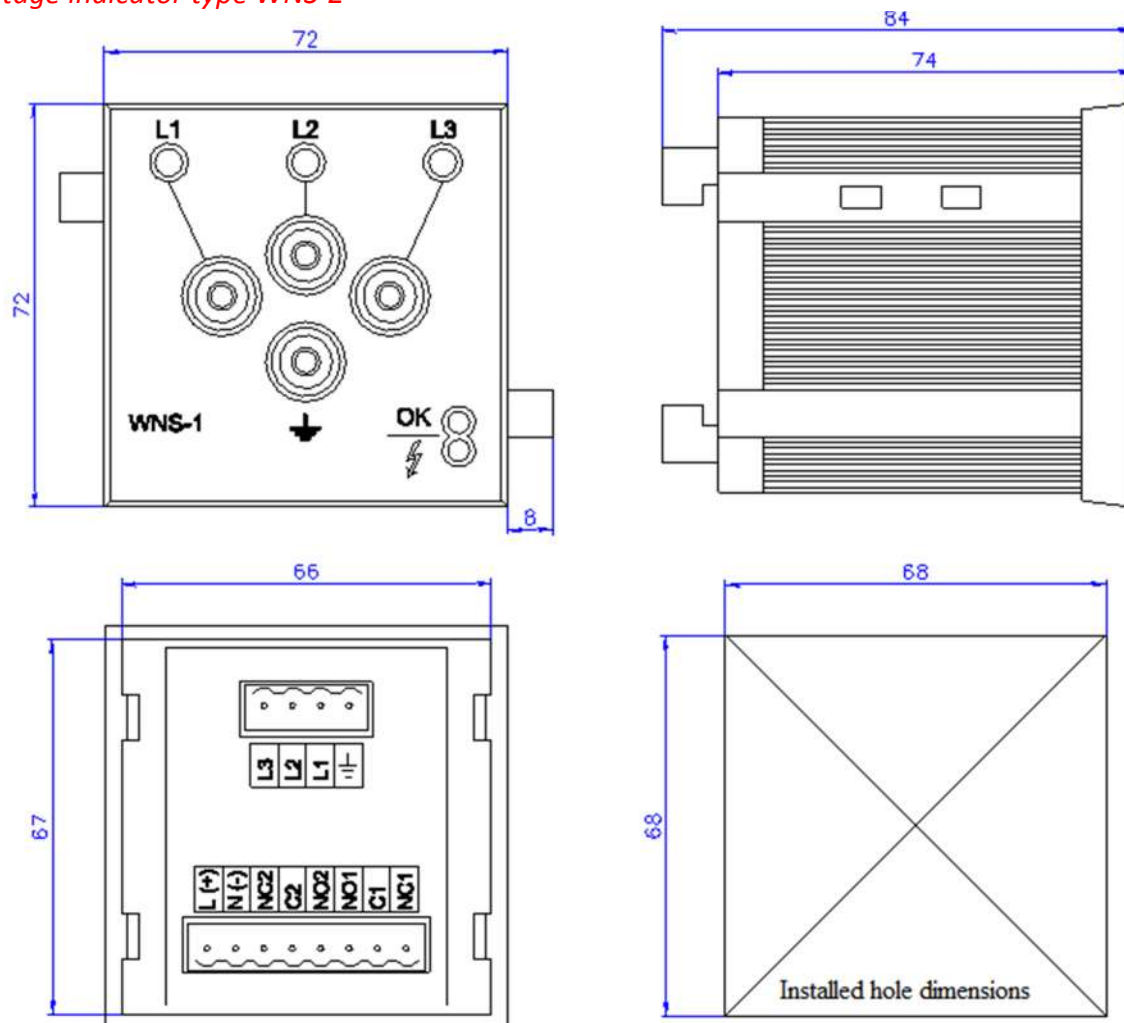


Fig.3. Dimensional drawings of voltage indicators.

Note: Some improvements and alteration may occur as a consequence of development in manufacturing techniques.

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