vigivolt

TRIO3.0

Protector against permanent and transient overvoltages. Three-phase. Type 2.



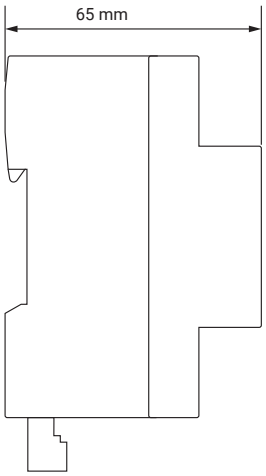
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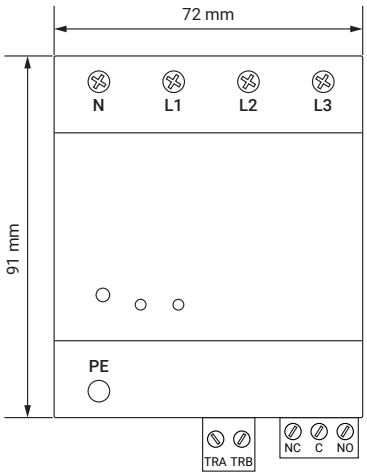
USER MANUAL

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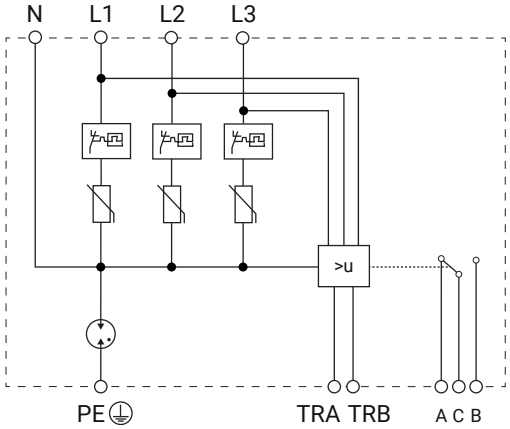
WARNING!	HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
- The installation, maintenance and eventual replacement of this device must only be carried out by a qualified electrician. - This device must not be repaired. - All applicable local, regional and national regulations must be complied with during the installation, use, maintenance and replacement of this device. - This device should not be installed if, when unpacking it, you observe that it is damaged. - Toscano cannot be held responsible in the event of non-compliance with the instructions in this document and in the documents to which it refers. - For the correct operation of the equipment, the phases must be connected to the "L" terminals, the neutral to the "N" terminal and the earth to the "PE" terminal.	- Turn off all power supplying this device before working on it. - Use a voltage tester on an appropriate scale to verify that all live conductors are not energized. - Failure to comply with these instructions may result in serious injury or death.

Dimensions



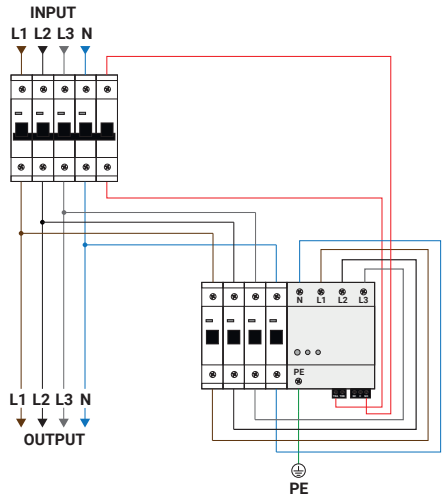


Electrical diagrams

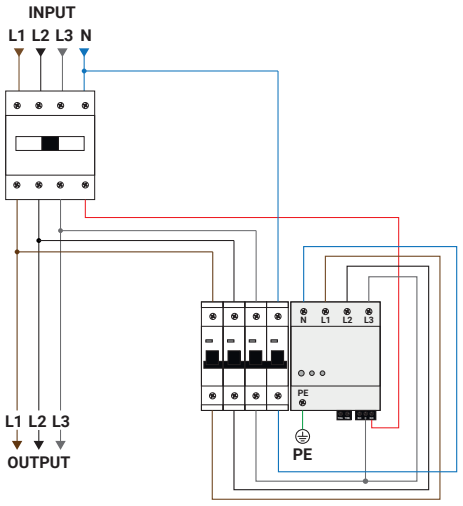


Wiring

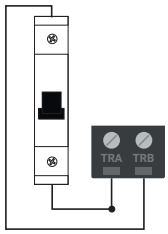
With shunt trip coil



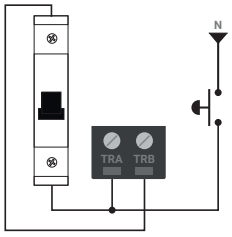
With automatic reset contactor



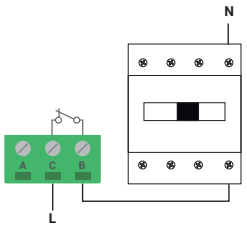
Shunt trip coil



Emergency mushroom button option



Automatic reset contactor



TRA and TRB cannot be associated with other control devices except those specified in this manual.

Technical specifications

GENERAL	Rated voltage Un (L1-N, L2-N, L3-N)	230 VAC
	Alarm contact	6 A / 30 VDC, 6 A / 250 VAC
	Upstream protection	40 A, Curve C (IEC 60898 / IEC 61009 / IEC 60947-2) Fuse 50 A gG (IEC 60269 / IEC 60127)
	Frequency	50-60 Hz
	Consumption	0.6 W
	Maximum terminal cross-section	35 mm²
	Minimum cable cross-section (L1, L2, L3, N, PE)	**6 mm²**
	Minimum signal cable cross-section (TRA, TRB, NC, C, NO)	**1,5 mm²**
	Tightening torque (L1, L2, L3, N, PE)	2.5 Nm
	Tightening torque (TRA, TRB, NC, C, NO)	2 Nm
	Environmental limits	-20 °C +70 °C / 80% R.H.
	Protection	IP20
	Mounting	Rail DIN 35
	No. of DIN modules	4
	Dimensions (width x height x depth)	72 x 91 x 65 mm
	Approx. average weight	395 g
	Approx. packed weight	430 g
PERM.	Disconnection voltage (L1-N, L2-N, L3-N)	according to EN IEC 63052
	Overvoltage response time	
TRANS.	Protection level Up	≤1.5 kV
	Maximum discharge current (8/20µs) Imax	40 kA
	Type	2
COMPLIANCE	Directives	2014/35/EU (LVD) 2014/30/EU (EMC) 2011/65/EU (RoHS)
	Standards	EN 61643-11 EN IEC 63052

Description

Protection device against permanent overvoltages caused by increases in the mains voltage in three-phase installations.

It also protects against transient overvoltages caused by lightning strikes or switching operations in the network.

The device includes a changeover relay output for status indication or control indication. In the event of an overvoltage, contacts C and A are activated and remain in this state until the anomaly disappears, at which point it switches back to contacts C and B.

Operation

The device continuously monitors the installation voltage. In case of an anomaly, it acts on the shunt trip coil of the MCB (Main Circuit Breaker).

If the device is configured as “standard connection”, it will become operational again once the MCB is manually reset, provided that the voltage is within its nominal values.

In “automatic reset” configuration, the device monitors the input voltage and, when all three phases are below 260 VAC with respect to neutral for at least 10 seconds, it sends the reset signal to the contactor.

In the event of a transient overvoltage, the device diverts it to ground, mitigating possible damage to devices connected to the network.

Two indicators show the device status:

- **Green** (flashing): Device monitoring.
- **Red** (steady): Indicates wear of the transient protection. Replace with a new device.
- **Red** (flashing): Indicates that the installation voltage has exceeded the trip level. It should only be visible if the system is configured as “automatic reset”, since in “standard” configuration, when the device sends the trip signal to the coil, it must be de-energized, as well as the rest of the installation.

A test push button located on the front allows verification of correct operation by simulating an overvoltage. To activate it, it must be pressed for at least five seconds.

Terminals

L1, L2, L3: Input phase connections.

N: Neutral input connection.

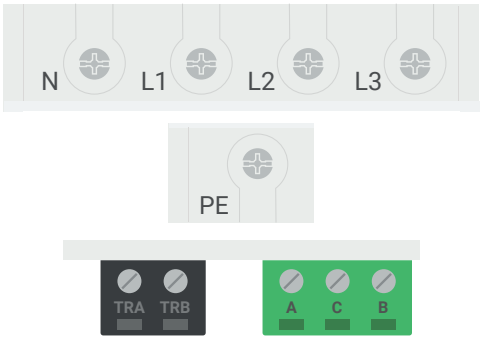
PE: Protective earth connection.

TRA, TRB: Contacts for the shunt trip coil.

A: Overvoltage fault contact.

B: Normal voltage contact.

C: Common contact for status output.



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Scan for more information:

toscano

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