

**Technical Characteristics**

Type	VROT-15-1
Highest Voltage for Equipment [kV]	1
Test Voltage 60Hz, 1 min [kV]	3
Lightning Impulse Voltage 1.2/50µs [kV]	6
Rated Primary Voltage [V]	600, 480, 420, 240, 208
Rated Secondary Voltage [V]	(480, 370, 277, 230) ±10%
Nominal Power [W]	14550
Rated Power [kVA]	15
Current Output [A]	125
Rated Frequency [Hz]	60
Guaranteed no-load losses "P <sub>cu</sub> [W] / P <sub>fe</sub> [W]" [W]	150 / 60
Power Factor "cos φ"	0.97
Harmonics	N/A (does not generate / pass through)
Mechanical Protection	IP 54 / NEMA 3R
Ambient Temperature Range [°C]	-50 to +65
Operating Temperature [°C]	Up to 135
Ventilated	No
Installation (in any position)	On pole or pad mount
Standards / Certified	IEC 60076-11 / 2004, EN 50160

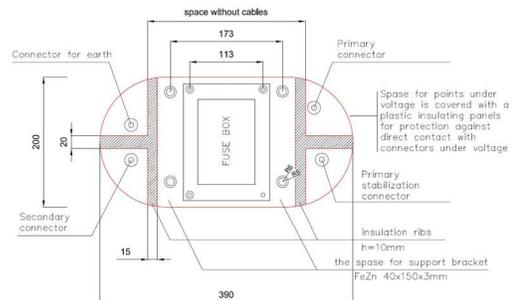
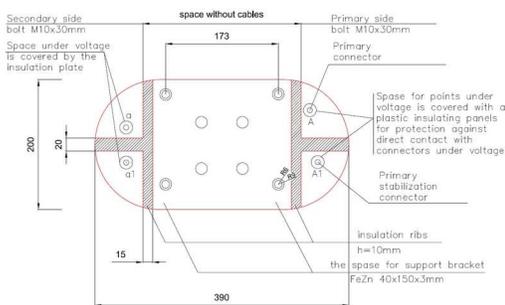
Primary or secondary voltages and power can be adjusted on request. Maximum primary voltage 600 [V].

**Increasing power and voltage:**

Combining and connecting two or more of these units as modules can achieve different voltages and power requirements such as:

- VROT-15-1, single phase (600, ..., 208 // 120V, 60Hz, 15kVA) (one unit)
- VROT-15-2R, two phases reversible (600, ..., 208 // 120/240V, 60Hz, 30kVA) (two units)
- VROT-15-3, three phases (600, ..., 208 // 120/208V, 60Hz, 45kVA) (three units)

**Overall Dimensions**





## PRODUCT DESCRIPTION

Voltage Regulating Optimizing Terminal (VROT) form the industry standard for the SMART innovative design and impeccable performance efficiency. This unique design works to control under voltage performance of low voltage (LV) electrical networks, balancing loads in them, increase safety protection, selectivity, and effectiveness. VROT terminals are monolithically casted within cured epoxy resin and designed for outdoor or indoor installation on low voltage lines.

Fully cured epoxy resin is a moisture resistant material providing VROT with a type of body that is non-combustible with smooth surfaces for high dielectric strength and mechanical durability. The magnetic core is a classical type with its copper windings wrapped in layers to provide convenient distribution of radial and axial stresses as well as good resistance to industrial frequency shocks and transients.

They are typically designed for an insulation voltage of 0.72kV to 3kV. VROT is constructed so that its energy losses in the iron are very small (150W), and all parts which are under the voltage are casted in epoxy resin, or covered with insulating tiles.

VROT family of products are intended for a connection between low voltage lines and earth or between lines. VROT has built in unique Smart Technology components enabling it to regulate voltage, current and power in heavily loaded very long LV lines, guarantying quality of power and voltage.

### BASIC VROT ELEMENTS:

- Breaker box
- Electronic control box
- Dry type energy power terminal

## FUNCTIONING PRINCIPLE

This innovative system monitors the voltage stability/situation of the electrical network and by using internal SMART technology regulates the voltage or if there is a voltage drop, the system gives a signal to start the regulation process to sustain the voltage. The appropriate protection fuse for selected power of the unit is in a waterproof insulating box

## KEY PRODUCT BENEFITS

- Reduces intermittence, demanded energy delivered faster
- VROT does not generate harmonics
- Designed to withstand extreme outdoor weather conditions
- Fast installation and operation
- Maintenance free
- Economically superior in comparison to traditional methods
- Delivers demanded power to longer distances within the same conductor size
- Automatically determine voltage deficiencies and regulates voltage needs

## ADDITIONAL INFORMATION

Please visit our website [www.egcanada.ca](http://www.egcanada.ca) for further information about Energo Group Canada Inc. and it's products or contact sales at [sales@egcanada.ca](mailto:sales@egcanada.ca)