

VOLTAGE CONTROLLER
VC6K-1P-000

GENERAL INFORMATION

- Check that the product is suitable for the cable type.
- Check the materials listed in the bill of materials for completeness.
- Read the installation instructions carefully before starting the installation.
- Install carefully and make sure the materials are clean during the installation.
- Clean the working place after the installation.

LEGAL NOTICE

- The product must be installed only by a competent person with sufficient training in installation practices and with sufficient knowledge of good safety and installation practices in respect of electrical equipment. If local legislation contains provisions in respect of such training or sufficient knowledge in respect of installation of electrical equipment such provisions shall be fulfilled by the said person.
- Ensto accepts no liability concerning claims resulting from misuse, incorrect installation or ignored national safety regulations or other national provisions.
- **WARNING:** Failure to follow the installation instructions may result in damage to the product and serious or fatal injury.



DANGEROUS VOLTAGES ARE EXPOSED WITHIN ENSTO VOLTAGE CONTROLLER. ONLY A COMPETENT ELECTRICIAN IS ALLOWED TO CARRY OUT THE ELECTRICAL INSTALLATION!

Bill of material

Part	PCS
Voltage Controller	1
Pole adaptor	1
Counter parts for pole adaptor	2
Manual	1
Test report	1
Triangular key	1
Cable gland set 3xM16 + 2xM20 + 2xM25	1
Bolt M8x25mm	4
Washer M8	8
Nut M8	4
Spring washer M8	4
Hex bolt M6x10 mm	1
Clampo Pro terminal shroud	1

Recommended additional products (not included in the package).

Surge arrester to input side SE46.328-10 or SE45.328-10
Metal band COT37
Metal buckle COT36
Tool CT42
Connector SLIP12.1

Technical Characteristics

1 GENERAL CHARACTERISTIC

Type	VC6K-1P-000
Rated power (Pn)	6 kVA
Rated voltage (Un)	230 VAC
Rated frequency (fn)	50 Hz
Rated current (In)	25 A (OUT), 28A (IN)
Rated operational voltage (Ue)	160...260 VAC
Network	TN / TT
Rated impulse withstand voltage (Uimp)	6 kV
IP class	IP-54
Internal short circuit protection device	MCB C-curve, 50 A, Icu 6 kA
Cable connections	CU 2.5 – 50 mm ² Al 6 – 50 mm ²
Weight	35 kg
Dimensions (W x H x D)	400 x 600 x 350 mm (inc. pole adapter)
External mechanical impact	IK 10

2 SERVICE CONDITIONS

Ambient air temperature	- 35 °C + 40 °C
Humidity conditions for outdoor installation	100% (+25 °C)
Max installation altitude	≤ 1000 m

3 STORAGE AND HANDLING

Ambient storage temperature (indoor storage)	- 40 °C + 40 °C
--	----------------------

4 PACKING DETAILS

Weight	40 kg
Dimensions (W x H x D)	650 x 540 x 260 mm

Ensto Voltage Controller Installation Guide

1 GENERAL

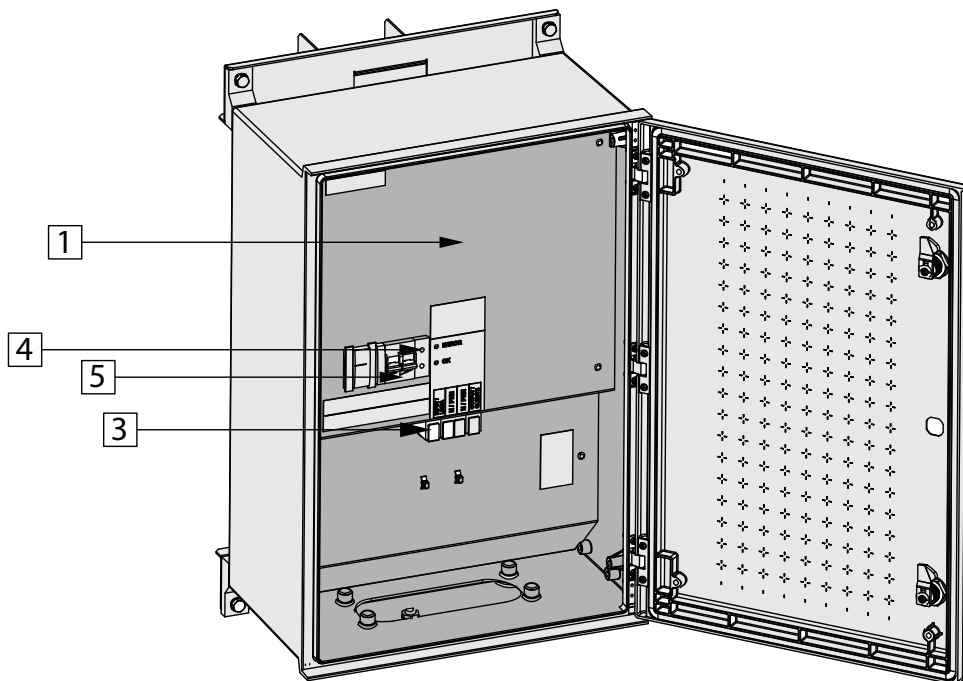
This guide gives basic information about mechanical and electrical installation of Ensto Voltage Controller.

All mechanical installation equipment is based on standard Ensto components.

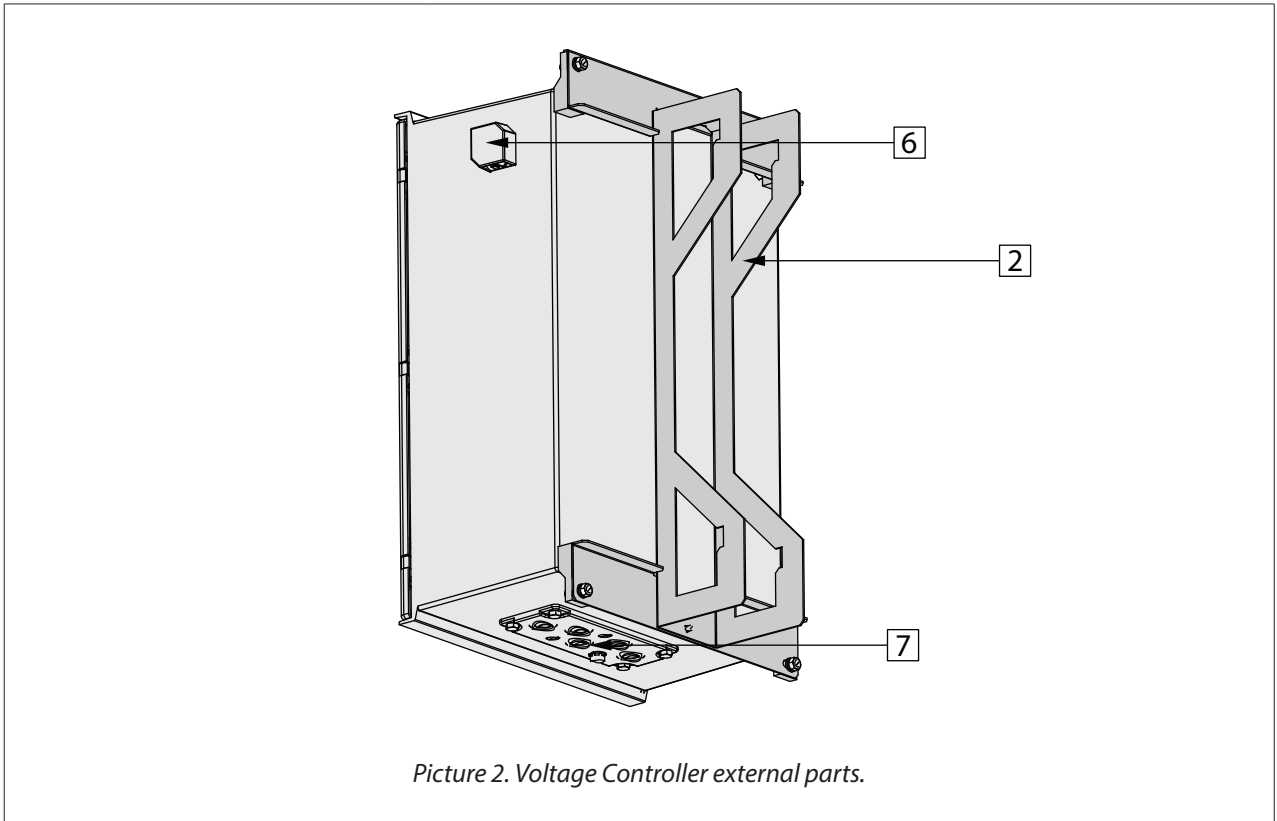
2 INTRODUCTION

Voltage Controller internal and external parts are shown in picture 1. and picture 2. Following components can be found from those pictures.

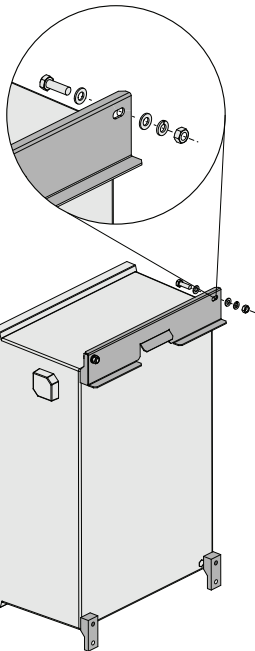
- [1] Electronic and Transformer Module
All electronics and transformer are placed behind the plastic cover.
- [2] Pole Adapter
Voltage Controller is mounted to pole with the pole adapter.
- [3] Input/Output/Neutral terminals
- [4] LED-indications
- [5] 50A Miniature Circuit Breaker
- [6] Ventilation Filter In
- [7] Knockout Flange



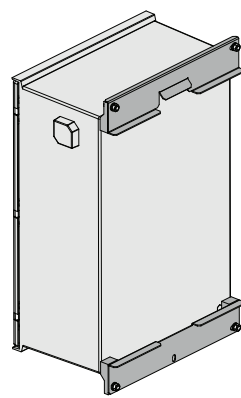
Picture 1. Voltage Controller internal parts.



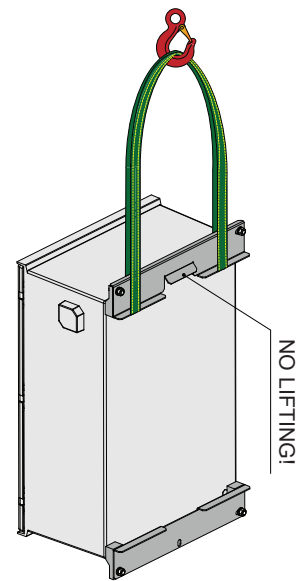
3 INSTALLATION TO POLE



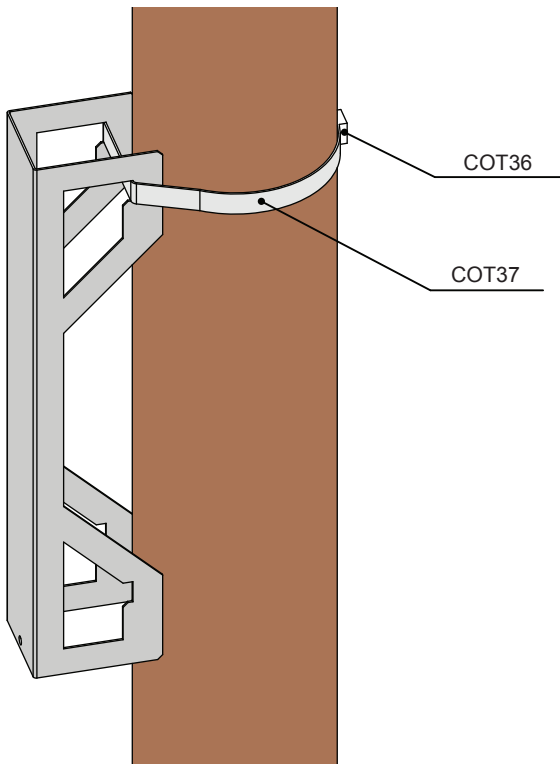
1. Install the upper part to Voltage Controller.



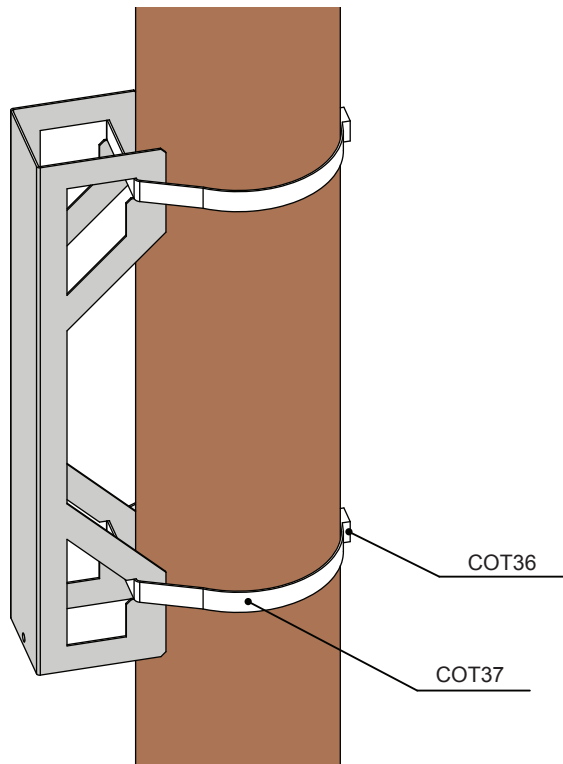
2. Install the lower part to Voltage Controller



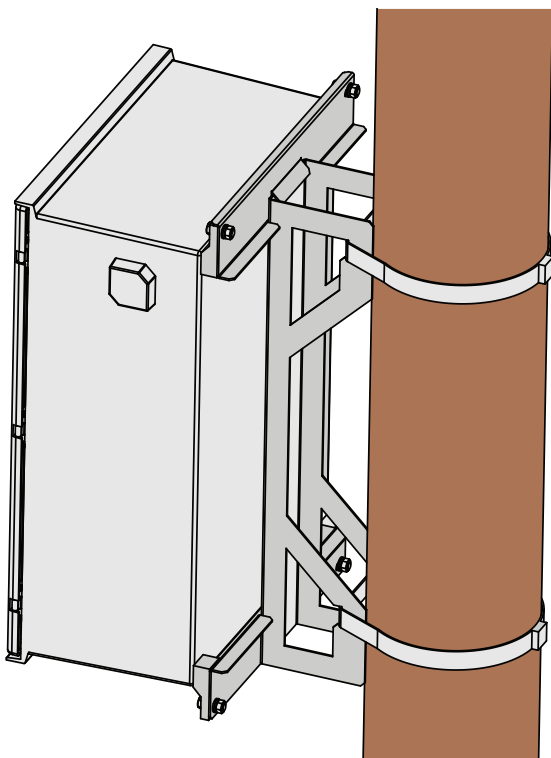
3. Attach lifting ropes to the upper steel part. Warning: Do not lift from the center.



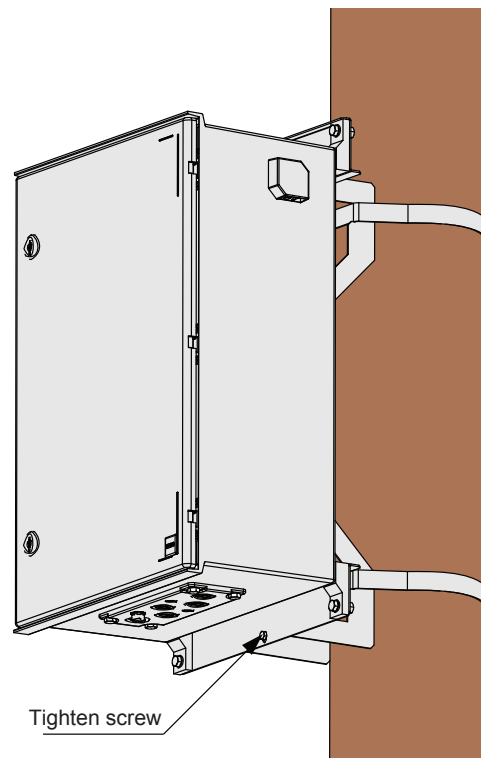
3. Install the upper part of the pole adapter with metal band COT37 and metal buckle COT36 by tool CT42.



4. Install the lower part of the pole adapter with metal band COT37 and metal buckle COT36 by tool CT42.

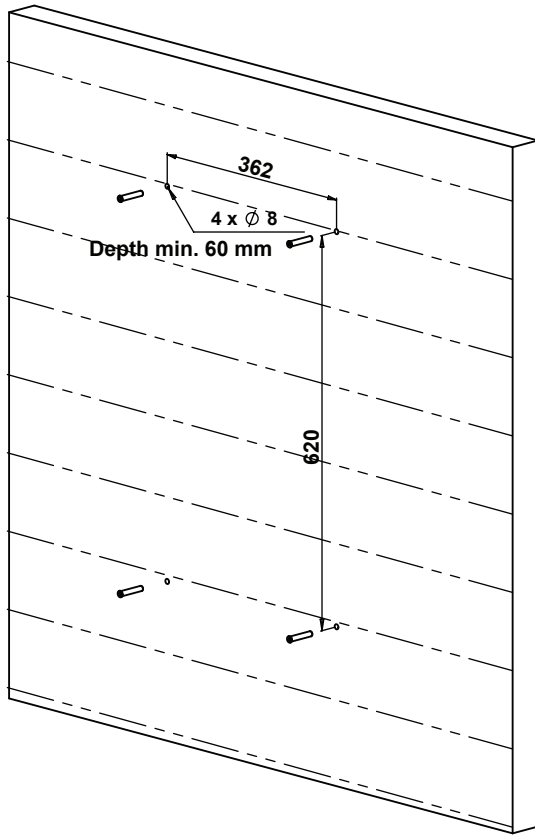


5. Lift Voltage Controller to the pole adapter.

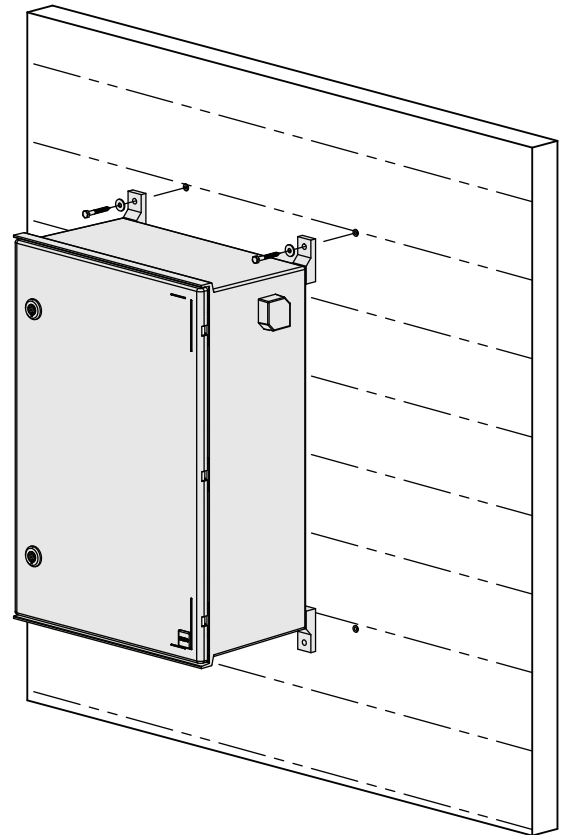


6. Finish the installation by tightening the lower part screw to the pole adapter.

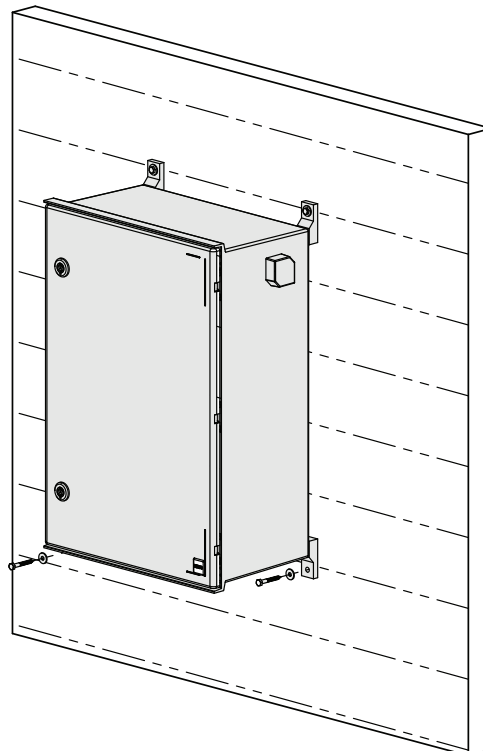
4 INSTALLATION ON WALL



1. Drill holes according to the measures and install the wall plugs.



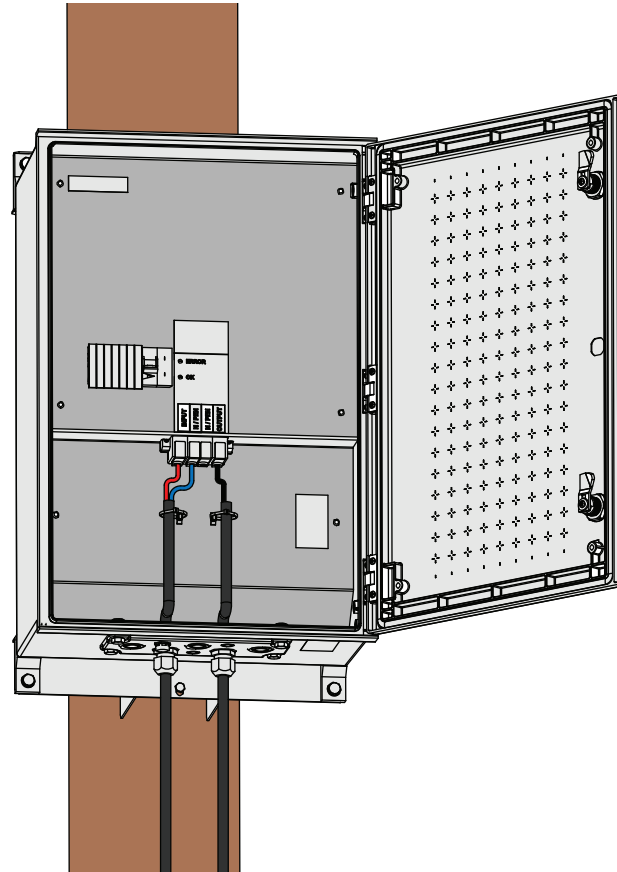
2. Install the washers and then fasten the top screws.



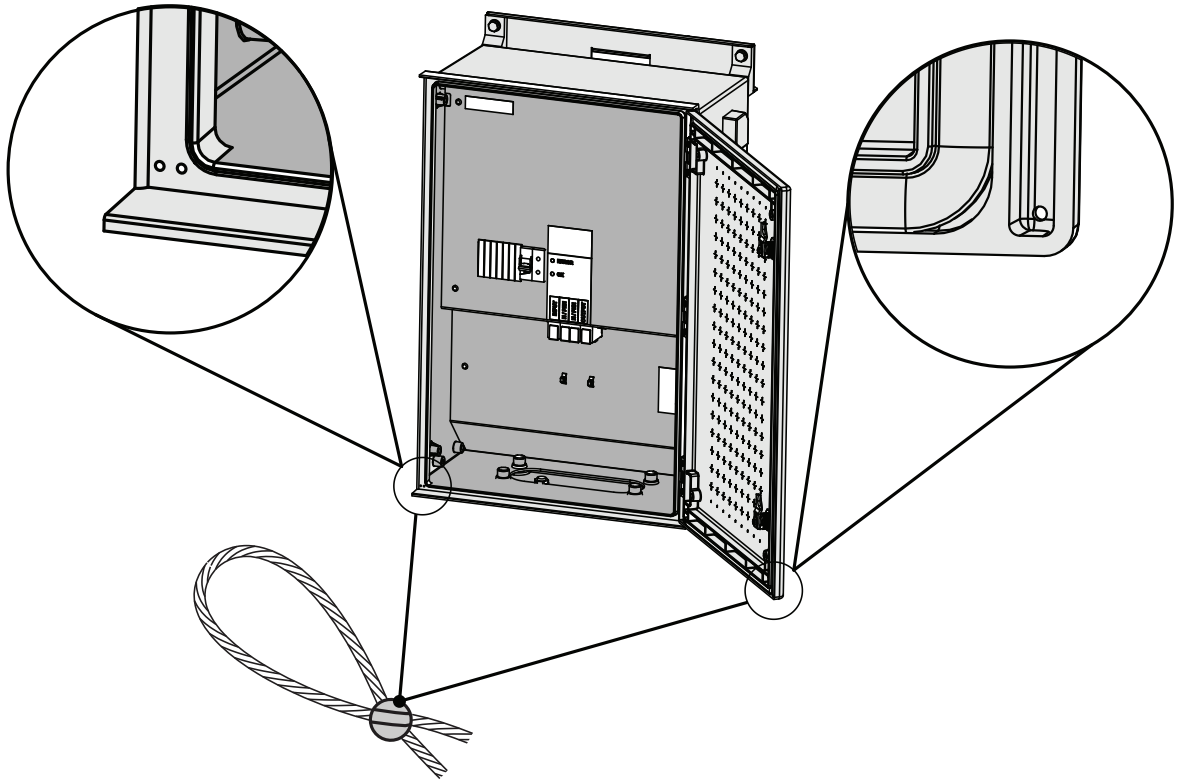
2. Install the washers and then fasten the lower screws.

5 ELECTRICAL INSTALLATION

For your own safety, cut the line power before mounting and starting electrical installation. Voltage Controller is connected in series between the feeding line and consumer. To gain most of the benefit Voltage Controller should be installed near to the consumer point.



1. Select the installation location.
2. Measure and prepare jump wires that are connected between existing line and the Voltage Controller.
3. Prepare the knockout flange according to cable diameters.
4. Mount Voltage Controller to the pole or wall.
5. Cut the phase wire of the distribution line.
6. Install surge arrester between input phase and earth.
7. Connect the PEN jump wire to the PEN-terminal.
8. Connect the input and output phase wires to the terminals.
9. Check that everything is properly installed before switching power on.
10. Switch power and miniature circuit breaker on.
11. Check that green LED is on and red LED is off.
12. Measure input and output voltages.
13. Close the door, installation is ready.
14. Seal the door if necessary.

6 SEALING THE CABINET

1. Close and lock the cabinet.
2. Thread the signet wire through the holes seen in the picture above.
3. Seal the signet wire with the proper compression tool.

A large, empty rectangular box with a thin black border, occupying the majority of the page. It is intended for the student to write their notes during the lecture.

A large, empty rectangular box with a thin black border, occupying most of the page. It is intended for the user to write their notes.

ENSTO

ENSTO FINLAND OY
ENSIO MIETTISEN KATU 2, P.O.BOX 77
06101 PORVOO, FINLAND
TEL. +358 204 76 21
FAX +358 204 762 770
UTILITY.NETWORKS@ENSTO.COM

WWW.ENSTO.COM