



(An ISO 9001:2008 Mfg. Co.)

**Voltage Controller
Control Unit
EE-402**

INSTRUCTION MANUAL

Instruction Manual
for
**Voltage Controller
Control Unit
EE-402**

EMCO ELECTRONICS

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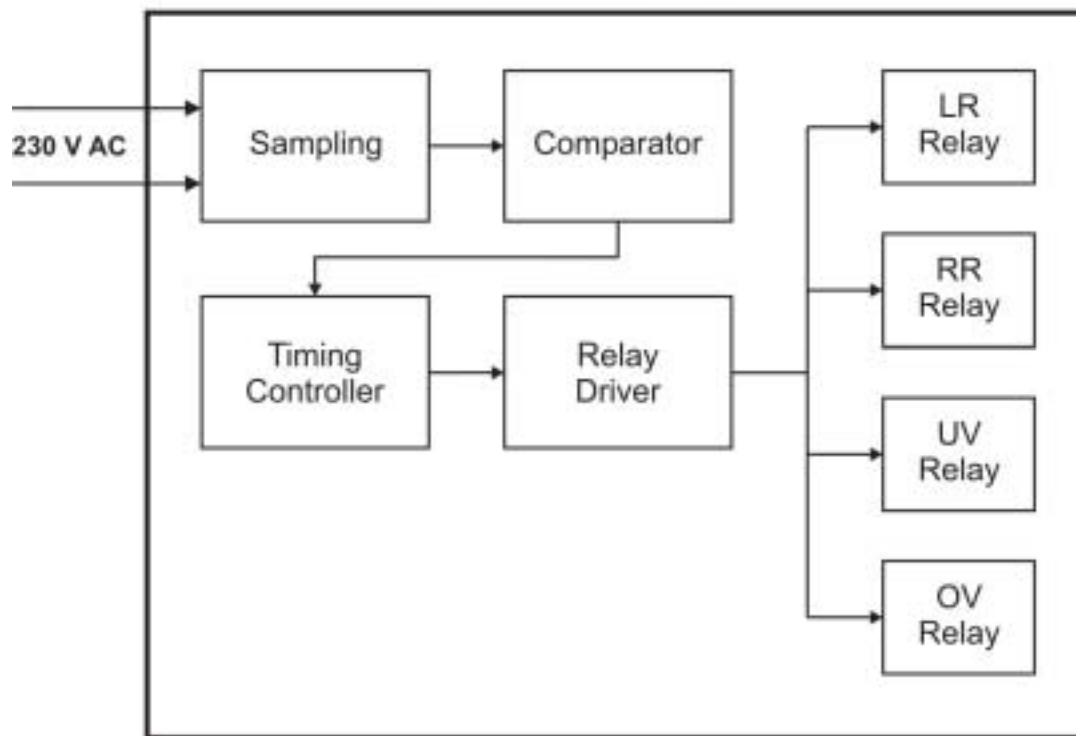
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The VCCU is basically used in Servo Stabilizers to regulate the Output Voltage. The Control unit senses the 230V AC I/P & gives control outputs for the Motor. There are two independent settings for Lower (LSET – 200V to 250V) and Raise (RSET – 200V to 250V) limits.

When the voltage is between the set limits, no control signal is given. When the voltage goes outside the set limits, the time delay (TD) LED glows depending on the set delay. The delay can be set from 0.5 to 10 secs approx. by the ADJ pot and the delay is indicated by the TD LED. After the delay is over a pair of NO contacts will close depending on whether the voltage has to be raised or lowered. Lower (LR) & Raise (RR) LEDs are provided to indicate the control action.

Voltage Controller Control Unit



Block diagram of VCCU EE-402

Provision for setting Undervoltage (UV – 180V to 230V) and Overvoltage (OV – 220V to 260V) limits is also available. A pair of changeover contacts is provided.



VCCU EE-402

Specifications :

Auxiliary Supply	: 230 V AC \pm 15%
Raise Setting	: Adjustable from 200V to 250V
Lower Setting	: Adjustable from 200V to 250V
Undervoltage Setting	: Adjustable from 180V to 230V
Overvoltage Setting	: Adjustable from 220V to 260V
Time Delay Setting	: Adjustable from 0.5 to 10 sec.
Operating Temperature	: 0 to 50 ^o C
Overall size	: 92 (H) x 92 (W) x 120 (D) mm
Weight	: 1 Kg approx.

Inputs & Outputs are brought out on the terminal block on the front panel. Please note that the same 230V supply is used for generating internal DC Voltages. Hence the unit will work for 230V \pm 15%

The LSET, RSET settings have been set at 235V & 225V respectively. A hysteresis of approximately 2V has been kept to avoid chattering. The UVSET, OVSET settings have been set at 210V & 250V respectively. A hysteresis of approximately 5V has been kept. The delay is set to min at the time of dispatch.

To change the RSET/LSET settings, set the input voltage to the required value. Vary the respective pot till the TD led just glows. The RR/LR leds should be off when making the settings. (RSET pot should be kept min. and increased in clockwise direction till TD led just glows. LSET pot should be kept in max. position and decreased in anticlockwise direction till the TD led just glows.)

To change the UVSET/OVSET settings, set the input voltage to the required value. Vary the respective pot till the RR/LR led just goes off. The RR/LR leds should be on when making the settings. (UVSET pot should be kept min. and increased in clockwise direction till RR led just goes off. OVSET pot should be kept in max. position and decreased in anticlockwise direction till the LR led just goes off.)

The unit is housed in standard 96 x 96 mm box with projection mounting. The mounting dimensions are 122*62 mm.

Note : Please use the right screw driver for adjusting the pots. Do not exert extra force while making the adjustment.

Connection diagram



VCCU Connections

WARRANTY

This product from EMCO ELECTRONICS is warranted against defects in materials and workmanship for a period of 12 months from the date of dispatch to the first buyer/purchaser of this equipment, this being essentially limited by warranties given to EMCO ELECTRONICS on the component used in equipment.

During the warranty period, EMCO ELECTRONICS will at its option, either repair or replace the product which proves to be defective provided the product has been used with reasonable care and in accordance with the manuals/product specification. Consequently this warranty shall also not apply to defects/damages in transit or resulting from misbehaving, misuse, unauthorized modifications or repairs operations outside the environmental, electrical and/or other specification, improper or inadequate maintenance of the product, or site conditions as required/recommended and damages arising from accidental or abnormal causes.

The warranty period for items repaired/replaced shall not exceed the period for which the equipment was originally warranted and also the liability of EMCO ELECTRONICS to the purchaser shall not in any case, exceed the original purchase price of the equipment.

For warranty service or repair, the equipment must be returned to EMCO ELECTRONICS securely packed on Freight paid basis and accompanied by a certificate stating that the equipment is being returned for warranty repairs along with details of the purchase (Purchaser's Name, and address, Invoice No. and Date of purchase) and details of the equipment failure, faults conditions, other useful information to facilitate early repair/rectification of the equipment.

Return of the equipment duly repaired can be arranged on payment of the packing and forwarding charges together with any other taxes, duties, other miscellaneous expense incurred. Alternatively the purchaser may arrange to collect the equipment from EMCO ELECTRONICS. In case the repairs are not covered under warranty, the charges for the same must also be paid before collection of the equipment.

Our engineer's services are available at site for instruments during warranty or out of warranty period, on chargeable basis, details of which are available on request.

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