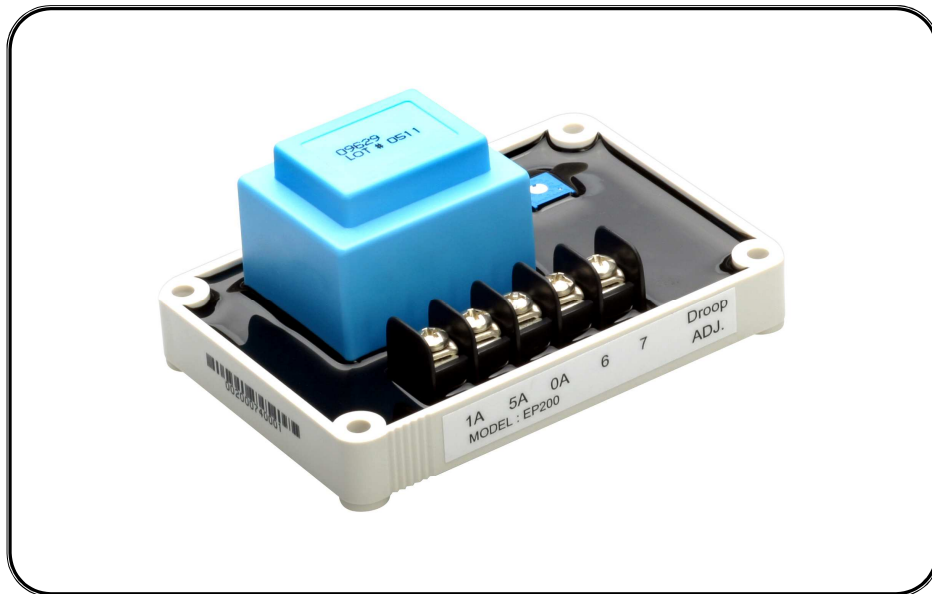


EP200

Paralleling Module Operation Manual



For Use With EA04A、EA05A、EA350、EA460、EA63-2.5 Voltage Regulators Paralleling Module



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The EP200 Paralleling Module provides paralleling capability for the EA04, EA05, EA350, EA460, and EA63-2.5. The EP200 can response reactive droop compensation, and it can be controlled by a remote voltage adjustment.

The EP200 operates in conjunction with an external parallel current transformer, and then provides the droop signal necessary to two or more generators to share reactive loads and to reduce circulating currents between generators.

1. SPECIFICATIONS

Current Transformer Input : 1A or 5A

CT Burden 5VA MAX

General Voltage Droop :

13% for 50% of nominal CT current

26% for 100% of nominal CT current

Operating Temperature : -40~+70°C

Storage Temperature : -65~+85°C

2. INSTALLATION

The EP200 can be mounted directly on the engine, genset, switchgear, control panel, or any position that would effects operation.

For mounting, please see Figure 1.

3. PARALLEL COMPENSATION

When two generators are operating in parallel the field excitation on one generator becomes excessive, causing a circulating current to flow between generators. The current appears as an inductive load to the generator (lagging power factor) with excessive field current and a capacitive load to the other (leading power factor). The reactive droop compensation circuit in the EP200 will cause the voltage regulator to decrease its field excitation on the generator with lagging power factor load to minimize the circulating currents between the generators.

For parallel compensation diagram, please see Figure 2, 3, and 4.

Reactive differential compensation allows two or more paralleled generators in an isolated system to share inductive, reactive loads with no decrease or droop in the generator system output voltage. This is accomplished by the action and circuitry described previously for reactive droop compensation and by the across connecting of the CT secondary leads. (Figure 2 and 3)

This type of circuit is called reactive droop compensation. It allows two or more paralleled generators to proportionally share inductive loads by causing a decrease or droop in the generator system voltage. (Figure 2)

4. PARALLEL OPERATION

Please confirm the following tests before operating.

1. The voltage sensing for voltage adjustment and CT have to be connected in different phase. For example, the voltage sensing is in R and S Phases and CT has to in T Phase, and each adjustment has to have the same wiring.
2. If reactive differential compensation is used, the interconnection loop between the generators should be left open until completing these tests. Adjust the Droop button to the maximum resistance position (fully clockwise).
3. Record the voltage and then increase current load (0.8PF) and record voltage load again.
4. If a higher voltage was obtained with the Unit-Parallel switch set to Parallel, stop the system and verify that CT and sensing leads are connected to the correct generator. If all corrections are proper and correct, interchange the parallel CE secondary leads.
5. If step 3 and 4 are required, please repeat them to ensure that the system voltage droop is obtained.

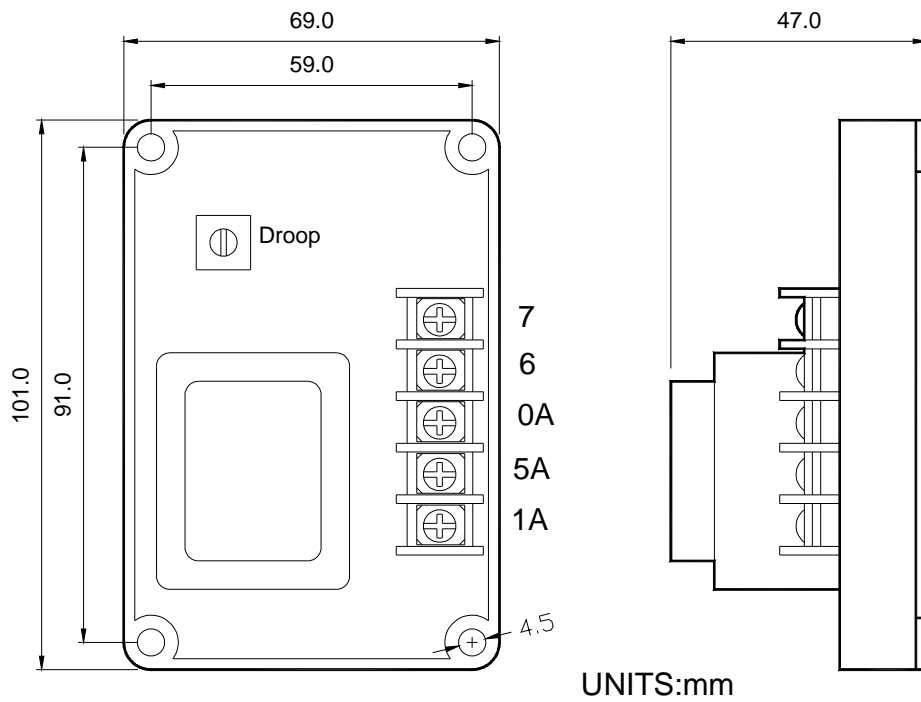


Figure 1 Mounting Dimensions

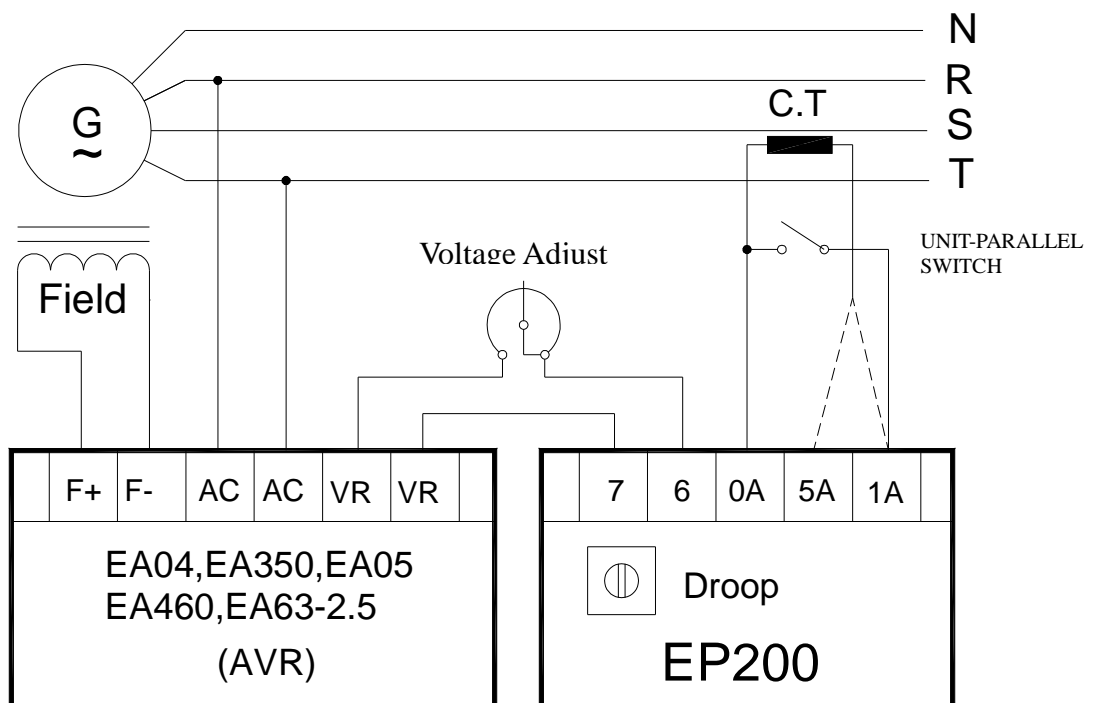


Figure 2 Wiring

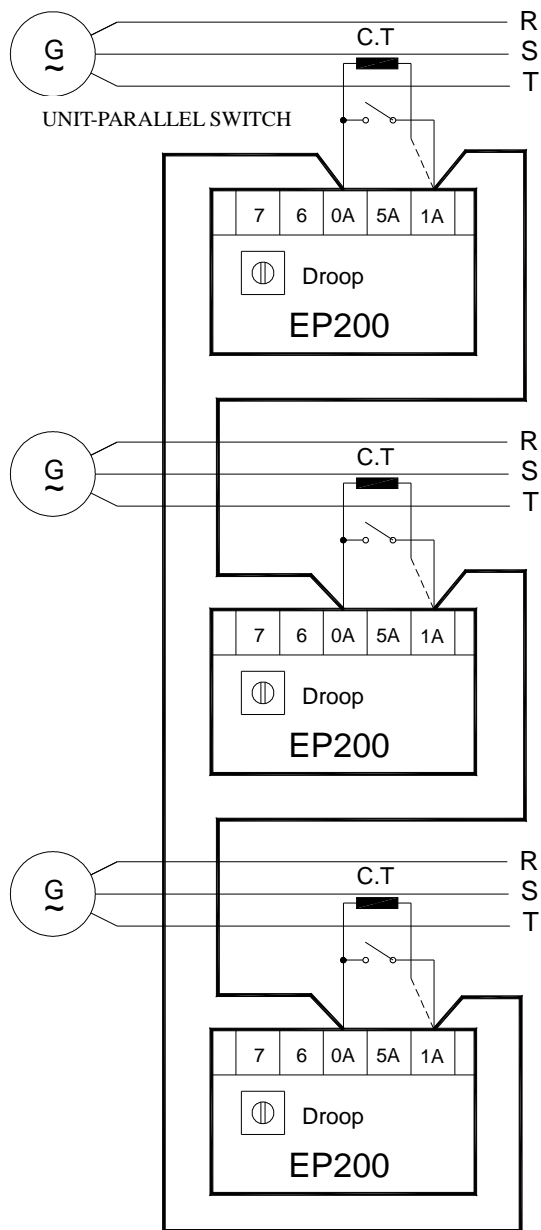


Figure 3 C.T 1A Interconnection Diagram

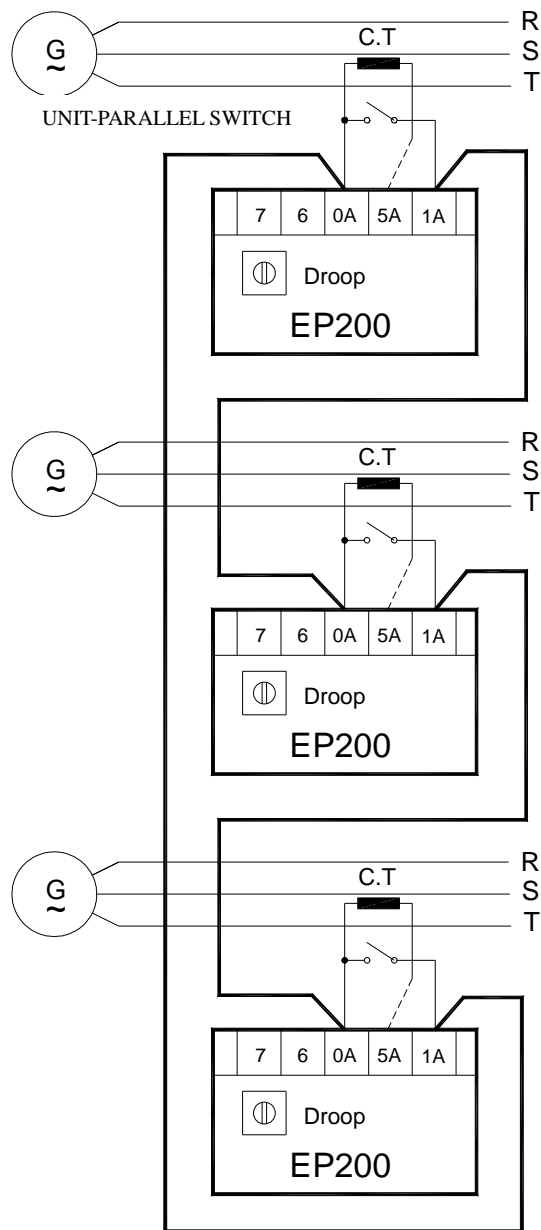


Figure 4 C.T 5A Interconnection Diagram