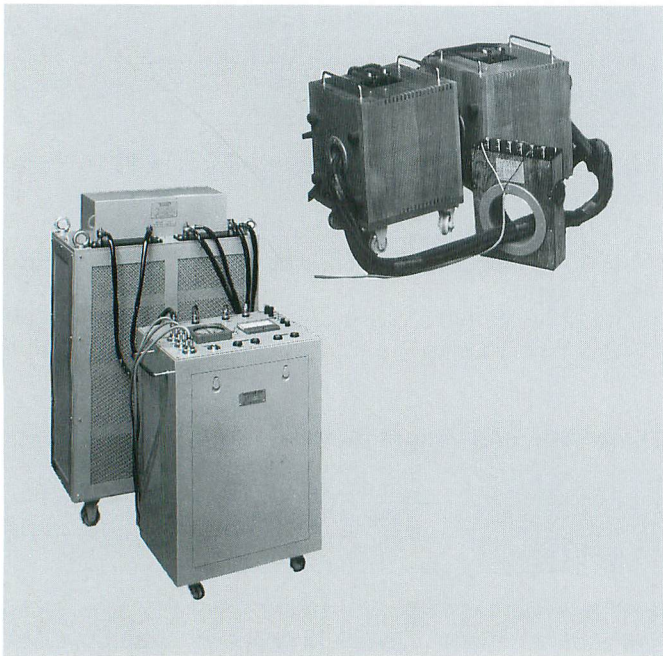


# Heavy Current Test

## Primary Injection Test Set : Model HCR-5040B



**Model HCR-5040B**

### Constitution of model HCR-5040B

- Operation Unit 1
- Current Regulator 1
- Step-down Transformers 2
- Current Transformer 1
- Lead wires 1 set

Model HCR-5040B consists of five units, Operation unit, Current regulator, Current transformer model CT-14 and two step-down transformer model DTK-5020 which are connected in series to increase the output voltage. The lead wires for 5000 A are supplied with this test set.

The test set provides enough capacity, and the primary injection test for protective relaying system can be proceeded from the primary side of the current transformer including circuit breaker.

### Rating of each unit

#### Operation unit:

Power supply	1 $\phi$ 440 V, 50/60 Hz
Ammeter	AC 6 A, 1.5 class
Timer	0-999.9999 sec.

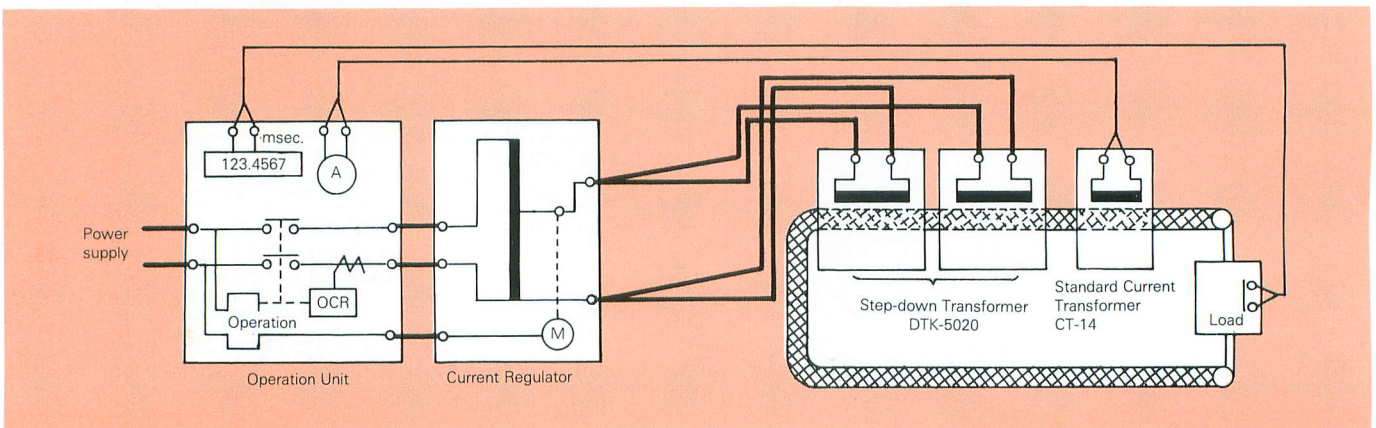
#### Current regulator:

Input voltage	1 $\phi$ 440 V
Output voltage	0-440 V
Capacity	40 kVA for 10 min.
Operation	motor-driven

#### Step-down transformer (2 sets) model DTK-5020 :

Primary voltage	1 $\phi$ 400 V
Sec. voltage	8 V
Sec. current	5000 A
Capacity	40 kVA, 10 min. duty

### Connections between four units : (for output 5000 A with 8 V)



Heavy current for primary injection test is generated by using Model HCR-5040B as shown in the above connection diagram.

Adjustment of heavy current is by motor-driven which is operated by the switch on Operation Unit.

Two Step-down transformers are connected in parallel at the primary coils and are connected in series at the secondary coil, in this case, the lead wire with 750 mm<sup>2</sup> works as the secondary coil which passes through two holes of Step-down transformers. The load under test is connected at the extremities of this

lead wire. When connecting the lead wire to the load, if the lead wire makes a loop, it causes high impedance drop in output voltage because of the large current, so that the lead wire should be twisted to reduce the impedance of the secondary side.

When a current transformer and an over-current relay are included, the over all test can be carried on, that is, the polarity check of the current transformer and the operating time of relay including operation of over current circuit breaker are carried out.