

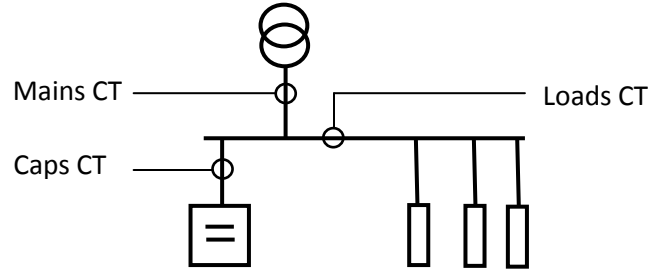
How to perform L C M Test

1. Set the system to Manual Mode: press F1 Mode → highlight Manual → press F3 Select. Now the system is in stand by mode, all groups are disconnected.

```

1 2 2 SCAN
ON

-----
SELECT OPERATION MODE
-----
Automatic (PF=99.0%)
Manual
-----
Perform System Test
  
```



```

CANCEL SELECT ▲ ▼
  
```

2. Go to LCM Total KVAR Meters: press F3 Menu → highlight L C M Combined → press F3 Enter → highlight Total KVAR meters → press F3 Enter. The LCM Total KVAR meters screen appears.

```

1 2 2 SCAN
ON

-----
SELECT MENU
-----
Main feeder readings
Load center readings
Cap. system readings
LCM combined
-----
System Information
System Setup
  
```

```

1 2 2 SCAN
ON

-----
MAIN MENU
-----
Average Line Currents
Total kVAR meters
Total kVA meters
Total PF meters
Maximum Currents THD
  
```

```

HELP CANCEL ENTER ▲ ▼
  
```

```

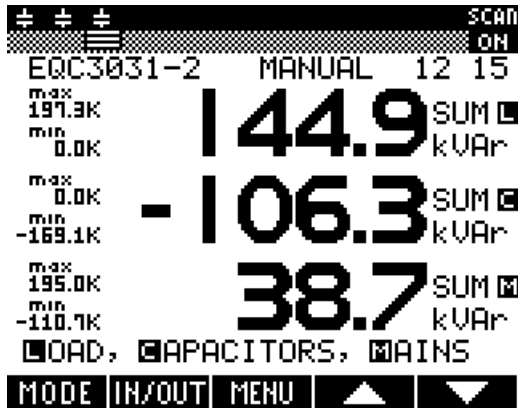
CANCEL ENTER ▲ ▼
  
```

```

≡ ≡ ≡ SCAN
ON
EQC3031-2 MANUAL 12 15
max 195.3K 142.2 SUM
min 0.0K 0.0 kVAR
max 0.0K 0.0 SUM
min -169.1K 0.0 kVAR
max 195.0K 142.2 SUM
min -110.7K 0.0 kVAR
LOAD, CAPACITORS, MAINS
MODE IN/OUT MENU ▲ ▼
  
```

Total KVAR meters screen when all groups are disconnected

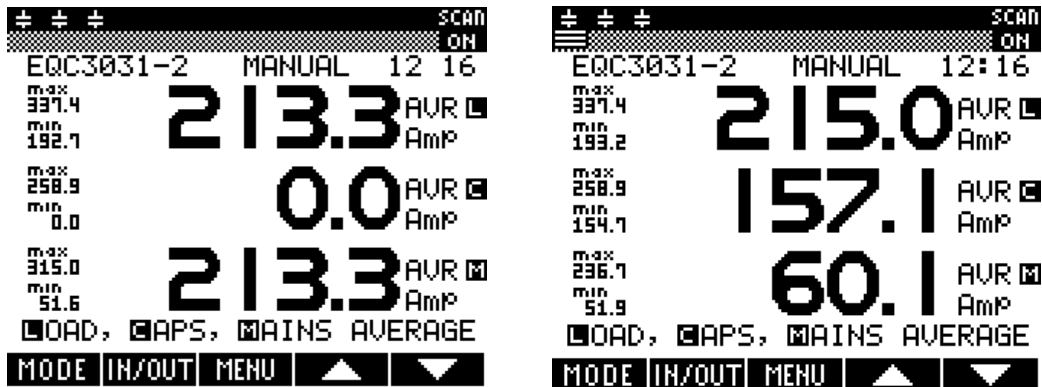
3. In Total KVAR meters screen when all groups are disconnected
 - The Capacitors section should be Zero.
 - The Mains section and the Load section should show very similar values.
4. Insert one group manually: press and hold F2 IN/OUT and press F4 IN.
Now the smallest group is connected.



5. In Total KVAR meters screen when a group is connected:
 - The load value should stay almost the same as before.
 - The capacitors value should show the KVAR value of the connected group with a minus sign (-106.3 in the picture).
 - The mains Value should be approximately the Load value + the capacitor value ($144.9 + (-106.3) = 38.6 \approx 38.7$)
6. If the results of this test are not as described in 3. And 4.
 - The system's CT's are not connected correctly.
 - The polarity of some CT's is reversed.
 - The CT ratio in the system setup is not correct.
 - Or combination of the above mentioned.

7. It might help to view the Average Line Currents LCM screen: Press F3 Menu → highlight L C M Combined → press F3 Enter → highlight Average Line Currents → press F3 Enter.

The LCM Average Line Currents screen appears.



8. In this screen in standby mode (all groups disconnected) we can see:
 - The measured current in the mains and load is as we expect it to be
 - The capacitors current should be zero.
9. In this screen with a group connected we expect.
 - The Load value should stay almost the same.
 - The capacitors value should be as expected from this group.
 - The mains value should be decreased substantially.
10. From these screens we can learn if the CT ratio is not correct and by what factor.