Brief Instruction System Modifications and Extensions
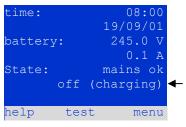## microControl *plus*

1 Modifications or extensions of your microControl *plus* system

Shut down the system prior to all modifications and extensions. Afterwards it has to be made ready for operation again. The necessary steps are shown below.

2 Shutting down the system

1. Switch the system to charging mode (operation mode switch (9) to position "0")
   Note: Check that the LC-display (8) shows "charging mode".
2. Disconnect the system from mains (mains switch (3) to position "0")
3. Remove battery fuses F2/F3/F4 (6)
4. Remove mains fuse F1 (5)
5. De-energise the system and protect it against unintentional restart

```
time:              08:00
                19/09/01
battery:         245.0 V
                   0.1 A
State:          mains ok
        off (charging)  ←

help      test      menu
```
Status "charging mode" (arrow)
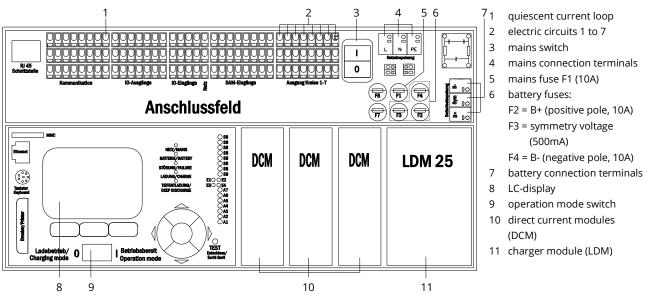
3 Modifications/extensions/maintenance

You can now start working on the de-energised system and e.g. connect the BUS-line of a remote control unit (MCT-15 or MCT-15S) to the terminals of the RS485-interface (for exact pin assignment see connection diagram).

4 Restart the system

1. Remove restart protection and energise the system
2. Insert battery fuses F2/F3/F4 (6)
3. Insert mains fuses F1 (5)
4. Connect the system to mains (mains switch (3) to position "1")

   The system starts booting. This process can take several minutes. **Caution:** Do not shut down the system during the booting process**!**

5. Switch the system to "ready to operate" (operation mode switch (9) to position "1")

1. quiescent current loop
2. electric circuits 1 to 7
3. mains switch
4. mains connection terminals
5. mains fuse F1 (10A)
6. battery fuses:
   F2 = B+ (positive pole, 10A)
   F3 = symmetry voltage (500mA)
   F4 = B- (negative pole, 10A)
7. battery connection terminals
8. LC-display
9. operation mode switch
10. direct current modules (DCM)
11. charger module (LDM)

Figure 1: View of the opened microControl *plus* system