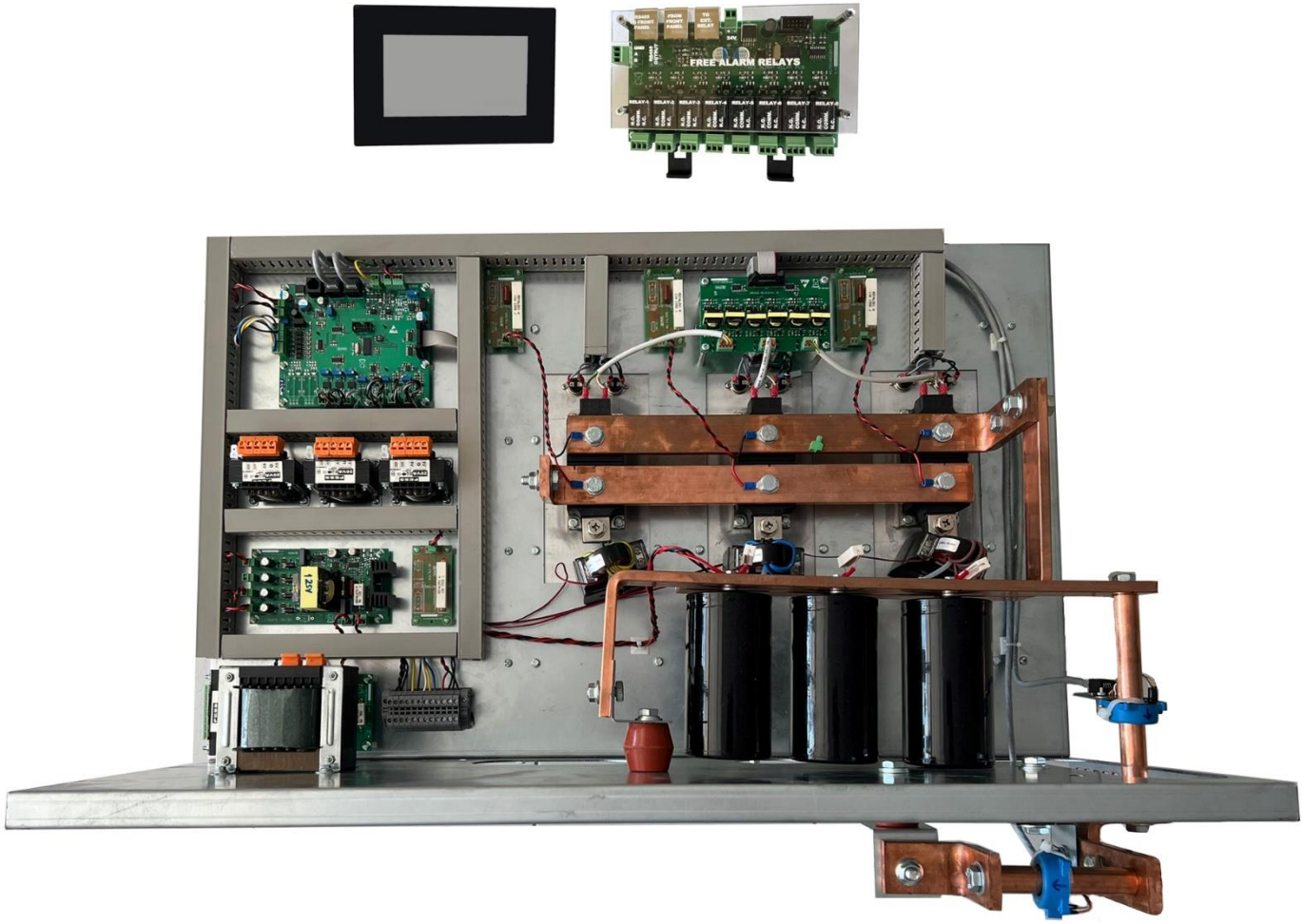
Quick Installation Guide for PESS Open Frame Devices



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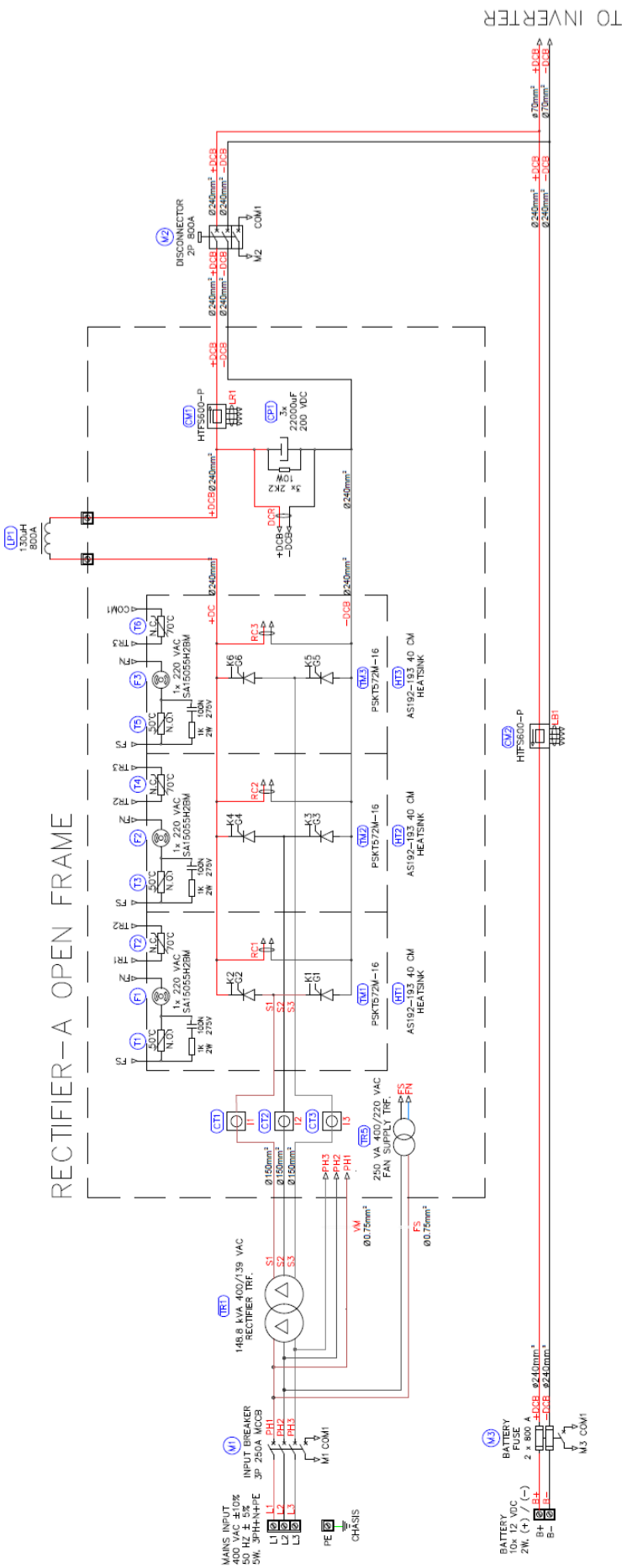
1. Table for Required Component

Components Supplied From PESS	Other Required Components
Open frame rectifier device	Rectifier transformer
Touch Screen Panel	LC Filter
Free alarm relay board	Circuit breaker
	Rectifier cabinet
	Cabinet cooling and lightining (optional)


TO INVERTER
RECTIFIER-A OPEN FRAME
DISCONNECTOR 2P 800A
HTF5600-P
3x 22000uF 200 VDC
1x 220 VAC SA15055H28M
PSKT572M-16
AS192-193 40 CM HEATSINK
250 VA 400/220 VAC FAN SUPPLY TRF.
148.8 kVA 400/139 VAC RECTIFIER TRF.
INPUT BREAKER 3P 250A MCCB
BATTERY FUSE 2 x 800 A
MAINS INPUT 400 VAC ±10% 50 HZ ± 5% 5W, 3PH+N+PE
BATTERY 10x 12 VDC 2W, (+) / (-)

2. Connection Points

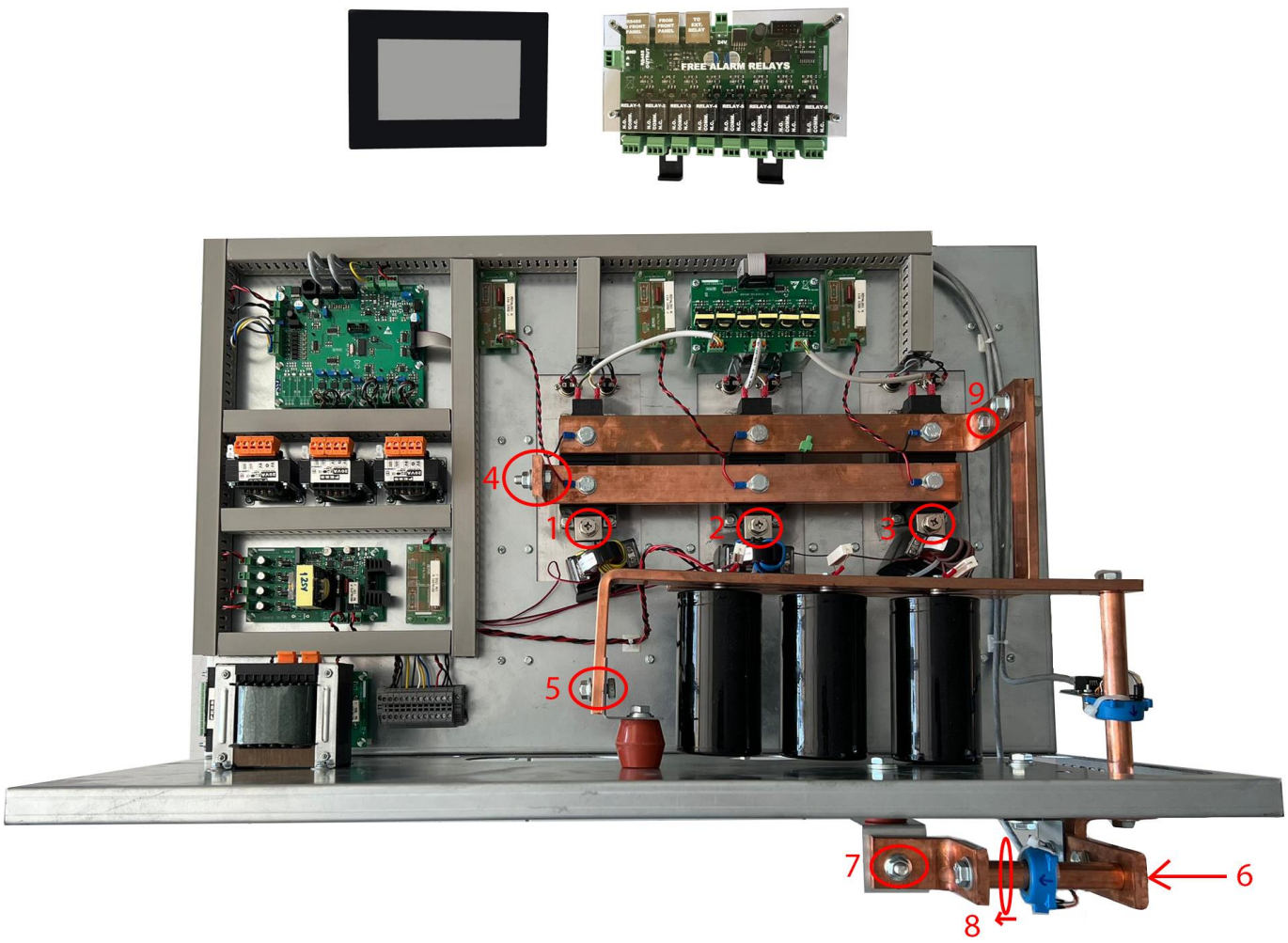


Figure 1 High Power Cable Connection Points

Figure 2 Low Power Signal Cable Connection Points

3. Cabling Description

Never energize the device before reading the turn-on process in heading 4. Otherwise, it may cause permanent damage !

Figure 1 shows high power cable connection points. Terminal 1, Terminal 2 and Terminal 3 marked with a red circle in Figure 1 are high power AC input cable of the rectifier which coming from rectifier transformer secondary terminals.

- Don't forget pass the AC input cables into the current transformers.
- Avoid damaging semiconductor modules when tightening the bolts.
- Try to keep cables as short as possible;
- Pay attention to the phase sequence for the rectifier to work correctly. Incorrect phase sequence causes malfunction of the rectifier and permanent damage to the device.

  For this reason, correct phase sequence indicated at the below.

  Terminal 3 -> Phase A (L1)

  Terminal 2 -> Phase B (L2)

  Terminal 1 -> Phase C(L3)

Rectifier output inductance must be connected to terminal 4 and terminal 5 seen in figure 1.

- **The rectifier inductance should be connected after checking the phase sequence and ensuring that the rectifier is working correctly. Otherwise, DC bus capacitors may be damaged as a result of incorrect triggering.**

When connecting the rectifier to any load

- Terminal 6 (+) and Terminal 9 (-) should be used.

When connecting the battery to the rectifier

- Terminal 7 (+) and Terminal 9 (-) should be used.

The red circle number 8 in Figure 1 shows the location and direction where the battery current module of the other rectifier should be connected in case of parallel operation.

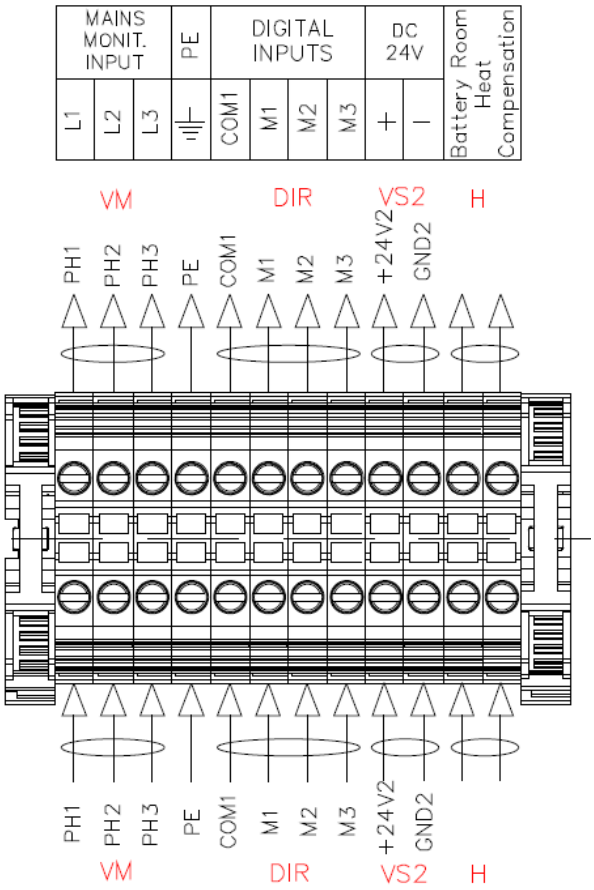


Figure 3 Rectifier Electronic Control Terminal Pinout

4. Turn-On Process

Before the device is put into operation, **disconnect the rectifier inductance** that must be connected between terminal 4 and terminal 5. Then, with the help of an oscilloscope, **make sure that the voltage signal on the DC bus and the thyristor triggers are correct**.

You should also see the DC voltage gradually increase due to the soft start.

Once the voltage waveform is correct and the soft start effect is seen, you can cut off the power of the device, connect the rectifier inductance and start using the device.