

15. Manual By-Pass

Manual By-Pass has to be operated by trained people only.

When system is in manual by-pass the load is subjected to mains voltage without active filtering. Output alarm is activated when system is in manual by-pass.

The Manual By-Pass cannot be operated remotely.

The Manual By-Pass can be integrated into the CE+T cabinet if requested at time of order. A Manual By-Pass purchased separately must comply with the instructions within section 15.2, page 43

15.1 Pre-requisites

Commercial AC power must be present, and the inverter must be synchronized with it, before operating MBP. The upstream commercial breaker must be correctly sized to accept the overload, and if the AC is supplied by a Gen-set, the minimal required power will be twice the nominal power of the inverter.

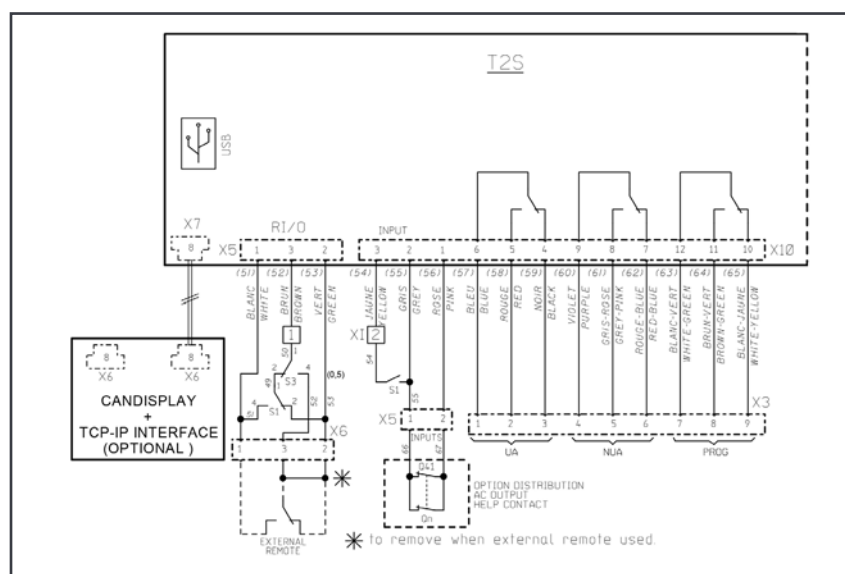
The inverter may be overloaded during the MBP procedure, depending on voltage network and output. Inverter voltage setting: To reduce the impact of an overload, the inverter power and current will be reduced from 150% to nominal value.

The by-pass switch disconnects all AC voltage on the shelves but has no effect on the DC feeding the inverter and the remote alarm terminal.

15.2 For those who integrate the MBP into their cabinet

The schematic in section 21.3, page 54 gives a global view of single phase and 3 phase TSI inverter systems with Manual By-Pass.

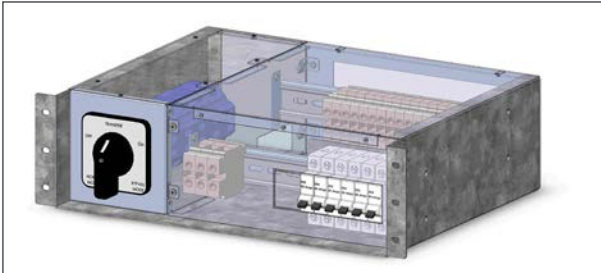
1. It is mandatory to wire auxiliary contacts S1, S3 from By Pass switches to digital input 2 and remote on/off as indicated in the following schematic.



2. The configuration file of the T2S with SW V3 or above shall have the appropriate text written in the parameter :
;901; ;Digital input 1 label; ; MBP ENGAGED; ;;

15.2.1 Normal to By-Pass

1. Turn switch to ON, passing through Intermediate.
2. Switch DC OFF.



15.2.2 By-Pass to Normal

1. Switch DC ON.
2. Turn switch to INTERMEDIATE (mid position).
3. PAUSE: Wait until the inverter modules reach full operation and have synchronized (30-60 seconds).
4. Complete turn to OFF.

15.3 CE+T 20 kVA Manual By-Pass and termination box

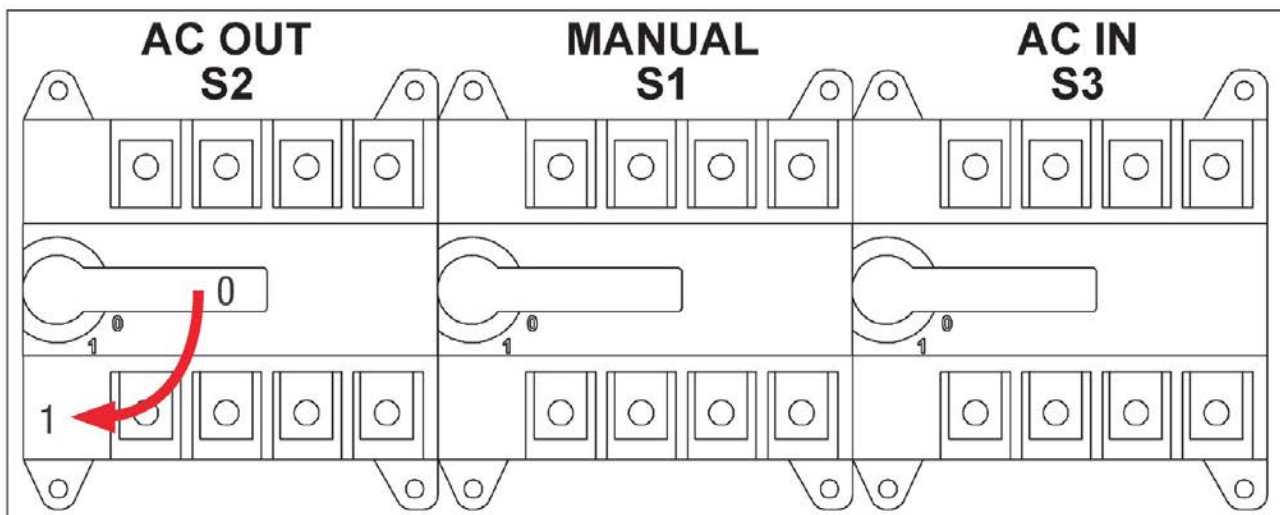
The manual by pass operates via three individual switches (S2, S1, and S3). It creates a by-pass from the mains input to the output AC distribution. Inverter modules are by-passed, allowing disconnection without impacting the load.

15.3.1 Normal to By-Pass

1. S1: 0 to 1
2. S2: 1 to 0
3. S3: 1 to 0
4. DC OFF

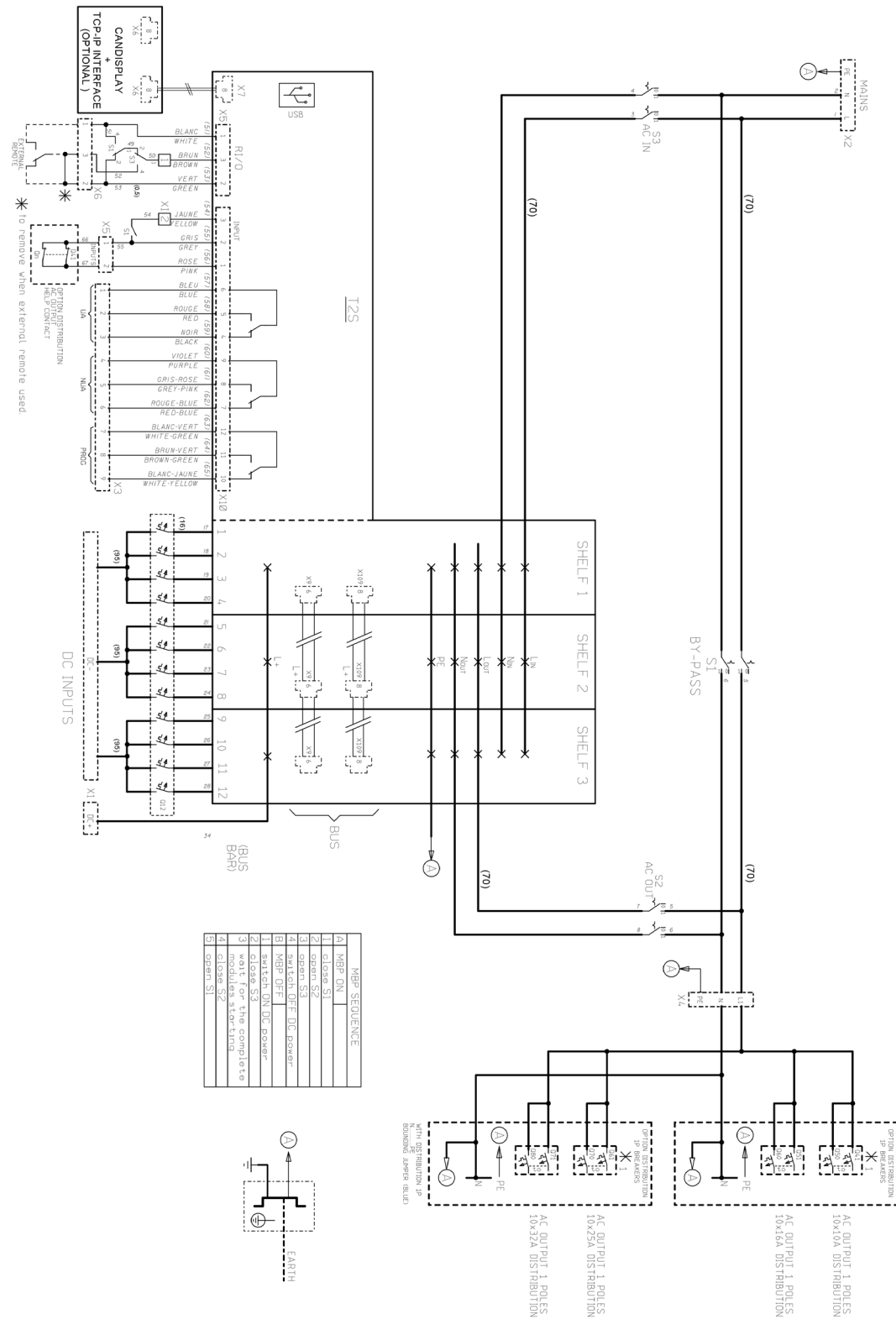
15.3.2 By-Pass to Normal

1. DC ON
2. S3: 0 to 1
3. PAUSE, wait until the inverter modules reach full operation (30-60 seconds)
4. S2: 0 to 1
5. S1: 1 to 0

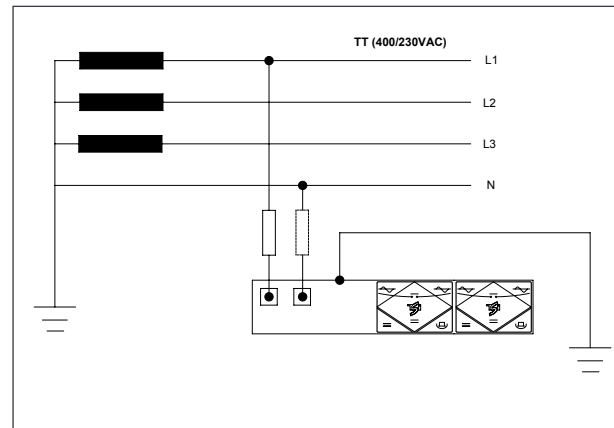
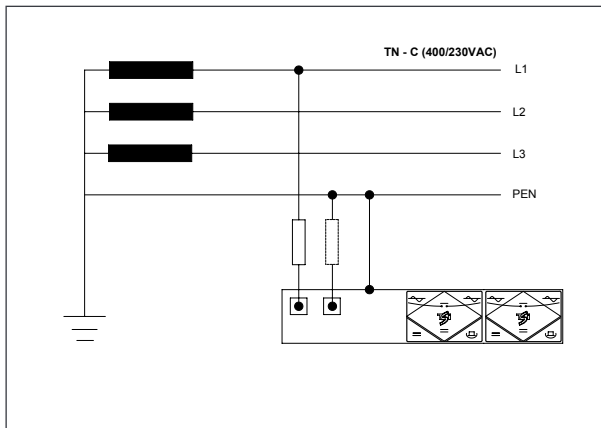
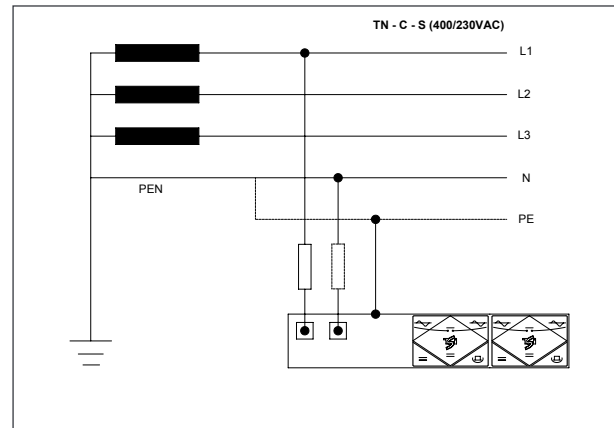
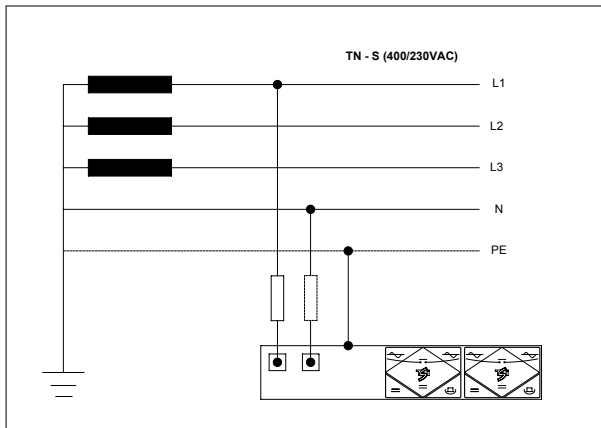




21.3 Single phase circuit diagram with MBP



21.5 Mains connection, single phase



21.6 Mains connection, three phase

