Manual Backup Switch for Fronius Primo GEN24 Plus

Disclaimer

This device should only be fitted by a suitably qualified competent person in accordance with relevant local safety standards and the manufacturer's installation instructions.

From time to time manufacturers may change the specifications of their products without notification. While Wind & Sun take all reasonable steps to ensure this document is up to date, it is the responsibility of the installer to verify the devices function as intended as part of the commissioning process.

Function overview

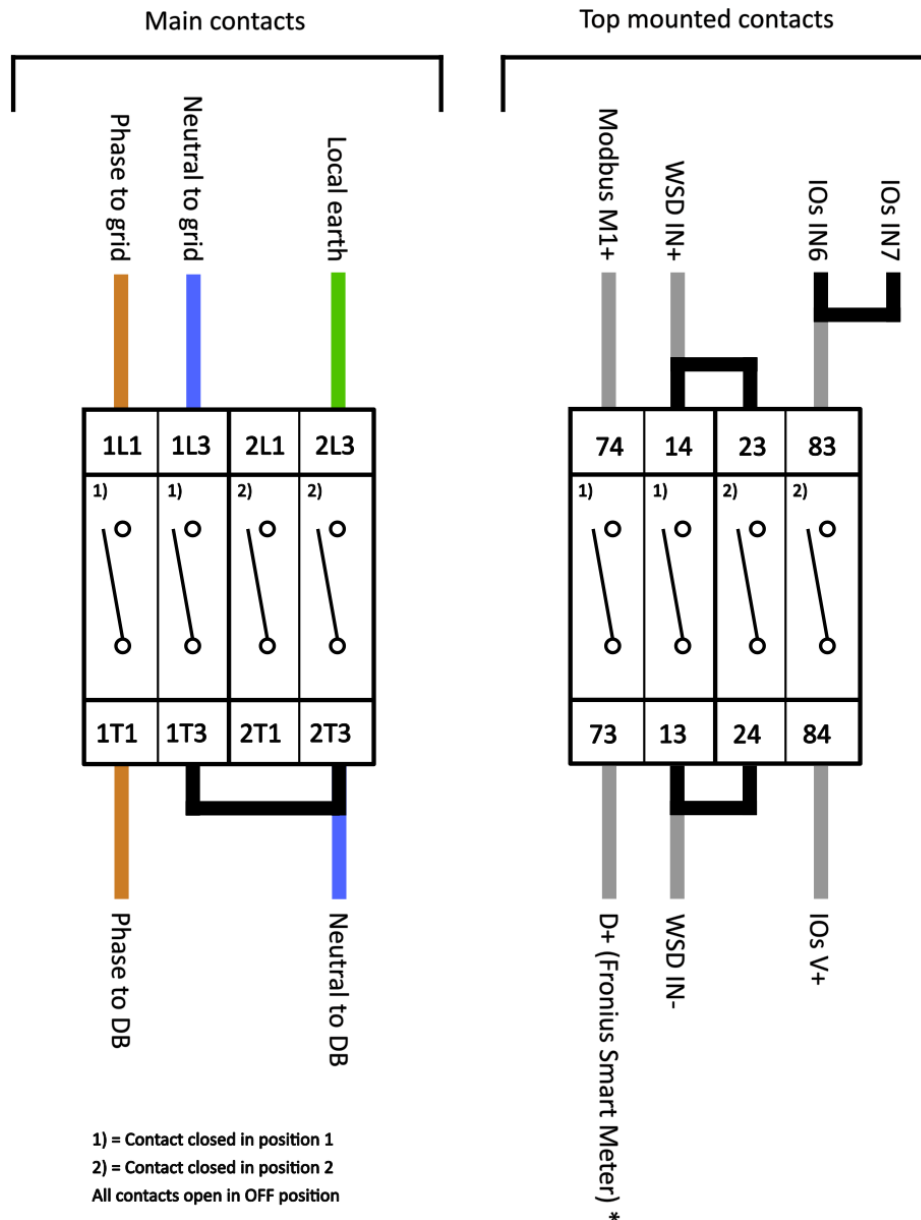When installed correctly the three switch positions function as follows:

- Position 1 - Normal grid connected operation.

- Centre OFF - Distribution board disconnected from grid and inverter shut down.

- Position 2 - Backup power mode.

For a full explanation of manual backup functionality, consult the Fronius Primo GEN24 Plus operating instructions (Backup power variant - Full Backup > Manual switch to backup power 1-pin separation, e.g. Australia / 2-pin separation, e.g. Germany).

Switch wiring overview

The switch is shipped with jumpers between 1L1 / 2L1 and 1L3 / 2L3, these must be removed prior to installation. One of these can be repurposed as the jumper between 1T3 / 2T3 shown below. The jumper wires for the top mounted contacts are not included.

1) = Contact closed in position 1
2) = Contact closed in position 2
All contacts open in OFF position

* Fronius Smart Meter D- connects to Modbus M1- on inverter. M1+ and M1- cable should be a twisted pair.

For a full system diagram, refer to the "Manual switch to backup power 2-pin separation" diagram in the circuit diagrams section of the Fronius Primo GEN24 Plus operating instructions. Note that this switch layout differs from the switch used in the Fronius diagram.

Inverter communication area

The below diagram shows the layout of the relevant inverter communication connections in the Fronius Primo GEN24 Plus. This is included for reference purposes, for a full explanation of the connections refer to the inverters operating instructions (General information > Control elements and connections > Data communication area).

WSD

IN-   IN+
OUT-   OUT+

Factory default

WSD > wired disconnection of grid feed-in

Modbus

GND	V+
M0-	M0+
SHIELD	SHIELD
M1-	M1+
GND	V+

RS485 (0/1) → Fronius Smart Meter, Ohmpilot, Battery (only GEN24), Sunspec, Interface, ...

IOs

V+ V+ IO0 IO2 IO4* IN6* IN8* IN10

GND GND IO1 IO3 IO5* IN7* IN9* IN11

I/Os → Load Management, Demand Respone Mode (DRM)*, Back-up power, IO control, ...

* Demand Response Mode (DRM)
IO4 = RG0 (Ref GEN/0)
IO5 = CL0 (COM LOAD/0)
IN6 = 1/5
IN7 = 2/6
IN8 = 3/7
IN9 = 4/8