



Power Supply controller – 6 units DIN rail

Functional characteristics

FD-BC01 is a main power and battery control module belonging to the Orangelink family, with the following characteristics:

- ◆ Designed for mounting on DIN rails
- ◆ Capable of delivering 12V 5A to the field
- ◆ Battery disconnection at 10V for overload protection
- ◆ Output can be connected in parallel with other power supplies
- ◆ Capable of monitoring all the electrical parameters of the battery, including battery efficiency tests
- ◆ Capable of routing up to 64 devices on RS485
- ◆ Visual On/Off indicator for main power supply
- ◆ Fault and/or overload indicator
- ◆ Connection to FD-BUS through an RJ45 connection
- ◆ Predisposition for branching of the FD-BUS data connection between pairs of connectors by means of jumpers.

Protection

The equipment is protected against the following events:

- ◆ polarity reversal on the cables (RJ45) connecting to the FD-BUS
- ◆ voltage surge in the power supply
- ◆ battery short circuit

Modes of Operation

FD-BC01 can supply power to up to 4 Orangelink system backbones.

- ◆ Each FD-BUS-A/B and FD-BUS C/D pair can be set individually to bypass or open mode.
- ◆ In bypass mode, the data lines of the FD-BUS pair are interconnected so as to form a single backbone.
- ◆ In open mode, the data lines of the FD-BUS pair are separated so as to form 2 independent backbones.


Visual indicators

The FD-BC01 can give signals to the user by the following means:

- ◆ red LED
- ◆ yellow LED
- ◆ green LED
- ◆ buzzer

The most common indications are as follows:

- ◆ Green LED, lit steadily when main power is On
- ◆ Green LED, flashing when main power is Off
- ◆ Red LED, flashing in the event of overload (overvoltage, intensive charge)
- ◆ Red LED, lit steadily in the event of a fault (no voltage at output) or if power is about to go off.
- ◆ Yellow LED, flashing during communication (one flash for each message sent)
- ◆ Active buzzer for indicating a battery fault

Parameter	Description
Dimensions	105x85x55mm (6 DIN units)
Weight	250g
Mounting	On DIN rail
Power supply: input voltage	15V _{DC} +/- 3%
Alimentazione: optoisolated section FD-BUS	Da 8V _{DC} a 14V _{DC} 0.8 mA nominali (a 14V _{DC})
Internal consumption	35mA rated 55mA max
Consumption for battery charging	Charging limits can be set by means of jumpers from 0.6A (no jumper inserted) to 4.9A (all jumpers inserted) in steps of 1.1A (each jumper inserted adds 1.1A to the 0.6A that constitute the minimum charging current)
Fuses	Battery fuse: 8A 250V T (6x36)
Connections	Indirect terminal blocks for cables up to AWG12 <ul style="list-style-type: none"> • DC/AC power input • Battery • Power output Connections for RJ45 cables Connectors for FD-BUS (2 RJ45s in parallel)
Output voltage	From 13V _{DC} to 14.5V _{DC} (with 15V supply voltage) From 10V _{DC} to 13V _{DC} (operating on battery)
Output current	8A max (battery fuse limit)
Tamper input	Clamp (removable) for tampering with cabinet (dry contact) Voltage applied: 0V _{DC} to 30V _{DC} Response threshold: 3V _{DC} Current supplied: 0.5 mA
Operating temperature	0 ↔ 40°C (ventilation by natural convection)
Relative humidity	Up to 95% without condensation
Address selector	From 0 to 63 through binary coding on 6 DIP switches
Other functions	<ul style="list-style-type: none"> • Battery short circuit protection • Battery overload protection at 10V • Thermal protection for intensive battery charging • Battery charging current limitation (value set by means of jumpers) • Battery test function to check effectiveness • Possibility of connecting the outputs of several power supply units in parallel • Remote monitoring
Compliance	 Directives 89/336/EEC, 93/68/EEC, 92/31/EEC EN60950, EN 55022, EN 55024