



Description

The Power-One Power Controller System (PCS) provides comprehensive monitoring and control for a broad range of Power-One's DC power systems. This digital controller monitors total system conditions including DC voltage, rectifier current, rectifier temperature, system capacity, battery parameters and circuit breaker status.

The PCS enables data storage of system configuration information such as battery type, installation date and system commission date. In addition, the PCS is capable of monitoring up to 128 rectifiers and 128 sub-controllers within a power system. Visual notification of alarm and warning conditions are indicated by front panel LEDs, while descriptions of the alarms are provided through an LCD or can optionally be accessed remotely using a PC modem, or over a network using an optional Network Interface (PNI) module.

To meet individual site requirements, the PCS contains a logic operator that can be programmed to monitor and control specified requirements. This allows actions to be set, alarms to be triggered and outputs to be activated based on internal and external signal monitoring, comparing and processing.

Features

User controls and interfaces:

- Simple menu-guided operation using front panel mounted pushbuttons and an LCD
- User-selectable alarm parameters
- 40 event data logging
- Password controlled environment
- Multiple language options
- RS232 Interface and Form "C" dry alarm contacts

Intelligent battery management:

- Temperature compensation with programmable compensation factor
- Automatic and manual load testing
- Battery voltage and symmetry monitoring
- Capacity testing
- Low voltage disconnect
- Monthly data logging

PCS

Controller

Input

| | |
|----------------|--------------------------------|
| Voltage | 18-72V DC |
| Current | <200 mA at 48V, <400 mA at 24V |

Interface

| | |
|-------------------------------|---|
| Display | 2x20 character LCD with backlight |
| Internal Communication | RS485 Data Bus for communication with a maximum of 128 rectifiers and 128 sub-controllers |
| External Communication | RS232 Serial interface for remote control from a PC with PowCom software |
| Indications | Green LED - Power ON Yellow LED - System warning message Red LED - System failure message |
| Controls | Four pushbutton controls |
| Signal Collection | Wide range of interface units with analog and digital input/outputs |
| Software | Site upgradeable by EEPROM flash |
| Language | Multiple language options |

Alarms

| | | |
|---|---|--|
| Alarm History | The last 40 events are saved and include a time and date stamp. | |
| Alarm Contacts | 6 potential free change-over alarm contacts. Two open collector outputs for LVD operation. | |
| Alarms | High System Voltage Low System Voltage Load/ Battery Disc. Mains Error Distribution Fuse Failure Battery Failure Module Failure Battery Temp. Alarm Symmetry Fault Battery Fuse Failure High Load Battery Fuse Disc. Urgent Module Failure Communication Failure Partial Load Disc. | 1* 2* 4* 3* 4* 6* 5* 6* 6* 4* 5* 5* 4* 5* 4* |
| * All alarms are indicated using an LED and displayed in the LCD. The numbers represent an example of alarm routing. Sixteen additional alarms are available and are configurable by changing the PCS EEPROM. | | |

Other Technical Data

| | | |
|------------------------------|---|---|
| Dimensions (WxHxD) | 508 x 133 x 57mm (20 x 5.25 x 2.25in.) | |
| Weight | 1.6kg (3.5lbs.) | |
| Operating Temperature | -25 to +55°C | |
| Storage Temperature | -50 to +85°C | |
| Environment | Storage: Transport: Operation: | ETS 300 019-2-1 ETS 300 019-2-2 ETS 300 019-2-3 |

Battery

| | |
|--|---|
| Battery Disconnection | Allows voltage controlled disconnection of batteries. |
| Boost Charging | Manual time controlled or automatic boost charging with adjustable time and voltage levels. |
| Battery Test | Automatic or manual testing of batteries up to four times per year with a 10 test memory. Variables include: test duration, end voltage, and amount of Ah's to be discharged during test. |
| Symmetry Measurement | Optional tool that measures batteries for early detection of thermal runaway. Allows for separate measurements of up to 12 parallel battery branches, each divided into four blocks. |
| Temperature Compensation Charging | Allows continuous adjustment of output voltage according to battery temperature. Features include adjustable compensation factor and separate thresholds for high temperature alarms. |
| PLD | Optional feature that allows voltage or time controlled disconnection of non-essential load. |
| Enhanced Battery Monitoring | Monthly logging of essential battery parameters, including temperature, temp. hours, current, charging voltage, and symmetry voltage. Parameters are stored for 5 years. |

Note: All specifications are subject to change without notification.