Smartpack Controller

Monitoring and Control Unit

Powerful and cost effective control module

The Smartpack controller is a monitoring and control unit used as the vital nerve center of the DC power plant. You operate the system from the elegant front panel, using three front keys and the LCD-display. They represent the main interface between you and the system.

SMARTPACK CONTROLLER

MONITORING AND CONTROL UNIT

242100.100.DS3- rev10

APPLICATIONS

CAN bus communication

Smartpack utilizes a digital interface architecture (CAN bus communication). It allows the unit to support dedicated communication channel with each rectifier, providing for increased number of functions and greater flexibility.

Modular design

The Smartpack is extremely flexible in its expandability. Additional units connected to the CAN bus can be added to provide extended functionality and increased number of measuring points. Accordingly, system components can be set up and upgraded to meet the demand of any tailor-made power solution.

PRODUCT DESCRIPTION

The Smartpack controller is a powerful and cost-effective module, developed for monitoring and controlling a wide range of Eltek's DC power supply systems, such as Powerpack, Flatpack2 and Minipack DC power systems.

You can also operate the system locally via a PC using the PowerSuite PC application, or remotely via modem, Ethernet and the Web. The module then utilizes the USB- or RS-232 ports to interface with a local PC, SNMP or Web adapters.

The Smartpack controllers are CE, UL and NEBS tested as part of systems approvals.

KEY FEATURES

- **FRONT PANEL LCD AND BUTTONS**
  For on-site service without PC. (Not on Basic Slave model)

- **USB- OR RS-232 INTERFACE**
  For PC connection locally or remote monitoring and control via modem, Ethernet, web or SNMP.

- **INPUT/OUTPUT MONITORING**
  -6/2 user programmable relay outputs for traditional remote monitoring
  -6/2 user programmable inputs for monitoring of other equipment on site

- **BATTERY FEATURES**
  - Battery monitoring and testing without site attendance
  - Temperature compensated charging for increased battery lifetime
  - Battery lifetime indication

- **SECURITY**
  Password protected operator access levels

- **ALARM/EVENT**
  log with time and date

- **SOFTWARE**
  Windows-based PC communication

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SMARTPACK CONTROLLER

REMOTE MONITORING AND CONTROL

From a PC running Powersuite	A Windows-based communication program installed on a remote computer, the system can be monitored and controlled via modem or Ethernet network
From a PC running web-browser	The system can be monitored and controlled via Ethernet network
From an NMS via Ethernet (SNMP)	With an SNMP agent connected to the Smartpack, the system can be monitored and controlled from a Network Management System (NMS) through Ethernet on Simple Network Management Protocol (SNMP)
Using alarm relay (voltage free contacts)	6/2 internal failsafe alarm relays provide voltage free contacts that can be connected to equipment used for traditional alarm monitoring

LOCAL MONITORING AND CONTROL

From a PC running PowerSuite	A Windows-based communication software, can also communicate with the Smartpack through an USB serial or RS-232 cable
LCD and three keypads for local operations	If any alarm (major or minor) is activated, a (red or yellow) LED is lit in the front panel, the alarm text appears in the LCD and the corresponding alarm relay is activated
	In normal operation, the front LCD will display the output voltage, battery current, load current and charge mode. (Not on Basic Slave version)

FEATURES — AVAILABLE ALARMS

FEATURES	AVAILABLE ALARMS
System	
Output Voltage Measurement	Mains Failure (individual phases)
Total Load Current Measurement	Digital Inputs (programmable names)
Load/Battery Disconnect	Load Disconnect (voltage or timer)
Alarm Level Settings (major / minor)	Load Fuse
Alarm Log (up to 1000 events, 10k on HW v2)	Load Current
Real Time Clock with Battery Backup	
Site Text/ID	
Test of Relay Outputs	
Voltage Level setup	
Data logging (up to 7000 data points)	
Energy logging (hourly, daily and weekly)	
Battery	
Battery Current Measurement	High Battery voltage
Battery Temperature Measurement (optional)	Low Battery voltage
Battery Testing (acc. to discharge table or set time limit)	High Battery temperature
Battery Test Information (10 latest tests)	Low Battery temperature
Setup of Battery Data	Battery Capacity
Battery shunt setup	Battery Disconnect
Battery quality indication	Battery Fuse
Battery Boost Charging	Symmetry Failure
Battery Cable Voltage Drop Compensation	Battery quality indication
Temperature Compensated Charging	Battery discharge current
Protection against Temperature Probe Failure	
Rectifier	
Available information about each rectifier, e.g. serial number, version, internal temperature	Rectifier Failure
Individual Rectifier Current Measurement	Critical Rectifier Failure (> 1, programmable)
Individual Rectifier Input Voltage	Rectifier Capacity w. programmable level
Efficiency Management	Rectifier Current Limit
	Rectifier Overvoltage Protection
	Rectifier Current
Generator and solar charger support	
Generator On/Off control signaling based on SOC monitoring for battery cycling applications, adjustable limits	
Time based, daily and/or monthly on/off signaling	
Prioritize power from solar charger when available	
Suppress solar charger warning during full panel shading	

SMARTPACK CONTROLLER

ADVICE

ELTEK
A Delta Group Company

SPECIFICATIONS

Input Voltage	18-75VDC, covering 24, 48 and 60 nominal systems voltages.
Power consumptions	4.5W max (stand alone – no CAN control nodes powered)
Dimensions (WxHxD)	109 x 44 (1U) x 140mm 4.3 x 1.7 x 5.5"

OPTIONAL CONTROL DEVICES/CAN NODES

Part No.	Description
242100.300	Battery Monitor
242100.301	Load Monitor
242100.304	I/O Monitor (Outdoor)
242100.200	Smartnode RS232/485

PART NUMBERS

Part No.	Description
242100.110	Smartpack Extended (6 + 6 I/O, 2 String Battery connection)
242100.111	Smartpack RS-232 front (RS-232, 6 + 6 I/O, 2 String Battery connection)
242100.118	Smartpack WEB/SNMP (Ethernet, 6 + 6 I/O, 1 String Battery connection)
242100.000	Smartpack Basic Slave (without display, buttons & internal power for distributed systems)

Specifications are subject to change without notice