



Smartnode

CAN node for modem call-back
SMS and protocol conversion

Intelligent protocol converter module

Not everyone speaks the same language; this is also true for networks. Smartnode with customized software can create protocols to suit any customer network.

Applications

Modem Call-back/SMS

With an analog modem or GSM modem the DC power system status and alarms can be communicated instantly to a traditional analog modem pool based monitoring system or to a mobile phone with an SMS message.

Custom monitoring networks

Not everyone speaks the same language; this is also true for networks. Smartnode with customized software can create protocols to suit any customer network.

Product Description

Smartnode is a control unit (CAN node) that can be used with Smartpack -based DC power solutions.

The unit allows communication with external equipment with proprietary protocols. SW for protocol conversion is developed on project basis.

Standard SW is developed with modem call-back and SMS (only with GSM modems) functionality when modem connected to RS-232 port.

Key Features

- ü RS-232 (9-pin D-SUB) interface in rear.
- ü RS-485 (RJ-45) interface at front.
- ü Plug-and-play with Smartpack.
- ü No local powering. Module is powered through CAN-bus from Smartpack and/or CAN power.
- ü Modem Call-back/SMS functionality
- ü Monitoring and communication with 3rd party equipment with proprietary protocols.
- ü Configuration and setup through PowerSuite PC SW.

Smartnode

Additional Technical Specifications

Communication Port Pin-out

RS-232 (9-pin D-SUB, female)

Pin	Signal	Pin	Signal
1		6	
2	TxD	7	CTS (Not used)
3	RxD	8	RTS (Not used)
4		9	
5	GND		

<Blank>: Not connected

RS-485 (RJ-45)

Pin	Signal	Pin	Signal
1		5	A
2		6	
3		7	
4	B	8	GND

<Blank>: Not connected

Available Protocols

ü MODBUS

An Eltek Valere developed MODBUS protocol is default available on the RS-485 port. Request document no. 2027380 for details/register list

ü Modem Call-back/SMS

An Eltek Valere developed protocol for communicating with external 3rd party modems is default available on the RS-232 port

ü Battery Cell Monitoring

A special protocol for "talking" to 3rd party Battery Cell monitoring equipment. The equipment monitors voltage, temperature and conductivity on battery cell (2V) level

ü COMLI

A telecom operator specified communication protocol

ü TEC

A telecom operator specified communication protocol

Modem Call-back/SMS Functionality

Call-back

- o ASCII data text
- o 5 Configurable phone numbers
- o Instant alarm dial-up
- o Interval dial-up (Configurable "I'm alive" message)
- o Selectable Alarm Groups for individual phone numbers
- o Re-dial when busy
- o Ffhskfhsd
- o Dial-up modem connect ion from PowerSuite PC SW is possible

SMS

- o GSM modem signal strength monitoring
- o Instant alarms on SMS (configurable through Alarm Groups)
- o Interval SMS (Configurable "I'm alive" message)
- o Selectable Alarm Groups for individual phone numbers
- o Status report request by SMS with automatic SMS reply

Modems and Init-strings

- o Default init-string for most common analogue modems
- o Advanced configuration options

Modem user guide and HAYES commands knowledge is necessary when setting up 3rd party modems to work with Smartnode.

Default: AT&FE0V1Q0S0=1

Example (Siemens MC35i GSM modem): AT+cmgf=1E0V1Q0S0=1

Available Software

Part No.	Description
402077.009 v01.00	Modem Call-back/SMS & MODBUS
402076.003 v0A.0V	Battery Cell monitoring & TEC
402077.009 v02.00	Modem Call-back/ SMS & MODBUS & COMLI

Software for Smartnode can only be uploaded through CAN port. FW Loader SW application and a USB -> CAN converter are needed.

Default SW on Smartnode (242100.200) is 402077.009. If needed the correct SW is uploaded by system test department during manufacturing of the DC power system.

Smartpack Part no. 242100.11x is needed with firmware version 2.03 or newer.

PowerSuite v2.3 is needed for configuration and setup

Specifications

Input Voltage	+/- 15 VDC (Distributed CAN bus voltage)
Max. CAN power consumption	300mA
Dimensions (WxHxD)	109 x 44 (1U) x 112 mm 4.3 x 1.7 x 4.4"

Specifications are subject to change without notice

242100.200.DS3 v3

Ordering Information

Part no.	Description
242100.200	Smartnode RS232 & RS485

