

## NRC50

### Powerful and expandable digital controller module for management of digital and analogue DC power systems

#### Key Features

##### • Technology

Advanced microprocessor technology with CAN bus system communications.

##### • Mains monitoring

Measurement of network mains voltage, frequency and current (single, or three phase).

##### • Rectifier management

Individual, or "per group" control, of up to 300\* digital rectifiers or 200\* analogue rectifiers.

##### • Battery charge control

- Comprehensive battery management capabilities for up to 6 branches, with battery voltage, current and temperature measurement and battery type selection
- Mapped Float Temperature Compensation curves for optimum battery charging
- Float and equalise battery charge modes, with charge current limitation and programmable switching conditions
- Battery symmetry monitoring
- Battery amp-hour-meter

##### • Battery discharge control

Low voltage disconnection (LVD) for up to 6 battery branches.  
Battery life monitoring.

##### • Battery test

Battery discharge test with adjustable settings test parameters and timed intervals (Automatic).

\* optional expansion boards



##### • Alarms

Alarm Manager with adjustable settings/management of 100 predefined alarms and event history log.

##### • Flexible configuration

Equation interpreter for total customer flexibility in alarm conditions definitions and settings.

##### • Local and remote system alarm

Local and remote system alarm reporting with Modem\* Auto Dial-out feature.

##### • Digital inputs

Up to 80 digital O/S opto-isolated inputs.

##### • Digital outputs

Up to 32 digital outputs opto-isolated.

##### • History log

255 events and alarms can be locally or remotely displayed and stored with possible filtering option (all alarms, urgent alarms only, informative alarms).

##### • Local man machine interface

An 8 keys keyboard to display:

- Alarms systems
- Measurements/system status

Display:

High visibility 4 alphanumeric lines or optional graphic display. Pass word protected menus.

##### • User communication

Powerful control unit, NRC50 is available for various communication. modes:

- Direct PC connection with one RS232/485 communication port.

Proprietary protocol or MODBUS;

- PSTN or GSM Modem (option);

- SMS of alarm via Modem;

An optional Ethernet board providing TCP/IP, SNMP, SMTP, Web server (NCS option) functions.

##### • Access security

System security via password-protected, multi-level access.

##### • Win50 and WinSite softwares

Embedded in the NRC50 unit, Win50 software enables system monitoring and eases set up with a user friendly graphic display;

WinSite is the network supervision platform developed by SAFT Power Systems to supervise and monitor complete multi site power systems networks.

##### • Approvals

CE marked.

#### For use in systems:

MTP2200C, MTP2800iHP

#### For use with rectifiers:

SMi1800, SMc2200, SM2800, SMi2800

#### For use with software:

Win50, WinSite

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#### SPECIFICATION

<b>Input</b>	
<b>Input voltage</b>	18 - 80Vdc
<b>Nominal current</b>	1.5A (48V input)
<b>Mains measurement</b>	
<b>Voltage</b>	Single or three phase voltage measurement input (0/20Vac)
<b>Frequency</b>	0 to 60Hz
<b>Current</b>	Single or three phase
<b>DC Measurement</b>	
<b>Voltage</b>	2 DC voltage measurement inputs (0/60V or 0/5V) link selectable
<b>Current</b>	2 DC current + sign measurement inputs (+50mV/-20mV, +100mV/-40mV, +5V/-2V) link selectable
<b>Temperature</b>	Up to 8 sensors temperature
<b>Protection</b>	
<b>Input</b>	Internal input fusing
<b>Connections</b>	
<b>Digital outputs</b>	8 opto outputs 60V/50mA (expandable to 32 relays)
<b>Alarm outputs</b>	4 software configurable volt-free changeover relay contacts
<b>Digital inputs</b>	16 opto-isolated inputs: (expandable to 80) 0-5Vdc (12V-70Vdc available via external interface board)
<b>Analog outputs</b>	1 isolated output max -10V / + 10V with software programmable limits
<b>Communication</b>	
<b>Communications ports</b>	1 isolated RS485 or RS232 link selectable. Optional Modem or Ethernet board
<b>Battery management</b>	
<b>Battery charge modes</b>	Float, Equalise (Charge modes have configurable float temperature compensation curve (FTC) and dI/dt charge limiting)
<b>Battery test</b>	Automatic programmable or manually triggered battery test (test undertaken at constant discharge current). Battery history log
<b>Mechanical specification</b>	
<b>Dimensions</b>	88m (2U) H, 445mm (19") W, 245mm D
<b>Weight</b>	3.5kg
<b>Environmental</b>	
<b>Cooling</b>	Natural convection
<b>Operating temperature</b>	+10°C to +70°C ambient
<b>Standards</b>	
<b>Safety</b>	Meets EN60950, UL1950 requirements
<b>EMC</b>	Meets EN50081-1 , EN50082-2, FCC part 15 subpart B, Class A