

MiniCSU-2/3 Alarm Management

Each of the parameters monitored by the RT MiniCSU-2/3 controller can generate alarms based on user defined limited.

Reported Alarms

These alarms include:

Alarm Name	Comments
SMR Alarm	Combination of one or more SMR alarms
SMR Urgent	One or more SMRs have shut down
SMR HVSD	SMR shut down due to output over-voltage
UNIT OFF	SMR is off
No Response	A particular SMR is not responding to the MiniCSU-3
Power Limit	SMR is in Power Limit
No Load	SMR output current less than minimum for SMR type used
Current Limit	SMR in current limit
Voltage High	Voltage measured by SMR too high
Voltage Low	Voltage measured by SMR too low
UNCAL SMR	SMR Internal Adjustment for current sharing out of limits
EEPROM Fail	EEPROM failed (CSU or SMR)
Fan Fail	SMR Internal Fan failure alarm (only possible on SMRs with fans)
Relay Fail	SMR output relay contact failure
No Demand	Control loop in SMR not in normal state
H/S Temp High	SMR heatsink temperature too high (where available)
DC-Dc Contr Fail	SMR DC/DC converter fault
Temp Sensor Fail	Temp sensor in SMR faulty - S/C or O/C (where available)
Vref Fail	Voltage reference in SMR microprocessor circuit faulty
HVDC not OK	DC/DC converter (boost) voltage in SMR not OK
AC Volt Fault – detected by SMRs	All SMRs are reporting AC fault. Available only on some SMR models.
AC Volt Fault – detected by CSU	None of SMRS are responding (AC fail assumed), or if AC monitor is used, AC voltage is out of limits set (When no AC monitoring module is used, this comes together with "SMR Comms Fault")
AC Freq Fault	AC frequency lower or higher than preset value
Battery Switch	One or more battery switches open
Cct Breaker	Fuse or CB in load distribution open
LVDS Open	Low Voltage Disconnect switch open
Sys Volts High	System output volts too high
Sys Volts Low	System output volts too low

Alarm Name	Comments
System V Clamp	CSU can not reach desired system voltage. This can be due to possible excessive voltage drop along bus bars or "System V Drop" parameter has value too low.
Cell V High	One or more cells being monitored by BCM is too high in voltage
Cell V Low	One or more cells being monitored by BCM is too low in voltage
Cell %dev High	One or more cells being monitored by BCM is too high % deviation from the mean battery cell voltage
Cell %dev Low	One or more cells being monitored by BCM is too low % deviation from the mean battery cell voltage
Range SMR	SMR parameter range error. MiniCSU-3 could not overwrite values
Site Monitor	Alarm present from the site monitor module. See site monitor menu for details of alarm channel.
Battery Disch	Batteries are discharging
Disch Tst Fail	Battery discharge test failed to reach a programmed end point
Bat Disch Low	Alarm flags only if the system voltage falls below Discharge Alarm level while the battery is discharging
SMR Comms Fail	One or more of SMRs are not responding
Amb Temp High	Ambient temperature higher than preset limit
Batt Temp High	Battery temperature higher than preset limit
Batt Temp Sens	Battery temperature sensor not connected or failure
Batt I-Limit	Battery charging current is being limited to preset value
Bat Sym Alarm	Battery discharge currents from battery strings not sharing load equally
Earth Leak Alarm	Earth leakage current greater than the limit set
Equalise	System is in equalise mode

The alarms can trigger various events; include dry contact closures and alert messages being sent to the monitoring software such as WinCSU-2.

Alarm Logging

The MiniCSU-2/3 system keeps a record of the most recent alarms and can be viewed locally on the front panel of the contract or remotely via the monitoring software.

1000 of the most recent alarms are record.

LOG 1
AC Freq Fault

Alarm Log Entry

10/01/2003
12:05:26

Entry Date/time

CSU Alarm Log	
1. Rectifier Alarm	09/04/2008 06:23:29
2. System Voltage Clamp	09/04/2008 06:14:03
3. Rectifier Alarm	09/04/2008 04:35:28
4. Voltage Low	09/04/2008 04:35:20
5. Voltage Low	09/04/2008 04:35:11
6. Discharge Test Fail	09/04/2008 04:35:01
7. LVDS Open	09/04/2008 04:35:01
8. Rectifier Alarm	09/04/2008 03:39:06

Dry Contact Closures Configuration

The MiniCSU-2/3 MUIB has 5 available dry contact alarm closures and their activation is operator programmable via the WinCSU-2 management software.

Each individual contact's activation can be triggered by an event or alarm that is a part of a user selected group of events or alarms.

The operator can select whether a selected relay is in the "Normally Energized" or "Normally Closed" state

All possible alarms and events are listed in graphical user interface used to setup the contactor's activation. The operator can select which group of events will individually trigger the selected contactor. The items that are selected by the operator will form a part of the trigger group for the contactor.

