

# C P R 3 2

## ACCESS CONTROL PANEL FOR ROGER ACCESS CONTROL SYSTEM

### General Description

The CPR access control panel is a part of Roger Access Control System (RACS 3.x). The main function of CPR is to collect and store all events which occurred on controllers. The CPR can be set into two modes of operation: ON or OFF. When in ON mode, CPR continuously read events from controllers and save them in its internal memory banks. Events stored in CPR can be moved to PC database on operator's request ("Read Events" command). When PR Master runs in Monitoring Mode (Events and/or Alarm Window active) events are continuously transferred from controllers to CPR and then automatically to PC database, usually this transfer takes not more than 2..3 seconds. The old family of controllers PRxx1 were not equipped with internal memory so without CPR all events which occurred on those controllers were lost. New PRxx2 controllers are equipped with relatively large memory buffer which is dedicated to store events. Normally events which occurred on PRxx2 controller are transferred to CPR, but in case of system failure (communication with CPR corrupted or CPR set to OFF mode) controller switch automatically to autonomic mode and save all events in its internal memory banks. Using adequate command, system operator can check the contents of controller's internal memory and if required can download them into PC database. Events downloaded to PC are appended to PR Master events register, using Report command operator can view and print some parts of it. PR Master deliver few mechanism for events selecting and filtering, using those feature different kinds of reports can be easy achieved. When CPR stay in OFF mode it doesn't read events from controllers, this mode is dedicated for service purpose only.

### Main Features

- 1.5A buffered power supply,
- battery backed memory banks and time/date clock,
- RS485 interface,
- 1Adc transistor output,
- TAMPER input,
- LED and Buzzer signalization,
- battery protection against deep discharge,
- battery charging control circuit,
- metal case with compartment for 17Ah battery.

### Supply Output

CPR is equipped with 1.5A/13.8V power supply unit, this unit is prepared for operation with sealed lead-acid battery (17Ah type is suggested). CPR monitors battery level, after it falls below approximately 12V the Low Battery alarm occurs, when battery level drop below ~10V CPR automatically disconnect battery, entire system goes down. Automatic disconnection of battery protects it from deep discharge and access system from operation below minimum acceptable supply voltage. CPR charge battery with stable current, this method guarantee relatively quick and safe battery charging process. The supply output voltage is factory set to 13.8V but it can vary from 11.0 to 13.8V, this depends on actual battery charging phase. When output level is above 13.5V it means that battery is nearly charged, when levels drop below 12.0V it indicates that battery is on beginning phase of charging.

### A and B communication lines

CPR is equipped with RS485 communication interface. This standard of transmission guarantee up to 1200 meters communication distance with high immunity against interferences. Installer may use arbitrary communication bus topology (star, three or any combination of both), no terminating resistors are required. In most cases communication runs satisfactory on almost each types of cables (twisted/untwisted, shielded/unshielded) but it is not guaranteed in each case. Generally unshielded, twisted type cables are preferred and guarantee best performance of communication.

### TAMPER Input

CPR offer one input line (TAMER) which is dedicated to supervise tamper contacts of access equipment installed in system. In normal state input of this line must be shorted to GND (all TAMPER contacts closed). If this loop is open an TAMPER alarm is generated.

### ALARM Output

An ALARM line is an open drain, N-MOS type, transistor output. This output can sink up to 1Adc current for unlimited time. In normal (not triggered) condition output remain in high impedance state, when triggered it move to low resistance state which results that supply minus is observed on output.

### Optical and Acoustic signalization

Every alarm situation is signalized through LED, Buzzer, ALARM output and on PR Master monitoring window. The signalization on ALARM output and Buzzer ceased automatically after 250 seconds, it can be also ceased manually by pressing CANCEL

button (front cover of CPR case) or remotely from PR Master. A signalization on LED can not be cancelled, it last until alarm condition disappear. Some of the alarms can be forbidden through PR Master (see CPR settings window from Networks menu).

LED	Description
Tamper	The violation of TAMPER loop was detected, non authorized access to access equipment occurred.
Operation Suspended	CPR set to OFF mode, events registering stopped, monitoring not available.
Low Battery	Low level of reserve battery, installer should be called immediately.
AC Lost	Lack of AC supply, signalization occur when CPR detects a lack of AC voltage for 15 minutes period. Signalization stop when AC returns for minimum 5 minutes period.
Memory Full	When this LED blinks, this means that 75% of CPR memory is occupied, operator should transfer the contents of CPR memory to the PC otherwise the events memory overflow can occur. When this LED is set continuously it indicates that buffer is fully occupied, some events where lost.
TXD	Data transmitted from CPR.
RXD	Data coming to CPR.

Note: When all LED blinks periodically it means that CPR settings are corrupted, operator must Reset CPR Memory and then fully download it with new ones.

### Memory Reset Procedure

The MEMORY RESET procedure clears all existing data in CPR memory (configuration settings and events register). The CPR Memory Reset can be performed from PR Master software ("Initialize" command) or can be performed in hard manner. The second method requires following steps:

- disconnect battery,
- switch off power supply
- connect PGM output to TAMPER input,
- switch power supply on,
- Buzzer will signalize memory reset,
- Disconnect PGM output from TAMPER input.

After Memory Reset CPR must be fully configured from PC.

Note: The PR Master keep all settings in \*.prc type file, operator must use the same file for CPR and controllers configuration.

### Installation

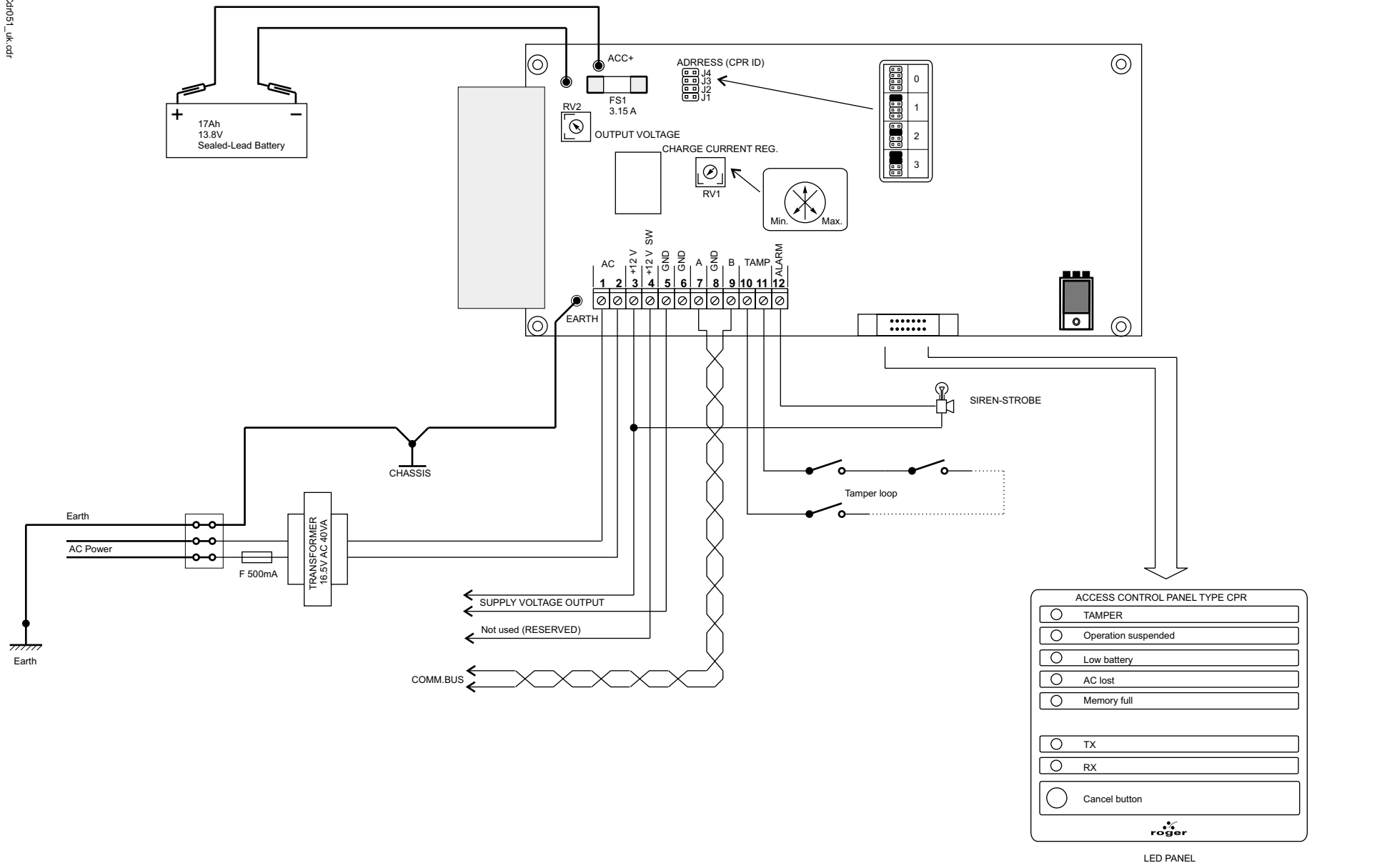
CPR should be mounted in protected location, far from heat and/or moisture sources, all electrical connections must be made with power supply off. The CPR can not start operation from battery only, the AC supply must be present first. CPR can be connected to RACS communication bus (A and B lines) in any location.

- Roger recommend to connect CPR EARTH terminal to earth ground,
- Do not connect +12V power output from CPR with other supplies "+" outputs,
- A "-" terminals of each power supply and CPR should be connected together, this will guarantee that the potential of each GND for separate supply source will have the same potential referred to earth,
- Do not change settings of potentiometers located on CPR board,

Ordering information	
<b>CPR32</b>	CPR control panel with metal case.
<b>CPR32-MOD</b>	CPR control panel electronic module (without casings).

Technical Specification	
Power supply	220..230 V ac
Power consumption:	40W
Supply Output (nominal)	13.8 V dc
Battery Charging Current	~300 mA
Battery Cut Off Level	~ 10.0 V
Operating temp. range	0...+55° C.
Cable distance between CPR and controller or PC computer	Max. 1200 meters (4000 ft)
Operating humidity	0 to 95% (non condensing)
Dimensions (mm):	405 x 305 x 87
Weight (grams):	450g (without battery)

Connection terminal assignment		
Name	Function	
1. - AC -	AC supply input, CPR requires 40W/16.5VAC transformer.	
2. - AC -		
3. +12V	Power Supply Plus, output can deliver max. 1Adc.	
4. +12V SW	Not used, reserved.	
5. GND	Power GND	
6. GND	Power GND	
7. A	RS485 communication bus, wire "A"	
8. GND	Power GND.	
9. B	RS485 communication bus, wire "B"	
10. TAMP	Tamper Loop Input, a terminal number 10 is internally connected with GND.	
11. TAMP		
12. ALARM	Alarm Output, can sink max. 1A. The maximum voltage applied to this output must not exceed 16V dc.	



- Notes:
1. Terminal 10 is internally connected to GND
  2. For Memory Reset connect terminals 11 and 12
  3. CPR ID jumpers are not used (reserved)