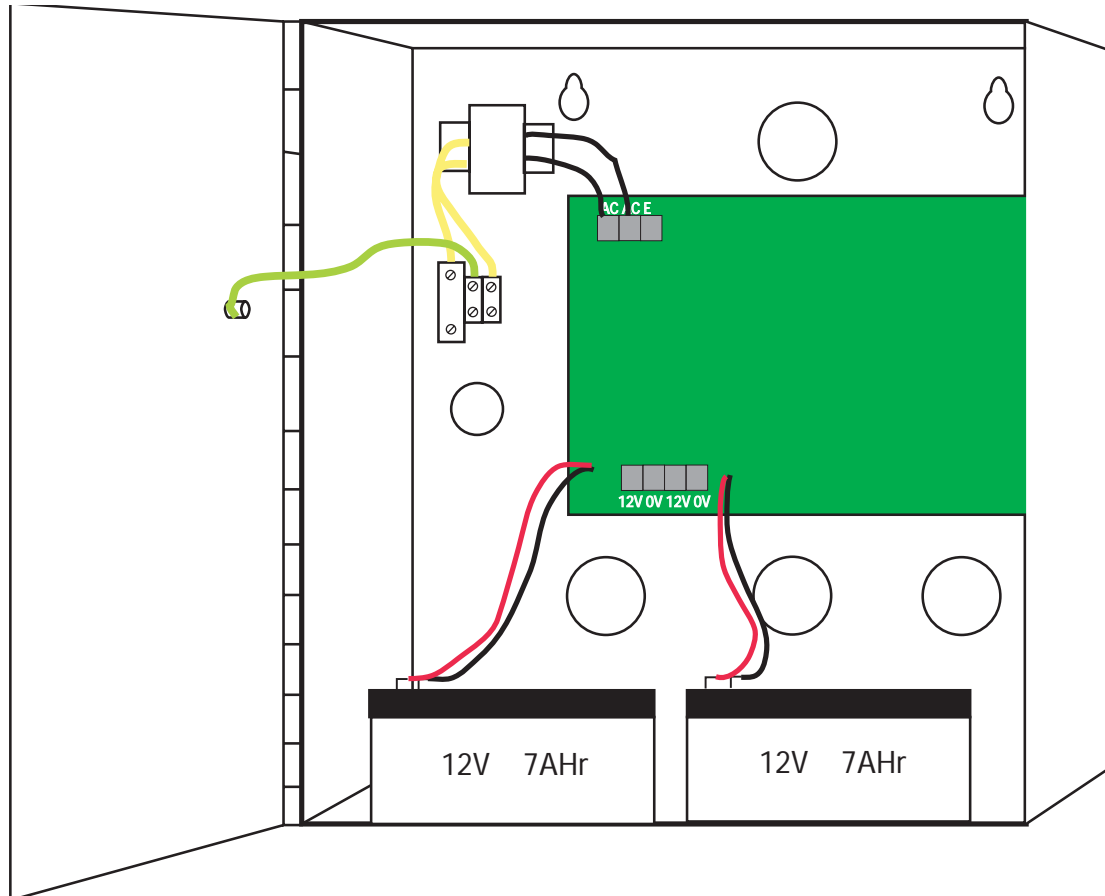


ACTpro200

2 Door Station & Power Supply



Features

This product consists of a 2-door controller housed inside a metal cabinet, complete with a monitored power supply. The unit is designed to connect to ACT2000 and ACT3000 controllers on the Door Station RS-485 network.

The assembly as supplied provides the following features:

- 18 swg Mild Steel Cabinet with hinged lid with space for 2 7Ahr batteries
- 3 Amp Power Supply with battery backup provision (Batteries not supplied)
- Monitored power supply with automatic battery test
- 2 fused outputs for door locks
- PSU status (AC fault, battery low) reported to controller and to ACTWinPro
- Deep-Discharge protection of batteries provided
- 20mm 'knockouts' provided for external wiring at top and sides
- 7 40mm holes in the back of the cabinet for rear wiring entry
- Wiring Instructions on label inside front lid.
- Lid to accommodate two standard DS100 units

Power Supply Specification

The power supply is capable of supplying a maximum of 3 Amps. This should be sufficient to power the 2-Door Station pcb, up to 4 readers, 2 locks and provide charging current for the batteries.

Use the following table to ensure you do not overload the power supply:

Item	Current(mA)
DS200	100
Door 1 Entry Reader	80
Door 1 Exit Reader	80
Door 2 Entry Reader	80
Door 2 Exit Reader	80
Door 1 Mag Lock	
Door 2 Mag Lock	
Battery 1 Recharge current	300
Battery 2 Recharge current	300
Safety Margin	300
Total	

The total current should not exceed 3Amps (3000mA). This leaves approximately 1600mA available for supplying the locks on a 2 door system with 2 entry and 2 exit readers.

Battery Backup

There is room in the cabinet for two 7Ahr batteries giving a total of 14Ahrs. The length of time these batteries will last depend on the power consumption of the system. Battery 1 provides backup for the PCB, the readers and Door 1 output. Battery 2 provides backup for Door 2 output only. Battery 1 **must always** be fitted. A magnetic lock draws current continuously and therefore you can add the continuous current to the total. A fail-safe lock (door strike) only draws current when it operates. In this case you need to estimate the average hourly consumption using the following equation:

$$\text{Lock Current (mA)} \times (\text{Number of operations per hour} \times \text{door relay time}) / 3600$$

For example, a 500 mA lock operating 20 times an hour for 5 seconds would use $500 \times (20 \times 5) / 3600 = 13.9\text{mA}$ per hour

Once the total power consumption has been determined, then it can be calculated how long the batteries will last.

Example

DS200 with two readers and 2 magnetic locks, each drawing 400mA would consume

$100 + 80 + 80 + 400 + 400 = 1060\text{mA}$. In the event of a power fail, Battery 1 will supply the pcb, readers and 1 lock. Battery 2 will supply the lock for doors 2. The current draw on battery 1 would be $100+80+80+400 = 660\text{mA}$ A fully charged 7Ahr battery for battery 1 would last $7/0.66 = \mathbf{10.6 \text{ hours}}$.

After a mains power failure, the ACTpro200 will continue to operate while the batteries are charged. After the batteries discharge, the ACTpro200 will disconnect the batteries to protect them from being 'deep-discharged'.

On receipt the unit should be carefully unpacked and inspected to ensure that no transit damage has occurred. Provided that this inspection is satisfactory and reveals no evidence of damage then installation can proceed.

Mount the ACTpro200 directly to the wall with the supplied screws. The unit must be mounted in a well-ventilated area that allows for accessibility after installation and must not be adjacent to combustible materials or in an area that exceeds temperatures of 45°C. Adequate ventilation should be provided to keep the unit cool and the ventilation slots around the cabinet should not be covered in any way.

This unit is designed for use from an AC supply of between 195V min and 253V max. AC rms 50/60Hz. Mains power should be connected to the ACTpro200 by a licensed electrician in accordance with local and national codes

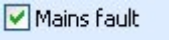

For continued protection against fire hazard, replace fuses with the same type and rating.

A PROTECTIVE EARTH must be provided for safety in accordance with EN61010 Part 1 : 1993 : Clause 6.5.1.

An appropriate Mains Isolation switch (Mains on/off) should be fitted between the AC input of the unit and the equipment electrical supply plug to allow equipment servicing.

Before any maintenance of the product, ensure mains is disconnected from the ACTpro.

Configuring ACTpro200

1. Connect up the ACTpro200 to the readers and the ACT2000/3000 as per the installation diagram.
2. ***Remember** to connect the terminals marked DOORS on the ACTpro200 to the controller together.
3. Connect up the door locks to the fused outputs. **Remember** to connect the supplied varistors across the door lock terminals.
4. Set the dipswitch on the ACTpro200 to the desired address. The doors are numbered in sequence, so if the dipswitch address is set to 7, then door 1 will report as 7 and door 2 will report as 8.
5. **Remember** to enable communications with the doors from the ACT2000/3000. Go to Installer Menu->Communications->Remote Doors.
6. Connect up both 7AHr batteries.
7. Test the ACTpro200 by pressing the buttons above the batteries. This will connect the batteries to the system and allow the ACTpro200 to operate
8. Check that ACTpro200 powers up.
9. Check that both the green battery LEDs are on steady.
10. The red LED in the centre of the board should flash rapidly indicating communications with the controller.
11. Close the cabinet lid over.
12. Apply mains power.¹
13. Check that the controller reports the ACTpro200 as online. Ensure there are no faults reported on the controller display.
14. For ACTWinPro users, make sure the **Mains Fault** box is ticked for the ACTpro200 doors.  Download the database.
15. ACTWinPro should display the doors as blue icons.¹ 
16. Check that cards/PIN codes grant access and open the doors.

¹Use ACTWinPro 2.2 or later with the ACTpro200.

Always connect Battery 1 to the ACTpro200. Battery 2 is not required if nothing is powered from Output 2. Monitoring of Battery 2 may be disabled by setting Dipswitch 3 to ON.

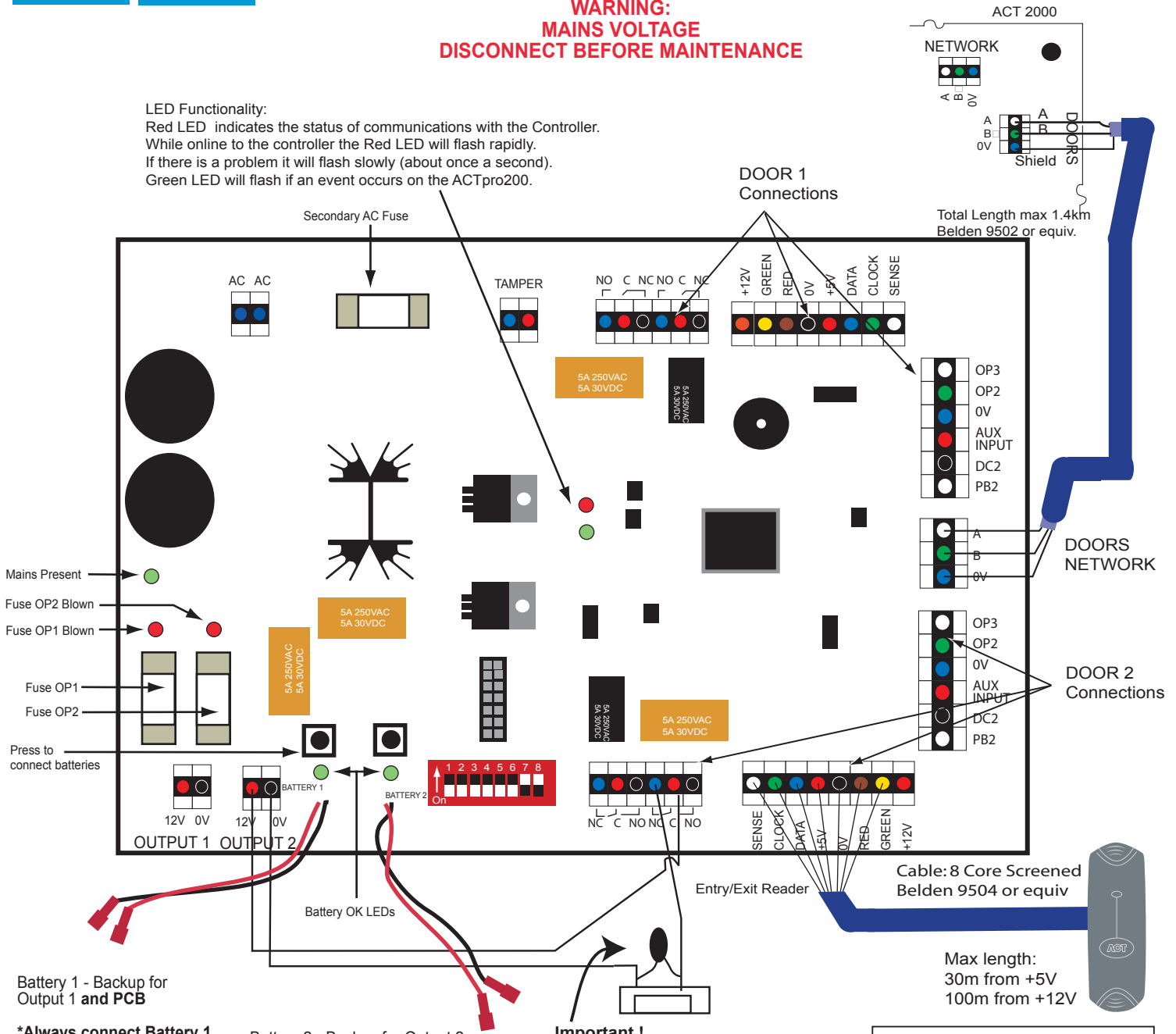


ACTpro200 Installation

2 Door Controller and Monitored Power Supply

WARNING:
MAINS VOLTAGE
DISCONNECT BEFORE MAINTENANCE

LED Functionality:
 Red LED indicates the status of communications with the Controller.
 While online to the controller the Red LED will flash rapidly.
 If there is a problem it will flash slowly (about once a second).
 Green LED will flash if an event occurs on the ACTpro200.



Battery 1 - Backup for Output 1 and PCB

***Always connect Battery 1.**

Battery 2 - Backup for Output 2
 Monitoring for battery 2 can be disabled by setting dipswitch 3 to ON

*Connect Red to Battery positive
 Black to Battery negative

Important !
Always Place Varistor Across Lock Terminals
 This illustration shows wiring for a normally energised lock. If a normally de-energised lock is required, use the N/O relay contacts.

Technical Specifications

Mains Voltage	□ □	230Vac +10% -15%
Frequency	□ □ □	47-63 Hz
Mains Fuse	□ □ □	630mAmp
Secondary AC Fuse	□ □	3.15Amps
Fuse OP1	□ □ □	1.25 Amps Quick
Fuse OP2	□ □ □	1.25 Amps Quick
Ripple Voltage	□ □	<200mV

White	SENSE
Green	CLOCK / DATA 1
Blue	DATA / DATA 0
Red	+5V or +12V
Black	0V
Brown	RED
Yellow	GREEN
Orange	(Buzzer Control)

For **Clock and Data** Readers, wire exit reader in parallel but do not connect to SENSE.

For **Wiegand** Readers, wire DATA0 of the exit reader to SENSE.

Door Address	4	5	6	7	8
03	OFF	OFF	OFF	ON	ON
04	OFF	OFF	ON	OFF	OFF
05	OFF	OFF	ON	OFF	ON
06	OFF	OFF	ON	ON	OFF
07	OFF	OFF	ON	ON	ON
08	OFF	ON	OFF	OFF	OFF
09	OFF	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON	OFF
11	OFF	ON	OFF	ON	ON
12	OFF	ON	ON	OFF	OFF
13	OFF	ON	ON	OFF	ON
14	OFF	ON	ON	ON	OFF
15	OFF	ON	ON	ON	ON
16	ON	OFF	OFF	OFF	OFF

Example:
 When the dipswitch is set to 3, Door 1 is set to Address 3 and Door 2 is set to Address 4.
 When the dipswitch is set to 4, Door 1 is set to Address 4 and Door 2 is set to Address 5.

ACTWinPro users **must** tick Mains Fault Reporting in the door view Mains fault