



Access Control Technology



Operating & Installation Instructions for

ACTpro 4200

4 Door Controller & 3 Amp Power Supply

18-00074

Contents

PRODUCT FEATURES.....	2
PRODUCT SPECIFICATION	2
INSTALLATION NOTES	2
ORDERING INFORMATION	2
POWER BUDGET CALCULATION.....	3
BATTERY BACK-UP	3
CONFIGURING ACTpro 4200	4

Diagrams

ACTpro 4200 Installation Diagram.....	5
---------------------------------------	---



Unit C1, South City Business Centre,
Tallaght, Dublin 24, Ireland.

Tel: +353 (0)1 466 2570 UK Lo-call: 0845 300 5204

Web: www.accesscontrol.ie or www.act.eu E-mail: sales@ accesscontrol.ie

Copyright © 2009 Access Control Technology Ltd.

Features

This product consists of a 4-door controller housed inside a metal cabinet, complete with a monitored power supply.

The assembly as supplied provides the following features:

- ACTpro 4000 2 Door controller.
- ACTpro 200 2 Door controller door station.
- Up to 60,000 Users.
- Connection to PC over TCP/IP, USB or RS232/RS485.
- 3 Amp Regulated Power Supply with battery backup provision.
- Steel Cabinet (thickness 1.2mm) with hinged lid.
- Space for two 7Ahr batteries (not included).
- Monitored power supply with automatic battery test.
- 2 fused outputs for door locks.
- PSU status (AC fault, battery low) reported to controller and to The ACTWin pro software.
- Deep-Discharge protection of batteries.
- 20mm 'knockouts' provided for external wiring at top and sides.
- 40mm holes in the back of the cabinet for rear wiring entry.

Product Specification

Mains Supply

Mains Voltage	230 VAC + 10% / -15%
Frequency	50 Hz
Main Fuse	630 mA
Output Voltage (Output 1 and Output 2)	12 V DC fused at 1.25 Amp

Installation Notes

- On receipt the unit should be unpacked and inspected to ensure that no transit damage has occurred.
- Mount the ACTpro 4200 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.
- Mains power should be connected to the ACTpro 4200 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.

Ordering Information

Model	Description	Part Number
ACTpro 4200	4 door controller & 12 V DC 3amp power supply	ACTpro 4200

Power Budget Calculation

The power supply output is 12 Volt DC supplying a max of 3amps.

This is sufficient to power the ACTpro 4200 and up to 8 readers and the battery recharge.

ACT recommends the use of a separated power supply for the locks.

The power budget calculation below shows that when all the 4 doors of the ACTpro 4200 are used with ACTpro-X Entry and Exit readers that the total current consumption is 2000mA. This gives headroom of 1000mA.

Item	Current(mA)
ACTpro 4200	460
Door 1 Entry ACTpro-X Reader	80
Door 1 Exit ACTpro-X Reader	80
Door 2 Entry ACTpro-X Reader	80
Door 2 Exit ACTpro-X Reader	80
Door 3 Entry ACTpro-X Reader	80
Door 3 Exit ACTpro-X Reader	80
Door 4 Entry ACTpro-X Reader	80
Door 4 Exit ACTpro-X Reader	80
Battery 1 Recharge current	300
Battery 2 Recharge current	300
Safety Margin	300
Total	2000
Headroom	1000

Battery Back Up

- After a mains power failure the ACTpro 4200 will continue to operate while the batteries have a sufficient charge.
- There is room in the cabinet for two 7Ahr batteries giving a total of 14Ahrs.
- The length of time these batteries will last depends on the power consumption.
- Use of Battery 1 is recommended.
- Battery 2 can be used if a longer operation time without a mains supply is required.

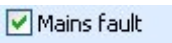
Battery 1:

- By default Battery 1 is used to provide the backup power to the ACTpro 4200 and all the readers.
- The duration for which the battery can provide backup power can be calculated by dividing the battery rating by the total current draw.
- In the example from the power budget above the total current draw is 1100mA or 1.1A. This figure is calculated by the ignoring the recharge currents which don't apply when the battery is supplying the current and ignoring the Safety margin which is obviously not a current draw.
- Given a battery capacity of 7Ahr and the calculated current draw of 1.1A. Then the battery will last for $7/1.1 = 6.36$ Hrs

Battery 2:

- The second battery maybe used to provide a longer battery backup period. In this case the ACTpro 4000 should be connected to the OUTPUT 2 supply.
- Battery 1 will power the ACTpro 200 and 4 readers. Battery 2 will power the ACTpro 4000 and 4 readers.
- The ACTpro 4000 consumes 360mA max and so battery 2 will have the greater current draw and so will be the limit on the total battery backup period.
- Calculating the current draw is $360\text{mA} + 80\text{mA} + 80\text{mA} + 80\text{mA} + 80\text{mA} = 680\text{mA} = 0.68\text{A}$
- Battery can provide power for $7 / 0.68 = 10.29$ Hrs.

Configuring the ACTpro 4200

1. Connect the ACTpro-X readers to the ACTpro 4200.
2. Connect the locks to the relay outputs, of the ACTpro 4200.
3. Connect the door contacts and push to exit buttons to the ACTpro 4200.
4. Connect the 7AHr batteries, at least one is recommended connected to Battery 1.
5. Test the ACTpro 4200 by pressing the battery enable switches above the batteries. This will connect the batteries to the system and allow the ACTpro 4200 to operate
6. Connect either the TCP / IP or the serial cable for connection to the ACTWin software
7. Check that ACTpro 4200 powers up.
8. Check that both the green battery LEDs are on steady.
9. The red NETWORK LED in the centre of the board should flash rapidly indicating communications with the controller.
10. Close the cabinet lid over.
11. Apply mains power (mains should be connected by a qualified installer)
12. Check that the controller does not report any door offline. Ensure there are no faults reported on the controller display.
13. For ACTWin pro users, make sure the **Mains Fault** box is ticked for the ACTpro 4200 doors 3 &
4. Mains fault
14. Tamper on the ACTpro4200 will be reported as door 3. Therefore in ACTWin software disable tamper reporting on door 1 and enable it on door 3.
15. Download the database.
16. The ACTWin pro software should display the doors as blue icons. 
17. Check that cards/PIN codes grant access and open the doors.

ACTpro 4200 Installation

4 Door Controller and Monitored Power Supply

