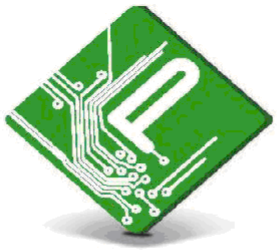
PERMACONN PM1030

Includes DI300

Installation Manual



PERMACONN™

leaders in GPRS security technology

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Introduction

The PERMACONN system provides two-way communication between supervised premises and the monitoring centre. The Permaconn PM1030 is a versatile state of the art microprocessor based 3G and NextG security communicator. This unit can interface with a range of alarm panels using RS485 / RS232 and Contact ID. It also has four (4) Inputs and three (3) Outputs.

- The Permaconn PM1030 reports Contact ID events on the 3G networks.
- The Permaconn PM1030 polls according to the registered fault recognition time.
- The Permaconn PM1030 requires an interface module to communicate with an alarm panel.

Features of the Permaconn PM1030

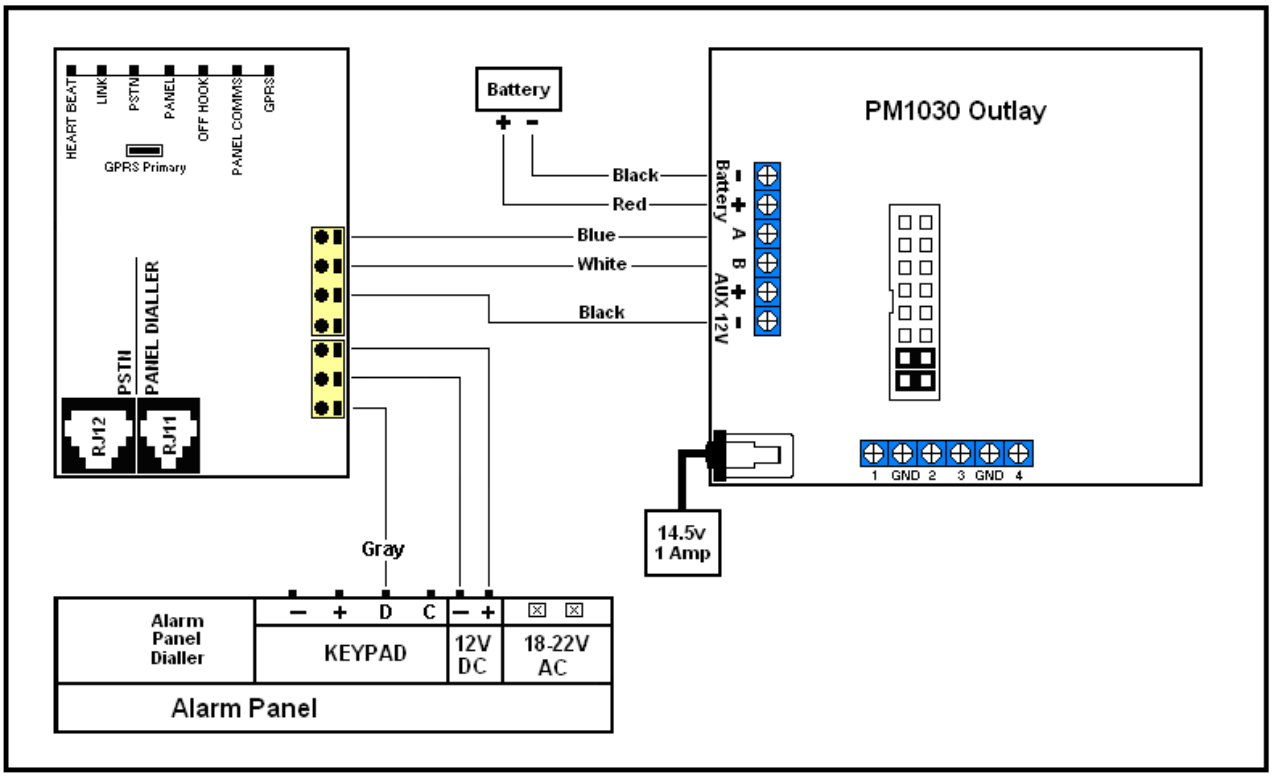
- Four (4) Inputs and a dedicated box tamper
- Three (3) Outputs
- Contact ID interface (requires DI300 module)
- RS485 / RS232 Interface (requires IFM)
- IP reporting (requires IP63 Module)
- Monitors and reports status of alarm panel interface lead
- Monitors and reports battery status
- Monitors and reports DC power status
- Non volatile memory stores all setup information in the event of a power failure
- Dual Sim Cards
- No onsite programming required
- RF signal strength indicator
- Various LED status indicators for easy onsite diagnostics
- 13.8V battery charging circuit.

Installation Procedure

- Place the Permaconn PM1030 unit in the exact position where you intend to install it.
- Screw the antenna onto SMA connector.
- Unit is by default set up to operate with the DI300. If any other module is required remove the two (2) jumpers from (JP2) and fit applicable IFM.
- No additional module required for standalone operation.
- Connect 14.5V DC power to power up.
- The ‘HEART BEAT’ LED will blink.
- The signal strength will be displayed as ‘High’, ‘Medium’ or ‘Low’.
- The ‘Online/GPOL’ LED will blink to indicate connectivity with the Permaconn Network. This may take to three (3) minutes.
- Connect the DI300 or IFM module.
- Program alarm panel.
- Generate an event from the alarm panel.
- The ‘Online/GPOL’ LED will stay on steady.
- Test all inputs and outputs.
- Carry out all tests on ‘Final Commissioning Check List’
- **Never leave site without achieving a steady ‘Online/GPOL’ LED.**

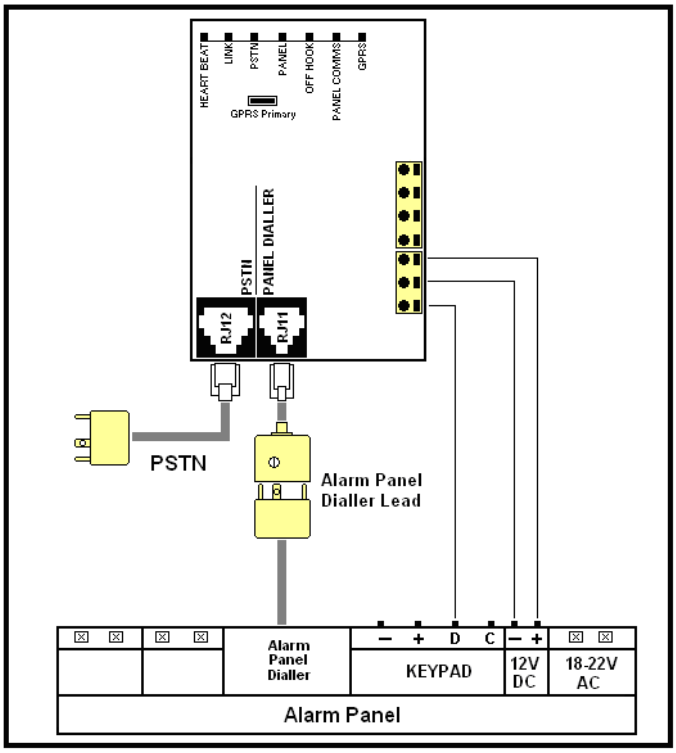
Connecting the DI300

- A Three (3) wire connection is required between the DI300 and the PM1030. Negative and A & B Data lines. Do not connect the red wire when using 14.5V DC plug pack.
- Power for the DI300 is supplied from the Alarm panel
- The gray wire connects to Data line on keypad. The gray wire simply monitors and reports the status of the alarm panel.
- Cut the gray wire off at terminal if you do not use it, otherwise it will send false alarms.
- The 'COMMS' LED will flash to indicate correct serial communication between the DI300 panel and the Permaconn PM1030.



Connecting the Alarm Panel

- Always use the original telephone lead supplied with the alarm panel – between the alarm panel and the DI300.
- A four wire connection is required between the alarm panel and the DI-300 module. Ring & Tip as input and R1 & T1 as the return line.
- Always use 611 Tail plugged into the DI300
- Connect PSTN in Mode 3.



Programming the Alarm Panel

- Panel must use tone dialling.
- Panel must be programmed with at least an 8 digit phone number.
- Panel must report Contact ID format.
- Panel must be programmed with a Hard ID.
- Disable telephone line monitoring feature from the panel.

Choosing GPRS or PSTN Primary Reporting

- Unit is supplied as GPRS primary with PSTN back up.
- To make the PSTN primary and GPRS back up, the PSTN jumper must be removed from the DI300.
- The option of PSTN primary should only be selected after installation and testing with GPRS as primary.
- If PSTN is primary you must test the following:

Trigger the ‘tamper’ input on the Permaconn PM1030 unit. Verify with the monitoring centre that a tamper was received with the correct CID account number

Battery Charging

- A dedicated 14.5V power supply is required if you want to charge a battery
- Do not fit a battery if power is being supplied by the Alarm panel.

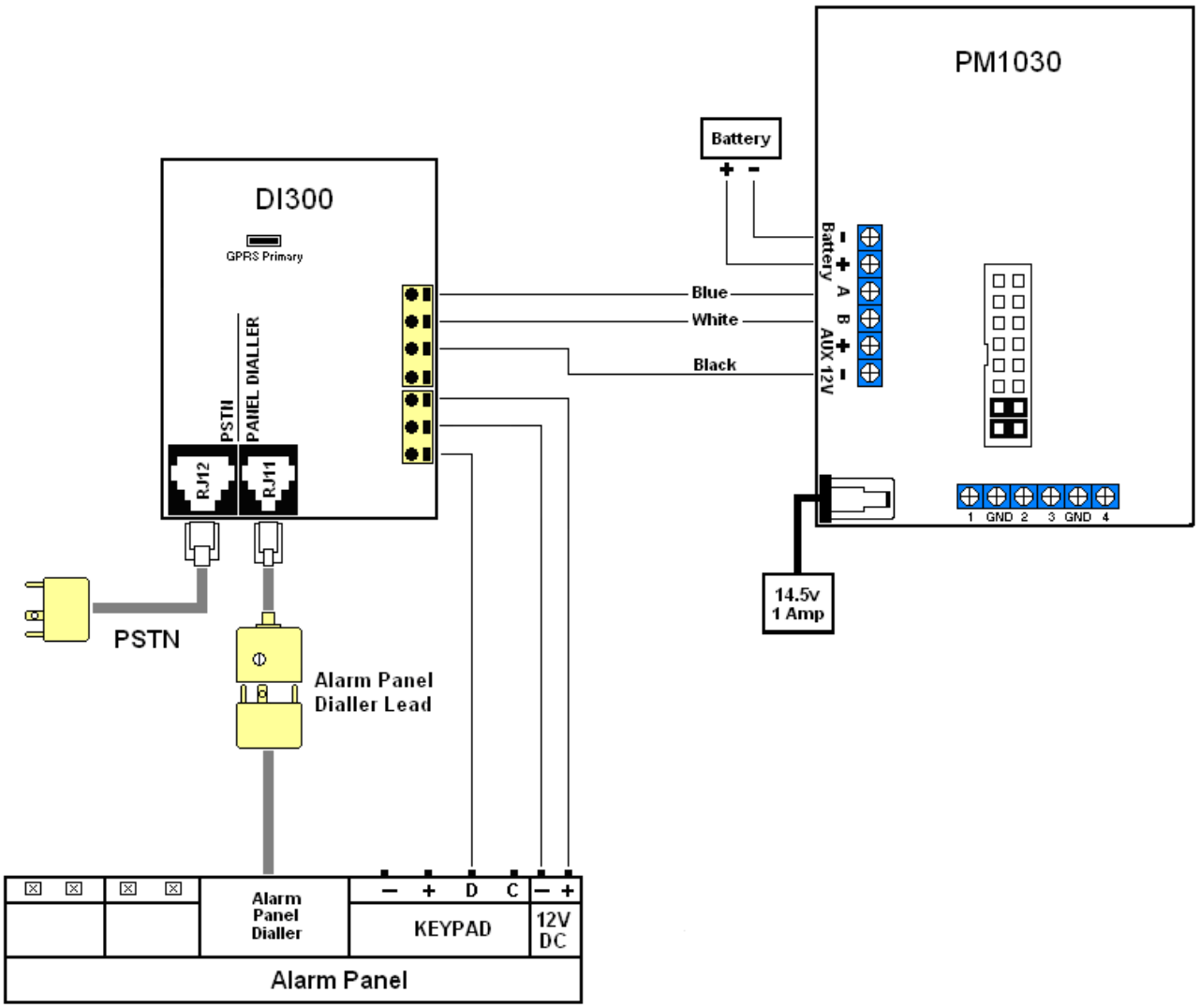
Input and Output

- Output is open collector 12V, 50mA switching negative, for heavier loads a relay must be used.
- The outputs can be Opened, Closed or Pulsed remotely using the Permaconn Atlas web platform.
- Ensure there is a common negative between PM1030 and the device being switched.
- Tamper input does not require an EOL resistor.
- All other inputs must be terminated with a 10K resistor.

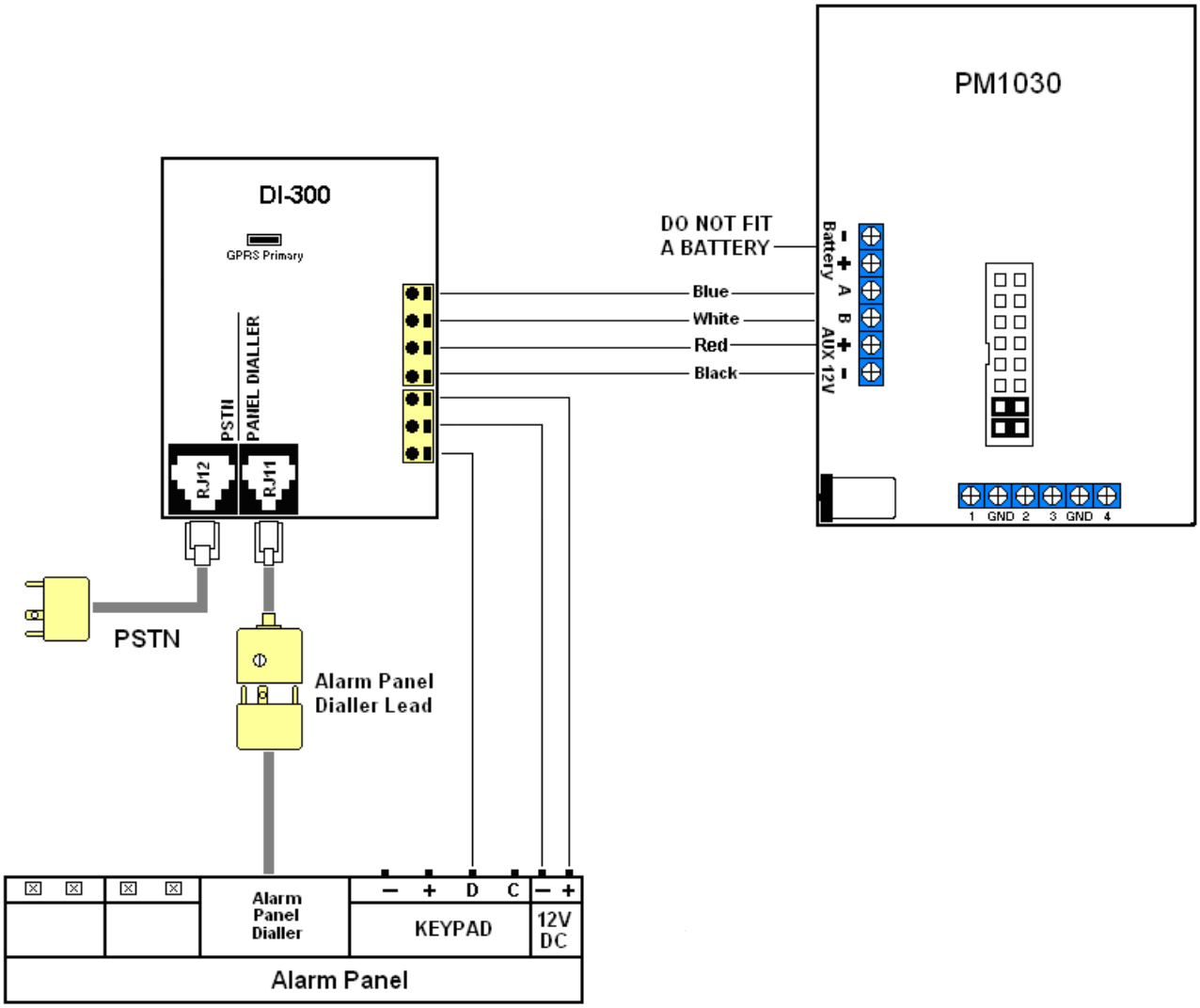
Defaulting the Permaconn PM1030

- Apply Battery or 14.5V DC power for less than two (2) seconds remove power and then apply power again.
- LEDS will all flash together for four (4) seconds to confirm successful default.

DI300 Powered by Panel – PM1030 Powered Independent Supply



PM1030 V2 and DI300 Powered by Panel



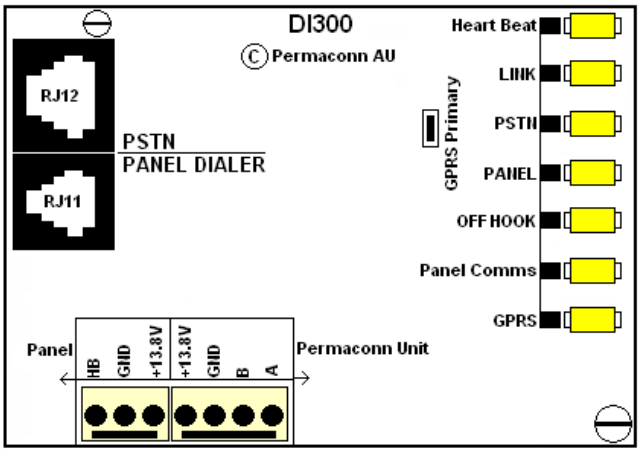
- **Do not fit a battery when PM1030 is powered by the alarm panel**

LED Status Indicators PM1030

LED	Activity	Indication
POWER	On *	Indicates battery or 14.5 Volt Power
	Off	Indicates unit is off
GSM	On *	Unit not activated or network is not available
	Blinking (1 sec On -1 sec Off)	Searching for 3G network
	Flashing once	Connected to GSM Network
	Flashing twice *	Indicates connectivity with Permaconn network
SIM	On	Indicates unit is connected on 'B' sim
	Off	Indicates unit is connected on 'A' Sim
BATTERY	On	Indicates low battery voltage or no battery connected
	Off *	Battery voltage correct
SIGNAL STRENGTH	L	Indicates Low signal strength
	M *	Indicates Medium signal strength
	H *	Indicates High signal strength
COMMS	Blinking *	Indicates serial /RS485/RS232 connectivity with alarm panel or DI300
	Off	No serial connection between DI300 and Permaconn
ONLINE/GPOL	On *	Normal operation Unit is connected to Permaconn network.
	Off	No connection to network
	Blinking	Unit is registered on Permaconn Network but has not received message with account details from the alarm panel.
	On for 2 seconds 1 flash	Only SIM A is active
	On for 2 seconds 2 Flash	Only SIM B is active
HEART BEAT	Blinking *	Indicates the unit has completed a power up test and is working properly
	Off	No Power or unit is faulty

* Normal Operation

LED Status Indicators DI300



Normal operation

Heart Beat	Blinking
Link	Blinking
Phone line	Off
Panel	Off
Off Hook	Off
Panel Comms	Steady On
GPRS	Steady On

The following table shows Various LED Indications during normal operation.

LED	Activity	Indication
Heat Beat	Blinking	When the CPU has completed a power up test and is working properly
	Off	Unit is faulty
Link	Blinking	Indicates connectivity between the PM1030 and the DI300
	Off	Indicates fault with wiring between PM1030 and DI300. Check blue and white wire
PSTN	On	Indicates that there is no line voltage on the incoming telephone (from the exchange).
	Off	Indicates PSTN line voltage
Off Hook	On	Indicates that the alarm panel dialler has grabbed the line.
	Off	Alarm panel is not attempting to grab the line
Panel Comms	On	Indicates that the alarm panel sent a valid Contact ID message.
	Pulses	when panel dials or sends a message
	Off	panel has not sent a valid contact ID message
GPRS	On	Indicates connectivity to the PM1030
	Off	The Permaconn unit is off line. DI 300 will not operate.

Final Commissioning Check List

‘HEART BEAT’ LED Blinking	
‘Online/GPOL’ LED Steady On	
‘COMMS LED’ blinking	
Signal Strength LED (L/M/H) is M or H	
‘BATTERY’ LED is Off	
‘POWER’ LED is On	
Tamper switch connected	
Test 3G communication Make sure Permaconn PM1030 is connected. Generate event from alarm panel. Verify with monitoring centre that correct CID account and event received.	
Test alarm panel PSTN communication Remove jumper from DI300 Generate event from alarm panel. Verify with monitoring centre that correct CID account and event received via PSTN.	
Test Permaconn PM1030 communication Trigger the tamper input on Permaconn PM1030. Trigger outputs and inputs Verify with monitoring centre that correct CID account and event received.	

Contact ID Reporting Codes

To comply with AS2201.5 these event IDs must be mapped correctly at the monitoring centre.

PERMACONN AUST CONTACT ID EVENT TEMPLATE			
Event ID	**Partition**	**Zone**	**Description**
300	0	956	Panel Faulty - No activity detected from alarm panel indicating possible problem with panel.
301	0	950	Mains Fail – No AC power available.
302	0	951	Battery Low – Battery voltage is low or absent.
313	0	953 & 954	Engineering Reset (changed encryption key) – No action required.
337	0	950	Expansion Module DC Loss – 13.8V DC voltage low or absent.
338	0	951	Expansion Module Battery Fail – Battery voltage is low or absent.
350	0	953	Fail To Communicate – Permaconn experienced trouble sending signals do not expect restore.
351	0	954 & 956	Phone Line Fail.
352	0	955 & 956	Dialer Interface Lead Fail – Issue with dialer lead between Permaconn unit and the alarm panel.
353	0	956	Serial Interface Fail – Issue with Permaconn unit serial connection to the alarm panel.
356	0	968	IP path poll fail.
356	0	969	3G path poll fail.
356	0	970	Permaconn Outstation – Permaconn outstation is offline.
137	0	983	Tamper – Permaconn box tamper.
140	0	981	Auxiliary 1 – Auxiliary input on Permaconn unit.
140	0	982	Auxiliary 2 – Auxiliary input on Permaconn unit.
140	0	983	Auxiliary 3 – Auxiliary input on Permaconn unit.
140	0	984	Auxiliary 4 – Auxiliary input on Permaconn unit.

Transmission Delay Times

- Tamper input status message are transmitted immediately.
- Message originating from the panel are forwarded immediately.
- Alarm panel interface fail sent if not restored within 90 seconds.

Specifications PM1030 V2

Size:	142 x 100 mm
Weight:	0.25 Kg
Antenna:	Dual Band 2G & 3G
3G & NEXT G Modem:	Siemens
Power:	14.5V DC Plug pack must have approval
Power Consumption:	Standby: 0.05A
	Transmitting: 0.60 A
Power Reporting:	**Powered from 14.5V plug pack.**
	DC-Loss reported <11.8v
	DC-OK reported >12.8v
	Battery Low reported <11.6v
	Battery OK reported >12.5v
Backup Battery:	12V/1.2AH sealed lead acid battery (Powers unit for about 30 hours)
Auxiliary Input:	TT, tamper input, (24Hr Zones)
	State change detected every second
Serial Interface:	Consult the relevant serial interface specifications
Battery Low	
Fail	DCV<11.8 Report delay 10 minute
Restore	DCV>12.5 Immediate
Communications Class:	As per compliance statement

Standards Compliance

Size:	70 x 50 x 20 mm
Power:	10 – 15V DC 0.3A
Power Consumption:	Standby: 0.12A
Dialler Interface:	Accepts Contact ID (ADEMCO-685)
Telephone Lead:	
Fail	DCV< 4V for more than 18seconds
Restore	DCV > 5V for more than 8 seconds
Interface Lead (Dialler):	
Fail	DCV< 4V for more than 18seconds
Restore	DCV > 5V for more than 8 seconds
Response Dialler Interface:	< 10 sec typical (seizing line to receiving ACK)
	< 50 sec absolute maximum
Serial Interface:	< 2 sec typical (dispatch to receiving ACK)
	< 50 sec absolute maximum

Warning

- INSTALLATION MUST BE CARRIED OUT BY SERVICE PERSONNEL ONLY
- CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES.
- For correct operation the unit must be powered with an approved power supply and a 12V/1.2AH sealed lead acid battery.
- The unit must only be operated with the supplied antenna. Install the Permaconn PM1030 in a location that no person[s] is closer than 200 mm to the antenna at all times.
- Australian Standard AS2201 requires regular service by qualified and licensed technicians and regular testing.
- The unit must be installed in accordance with this manual and AS2201.1 for proper operation.

Notes

- In this manual, ‘AS2201.1’ refers to AS/NZS 2201.1:2007, ‘AS2201.5’ refers to AS/NZS 2201.5:2008 and ‘AS2201’ refers to the current issues of the AS2201 range of documents.
- In order to achieve compliance with AS2201.5, the terms of the current issue of the document ‘Permaconn AS/NZS 2201.5:2008 Compliance Statement’ must be met.
- Note that the overall alarm transmission system configuration needs to comply with AS2201.1 and AS2201.5.
- It is stressed that the supervised premises alarm panel is be installed and maintained in order to meet Class (as relevant to the alarm transmission system classification) under AS2001. The logbook required under Clause 6.4 of that Standard is to remain current.
- The monitoring centre is to hold a copy of the documentation required at AS2201.5 Clause 2.3.
- The monitoring centre is to maintain ‘fault and maintenance logs’ in accordance with AS 2201.5 Clause 3.9.on.
- Subject to the Standard Terms and Conditions set out on the Activation Form for this unit.

Liability

While every effort has been taken to ensure the accuracy of this document, Radio Data Comms assumes no responsibility or liability for any errors or omissions. Radio Data Comms reserves the right to make changes to this manual due to ongoing development.

Notes

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