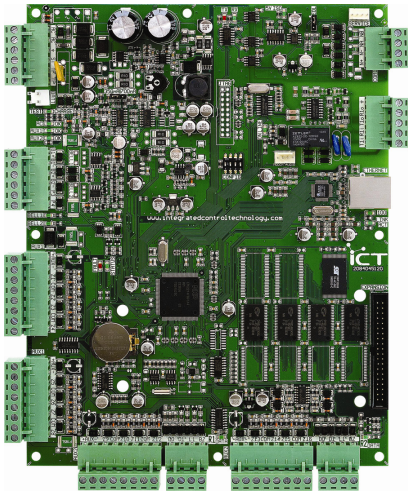




Protege SE Integrated System Controller Quick Start Guide

Thank you for purchasing the Protege SE Integrated System Controller by Integrated Control Technology. The Protege SE Integrated System Controller is the central processing unit of the Protege System. The Protege SE Integrated System Controller communicates with all system modules, stores all configuration and transaction information, process's all system communication and reports alarms and system activity to a monitoring station or remote computer.

When receiving the Protege SE Integrated System Controller you should find the kit contains the items listed below. The kit type is clearly labelled on the packaging and will tell you what your kit contains. Please note that if you do not have the correct contents contact your distributor immediately.

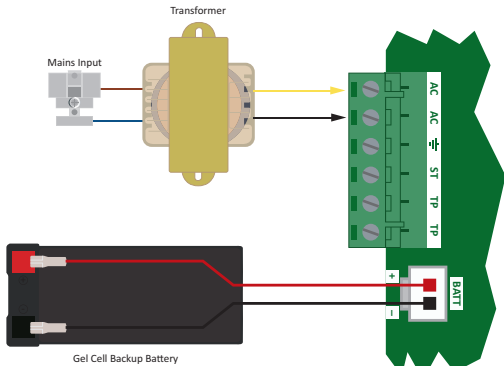
- Protege SE Integrated System Controller
- Protege SE Integrated System Controller Quick Start Guide
- 6x Nylon Spacers
- 36x 1K Ohm Resistors
- 2x Diode 1N4007 1A 400V (Axial)
- Red/black Battery Backup Wires

For more information on the Protege SE Integrated System Controller and other Integrated Control Technology products please login to www.incontrol.co.nz.

1. AC Power and Battery Connection

Connect the primary of a 16.5VAC, 50/60Hz, 40VA Transformer to the electrical circuit and run the secondary to the AC input on the controller terminals.

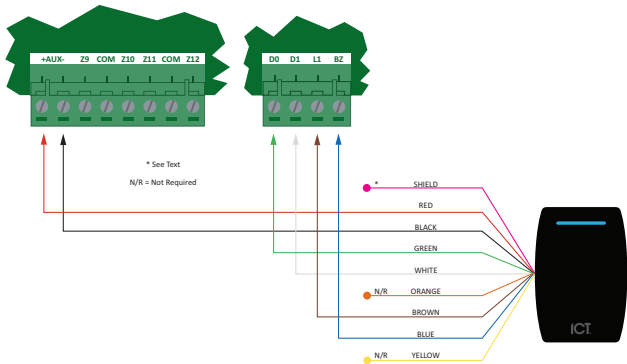
It is recommended that a minimum of a 4Ah battery is used as the main battery backup. From the accessory bag provided, connect the red and black battery termination wires to the B+ and B- terminals.



AC Power and Battery Connection

2. Card Reader Connection

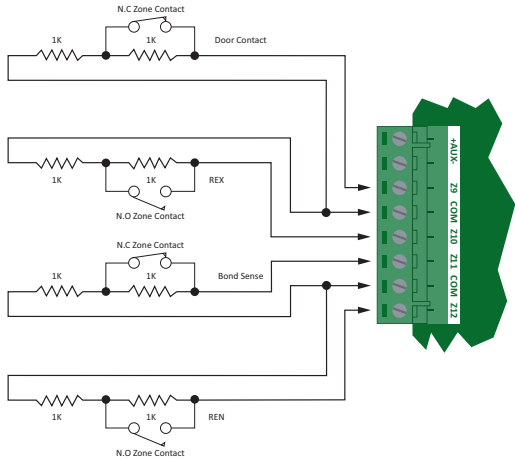
The following diagram shows the connection of standard Wiegand Reader with the Protege SE Integrated System Controller controlling an Access Door in Entry or Exit mode. The Protege SE Integrated System Controller does not support Dual LED Reader mode and readers must be configured for Single LED mode. Refer to your card reader documentation for further details.



Card Reader Connection

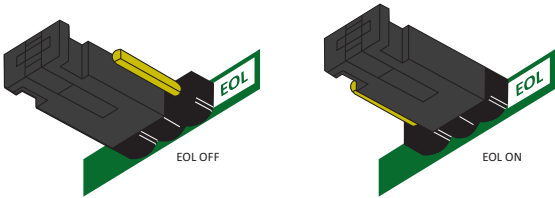
3. Door Contact Connection

The Protege SE Integrated System Controller allows the connection of up to 4x contacts for monitoring and controlling access control doors. Each zone on the reader expander can be used for the door function that is automatically assigned and as a normal zone input on the system. The following example shows the connection of a normally closed door position monitoring contact to monitor the Open, Closed, Forced and Alarm conditions of the door.



Door Contact Connection

Zone	Function	Default Setting
Zone 9	Door Contact, Port 1	Door Contact, Port 1
Zone 10	REX Input, Port 1	REX Input, Port 1
Zone 11	Bond Sense, Port 1	General Purpose Zone
Zone 12	REN Input, Port 1	General Purpose Zone
Zone 13	Door Contact, Port 2	Door Contact, Port 2
Zone 14	REX Input, Port 2	REX Input, Port 2
Zone 15	Bond Sense, Port 2	General Purpose Zone
Zone 16	REN Input, Port 2	General Purpose Zone

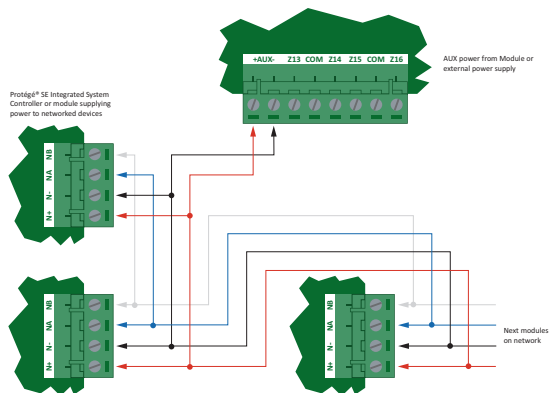


EOL Jumper

! The EOL (End Of Line) jumper setting MUST be set in the ON position for the FIRST and LAST module on the RS-485 network. EOL is ON when the jumper is closest to the EOL text.

4. Encrypted Module Network

The Protege SE Integrated System Controller incorporates encrypted RS-485 communications technology. The isolated communications interface offers full galvanic isolation to prevent ground loop noise and cross phase ground differential between network devices.



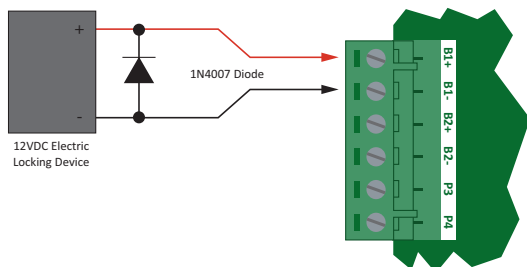
Standard Communication Connection

Always connect the Protege SE Integrated System Controller's NA and NB terminals to the NA and NB terminals of the expansion devices and keypads. The N+ and N- must go to a 12V power supply source as shown in the above diagram and connect at only ONE +12V power source.

5. Lock Output Connection

The Protege SE Integrated System Controller provides a connection for 2x electric strike locks with full monitoring of the lock circuit for tamper and over current/fuse blown conditions. The door lock monitoring can be disabled if it is not required.

Lock Outputs are shared with the Bell/Siren functions as shown in the diagram below. You can select another output for the Lock Control (P3 or P4) if the Bell/Siren function is required. To use the lock outputs in conjunction with the Onboard Reader module, the Lock PGM for the Door associated with the Reader Port must be configured to be the desired Lock Output on the Controller. This is not configured by default.



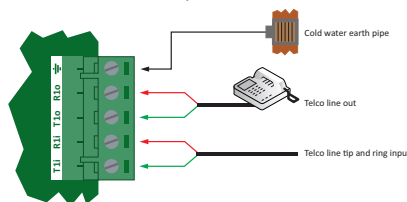
Lock Output Connection

6. Ethernet Interface

The communication between the Protege System and the Protege SE Integrated System Controller uses a 10/100 Ethernet network operating the TCP/IP protocol suite. The IP address of the Protege SE Integrated System Controller can be configured using the LCD Keypad Terminal. The default IP address is set to a static IP address of 192.168.1.2 with a subnet mask of 255.255.255.0.

7. Telephone Dialer

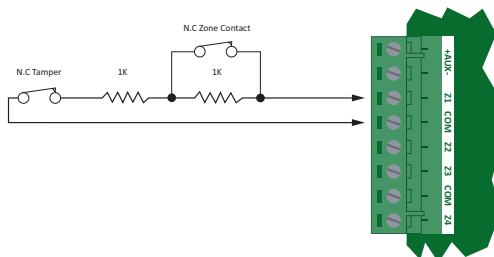
The Protege SE Integrated System Controller supports one telephone line. Connect the phone line as shown below.



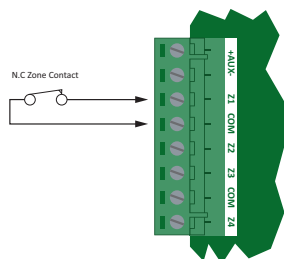
Telephone Line Connection

8. Zone Inputs

The Protege SE Integrated System Controller can monitor the state of up to 16 zone inputs such as magnetic contacts, motion detectors and temperature sensors. Devices connected to these zones can be installed to a maximum distance of 300m (1000ft) from the Controller when using 22 AWG. The Controller supports normally opened and normally closed configurations with or without EOL resistors.



EOL Resistor Zone Configuration



No EOL Resistor Zone Configuration

9. Technical Specifications

Operating Voltage	16 to 16.5VAC, 50-60Hz
Operating Current	120mA (Typical)
Total Combined Current	1.7A (Max) using a 37/40VA transformer 2.5A (Max) Using a 60VA or greater transformer
DC Output (Auxiliary)	1.0A (Typical) Electronic Shutdown at 1.85A
B1/B2 DC Outputs (Continuous)	8 Ohm 20W Siren or 700mA (Typical)
B1/B2 DC Outputs (Inrush)	1500mA
Battery Charging	350mA/700mA
Battery Low	11.2VDC
Battery Restore	12.5VDC
Electronic Disconnection	9.4VDC
Communication (Ethernet)	1x 10/100Mbps Ethernet Communication Link
Communication (Serial)	1x Isolated RS-485 Communication Interface Port 12VDC @ 28mA. (Input)
Communication (Modem)	1x 2400bps Modem Communication
Readers* (Standard Mode)	2x Wiegand or clock data readers providing one Entry/Exit Door or two Entry/Exit only Doors.
Readers* (Multiplex-reader Mode)	4x Wiegand Readers (connected in Multiplex Reader mode) providing any combination of Entry or Exit for two Doors.
Zone Inputs (System Zones)	16x High Security Monitored Zone Inputs
PGM Outputs	6x 50mA (Max) Open Collector Output for reader LED and beeper or general functions.
Operating Temperature	0° to 49° C (32° to 122° F)
Storage Temperature	-10° to 85° C (14° to 185° F)
Humidity	0% to 85% non condensing, indoor use only (Relative Humidity)
Dimensions (L x W x H)	234 x 183 x 35mm (9.21 x 7.20 x 1.37")
Weight	376g (13.26oz)

*Onboard reader registers as expander 008. The size of conductor used for the supply of all power to the Protege SE Integrated System Controller should be adequate in size to prevent voltage drop at the terminals of no more than 5% of the rated voltage. Specifications are subject to change without notice, please visit www.incontrol.co.nz for updated information.



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Designers and manufacturers of integrated electronic access control, security and building automation products.

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