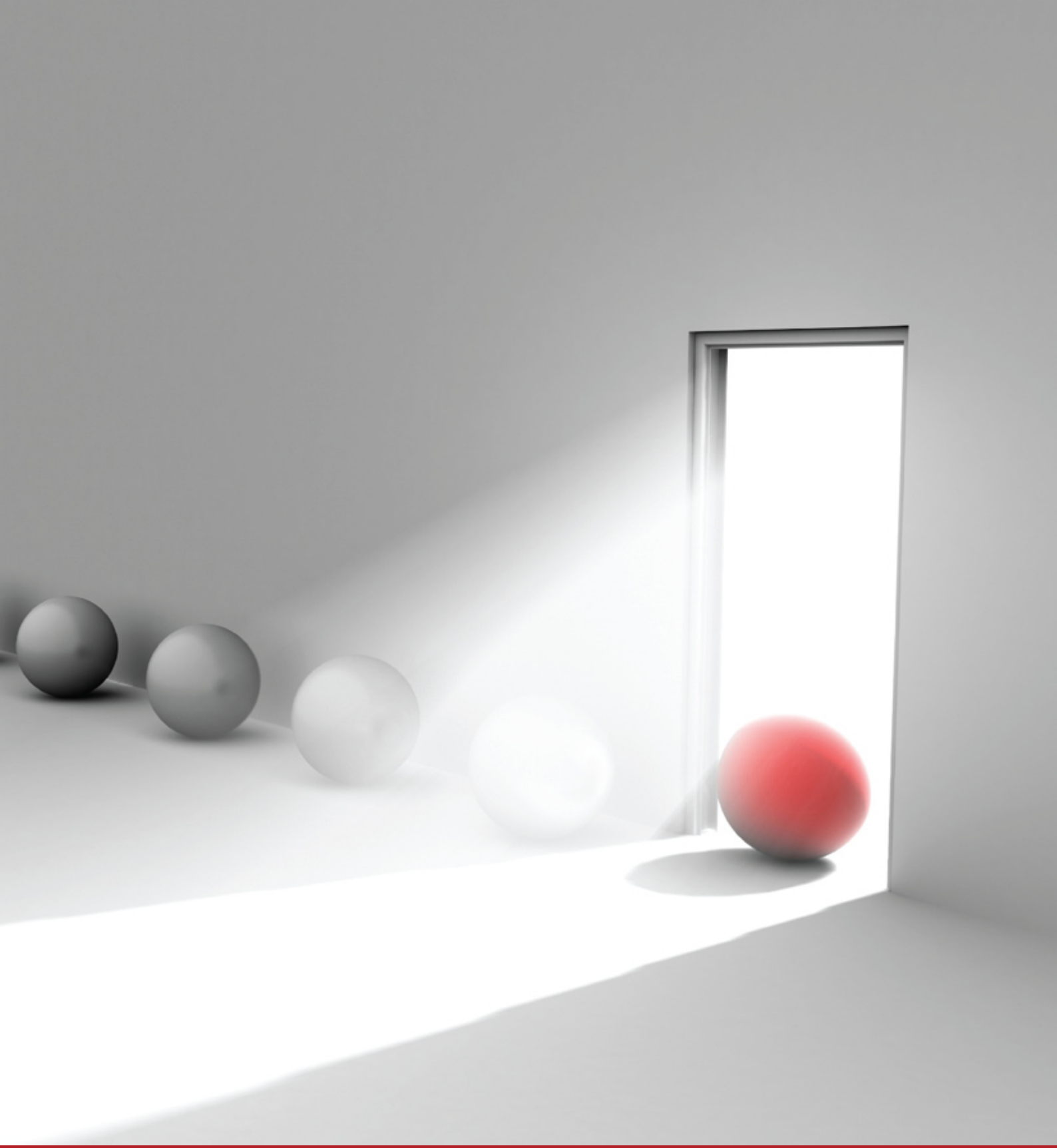


PROTEGE®

Protégé Integrated System Controller

Contents

Protégé Integrated System Controller

The Protégé Integrated System Controller is the central processing unit responsible for the control of security, access control and automation in the Protégé an advanced technology security product providing seamless and powerful integration.

The Protégé Integrated System Controller processes and controls all actions within the Protégé Integrated Access Control, Security and Building Automation system.

Ethernet 10/100 Connection

The Protégé Integrated System Controller provides onboard ethernet communication to allow direct connection from a local PC or interconnect to an existing LAN/WAN:

- Directly connect the Protégé System Management suite across a LAN or WAN interface for instant connection and upload download.
- IP reporting functionality using the Protégé IP Reporting Protocol, Contact ID over IP, SIA over IP and Full Text reporting methods. The Protégé IP Reporting Protocol requires the Protégé IP Reporting Bridge application operating on the remote machine or device with a suitable communications driver for the automation software being used.
- Full 10/100 compliant network interface allows the connection of the Protégé System Controller to all networks at the maximum capable signalling rate.
- Indication of link status, communication signalling rate and data transmission/reception shown on LED status indicators.

Local Monitored Power Supply

The Protégé Integrated System Controller operates from a 16VAC Input, utilizing low cost transformers and providing a fully monitor reader and door solution:

- Deep discharge prevention of the battery with automatic electronic cut-off.
- Manual or processor controlled battery charge selection of 350mA or 700mA.
- Intelligent charging algorithm monitors battery and AC supply allowing optimum performance to be achieved using standard lead acid batteries.
- Monitored signals for Battery Low/Disconnect and AC Failure using local trouble zones.

Integrated Arming/Disarming

The Protégé Integrated System Controller features advanced integration of arming and disarming solutions for control of up to 250 alarm areas:

- Deny access to a user based on the status of the area and the ability for the user to control the area they are entering in turn reducing false alarms.
- Implement bank vault areas to control and manage the time delayed access and unlocking of vault areas in banking facilities without the need for extra hardware control devices.
- Prevent access to a keypad using a card and pin function or allow card presentation to automatically login the user at the associated keypad.
- Disarm an area associated with an elevator floor on access when using the destination reporting option or prevent the user from gaining access to the floor based on the area status associated with the floor.
- Arm large numbers of areas using area groups.

Integrated Access Control

The Protégé Integrated System Controller provides a highly sophisticated access control solution with large user capacity and extensive features:

- Utilise primary and secondary access levels to manage users over simple scheduled periods and time zones.
- Assign door groups, menu groups, area groups, floor groups and elevator groups to an access level for flexible user management. Each group can optionally access a secondary group to provide multiple levels of user access.
- System wide global anti-pass back, the Protégé System Controller can maintain and control users area status throughout the entire system with hard and soft anti-pass back configuration options.
- Multiple card presentation options allows the use of access control cards, tags or other credentials to arm and disarm areas associated with doors.
- Count users entering an area and arm the area when the count reaches a terminal number or deny access to users based on a maximum user count.

Automation Functions

Automation points can be controlled from LCD User Stations for the management of any controllable device such as lighting, air con and signage.

- Access directly from the keypad the automation points allow a user interface to specific programmable outputs that a user can control.
- Link automation points to programmable functions to provide sophisticated control logic at the selection of an automation point.
- Text names can be set for automation points allowing a scrollable list of controllable items in the system such as “Office A/C” or “Outside Lights”.
- Link automation points with external devices through the PRT-COMM serial communications interface.

Memory Profiling and Expansion

Highly flexible memory profiling is an integral part of the Protégé System Controller Architecture and allows for the customisation of the number of records and record types to allow best fit solutions for any solution. The ability to expand memory using industry standard flash file technology gives unlimited possibilities:

- Select from seven predefined memory profiles tailored specific to industry segments and system architectures or create your own custom profile using the profile builder available from the keypad menu.
- Record names can be eliminated allowing for more economical use of the system controllers memory.
- Memory expansion is provided for large sites that exceed the onboard memory limit of 20,000 users. Accomplished by using industry standard flash card technology and the PRT-MEM Protégé Memory Expansion Interface.
- Grow with your installation as required. The Protégé System Management Suite automatically updates and monitors the profile selection in a site or controller and alters the configuration allowing a controller to be uploaded, re-profiled and downloaded without the loss of programming.
- Expand the controllers memory using the PRT-MEM Protégé Memory Expansion Interface.

Programmable Functions

Programmable functions allow for the use of special applications that are configured in the system controller for Logic, Area, Door and many other controllable devices:

- Process logic functions to allow complex equations to be evaluated using the special internal memory registers and PGM Output Status.
- Output of programmable functions can be directed to an action, memory region for storage and later use or a programmable output.
- Inclusion of special applications to reduce installation time for the control and automation of Garden Lighting, External Lighting and electronic movement sensors with auto manual operation.
- Control of Doors, Areas, Elevators and PGM's can be easily programmed and managed.
- Starting and Stopping of functions allows them to be managed remotely as required including special run once options to allow manual control of a function that is controlled by an operator.

Connectivity and System Expansion

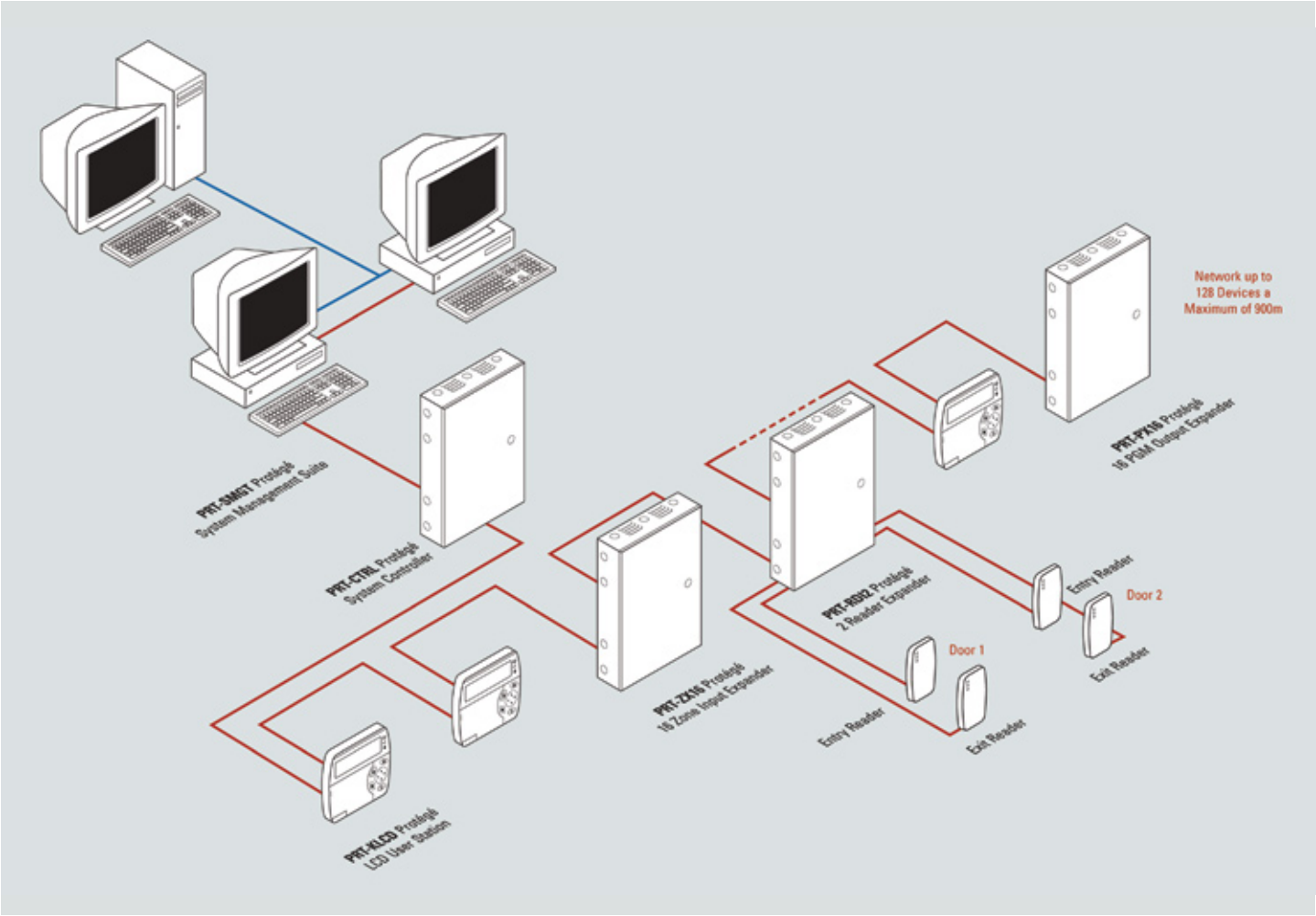
Expansion of the Protégé System with the onboard local Zone (Input) and PGM (Output) from the Integrated System Controller allows convenient cost effective expansion without the increased cost of modules for simple system functions:

- 16 onboard zone inputs each can be programmed to require an EOL (End Of Line) resistor or standard closed contact.
- 2 Bell Siren Outputs with fully monitored operation.
- Use the PRT-KLCD User Station to expand the number of LCD keypads within an installation. User or Keypad based security for flexible control of your system.
- Zone expansion is provided on nearly all modules as part of the Protégé Systems integrated structure and provides a dual function for many of the zone input configurations. Use the PRT-ZX16 to expand the number of Zone Inputs on the Protégé System.
- Programmable output expansion is provided directly on the Module Network by the PRT-PX16 and incorporates 16 high current FORM C relays and fire control functions.
- Expand the access control reader connections in the Protégé System with the PRT-RDM2 Mini Two Reader Expander, PRT-RDI2 Intelligent Two Reader Expander, PRT-RDS2 Standard Two Reader Expander or the PRT-RDE2 Ethernet Reader Expander. All providing two additional readers (or four Wiegand) and various options with local autonomous operation, power supply and ethernet options.

Communication

Galvanic isolated RS-485 communication interface for module communication, onboard 2400bps modem with dual line input and a 10/100 ethernet communications port gives a complete solution:

- Network RS-485 port used for all network communication functions and interconnects to other modules with full galvanic isolation.
- On board 2400BPS modem interface to allow all popular alarm reporting formats and the ability for remote connection from the Protégé System Management Suite.
- 10/100MB Ethernet interface for communication with the Protégé System Management Suite and other applications and functions.
- Expand the communication of the Protégé with the PRT-COMM Dual Communications Interface. Provide dual fully compliant EIA-232 Serial Ports and connect directly to the system controller.



Multifunction Reporting Services

Utilizing the latest functionality in communication services the Protégé System Controller incorporates a host of communication options:

- Monitor telephone line inputs using the monitor phone service and answer incoming calls on local modem interface using answer machine override and high security remote call back options.
- Report alarms using Contact ID, SIA Level 2 and ModBUS RTU remote formats.
- Communicate with terminal programs using the serial printer option and output the data in ASCII, HEX with custom format options and acknowledgement settings to allow connection of third party applications directly to the system controller.
- Communicate with AMX automation products using the AMX service for home and office automation solutions.
- Implement the system controller as part of a full SCADA network as part of an existing factory automation system allowing the control and monitoring of all inputs and outputs as well as areas and doors using industry standard ModBUS RTU.
- Send IP based reporting protocols using the onboard ethernet communication interface and Protégé IP Reporting Bridge application.

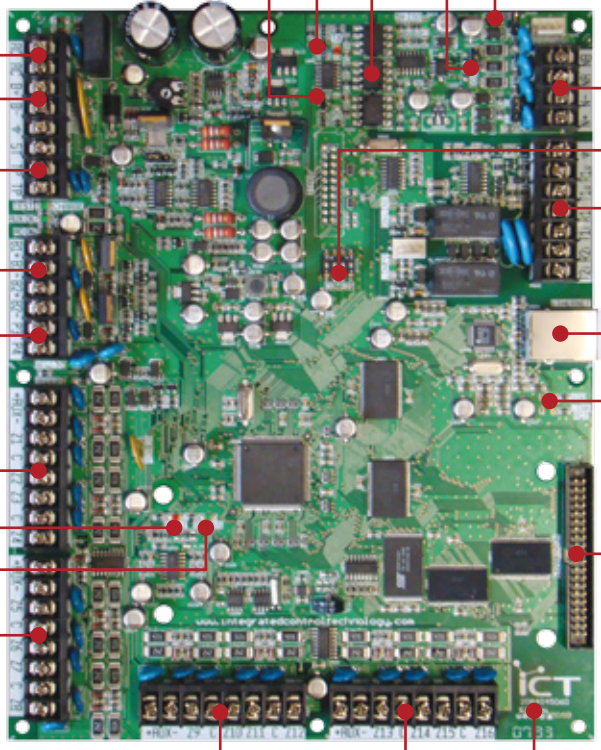
Upgradable Firmware

Utilizing the latest flash technology and high performance communication interface the firmware of the Protégé Integrated System Controller module can be updated either by using the Protégé LoadIt application, a standard terminal emulation program, or a high speed tftp protocol transfer.

Electronic Bell/Siren Outputs

High current electronic monitored bell siren control outputs:

- Indication of bell/siren output activation using LED.
- Bell/Siren failure monitoring or lock disconnected (Tamper) displayed as indicator and reported using trouble zone.
- Automatic shutdown on bell over current when activated or shorted. Automatic restore on next deactivation/activation cycle. Shutdown reported using trouble zone.
- Drive high current bell/siren directly from the bell/siren outputs.


ISOLATED COMMS
EOL JUMPER
RED TX LED
BIASING JUMPERS
GREEN RX LED
16V AC INPUT
BATTERY INPUT
MODULE NETWORK RS485
CONFIG SWITCH
CABINET TAMPER INPUT
PHONE LINE
SIREN/BELL OUTPUTS
PGM 3/4 OUTPUTS
10/100 ETHERNET
ETHERNET STATUS LEDS
ZONE 1 TO 4
RED FAULT LED
GREEN STATUS LED
EXPANSION INTERFACE
ZONE 5 TO 8
ZONE 9 TO 12
ZONE 13 TO 16
PART NUMBER

System Capacities

The Protégé Integrated System Controller can be profiled to allow a comprehensive solution that allows optimal performance to be achieved in any installation. The system capacities table shows the maximum number of users obtained for the available profile structure. For a detailed list of the profiles please review the System Controller Profile Document.

Users (Card Holders)	8 Digit PIN Number 64 Bit Card Number	2,500 to 10,000
Events	Full Offline Event Processing Functionality	4,000 to 8,000
Doors	Per Controller Per Site/System	128 8192
Access Levels	Assigned to users to control their access within the system	250
Door Groups	Assigned to an access level to limit their access to doors	128
Area Groups	Assigned to an access level in an arming or disarming setting for intruder alarm area management	128
Menu Groups	Controls user access to LCD User Station functionality	64
Elevator Groups	Assigned to access levels to limit the elevators a user can access	32
Floor Groups	Assigned to access levels and combined with the elevator group to limit the floors that can be accessed in an elevator	128
Schedules	Allows the control of functions for a time period during the day Periods PER schedule Holiday Groups Per Schedule	128 4 8
Automation	Controls Programmable Outputs and Functions for Automation	128
Performance of the Protégé System can be optimized by selecting a profile that matches the requirements of your installation. Contact Integrated Control Technology for information on selecting a memory profile that will enhance your application.		

Technical Specifications

Power	Operating Voltage Operating Current Auxiliary Output	15.5VAC to 16.5VAC, 50-60Hz, 40VA (Max) 119mA (207mA Max) 1.2A Fused / Monitored
Battery Backup	Type Charging Low Battery Electronic Disconnection	13.8V Sealed Lead Acid 350mA/700mA 11.2VDC Alarm, 12.5VDC Restore 8.76VDC
Cable Specifications	Protégé RS-485 Encrypted System Network Communication	Beldon Part Code 9842 or Equivalent. CAT5 / 5e (up to a maximum length of 300m).
Communication	Serial Isolated Power Ethernet	RS485 Isolated Communication Interface Ports 12VDC @ 28mA 10/100Mbs Ethernet Communication Link
Zone (Inputs)	System Zones Enclosure Tamper	16 Standard zones individual resistor or no resistor per zone Normally Closed
PGM (Outputs)	Bell/Siren PGMs System PGMs	2 Fixed Voltage High Current Outputs (2.0A Continuous, 2.2A Max) Monitored with Auto Shutdown and Reportable Events. 2 Open Collector (Negative, 50mA Max) Outputs. Programmable for all PGM functions.
Temperature	Operating Storage Humidity	5° to 55°C (41° to 131°F) -10° to +85°C (14° to 185°F) 0%-85% (Non Condensing)
Dimensions	Height Width Depth Weight	183mm (7.2”) 234mm (9.21”) 35mm (1.37”) 790gms (27.86oz)
The size of conductor used for the supply of all power to the Protégé Integrated System Controller should be adequate in size to prevent voltage drop at the terminals of no more than 5% of the rated voltage.		

ICT CODE: 245-4045-001 V: 81B2

International Compliance Standards:
The Protégé Integrated System Controller complies with the following international standards.
For an installation of the Protégé Integrated System Controller to comply with any of the standards all installation procedures and programming configuration settings must be made in accordance with the required standard.

Disclaimer:
Whilst every effort has been made to ensure accuracy in the representation of this product, neither Integrated Control Technology Ltd or any employee of the company, shall be liable on any ground whatsoever to any party in respect of decision or actions they may make as a result of using this information. In accordance with the Integrated Control Technology policy of enhanced development, design and specifications are subject to change without notice.

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