



## Protege Half DIN Rail 2 Door Reader Expander



The Protege Half DIN Rail 2 Door Reader Expander delivers up to 4 reader inputs and 2 locking device outputs, in a compact two-tier half DIN rail design.

With 8 inputs that can be used for extended monitoring functionality, and 6 open collector outputs available for management of controllable devices, the Half DIN Rail 2 Door Reader Expander features extensive hardware advancements that support flexible security and access control, alarm monitoring and building automation.

### Feature Highlights

- > 2 reader ports, independently configurable for either Wiegand or RS-485 operation
- > OSDP configurable RS-485
- > Connect up to 4 readers, providing dual entry and exit door configuration
- > Fused and monitored reader power supply
- > Designed for use with industry standard DIN rail mounting
- > Support for intelligent tamper operation. Readers are monitored for keep-alive transmissions using the programmed protocol
- > Offline functions including No Users, All Users and First 10 Users plus 150 Card Cache
- > Over 40 predefined reading formats
- > Control up to 3 outputs per reader port with predefined configurations for instant connection

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## Connectivity and System Expansion

Expanding the Protege system with local input and output from the Half DIN Rail 2 Door Reader Expander allows for a convenient, cost effective expansion and the added benefit of dual functionality on door monitoring zones:

- > 8 high security inputs can be used to perform system monitoring, alarm and automation functions. All 8 inputs have assigned functions that are processed by the reader expander for door control. Each function can be enabled individually.
- > 6 open collector outputs can be used within the system for the management of controllable devices such as relays, lighting and building automation.
- > System expansion is achieved seamlessly by connecting additional expander modules.
- > Address configuration of the Half DIN Rail 2 Door Reader Expander is achieved using the address programming feature of the Protege System Controller.

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## Power Supply

Device power is supplied from a 12VDC input. Ultra low current requirements ensure cost-effective power distribution.

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## Flexible Reader Support

Provides 2 reader ports that can be independently configured for either Wiegand or RS-485 reader operation, allowing the connection of up to 4 readers controlling 2 doors.

Choose Wiegand readers for compatibility with all standard access control systems, or RS-485 for fast, secure communication.

RS-485 readers provide the added benefits of being easier and more cost effective to wire and deploy, and allow for direct integration with Protege systems, enabling you to make changes on the fly once readers are installed. RS-485 also allows for longer cable runs and offers a simpler firmware update process.

OSDP protocol configuration in RS-485 offers additional security and adds scalability, flexibility and ease of implementation.\*

\* The ICT implementation of OSDP conforms to a subset of the OSDP functionality. For specifications and reader configuration, refer to [Application Note 254: Configuring OSDP Readers](#), available from the ICT website.

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## Communication

A single RS-485 communication interface port used for all network communication functions and interconnection to other modules.

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## Integrated Arming/Disarming

Featuring advanced integration of arming and disarming solutions for control of hundreds of alarm areas, the module allows a user to arm and disarm an area from an input associated with a door:

- > Deny access to a user based on the status of the area and allow the user to control the area they are entering, in turn reducing false alarms.
- > Implement vault control areas to manage time delayed access and unlocking of vault areas in banking facilities, without the need for additional hardware control devices.
- > Control access to a keypad using a card and PIN function, or allow card presentation to automatically log the user in at the associated keypad.
- > Disarm an area associated with an elevator floor on access, or prevent the user from gaining access to the floor based on the area status associated with the floor.
- > Repeated presentation of an access card can arm an area associated with the entry or exit direction of the door being accessed.
- > Arm large numbers of areas using area groups.

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## Upgradable Firmware

Utilizing the latest flash technology and high performance communication mediums, the firmware can be updated via the Protege interface.

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## Smaller Footprint

The compact two-tier half DIN rail module design occupies less valuable real estate to provide more control in less space.

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## Wall Mountable

The additional wall mounting feature provides absolute convenience and flexibility in module positioning.

## Technical Specifications

Ordering Information	
PRT-HRDM-DIN	Protege Half DIN Rail 2 Door Reader Expander
Power Supply	
DC Input Voltage	11-14VDC
DC Output Voltage (DC IN Pass Through)	10.83-14.0VDC 0.7A (Typical) Electronic Shutdown at 1.1A Reader 1&2 10.45-13.85VDC Pass Through share 0.7A (Typical) Electronic Shutdown at 1.1A
Operating Current	80mA (Normal Standby)
Total Combined Current*	1.6A (Max)
Low Voltage Cutout	8.7VDC
Low Voltage Restore	10.5VDC
Communication	
RS-485	Module network
Offline Operation	
Offline Access Modes	All Users, First 10 Users plus 150 Card Cache, No Users
Readers	
Reader Configurations	2 reader ports that can be independently configured for either Wiegand (up to 1024 bits configurable) or RS-485, allowing connection of up to 4 readers providing entry/exit control for two doors ** RS-485 reader port connections support configuration for OSDP protocol
Outputs	
Lock Outputs	2 Form C Relay Outputs - 7A N.O/N.C. at 30 VAC/DC resistive/inductive
Outputs	6 (50mA Max) Open Collector
Inputs	
Inputs	8 High Security Monitored Inputs (10ms to 1hr Input Speed Programmable)
Trouble Inputs	16
Dimensions	
Dimensions (L x W x H)	78 x 90 x 60mm (3.07 x 3.54 x 2.36")
Net Weight	210g (7.4oz)
Gross Weight	270g (9.5oz)
Operating Conditions	
Operating Temperature	UL/ULC 0° to 49°C (32° to 120°F) : EU EN -10° to 55°C (14° to 131°F)
Storage Temperature	-10° to 85° C (14° to 185° F)
Humidity	0%-93% non-condensing, indoor use only (relative humidity)
Mean Time Between Failures (MTBF)	622,997 hours (calculated using RFD 2000 (UTE C 80-810) Standard)

\* The total combined current refers to the current that will be drawn from the external power supply to supply the expander and any devices connected to its outputs. The auxiliary outputs are directly connected via thermal resettable fuses to the N+ N- input terminals, and the maximum current is governed by the trip level of these fuses.

\*\* Each reader port supports either Wiegand or RS-485 reader operation, but not both at the same time. If combining reader technologies, they must be connected on separate ports.

The ICT implementation of OSDP conforms to a subset of the OSDP functionality. For specifications and reader configuration, refer to Application Note 254: Configuring OSDP Readers, available from the ICT website.

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## Regulatory Notices

### **RCM (Australian Communications and Media Authority (ACMA))**

This equipment carries the RCM label and complies with EMC and radio communications regulations of the Australian Communications and Media Authority (ACMA) governing the Australian and New Zealand (AS/NZS) communities.

### **AS/NZS 2201.1 Class 5**

Protege systems conform to AS/NZS 2201.1:2007 Class 5 intruder alarm systems standards for the construction, operation, performance and installation of intruder alarm equipment and systems installed in clients' premises.

### **CE - Compliance with European Union (EU)**

Conforms where applicable to European Union (EU) Low Voltage Directive (LVD) 2014/35/EU, Electromagnetic Compatibility (EMC) Directive 2014/30/EU, Radio Equipment Directive (RED) 2014/53/EU and RoHS Recast (RoHS2) Directive: 2011/65/EU + Amendment Directive (EU) 2015/863.

This equipment complies with the rules of the Official Journal of the European Union, for governing the Self Declaration of the CE Marking for the European Union as specified in the above directives.

Security Grade 4, Environmental Class II, EN 50131-1:2006+A2:2017, EN 50131-3:2009, EN 50131-6:2008+A1:2014, EN 50131-10:2014, EN 50136-1:2012, EN 50136-2:2013, EN 60839-11-1:2013, Power frequency magnetic field immunity tests EN 61000-4-8, Readers Environmental Class: IVA, IK07.

### **UK Conformity Assessment (UKCA) Mark**

This equipment carries the UKCA label and complies with all applicable standards.

### **UL/ULC (Underwriters Laboratories)**

- > UL 294 for Access Control System Units
- > CAN/ULC S319 for Electronic Access Control Systems

### **Industry Canada**

ICES-003

This is a Class A digital device that meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (A)/NMB-3(A)

### **Federal Communications Commission (FCC)**

FCC Rules and Regulations CFR 47, Part 15, Class A.

This equipment complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; (2) This device must accept any interference received, including interference that may cause undesired operation.

- > For a full regulatory and approval list please visit the ICT website.

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