



Protege DIN Rail 2A Intelligent Power Supply



The Protege DIN Rail 2A Intelligent Power Supply provides the Protege system with 12VDC power, ideal for running security, access control or automation devices along with large numbers of Protege network powered modules in the same installation.

The power supply includes intelligent charging for optimum performance and allows for simple and powerful monitoring of supply currents and voltages.

Feature Highlights

- > 16VAC input ideal for ICT's range of low cost AC transformers
- > High performance 32 Bit processor
- > 2 Form B relay outputs can be used as programmable outputs or as additional status outputs for monitoring battery failure, disconnection and AC failure
- > Each power supply can monitor up to 8 trouble inputs
- > Comprehensive diagnostic LED indicators
- > Secure encrypted RS-485 module network communications and intelligent monitoring
- > Battery backup connection for uninterrupted power delivery in power outage conditions
- > Processor controlled battery level testing and indication
- > Intelligent charging algorithm monitors battery and AC supply ensuring optimum performance
- > Designed for use with industry standard DIN rail mounting

Reliable Power Delivery

The Protege DIN Rail 2A Intelligent Power Supply is capable of supplying power to a large number of smaller devices or multiple high-current devices with a combined total output of 2 amps. A battery charging circuit current of 350mA is also provided by the power supply.

A continuous source of power is maintained with the inclusion of intelligent battery backup charging, optimal level maintenance and seamless switch on AC failure. The battery backup, AC status and core temperature are constantly monitored, and failure conditions are communicated to the Protege system.

Battery Backup

The backup battery plays an important role in power conditioning and provides a continuous source of power in the event of a power outage.

The battery test procedure uses a proprietary algorithm to prevent deep discharge and increase battery endurance. A dynamic battery test is performed every ten minutes when mains power is present, and a battery condition alarm will be generated if the battery is disconnected or shows poor capacity. Battery fault conditions will activate the associated battery trouble input.

In addition to the dynamic battery test procedure the power supply performs a battery presence test every 60 seconds. If no backup battery is detected a battery condition alarm will be generated and the associated trouble input will be activated.

Upon reconnection of mains power the power supply automatically detects the backup battery and begins controlled charging.

Power Supply Outputs

The power supply has two 50mA outputs that can operate as either programmable outputs or predefined status outputs.

While in online mode the two outputs function as programmable outputs and can be used to activate bell sirens, lighting circuits, door locks, relay accessory products and other automation points.

While in offline mode the two outputs function as status outputs. In addition to the comprehensive front panel diagnostic indicators these status outputs offer additional information that can aid in diagnosing faults and conditions.

Communication

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

Intelligent Power Monitoring

The power supply is able to relay information about critical system voltages, currents and core temperature to the Protege GX integrated system controller.

The controller can then store these values in variables which can be viewed live from the Protege GX system interface and monitored on a status page or floor plan, along with logging for review at any time.

LED Indicators

The power supply features comprehensive diagnostic indicators that can aid in diagnosing faults and conditions. LED indicators on the power supply include:

- > Status indicator
 - > Fault indicator
 - > Power indicator
 - > V1 output/V2 output indicators
 - > Battery indicator
 - > Temp indicator
 - > Over current indicator
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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.

* Requires a transformer (TFR-40-16 or TFR-100-16). Transformers are sold separately.

Technical Specifications

Ordering Information	
PRT-PSU-DIN-2A	Protege DIN Rail 2A Intelligent Power Supply
Power Supply	
AC Input Voltage	16 to 16.5VAC 50-60Hz
Operating AC Input Current	3.15A @ 16.5VAC when Total Combined Current = 2.5A 2.2A @ 16.5VAC when Total Combined Current = 1.7A
Operating Current	140mA (Typical)
Total Combined Current	1.7A (Max) using a 37/40VA transformer 2.5A (Max) using a 60VA or greater transformer Electronically limited at 2.5A
DC Output (Single)	12.4VDC, 1.0A (Typical) Electronic Shutdown at 1.85A
Battery Charging	350mA (Typical) *Additional to the 2A Combined DC Output
Battery Low	11.75VDC
Battery Restore	12.5VDC
Electronic Disconnection	9.4VDC
Communication	
RS-485	Isolated Module Network
Inputs	
Tamper	Dedicated Hardware Tamper Input
Trouble Inputs	8 (internal)
Outputs	
PGM Outputs	2 Solid-State Relay Outputs, 50mA 12V Max
Dimensions	
Dimensions (L x W x H)	78.4 x 90 x 60mm (3.08 x 3.54 x 2.36")
Net Weight	190g (6.7oz)
Gross Weight	280g (9.9oz)
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)	237,455 hours (calculated using RFD 2000 (UTE C 80-810) Standard)

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.

UL/ULC (Underwriters Laboratories)

- > UL1610 for Central-Station Burglar-Alarm Units
- > UL294 for Access Control System Units
- > CAN/ULC S304 for Signal Receiving Centre and Premise Burglar Alarm Control Units
- > CAN/ULC S319 for Electronic Access Control Systems
- > CAN/ULC S559 for Fire Signal Receiving Centres and Systems

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.

Industry Canada

ICES-003

This is a Class A digital device that meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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

- > 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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