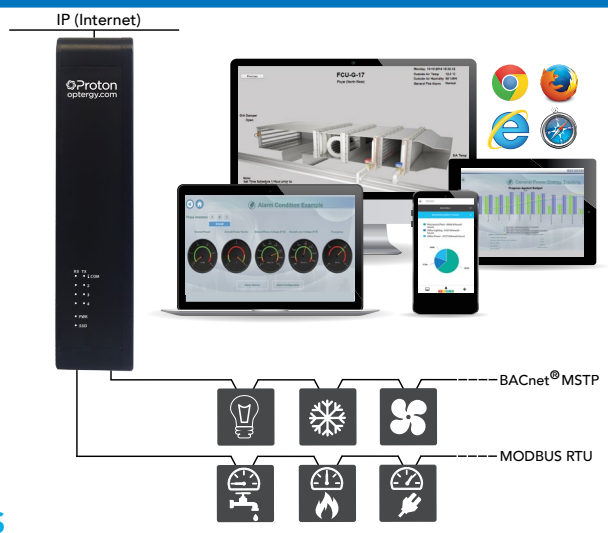
ACF ELECTRICAL SOLUTIONS

Proton By Optergy

Proton is a web-based building controller that integrates building automation and energy management systems. Proton provides the tools to visualise, monitor, control and report on building operation in real time.



Access to the system is via a local Wi-Fi or network connection using common web-browsers.

Proton supports BACnet MSTP, IP and Modbus RTU, IP with 4 onboard communication ports.

MAIN FEATURES

- Automated Building Management
- Automated Energy Management
- Energy metering and reporting
- Mobile App
- Web server with customisable content
- Remote Management
- All web based tools included
- Graphic Displays
- BACnet IP and MS/TP
- MODBUS IP and RTU
- Simple licensing

PROTON MODELS

Proton 10 supports up to 10 connected devices.

Proton 20 supports up to 20 connected devices and adds scrolling public displays.

Proton 50 supports up to 50 connected devices, tenant management (3 tenants), utility billing and after hours billing.

Proton 100 supports up to 100 connected devices, tenant management (10 tenants), utility billing and after hours billing.

The number of users for Proton is not restricted. The administrator group has the ability to add or modify users, define access to display, and set the navigation path specific to the user role.

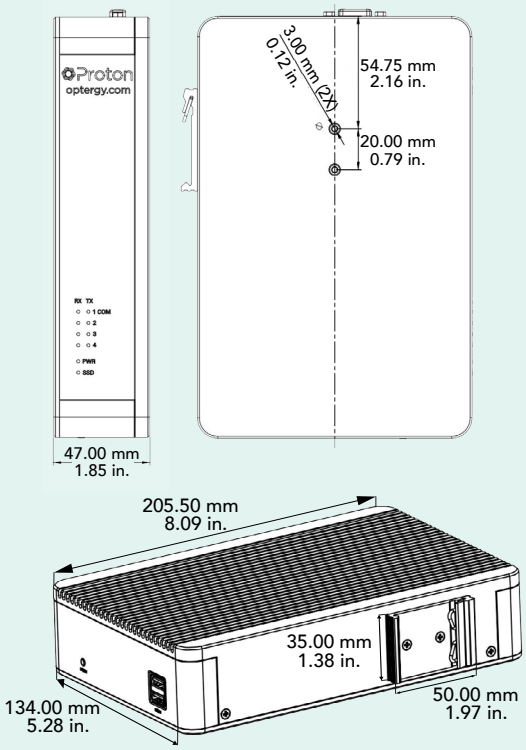
HARDWARE SPECIFICATIONS

Model	Proton 10-20-50-100
Processor	Integrated Intel J1900 2.00GHz Quad Core processor
Ethernet	2* RTL8111F GbE port
Storage	120GB mSATA SSD
RAM	4GB
Connections and Indicators	2 x USB 2.0 port PWR led (power) HDD led (drive activity) TX (Amber) & RX (Green) led on each RS-485 Port 4 x 3 pin connector (RS-485) 1 x Display Port 1 x VGA Port 2 x RJ-45 Ethernet Port 1 x 3 pin connector (12V DC)
RS-485 baud rates	9.6k, 19.2k, 38.4k, 76.8k, 115.2k
BIOS	AMI 64Mb Flash ROM
Watchdog	Watchdog Timer support. Offer 0~255 step
Power	12V DC input 3-pin connector
Operating Temp	-10°C ~ 60°C
Storage Temp	-20°C ~ 70°C
Relative Humidity	5%-95% (non-condensing)
OS	Debian LINUX OS ver 7

Agency Certifications

- CE
- FCC

HARDWARE DIMENSIONS



PROTON 10-20-50-100 KEY FEATURES

BACNET AND MODBUS

BACnet and Modbus combined offer the best interoperable solution with minimal integration effort.

TRENDS, ALARMS, SCHEDULES AND CALENDARS

Users can create trends, alarms, schedules and calendars.

Trend graphs can be modified to view multiple trends and view over a defined time interval.

Users will be able to view a list of all alarms, with the ability to acknowledge and/or to clear.

Multiple schedules can be linked to a calendar that overrides standard schedule entries.

EMAIL NOTIFICATION

Alarm notifications and saved reports can be automatically emailed at a pre-defined frequency to any user with email credentials.

TEXT MESSAGING (SMS) ALARM WITH ESCALATION AND ACKNOWLEDGMENT

Proton will send a text message when an alarm event occurs. If alarms are not acknowledged, Proton escalates alarms to any number of predetermined recipients after a user defined time period has elapsed.

OPTIMUM START POINTS

Calculates the optimal plant start time to ensure the building achieves temperature when the occupied period begins.

REPORTING

Proton's flexible reporting system contains pre-packaged reports with specified time periods. It allows the simple generation of custom reports, with multiple output options such as Web, PDF and CSV. These can be automatically emailed at predetermined intervals.

DEMAND LIMITING

Reduce the amount of energy consumed by your devices during peak periods. This feature allows the user to create and arrange analog or binary load controls.

MAINTENANCE TICKETS

Users can report problems to facility management. Proton administrators can post follow ups and keep track of progress.

TOOLS

All the necessary web based tools to customise, configure, and program the Proton are included with easy to use help.

PUBLIC DISPLAYS (Proton 20 / Proton 50 / Proton 100)

Scrolling public displays are supported by a list of accessible URLs which are displayed in order for a predetermined time. Proton supports an unlimited number of public displays on a per-user basis allowing you to communicate with building users.

TENANTS (Proton 50 / Proton 100)

Tenants are building occupants who usually pay for their own utility needs. Tenants can have their profile entered into the system and attached to a space.

UTILITY BILLING (Proton 50 / Proton 100)

Tenant spaces can be linked to utility meters with automatic billing. Invoices contain the energy and cost details as well as payment instructions.

AFTER HOURS BILLING (Proton 50 / Proton 100)

Tenants may create after hours scheduling events that incur energy use charges. This feature can log events, create after hours usage invoices and automatically notify the tenants.

Product feature by model	Proton 10	Proton 20	Proton 50	Proton 100
Devices (BACnet/Modbus/Meters)	10	20	50	100
Optimum start points	10	20	50	100
Demand limiting points	10	20	50	100
Weather & Forecast	✓	✓	✓	✓
Public displays	✗	✓	✓	✓
Tenants	✗	✗	3	10
Utility billing	✗	✗	✓	✓
After hours billing	✗	✗	✓	✓

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