

PAC3100 Basic Power Meter

Technical Overview

2018

PAC3100 Power Meter Overview

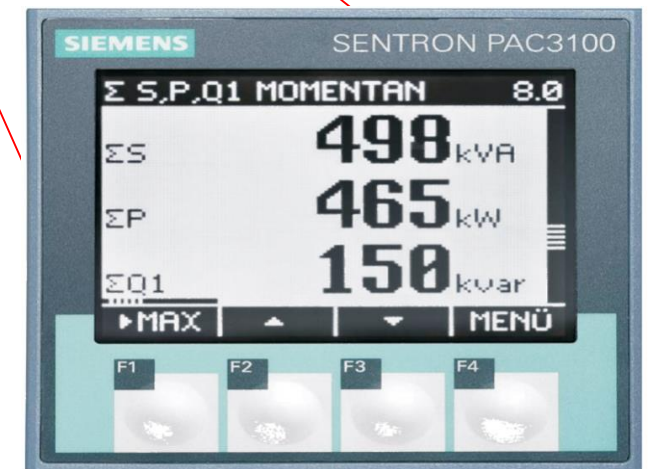
The PAC3100 meter is an affordable, compact, basic level power and energy meter designed for OEM's and customers requiring more than just kWh.

The PAC3100 meter starts the PAC meter family with standard metering that sets the foundation for low cost, highly accurate metering.

Multiple models available:

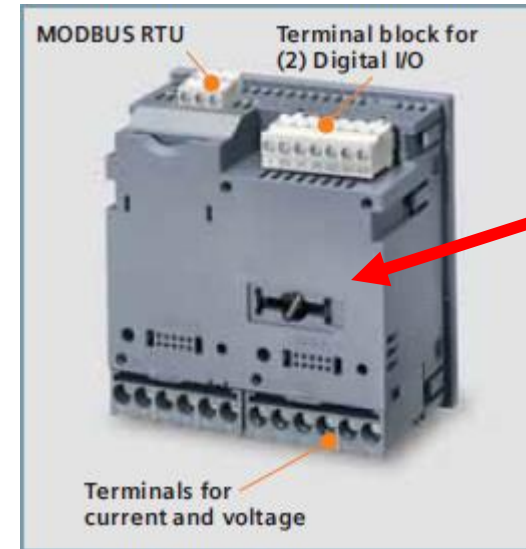
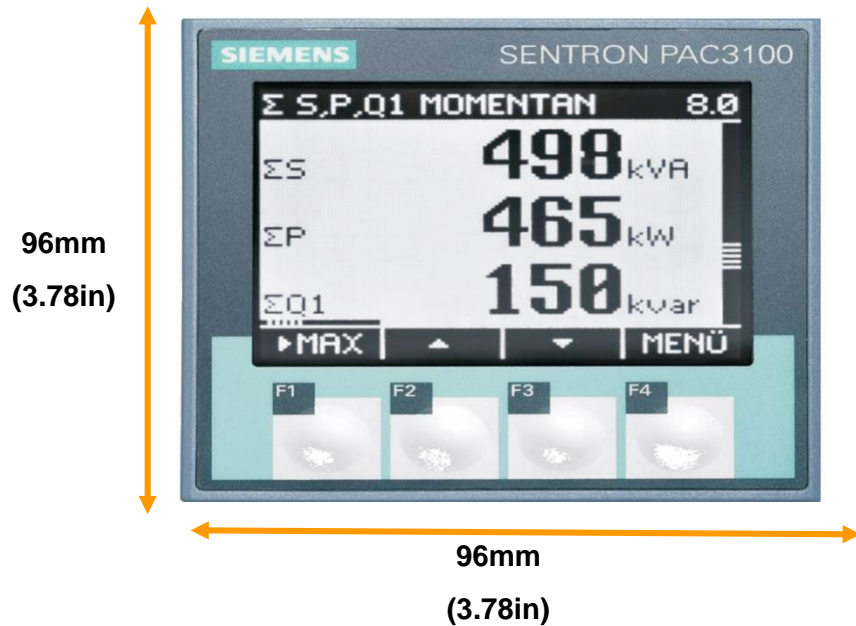
- 95-240VAC
- 110-340VDC

The optional DIN Rail adapter provides more flexibility for OEM's and customer installations.



PAC3100 Power Meter Overview

Meter Design Features



PAC3100 Supports
NO optional Modules

Full Graphic LCD Display Indicates:

- ✓ Display Title or designation of display measurements
- ✓ Phase
- ✓ Measured Value
- ✓ Units
- ✓ Labeling of function key



Two-tier DIN Rail Adapter

“display up”

DIN Rail Adapter



PAC3100 Power Meter Overview

Meter Design Features

Displays written in easy to understand text



Large, full graphics LCD with backlight and easy-to-read text displays



Plain text displays

4 Function Keys

Direct navigation in the measurement menus



LCD screen contrast and brightness can be adjusted for ambient conditions



Display colors can be inverted



Programmable dimming or "screen off" time to reduce energy and to increase backlight life.

PAC3100 Power Meter Overview

Key Features

Functions

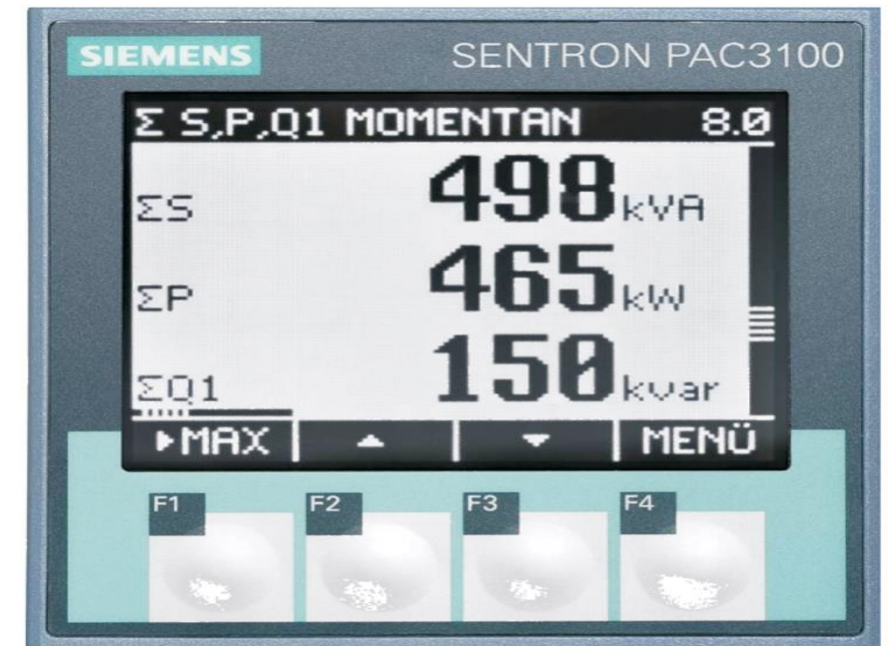
- Acquisition of voltage, current, power and energy
- Low price with communication
- Meter for Basic Power Management Systems
- Includes standard I/O for monitoring and control
- No logging or time stamping

Innovation

- Display of neutral current
- Graphical display

Unique selling proposition

- 2 digital inputs and 2 digital outputs combined with Modbus RTU communication interface
- Intuitive menu prompt via plain text displays in 8 languages and 4 function keys
- Meets the high requirements in accordance with IEC61557-12 (new standard for power monitoring devices)



**Power Monitoring Device SETRON
PAC3100
"for worldwide use"**

PAC3100 Power Meter Overview

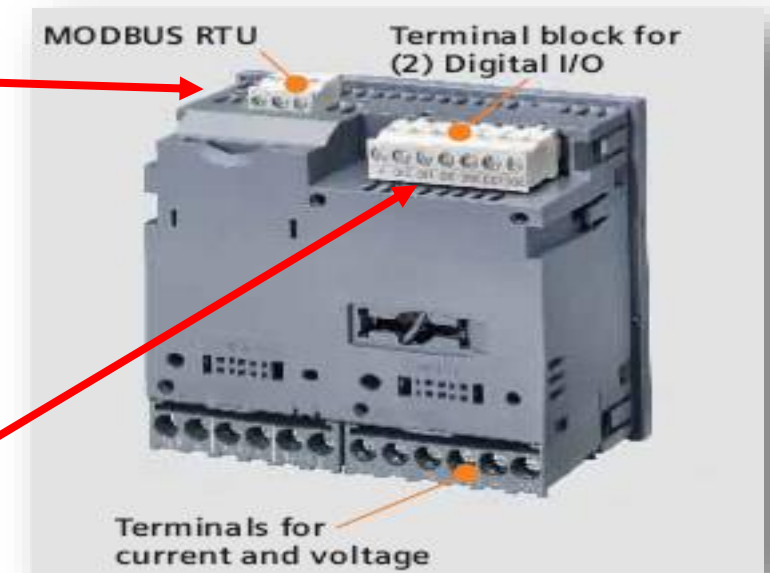
Meter Design Features

Communication

- Integrated RS485 interface with open protocol (Modbus RTU)
- Functionality:
 - Reading the status of the digital inputs
 - Synchronization of the demand periods

Digital Inputs and Outputs

- 2 self wetting digital inputs for:
 - Monitoring states of external devices such as circuit breakers
- 2 digital outputs
 - Pulse output for active and reactive energy (import, export or net)
 - Remote switching triggered by a Modbus RTU command



Voltage and Current Terminal location – bottom side

PAC3100 Power Meter Overview

Meter Measurement Features



- ✓ NEMA 12 , IP65
- ✓ Device class PICQ
- ✓ File number: E314880
- ✓ Over voltage category III
- ✓ UL certified for voltages up to 600V
- ✓ Safety of Electrical equipment for Measurement, Control and Laboratory Use Part 1: General Requirements
- ✓ CAN/CSA-C22.2 No. 61010-1-04, 2ND Ed Safety of Electrical Equipment for Measurement, Control and Laboratory Use



PAC3100 Power Meter Overview

Quick Installation Feature

Quick no-tool installation

Uses a simple combined latching holder

- ⇒ Degree of protection NEMA12 / IP65
- ⇒ Integral seal provided as standard.

Installation with screws

(integrated in combined latching holder)

- ⇒ Increased contact pressure
- ⇒ Increase degree of protection to NEMA 12 / IP65 (front side)

Minimal Space Requirement for latches

- Low installation depth of just 2.0" (51 mm) or 2.875" (73 mm) with extension module.



PAC3100 Power Meter Overview

Retrofit Installation Feature – for all PAC series meters

Siemens panel mount adapter plate

Part #: 93-47ADAPTER

This plate will work for old Siemens 4700 and 4720. The plate fills the cutout left by the old meter with cutouts for PAC meter.



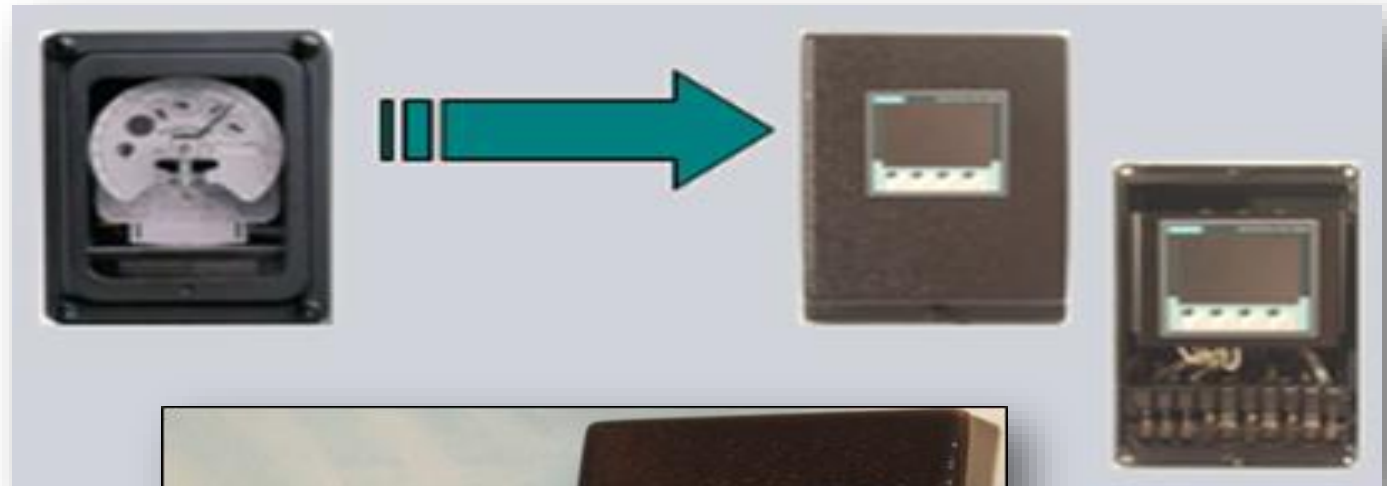
PAC3100 Power Meter Overview

Retrofit Installation Feature – for all PAC series meters

Draw out kWh Meter
Replacement kits for many
old meter designs.



Quoted as a special through
the local Siemens Sales
person.



PAC3100 Power Meter Overview

Multi-meter Installation Feature – for all PAC series meters

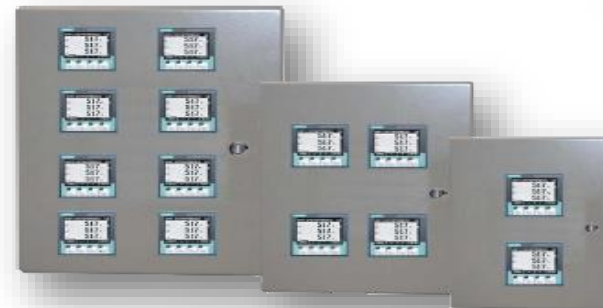
Siemens Single Unit PAC Meter Enclosure



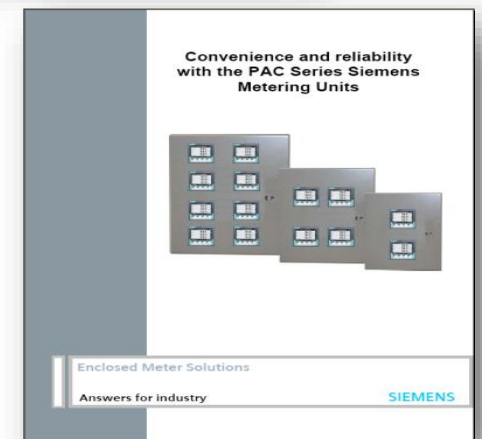
Siemens Metering Units (SMU's) for sizes ranging from 2 to 14 meters and NEMA 1 or 12.

*Other ratings can be supplied.

All enclosures come pre-wired with shorting blocks, fuse blocks, and CPT if required.



Multi-Meter Enclosures

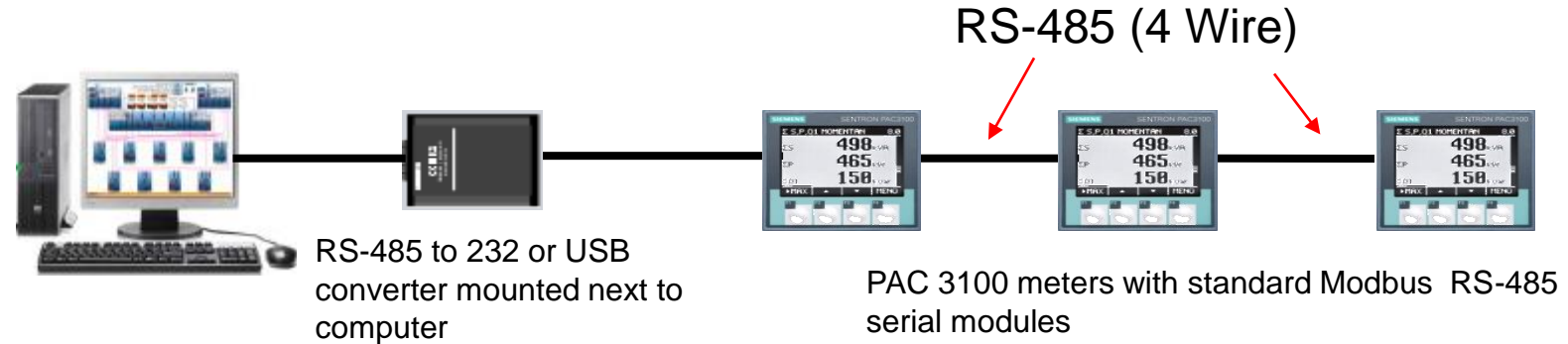


Data Sheets

PAC3100 Power Meter Overview

Communications Example – Direct Serial Connection

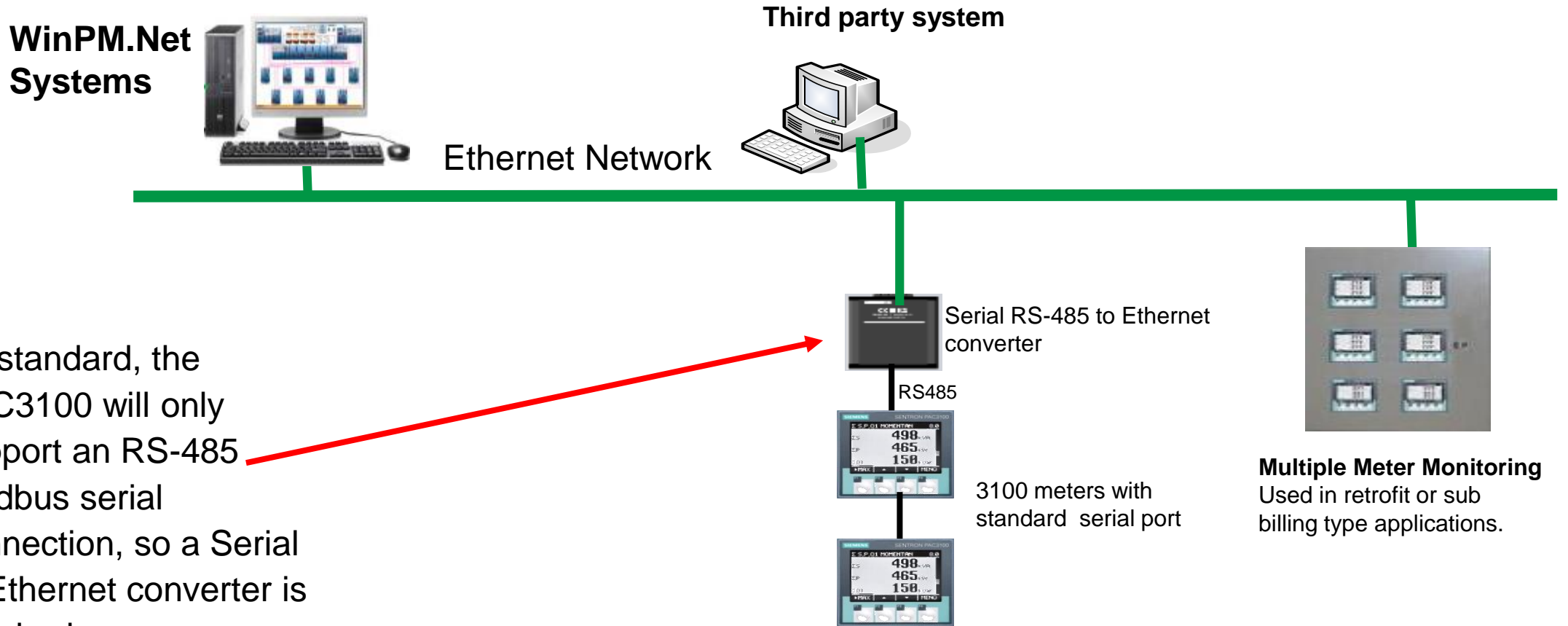
**WinPM.Net
Powermanager
System**



Direct connection to a computer via RS-485 serial wire (up to 4000 ft). One RS-485 string can support up to 32 meters.

PAC3100 Power Meter Overview

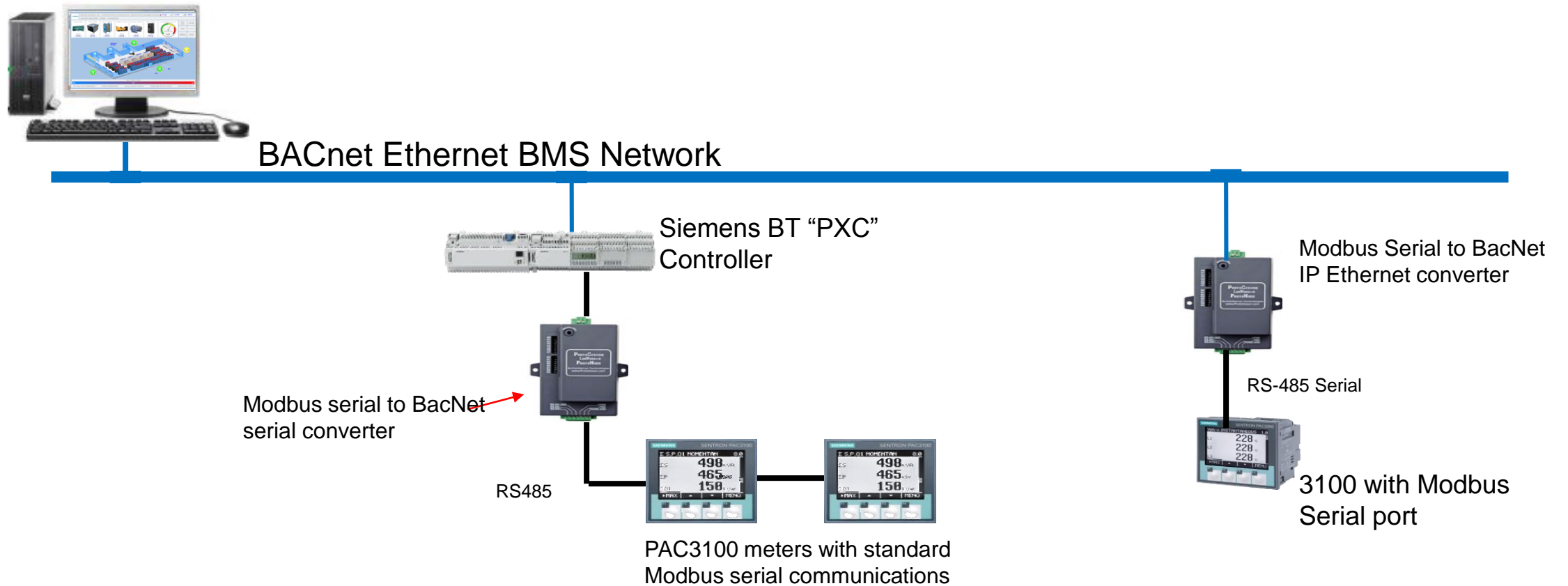
Communications Example – Ethernet Connection



PAC3100 Power Meter Overview

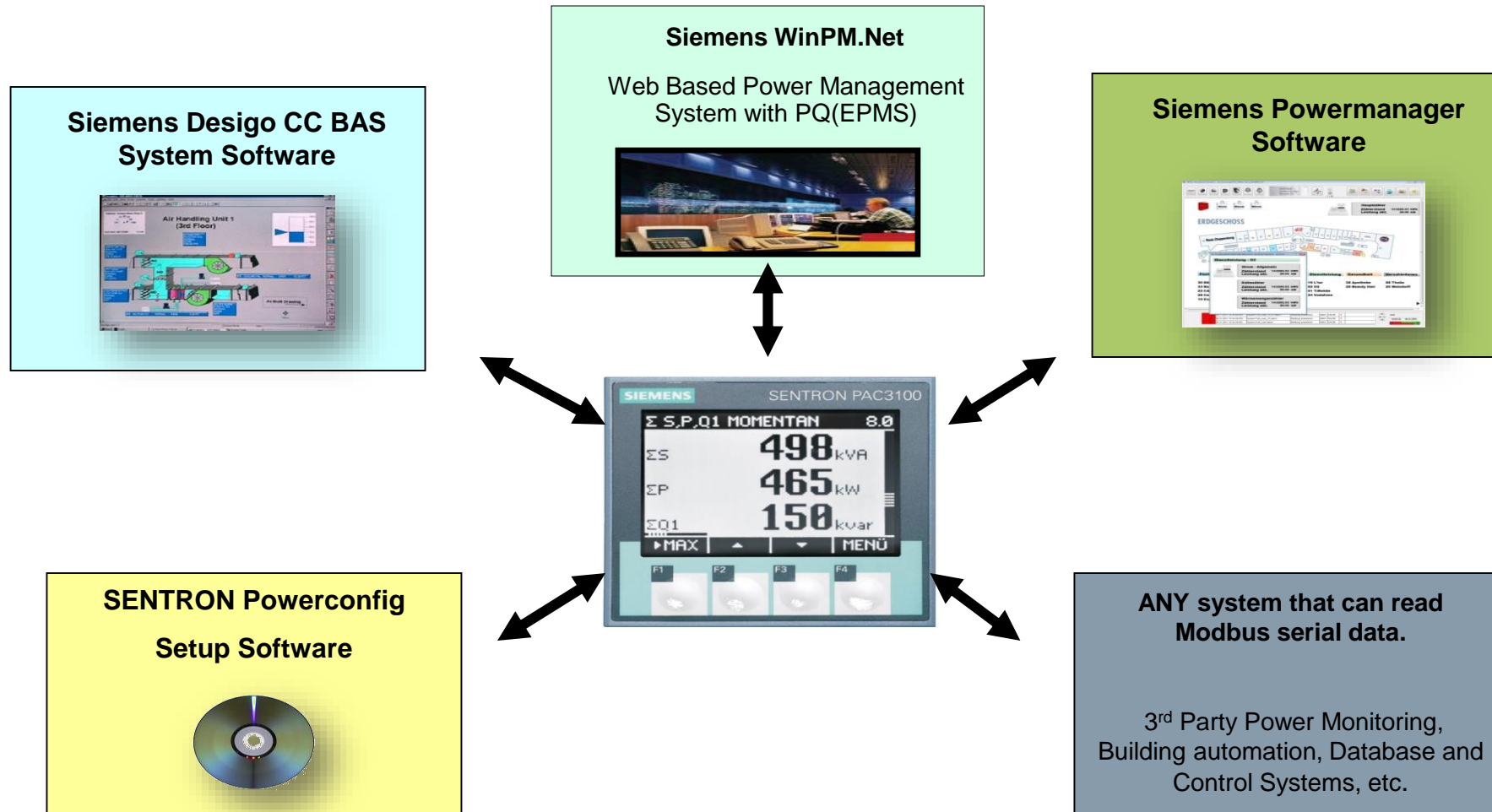
Communications Example – Siemens BT (DesigoCC) BACnet Connection

Siemens DesigoCC Building Management System



PAC3100 Power Management Solutions

Supporting software solutions for PAC Meters



PAC3100 Power Meter Overview

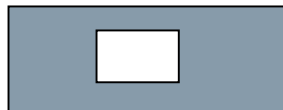
Part numbers



7KM31330BA003AA0



7KM99000YA000AA0



93-47ADAPTER

- Class 0.5S meter, serial Modbus, panel mount with Integrated display, 1 Kwh register, 1 kVARh register, 2 x DI and 2 x DO.
- 110/240VAC $\pm 10\%$ / 110/250VDC $\pm 10\%$
- **Optional** DIN rail mounting kit
- **Optional** 4700 meter adapter plate

Thank You

SIEMENS
Ingenuity for Life



For additional information on Siemens Digital Solutions contact:

- ✓ Technical Support line at 1-800-333-7421 (M-F) 8-5pm Eastern US.
- ✓ Web Support:
 - ✓ www.usa.Siemens.com/pds
- ✓ Request for Information / Proposal
 - ✓ www.usa.Siemens.com/pds-request