

# Power and Energy Meter **POWERCERT**



Power and Energy Meter

# **POWERCERT** PR300

Bulletin 77C01A02-E

[www.yokogawa.com/ns/pr300/](http://www.yokogawa.com/ns/pr300/)

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VigilantPlant excels at bringing out the best in your plant and your people - keeping them fully aware, well informed, and ready to face the next challenge. POWERCERT is a core building block of Yokogawa's VigilantPlant solutions that promise to bring operational excellence to visionary plants.

**PR300**

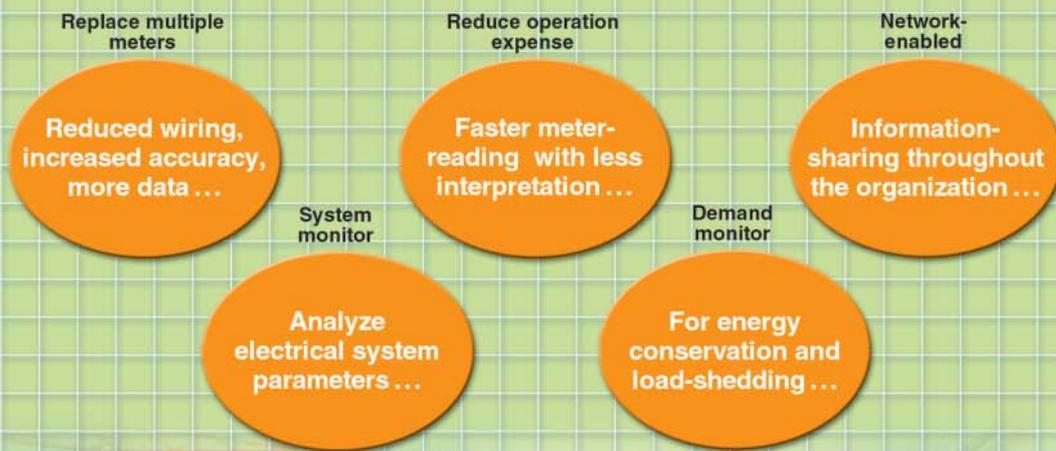
**Power and Energy Meter**

High-quality Power Monitoring Underpinned by Yokogawa's Power Measurement Technologies

**POWERCERT**



**Panel-mounted PR300 for Power Facilities**  
& Monitoring Energy Consumption



**Models and Suffix Codes**

Model	PR300	-	□	□	□	□	□	-6	□	-0
Phase and wire system	Universal three-phase three-wire system (single-phase two-wire, single-phase three-wire, and three-phase three-wire systems)	-3								
	Universal three-phase four-wire system (single-phase two-wire, single-phase three-wire, three-phase three-wire, and three-phase four-wire systems)	-4								
	Three-phase four-wire system (2.5 element) Not combinable with 1A AC input.	-5								
Input voltage/input current	Universal voltage input (150 V, 300 V, 600 V) / 1 A AC		1							
	Universal voltage input (150 V, 300 V, 600 V) / 5 A AC		2							
Additional input and output function	1 digital input			0						
	1 digital input, 1 analog output			1						
	1 digital input, 1 pulse output			2						
	1 digital input, 1 analog output, 1 pulse output			3						
Communication function	RS-485 communication				0					
	RS-485 communication, Ethernet communication				3					
Optional measuring function	None					0				
	Demand measurement (1 demand alarm output)					3				
Power supply	100 – 240 V AC ±10 % ( 50/60 Hz) or 130 – 300 V DC ±15 %							-6		
Phase indication format	A, B and C indications									A
	R, S and T indications									R

# PR300 **NEW**



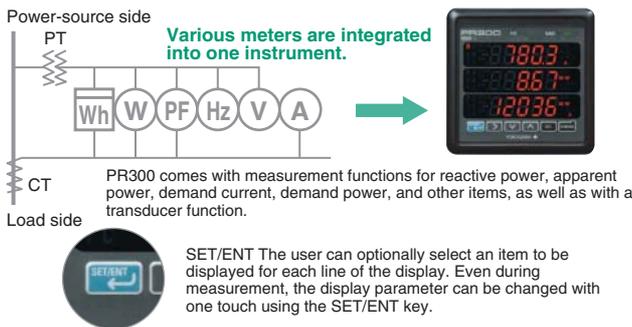
PR300 is a panel-mounted meter designed to meet two user needs: a power facility meter and a meter for monitoring energy consumption.



The demand alarm and network access make your power monitoring even more efficient.

## Large Triple Display and Multimeter Function

Combine three desired measurement items and show them all at once on the large LED display. Just one PR300 unit can take the place of two or more meters, dramatically contributing to savings in cost, space and wiring.



### Examples of Display Item Combinations

Display	Display Pattern-1	Display Pattern-2	Display Pattern-3	Display Pattern-4	Display Pattern-5	Display Pattern-6	Display Pattern-7	Display Pattern-8
Upper display	Current*	Active power	Active energy	Current 1	Voltage 1	Current*	Current*	Active power
Middle display	Voltage*	Reactive power	LEAD reactive energy	Current 2	Voltage 2	Voltage*	Active power	Maximum demand value
Lower display	Active power	Power factor	Apparent energy	Current 3	Voltage 3	Frequency	Power factor	Demand value

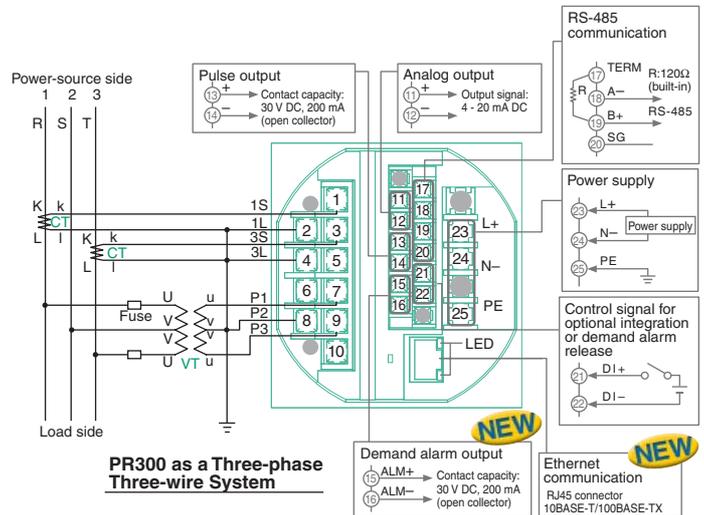
Note: The display pattern depends on the specification of the PR300.

## Wide Choice of Measurement Items

<b>Voltage</b>	Instantaneous value		Max. value		Min. value	
<b>Current</b>	Instantaneous value		Max. value		-	
<b>Active power</b>	Instantaneous value		Max. value		Min. value	
<b>Reactive power</b>	Instantaneous value		Max. value		Min. value	
<b>Apparent power</b>	Instantaneous value		Max. value		Min. value	
<b>Electric energy</b>	Active	Re-generative	Reactive (LEAD)	Reactive (LAG)	Apparent	Optional
<b>Power factor</b>	Instantaneous value		Max. value		Min. value	
<b>Frequency</b>	Instantaneous value		Max. value		Min. value	
<b>Demand current*</b>	Demand value		Max. value		-	
<b>Demand power*</b>	Demand value		Max. value		-	

\* denotes optional.

PR300 comes complete with functions necessary for efficient power monitoring, including power integration over a desired period, a transducer function (4 - 20 mA DC output), an integrated pulse output of electric energy, demand current/power alarm output functions, RS-485 communication (Modbus/PC link), and Ethernet communication.



Other RS-485 devices can be connected to the network using Ethernet-serial gateway function.

## Universal Design

PR300 versatilely supports a wide range of phases and wire systems, from a single-phase two-wire system to a three-phase four-wire system. The phase and/or wire system, including CT/VT ratios, can be selected or changed on site using the panel keys. For panel mounting, PR300 supports various standards with different shapes and sizes.



## Other

<b>Accuracy Rating</b>	Voltage, Current: $\pm 0.25\%$ of F.S.
	Active power: $\pm 0.5\%$ of F.S.
<b>External Dimensions (H×W×D mm) (including a terminal cover)</b>	ANSI 4-inch round form size: 110 × 110 × 128
	DIN 96-square instrument size: 96 × 96 × 126
<b>Power Consumption</b>	AC drive: 10 VA maximum, DC drive: 5 W maximum

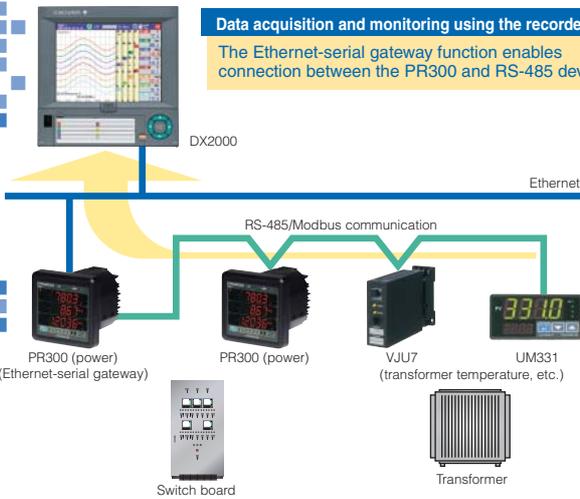


# POWERGERT PR300

## Integrated power monitoring by **Daystation**

### Data acquisition and monitoring using the recorder

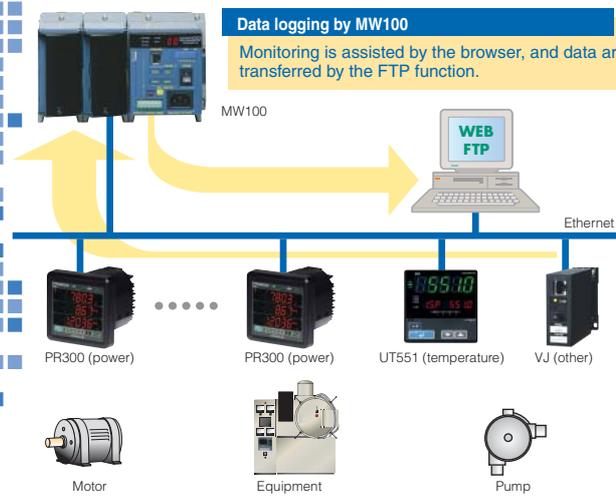
The Ethernet-serial gateway function enables connection between the PR300 and RS-485 devices.



## Browser-assisted monitoring by **DAQMASTER**

### Data logging by MW100

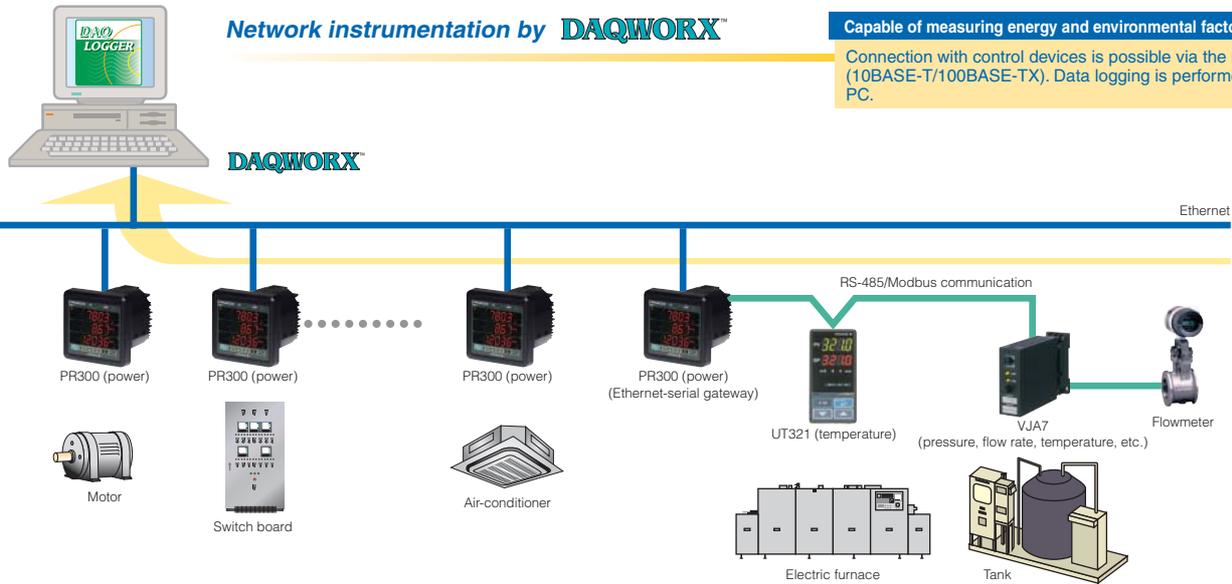
Monitoring is assisted by the browser, and data are transferred by the FTP function.



## Network instrumentation by **DAQWORX**

### Capable of measuring energy and environmental factors

Connection with control devices is possible via the network (10BASE-T/100BASE-TX). Data logging is performed by PC.



\* Ethernet is a registered trademark of XEROX Corporation.

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WITH AGILITY

VigilantPlant is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

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