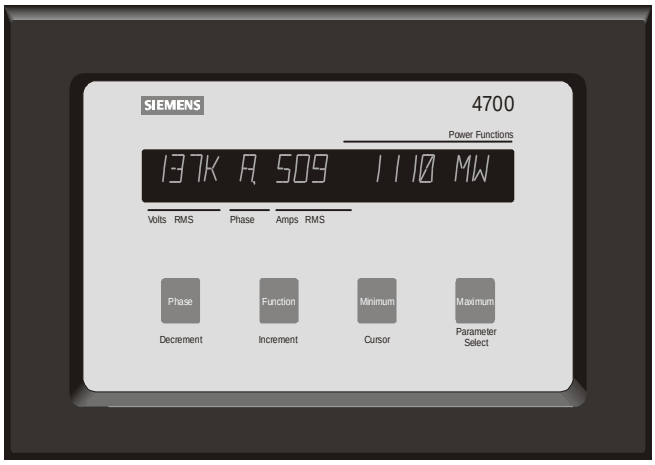
SIEMENS

ACCESS™ Compatible

4700 Power Meter



Application

The Siemens 4700 power meter is designed for high-accuracy electrical metering of power distribution equipment in industrial, commercial, institutional and utility applications. The 4700 power meter continuously collects, displays and communicates real-time and minimum and maximum data. Data may be viewed at the meter's high visibility display or via communications at a supervisory computer. Operators may select specific data to display or configure the meter, via the sealed membrane keypad.

In addition to accurate power monitoring, the 4700 power meter has additional inputs and outputs to perform extended tasks which reduce overall monitoring and alarming system installed cost and increase traditional alarming and monitoring capabilities. Examples include breaker position, level switch and alarm contact monitoring, demand control, password protected remote control and temperature or other auxiliary signal monitoring.

The 4700 power meter is built for use in industrial environments. Rugged microprocessor-based technology meets ANSI/IEEE C37.90 requirements for radio frequency interference (RFI), surge withstand and fast transient tests. Complies with FCC/DOC emissions standard. Recognized under UL 1244. All configuration data is stored in nonvolatile memory which does not require batteries.

4700 Power Meter Features

The 4700 Power Meter provides the following features:

- Metering includes phase currents and average phase current, amp demand, neutral current, phase to phase voltages and average phase to phase voltage, line voltages and average line voltage, kW per phase and 3-phase total, kVAR per phase and 3-phase total, kVA per phase and 3-phase total, kW demand, kW hours, reverse KW hours, kVAR hours, reverse KVAR hours, power factor and frequency
- Simultaneous display of volts, amps and power function. All values are displayed in meaningful engineering units rather than codes
- Records minimum and maximum data for each measured parameter
- Operates as a stand-alone switchboard, switchgear, and motor control center or substation instrument
- Three output relays can be programmed to operate based on the measured value of any parameter. Relays can be programmed to pulse on kWHr or kVARHr
- Provides single programmable analog output for input to SCADA, DCS or other analog system
- Accepts discrete inputs and communicates their status to supervisory computers
- Provides waveform capture through hi-speed sampling of any of the four current or four voltage inputs (128 samples per cycle). Communicates data to supervisory computers for display and calculation of the harmonic content up to the 64th harmonic
- Communications module connects to the Siemens ACCESS™ electrical distribution communications system
- Configuration is password protected and may be done at the meter or remotely through communications

Metered Values

Parameter	Accuracy	Resolution	Range
Volts	0.2%	0.1%	0–999,999[1]
Amps	0.2%	0.1%	0–9,999
kVA	0.4%	0.1%	0–999,999[2]
kW	0.4%	0.1%	±999 999[2]
kVAR	0.4%	0.1%	±999 999[2]
Power Factor	1.0%	1.0%	0.6–1.0 Lead, Lag
Frequency	0.2Hz	0.1 Hz	40Hz to 70Hz
kW Demand	0.4%	0.1%	±999,999
Amps Demand	0.2%	0.1%	0–9,999
kW Hour - Forward	0.4%	1 kWHr	0–999,999,999
kW Hour - Reverse	0.4%	1 kWHr	0–999,999,999
kVAR Hour - Forward	0.4%	1 kVARHr	0–999,999,999
kVAR Hour - Reverse	0.4%	1 kVARHr	0–999,999,999
V_{AUX} (1VAC scale)	0.25%	0.1%	0–999,999
Neutral Current	0.2%	0.1%	0–9,999

1. Reads in kV (x1000) for readings over 9,999
2. Reads in M (x1,000,000) for readings over 9,999

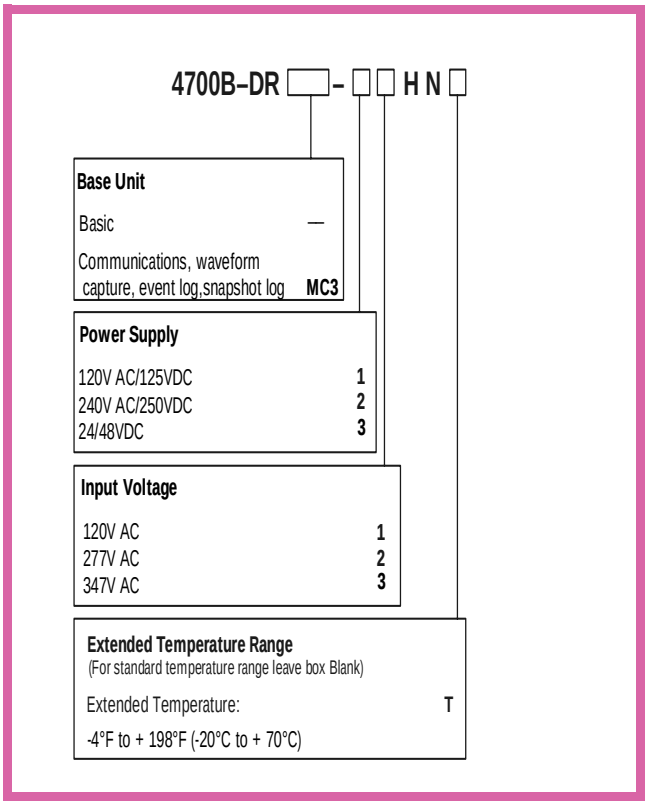
Input Ratings

The following table provides inputs, power supply, and outputs for the 4700 Power Meter.

Voltage Inputs	
Standard–120VAC Overload withstand Input impedance	120VAC nominal full-scale input 1500VAC continuous, 2500VAC for 1 sec. 2 MW
Option–277VAC Overload withstand Input impedance	277VAC nominal full-scale input 1500VAC continuous, 2500VAC for 1 sec. 2 MW
Option–347VAC Overload withstand Input impedance	347VAC nominal full-scale input 1500VAC continuous, 2500VAC for 1 sec. 2 MW
Auxiliary Voltage Input (V_{AUX})	
Standard Overload withstand Input impedance	1.0VAC VDC nominal full scale input (1.25VACNDC max) 120V continuous/ 1000V for 1 second 10 kW
Current Inputs	
Standard Overload withstand Input impedance Burden	5.0A AC nominal full-scale input 15A continuous, 300A for 1 second 0.05W 0.05VA
Status Inputs	
Standard Overload withstand Input impedance	>20VAC VDC = active, <9VAC VDC = inactive 1500V continuous, 2500V for 1 second 49.2 kW from S1, S2, S3, S4 to SCOMM. Optically isolated to 1000V from main circuit board
Power Supply	
North American European Optional	85 - 132VAC / 0.2A / 47 to 440Hz or 110 - 170VDC / 0.2A 85 - 264VAC / 0.2A / 47 to 440Hz or 110 - 340VDC / 0.2A 24VDC and 48VDC
Operating temperature Optional	0°C to 50°C ambient air -20°C to + 70°C
Storage temperature Humidity	-30°C to +70°C 5% to 95%, non-condensing
Outputs	
Control relays	Form-C dry contact relays 277VAC or 30VDC @ 10A maximum load current
Analog output	Provides analog input to SCADA, PLC and DCS (0-20mA or 4-20mA)

Ordering Information

The order number is generated by inserting the selection code into the appropriate box. For additional information on ordering SIEMENS ACCESS products, please call 1-800-427-2256 or your SIEMENS representative.



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