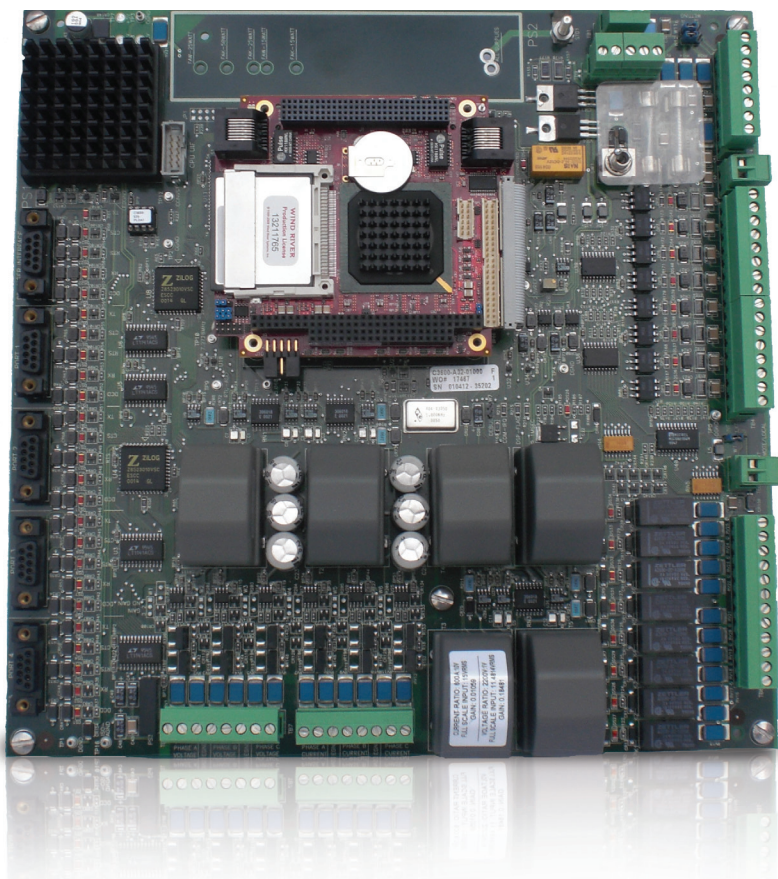


# SAGE 1450

A powerful distribution automation platform  
with all the functionality of a gateway



Make the most of your energy<sup>SM</sup>

**Schneider**  
Electric<sup>™</sup>

# SAGE 1450

## Features

Compact Footprint (11"x 11"x4")

Two Built-in independent Ethernet Ports

Optional 4 Port Ethernet switch

Four Built-in serial ports (expands to 12)

Separate PPP port for serial dial-up

LX800 500 Mhz CPU w/ 1 GB Flash Memory

Browser based configuration tool

On Board I/O with removable terminal blocks

- 8 Digital Inputs (Sts/Accum/SOE)
- 4 T/C Mom Pairs (8 relays - 2A@30VDC )
- 6 Transducerless Als (3 current & 3 voltage)

On board LEDs show operational status

- Power, status, control indications
- Full Comm Status indications

Accepts 9-33 VDC Input Power directly

Optional 125 VDC/20-60 VDC/120 VAC on-board power supply

Built-in Battery Charger w/low voltage Disconnect

Designed for Electric Utility applications

- Meet IEEE 472, ANSI C37.90 SWC
- Meet C37.90.1 standards

Optional on board GPS Receiver

Optional IRIG-B Input/Output

IP Sec Security

- HTTPS
- Encryption
- SSL/SSH
- Firewall

Full 3 Year Warranty Standard

## Specifications

Power Requirements	
Input Voltage	10 to 33VDC required by the baseboard
Optional Power	120/240VAC, 12VDC, 48VDC, 129VDC (with optional DC/DC supply)
Input Power	10.5W typical for baseboard
Input/Output Isolation	500 VDC
Battery Charger	Built-in constant current charger with low voltage disconnect
CPU/Memory	
Processor / Speed	AMDLX-800 , 500 MHz
DRAM	256 MB
BB RAM	2 MB
Compact Flash	1 GB
Bios Flash	1 MB
Real Time Clock	±10 sec per day (115ppm)
Battery	3.0V Rechargeable Lithium Model BR2330A (Standby power for 10+ years)
Communications	
Ethernet	Two 10/100Base-T (RJ45)
Serial	Four RS232 (DB-9) Expands to 12
PPP/Console	RS232 (DB-9)
Serial Speeds	300-115,000 bps
Protocols	Synchronous and asynchronous
Visual Indicators	
Baseboard LEDs	Input Power, Digital Power, Battery, 5 LEDs per COMM port (DCD, RX, RTS, TX, CTS), Status Inputs (1 per input), Relays (1 per coil)
PC/104 CPU LEDs	Primary Ethernet Link/Activity Primary Ethernet Link Speed Secondary Ethernet Link/Activity Secondary Ethernet Link Speed
User Interface	
Web Browser	Internet Explorer®
Ethernet	10/100BASE-T (RJ45)
PPP	38.4kbps (RS232)
Digital Signal Processor (DSP)	
DSP	Analog Devices Series 2185
ADC	80 KHz, 12 bit sampling
Sampling	Crystal controlled sampling clock 16 channels of solid state multiplexing
DC Analog Inputs	
Six internal fixed points	Ground Reference, +2.5 V Reference, -2.5 V Reference, Temperature (F or C) Battery Voltage, DC Input Voltage
AC Analog Inputs	
Input Types	Current/Voltage line post sensor or CT/P (transformer isolated)
Input Ranges	All popular line post sensors supported CT: 0-5, 0-2.5, 0-1 A RMS PT: 0-69, 0-120 V RMS
Frequency	50/60 Hz software selectable
Resolution	12 bits (11 bits plus sign)



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## Specifications

Overall Accuracy	
CT or Current Sensor	±0.25% FS, 0-150% nominal FS input ±5% FS, 150-2000% nominal FS input
PT or Voltage Sensor	±0.25% FS, 0-125% nominal FS input
Burden	CT: 0.0004 VA@5A PT: 0.012 VA@120VAC,0.012@69VAC
Resistive	399Kohms for 69VAC
Impedance	1.2Mohms for 120VAC
Calculation Rate	All calculated values updated once/cycle
Fault detection	Performed once/cycle
Conversion Rate	Current & Voltage inputs sampled 96 times per cycle, then filtered and down sampled to an effective rate of 16 times per cycle
Input Resistance	CT: less than 0.1 VA burden PT: greater than 1000 Mohms
Current Sensor	> 1000 Mohms
Voltage Sensor	> 1000 Mohms (Optional 1 Mohms)
Terminations	
CTs Primary:	unbroken wire loop through a toroidal transformer
Secondary	Number 10 studs with nuts
PTs	Number 10 studs with nuts
LP Sensors	Phoenix removable connectors
Environmental	
Operating Temperature	-40° to +85° C
Relative Humidity	5 percent to 95 percent, non-condensing
Transient Protection	All user field connections designed to pass: IEEE 472-1974, ANSI C37.90-1979 (R1982) ANSI C37.90.1-1989
Digital Inputs As Status Inputs	
Isolation	Optically isolated, 1500VDC
Loop Voltages	12, 24, 48, and 129VDC
Debounce	20 msec nominal
Configuration	Two terminals per point (+ and -)
Baseboard Points	Eight
Power	Baseboard and XT excitation
Indicators	One LED per point
As Accumulator Inputs	
Accum. Formats	FA, FC (One or two counts/cycle)
Accum. Input Rate	20 pps max.
SBO Control Outputs	
Duration	Software programmable in 5 msec increments
Contact Form	Form A (one side common on each relay pair)
Contact Ratings	30 VDC @ 2A
Control Points	Four (Eight relays)
Size	
Baseboard	11"x 11"x 4" (includes optional power supply module)
CT and PT Modules	1.5"x 5.5"x 3" (includes mounting ears)

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