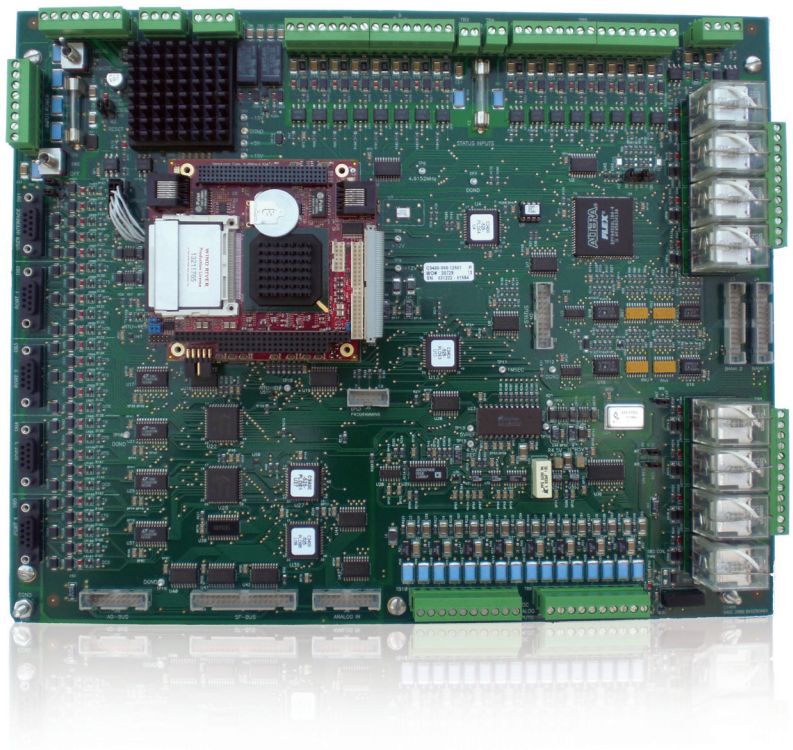
SAGE 2400

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



Make the most of your energy℠

Schneider Electric™

Designed to provide maximum value and return on investment

SAGE 2400

Features

Two built-in 10/100 Mbps Ethernet® ports (independent IPs)

Optional four port Ethernet switch

Four built-in RS232 serial ports (expands to 12)

LX-800 500 Mhz CPU with 1GB flash memory

Browser based “UIF” User Interface Configuration Tool (Uses Internet Explorer®)
*no proprietary software required

Modular physical I/O

- Base I/O = 16 DI, 8 AI, 8 control relays (4 T/C pairs)
- DI expands to 240
- AI expands to 232
- Control expands to 128 pairs

Removable I/O terminal blocks

On board LED’s show operational status

- Power, status, control indications
- Full comm status indications

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

Complete MTU/IED protocol library (standard with every unit)

IP sec Security

- HTTPS
- Encryption
- SSL/SSH
- Firewall

Full three-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
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 10/100 Base-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,Reset,Local/Remote, 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[0]
Ethernet	10/100 BASE-T (RJ45)
PPP	38.4kbps (RS232)
Baseboard Size	12”x15”x2.25” (Includes CPU)
Analog Inputs	
Input type	Differential
Input ranges	±5VDC, 0-5VDC, 1-5VDC, ±1mA, 0-1mA, 4-20mA, 10-50mA
Resolution	12 bits (11 bits plus sign)
Comp accuracy	±0.25% FS between –40° and +85°C
Reference voltages	±4.500V
Conversion rate	All analogs once per second
Common mode range	±10V

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Specifications

Common mode rejection	80 dB @ 50/60Hz
Normal mode rejection	60 dB @ 50/60Hz
Input resistance	10M ohm or greater
Baseboard points	8
Max inputs	232
Configuration	Two terminals per point (+ and -) with a shared shield ground.
XT Dimensions	16pt 5x8 inch & 32pt 7x19 inch
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	16
Max inputs	240
Power	Baseboard and XT excitation
Indicators	One LED per point
XT dimensions	32pt 5x8 inch & 32pt 7x19 inch
As Accumulator Inputs	
Accum. formats	FA, FC (1 or 2 counts/cycle)
Accum. input rate	20 pps max.
Max inputs	240
As SOE Inputs	
Accuracy	5ms, leading edge tagged
Debounce	20ms fixed
Storage capacity	256 events, optional 1024
As 1 Millisecond SOE Inputs (Optional C3235 needed)	
Accuracy	1ms, leading edge tagged
Debounce	20ms nominal (configurable)
Storage capacity	256 events on XT, optional 1024
Input power	5W max, 3W typical.
XT Dimensions (Also requires DI XTs)	128 point 5x8 inch
Maximum XTs	3 per baseboard
Alarm Outputs	
Two FC Contacts rated for 2.0A @ 30VDC	
SBO Control Outputs	
Duration	Software programmable in 5 millisecond increments

Specifications

Contact form and ratings	
Baseboard	K20 type 1FC 20A @ 240VAC or 10A @ 28VDC KUP type 1FC/2FA 10A @ 240VAC or 10A @28VDC.
XT	KUEP momentary type 1FC 3A @ 150VDC, 2FA 5A @ 150VDC, 1FX 10A @ 150 VDC. KUL latching type 1FC/2FA 10A @ 240VAC or 10A @28VDC.
Relay installation	Socketed
Baseboard points	Four (from 8 DO points)
Max outputs	128 T/C Pairs
Control inhibit	Local/Remote switch on Baseboard
XT dimensions	4pt 6.4x8 inch & 8pt 8.75x19 inch
Digital Outputs	
Duration	Software programmable in 5 millisecond increments
Contact form and ratings	
Baseboard	K20 type 1FC 20A @ 240VAC or 10A @ 28VDC
XT	KUP type FC/2FA 10A @ 240VAC or 10A @28VDC. KUEP momentary type 1FC 3A @ 150VDC, 2FA 5A @ 150VDC, 1FX 10A @ 150 VDC, 1FC 10A @ 24VDC, 1FC 10A @ 12VDC
Relay installation	Socketed
Baseboard points	Eight (also configurable as 4 SBOs)
Max outputs	264
Indicators	One LED per point
XT dimensions	16pt 5x8 inch & 32pt 7x19 inch
Analog Outputs	
Output Ranges	0-1mA, 4-20mA, 10-50mA, ±5V,±10V
Isolation	Optical, 1500 VDC, per board
Resolution	12 bits
Comp Accuracy	±0.1% FS between 0°C and +50°C
Max Outputs	12 w/ optional XTs
XT Dimensions	4pt/ 5x8 inch card
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

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October 2013