

Model 8832 Data System Controller



ESC's Model 8832 Data System Controller delivers unmatched flexibility and performance in data acquisition and reporting.

Our 'next generation' design provides more processing power - increased program, configuration and long-term data storage - designed to meet your growing data system and regulatory requirements.

ESC's advanced Model 8832 Data System Controller is designed around a high performance, 32-bit Motorola PowerPC processor running at 50MHz. Standard data storage space has been increased from 40,000 to over 100,000 data points. The configuration space has been more than tripled, allowing up to 99 channels of input or calculated values. The increased speed allows a new value to be calculated each second on any of the channels. An optional 2 MB memory card can expand long-term data storage to over 300,000 data points.

Additional capabilities of the Model 8832 include an optional color LCD display to facilitate display of alarms. A VGA video output port allows an external monitor to be connected to the Model 8832 to provide a 640x480 color viewing display. An Ethernet communications port and high speed serial communication ports not only allow for faster configuration downloads and data polling, but also enable new software versions to be loaded without an EPROM change.



Model 8832 Communications Panel

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Features

CPU	Motorola MPC860 PowerQUICC	Serial Port 0	Optically isolated RS-232 or RS-485; 300 - 115.2k baud
Data Bus	32 bits	Serial Port 1	RS-232 or RS-485; 300 to 115.2k baud
Speed	50MHz	Serial Port 2	Optional RS-232; 300 to 115.2k baud
EPROM	512KB – boot functions	Serial Port 3	Optional RS-232; 300 to 38.4k baud
Flash	4MB – code storage	LCD	16 colors; 640x240
DRAM	32MB – operational data & code execution	VGA Port	Optional; 16 colors; 640x480
SRAM	2048KB – configuration & long-term data	Printer Port	Optional; Centronics general purpose
EEPROM	8192 Bytes – system settings	Channels	99 total (75 available as math channels)
PCMCIA Slot	Internal – extended configuration & long-term data storage (2 Mb initially)	Calibrations	32 total w/ 100 phases & 100 data points
Ethernet Port	TCP/IP; 10 Mbps - code download, configuration download, data polling, MODBUS TCP	Alarms	64 total (average + calibration)
		Digital Events	32 total (timed + digitally-triggered)

Specifications

Dimensions	17.00w x 5.25h x 14.00d inches (43.2w x 13.3h x 35.6d cm)	CPU	Motorola MPC860 PowerQUICC, 50MHz
Weight	Less than 15 pounds (6.8 kg)	EPROM	512KB (boot program code)
Mounting	19-inch rack	SRAM	2MB (configuration & long-term data storage)
Power	Universal 110/220VAC; 50/60 Hz; less than 60 Watts	DRAM	32MB (operational data & code execution)
Battery Backup	90 mA-hour rechargeable lithium (30 days minimum backup time)	Flash	4MB (program code storage)
Temperature	0°C to 40°C operating	EEPROM	8KB (system settings)
Humidity	0 to 95% (noncondensating)	PCMCIA	One internal slot; supports 2MB optional expansion card (extended configuration & long-term data storage)
Analog Inputs	Voltage or 4-20mA current loop available, differential with programmable gain amplifier	Serial I/O Ports	One isolated RS-232C or RS-485 port, one non-isolated RS-232C or RS-485 port and, up to two optional RS-232C ports
Resolution	14-bit	Baud Rates	300 baud to 115.2k baud on first three ports; 300 baud to 38.4k baud on fourth port; software selectable
Voltage Ranges	+/- 100mV, +/- 1V, +/- 5V, +/- 10V full scale	Data Format	8-bit word, even, odd or no parity, full duplex; 7-bit word, even or odd parity, full duplex
Input Impedance	>10 Megaohms	Printer Port	Centronics port; DB-25 connector (optional)
Front-To-Back Accuracy	+/- 0.05% full scale at room temperature (20°C) +/- 0.1% full scale over full temp range	LCD	16 colors; 640 x 240
Contact Closure Digital Inputs	Detects contact (relay) closures or voltage-to-ground transitions (to 24V); optional software debounce	VGA Output Port	16 colors; 640 x 480 (optional)
Isolated Digital Inputs	Detects open-to-voltage transitions (24V to 120V, AC or DC); optional software debounce available	Ethernet Port	TCP/IP; 10 Mbps code download, configuration download, data polling, MODBUS TCP, MODBUS Master
Scan Rate	32 channels per second		
Digital Outputs	Latching-coil relays; rated load: 5A @ 250VAC, 5A @ 30VDC		
Analog Outputs	4-20mA current loop outputs; 12-bit resolution		



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE