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Model 6000E, Enclosure 16-Slot, Ethernet Data & Control Interface

Features

- Enclosure for 16 I/O modules
- Ethernet Interface provides up to 4.8 MS/s aggregate data rate
- Calibration voltage distribution
- Alarm busses for control of external equipment
- Optional on-board data storage
- Built-in fans and cable tray

Description

The 6000E enclosure has 16 slots for Series 6000 input and output modules with a gigabit Ethernet interface for programming, control and data output. An internal Control & Data Processor (Model 6096) provides an Ethernet interface to the remote Operators Workstation. The 6000E has 5 USB 2.0 connectors on the rear panel. This allows multiple Model 6000U (up to 63) enclosures to be used for system expansion. A sample clock bus is provided for multi rack installations.

The enclosures are 8U 19-inch rack-mount. The enclosures have integral fans providing air circulation and an internal cable tray that routes the input and output cables from the front of the installed modules to exit the rear of the enclosure.

Data Recording Redundancy is optionally available. A 2.5" HD (Model 6095) mounts on the USB controller board in each 6000U enclosure and provides a redundant recording point for the DAS. In the unlikely event the Operators Workstation or DAS Software fails, data will continue to record in each enclosure and can be recovered from the system post test.

The Operators Workstation (PCCOWU-DHD) is the primary control and data recording point for the Series 6000 DAS. The PCCOWU-DHD is typically installed in the control room and runs PI660 Data Acquisition Software for system setup, calibration, display, recording, distribution and export.

Overview · Data Format · Data Interface · Operation · Connections · Mechanical · Operators Workstation (PCCOWU) (Optional) · Ordering Information

Overview	
Enclosure Specifications	Series 6000 and 6100 Enclosures are common between the two product lines. Integrated A/D, data and sample rates noted in enclosure specifications apply only to the Series 6000 systems.

Data Format	
Data Word	16 or 32-bits, 2's complement binary.
Scan Table	Maximum format length is 65,536 samples.
Sample Rates	Multiple sample rates consisting of the highest sample rate divided by binary numbers. Highest sample rate is programmable with 1 uS resolution.

Data Interface

Output Rate	Processor dependent, up to 4.8 million 16-bit samples/second (4.8 MS/s).
Latency	Processor and scan table dependent, typically less than 5 milliseconds.
Clock Stability	100 ppm over temperature range.

Operation

Protocol	Gigabit Ethernet
Software	Windows 10 64-bit driver provides a high-level operating command set. Fully compatible with all implementations of PI660 operating software.
Control Inputs	TTL inputs for Start, Stop and Trigger assert flags in the header of output data that initiate software control operations.
Alarms	Warning and alarm buses may be independent or shared between enclosures and may initiate an output from a digital I/O type module.

Connections

Calibration	15-Pin Type D mounted on rear panel. Mating connector supplied.
Control	9-Pin Type D mounted on rear panel. Mating connector supplied.
Synchronization	Sampling clock synchronization for multiple rack systems. RJ45 connector on controller board. Category 5, 2-meter cable supplied.
USB	5 USB 2.0 ports on rear panel for system expansion.
Ethernet (Connections)	RJ45 connector on rear panel.

Mechanical

Power (Mechanical)	115 or 230 VAC, 110%, 47 to 63 Hz, 400 Watts.
Operating Temperature (Mechanical)	0 to +50 ºC
Humidity	95% without condensation.
Shock/Vibration	Normal shipping and handling of laboratory instruments.
Width ?	19 in
Height ?	14 in
Depth ?	23 in
Weight	Approximately 85 pounds with all channel modules

Operators Workstation (PCCOWU) (Optional)

Operating System	Windows 10, 64-Bit.
Processor & Memory	Intel Core i7 or better. 32GB RAM.
Media	512GB SSD or better and CD/DVD. Dual SSD Option. Larger disk drives available.
Ethernet	Gigabit Ethernet
Display	Dual 24" Widescreen for PCCOWU-DHD. No Display for CDP. Larger, distributed or multi-monitor configurations available.
Power	115 or 230 VAC, 47 to 63 Hz.
Operating Temperature	0 to +50 ºC
Size	2U high, 19 in. Rack Mount. (other configurations available)

Ordering Information

Ordering Information	6000E - Enclosure, 16-slot, Ethernet Interface 6095 - Redundant Hard Drive CDP-1 - Control and Data Processor CDP-1-DHD - Control and Data Processor, Dual Hard Drives PCCOWU-DHD - Operators Workstation, Dual Hard Drive

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