PACIFIC INSTRUMENTS
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Metromatics

MODEL 6005U

Enclosure, 10-slot, 12VDC USB Control & Data Interface

The 6005U enclosure has 10 slots for Series 6000 input and output modules with a Universal Serial Bus (USB 2.0) computer interface for programming, control and data output. Multiple enclosures can be combined for larger and/or distributed installations. 6005U is DC operated for mobile applications.

All connections are made on the front allowing the 6005U to be located in the tightest of spaces. It has integral fans that supply cooling air to the modules and power supply. Power is 10 to 20 VDC with 21 to 32 VDC also available. An included power adapter is provided for operation from 120/240 VAC.

A sample clock bus is provided for multi-rack installations. Programming and data transfer are USB 2.0 which provides high data transfer rates with low, predictable latency. It interfaces to the USB 2.0 port provided on most PC computers, including laptops. Maximum length of the interface cable is 3 meters but it may be extended further using Ethernet with the Control & Data Processor (CDP) option.

Data Redundancy is optionally available. A 2.5" HD (Model 6095) mounts on the USB controller board in each 6005 enclosure and provides a redundant recording point for the DAS. In the unlikely event the Operator's Workstation or DAS Software fails, data will continue to record in each enclosure and can be recovered from the system post test.

The Operator's Workstation (PCCOWU-LT) is the primary control and data recording point for the Series 6000 DAS. The PCCOWU-LT is typically a laptop, connected to the 6005U's USB port and runs PI660 Data Acquistion Software for system setup, calibration, display, recording, distribution and export.

FEATURES

- DC Enclosure for 10 I/O Modules
- USB 2.0 Interface provides 4.8 MS/s aggregate data rate
- Calibration voltage input
- Alarm busses for control external equipment
- Optional remote operation using gigabit Ethernet
- Optional on-board data storage
- Built-in fans and front mounted connections

SPECIFICATIONS

DATA FORMAT

Data Word .....16/24/32-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 1µS resolution.

DATA INTERFACE

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

OPERATION

Protocol .....Control and data interface is USB 2.0.
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 .....Two-meter cable supplied.

MECHANICAL

Power Input .....10 to 20 VDC. (21 to 32 VDC available on special order)
Temperature .....0°C to +50°C operating.
Humidity .....95% without condensation.
Size .....13.4 inches wide, 10.5 inches high, 16.7 inches deep exclusive of handles.
Weight .....Approximately 30 pounds with all channel modules.

ACCESSORIES

6085 .....Connector Interface Panel for 6005 Enclosures.

OPERATORS WORKSTATION (PCCOWU-LT) (OPTIONAL)

Operating System ..Windows 10, 64-Bit.
Processor .....Intel Core i5 or better. 2GB RAM.
Media.....160GB SSD or better and CD/DVD. Dual SSD Option. Larger disk drives available.
Ethernet .....Gigabit Ethernet.
Display .....15".
Power .....115 or 230 VAC, 47 to 63 Hz..
Temperature .....0°C to +50°C operating.
Size .....Laptop (other configruations available).

ORDERING INFORMATION

6005U .....Enclosure, 10-slot, 12VDC USB Interface.
6095 .....Redundant Hard Drive.
PCCOWU-LT .....Operator's Workstation, Laptop.

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4080 Pike Lane ■ Concord, CA 94520 ■ Tel (925) 827-9010 ■ Fax (925) 827-9023 ■ PIsales@pacificinstruments.com