



PCS: Positioning Control System

Performance Data



Positioning Control System Design Concept

ION's business philosophy is to continually improve our products and create new innovative solutions for the seismic industry. The PCS is the next generation control and data acquisition platform for all ION Marine Imaging Systems in-water positioning devices.

- Configuration interface to host navigation system
- Online diagnostic and performance monitors
- Expanded system supports up to 32 twisted pair communication (FSK) lines and 4 radio telemetry lines
- Future system requirements supported through modular, expandable architecture
- Remotely located, multiple independent displays and operator interface consoles provide information where it is needed
- Supports back deck handheld mobile computer

Positioning Control System

The PCS is composed of the following major components, each implemented with its own dedicated processor. 1. DMU (Data Management Unit); 2. LIU (Line Interface Unit)

The DMU controls all high level system interface functions including triggers from NAV, data distribution, in-water device commands, and primary processing of sensor data prior to distribution to other interfaced systems.

The LIU is the interface between the in-water positioning devices and the DMU. It takes DMU requests for data and control and translates those high level requests into device specific communications, converts the digital data streams into FSK signals for transmission to the in-water devices, converts device responses from FSK signals into digital data streams and translates those into high level data formats for the DMU. The LIU comes in 8 channel and 2 channel versions.

The OI* serves as the main system console from which the operator can enter commands to control sensors on the streamer cable and to display and analyze sensor measurement data locally. Communications with the DMU is through the Ethernet port. Multiple OI stations allow cable and navigation control at separate stations.

Specifications

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| Physical Characteristics | DMU | LIU |
|----------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Width | 48.09 cm (18.95 in) | 48.26 cm (19.00 in) |
| Depth | 65.25 cm (25.69 in) | 28.88 cm (11.4 in) |
| Height | 8.8 cm (3.47 in) | 13.26 cm (5.219 in) |
| Electrical Characteristics | DMU | LIU |
| Input voltage | 100-240 Vac | 100-240 Vac |
| Input frequency | 50-60 Hz | 50-60 Hz |
| Input power | 300 W (max) | 300 W (max) |
| Output voltages | +3.3 Vdc@20A +5 Vdc @35A -5 Vdc @ 0.5A +12 Vdc @16A -12 Vdc @ 1.0A | +3.3 Vdc@28A +5 Vdc @30A N/A +12 Vdc @15A -12 Vdc @ 0.8A |

Order Information

ION

| | |
|----------------------|-----------------|
| DMU | P/N 8000-1764 |
| LIU-8 channel | P/N 8000-1765-8 |
| LIU-2 channel | P/N 8000-1765-2 |

Spares Recommendation

| | |
|--------------------|----------------|
| 8+ channels | P/N 8200-207-8 |
| 2 channels | |
| - 2 or | P/N 8200-207-2 |
| - C | P/N 8200-205-C |

Related Products

| | |
|-----------------------------------------|----------------------------------------------------------------|
| PCS Installation Kit | P/N 8200-206 |
| Handheld Mobile Computer | P/N 9000-295/01 |
| OI (Operator Interface Software) | P/N 9000-507/cc-6.vv * cc= channel count vv=current version |

Related Documents

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|------------------------------------------------------|--------------|
| System 3 User's Manual | P/N 4200-036 |
| Positioning Control System Installation Guide | P/N 4200-504 |

* Note: separate software license required for OI



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