Operator Control Station
HE500OCS200 / OCS210
Products Specifications
and Installation Data

The following information is taken from the *Control Station Hardware Manual* (MAN0227). To obtain user manual updates, visit our web site at www.heapg.com.

1   SPECIFICATIONS

<table>
<tr><th colspan="3">Table 1 – OCS200/210 Specifications</th></tr>
<tr><td>Memory</td><td>OCS200</td><td>OCS210</td></tr>
<tr><td>   Ladder Memory</td><td>64K</td><td>128K</td></tr>
<tr><td>   Screen Memory</td><td>64K</td><td>128K</td></tr>
<tr><td>   Register Memory</td><td>8K</td><td>24K</td></tr>
<tr><td>Ladder Execution
    Typical Execution Speed</td><td colspan="2">0.7 ms. per 1K of boolean logic.</td></tr>
<tr><td>Primary Power Range*</td><td colspan="2">10-30VDC</td></tr>
<tr><td>Primary Serial</td><td colspan="2">Standard 9 pin RS-232 for programming, monitoring, and network administration. Modbus/RTU Master, Slave, ASCII Send and Receive, and CsCAN Serial also supported.</td></tr>
<tr><td>CAN Power Range</td><td colspan="2">12 – 25 VDC</td></tr>
<tr><td>CAN Power Current</td><td colspan="2">75mA maximum</td></tr>
<tr><td>CAN Network</td><td colspan="2">CsCAN Network / DeviceNet Slave</td></tr>
<tr><td>Input / Output</td><td colspan="2"></td></tr>
<tr><td>Keypad</td><td colspan="2">Faceplate made of Autotex® polyester by Autotype®.   The material is resistant to most corrosive substances found in industrial environments. The material also holds up well in most industrial conditions. If used outdoors, the material can yellow or crack.</td></tr>
<tr><td>UL</td><td colspan="2">Class I, Groups A, B, C, D, Division 2</td></tr>
<tr><td>CE</td><td colspan="2">Yes</td></tr>
<tr><td>Operating Temperature</td><td colspan="2">0°C to +60°C **</td></tr>
<tr><td>Typical Power Draw (OCS200)*</td><td colspan="2">180mA @ 24VDC</td></tr>
<tr><td>Inrush Current *</td><td colspan="2">270mA @ 24VDC for 1S</td></tr>
<tr><td>Humidity</td><td colspan="2">5% to 95% non-condensing</td></tr>
<tr><td>NEMA Standard</td><td colspan="2">NEMA 4, 12
(Note: UL NEMA 4, 4x, 12 available as an option for OCS100 / 110, OCS200 / 210. This option is highly recommended for wash down environment.)</td></tr>
<tr><td>Height</td><td colspan="2">7.13" (181.10 mm)</td></tr>
<tr><td>Width</td><td colspan="2">9.00" (228.60 mm)</td></tr>
<tr><td>Mounting Depth</td><td colspan="2">2.00" (50.80 mm)</td></tr>
<tr><td>User Keys</td><td colspan="2">32</td></tr>
<tr><td>Keypad</td><td colspan="2">12 user-programmable keys + Shift, Esc, Enter, 4 direction keys and a full numeric keypad</td></tr>
<tr><td>Display</td><td colspan="2">4x20 LCD w/backlight ; 4.84w x 8.06h mm characters</td></tr>
<tr><td colspan="3">*   These specifications are for OCS products without any SmartStack I/O Modules attached. The specifications for the SmartStack Modules can be found in the applicable SmartStack Data Sheets.
**   Although the OCS withstands the temperature range of 0°C to +60°C, such temperatures may decrease the life of the display. The recommended rating is 0°C to +50°C.</td></tr>
</table>
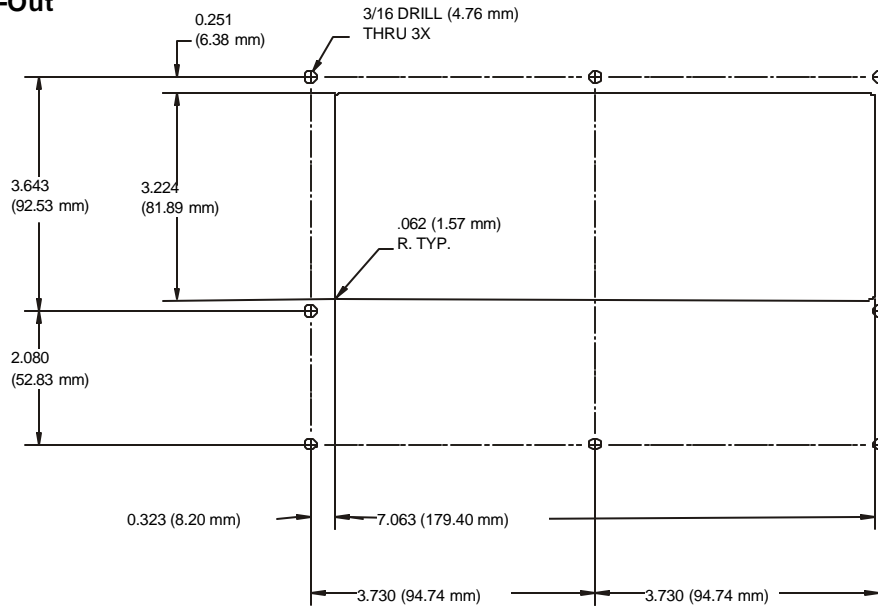
2   INSTALLATION

2.1   Panel Cut-Out

Figure 1 – Panel Cut-Out for the OCS200 / OCS210

2.2   Ports, Connectors and Wiring

2.2.1   Primary Power Port

Table 2 – Primary Power Port Pins		
Pin	**Signal**	**Description**
1	V+	Input power supply voltage
2	V-	Input power supply ground
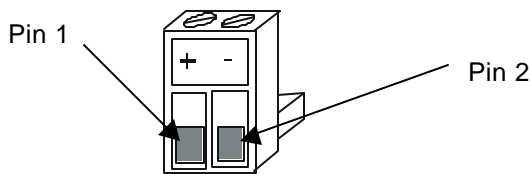
**Figure 2 Power Connector
(Primary Power Port)**
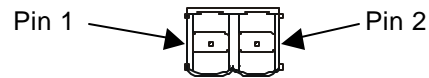
**Figure 3 As viewed looking at
the OCS models**

Note: Power Supply Voltage Range is from 10-30 VDC.

Warning: To provide maximum noise immunity and to ensure minimum EMI radiation, the V-
signal (DC power return) need to be connected to earth ground at the power supply. The user must
ensure that the power supply selected is compatible with this method of grounding.

2.2.2   CAN / DeviceNet Network Port and Wiring

a.   Network Connector

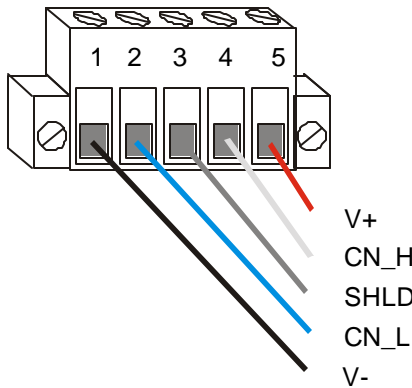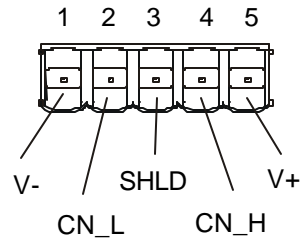| Table 3 – CAN Port Pins		
Pin	**Signal**	**Description**
1	V-	Power -
2	CN_L	Signal -
3	SHLD	Shield
4	CN_H	Signal +
5	V+	Power +

Figure 4– Network Connector

Figure 5– As viewed at the OCS

Warning: To provide maximum noise immunity and to ensure minimum EMI radiation, the V-
signal (DC power return) need to be connected to earth ground at the power supply. The user must
ensure that the power supply selected is compatible with this method of grounding.
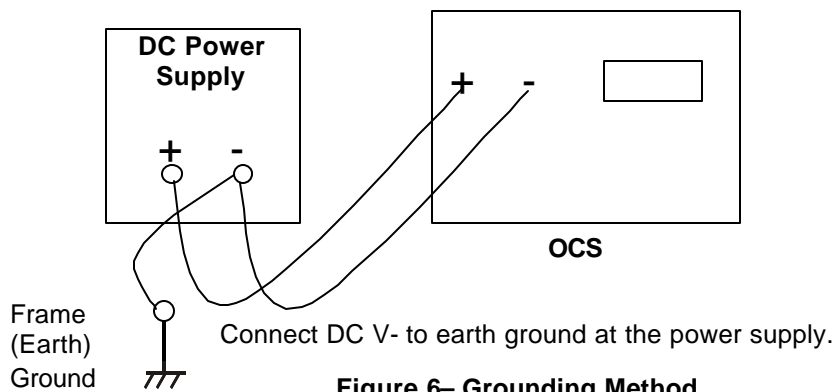
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b.   Grounding

Connect DC V- to earth ground at the power supply.

**Figure 6– Grounding Method
(OCS shown in this example.)**

2.2.3   RS-232 Programming Port and Wiring

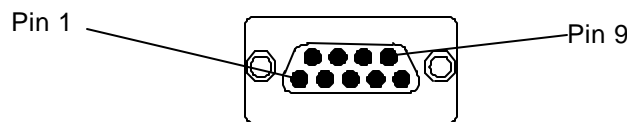| Table 4– RS-232 Port Pins			
Pin	**Signal**	**Description**	**Direction**
1	DCD	Always high	Out
2	RXD	Received Data	Out
3	TXD	Transmitted Data	In
4	DTR	Data Terminal Ready	In
5	GND	Ground	-
6	DSR	Data Set Ready	Out
7	RTS	Request to Send	In
8	CTS	Clear to Send	Out
9	RI	Ring Indicate	Out

Figure 7 – RS-232 Port

The OCS units feature an RS-232 port (Programming/Debug) for connection to a personal computer. This port is used for the purposes of OCS programming, configuring, monitoring, and debugging. This port can also be used for general ladder logic controlled serial communications to printers, modems, terminals, etc. When ladder has control of this port, it is not available for programming or debugging. The wiring diagram for the RS-232 port is shown in Figure 8. If a permanent connection is to be made between the OCS and the personal computer, the use of a shielded, multiple conductor wire with a maximum length of 15.24 meters (50 feet) enables proper performance.
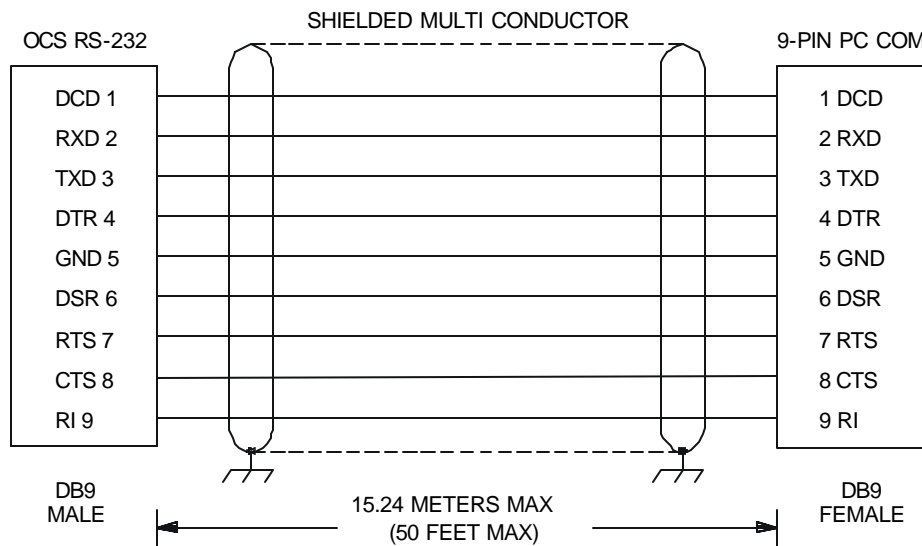

Figure 8- OCS to PC Wiring Diagram

3   SAFETY

All applicable codes and standards need to be followed in the installation of this product.

4   TECHNICAL ASSISTANCE

For assistance, contact Technical Support at the following locations:

North America:

(317) 916-4274 or visit our website at www.heapg.com.

Europe:
(+) 353-21-4321-266

NOTES