This guide provides specifications for Unitronics’ communication modules V100-17-RS4, V100-17-RS4X.

You can find additional information, such as wiring diagrams, in the product’s installation guide located on the Unitronics’ Setup CD and in the Technical Library at www.unitronics.com.

**V100-17-RS4 (not isolated) V100-17-RS4X (isolated) Serial Modules**

Use these modules to add an additional serial communication port to the controller.
- Use RS232 to download programs from a PC, and to communicate with serial devices and applications, such as SCADA.
- Use RS485 to create a multi-drop network containing up to 32 devices.

The modules are identical except for isolation. Module ports are type RJ-11 and may be set to **either** RS232 or RS485 via wiring and DIP switch settings, in accordance with the table on page 2.

To connect a PC to a port that is set to RS485, remove the RS485 connector, and connect the PC to the PLC via the programming cable. Note that this is possible only if flow control signals are not used (which is the standard case).

### Standard Kit contents

- RS232/485 Module
- RS485 cable

- Signals are related to the controller’s 0V; the same 0V is used by the power supply.
- Do not connect the device directly to a telephone or telephone line.
- Note that the V100-17-RS4 port is not isolated. If the controller is used with a non-isolated external device, avoid potential voltage that exceeds ± 10V. To avoid damaging the system, all non-isolated device ports should relate to the same ground signal.

### Pinouts

The pinouts below show the PLC port signals.

<table>
<thead>
<tr>
<th>RS232</th>
<th>Description</th>
<th>RS485**</th>
<th>Description</th>
<th>Controller Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin #</td>
<td></td>
<td>Pin #</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1*</td>
<td>DTR signal</td>
<td>1</td>
<td>A signal (+)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0V reference</td>
<td>2</td>
<td>(RS232 signal)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>TXD signal</td>
<td>3</td>
<td>(RS232 signal)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>RXD signal</td>
<td>4</td>
<td>(RS232 signal)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0V reference</td>
<td>5</td>
<td>(RS232 signal)</td>
<td></td>
</tr>
<tr>
<td>6*</td>
<td>DSR signal</td>
<td>6</td>
<td>B signal (-)</td>
<td></td>
</tr>
</tbody>
</table>

*Standard programming cables do not provide connection points for pins 1 and 6.

**When a port is adapted to RS485, Pin 1 (DTR) is used for signal A, and Pin 6 (DSR) signal is used for signal B.
RS232 to RS485: Changing DIP Switch Settings

The port is set to RS232, termination ON, by factory default.

<table>
<thead>
<tr>
<th>Switch Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>RS232*</td>
</tr>
<tr>
<td>RS485</td>
</tr>
<tr>
<td>RS485 with termination**</td>
</tr>
</tbody>
</table>

*Default factory setting

**Causes the unit to function as an end unit in an RS485 network

V100-17-RS4  V100-17-RS4X  Technical Specifications

RS232 Port Specifications

- Voltage limits: ±20V
- Input voltage: ±20VDC absolute maximum
- Cable length: 15m maximum (50 feet)

RS485 Port Specifications

- Input Voltage: -7 to +12V differential max.
- Cable type: Shielded twisted pair, in compliance with EIA RS485
- Cable length: 1200m maximum (4000 feet)
- Baud rate: 300–115,200 bps
- Nodes: Up to 32

Isolation

- V100-17-RS4: No
- V100-17-RS4-X: Yes

Weight

- V100-17-RS4/X: 12.6g (0.44 oz)