In this Chapter...

- Introduction ........................................................................................................... 6-2
- Available PLC Protocols ....................................................................................... 6-3
- C-more Micro Communication Ports .................................................................... 6-4
- DirectLOGIC PLCs Password Protection ............................................................... 6-5
- Compatibility and Connection Charts ................................................................. 6-5
  - AutomationDirect Controllers ........................................................................... 6-5
  - RS-422A/RS-485A Communications .................................................................. 6-5
  - Allen-Bradley ....................................................................................................... 6-5
  - GE, Mitsubishi, Omron, Modicon and Siemens .................................................... 6-5
  - How to use the Compatibility and Connection Charts ......................................... 6-6
- Cables from AutomationDirect .............................................................................. 6-14
- Cables from AutomationDirect – Wiring Diagrams .............................................. 6-16
- User Constructed Cables – Wiring Diagrams ....................................................... 6-24
- RS-422A Multi-Drop Wiring Diagram Example ....................................................... 6-34
- RS-485A Multi-Drop Wiring Diagram Example ....................................................... 6-36
Introduction

The C-more® Micro panels are capable of communicating with AutomationDirect Productivity Series, Do-more, CLICK, SOLO, GS Drives and the entire DirectLOGIC family of PLCs. The panel is capable of communicating using RS232 on the RJ12 Port1 and RS232, RS422 or RS485 on Port2.

<table>
<thead>
<tr>
<th>Cable Description</th>
<th>Cable Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutomationDirect Productivity Series, Do-more, CLICK, DirectLOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 &amp; H2-WinPLC (RS-232C)</td>
<td>D0-CBL</td>
</tr>
<tr>
<td>DirectLOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C). Use with DO-CBL cable.</td>
<td>FA-15HD</td>
</tr>
<tr>
<td>DirectLOGIC PLC RJ-11 port, D3-340 (RS-232C) 2m (6.56 ft) cable length</td>
<td>OP-3CBL-1</td>
</tr>
<tr>
<td>Cables used with 15-pin RS-232/422/485 serial Port2</td>
<td></td>
</tr>
<tr>
<td>AutomationDirect Productivity Series, Do-more, CLICK, DirectLOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 &amp; H2-WinPLC (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-2CBL</td>
</tr>
<tr>
<td>DirectLOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-2CBL-1</td>
</tr>
<tr>
<td>DirectLOGIC PLC RJ-11 port, D3-340 (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-3CBL</td>
</tr>
<tr>
<td>DirectLOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCMs (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-4CBL-1</td>
</tr>
<tr>
<td>Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 &amp; 1500 (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-MLOGIX-CBL</td>
</tr>
<tr>
<td>Allen-Bradley SLC 5-03/04/05, ControlLogix, CompactLogix, FlexLogix DF1 port (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-SLC-232-CBL</td>
</tr>
<tr>
<td>Allen-Bradley PLC-5 DF1 port (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-PLC5-232-CBL</td>
</tr>
<tr>
<td>Allen-Bradley MicroLogix, SLC 5-01/02/03 DH485 port (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-DH485-CBL</td>
</tr>
<tr>
<td>GE 90/30, 90/70, Micro 90, Versamax Micro (Port2) 15-pin D-sub port (RS-422A) 3m (9.8 ft) cable length</td>
<td>EA-90-30-CBL</td>
</tr>
<tr>
<td>MITSUBISHI FX Series 25-pin port (RS-422A) 3m (9.8 ft) cable length</td>
<td>EA-MITSU-CBL</td>
</tr>
<tr>
<td>MITSUBISHI FX Series 8-pin mini-DIN (RS-422A) 3m (9.8 ft) cable length</td>
<td>EA-MITSU-CBL-1</td>
</tr>
<tr>
<td>OMRON Host Link (C200 Adapter, C500) (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-OMRON-CBL</td>
</tr>
</tbody>
</table>

Caution: 5VDC is provided at the panels’ Port1 pin 5. Refer to the panel communication ports specification on page 6-4.

NOTE: C-more Micro EA3 Series panels cannot be powered by a PLC and cannot communicate with a PLC through the USB programming port. EA3-T6CL can be powered during programming from the PC through a USB Programming Cable such as USB-CBL-AB6. When powered from the PC, EA3-T6CL will operate in Low-Power mode and the screen brightness is diminished.

The PLC Compatibility and Connection Chart tables on the following pages list the various PLCs and protocols that can be configured. Other third party PLCs include GE, Mitsubishi, Omron, Modicon and Siemens. The rest of this chapter shows the pin to pin connections of available cables plus wiring diagrams to construct cables.

NOTE: Refer to the Compatibility and Connection Charts beginning on page 6-7 for a listing of PLC connections for the C-more Micro panel.
Introduction (cont’d)

Available PLC Protocols

<table>
<thead>
<tr>
<th>PLC Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutomationDirect Productivity Series</td>
</tr>
<tr>
<td>AutomationDirect CLICK</td>
</tr>
<tr>
<td>AutomationDirect Do-more</td>
</tr>
<tr>
<td>AutomationDirect K-sequence</td>
</tr>
<tr>
<td>AutomationDirect DirectNET</td>
</tr>
<tr>
<td>AutomationDirect Modbus</td>
</tr>
<tr>
<td>AutomationDirect SOLO</td>
</tr>
<tr>
<td>AutomationDirect GS Drives</td>
</tr>
<tr>
<td>Modicon Modbus RTU</td>
</tr>
<tr>
<td>Entity Modbus RTU</td>
</tr>
<tr>
<td>Allen-Bradley DF1 Half Duplex</td>
</tr>
<tr>
<td>Allen-Bradley DF1 Full Duplex</td>
</tr>
<tr>
<td>Allen-Bradley PLC5 DF1</td>
</tr>
<tr>
<td>Allen-Bradley DH485</td>
</tr>
<tr>
<td>GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)</td>
</tr>
<tr>
<td>Mitsubishi FX</td>
</tr>
<tr>
<td>Mitsubishi (Q, QnA)</td>
</tr>
<tr>
<td>Omron Host Link (C200 Adapter, C500)</td>
</tr>
<tr>
<td>Omron FINS Serial (CJ1, CS1)</td>
</tr>
<tr>
<td>Siemens PPI (S7-200 CPU)</td>
</tr>
</tbody>
</table>

The panel can also be connected to more than one PLC by using RS-422 or RS-485 wired in a multi-drop configuration. See the example wiring diagrams at the end of this chapter for details.

If you have difficulty determining whether the particular PLC and/or protocol you are using will work with C-more Micro panels, please contact our technical support group at 770-844-4200.
**C-more Micro Communication Ports**

Example of panel
Connected to a CLICK PLC

---

**C-more Micro Panel**

**CLICK PLC**

**PSC-24-030 Power Supply**

**Port 2**

**EA-2CBL serial cable**

---

**Example Panel Diagram**

- **RS-232**
  - **UART 12 serial communications Port1**
  - **USB Type B Programming Port1**

- **RS-232/422/485**

---

**Pin Signal**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Logic GND</td>
</tr>
<tr>
<td>2</td>
<td>not used</td>
</tr>
<tr>
<td>3</td>
<td>RXD (232C)</td>
</tr>
<tr>
<td>4</td>
<td>TXD (232C)</td>
</tr>
<tr>
<td>5</td>
<td>Supplies +5VDC</td>
</tr>
<tr>
<td>6</td>
<td>Logic GND</td>
</tr>
<tr>
<td>7</td>
<td>RXD+ (422/485)</td>
</tr>
<tr>
<td>8</td>
<td>TXD– (422/485)</td>
</tr>
<tr>
<td>9</td>
<td>RXD– (422/485)</td>
</tr>
<tr>
<td>10</td>
<td>TXD+ (422/485)</td>
</tr>
<tr>
<td>11</td>
<td>Term. Resistor</td>
</tr>
<tr>
<td>12</td>
<td>do not use</td>
</tr>
<tr>
<td>13</td>
<td>do not use</td>
</tr>
</tbody>
</table>
DirectLOGIC PLCs Password Protection

**NOTE:** DirectLOGIC PLCs support multi-level password protection of the ladder program. This allows password protection while not locking the communication port to an operator interface. The multilevel password can be invoked by creating a password with an upper case “A” followed by any variation of seven numeric characters (e.g. A1234567). Please refer to the specific PLC user manual for further details.

Compatibility and Connection Charts

The following pages include charts that list the recommended cables and/or manufactured devices that can be used to make up the communications link between several different controllers and the C-more Micro panel. Port1 is an RJ12 connector that supports RS232 communication. Port2 is a 15-pin D-sub communication port that supports RS-232, RS-485 and RS-422. An external Class 2, 1 Amp @ 12-24 VDC external power source is required.

**NOTE:** Recommended DC power supply to power the C-more Micro Panel, AutomationDirect Part No. PSC-24-030.

The chart also refers to wiring diagrams that can be used to construct cables for connecting the PLC’s port to the panel’s port. The user constructed cable diagrams start on page 6-24.

AutomationDirect Controllers

**AutomationDirect Productivity Series, CLICK, Do-more, DirectLOGIC, SOLO Temperature Controller and GS Drives**

Drivers specific to these AutomationDirect control devices make it convenient to communicate with the C-more Micro panels and simplify configuring objects with controller addresses.

RS-422A/RS-485A Communications

When using the RS-422A/RS-485A communications capabilities of the C-more Micro Serial Port (Port 2), the termination resistor is placed between the RXD– and RXD+ terminals on the PLC side of the connection between the touch panel and PLC. The Termination Resistor value is based on the characteristic impedance of the cable being used. To enable the built-in 120 Ohm Termination Resistor, jumper pin 13 (termination resistor) to pin 9 (RXD+) on the C-more Micro 15-pin PLC communications port.

Allen-Bradley

As stated in this chapter’s introduction, the panel also has the ability to communicate with Allen-Bradley PLCs that support the Allen-Bradley DF1 and DH485 protocols. The chart for the various Allen-Bradley PLCs includes recommended cables.

GE, Mitsubishi, Omron, Modicon and Siemens

Other 3rd party PLCs can be used with the C-more Micro panel. These PLCs are listed in a chart and various wiring diagrams are shown to allow connectivity.
How to use the Compatibility and Connection Charts

1.) Find the Controller or PLC Family being used.
2.) Find the particular Controller or PLC model in the Controller family.
3.) Determine the cable and other components, manufactured or user constructed, are required.

Example

<table>
<thead>
<tr>
<th>Family</th>
<th>CPU</th>
<th>PLC Port &amp; Type</th>
<th>C-more EA3 Series Micro Panel</th>
<th>Panel to PLC Cabling Components Required for Specific Port and Protocol being used.</th>
<th>Using panel's Port1</th>
<th>Using panel's Port2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLICK</td>
<td>all versions</td>
<td>Port 1 RJ12 - 6 pin</td>
<td>AutomationDirect Modbus (CLICK)</td>
<td>Protocol(s) Supported</td>
<td>Component &amp; Network Type</td>
<td>Protocol(s) Supported</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Term block 3-pin</td>
<td>AutomationDirect Modbus (CLICK)</td>
<td>N/A</td>
<td>AutomationDirect Modbus (CLICK)</td>
<td>* See Diagram 17 RS-485</td>
</tr>
<tr>
<td>Series</td>
<td></td>
<td>RS-485 Port Term block 3-pin</td>
<td>AutomationDirect Productivity Serial</td>
<td>N/A</td>
<td>AutomationDirect Productivity Serial</td>
<td>* See Diagram 18 RS-485</td>
</tr>
<tr>
<td>Do-more</td>
<td>all versions</td>
<td>Port 2 RJ12 - 6 pin</td>
<td>AutomationDirect Do-more Serial</td>
<td>DO-CBL RS-232</td>
<td>AutomationDirect Do-more Serial</td>
<td>EA-2CBL RS-232</td>
</tr>
<tr>
<td>SOLO</td>
<td>N/A</td>
<td>Data +/- terminals</td>
<td>N/A</td>
<td>SOLO Temperature Controller</td>
<td>N/A</td>
<td>* See Diagram 21 RS-485</td>
</tr>
<tr>
<td>GS Drives</td>
<td>N/A</td>
<td>RS-485 Interface</td>
<td>N/A</td>
<td>GS Drives Serial GS Drives TCP/IP (GS-EDRV)</td>
<td>N/A</td>
<td>* See Diagram 19 and 20 RS-485</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

C-more Micro EA3 Series panels require an external power supply.
PLC Compatibility & Connection Chart continued on next page.
### AutomationDirect CLICK PLC, Productivity Series, Do-more, SOLO Temperature Controller and GS Drives

#### Controller Compatibility & Connection Chart

<table>
<thead>
<tr>
<th>Family</th>
<th>CPU</th>
<th>PLC Port &amp; Type</th>
<th>C-more EA3 Series Micro Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Using panel’s RJ12 Port 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protocol(s)</td>
<td>Components &amp; Network Type</td>
</tr>
<tr>
<td>CLICK</td>
<td>all versions</td>
<td>Port 1 RJ12 - 6 pin</td>
<td>AutomationDirect Modbus (CLICK)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Port 2 RJ12 - 6 pin</td>
<td>AutomationDirect Modbus (CLICK)</td>
</tr>
<tr>
<td></td>
<td>all versions</td>
<td>Analog CPU's Term block 3-pin</td>
<td>N/A</td>
</tr>
<tr>
<td>Productivity Series</td>
<td>all versions</td>
<td>RS-232 RJ12 - 6 pin</td>
<td>AutomationDirect Productivity Serial</td>
</tr>
<tr>
<td>Do-more</td>
<td>all versions</td>
<td>RS-485 Port Term block 3-pin</td>
<td>AutomationDirect Productivity Serial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Port 2 RJ12 - 6 pin</td>
<td>AutomationDirect Do-more Serial</td>
</tr>
<tr>
<td>SOLO</td>
<td>N/A</td>
<td>Data +/- terminals</td>
<td>SOLO Temperature Controller</td>
</tr>
<tr>
<td>GS Drives</td>
<td>N/A</td>
<td>RS-485 Interface</td>
<td>GS Drives Serial GS Drives TCP/IP (GS-EDRV)</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

C-more Micro EA3 Series panels require an external power supply. PLC Compatibility & Connection Chart continued on next page.
## AutomationDirect DirectLOGIC DL05, DL06, D0-DCM Module & DL105 PLCs

### Controller Compatibility & Connection Chart

<table>
<thead>
<tr>
<th>Family</th>
<th>CPU</th>
<th>PLC Port &amp; Type</th>
<th>C-more EA3 Series Micro Panel</th>
<th>Panel to PLC Cabling Components Required for Specific Port and Protocol being used.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Using panel’s RJ12 Port1</td>
<td>Using panel’s Port2 DB 15-pin - female</td>
</tr>
<tr>
<td><strong>DirectLOGIC DL05</strong></td>
<td>all versions</td>
<td>Port 1 RJ12 - 6 pin</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>D0-CBL</td>
</tr>
<tr>
<td></td>
<td>D0-DCM</td>
<td>Port 2 RJ12 - 6 pin</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>D0-CBL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DB15HD (female)</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>D0-CBL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Modbus RTU</td>
<td>EA-2CBL</td>
</tr>
<tr>
<td><strong>DirectLOGIC DL06</strong></td>
<td>all versions</td>
<td>Port 1 RJ12 - 6 pin</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>D0-CBL</td>
</tr>
<tr>
<td></td>
<td>D0-DCM</td>
<td>Port 2 DB15HD (female)</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>D0-CBL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Modbus RTU</td>
<td>EA-2CBL</td>
</tr>
<tr>
<td><strong>DirectLOGIC DL105</strong></td>
<td>all versions</td>
<td>Port 1 RJ12 - 6 pin</td>
<td>K-sequence</td>
<td>D0-CBL</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

C-more Micro EA3 Series panels require an external power supply.

PLC Compatibility & Connection Chart continued on next page.
# DirectLOGIC DL205 PLCs, D2-DCM Module and WINPLC

## C-more EA3 Series Micro Panel

### Controller Compatibility & Connection Chart

<table>
<thead>
<tr>
<th>Family</th>
<th>CPU</th>
<th>Port &amp; Type</th>
<th>Panel to PLC Cabling Components Required for Specific Port and Protocol being used.</th>
<th>Cabling Components Needed</th>
<th>Network Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Using panel’s RJ12 Port1</td>
<td>Protocol(s) Supported</td>
<td>Components &amp; Network Type</td>
</tr>
<tr>
<td><strong>Direct LOGIC DL205</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D2-230</td>
<td>Port 1</td>
<td>RJ12 - 6 pin</td>
<td>K-sequence</td>
<td>D0-CBL</td>
<td>RS-232</td>
</tr>
<tr>
<td>D2-240</td>
<td>Port 1</td>
<td>RJ12 - 6 pin</td>
<td>K-sequence</td>
<td>D0-CBL</td>
<td>RS-232</td>
</tr>
<tr>
<td></td>
<td>Port 2</td>
<td>RJ12 - 6 pin</td>
<td>K-sequence, Direct NET</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D2-260</td>
<td>Port 1</td>
<td>RJ12 - 6 pin</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>D0-CBL</td>
<td>RS-232</td>
</tr>
<tr>
<td>D2-DCM</td>
<td>Port 1</td>
<td>DB 25 pin (female)</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>See Diagram 3</td>
<td>RS-232</td>
</tr>
<tr>
<td>WINPLC</td>
<td>Port 1</td>
<td>RJ12 - 6 pin</td>
<td>Modbus RTU</td>
<td>D0-CBL</td>
<td>RS-232</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

C-more Micro EA3 Series panels require an external power supply.

PLC Compatibility & Connection Chart continued on next page.
## DirectLOGIC DL305 PLCs and D3-DCM Module

### Controller Compatibility & Connection Chart

<table>
<thead>
<tr>
<th>PLC Family</th>
<th>CPU Type</th>
<th>Port &amp; Type</th>
<th>Panel to PLC Cabling Components Required for Specific Port and Protocol being used.</th>
<th>C-more EA3 Series Micro Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>D3-422-DCU DB 25 pin (female)</td>
<td>N/A</td>
<td>Direct NET</td>
</tr>
<tr>
<td></td>
<td>D3-340</td>
<td>Port 1 RJ11 - 4 pin</td>
<td>Direct NET</td>
<td>OP-3CBL-1 RS-232</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Port 2 RJ11 - 4 pin</td>
<td>Direct NET, Modbus RTU</td>
<td>Direct NET</td>
</tr>
<tr>
<td></td>
<td>D3-350</td>
<td>Port 1 RJ12 - 6 pin</td>
<td>K-sequence, Direct NET</td>
<td>D0-CBL RS-232</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Port 2 DB 25 pin (female)</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>*See Diagram 3 RS-232</td>
</tr>
<tr>
<td></td>
<td>D3-DCM D3-350 only</td>
<td>Port 1 DB 25 pin (female)</td>
<td>K-sequence, Direct NET, Modbus RTU</td>
<td>*See Diagram 3 RS-232</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

C-more Micro EA3 Series panels require an external power supply.

PLC Compatibility & Connection Chart continued on next page.
### DirectLOGIC DL405 PLCs and D4-DCM Module

Panel Powered via external power supply. Port1 or Port2 Communications

#### Controller Compatibility & Connection Chart

<table>
<thead>
<tr>
<th>PLC</th>
<th>C-more EA3 Series Micro Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family</strong></td>
<td><strong>CPU</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Direct LOGIC DL405</strong></td>
<td>D4-430</td>
</tr>
<tr>
<td></td>
<td>D4-440</td>
</tr>
<tr>
<td></td>
<td>D4-DCM</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

C-more Micro EA3 Series panels require an external power supply.

PLC Compatibility & Connection Chart continued on next page.
### Allen-Bradley PLCs
Panel Powered via external power supply. Port1 or Port2 Communications

#### Controller Compatibility & Connection Chart

<table>
<thead>
<tr>
<th>PLC</th>
<th>C-more EA3 Series Micro Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Port &amp; Type</strong></td>
<td></td>
</tr>
<tr>
<td>Protocol(s) Supported</td>
<td>Components &amp; Network Type</td>
</tr>
<tr>
<td>Protocol(s) Supported</td>
<td>Components &amp; Network Type</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PLC</th>
<th>C-more EA3 Series Micro Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen-Bradley MicroLogix 1000, 1100, 1200, 1400, 1500</td>
<td>N/A</td>
</tr>
<tr>
<td>8-pin mini-din port</td>
<td></td>
</tr>
<tr>
<td>RJ45 8-pin</td>
<td></td>
</tr>
<tr>
<td>DF1 Full Duplex</td>
<td>EA-MLOGIX-CBL</td>
</tr>
<tr>
<td>DF1 Half Duplex</td>
<td>RS-232</td>
</tr>
<tr>
<td>DH485/AIC/AIC+</td>
<td>EA-DH485-CBL</td>
</tr>
<tr>
<td>RS-232</td>
<td></td>
</tr>
<tr>
<td>Allen-Bradley SLC500  5/03, 5/04, 5/05</td>
<td>N/A</td>
</tr>
<tr>
<td>9-pin D-sub port</td>
<td></td>
</tr>
<tr>
<td>RJ45 8-pin</td>
<td></td>
</tr>
<tr>
<td>DF1 Full Duplex</td>
<td>EA-SLC-232-CBL</td>
</tr>
<tr>
<td>DF1 Half Duplex</td>
<td>RS-232</td>
</tr>
<tr>
<td>DH485/AIC/AIC+</td>
<td>EA-DH485-CBL</td>
</tr>
<tr>
<td>RS-232</td>
<td></td>
</tr>
<tr>
<td>Allen-Bradley ControlLogix all 9-pin D-sub port</td>
<td>N/A</td>
</tr>
<tr>
<td>9-pin D-sub port</td>
<td></td>
</tr>
<tr>
<td>RJ45 8-pin</td>
<td></td>
</tr>
<tr>
<td>DF1 Full Duplex</td>
<td>EA-SLC-232-CBL</td>
</tr>
<tr>
<td>DF1 Half Duplex</td>
<td>RS-232</td>
</tr>
<tr>
<td>Allen-Bradley CompactLogix all 9-pin D-sub port</td>
<td>N/A</td>
</tr>
<tr>
<td>9-pin D-sub port</td>
<td></td>
</tr>
<tr>
<td>RJ45 8-pin</td>
<td></td>
</tr>
<tr>
<td>DF1 Full Duplex</td>
<td>EA-SLC-232-CBL</td>
</tr>
<tr>
<td>DF1 Half Duplex</td>
<td>RS-232</td>
</tr>
<tr>
<td>Allenden-Bradley FlexLogix all 9-pin D-sub port</td>
<td>N/A</td>
</tr>
<tr>
<td>9-pin D-sub port</td>
<td></td>
</tr>
<tr>
<td>RJ45 8-pin</td>
<td></td>
</tr>
<tr>
<td>DF1 Full Duplex</td>
<td>EA-SLC-232-CBL</td>
</tr>
<tr>
<td>DF1 Half Duplex</td>
<td>RS-232</td>
</tr>
<tr>
<td>Allen-Bradley PLC5    all 9-pin D-sub port</td>
<td>N/A</td>
</tr>
<tr>
<td>25-pin D-sub port</td>
<td></td>
</tr>
<tr>
<td>RJ45 8-pin</td>
<td></td>
</tr>
<tr>
<td>DF1 Full Duplex</td>
<td>EA-PLC5-232-CBL</td>
</tr>
<tr>
<td>*See Diagram 16</td>
<td>RS-422</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

C-more Micro EA3 Series panels require an external power supply. PLC Compatibility & Connection Chart continued on next page.
### Controller Compatibility & Connection Chart

<table>
<thead>
<tr>
<th>PLC</th>
<th>C-more EA3 Series Micro Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel to PLC Cabling Components Required for Specific Port and Protocol being used.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Using Panel’s RJ12 port 1</strong></td>
<td><strong>Using Panel’s Port2</strong></td>
</tr>
<tr>
<td><strong>Using panel’s RJ12 port 1</strong></td>
<td><strong>DB 15-pin - female</strong></td>
</tr>
<tr>
<td><strong>Protocol(s) Supported</strong></td>
<td><strong>Components &amp; Network Type</strong></td>
</tr>
<tr>
<td><strong>Components &amp; Network Type</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Panel Powered via external power supply. Port1 or Port2 Communications</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family</th>
<th>CPU</th>
<th>Port &amp; Type</th>
<th>Protocol(s) Supported</th>
<th>Components &amp; Network Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE</td>
<td>90/30</td>
<td>15-pin D-sub port</td>
<td>RS-232</td>
<td>EA-90-30-CBL RS-422</td>
</tr>
<tr>
<td></td>
<td>Micro 90, VersaMax Micro</td>
<td>RJ45 Port 1</td>
<td>SNPX</td>
<td>*See Diagram 12 RS-232</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-pin D-sub port Port 2</td>
<td></td>
<td>EA-90-30-CBL RS-422</td>
</tr>
<tr>
<td>Mitsubishi</td>
<td>Melsec FX Series</td>
<td>25-pin D-sub port 8-pin mini-din port</td>
<td>CPU Direct</td>
<td>EA-MITSU-CBL RS-422</td>
</tr>
<tr>
<td></td>
<td>Q / QnA</td>
<td>9-pin D-sub port 6-pin mini-din port</td>
<td></td>
<td>EA-MITSU-CBL-1 RS-422</td>
</tr>
<tr>
<td>Omron</td>
<td>C200 (Adapter), C500</td>
<td>25-pin D-sub port</td>
<td>Host Link</td>
<td>EA-OMRON-CBL RS-232</td>
</tr>
<tr>
<td></td>
<td>CJ1, CS1, CQM1, CPM1, CPM2, C200</td>
<td>9-pin D-sub port</td>
<td>FINS</td>
<td>*See Diagrams 7 &amp; 8 RS-232</td>
</tr>
<tr>
<td>Modicon</td>
<td>984 CPU, Quantum 113 CPU, AEG</td>
<td>varies</td>
<td>Modbus RTU</td>
<td>*See Diagrams 9, 10 &amp; 11 RS-232</td>
</tr>
<tr>
<td></td>
<td>Modicon Micro Series 110 CPU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siemens</td>
<td>S7-200 CPU</td>
<td>9-pin D-sub port 0 or 1</td>
<td>PPI</td>
<td>*See Diagram 13 RS-485</td>
</tr>
</tbody>
</table>

* Note: Wiring Diagrams for user constructed cables start on page 6-24.

**C-more Micro EA3 Series panels require an external power supply.**

**PLC Compatibility & Connection Chart continued on next page.**
## Cables from AutomationDirect

<table>
<thead>
<tr>
<th>Cable Description</th>
<th>Cable Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cables used with RJ12 RS-232 serial Port1</strong></td>
<td></td>
</tr>
<tr>
<td>AutomationDirect Productivity Series, Do-more, CLICK, Direct LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 &amp; H2-WinPLC (RS-232C) 3.66m (12ft) cable length</td>
<td>D0-CBL</td>
</tr>
<tr>
<td>Direct LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C). Use with D0-CBL cable.</td>
<td>FA-15HD</td>
</tr>
<tr>
<td>Direct LOGIC PLC 15-pin D-sub port, DL405 (RS-232C). Use with D0-CBL cable.</td>
<td>FA-CABKIT</td>
</tr>
<tr>
<td>Direct LOGIC PLC RJ-11 port, D3-340 (RS-232C) 2m (6.56 ft) cable length</td>
<td>OP-3CBL-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cable Description</th>
<th>Cable Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cables used with 15-pin RS-232/422/485 serial Port2</strong></td>
<td></td>
</tr>
<tr>
<td>AutomationDirect Productivity Series, Do-more, CLICK, Direct LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 &amp; H2-WinPLC (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-2CBL</td>
</tr>
<tr>
<td>Direct LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-2CBL-1</td>
</tr>
<tr>
<td>Direct LOGIC PLC RJ-11 port, D3-340 (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-3CBL</td>
</tr>
<tr>
<td>Direct LOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-4CBL-1</td>
</tr>
<tr>
<td>Direct LOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM’s (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-4CBL-2</td>
</tr>
<tr>
<td>Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 &amp; 1500 (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-MLOGIX-CBL</td>
</tr>
<tr>
<td>Allen-Bradley SLC 5-03/04/05, ControlLogix, CompactLogix, FlexLogix DF1 port (RS-232C)</td>
<td>EA-SLC-232-CBL</td>
</tr>
<tr>
<td>Allen-Bradley PLC-5 DF1 port (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-PLC5-232-CBL</td>
</tr>
<tr>
<td>Allen-Bradley MicroLogix, SLC 5-01/02/03 DH485 port (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-DH485-CBL</td>
</tr>
<tr>
<td>GE 90/30, 90/70, Micro 90, Versamax Micro (Port2) 15-pin D-sub port (RS-422A) 3m (9.8 ft) cable length</td>
<td>EA-90-30-CBL</td>
</tr>
<tr>
<td>MITSUBISHI FX Series 25-pin port (RS-422A) 3m (9.8 ft) cable length</td>
<td>EA-MITSU-CBL</td>
</tr>
<tr>
<td>MITSUBISHI FX Series 8-pin mini-DIN (RS-422A) 3m (9.8 ft) cable length</td>
<td>EA-MITSU-CBL-1</td>
</tr>
<tr>
<td>OMRON Host Link (C200 Adapter, C500) (RS-232C) 3m (9.8 ft) cable length</td>
<td>EA-OMRON-CBL</td>
</tr>
</tbody>
</table>

**Caution:** 5VDC is provided at the panel’s Port1 pin 5. Refer to the panel communication ports specification on page 6-4.

**NOTE:** C-more Micro EA3 Series panels cannot be powered by a PLC and cannot communicate with a PLC through the USB programming port. EA3-T6CL can be powered during programming from the PC through a USB Programming Cable such as USB-CBL-AB6. When powered from the PC, EA3-T6CL will operate in Low-Power mode and the screen brightness is diminished.
Cables from *AutomationDirect* (cont’d)

- Part No. D0-CBL
- Part No. OP-3CBL-1
- Part No. FA-15HD
- Part No. EA-2CBL
- Part No. EA-2CBL-1
- Part No. FA-CABKIT
- Part No. EA-4CBL-1
- Part No. EA-4CBL-2
- Part No. EA-3CBL
- Part No. EA-MLOGIX-CBL
- Part No. EA-SLC-232-CBL
- Part No. EA-PLC5-232-CBL
- Part No. EA-DH485-CBL
- Part No. EA-90-30-CBL
- Part No. EA-MITSU-CBL
- Part No. EA-MITSU-CBL-1
- Part No. EA-OMRON-CBL
Cables from AutomationDirect – Wiring Diagrams

The following series of wiring diagrams show the connectors and wiring details for the communication cables that are used between the C-more Micro panels and various PLCs. Part numbers are included with the pre-made cables that can be purchased from AutomationDirect. The information presented will allow the user to construct their own cables if so desired.

CLICK and DirectLogic:

**EA-2CBL**

**Productivity Series, Do-more, CLICK and DirectLogic PLC RJ12 port:**
DL05, DL06, DL105, DL205, DL350, DL450, H2-WINPLC
RS-232C (p/n EA-2CBL)

**Wiring Diagram**

1. Sig GND
2. do not use
3. RXD
4. TXD
5. do not use
6. do not use
7. do not use
8. do not use
9. do not use
10. do not use
11. do not use
12. do not use
13. do not use
14. do not use
15. do not use

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.

DirectLogic:

**EA-2CBL-1**

**DirectLogic PLC (VGA style) 15-pin HD port:**
D2-250, D2-250-1, D2-260, DL06
RS-232C (p/n EA-2CBL-1)

**Wiring Diagram**

1. +5 VDC - N/C
2. TXD
3. RXD
4. RTS
5. CTS
6. GND
7. do not use
8. do not use
9. do not use
10. do not use
11. do not use
12. do not use
13. do not use
14. do not use
15. do not use

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.
Cables from *AutomationDirect* – Wiring Diagrams (cont’d)

**DirectLOGIC:**

**EA-3CBL**

*Direct*Logic PLC RJ11 port: D3-340
RS-232C (p/n EA-3CBL)

![Wiring Diagram](image)

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.

**DirectLOGIC:**

**EA-4CBL-1**

*Direct*Logic PLC 15-pin D-sub port: DL405,
RS-232C (p/n EA-4CBL-1)

![Wiring Diagram](image)

See PLC user manual for pin out details.

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.
Cables from AutomationDirect – Wiring Diagrams (cont’d)

DirectLogic:

To PLC 25-Pin Port

Direct Logic PLC 25-pin D-sub port: DL405, D3-350, DL305 DCU, and all DCMs, RS-232C (p/n EA-4CBL-2)

Wiring Diagram

13 = do not use
12 = do not use
11 = do not use
10 = do not use
9 = do not use
8 = do not use
7 = Signal GND
6 = do not use
5 = CTS
4 = RTS
3 = RXD
2 = TXD
1 = do not use

8 = do not use
7 = do not use
6 = Logic GND
5 = do not use
4 = do not use
3 = RXD (232C)
2 = TXD (232C)
1 = Frame GND

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.

AutomationDirect Controllers

D0-CBL

RJ12 6-pin Phone Plug (6P6C)

D0-CBL RS-232 RJ12 to RJ12 Shielded Cable

1 = Sig GND
2 = not used
3 = RXD
4 = TXD
5 = not used
6 = not used

12 feet [3.7 m]

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.

DirectLogic:

To PLC RJ11 Port

Direct Logic PLC RJ11 port: D3-340 Port 1 & 2 RS-232C (p/n OP-3CBL-1)

Wiring Diagram

1 = RXD
2 = TXD
3 = do not use
4 = Sig GND

1 = RXD
2 = TXD
3 = do not use
4 = +5 VDC
5 = Sig GND
6 = Sig GND

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.
Cables from AutomationDirect – Wiring Diagrams (cont’d)

**AllenBradley:**

**EA-MLOGIX-CBL**

To AB MicroLogix RS-232 communication channel

![Wiring Diagram](image)

**Note:** Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.

**AllenBradley:**

**EA-SLC-232-CBL**

To PLC 9-Pin Port

![Wiring Diagram](image)

**Note:** Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.

**AllenBradley:**

**EA-PLC5-232-CBL**

To PLC 25-Pin Port

![Wiring Diagram](image)

**Note:** Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.
Cables from *AutomationDirect* – Wiring Diagrams (cont’d)

**Allen-Bradley:**

**EA-DH485-CBL**

Allen-Bradley SLC500™, 5/01, /02, /03 DH-485
Point-to-Point
RS-485A (p/n EA-DH485-CBL)

<table>
<thead>
<tr>
<th>1 = TXD/RXD+</th>
<th>2 = TXD/RXD–</th>
<th>3 = do not use</th>
<th>4 = Signal GND</th>
<th>5 = LE</th>
<th>6 = do not use</th>
<th>7 = Signal GND</th>
<th>8 = do not use</th>
</tr>
</thead>
</table>

Wiring Diagram

Note: Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19954 shielded cable or equivalent.

---

Allen-Bradley SLC500™, 5/01, /02, /03 DH-485/AIC to Multiple *C-more* Micro Panels
RS-485A (using *C-more* cable p/n EA-DH485-CBL)

Note: The above diagram shows connecting multiple *C-more* Micro panels to an Allen-Bradley DH485/AIC network using the AB DH485 Link Coupler, p/n 1747-AIC. Select the “Allen-Bradly DH485/AIC SLC500 MicroLogix” driver in the *C-more* Programming Software when starting the project. Also, set the AB channel configuration for DH485.
Cables from AutomationDirect – Wiring Diagrams (cont’d)

Allen-Bradley:

Allen-Bradley SLC500™ 5/03 DH-485/AIC to Multiple C-more Micro Panels
(using C-more cables p/n EA-MLOGIX-CBL, EA-SLC-232-CBL)

Note: The above diagram shows connecting multiple C-more Micro panels to an Allen-Bradley DH485/AIC network using the AB AIC+ Advanced Interface Converter, p/n 1761-NET-AIC. Select the ‘Allen-Bradley DH485/AIC SLC500 MicroLogix’ driver in the C-more Micro Programming Software when starting the project. Also, set the AB channel configuration for DH485.
Cables from AutomationDirect – Wiring Diagrams (cont’d)

GE:

GE 90/30, 90/70, Micro 90 and VersaMax Micro (Port 2)
15-pin D-sub port, RS-422A (p/n EA-90-30-CBL)

Mitsubishi

Mitsubishi FX Series 25-pin D-sub port, RS-422A (p/n EA-MITSU-CBL)

Note: Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19853 shielded cable or equivalent.
Cables from AutomationDirect – Wiring Diagrams (cont’d)

**Mitsubishi**

**EA-MITSU-CBL-1**

To PLC 8-Pin Port

- 1 = RD– (RS-422)
- 2 = RD+ (RS-422)
- 3 = Sig GND
- 4 = SD– (RS-422)
- 5 = do not use
- 6 = do not use
- 7 = SD+ (RS-422)
- 8 = do not use

**Wiring Diagram**

- SD+ 4
- SD– 7
- RD+ 2
- RD– 3
- GND 8
- Shield

To C-more Micro Serial Port2

- 15 = do not use
- 14 = do not use
- 13 = do not use
- 12 = SD– (RS-422)
- 11 = SD+ (RS-422)
- 10 = RD– (RS-422)
- 9 = RD+ (RS-422)

Note: Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19853 shielded cable or equivalent.

**Omron**

**EA-OMRON-CBL**

To PLC 25-Pin Port

- 13 = do not use
- 12 = do not use
- 11 = do not use
- 10 = do not use
- 9 = do not use
- 8 = do not use
- 7 = Signal GND
- 6 = do not use
- 5 = CTS
- 4 = RTS
- 3 = RXD
- 2 = TXD
- 1 = do not use

**Wiring Diagram**

- TXD 2
- RXD 3
- GND 4
- RTS 5
- CTS 6
- Shield

To C-more Micro Serial Port2

- 15 = do not use
- 14 = do not use
- 13 = do not use
- 12 = do not use
- 11 = do not use
- 10 = do not use
- 9 = do not use

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.
### User Constructed Cables – Wiring Diagrams

#### Diagram 1

DirectLOGIC ZIPLink ZL-CMA15L Adapter Module to EA-COMCON-3A Terminal Block Adapter

RS-422A – PLC D2-250 (-1), D2-260 or DL06 – Port 2

*Wiring Diagram*

*ZL-CMA15L*

RS-232 RXD
RS-232 TXD
+5V
SIGNAL GND
RS-422/485 RX–
RS-422/485 TX–
RS-422/485 RX+
RS-422/485 TX+

*EA-COMCON-3A*

SD–
SD+
GND
SD–
SD+
GND
SD–
SD+
GND
TERM

Shield

*Note:* Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19954 shielded cable or equivalent.

#### Diagram 2

DirectLOGIC ZIPLink ZL-CMA15L Adapter Module to EA-COMCON-3 Terminal Block Adapter

RS-485A – PLC D2-260 or DL06 – Port 2

*Wiring Diagram*

*ZL-CMA15L*

RS-232 RXD
RS-232 TXD
+5V
SIGNAL GND
RS-422/485 RX–
RS-422/485 TX–
RS-422/485 RX+
RS-422/485 TX+

*EA-COMCON-3A*

RS-232 RXD
RS-232 TXD
+5V
SIGNAL GND
RS-422/485 RX–
RS-422/485 TX–
RS-422/485 RX+
RS-422/485 TX+

*Note:* Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19853 shielded cable or equivalent.

**NOTE:** The RS-422 and RS-485 wiring diagrams shown above are not for multi-drop networks involving connecting more than one PLC to a panel. Refer to the wiring diagram examples starting on page 6-40 if more than one PLC will be connected to a panel.
User Constructed Cables – Wiring Diagrams (cont’d)

Diagram 3

DirectLogic D2-DCM 25-pin D-sub port:
RS-232C

To DCM
25-Pin Port

Wiring Diagram

1 = do not use
10 = do not use
9 = do not use
8 = do not use
7 = Signal GND
6 = +5 VDC
5 = CTS
4 = RTS
3 = RXD
2 = TXD
1 = do not use

25-pin D-sub (male)

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.

Diagram 4

DirectLogic D4-430/D4-440/D4-450 Port 1
and D3-350 Port 2, all RS-422A

To PLC
25-Pin Port

Wiring Diagram

1 = do not use
12 = do not use
11 = CTS+
10 = RXD– (RS422)
9 = RXD+ (RS422)
8 = do not use
7 = 0 V
6 = do not use
5 = do not use
4 = do not use
3 = do not use
2 = do not use
1 = do not use

25-pin D-sub (male)

Note: Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19853 shielded cable or equivalent.

NOTE: The RS-422 wiring diagram shown above is not for multi-drop networks involving connecting more than one PLC to a panel. Refer to the wiring diagram examples starting on page 6-40 if more than one PLC will be connected to a panel.
User Constructed Cables – Wiring Diagrams (cont’d)

Diagram 5

DirectLOGIC D4-450 Port 3
RS-422A

To PLC 25-Pin Port

Wiring Diagram

13 = TXD– (RS422)
12 = TXD+ (RS422)
11 = do not use
10 = do not use
9 = do not use
8 = do not use
7 = 0 V
6 = do not use
5 = do not use
4 = do not use
3 = do not use
2 = do not use
1 = do not use

25 = do not use
24 = RXD+ (RS422)
23 = do not use
22 = do not use
21 = do not use
20 = do not use
19 = do not use
18 = do not use
17 = RXD– (RS422)
16 = RXD+ (RS422)
15 = TXD– (RS422)
14 = TXD+ (RS422)

To C-more Micro Serial Port2

Note: Use the above wiring diagram to make your own cable. We recommend using AutomationDirect p/n L19853 shielded cable or equivalent.

Diagram 6

DirectLOGIC D2-DCM*, D3-DCM* & D4-DCM*
RS-422A

To PLC 25-Pin Port

Wiring Diagram

13 = CTS–
12 = CTS+
11 = RTS–
10 = RTS+
9 = do not use
8 = do not use
7 = 0 V
6 = do not use
5 = do not use
4 = do not use
3 = do not use
2 = do not use
1 = do not use

25 = do not use
24 = RXD+ (RS422)
23 = do not use
22 = do not use
21 = do not use
20 = do not use
19 = do not use
18 = do not use
17 = RXD– (RS422)
16 = RXD+ (RS422)
15 = TXD– (RS422)
14 = TXD+ (RS422)

To C-more Micro Serial Port2

*Note: The DCM modules must be set for: DirectNET Slave, HEX mode.

Note: Use the above wiring diagram to make your own cable. We recommend using AutomationDirect p/n L19853 shielded cable or equivalent.

NOTE: The RS-422 wiring diagrams shown above are not for multi-drop networks involving connecting more than one PLC to a panel. Refer to the wiring diagram examples starting on page 6-40 if more than one PLC will be connected to a panel.
User Constructed Cables – Wiring Diagrams (cont’d)

### Diagram 7

**User Constructed**

Omron FINS (CQM1, CPM1, CPM2, C200, CJ1 & CS1) 
RS-232C 

9-pin D-sub (male) 

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>= do not use</td>
<td>= TXD</td>
<td>= RXD</td>
<td>= RTS</td>
<td>= CTS</td>
<td>do not use</td>
<td>do not use</td>
<td>do not use</td>
<td>do not use</td>
</tr>
</tbody>
</table>

**To PLC 9-Pin Port**

**To C-more Micro Serial Port2**

Note: Use the above wiring diagram to make your own cable. We recommend using 22 AWG shielded cable.

### Diagram 8

**User Constructed**

Omron Host Link CQM1 using 
CQM1-CIF02 Peripheral Port Connecting Cable 
RS-232C 

9-pin D-sub (male) 

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>= do not use</td>
<td>= RXD</td>
<td>= TXD</td>
<td>RTS</td>
<td>CTS</td>
<td>do not use</td>
<td>do not use</td>
<td>do not use</td>
<td>do not use</td>
</tr>
</tbody>
</table>

**To Peripheral Port Cable**

**To C-more Micro Serial Port2**

Note: Use the above wiring diagram to make your own cable. We recommend using 22 AWG shielded cable.
User Constructed Cables – Wiring Diagrams (cont’d)

Diagram 9

User Constructed

Modicon™ ModBus™, 984 CPU, Quanum 113 CPU
RS-232C

To PLC
9-Pin Port

Wiring Diagram

1 = do not use
2 = RXD
3 = TXD
4 = DTR
5 = Signal GND
6 = DSR
7 = RTS
8 = do not use
9 = do not use

To C-more Micro
Serial Port 2

9-pin
D-sub
(male)

Note: Use the above wiring diagram to make your own cable. We recommend using 22 AWG shielded cable.

Diagram 10

User Constructed

AEG Modicon™ Micro Series:
110 CPU 311-xx, 110 CPU 411-xx, 110 CPU 512-xx, 110 CPU 612-xx
RS-232C

To PLC
9-Pin Port

Wiring Diagram

1 = do not use
2 = TXD
3 = RXD
4 = do not use
5 = Signal GND
6 = do not use
7 = do not use
8 = do not use
9 = do not use

To C-more Micro
Serial Port 2

9-pin
D-sub
(female)

Note: Use the above wiring diagram to make your own cable. We recommend using 22 AWG shielded cable.
User Constructed Cables – Wiring Diagrams (cont’d)

Diagram 11

Modicon™ ModBus™ with RJ45 RS-232C

<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>do not use</td>
</tr>
<tr>
<td>2</td>
<td>do not use</td>
</tr>
<tr>
<td>3</td>
<td>RXD (232C)</td>
</tr>
<tr>
<td>4</td>
<td>do not use</td>
</tr>
<tr>
<td>5</td>
<td>Logic GND</td>
</tr>
<tr>
<td>6</td>
<td>do not use</td>
</tr>
<tr>
<td>7</td>
<td>Transmit Data (TXD)</td>
</tr>
<tr>
<td>8</td>
<td>Receive Data (RXD)</td>
</tr>
</tbody>
</table>

Note: Use the above wiring diagram to make your own cable. We recommend using 22 AWG shielded cable.

Diagram 12

GE VersaMax Micro Port 1 RS-232C

<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RTS</td>
</tr>
<tr>
<td>2</td>
<td>CTS</td>
</tr>
<tr>
<td>3</td>
<td>RXD (232C)</td>
</tr>
<tr>
<td>4</td>
<td>TXD (232C)</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
</tr>
<tr>
<td>6</td>
<td>+5V</td>
</tr>
<tr>
<td>7</td>
<td>DTR</td>
</tr>
<tr>
<td>8</td>
<td>DCD</td>
</tr>
</tbody>
</table>

Note: Use the above wiring diagram to make your own cable. We recommend using 22 AWG shielded cable.
User Constructed Cables – Wiring Diagrams (cont’d)

Diagram 13

Siemens S7-200 CPU Port 0 or 1
RS-485A

To PLC
9-Pin Port

To C-more Micro
EA-MG-SP1 Serial Port
with DC Power Adapter

Wiring Diagram

9-pin D-sub (male)

RS-485 Signal B

RS-485 Signal A

Logic Common

shield

1 = Logic Com
2 = Logic Com
3 = RS485 Sig B
4 = do not use
5 = Logic Com
6 = +5 VDC
7 = +24 VDC
8 = RS485 Sig A
9 = do not use

Note: Use the above wiring diagram to make your own cable. We recommend AutomationDirect L19954 shielded cable or equivalent.

Diagram 14

Mitsubishi Q / QnA Serial PLC
QJ71C24N
RS-232C

To PLC
9-Pin Port

To C-more Micro
Serial Port

Wiring Diagram

9-pin D-sub (female)

CD
DTR
DSR
RS
CS
TXD
RXD
GND

shield

1 = CD
2 = RXD
3 = TXD
4 = DTR
5 = Signal GND
6 = DSR
7 = RS
8 = CS
9 = do not use

Note: Use the above wiring diagram if you need to make your own cable. We recommend using 22 AWG shielded cable.
User Constructed Cables – Wiring Diagrams (cont’d)

Diagram 15

Mitsubishi Q02 / Q02H / Q06H / Q12H / Q25H Serial Driver
and QnA Serial Driver with Direct Connection to
the Serial Port on Q00 and Q01 CPU’s
RS-232C

Note: Use the above wiring diagram to make your own cable. We recommend using 22 AWG shielded cable.

Diagram 16

Allen Bradley PLC5 DF1
RS-422

Notes:
1. Polarities must be swapped.
2. Handshaking is turned off
3. Use the above wiring diagram to make your own cable. We recommend using AutomationDirect p/n L19853 shielded cable or equivalent.
4. Refer to the PLC-5 Programmable Controllers User Manual Switch Setting Reference for details on switch settings to define
the controller’s serial port electrical interface.
**User Constructed Cables – Wiring Diagrams (cont’d)**

**Diagram 17**

**AutomationDirect CLICK PLC Analog CPU**

**RS-485 Wiring Diagram**

- **CLICK Com Port 3**
- **RS-485 Signal A**
- **RS-485 Signal B**
- **Logic Ground**

**Diagram 18**

**AutomationDirect Productivity PAC**

**RS-485 Wiring Diagram**

- **Removable Connector included with Productivity CPU**
- **TXD+ / RXD+**
- **TXD-/ RXD-**
- **Ground**

**Diagram 19**

**GS Serial Drive Connection via RS-485**

**Wiring Diagram**

- **GS Drives RS-485 Serial Comm. Port**
- **2: GND**
- **3: SG –**
- **4: SG +**

**Note:** Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19954 shielded cable or equivalent. Use 120 ohm resistors as termination resistors (Term.).
User Constructed Cables – Wiring Diagrams (cont’d)

Diagram 20

Multiple GS Drives Connected to One C-more Micro Panel (RS-485)

Notes:
1. The terminal connections at the ZL-CDM-RJ12X4 are different for multi-drop networks than for the direct drive to panel connection.
2. Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L19954 shielded cable or equivalent.

Diagram 21

SOLO Temperature Controller to C-more Micro Panel (RS-485)

Notes:
Use the above wiring diagram to make your own cable. We recommend AutomationDirect p/n L199772 shielded cable or equivalent.
RS-422A Multi-Drop Wiring Diagram Example

DL06 and DL205 used for illustration purposes

DirectLogic DL06 PLC

Port 2

Cable Adapter (ZL-CMA15L shown)

Shielded Cable

DirectLogic DL205 PLC

(Slave)

Notes: 1. We recommend Belden 8103 shielded cable or equivalent.
2. Wiring Diagram for this example, ZL-CMA15(L)

To DL06 PLC port 2

Used as example

15-pin HD D-sub (male)

When connecting to a DirectLogic PLC, use connector ZL-CMA15L or ZL-CMA15

Notes: 1. We recommend Belden 8103 shielded cable or equivalent.
2. Wiring Diagram for this example, ZL-CMA15(L)

To D2-250-1 PLC port 2

Used as example

Typical RS-422 Multi-Drop Wiring Diagram

using DirectLogic pin numbers to illustrate

* Termination resistors required at both ends of the network receive data signals to match the impedance of the cable (between 100 and 500 ohms).
RS-422A Multi-Drop Wiring Diagram Example (cont’d)

DL06 and DL205 used for illustration purposes

Notes:
1. We recommend Belden 8103 shielded cable or equivalent.
2. Wiring Diagram for this example, ZL-CMA15(L)

Typical RS-422 Multi-Drop Wiring Diagram (cont’d)
using DirectLogic pin numbers to illustrate

* Termination resistors required at both ends of the network to receive data signals to match the impedance of the cable (between 100 and 500 ohms). Jumper pin 13 to 9 on the C-more Micro Serial Port2 15-pin connector to place the 120Ω internal resistor into the network. If the cable impedance is different, then use an external resistor matched to the cable impedance.
RS-485A Multi-Drop Wiring Diagram Example

DL06 and DL205 used for illustration purposes

DirectLogic
DL06 PLC

Port 2

Cable Adapter
(ZL-CMA15L shown)

Shielded Cable

When connecting to a DirectLogic PLC use connector ZL-CMA15L or ZL-CMA15

Notes:
1. We recommend Belden 9842 shielded cable or equivalent.
2. Wiring Diagram for this example, ZL-CMA15(L)

To DL06 PLC port 2
Used as example

To D2-250-1 PLC port 2
Used as example

Typical RS-485 Multi-Drop Wiring Diagram
using DirectLogic pin numbers to illustrate

* Termination resistors required at both ends of the network to match the impedance of the cable (between 100 and 500 ohms).
RS-485A Multi-Drop Wiring Diagram Example (cont’d)

DL06 and DL205 used for illustration purposes

DirectLOGIC
DL06 PLC

C-more
EA3 Series
Micro Panel
with
EA-COMCON-3A

Port 2

Cable Adapter
(ZL-CMA15L shown)

When connecting to a DirectLogic PLC
use connector ZL-CMA15L or ZL-CMA15

Notes: 1. We recommend Belden 9842 shielded cable or equivalent.
2. Wiring Diagram for this example, ZL-CMA15(L)

Typical RS-485 Multi-Drop Wiring Diagram (cont’d)

using DirectLogic pin numbers to illustrate

* Termination resistors required at both ends of the network receive data signals to match the impedance of the cable (between 100 and 500 ohms). Jumper pin 13 to 9 on the C-more Micro Serial Port2 15-pin connector to place the 120Ω internal resistor into the network. If the cable impedance is different, then use an external resistor matched to the cable impedance.