

**Network Cable Selection Chart**

| Connectors                       | Length         | Cat. No.                     |  | Connectors                              | Length              | Cat. No.                      |
|----------------------------------|----------------|------------------------------|--|-----------------------------------------|---------------------|-------------------------------|
| 8-pin Mini DIN to 8-pin Mini DIN | 0.5 m (1.5 ft) | 1761-CBL-AM00 <sup>(1)</sup> |  | 8-pin Mini DIN to 9-pin D Shell         | 5 m (16 ft)         | 2711-CBL-PM05                 |
| 8-pin Mini DIN to 8-pin Mini DIN | 2 m (6.5 ft)   | 1761-CBL-HM02 <sup>(1)</sup> |  | 8-pin Mini DIN to 9-pin D Shell         | 10 m (32 ft)        | 2711-CBL-PM10                 |
| 8-pin Mini DIN to 8-pin Mini DIN | 5 m (16 ft)    | 2711-CBL-HM05                |  | 6-pin Phoenix to RJ45 (DH-485)          | 3 m (10 ft)         | 1761-CBL-AS03                 |
| 8-pin Mini DIN to 8-pin Mini DIN | 10 m (32 ft)   | 2711-CBL-HM10                |  | 6-pin Phoenix to RJ45 (DH-485)          | 9 m (30 ft)         | 1761-CBL-AS09                 |
| 9-pin D Shell to 9-pin D Shell   | 0.5 m (1.5 ft) | 1761-CBL-AC00                |  | 8-pin Mini DIN to 8-pin Mini DIN        | 15 m (49.2 ft)      | 2707-NC9 <sup>(1)</sup>       |
| 9-pin D Shell to 9-pin D Shell   | 3 m (10 ft)    | 1747-CP3                     |  | 8-pin Mini DIN to 6-pin DH-485 terminal | 30 cm (11.8 in.)    | 1763-NC01 series A            |
| 8-pin Mini DIN to 9-pin D Shell  | 0.5 m (1.5 ft) | 1761-CBL-AP00 <sup>(1)</sup> |  | RJ-45 to RJ-45                          | 100 m (328 ft), max | Ethernet Cable <sup>(2)</sup> |
| 8-pin Mini DIN to 9-pin D Shell  | 2 m (6.5 ft)   | 1761-CBL-PM02 <sup>(1)</sup> |  |                                         |                     |                               |

(1) Series C or later for Class 1 Div 2 applications.

(2) Commercially available.

**Programming Cable Selection****Programming Cable Selection Chart - Programming Device to Controller**

| Programming Device                | MicroLogix 1000, 1100, 1200, 1400, and 1500 Channel 0 (8-pin Mini DIN) |              | MicroLogix 1100 and 1400 Channel 1 (RJ-45) |                     | MicroLogix 1400 Channel 2                                        |            |
|-----------------------------------|------------------------------------------------------------------------|--------------|--------------------------------------------|---------------------|------------------------------------------------------------------|------------|
|                                   | MicroLogix 1200 Programming/HMI Port (8-pin Mini DIN)                  |              |                                            |                     | MicroLogix 1500 with 1764-LRP Processor Channel 1 (9-pin RS-232) |            |
|                                   | Cat. No.                                                               | Length       | Cat. No.                                   | Length              | Cat. No.                                                         | Length     |
| Personal Computer (9-pin D Shell) | 1761-CBL-PM02                                                          | 2 m (6.5 ft) | ---                                        |                     | 1747-CP3                                                         | 3m (10 ft) |
| Personal Computer (RJ-45)         | ---                                                                    |              | Ethernet Cable <sup>(1)</sup>              | 100 m (328 ft), max | ---                                                              |            |
| Hand-Held Programmer (1761-HHP)   | 1761-CBL-HM02                                                          | 2 m (6.5 ft) | ---                                        |                     | ---                                                              |            |

(1) Commercially available.

*1747-UIC Universal Serial Bus to DH-485 Interface Converter*

This device allows a computer with a USB port to interface to DH-485 ports on an SLC 500, MicroLogix, or other Rockwell Automation controllers and on PanelView terminals. The 1747-UIC features a USB connector as well as both an RS-232 and an RS-485 port. Use the RS-232 port to connect to SLC 5/03, 5/04, 5/05 (Channel 0), MicroLogix, CompactLogix, FlexLogix, ControlLogix controllers, PanelView 300 or higher terminals, or the AIC+ interface. Use the RS-485 port to connect to SLC 5/01, 5/02, 5/03 controllers (Channel 1), PanelView 300 or higher terminals, or the 1747-AIC isolated link coupler.

**USB to DH-485 Interface Converter Specifications**

| Cat. No.              | 1747-UIC            |
|-----------------------|---------------------|
| USB Power Consumption | <100 mA (low power) |
| USB Speed             | USB 1.1 (12 Mbps)   |
| DH-485 Baud Rate      | 19.2 Kbps           |

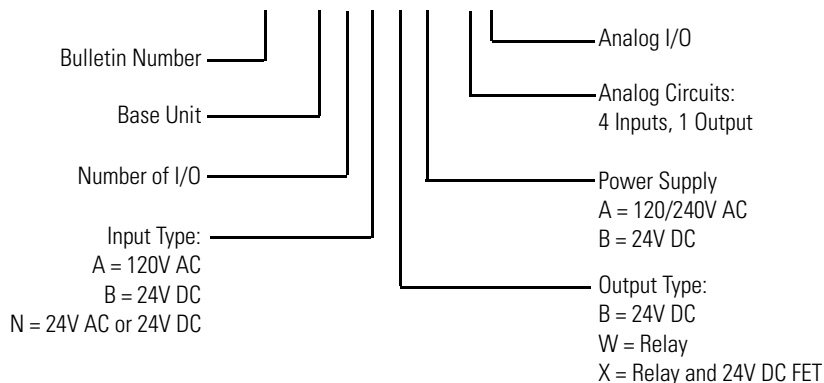
**Programming Cable Selection Chart - Programming Device to AIC+ (DH-485 only)**

| Programming Device           | 1761-NET-AIC (8-pin Mini DIN) to PC via 1747-UIC Universal Serial Bus to DH-485 Interface Converter |              | 1761-NET-AIC (9-pin D Shell) to PC via 1747-UIC Universal Serial Bus to DH-485 Interface Converter |             |
|------------------------------|-----------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------|-------------|
|                              | Cat. No.                                                                                            | Length       | Cat. No.                                                                                           | Length      |
| Personal Computer (USB Port) | 1761-CBL-PM02                                                                                       | 2 m (6.5 ft) | 1747-CP3                                                                                           | 3 m (10 ft) |

## Select MicroLogix 1000 Controllers

**MicroLogix 1000 Controller Catalog Number Detail****1761 - L 20 A W A - 5 A****Step 5 - Select:**

- controller - review power and I/O configurations to select a controller catalog number; see power supply and I/O specification for more detailed information
- record your selection in the Selection Record (start on [page 86](#))

**MicroLogix 1000 Controller Power and I/O Configuration**

| Cat. No.       | Line Voltage | Number of Inputs         | Number of Outputs <sup>(1)</sup> | High Speed I/O    |
|----------------|--------------|--------------------------|----------------------------------|-------------------|
| 1761-L16AWA    | 120/240V AC  | (10) 120V AC             | (6) Relay                        | N/A               |
| 1761-L32AWA    | 120/240V AC  | (20) 120V AC             | (12) Relay                       | N/A               |
| 1761-L20AWA-5A | 120/240V AC  | (12) 120V AC, (4) Analog | (8) Relay, (1) Analog            | N/A               |
| 1761-L32AAA    | 120/240V AC  | (20) 120V AC             | (10) Triac, (2) Relay            | N/A               |
| 1761-L16NWA    | 120/240V AC  | (10) 24V AC or DC        | (6) Relay                        | N/A               |
| 1761-L10BWA    | 120/240V AC  | (6) 24V DC               | (4) Relay                        | (1) 6.6 kHz input |
| 1761-L16BWA    | 120/240V AC  | (10) 24V DC              | (6) Relay                        | (1) 6.6 kHz input |
| 1761-L20BWA-5A | 120/240V AC  | (12) 24V DC, (4) Analog  | (8) Relay, (1) Analog            | (1) 6.6 kHz input |
| 1761-L32BWA    | 120/240V AC  | (20) 24V DC              | (12) Relay                       | (1) 6.6 kHz input |
| 1761-L10BWB    | 24V DC       | (6) 24V DC               | (4) Relay                        | (1) 6.6 kHz input |
| 1761-L16BWB    | 24V DC       | (10) 24V DC              | (6) Relay                        | (1) 6.6 kHz input |
| 1761-L20BWB-5A | 24V DC       | (12) 24V DC              | (8) Relay                        | (1) 6.6 kHz input |
| 1761-L32BWB    | 24V DC       | (20) 24V DC              | (12) Relay                       | (1) 6.6 kHz input |
| 1761-L10BXB    | 24V DC       | (6) 24V DC               | (2) MOSFET sourcing, (2) relay   | (1) 6.6 kHz input |
| 1761-L16BBB    | 24V DC       | (10) 24V DC              | (4) MOSFET sourcing, (2) relay   | (1) 6.6 kHz input |
| 1761-L32BBB    | 24V DC       | (20) 24V DC              | (10) MOSFET sourcing, (2) relay  | (1) 6.6 kHz input |
| 1761-L16NWB    | 24V DC       | (10) 24V AC or DC        | (6) Relay                        | N/A               |

(1) Two individually isolated relays per unit.

**Master List of Catalog Numbers**

| <b>Cat. No.</b> | <b>Description</b>                                        | <b>Quantity Selected</b> |
|-----------------|-----------------------------------------------------------|--------------------------|
| 1769-OF4VI      | Compact 4-channel Voltage Isolated Analog Output Module   |                          |
| 1769-OF8C       | Compact 8-point Analog Current Output Module              |                          |
| 1769-OF8V       | Compact 8-point Analog Voltage Output Module              |                          |
| 1769-OG16       | Compact TTL Output Module                                 |                          |
| 1769-OV16       | Compact Solid State 16-point 24V DC Sink Output Module    |                          |
| 1769-OV32T      | Compact Current Sinking 24V DC Output Module              |                          |
| 1769-OW16       | Compact 16-Output AC/DC Relay Module                      |                          |
| 1769-OW8        | Compact 8-Output AC/DC Relay Module                       |                          |
| 1769-OW8I       | Compact Individually Isolated 8-Output AC/DC Relay Module |                          |
| 1769-PA2        | Compact 124/240V AC Expansion Power Supply                |                          |
| 1769-PA4        | Compact 124/240V AC Expansion Power Supply                |                          |
| 1769-PB2        | Compact 24V DC Expansion Power Supply                     |                          |
| 1769-PB4        | Compact 24V DC Expansion Power Supply                     |                          |
| 1769-SDN        | CompactLogix DeviceNet Scanner Module                     |                          |
| 1769-SM1        | Compact I/O to DPI/SCANport Module                        |                          |
| 1769-SM2        | Compact I/O to DSI Communication Module                   |                          |

**MicroLogix Communication Interface Devices**

|               |                                                                       |  |
|---------------|-----------------------------------------------------------------------|--|
| 1761-NET-AIC  | MicroLogix Advanced Interface Converter Module                        |  |
| 1761-NET-DNI  | MicroLogix DeviceNet Interface Module                                 |  |
| 1761-NET-ENI  | MicroLogix Ethernet/IP Interface Module                               |  |
| 1761-NET-ENIW | MicroLogix Ethernet/IP Interface Module with Web Server Functionality |  |

**Programming Tools and Software**

|                  |                                                                 |  |
|------------------|-----------------------------------------------------------------|--|
| 1747-UIC         | Universal Serial Bus (USB) to DH-485 Interface Converter        |  |
| 1761-HHM-K08     | 8 KB Memory Module for MicroLogix 1000 Hand-Held Programmer     |  |
| 1761-HHM-K64     | 64 KB Memory Module for MicroLogix 1000 Hand-Held Programmer    |  |
| 1761-HHP-B30     | MicroLogix 1000 Hand-Held Programmer                            |  |
| 9324-RL0100ENE   | RSLogix 500 Starter                                             |  |
| 9324-RL0300ENE   | RSLogix 500 Programming for the SLC 500 and MicroLogix Families |  |
| 9324-RL0700NXENE | RSLogix 500 Professional                                        |  |
| 9324-RLM0100ENE  | RSLogix Micro Starter                                           |  |
| 9324-RLM0800ENE  | RSLogix Micro Professional                                      |  |

**Cables**

|               |                                                                                                             |  |
|---------------|-------------------------------------------------------------------------------------------------------------|--|
| 1747-CP3      | SLC 5/03, SLC 5/04, and SLC 5/05 RS-232 Programmer Cable                                                    |  |
| 1761-CBL-AC00 | RS-232 Operating Cable, 9-Pin D Shell to 9-Pin D Shell (MicroLogix), 0.5 m (1.5 ft)                         |  |
| 1761-CBL-AM00 | RS-232 Operating Cable, 8-Pin Mini DIN to 8-Pin Mini DIN (MicroLogix), 0.5 m (1.5 ft)                       |  |
| 1761-CBL-AP00 | RS-232 Operating Cable, 8-Pin Mini DIN to 9-Pin D Shell (MicroLogix), 0.5 m (1.5 ft)                        |  |
| 1761-CBL-AS03 | Controller/DH-485 Cable, 6-Pin Phoenix to RJ45, 3 m (10 ft)                                                 |  |
| 1761-CBL-AS09 | Controller/DH-485 Cable, 6-Pin Phoenix to RJ45, 9.5 m (31 ft)                                               |  |
| 1761-CBL-HM02 | RS-232 Operating/Programming Cable, 8-Pin Mini DIN to 8-Pin Mini DIN (MicroLogix), 2 m (6.5 ft)             |  |
| 1761-CBL-PM02 | RS-232 Operating/Programming Cable, 8-Pin Mini DIN to 9-Pin D Shell (MicroLogix), 2 m (6.5 ft)              |  |
| 1763-NC01     | DH-485 cable, 8-Pin Mini DIN to 6-Pin Phoenix                                                               |  |
| 2711-CBL-HM05 | RS-232 Operating Cable, 8-Pin Mini DIN to 8-Pin Mini DIN (PanelView 300 Micro to MicroLogix), 5 m (16.4 ft) |  |