

# Serial Connection Options

## : Serial Board Connection Box/Cable Usage Chart

| Serial Board Model Name | Connection Boxes |           |           |          |              |            | Connection Cables          |                           |                           |                          |                   |                  |                 |                      |                  |                         |                         |                |                 |                 |                |                 |
|-------------------------|------------------|-----------|-----------|----------|--------------|------------|----------------------------|---------------------------|---------------------------|--------------------------|-------------------|------------------|-----------------|----------------------|------------------|-------------------------|-------------------------|----------------|-----------------|-----------------|----------------|-----------------|
|                         | 8-port           |           |           |          |              |            | 8-port                     |                           |                           |                          |                   |                  | 4-port          |                      |                  |                         | 2-port                  |                |                 |                 |                |                 |
|                         | OPT8-M9          | OPT8-RJ45 | OPT8A/B/S | OPT8-M9+ | OPT8A+/B+/S+ | OPT8-RJ45+ | CBL-1M68M25x8-100 (OPT8C+) | CBL-1M68M9x8-100 (OPT8D+) | CBL-1M62M25x8-100 (OPT8C) | CBL-1M62M9x8-100 (OPT8D) | CBL-1M78M25x8-100 | CBL-1M78M9x8-100 | CBL-1M44M9x4-50 | CBL-1M44M9x4-50(POS) | CBL-1M44M25x4-50 | CBL-1M37M9x4-30 (OPT4C) | CBL-1M37M9x4-30 (OPT4D) | CBL-F40M9x4-50 | CBL-F40M25x4-50 | CBL-1M25M9x2-50 | CBL-F20M9x2-50 | CBL-F20M25x2-50 |
| C218Turbo Series        | ✓                | ✓         | ✓         | -        | -            | -          | -                          | -                         | ✓                         | ✓                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| C104H Series            | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | ✓                       | ✓                       | -              | -               | -               | -              | -               |
| CP-114 Series           | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | ✓                | ✓                       | -                       | -              | -               | -               | -              | -               |
| CI-134 Series           | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | ✓                | ✓                       | -                       | -              | -               | -               | -              | -               |
| CP-118U                 | ✓                | ✓         | ✓         | -        | -            | -          | -                          | -                         | ✓                         | ✓                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-138U                 | ✓                | ✓         | ✓         | -        | -            | -          | -                          | -                         | ✓                         | ✓                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-168U                 | ✓                | ✓         | ✓         | -        | -            | -          | -                          | -                         | ✓                         | ✓                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| C168H Series            | ✓                | ✓         | ✓         | -        | -            | -          | -                          | -                         | ✓                         | ✓                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-104UL                | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | ✓                | -               | ✓                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-134U Series          | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | ✓                | -               | ✓                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-114UL                | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | ✓                | -               | ✓                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-114UL-I              | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | ✓                | -               | ✓                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-104EL-A              | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | ✓                | -               | ✓                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-114EL                | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | ✓                | -               | ✓                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-114EL-I              | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | ✓                | -               | ✓                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-112UL                | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | -              | -               |
| CP-112UL-I              | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | -              | -               |
| CP-132UL Series         | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | -              | -               |
| CP-102UL                | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | -              | -               |
| CP-102EL                | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | -              | -               |
| CP-132EL                | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | -              | -               |
| CP-132EL-I              | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | -              | -               |
| CP-118EL-A              | -                | -         | -         | ✓        | ✓            | ✓          | ✓                          | ✓                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-168EL-A              | -                | -         | -         | ✓        | ✓            | ✓          | ✓                          | ✓                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-118U-I               | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | ✓                        | ✓                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CP-138U-I               | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | ✓                        | ✓                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| POS-104UL               | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | ✓               | -                    | -                | -                       | -                       | -              | -               | -               | -              | -               |
| CA-108                  | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | ✓                       | ✓              | -               | -               | -              | -               |
| CB-108                  | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | ✓                       | ✓              | -               | -               | -              | -               |
| CA-114                  | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | ✓                       | ✓              | -               | -               | -              | -               |
| CB-114                  | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | ✓                       | ✓              | -               | -               | -              | -               |
| CA-134I                 | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | ✓                       | ✓              | -               | -               | -              | -               |
| CB-134I                 | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | ✓                       | ✓              | -               | -               | -              | -               |
| CA-104                  | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | ✓                       | ✓              | -               | -               | -              | -               |
| CA-132                  | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | ✓              | -               |
| CA-132I                 | -                | -         | -         | -        | -            | -          | -                          | -                         | -                         | -                        | -                 | -                | -               | -                    | -                | -                       | -                       | -              | -               | ✓               | ✓              | -               |

## 8-port RS-232 Connection Boxes





|                       | OPT8-M9   | OPT8-RJ45                                 | OPT8A/S   | OPT8B         |
|-----------------------|---|---|---|---------------|
| Accessories Image     |   |   |   |               |
| Pin Assignment        |   |   |   |               |
| Board-side Connector  | DB62 male x 1   |   |   |               |
| Device-side Connector | DB9 male x 8  | 8-pin RJ45 x 8                            | DB25 female x 8   | DB25 male x 8 |
| LEDs                  | TxD, RxD indicators for each device-side port                                       | -   | TxD, RxD indicators for each device-side port                                     | -             |
| Baudrate              | -   | -   | 50 bps to 921.6 Kbps  | -             |
| Dimensions            | 90 x 111 x 27.5 mm (3.5 x 4.3 x 1 in)   | 152.8 x 32.8 x 32 mm (6 x 1.29 x 1.25 in) | 247 x 108 x 35 mm (9.7 x 4.3 x 1.4 in)  | -             |
| Protection            | -   | -   | 25 KV ESD, 2 KV EFT surge protection (OPT8S only)                                 | -             |
| Connection Cable      | DB62 male to DB62 female 150 cm connection cable for connecting to the serial board | -   | DB62 male to DB62 male 150 cm connection cable for connecting to the serial board | -             |
| Related Products      | See page A-2 for details  |   |   |               |

|                       | OPT8-M9+  | OPT8-RJ45+                                | OPT8A+/S+   | OPT8B+        |
|-----------------------|---|---|---|---------------|
| Accessories Image     |   |   |   |               |
| Pin Assignment        |   |   |   |               |
| Board-side Connector  | VHDCI 68 x 1  |   |   |               |
| Device-side Connector | DB9 male x 8  | 8-pin RJ45 x 8                            | DB25 female x 8   | DB25 male x 8 |
| LEDs                  | TxD, RxD indicators for each device-side port                                       | -   | TxD, RxD indicators for each device-side port   | -             |
| Baudrate              | -   | -   | 50 bps to 921.6 Kbps  | -             |
| Dimensions            | 90 x 111 x 27.5 mm (3.5 x 4.3 x 1 in)   | 152.8 x 32.8 x 32 mm (6 x 1.29 x 1.25 in) | 247 x 108 x 35 mm (9.7 x 4.3 x 1.4 in)  | -             |
| Protection            | -   | -   | 25 KV ESD, 2 KV EFT surge protection (Opt8S only)                                     | -             |
| Connection Cable      | DB68 male to DB62 female 150 cm connection cable for connecting to the serial board | -   | DB68 male to DB62 male 150 cm connection cable for the connecting to the serial board | -             |
| Related Products      | See page A-2 for details  |   |   |               |




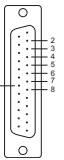
## 8-port RS-232 connection Cables

|                       | CBL-M62M25x8-100 (OPT8C) | CBL-M62M9x8-100 (OPT8D) | CBL-M68M25x8-100 (OPT8C+) | CBL-M68M9x8-100 (OPT8D+) | CBL-M78M25x8-100 | CBL-M78M9x8-100 |
|-----------------------|--------------------------|-------------------------|---------------------------|--------------------------|------------------|-----------------|
| Accessories Image     |                          |                         |                           |                          |                  |                 |
| Pin Assignment        |                          |                         |                           |                          |                  |                 |
| Board-side Connector  | DB62 male x 1            |                         | VHDCI 68 x 1              |                          | DB78 male x 1    |                 |
| Device-side Connector | DB25 male x 8            | DB9 male x 8            | DB25 male x 8             | DB9 male x 8             | DB25 male x 8    | DB9 male x 8    |
| Cable Length          | 100 cm                   |                         |                           |                          |                  |                 |
| Related Products      | See page A-2 for details |                         |                           |                          |                  |                 |









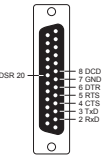

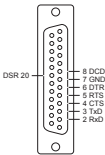
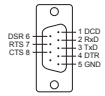
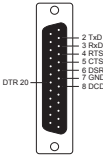
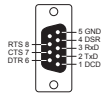
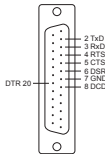
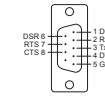
## : 2-port Connection Cables

|                   | CBL-F20M9x2-50  | CBL-F20M25x2-50   |           |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------------|---|---|-----------|-----------|-----------|---|---------|---------|----------|---|---------|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-----|-----|---|---------|---------|---|----|---------|---------|----------|----|---|---|---|---|-----|--------|-----------|-----------|---|---------|---------|---|---|---------|---------|---|---|---------|---------|----------|---|---------|---------|----------|---|-----|-----|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Accessories Image |    |  |           |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pin Assignment    |  <table border="1"> <thead> <tr> <th>PIN</th> <th>RS-422</th> <th>RS-485-4w</th> <th>RS-485-2w</th> </tr> </thead> <tbody> <tr><td>2</td><td>RxD+(B)</td><td>RxD+(B)</td><td>Data+(B)</td></tr> <tr><td>3</td><td>TxD+(B)</td><td>TxD+(B)</td><td>–</td></tr> <tr><td>4</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>5</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>6</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>7</td><td>GND</td><td>GND</td><td>GND</td></tr> <tr><td>8</td><td>TxD-(A)</td><td>TxD-(A)</td><td>–</td></tr> <tr><td>20</td><td>RxD-(A)</td><td>RxD-(A)</td><td>Data-(A)</td></tr> <tr><td>22</td><td>–</td><td>–</td><td>–</td></tr> </tbody> </table> | PIN   | RS-422    | RS-485-4w | RS-485-2w | 2 | RxD+(B) | RxD+(B) | Data+(B) | 3 | TxD+(B) | TxD+(B) | – | 4 | – | – | – | 5 | – | – | – | 6 | – | – | – | 7 | GND | GND | GND | 8 | TxD-(A) | TxD-(A) | – | 20 | RxD-(A) | RxD-(A) | Data-(A) | 22 | – | – | – |  <table border="1"> <thead> <tr> <th>PIN</th> <th>RS-422</th> <th>RS-485-4w</th> <th>RS-485-2w</th> </tr> </thead> <tbody> <tr><td>1</td><td>TxD-(A)</td><td>TxD-(A)</td><td>–</td></tr> <tr><td>2</td><td>TxD+(B)</td><td>TxD+(B)</td><td>–</td></tr> <tr><td>3</td><td>RxD+(B)</td><td>RxD+(B)</td><td>Data+(B)</td></tr> <tr><td>4</td><td>RxD-(A)</td><td>RxD-(A)</td><td>Data-(A)</td></tr> <tr><td>5</td><td>GND</td><td>GND</td><td>GND</td></tr> <tr><td>6</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>7</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>8</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>9</td><td>–</td><td>–</td><td>–</td></tr> </tbody> </table> | PIN | RS-422 | RS-485-4w | RS-485-2w | 1 | TxD-(A) | TxD-(A) | – | 2 | TxD+(B) | TxD+(B) | – | 3 | RxD+(B) | RxD+(B) | Data+(B) | 4 | RxD-(A) | RxD-(A) | Data-(A) | 5 | GND | GND | GND | 6 | – | – | – | 7 | – | – | – | 8 | – | – | – | 9 | – | – | – |
| PIN               | RS-422  | RS-485-4w   | RS-485-2w |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2                 | RxD+(B)   | RxD+(B)   | Data+(B)  |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3                 | TxD+(B)   | TxD+(B)   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4                 | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5                 | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6                 | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7                 | GND   | GND   | GND       |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8                 | TxD-(A)   | TxD-(A)   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 20                | RxD-(A)   | RxD-(A)   | Data-(A)  |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 22                | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PIN               | RS-422  | RS-485-4w   | RS-485-2w |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1                 | TxD-(A)   | TxD-(A)   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2                 | TxD+(B)   | TxD+(B)   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3                 | RxD+(B)   | RxD+(B)   | Data+(B)  |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4                 | RxD-(A)   | RxD-(A)   | Data-(A)  |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5                 | GND   | GND   | GND       |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6                 | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7                 | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8                 | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9                 | –   | –   | –         |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Description       | 20-pin box header to 2-port DB9 male cable  | 20-pin box header to 2-port DB25 male cable   |           |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Cable Length      | 20 cm   |   |           |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Related Products  | See page A-2 for details  |   |           |           |           |   |         |         |          |   |         |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |   |         |         |   |    |         |         |          |    |   |   |   |   |     |        |           |           |   |         |         |   |   |         |         |   |   |         |         |          |   |         |         |          |   |     |     |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## : 4-port Connection Cables

|                   | CBL-F40M9x4-50  | CBL-F40M25x4-50  |           |           |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
|-------------------|---|--|-----------|-----------|-----------|-----------|---|-----|---------|---------|---|---|-----|---------|---------|---|---|-----|---------|---------|----------|---|-----|---------|---------|----------|---|-----|-----|-----|-----|---|-----|---|---|---|---|-----|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|-----|--------|--------|-----------|-----------|---|-----|---------|---------|----------|---|-----|---------|---------|---|---|-----|---|---|---|---|-----|---|---|---|---|-----|---|---|---|---|-----|-----|-----|-----|---|-----|---------|---------|---|----|-----|---------|---------|----------|----|---|---|---|---|
| Accessories Image |   |  |           |           |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| Pin Assignment    |  <table border="1"> <thead> <tr> <th>PIN</th> <th>RS-232</th> <th>RS-422</th> <th>RS-485-4w</th> <th>RS-485-2w</th> </tr> </thead> <tbody> <tr><td>1</td><td>DCD</td><td>TxD-(A)</td><td>TxD-(A)</td><td>–</td></tr> <tr><td>2</td><td>RxD</td><td>TxD+(B)</td><td>TxD+(B)</td><td>–</td></tr> <tr><td>3</td><td>TxD</td><td>RxD+(B)</td><td>RxD+(B)</td><td>Data+(B)</td></tr> <tr><td>4</td><td>DTR</td><td>RxD-(A)</td><td>RxD-(A)</td><td>Data-(A)</td></tr> <tr><td>5</td><td>GND</td><td>GND</td><td>GND</td><td>GND</td></tr> <tr><td>6</td><td>DSR</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>7</td><td>RTS</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>8</td><td>CTS</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>9</td><td>–</td><td>–</td><td>–</td><td>–</td></tr> </tbody> </table> | PIN  | RS-232    | RS-422    | RS-485-4w | RS-485-2w | 1 | DCD | TxD-(A) | TxD-(A) | – | 2 | RxD | TxD+(B) | TxD+(B) | – | 3 | TxD | RxD+(B) | RxD+(B) | Data+(B) | 4 | DTR | RxD-(A) | RxD-(A) | Data-(A) | 5 | GND | GND | GND | GND | 6 | DSR | – | – | – | 7 | RTS | – | – | – | 8 | CTS | – | – | – | 9 | – | – | – | – |  <table border="1"> <thead> <tr> <th>PIN</th> <th>RS-232</th> <th>RS-422</th> <th>RS-485-4w</th> <th>RS-485-2w</th> </tr> </thead> <tbody> <tr><td>2</td><td>TxD</td><td>RxD+(B)</td><td>RxD+(B)</td><td>Data+(B)</td></tr> <tr><td>3</td><td>RxD</td><td>TxD+(B)</td><td>TxD+(B)</td><td>–</td></tr> <tr><td>4</td><td>RTS</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>5</td><td>CTS</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>6</td><td>DSR</td><td>–</td><td>–</td><td>–</td></tr> <tr><td>7</td><td>GND</td><td>GND</td><td>GND</td><td>GND</td></tr> <tr><td>8</td><td>DCD</td><td>TxD-(A)</td><td>TxD-(A)</td><td>–</td></tr> <tr><td>20</td><td>DTR</td><td>RxD-(A)</td><td>RxD-(A)</td><td>Data-(A)</td></tr> <tr><td>22</td><td>–</td><td>–</td><td>–</td><td>–</td></tr> </tbody> </table> | PIN | RS-232 | RS-422 | RS-485-4w | RS-485-2w | 2 | TxD | RxD+(B) | RxD+(B) | Data+(B) | 3 | RxD | TxD+(B) | TxD+(B) | – | 4 | RTS | – | – | – | 5 | CTS | – | – | – | 6 | DSR | – | – | – | 7 | GND | GND | GND | GND | 8 | DCD | TxD-(A) | TxD-(A) | – | 20 | DTR | RxD-(A) | RxD-(A) | Data-(A) | 22 | – | – | – | – |
| PIN               | RS-232  | RS-422   | RS-485-4w | RS-485-2w |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 1                 | DCD   | TxD-(A)  | TxD-(A)   | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 2                 | RxD   | TxD+(B)  | TxD+(B)   | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 3                 | TxD   | RxD+(B)  | RxD+(B)   | Data+(B)  |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 4                 | DTR   | RxD-(A)  | RxD-(A)   | Data-(A)  |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 5                 | GND   | GND  | GND       | GND       |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 6                 | DSR   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 7                 | RTS   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 8                 | CTS   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 9                 | –   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| PIN               | RS-232  | RS-422   | RS-485-4w | RS-485-2w |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 2                 | TxD   | RxD+(B)  | RxD+(B)   | Data+(B)  |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 3                 | RxD   | TxD+(B)  | TxD+(B)   | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 4                 | RTS   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 5                 | CTS   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 6                 | DSR   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 7                 | GND   | GND  | GND       | GND       |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 8                 | DCD   | TxD-(A)  | TxD-(A)   | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 20                | DTR   | RxD-(A)  | RxD-(A)   | Data-(A)  |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| 22                | –   | –  | –         | –         |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| Description       | 40-pin box header to 4-port DB9 male cable  | 40-pin box header to 4-port DB25 male cable  |           |           |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| Cable Length      | 50 cm   |  |           |           |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |
| Related Products  | See page A-2 for details  |  |           |           |           |           |   |     |         |         |   |   |     |         |         |   |   |     |         |         |          |   |     |         |         |          |   |     |     |     |     |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |     |        |        |           |           |   |     |         |         |          |   |     |         |         |   |   |     |   |   |   |   |     |   |   |   |   |     |   |   |   |   |     |     |     |     |   |     |         |         |   |    |     |         |         |          |    |   |   |   |   |

## : 8-pin RJ45 to DB9/DB25 Connection Cables

|                       | CBL-RJ45F25-150   | CBL-RJ45F9-150  | CBL-RJ45M25-150   | CBL-RJ45M9-150  | CBL-RJ45SF25-150   | CBL-RJ45SF9-150   | CBL-RJ45SM25-150  | CBL-RJ45SM9-150   |
|-----------------------|---|---|---|---|--|---|---|---|
| Accessories Image     |                  |  |  |  |  |  |  |  |
| Pin Assignment        |                  |  |  |  |   |  |  |  |
| Cable Type            | –   | –   | –   | –   | Shielded   |   |   |   |
| Board-side Connector  | 8-pin RJ45 x 1  |   |   |   |  |   |   |   |
| Device-side Connector | DB25 female x 1   | DB9 female x 1  | DB25 male x 1   | DB9 male x 1  | DB25 female x 1  | DB9 female x 1  | DB25 male x 1   | DB9 male x 1  |
| Cable Length          | 150 cm  |   |   |   |  |   |   |   |
| Related Products      | CP-104JU, OPT8-RJ45, NPort® 5210, NPort® 5600, NPort® 6600, CN2510/2600, NPort® W2004, UC-7410/7420 |   |   |   |  |   |   |   |

## : 10-pin RJ45 to DB9/DB25 Connection Cables

|                       | CN20030   | CN20040       | CN20060      | CN20070        |
|-----------------------|---|---------------|--------------|----------------|
| Accessories Image     |   |               |              |                |
| Pin Assignment        |   |               |              |                |
| Board-side Connector  | 10-pin RJ45 x 1                                   |               |              |                |
| Device-side Connector | DB25 female x 1                                   | DB25 male x 1 | DB9 male x 1 | DB9 female x 1 |
| Cable Length          | 150 cm  |               |              |                |
| Related Products      | C320Turbo Series, CP-204J, CI-104J, A52, A53, A60 |               |              |                |

## : Wiring Kits

|                       | TB-M9                                     | TB-F9                               | TB-M25                                    | TB-F25                               | ADP-RJ458P-DB9M            | ADP-RJ458P-DB9F              |
|-----------------------|---|-------------------------------------|---|--------------------------------------|----------------------------|------------------------------|
| Accessories Image     |   |                                     |   |                                      |                            |                              |
| Type                  | DB9 male DIN-Rail wiring terminal         | DB9 female DIN-Rail wiring terminal | DM25 male DIN-Rail wiring terminal        | DB25 female DIN-Rail wiring terminal | RJ45-to-DB9 adaptor (male) | RJ45-to-DB9 adaptor (female) |
| Connector             | DB9 male                                  | DB9 female                          | DB25 male                                 | DB25 female                          | -                          | -                            |
| Rating                | 300 V, 20 A (IEC250V 10A)                 |                                     |   |                                      | -                          | -                            |
| Operating Temperature | -40 to 105°C (-40 to 221°F)               |                                     |   |                                      | -                          | -                            |
| Suitable Wiring       | 24-12 AWG (IEC 0.5-2.5 mm <sup>2</sup> )  |                                     |   |                                      | -                          | -                            |
| Dimensions            | 77.5 x 45 x 51 mm (3.05 x 1.77 x 2.01 in) |                                     | 77.5 x 90 x 51 mm (3.05 x 3.54 x 2.01 in) |                                      | -                          | -                            |

## : TK-485 Tuning Kit

### *Pull high/low resistance tuner with termination resistor*



The TK-485, which has both a termination resistor and tuning resistor, is a great tool for engineers who build networks of daisy-chained 2-wire RS-485 devices. You no longer need to open up your RS-485 devices to add a termination resistor, and then add another resistor to tune the pull high/low resistance. Instead, simply connect the TK-485 to your RS-485 network, activate the termination resistor, and then tune the pull high/low resistor on the TK-485 until the RS-485 signal is transmitted intact.

#### Serial Protection

**Isolation:** 2 KV isolation protection

**ESD Protection:** ±4 KV protection from ESD due to contact discharge

#### Power Requirements

##### Power Input:

- 12 to 48 VDC input through power jack
- ±12 to ±48 VDC input through terminal block, with polarity protection

#### Resistance Options

**Pull High:** 600 Ω, 1 KΩ, 2 KΩ, 4.7 KΩ, 10 KΩ

**Pull Low:** 600 Ω, 1 KΩ, 2 KΩ, 4.7 KΩ, 10 KΩ

**Terminator:** 120 Ω

#### Connectors

**Signal Inputs:** D+, D-, GND

**Signal Outputs:** D+, D-, GND

#### Environmental Limits

**Operating Temperature:** 0 to 55°C

**Operating Humidity:** 95% RH max., non-condensing

**Storage Temperature:** -20 to 70°C