Pathway®
Connectivity Solutions
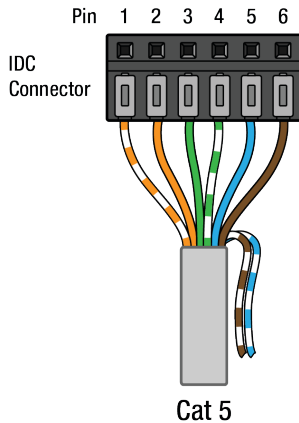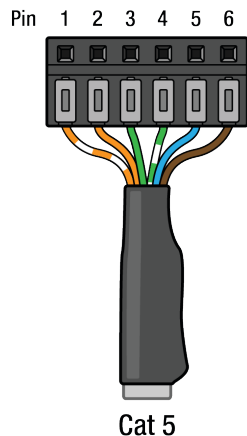
Button & Slider Station
485 Wiring Guide

- All wiring must be in a continuous run and daisy-chained. No "tees" are permitted.

- Maximum cable length for Category 5 wiring is 500 feet (152 meters).

- Maximum cable length for Belden 9773 wiring is 1000 feet (305 meters).

- The last station on the line must be terminated with two resistors with a value of 100 to 120 ohms, between pins 1 & 2 and between pins 3 & 4. Architectural Gateways ship with four terminated connectors (one per bus).

Category 5 Wiring (using IDC Connector)

Pin 1: Rx+   White/Orange
Pin 2: Rx-   Orange
Pin 3: Tx-   Green
Pin 4: Tx+   White/Green
Pin 5: +24V   Blue
Pin 6: GND   Brown
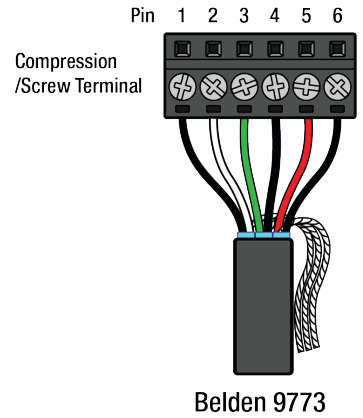NC: White/Blue
NC: White/Brown

Pin 1 2 3 4 5 6

IDC Connector

Cat 5

Apply heat shrinkable tubing to strengthen cable near connector and keep unused wires out of the way.
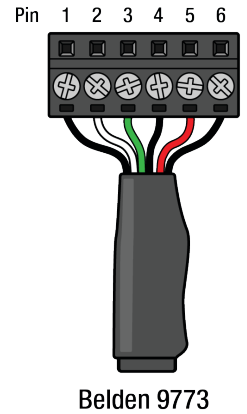
Pin 1 2 3 4 5 6

Cat 5

Belden 9773 Wiring (using compression connector)

Pin 1: Rx+   Black (White pair)
Pin 2: Rx-   White
Pin 3: Tx-   Green
Pin 4: Tx+   Black (Green pair)
Pin 5: +24V   Red
Pin 6: GND   Black (Red pair)
NC: Shield foil
NC: Drain wire

Pin 1 2 3 4 5 6

Compression /Screw Terminal

Belden 9773

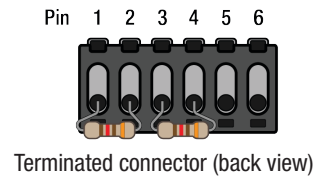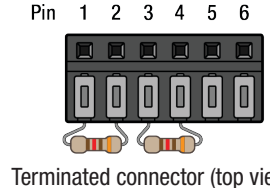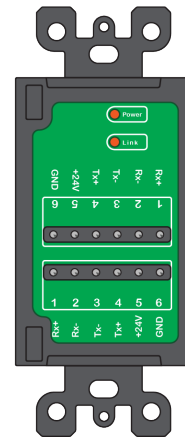Trim back foil on each wire pair. Separate bare drain wires, pull back and keep out of the way.

Apply heat shrinkable tubing to strengthen cable near connector and keep unused drain wires from short-circuiting against terminals.

Pin 1 2 3 4 5 6

Belden 9773

485 Master insert (rear view).

Note: There is no designated In or Thru; either header may be used as the In or Thru.

When wired correctly, the "Link" LED should flash at 1Hz.

Pin 1 2 3 4 5 6

Terminated connector (top view)

Pin 1 2 3 4 5 6

Terminated connector (back view)

Note: Do not let resistors touch

Recommended practices

- Minimize extra wire in the box. Tension on the electronics may result in damage to the station.

- Do not over-tighten screw terminal connectors. Tighten to 2.74 in-lbs (0.31 N-m)

- Pairs should remain twisted together for proper communication. Twists aid with noise rejection properties of differential signals.

- Vacuum or otherwise clean the backbox prior to installing the station. Metallic or conductive debris may result in station damage.

- After connecting all wires to either style of connector, pull gently on each conductor to ensure a secure connection. Wires should not pull out of connectors.

- Install into an earthed metal backbox.

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