

RMC200 CA4 Cable

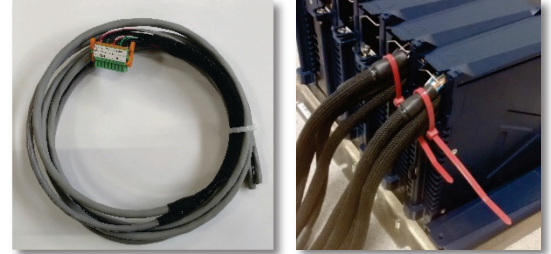
R2-CB-CA4-nnA Installation and Wiring

Pigtail cables provide a compact, convenient option for RMC200 modules. These cables are for short distances between the RMC200 and terminal blocks within the same cabinet. For long cable runs, Delta recommends using cables with lower resistance and better shielding.

Supplied Components

The **R2-CB-CA4-nnA** part number denotes a single cable assembly. The CA4 module requires two R2-CB-CA4-nnA cable assemblies – one per terminal block. Each cable assembly consists of:

- Terminal block connector
- Two cables, both wired to the single terminal block connector
- Flexible cable leader for easy bending out of module
- Pigtail ends



Cable specifications:

- Length: nn = 06: 6 ft (1.83 m); nn = 12: 12 ft (3.66 m). Contact Delta for other lengths.

Belden 8777 or equivalent:

- OD: 0.273 in; min. bend radius: 2.75 in.
- 3 twisted pairs, individually foil-shielded, with 1 drain wire per pair
- 22 AWG stranded
- Imp: 50 Ohms; Cap 30 pf/ft
- Res: 15 Ohms/1000 ft
- PVC jacket, -20 to 80 °C

Alpha 2214C or equivalent:

- OD: 0.266 in; min. bend radius: 2.7 in.
- 4 twisted pairs, overall foil-shielded, with 1 drain wire per pair
- 22 AWG stranded
- Imp: 59 Ohms; Cap 38 pf/ft
- Res: 16.5 Ohms/1000 ft
- PVC jacket, -20 to 80 °C

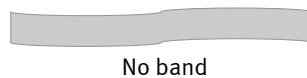
CA4 Cable Wiring Notes

- All analog outputs share the same common potential and all valve/drive commons must be tied together at some point in the system (typically, they share a power supply, which takes care of this requirement).
- All Cmn pins on the CA4 are internally connected.
- Shields from each individual valve/drive cable should be terminated at the separate terminal blocks with a low impedance connection to ground.
- Delta recommends the use of ferrules with these cables.

CA4 Cable Pin-out

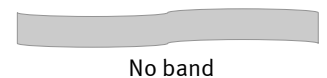
TB1 Cable A: Outputs 0-1

Color Pairs	Pin
	Red Out0+ Black Cmn
	White Out1+ Black Cmn
	Green Cmn Black Cmn



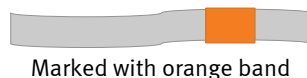
TB2 Cable B: Outputs 2-3

Color Pairs	Pin
	Red Out2+ Black Cmn
	White Out3+ Black Cmn
	Green Cmn Black Cmn



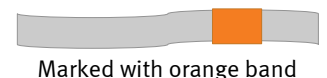
TB1 Cable B: En and Flt

Color Pairs	Pin
	Red EnOut0+ Black EnOut0-
	White EnOut1+ Black EnOut1-
	Green FltIn0+ Black FltIn0-
	Blue FltIn1+ Black FltIn1-



TB2 Cable B: Outputs 2-3

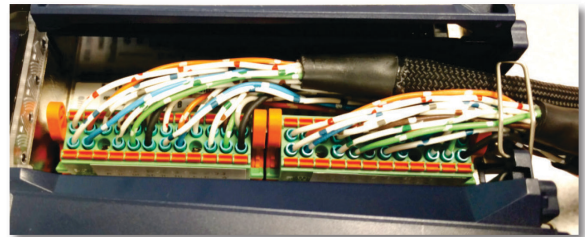
Color Pairs	Pin
	Red EnOut2+ Black EnOut2-
	White EnOut3+ Black EnOut3-
	Green FltIn2+ Black FltIn2-
	Blue FltIn3+ Black FltIn3-



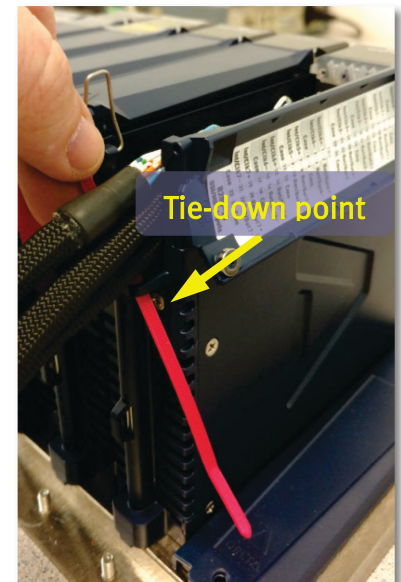
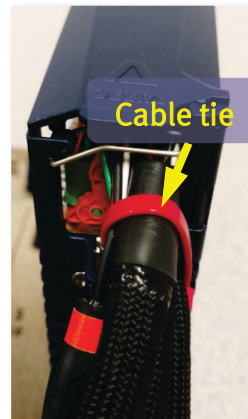


Installation Procedure

1. Insert the terminal block connectors for each cable assembly into the CA4 module, tucking the upper cable into the groove:



2. Use a cable tie to attach all cables exiting module to the tie down location shown. This ensures that module door will close properly. The cable tie should clamp onto the heat shrink tubing. Do not overtighten.

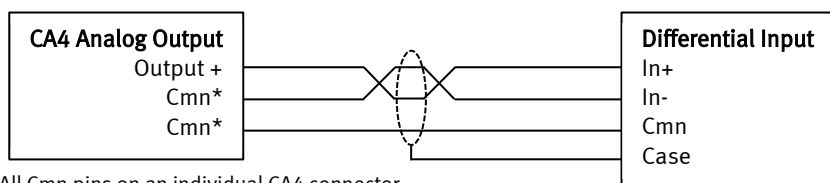


3. Connect the pigtail ends to terminal blocks as required by the application. Delta recommends the use of ferrules.

Differential Wiring

When connecting the CA4 outputs to valves or drives that support differential analog inputs, wire according to the diagram below. Differential inputs cancel noise when wired with the output and cmn wire in a twisted-pair connected to In+ and In-, and a separate common wire connected to Cmn. Any noise will affect the In+ and In- wires approximately equally. The input subtracts In- from In+, which effectively subtracts out the noise.

The differential input common mode voltage must not drift more than a certain amount from the Cmn, typically about 12V. Therefore, the analog In- and Cmn pins must be connected together. If this connection is done close to the analog output, the noise-cancelling qualities are retained. If In- and Cmn are connected together close to the input, the input will function properly, but there will be no noise-cancelling, since the noise on In- is shunted to common and is not available to cancel the noise on the In+ pin.



*All Cmn pins on an individual CA4 connector are electrically the same