INSTALLATION INSTRUCTIONS

ASSEMBLE-IN-THE-FIELD SENSING EDGE

CE cULus MODEL: CPT210

WARNING

Read and understand all instructions before beginning installation. Disconnect power to motor and test upon completion. Sensing edges should be installed by qualified personnel to ensure the requirements herein have been met. Keep these instructions with the installation. Always abide by local and national electrical code specifications when wiring accessories to motor controls.

CPT210 is a UL 325 recognized sensing edge designed for on-site configuration and assembly. Upon contact with an obstruction, CPT210 signals operator controls to immediately stop and/or reverse motion. With no adhesive required, the enhanced CPT210 end design allows for field length adjustment or to change termination for monitoring compatibility with an operator. Compatible with most operator brands with electronic controls.

CONTENTS

- **CPT210 Extrusion**
- **CPT210 End Kit:**
  - (1) Wired plug
  - (2) Cages
  - (2) Caps
  - (2) #4-24 x 3/4-in. Phillips flathead stainless steel screws
  - Non-wired plugs:
    - **End Kit Model: CPT210-ENDKIT-T1**
      - (1) 8.2K terminated plug (green)
      - (1) Non-terminated plug (black)
    - **End Kit Model: CPT210-ENDKIT-T2**
      - (1) 10K terminated plug (blue)
      - (1) Non-terminated plug (black)
    - **End Kit Model: CPT210-ENDKIT-T3**
      - (1) Diode capacitor plug (red)
      - (1) Non-terminated plug (black)
    - **End Kit Model: CPT210-ENDKIT-U**
      - (1) 8.2K terminated plug (green)
      - (1) 10K terminated plug (blue)
      - (1) Diode capacitor plug (red)
      - (1) Non-terminated plug (black)
    - **Edge Kit Model: CPT210-EDGE-5-T1T2**
      - (1) 8.2K terminated plug (green)
      - (1) 10K terminated plug (blue)
      - (1) Non-terminated plug (black)
      - 5-ft. ME120-C mounting channel

REQUIRED

- Operator manual for detail connection instructions
- Mounting channel: ME110-C, ME110-C2, ME110-C3, ME120-PC, ME120-C, ME120-C5
- #2 Phillips screwdriver
- PVC cutting tool (optional 224-101: Extrusion Cutter)
- Mounting hardware:
  - Mounting channel: #6-8 self-drilling screws
  - Gate/vertical mounting set screw: #8 x 1/2-in. lath screw

SUGGESTED

- Multi-meter capable of reading 10K Ω
- MET-101: Edge Tester

OPTIONAL

- **Wireless Connections**
  - Miller Edge wireless edge transmitter/receiver system
- **Wired Connections**
  - 18-22 gauge wire
  - Junction box(es) and mounting hardware
  - Coil cord
  - Retracting reel (non-monitored systems only)
  - Interface module (consult operator manual for the required monitoring configuration)

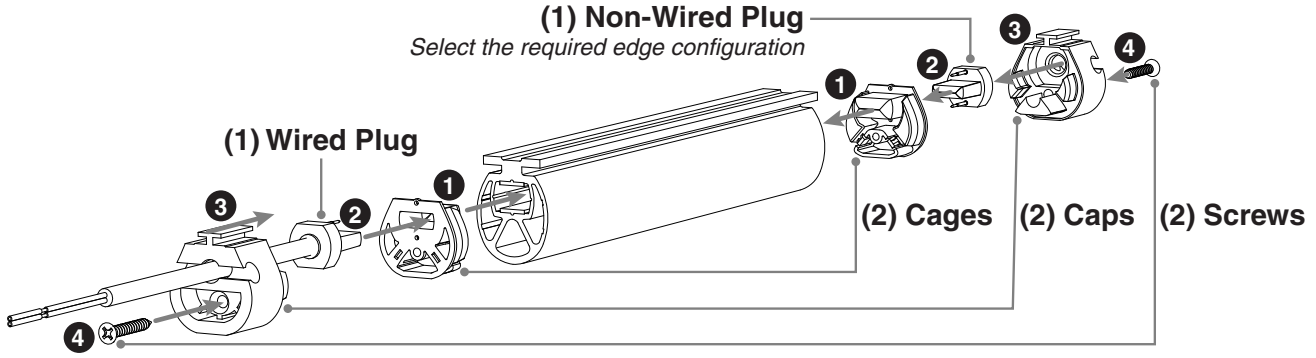


IMAGE 1: CPT210 Assembly

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I. INSTRUCTIONS

1. Measuring & Cutting

For Doors & Horizontal Mounting

a. Determine the length of the sensing edge by measuring the door section width.
b. Cut mounting channel to the section length.
c. Cut the extrusion 2-inches less than the section width.

For Gates & Vertical Mounting

a. Determine the desired overall sensing edge assembly length.
b. Cut the mounting channel to overall sensing edge assembly length.
c. Cut the extrusion to 1-1/2-inches shorter than the assembly length to account for the end components.

2. Assembly IMAGE 1

a. Wired end:
   i. Install cage into the end of the CPT210 extrusion.
   ii. Insert the wired plug into the cage, aligning the pins with the cage holes.
   iii. Install cap by pressing firmly, ensuring there are no gaps between the extrusion and the end components.
   iv. Using a #2 Phillips screwdriver, install one stainless steel screw into the cap.
b. Non-wired end:
   i. Install cage into the end of the CPT210 extrusion.
   ii. Insert one non-wired plug (green = 8.2K, blue = 10K, red = diode capacitor, black = non-terminated) into the cage, aligning the pins with the cage holes.
   iii. Install cap by pressing firmly, ensuring there are no gaps between the extrusion and the end components.
   iv. Using a #2 Phillips screwdriver, install one stainless steel screw into the cap.

3. Mounting Channel Installation

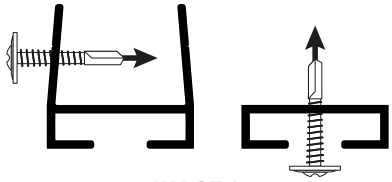


IMAGE 2
All Applications:
Mounting Channel Attachment Options

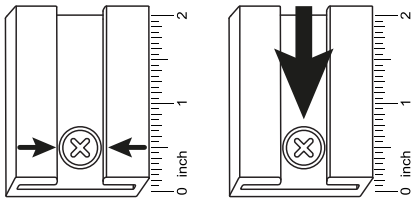


IMAGE 3
Gates & Vertical Mountings:
Installing the #8 x 1/2-inch Lath Screw & Vertical Edge

For Doors & Horizontal Mounting

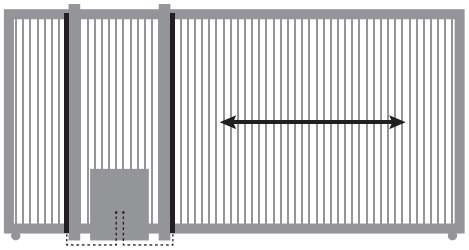
a. Pre-drill mounting holes into the channel.
   - **TechTip:** If needed, notch the ME110-C2 (U-shaped channel) at each end to clear any bottom corner brackets.
b. Align the channel with the edges of the bottom door section. Attach the mounting channel to the leading edge using #6-8 self-drilling screws (not provided) prior to installing the extrusion as shown. IMAGE 2
   Note: Channel is shipped in 5-foot sections. Install sections closely together, avoiding gaps.
c. Starting at one end of the mounting channel, gently slide the sensing edge into the channel. When complete, the wire should be facing the operator side.
d. Adjust the close limits on the motor for a maximum compression of .25-in. (6 mm).

For Gates & Vertical Mounting

a. Pre-drill mounting holes into the channel.
b. Attach the mounting channel to the leading edge using #6-8 self-drilling screws (not provided) prior to installing the extrusion as shown. IMAGE 2
   Note: Channel is shipped in 5-foot sections. If needed, install sections closely together, avoiding gaps.
c. In the bottom 1/2-inch of the mounting channel, insert a #8 x 1/2-inch lath screw. IMAGE 3
d. Starting at the top of the mounting channel, gently slide the sensing edge into the channel, stopping at the lath screw. IMAGE 4

4. **Connection**

OPTION 1: DIRECT HARDWIRED METHOD (for Gates & Vertical Mounting)

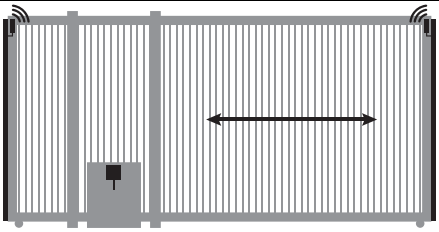


Required
- (1) Junction box
- Mounting screws
- Wire end caps
- 18-22 gauge wire

Installation:

a. Consult the Miller Edge transmitter/receiver installation instructions for wiring of the sensing edge.
b. For proper connection to operator inputs, please consult the operator manual.

OPTION 2: WIRELESS METHOD (for Doors & Gates)

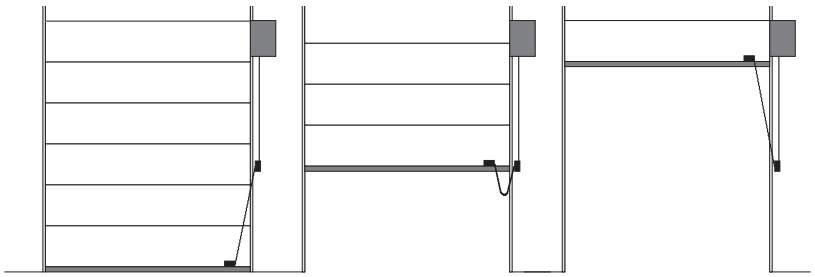


Required
- Miller Edge wireless edge transmitter/receiver system

Installation:

a. Consult the Miller Edge transmitter/receiver installation instructions for wiring of the sensing edge.
b. For proper connection to operator inputs, please consult the operator manual.

OPTION 3: COIL CORD METHOD (for Doors & Horizontal Mounting)



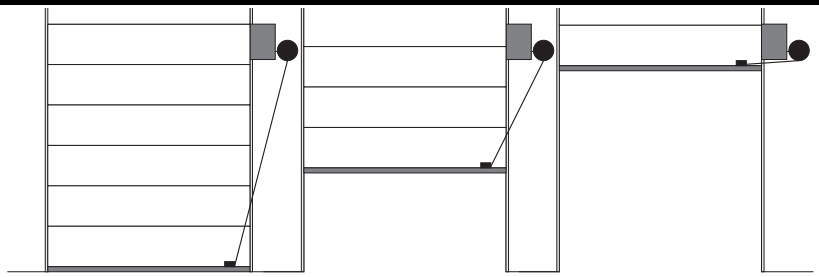
Required
- (2) Junction boxes
- Mounting screws
- Wire connectors
- 18-22 gauge wire

Note: For specific operator input connection diagrams and instructions, please consult your operator manual.

Installation:

a. Mount the first junction box on the bottom bar of the door.
b. Run the sensing edge lead wire into the junction box.
1. Mount the second junction box on an adjoining wall, midway between the floor and the operator.
2. With the door in the closed position, secure the coil cord to the first junction box.
3. Then run it, fully stretched, to the second wall mounted junction box so the stretched length is equal to one-half of the door opening.
4. Secure the coil cord into the wall junction box and trim the coil cord. This assures the excess coil cord will not get caught or hang in the opening of the door.
5. Secure 18-22 gauge wire into the second wall-mounted junction box and hard wire to the operator sensing edge terminals. For proper connection to operator inputs, please consult the operator manual.

OPTION 4: RETRACTING REEL METHOD (for Doors & Horizontal Mounting)



Required
- (1) Junction box
- Mounting screws
- Wire connectors
- 18-22 gauge wire

Note: For specific operator input connection diagrams and instructions, please consult your operator manual.

Installation:

Caution: Not Suitable for Monitored Sensing Edges

1. Mount the junction box on the end stile or bottom bar of the door.
2. Run the sensing edge lead wire into the junction box.
3. Mount the retracting reel on an adjoining wall, near the operator.
4. With the door in the closed position, secure the retracting reel cable to the junction box. The cable should freely extend, without rubbing, in and out of the retracting reel for the duration of the open/close cycle.
5. Using the 18-22 gauge wire, hardwire the retracting reel to the sensing edge terminals of the operator. For proper connection to operator inputs, please consult the operator manual.

II. TROUBLESHOOTING

Suggested:
- Edge Tester (MET-101)
- Multimeter (capable of measuring 10K)

Test:

Test the sensing edge for function:

1. To verify the termination of a 10K ohm (T2) sensing edge, use a Miller Edge Tester (MET-101) or a multimeter; the edge resistance should be ~10K ohms (9.5-10.5K).
2. To verify the termination of a diode capacitor (T3) sensing edge, use a Miller Edge Tester (MET-101); this is the only method to test a T3 sensing edge.
3. Press the Sensing Edge to confirm the resistance is less than 5 ohms.

TechTip:

To determine sensing edge termination, note the colored band on the sensing edge cable:

BAND COLOR	TERMINATION	TYPE
Green	8.2K ohm resistor	T1
Blue	10K ohm resistor	T2
Red	Diode capacitor	T3
White	Capacitor	T4
Orange	5.8K ohm resistor	T5
Purple	270K ohm resistor	T6
None	Non-terminator	–



III. TECH SUPPORT

For additional assistance, contact Miller Edge Tech Support: Call 800-220-3343 and select “option 2” or email techsupport@milleredge.com.

IV. GENERAL SPECIFICATIONS

Color	Black
Maximum Edge Length	50-ft.
Sensitivity	Nominal 3-5 lbf
Lead Wire	12-in., 22 gauge, SJTO
Wire Outlet Location	Universal end plug
Electrical Maximum	24 volts AC/DC, 1/2 amp
Electrical Configuration	Normally open non-terminated or terminated options: 8.2K ohm, 10K ohm, diode capacitor
Temperature Range	Meets or exceeds UL requirement
Exterior Materials	Extrusion: Flexible PVC, conductive polymer Ends: Molded polymer
Contact Element	Conductive polymer
Agency Approvals	UL 325 Recognized Component, Certificate of Compliance

V. MAINTENANCE

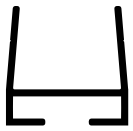
It is strongly recommended that users test sensing edges at least once per month. Check the sensing edge for cuts, loss of sensitivity, or water damage. Also check for signs of damage to cables or connection points. Compress the sensing edge 2-in. from both ends and in the center and observe that it sends an electric signal to the controls. Refer to your operator manual for detailed instructions about motor connections.

VI. WARRANTY

CPT210 carries a **2-year warranty** from date of shipment from Miller Edge for credit or replacement. This warranty applies to normal use, which is found to have defective materials or workmanship, as determined solely by an authorized factory representative. This warranty is void where evidence of misuse or abuse is present. This warranty covers repair or replacement of the purchased product only; product installation/labor charges are not covered. Miller Edge manufactures its products to meet stringent specifications and cannot assume responsibility for those consequences arising from improper installation or misuse. Installation instructions and testing procedures provided by Miller Edge must be followed for proper operation and maintenance.

VII. ACCESSORIES

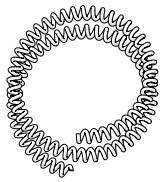
Contact your sales representative about accessories for your installation:



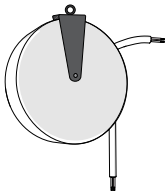
MOUNTING CHANNELS



JUNCTION BOXES



COIL CORDS



RETRACTING REELS



TRANSMITTERS/ RECEIVERS



INTERFACE MODULES