



# Sensing Edge

c  US MODEL: MC271

## 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.

The MC271 sensing edge is a UL Recognized Component and is custom manufactured to your exact specifications for length and outlet location. When touched lightly, MC271 sends an immediate electrical signal to operator controls to stop, and/or reverse operations. Made with a vinyl cover and an extruded T, MC271 is designed to slide into the bottom retainer of the CornellCookson rolling service doors and insulated rolling service doors. The exterior of this sensing edge is highly flexible and can conform to irregularities in the floor. Consult your operator installation manual for detailed instructions about connecting MC271 to motor controls.

## CONTENTS

- MC271 Sensing edge

## REQUIRED

- 18-22 gauge wire
- 7/16" Drill bit for aluminum
- Heavy duty scissors
- Pliers
- Flat head screwdriver
- Tape measure
- Pen or masking tape for marking

## OPTIONAL

- Connection methods:
  - Miller Edge wireless edge system
  - Coil cord
  - Retracting reel
  - Junction boxes
- SM-102: Signature Module

## SUGGESTED

- Operator installation manual
- Miller Edge Tester (MET-101)
- Multimeter (capable of measuring 10K ohms)

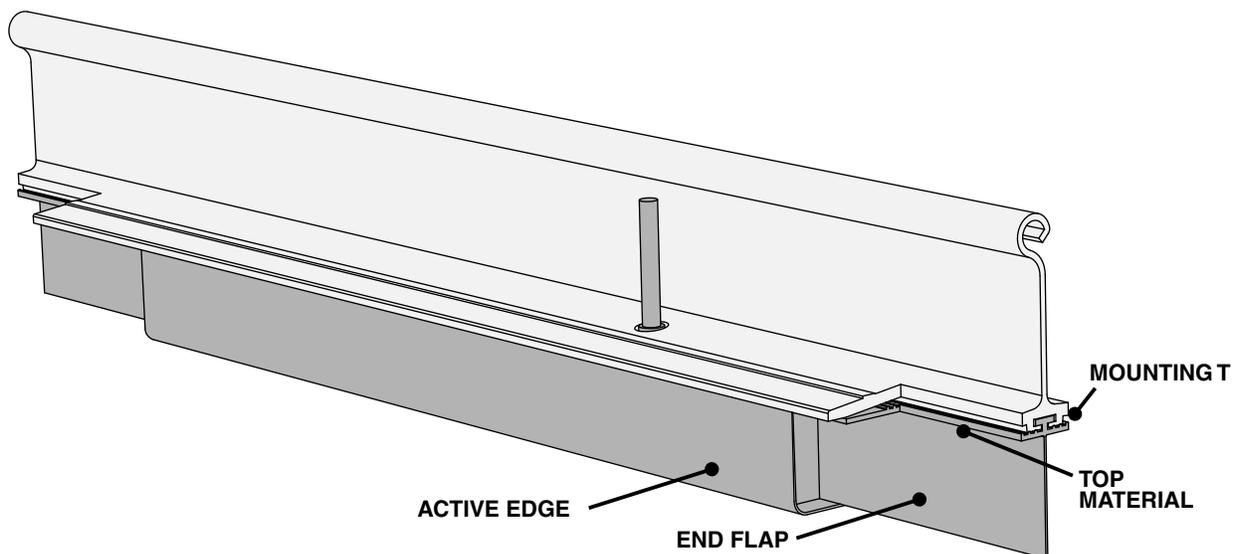


IMAGE 1: MC271 Sensing edge installed on an extruded aluminum bottom bar

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### I. SETUP

1. All Miller Edge sensing edges are inspected and tested prior to shipment to ensure quality. Upon opening the shipping box, inspect your sensing edge and wiring for shipping damage. If the shipping container appears to be damaged, please notify carrier immediately.
2. Un-box and lay the sensing edge out straight. This will allow the edge to relax and return to its original shape.
3. Remove existing bottom seal. If the ends of the bottom bar channel are crimped, open them to their original shape using pliers, a flat head screwdriver, or other tool. **IMAGE 2**
4. Viewing the coil side of the door, note the handing of the operator. On the operator end of the door, measure **19-1/2"** in from the cutout on the bottom bar towards the center of the bottom bar.
5. Centered on the top surface of the bottom bar, mark this location using a marking pen or piece of tape. **IMAGE 3**
6. Drill a hole up through the bottom bar using a **7/16"** bit and deburr the hole to eliminate any sharp metal fragments.

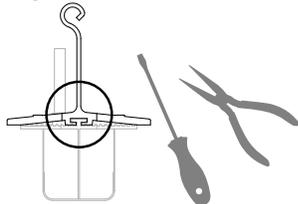


IMAGE 2: Open crimped ends, if necessary

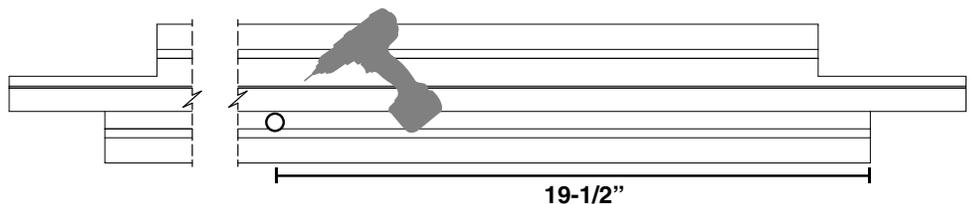


IMAGE 3: Drill a 7/16" hole 19-1/2" from the end of the bottom bar cutout

### II. INSTALLATION

1. Start at the non-wired end of the edge and feed the edge into the bottom bar channel.
2. Use 2 hands to slide the edge into the channel and gently pull it through until the wire from the sensing edge lines up with the hole drilled in step 3.
3. Feed the sensing edge wire up through the bottom of the predrilled hole for attachment to junction box or edge transmitter. **IMAGE 3**
4. Using pliers, crimp the channel at both ends to prevent the MC271 from sliding out of position.

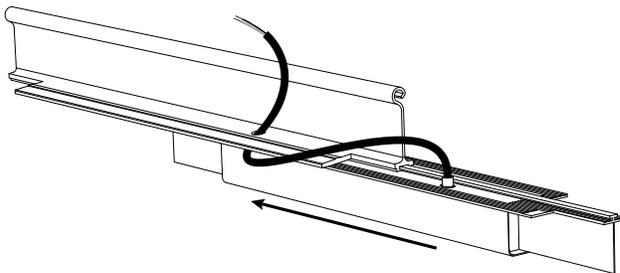


IMAGE 3: Feed the sensing edge wire up through the drilled hole

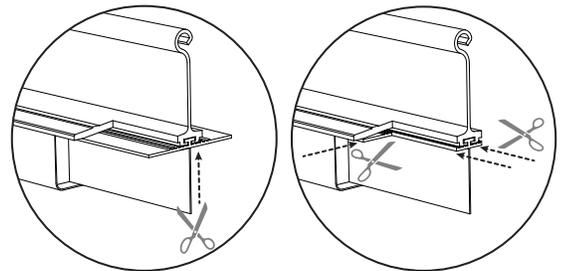


IMAGE 4A: Trim the excess end flaps

### III. TRIM THE EXCESS END FLAPS & TOP MATERIAL

1. Using heavy duty scissors, cut off any excess end flap and T material on both ends of the sensing edge, to prevent rubbing on the door guides. **IMAGE 4A**
2. Trim any excess top material to match the cutout on the bottom bar, on the inside and outside of the bottom bar. This will allow for free travel within the guides.

**Note: Avoid cutting into the active portion of the sensing edge and mounting T by maintaining a minimum distance of 1/2" from the active edge and mounting T. IMAGE 4B**

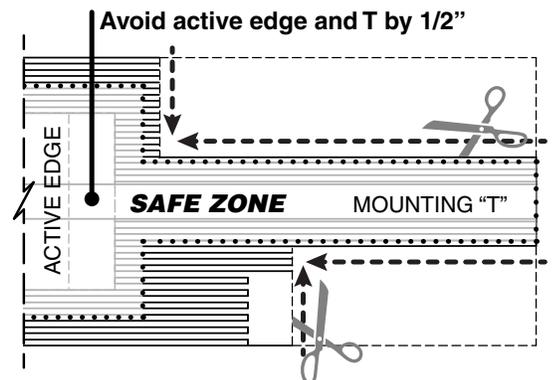
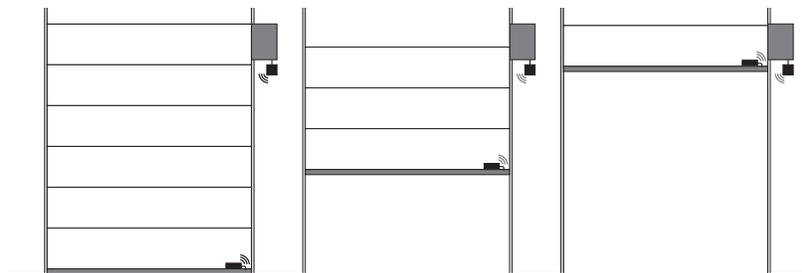


IMAGE 4B: Trim lines

### IV. OPERATOR CONNECTION

#### OPTION 1: WIRELESS METHOD



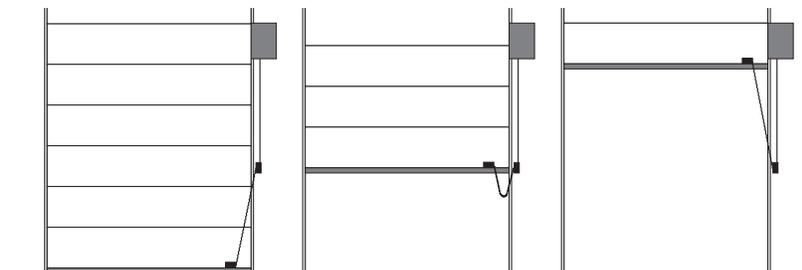
##### Required

- Miller Edge wireless edge transmitter/receiver system

##### Installation

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

#### OPTION 2: COIL CORD METHOD



##### Required

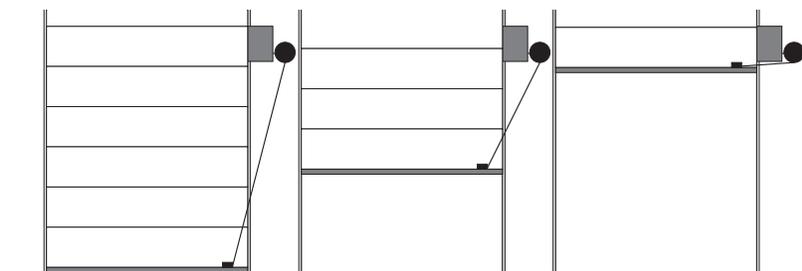
- Junction boxes (2)
- Mounting screws
- Wire end caps
- 18-22 gauge wire

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

##### Installation

1. Mount the first junction box on the bottom bar of the door.
2. Run the sensing edge lead wire into the junction box.
3. Mount the second junction box on an adjoining wall, midway between the floor and the operator.
4. With the door in the closed position, secure the coil cord to the first junction box.
5. 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.
6. 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.
7. Secure 18-22 gauge wire into the second wall-mounted junction box and hard wire to the operator sensing edge terminals.

#### OPTION 3: RETRACTING REEL METHOD



##### Required

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

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

## OPTION 3: RETRACTING REEL METHOD (continued)

### 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.

## V. 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	-



## VI. TECH SUPPORT

For additional assistance, contact Miller Edge Tech Support: 800-220-3343

## VII. GENERAL SPECIFICATIONS [INSERT GENERAL SPECIFICATIONS:]

Color	Gray, Black, Yellow
Length	Order in 1/4 in. increments (manufacturing tolerance $\pm 1/4$ in.)
Maximum Length	Electric : 150 ft.
Electrical Maximum	Nominal 3-5 lbf
Lead Wire	SJTO, 18 gauge, 2 ft. length
Wire Outlet Location	Right-top, left-top
Electrical Maximum	24 volts AC/DC, 1/2 amp
Electrical Configuration	Normally open
Operating Temperature	Meets or exceeds UL requirement
Exterior Materials	Heavy duty reinforced PVC
Contact Element	Alumaglas™
Agency Approvals	UL 325 Recognized Component

## VIII. CONFIGURATION OPTIONS

- 2-Wire 8.2K ohm resistive (T1/green band)
- 2-Wire 10K ohm resistive (T2/blue band)
- 2-Wire diode capacitor (T3/red band)
- 2-Wire non-monitored
- 4-Wire monitored
- Bumper (no sensor)

### IX. 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" 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.

### X. REPLACEMENT

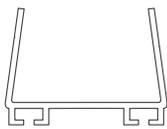
To replace your Miller Edge sensing edge, contact your sales representative. Attempting to repair your Miller Edge Sensing Edge is not recommended and will void the manufacturer warranty.

### XI. WARRANTY

The MC271 sensing edge carries a **3-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.

### XII. ACCESSORIES

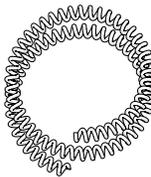
Contact your sales representative about accessories for your installation:



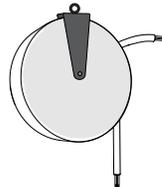
**MOUNTING  
CHANNELS**



**JUNCTION  
BOXES**



**COIL  
CORDS**



**RETRACTING  
REELS**



**TRANSMITTERS/  
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**MODULES**