



# MEL<sup>®</sup>

## Monitored Edge Link

# INSTALLATION INSTRUCTIONS

Model # MEL-K70



**MillerEdge<sup>®</sup>**

### IMPORTANT: READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION.

The Monitored Edge Link (**MEL**) transmitter/receiver system is intended to provide a wireless connection between a monitored safety edge and a motorized operator that controls the associated door or gate. MEL meets the UL-325/2010 requirements for monitored devices and has been certified as a UL325 recognized component. It is designed for use on operators that comply with UL325-2010 using a T2 or T3 terminated edge sensor.

## 1- Parts List

### PART NUMBER

#### Kit Contents:

1. MEL-TX70 Transmitter Unit
2. MEL-RX70 Receiver Unit
3. Receiver Antenna
4. (2) AA Lithium Batteries
5. 3 ft. 20 AWG lead wire
6. (4) #6 Pan Head Transmitter Mounting Screws

#### Required:

1. 1/8" Flat blade screwdriver
2. 1/4" Flat blade screwdriver
3. T2 (10K/Blue Band) or T3 (Diode-Capacitor/Red Band) Terminated Sensing Edge

#### Recommended:

VOM for test purposes  
Mounting screws as required for receiver

## 2- Install Transmitter and Test

- 2-1. Open and unpack the antenna, batteries, transmitter and receiver units.
- 2-2. Loosen screws from the top cover and remove the lid.
- 2-3. Remove the Transmitter PCB by pulling upward on one of the silicone caps.
- 2-4. Route the wires from the monitored edge through the strain relief cable fitting for approximately four inches. Strip the insulation from the two wires back 1/4" and secure the wires in the terminal block marked SE 1. (*Not polarized.*) A Knockout (K.O.) switch may be wired to the Tx terminal strip marked KO. (*Either normally open or normally closed switches may be used.*)
- 2-5. Place the two AA Lithium batteries in their holders in the proper direction, paying attention to the (+) and (-) ends.
- 2-6. Tuck the wires connected to the SE terminal block neatly between the batteries and pull the excess wire back through the strain relief. Re-seat the PCB in the case, and securely tighten the cable fitting.
- 2-7. Set the Termination Type switch to either 10K or DC. (*see Appendix*) This selection must match the Termination Type in the Safety Edge.

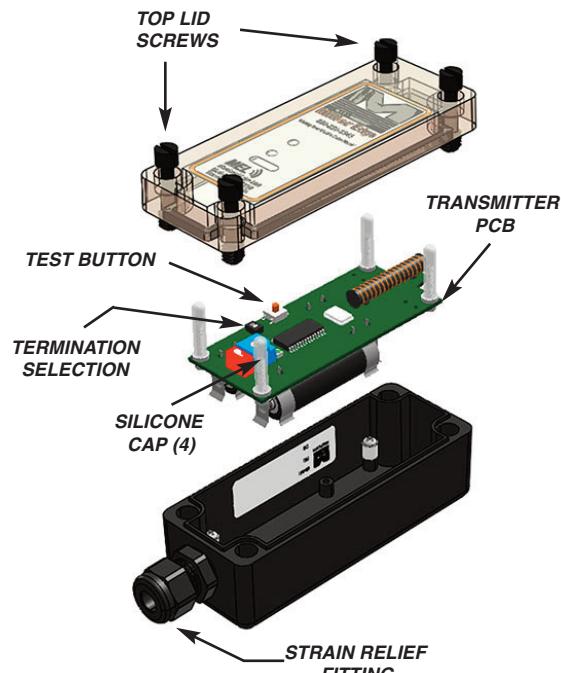
#### 2-8. Address Switches

Set the Group (red) and Address (blue) switches to the desired position. (*Note the settings for reference when setting up the Receiver.*)

If the Group switch is set to 0, the Address switch may be set to any position between 0 and F.

If the Group switch is set to 1, the Address switch may be set to any position between 0 and B.

(*The remaining positions, C, D, E, and F are reserved for factory test.*)



(2-6) EDGE WIRING TO TERMINAL BLOCK

- 2-9. Momentarily press the TEST button. The Green Tx Data LED should flash.  
(*The Red Low Battery LED will only light when the batteries fall below 2.4v.*)
- 2-10. Mount the Transmitter to the door or gate using #6 - 20 x 3/4" self-drilling screws. The mounting holes are located under the Top Lid Screws. Mount the transmitter with the wire strain relief facing down or to the side.
- 2-11. Replace the cover on the Transmitter and tighten the screws taking care to align the lid.  
*\*Note the alignment pin located in the upper left corner.*



### 3- Install Receiver and Test

- 3-1. Remove lid of the Receiver Unit.
- 3-2. Set the Group (red) and Address (blue) switches to match the transmitter settings.
- 3-3. Mount the receiver close to the operator and in-the-line-of-sight of the transmitter using the mounting holes, as shown.
- 3-4. \*Connect the receiver's PE (Photo-Eye) output to the operator's PE input terminals using Green and White wires.  
(Operator terminal label naming may differ. Contact factory for support).
- 3-5. Connect the Black and Red wires to a 12 or 24V ac/dc source.
- 3-6. Attach the antenna to the receiver RF board.
- 3-7. **Preliminary Test :**  
Confirm that the Transmitter and Receiver are powered ON.  
Activate the Safety Edge (or monitored device).  
The Address Valid Yellow LED on the Receiver should flash momentarily.  
If the Address Valid LED does not flash, check that the Group and Address switches match the transmitter settings. Confirm that the Photo-Eye and Safety Edge LEDs are lit while the safety edge is held active.  
Note that the Photo-Eye and Safety Edge LEDs go OFF when the Edge is released.
- 3-8. Replace the Receiver Lid taking care to slip the Antenna through the lids' grommet.

\*Certain installations may require an alternative wiring scheme. Please consult factory for assistance.

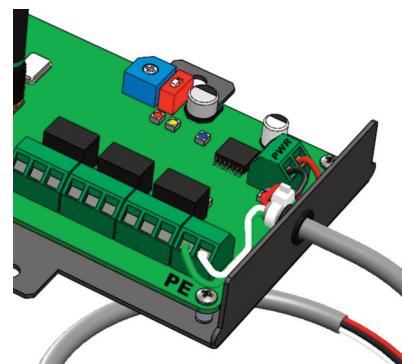
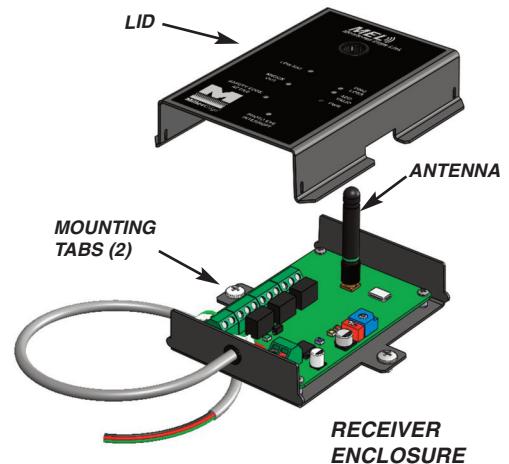


FIGURE (3-4)

### 4- Safety Test

- 4-1. While moving the door in the downward direction or the gate in the desired direction, momentarily activate the Safety Edge and confirm that the door or gate stops and reverses direction.

## **5- Specifications and Controls: Transmitter Unit**

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**Addressing Switches:** Addressing codes allow for multiple transmitters to operate on the same frequency in close proximity. See installation section of this manual.

**Frequency:** Standard frequency: 916 MHz.

**Indicator Lights- Tx:**

Green LED: Tx Data, Flashes upon activation and release of the external safety device to indicate transmission.

**Low Battery:** Red LED. Flashes as a warning during transmission when the battery voltage is below 2.4v.

All transmission ceases below 2.3v.

**Mounting:** 4 corner screws (provided)

**Power Source:** Batteries: 2 AA, 1.5v Lithium\* or Alkaline

*\*Recommended for extended life in prolonged cold environments. Life expectancy: 1 yr.*

**Dimensions:** 1.80" w x 4.78." h x 1.75"d

**Termination Sw.:** Selects termination type of the monitored device as 10K resistive or 9.1v Diode.

**Test Button:** Momentary push button – Forces the transmission of the transmitter's address and sensor status.

Also; Loads an address change when the addressing switches are altered.

## **6-Specifications and Controls: Receiver Unit**

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**Power:** 12v-24v ac/dc nominal (8-30v max). Power may be supplied from the operator or alternatively from an external supply.

**Cable Entrance:** Grommet for .15" - .2" diameter cables.

**Cable Connections:** Screw clamp type terminal blocks for 18 - 26 awg wire.

**Addressing: Group Switch:** 2 position slide switch, selectable as "0" or "1".

**Address Switch:** Selectable from 0 – 9 and A – F (See Address setting in the Tx setup section.)

**Dimensions:** 4.00"w x 4.74" h x 1.00" d

**Indicator Lights - Rx:**

Address Valid: Yellow LED: Indicates reception of message with our selected address.

PE Interrupt: Red LED: Indicates Safety Device is active. Photo-Eye output pulses are inhibited.

If Flashing: Indicates a transmitter safety edge termination error is sensed.

SE Active: Green LED: Indicates Safety Device is active.

KO: Green LED is ON when Tx Knock Out input is active.

Low Battery: Green LED–Blinking: Tx battery is below 2.4v, and above 2.3v.

Green LED–Steady: Tx battery is 2.3v.

Ping Loss: Indicates the periodic Tx signal is lost.

**Outputs:**

**PE Output:** Pulse stream output to door operator's Photo-Eye input (Compatible with all UL-325/2010 listed commercial operators. Check Operator Listing.)

**SE Output:** SPDT relay contacts, NO, NC, and Com outputs. (See optional Termination Types)

The pulse stream stops and the relay activates when any of the following occurs:

1. Safety device activation
2. Open or unconnected safety device
3. Bad or missing safety device termination
4. Low Battery
5. Loss of Tx radio signal or ping loss

Termination Type: 10K resistor, 9.1v Diode, NONE: Selectable by PCB Jumper/Header P2

**KO Output:** SPDT relay contacts, NO, NC, and Com outputs

**Low Battery:** SPDT relay contacts, NO, NC, and Com outputs

**Alarm Power Switch:** Provides for connection of optional audible or visual alarm when transmitter battery is low.

Optional: Dry contacts, or +5vdc @ 20 ma. (max) available on the NO & NC relay contacts.

The Low Bat relay is active when the “LOW BAT” LED is flashing or on steady.

With alarm power switched “ON”, you will have 5VDC available on the “LOW BAT” terminal between NC & NO.

With alarm power turned “OFF”, you will have dry relay contacts available on the “LOW BAT” terminals.



## 7- Appendix:

Miller Edge Terminated Sensing Edge Color Coding:

**T2 10K Resistor (Blue band)**

**T3 Diode/Capacitor (Red band)**

\* Colored ID tape is located on the Sensing Edge cable.

## 8- FCC Compliance

### Transmitter:

MODEL: MEL-TX70

FCC ID: OYE-MEL916

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATIONS IS SUBJECT TO THE FOLLOWING TWO CONDITIONS.

- 1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE  
AND
- 2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

### Receiver:

MODEL: MEL-RX70

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 1- Re-orient or relocate the receiver antenna
- 2- Increase the separation between the equipment and the receiver
- 3- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4- Consult the dealer or an experienced radio/TVtechnician for help.

Changes or Modifications Not Expressly Approved By The Party Responsible For Compliance Could Void The User's Authority To Operate The Equipment.