



MEL)))
Monitored Edge Link

INSTALLATION INSTRUCTIONS

Model # MEL-K20



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. Designed for use on operators that comply with UL325-2010 using a T2 or T3 terminated edge sensor. For additional termination options, please contact factory.

1- Parts List

PART NUMBER

Kit Contents:

1. MEL-TX20 Transmitter Unit
2. MEL-RX20 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

Tools Required:

1. 1/8" Flat blade screwdriver
2. 1/4" Flat blade screwdriver

Recommended:

VOM for test purposes
Mounting screws as required
Terminated sensing edge sold separately

2- Install Transmitter and Test

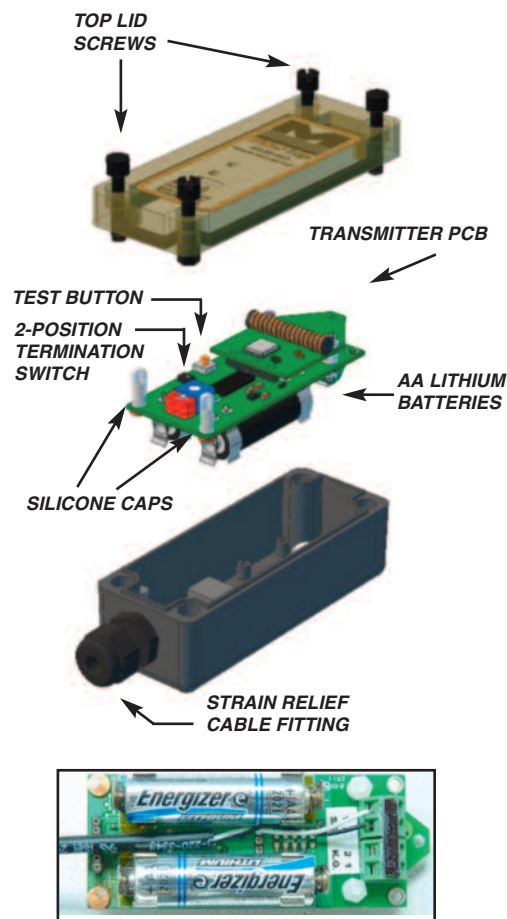
- 2-1. Open and unpack the antenna, batteries, transmitter and receiver units.
- 2-2. Loosen screws from the top cover and remove the lid.
- 2-3. Remove the Transmitter PCB by pulling upward on one of the silicone caps.
- 2-4. Route the wires from the monitored edge through the strain relief cable fitting for approximately four inches. Strip the insulation from the two wires back 1/4" and secure the wires in the terminal strip position marked SE.
 - 2-4A. A Knockout (K.O.) switch may be wired to the Tx terminal strip marked KO-1 and KO-2. 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.
- 6-A. Re-seat the PCB and securely tighten the cable fitting.
- 2-7. Set the Termination Type switch to either 10K resistive or 9.1v Diode. (see Appendix) This selection must match the Termination type in the Monitored Device.
- 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.



- 2-9. Momentarily press the TEST button to load the address and group data. 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 using #6 - 20 x 3/4" self-drilling screws. The mounting holes are located under the Top Lid. Mount the transmitter with the wire outlet 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 lower left corner.*

(4) PRE-DRILLED
CORNER
MOUNTING HOLES



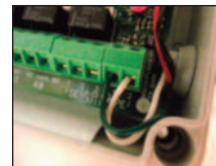
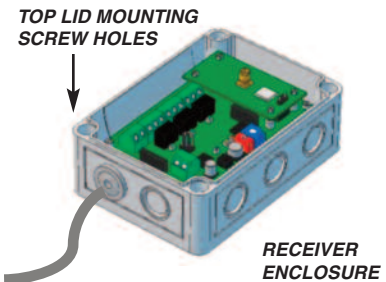
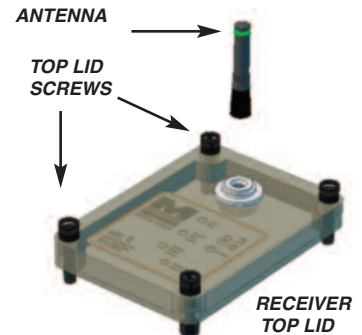
3- Install Receiver and Test

- 3-1. Loosen screws from the top lid of the Receiver Unit and remove the lid.
- 3-2. Set the Group (red) and Address (blue) switches to match the transmitter settings. (see Appendix)
- 3-3. Set the termination selection jumper to either 10k resistive or 9.1v Diode (to suit the Operator).
- 3-4. Mount the receiver close to the operator and in the line of sight of the transmitter using the pre-drilled mounting holes as shown.
- 3-5. Connect the receiver's PE (Photo Eye) output to the operator's photoeye input terminals using Green and White wires. (operator terminal label naming may differ. Contact factory for support). **(See Pic. #1)**
- 3-6. Connect 12/24V into 12/24VAC/DC source using Black and Red wires. **(See Pic. #2)**
- 3-7. Connect the antenna to the receiver RF board.
- 3-8. **Preliminary Test :**

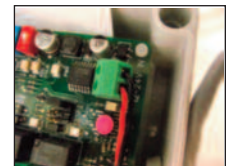
Confirm that the Transmitter and Receiver are powered ON. Activate the Safety Edge (or monitored device). The Address Valid Yellow led on the Receiver should flashes momentarily.

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.

- 3-9. Replace the Receiver Lid taking care to slip the Antenna thru the top lid membrane.



3-5 Pic. #1



3-6 Pic. #2

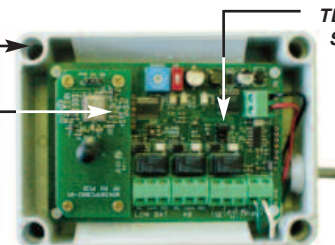
4- Safety Test

- 4-1. While moving the door in the downward direction, momentarily activate the safety edge and confirm that the door stops and reverses direction.

(4) PRE-DRILLED
CORNER
MOUNTING HOLES

LED
INDICATORS

TERMINATION
SELECTION
JUMPER



INSIDE RECEIVER UNIT

5- Specifications and Controls: Transmitter Unit

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

Frequency: Multiple frequency modules available. Standard frequency: 315 MHz. 303 MHz upon optional request.

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 when the battery voltage is below 2.4v. All transmission ceases below 2.3v

Mounting: 4 corner screws Type as needed.

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

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

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

RF Module: Plug in module with integral helical antenna.

Termination Sw.: Selects termination type of the monitored device as 10K resistive or 9v diode-capacitor.

Test Button: Momentary push button – Forces the transmission of the transmitter's address and sensor status.
Loads an address change when the addressing switches are altered.

6- Specifications and Controls: Receiver Unit

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

Cable Entrance: Rubber seals for .15" - .2" diameter cables.

Cable Connections: Screw clamp type terminal blocks for 22 -24 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: 3.70" w x 5.12" h x 2.20"d

Indicator Lights - Rx:

Address Valid: Yellow Led

PE Alarm: Red Led: Indicates Photo-eye pulse stream loss
: Flashing indicates a termination error

SE Alarm: Green Led: Indicates Safety device activation

K.O. Switch Active: Green Led

Low Battery: Green Led–Flashing: Tx battery falls below 2.4v
Green Led–Steady: Tx battery falls below 2.3v

Outputs:

PE Output: Pulse stream output compatible with all UL-325/2010 listed commercial operators. (Check Operator Listing)

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

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 radio signal or ping loss

Termination Type: 10K resistor or 9.1v Diode/Cap. Selectable by PCB Jumper/Header

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

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

Alarm Power Switch: Provides either dry contacts or +5vdc @ 20 ma. Max on the relay contacts.

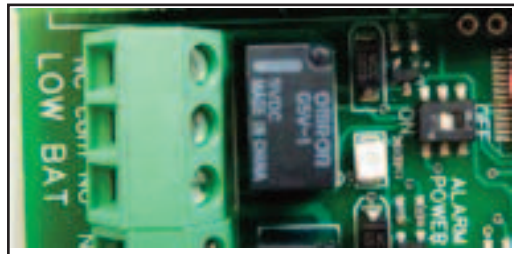
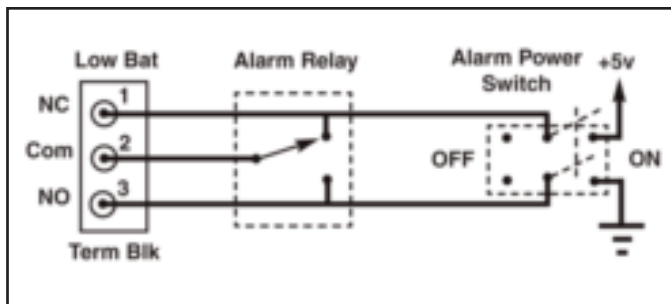
Position 0: Relay dry contacts

Position 1: 5v @ 20 ma supplied on relay NC

Alarm Power Switch: “LOW BAT” Provides for wiring of optional audible or visual alarm when battery life is diminished. Optional dry contacts or +5vdc @ 20 ma. Max on the relay contacts.

Position 0: Relay dry contacts

Position 1: 5v @ 20 ma supplied on relay NC



7- Appendix:

Miller Edge Terminated Sensing Edge Color Coding:

Suggested Termination Configurations

T2 Blue 10K Resistor

T3 Red Diode/Capacitor

Optional Termination Configurations - Contact Factory

T1 Green 8.2K Resistor

T4 White .001 uf capacitor

T5 Orange 6.8K Resistor

T6 Violet 270K Resistor

* Colored ID tape is located on the Edge cable.

8- FCC Compliance

Transmitter:

MODEL: MEL-TX20

FCC ID: OYE-MDTR3

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 UNDESIRE OPERATION.

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.

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