Technical Bulletin

EMX IRB-MON2 THROUGH-BEAM PHOTO EYE

SUBJECT: New EMX IRB-MON2 (V2) 10K Through-Beam Photo Eye Released   **DATE:** 02/13/2024
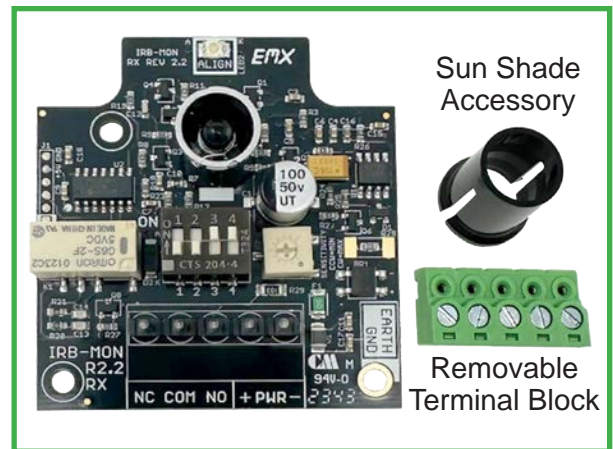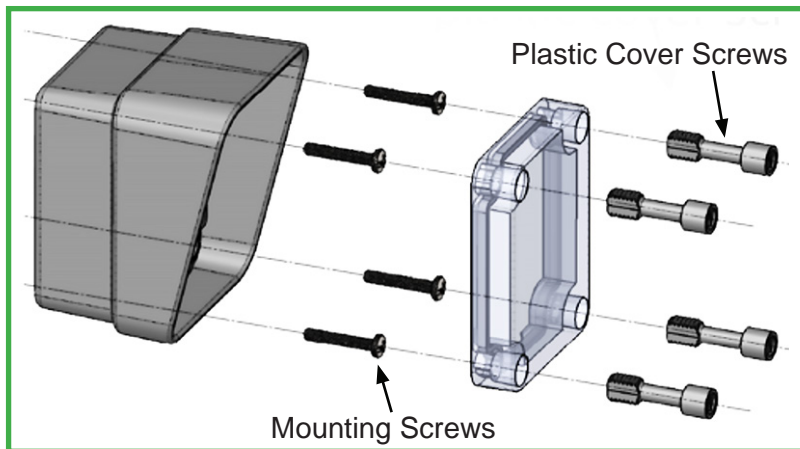
PRODUCTS AFFECTED: Operators using 10K resistive or NC (Normally Closed) contact monitoring schemes

IMPACT: Change to appearance, footprint, and features. Function unchanged

The EMX IRB-MON2 (V2) through-beam photo eye (FIG-1) has been released. It replaces the previous version (IRB-MON, P/N MX3990), which is no loger supported. The following changes to version 2 should be noted as follows:

- New polymer enclosures are available with integral hood (P/N 5792-01) or without hood (P/N MX5792-02, for use with crash products).

- Enclosures and PCBs are smaller in size.

- PCBs now feature detachable terminal blocks (FIG-3).

- A sun-shade is included for optional use on Rx sensor (FIG-3).

- An optional metal cover (fits over polymer enclosure) is available for enhanced protection (FIG-4).


P/N MX5792-01 (with hood)

Receiver

Transmitter

FIG-1: IRB-MON2 Photo Eye

Plastic Cover Screws

Mounting Screws

FIG-2: New IRB-MON2 Cover Assembly

Sun Shade Accessory

Removable Terminal Block

FIG-3: IRB-MON2 PCB

FIG-4: Optional Metal Cover

NOTICE
DIP switch sttings are the same as previous version (V1) used since 2021.

TABLE 1: EMX IRB-MON2 MONITOR DIP SWITCH SETTINGS							
MONITORING METHOD	WIRING DIAGRAM	DIP SWITCH SETTINGS				OUTPUT CONNECTIONS	10K STATE
		SW1	SW2	SW3	SW4		
Normally Closed	A	OFF	OFF	ON	OFF	NC, COM	10K Disabled
10K Resistive Termination	B	OFF	OFF	ON	ON	NO, COM	10K Enabled

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IRB-MON V2 WIRING DIAGRAMS & DIP SETTINGS

NOTICE

Images below show different monitoring scheme connections to a Mercury controller. Note that the Mercury controller can only monitor a 10k device, though other HySecurity|Nice controllers are able to monitor devices that are not 10K.

DIAG-A: Normally-Closed

DIP SETTINGS

Normally Closed
1 = OFF
2 = OFF
3 = ON
4 = OFF

DIAG-B: 10K Resistive

DIP SETTINGS
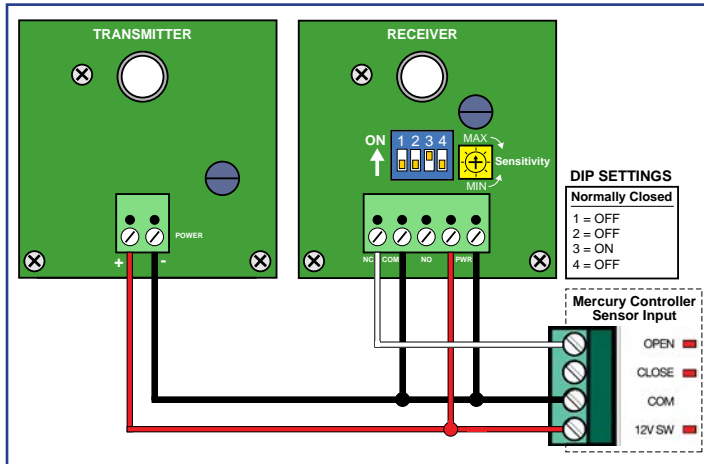
10K Resistive
1 = OFF
2 = OFF
3 = ON
4 = ON

Normally Closed: The operator cycles power to the transmitter while monitoring the receiver N.C. (Normally closed) contacts for proper operation.
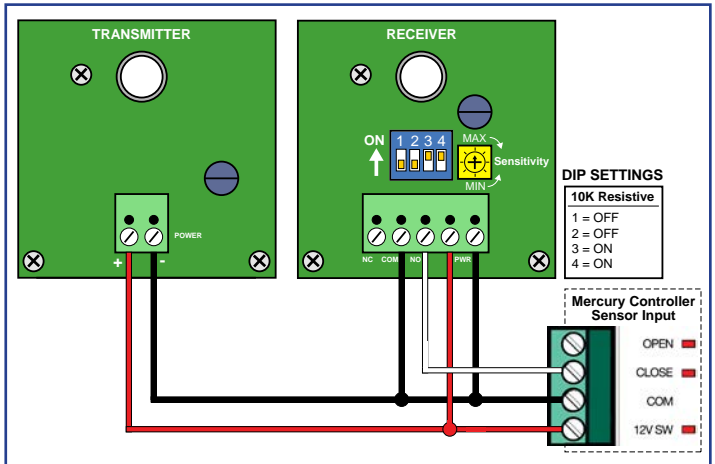
10K Resistive Termination: Provides a measurable 10K ohm resistance across the N.O. (normally open) relay when unobstructed and in Fail Safe mode.

NOTICE

If you need a normally open relay, but without a 10K resistor, then set Dipswitch 4 to OFF. This is a non-monitored method.