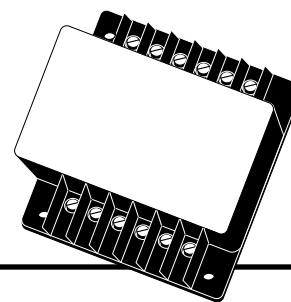


Intrinsically  
Safe

# Hazardous Location Sensor Systems



## Control Modules

The EE931-series control modules are designed to be mounted in the safe area. These modules provide limited energy to Namco's line of hazardous location sensors described on the previous pages. The control modules are housed in high impact Lexan® enclosures and are equipped with eight screw terminals (#8 stud size) for ease of installation. The EE931-02103 module provides an electro-mechanical relay output (One Form C), while the EE931-02303 unit has a photo-darlington (open collector) output for higher speed requirements. The outputs become energized when a metallic target is present in front of the associated sensor.

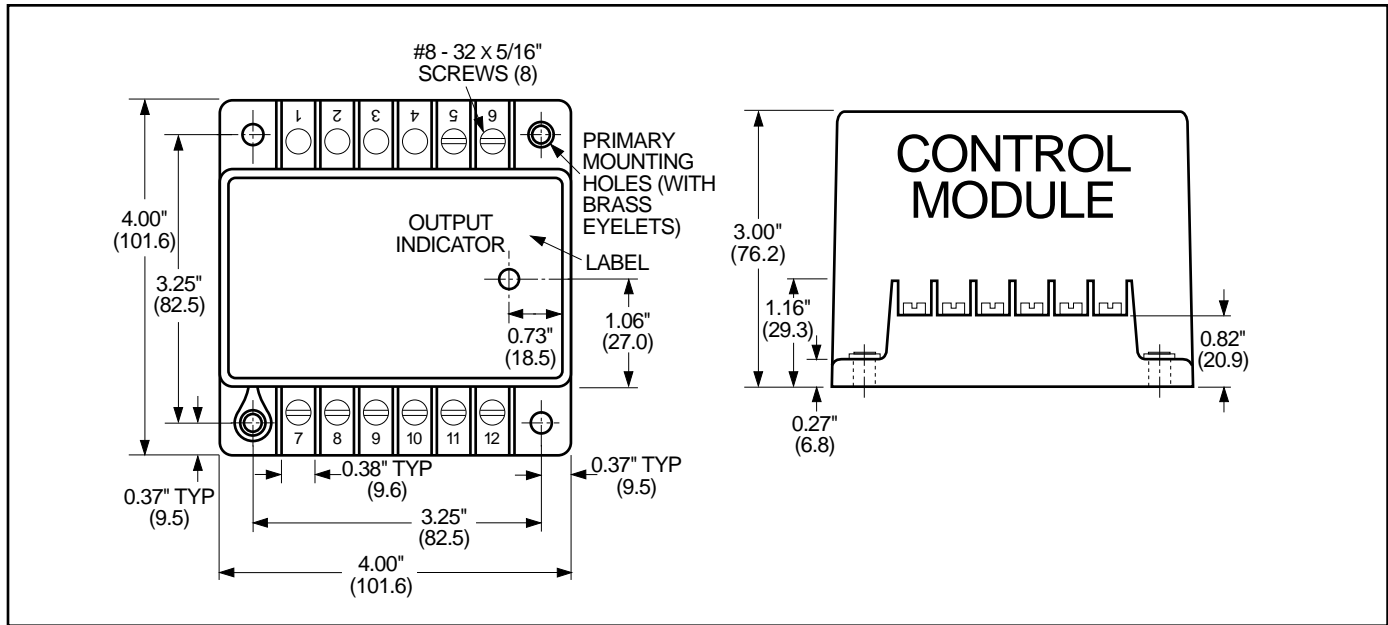
## Control Module Mounting:

The EE931-series control module **should be panel mounted in the safe area** where it will be protected from physical damage, dirt, and vibration. The location should be established within the limits of the sensor cable. The unit can be mounted vertically or horizontally using two No. 8 screws. When mounting with only two screws, **it is imperative to use the two mounting holes provided with brass eyelet inserts**. This method provides an additional ground path for the electronic circuit contained in the module. The ambient temperature range should be from -40°F to +158°F. The physical construction of the control module housing insures a separation of at least two inches between intrinsically safe terminals (5 and 6) and non-intrinsically safe terminals (7 thru 12).

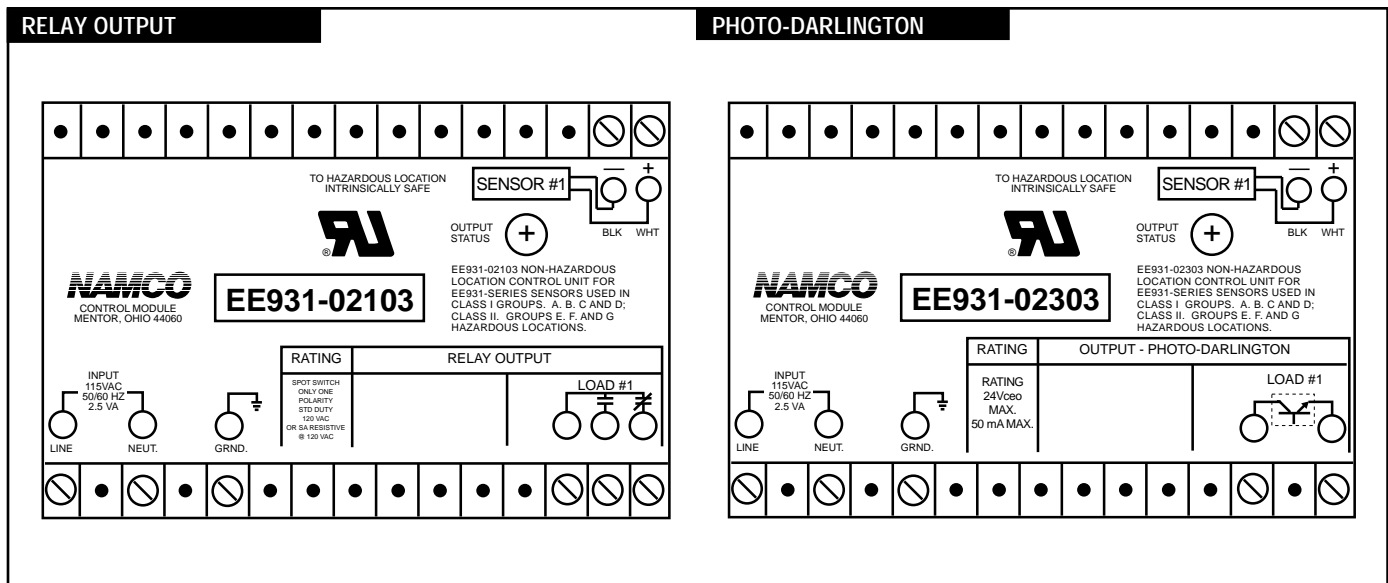
It is important when installing the sensor cable to the control unit terminals (5 and 6) to maintain this minimum spacing of two inches. A separate wiring duct is required to insure that the intrinsically safe sensor cable does not become intermingled with non-intrinsically safe wiring due to vibration. A separate conductor **MUST** be wired from Terminal 9 to earth ground to insure intrinsic safety of the system. Terminal 8 is for the neutral side of AC line. Terminal 7 is hot side of AC line and **MUST** be wired accordingly or intrinsic safety is voided.

Namco advises that the Instrument Society of America Specification RP12.6, which gives the recommended practice for installation of intrinsically safe systems, be followed when using the EE931-series control modules and sensors.

## Dimensional Drawing



## Circuit Drawings



## Common Control Module Characteristics

INTRINSICALLY SAFE CONTROL MODULE		
	EE931-02103	EE931-02303
Output	Electro-Mechanical SPDT Relay Rated 5A Resist. One form C	Photo-Darlington 50mA max. @ 24 VAC Open Collector
Speed (Hz)	3	1400
Supply Voltage	120 VAC	
Sensor Input	Namco EE931-Series only	
Ambient Temperature	-40°F to +158°F	
Case Material	Lexan	

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