Combustible Gas Monitor

DESCRIPTION

ITS-M1700-R

Gas monitor with built-in combustible sensor, wall-mounted, for binary/relay output control.

City of Los Angeles Approved

"Pending"

APPLICATION

To detect and control levels of combustible methane or propane in a wide variety of commercial and industrial applications such as buildings built on landfill sites, boiler rooms (i.e. Methane), warehouses and garages (i.e. Propane), and ventilation systems, etc. The monitor's binary/relay outputs can control fans, remote alarms and other devices.

FEATURES

- *Continuous monitoring*
- *One (1) built-in catalytic bead (pellistor) gas sensor*
- *Two-stage relay outputs, w/status LEDs*
- *Built-in alarm horn (buzzer)*
- *Liquid Crystal Display (LCD)*
- *Push button programming*
- *Easy maintenance*

SPECIFICATIONS

Electric	
Power supply	24 VAC (18-30 VAC), floating, 50/60 Hz, 24 VDC (18-30 VDC)
Protection	One (1) 1.0 A, socketed pico fuse
Power consumption	< 2 VA (100 mA) 250 mA turn-on surge
Sensor Performance	
Gas detected	Combustible gases
- part # - M1710-	Methane (CH_4)
- part # - M1730-	Propane (C_3H_8)
Sensor element	Catalytic bead (pellistor), diffusion
Range	0-100% LEL Methane 5% v/v = 100% LEL Propane 2.1% v/v = 100% LEL
Accuracy	± 2% LEL
Repeatability	± 2% LEL
Zero drift	2% of full scale/month at 68°F (20°C)
Long term sensitivity drift	2% of LEL $_{methane}$/month
Response time	< 10 sec. to 50% of step change < 30 sec. to 90% of step change
Sensor life expectancy	3 years, normal operating environment
Installation Location	
Mounting height	
- part # - M1710/methane	1 ft. (0.3m) below ceiling
- part # - M1730/propane	1 ft. (0.3m) above floor
Type of Control	
General	Single-stage or two-stage, two-position control, alarm levels/setpoints assignable over full % LEL
Relay outputs (TB4 & TB5)	
- type	(2) SPDT, dry contacts
- contact rating	115 VAC / 30 VDC, 1.0 A, contact resistance 50 mΩ, max.
- switching differential	Adjustable, individual for cut-in and cut-out per relay
- differential between relays	Adjustable
- time delays	0-60 minute(s) in 5-minute increments on or off, selectable switching for each cut-in and cut-out; 0 minute factory set
Audible alarm (buzzer)	Built-in, 85 db within 1 ft., enabled or disabled selectable; assignable to low or high alarm setpoint
Digital Display	LCD, two lines x 8 characters, 1 digit resolution, displays CO ppm values
Programming	Alarm level/setpoint set-up, differential, time delay and audible alarm via (3) push buttons and LCD display
Environmental	
Permissible ambient	
- working temperature	14°F to 104°F (-10°C to 40°C)
- storage temperature	41°F to 68°F (5°C to 20°C)
- humidity, continuous	0 to 95% RH, non-condensing
- humidity, intermitted	0 to 99% RH, non-condensing
- working pressure	Atmospheric ± 10%
Physical	
Enclosure	
- material	Polycarbonate, ABS blend, fire-retardant, UL-V0
- color	Cool gray, 2U pantone
- cover	Snap-on, secured by (2) screws
- protection	NEMA 1, general purpose
- installation	Wall (surface) mounted, or single gang electrical box

SPECIFICATIONS

Physical (cont…)	
Dimensions (H x W x D)	6.0 x 3.5 x 1.09 in. (152 x 89 x 28 mm)
Cable entry	1 hole on back side of base plate for single gang electrical box mounting
Wire connection	Terminal blocks, screw type for lead wire
Wire size	Min. 26 AWG (0.4 mm^2) Max. 16 AWG (1.3 mm^2)
Weight	0.5 lbs. (0.3 kg)

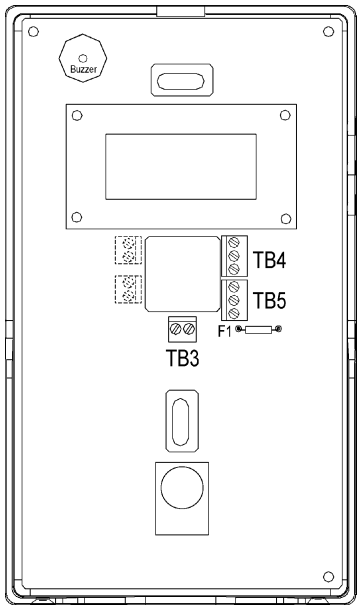
Approvals / Listings	City of Los Angeles Approved CSA pending
Warranty	12 months material and workmanship

ORDERING INFORMATION

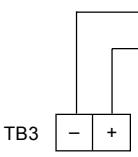
ITS-M1710-R	Methane (CH4)
ITS-M1730-R	Propane (C_4H_8) Combustible Transmitter, 0-100% LEL, (2) SPDT 1 A relays, buzzer, LCD, wall-mount

FIELD WIRING CONFIGURATION

ITS-M1700-R



TB3 Power Supply 24 VAC or 24 VDC



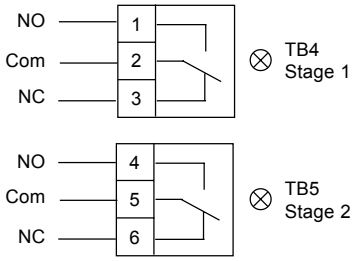
24 VAC floating ***

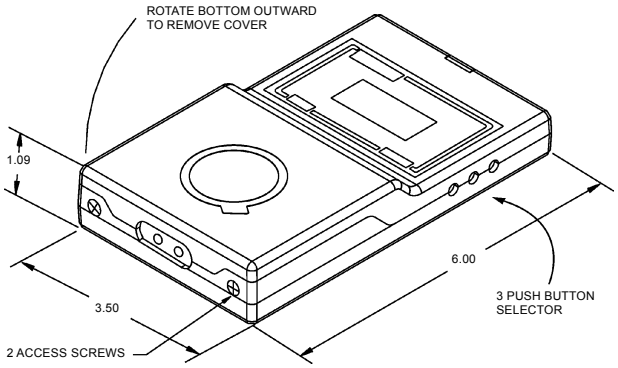
24 VDC **

*** *Do not connect 24 VAC to earth ground*

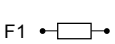
** *Do not use VDC power supply from the IM controller, use separate VDC power*

TB4 and **TB5** Staged Relay Output Control w/Status LEDs





F1 Fuse



Fuses, 1 A, slow-acting, (pico style)