

Infrared Gas Detector MT-Alliance installation guide

SPECIFICATIONS

INPUT POWER:

+24VDC nominal, range: 18 to 30VDC 0.15A DC Total Max.

~24VAC nominal, range: 15 to 24VAC 50/60HZ 5VA 2.5W Total Max.

(IMPORTANT!: AC must not be grounded and must not come from MT500/MT700 power)

OUTPUT SIGNAL:

023-0480 provides one channel 4-20 mA, 0-5 V; 0-10 V; 1-5 V or 2-10VDC analog output. 4-20 mA is the default choice because of the reliability of the signal. The maximum output impedance is 600 ohms for 4-20mA output. The maximum current is 10 mA for 2-10VDC output.

RELAYS SPDT: 1.0A MAX. @24VDC

(RESISTIVE LOAD) 0.5A MAX. @125VAC

(RESISTIVE LOAD)

ENCLOSURE:

ABS plastic; UL flammability rating of 94V-0
Not IP rated. An accessory splash shield is available for areas requiring additional protection from wash down.

OPERATING TEMPERATURE:

-30 C TO 40 C (-22° to 104° F)

AMBIENT HUMIDITY:

5% TO 90% RH (Non-condensing)

SIZE:

102 x 140 x 37 mm (4.0" x 5.5" x 1.5")

WEIGHT:

180 g (6.3 oz)

APPROVALS

CE, UL/CSA/IEC/EN 61010-1

ORDERING INFORMATION :

P/N 023-0480 = GAS SPECIFIC (R407F default)

Refrigerant type configurable between :

R22, R123, R134A, R404A, R407A, R407C, R407F, R410A, R422A, R422D, R427A, R507, HFO1233ZD, HFO1234YF, HFO1234Ze

Fig 1



P/N 023-0481 = BROADBAND GAS

Value for Param 11 and group	Refrigerant
P.-11 = 1	R134a
	R404a
	R407a
	R407c
	R407f
	R410a
	R427a
P.-11 = 2	R507
	HFO1233ZD
	R422d
P.-11 = 3	HFO1234YF
	HFO1234Ze
	R22

Installation instructions

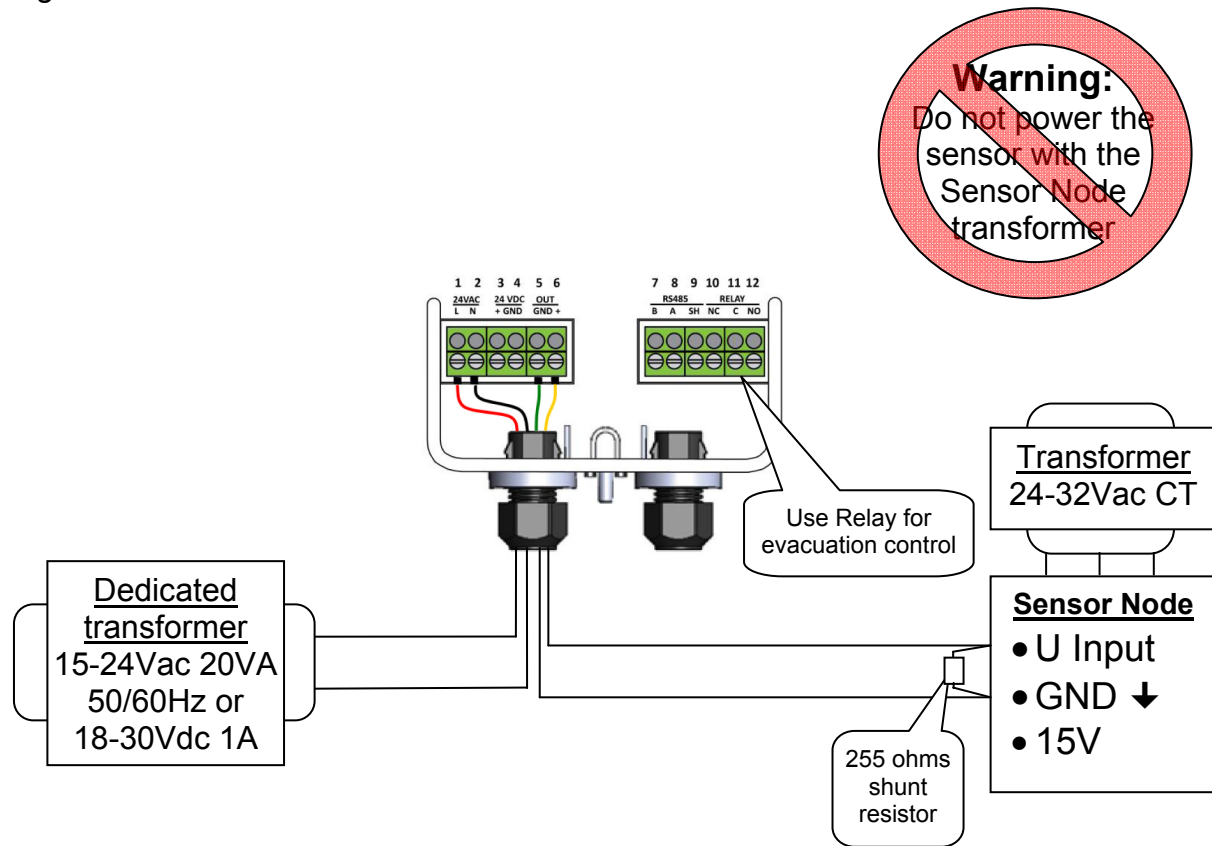
Sensor Location:

Several factors should be considered when selecting locations to install sensors. The following general suggestions should be considered to assure the detection of the target gas. Select the most suitable location for each sensor.

1. Air Currents: If there are fans, winds, or others sources of air movement, gases may tend to rise to collect in certain areas of a facility. The local air currents should be assessed to aid in selecting the sensor location. In outdoor situations considerations such as prevailing winds should be accounted for. Air convection can often be more important in determining gas concentrated areas than factors of Vapor Density.
2. Vapor Density: R11, R22, R123 and R134a are heavier than air. Detecting location should be 9 - 18 inch (0.23m to 0.46m) above the floor.
3. Gas Emission Sources: As a rule, at least one sensor should be located in close proximity to each point where a leak is likely to occur. This is particularly important when a liquid having a low volatility is monitored.
4. Environmental Factors: Designed to rugged outdoor use. Consider the following in selecting locations. Install sensors where they will be protected from wind, dust, snow, water, vibration and shock.

Sensor wiring:

Fig 2: Panel back wirin



Unit configuration

To enter configuration mode press (i) for 6 seconds.

You should see “r 0.00” (firmware revision) then P.-01 alternated with a 2 digit value. To change gas type press arrow button until P.-11 is shown.

Chose refrigerant type listed in the Sensor specification section.

These values are factory settings

Alarm Buzzer default values

Buzzer	Enabled	ACT-ON	ACT-OFF	ON-DLY	OFFDLY	MUTE DLY	SOUND
1	Yes	400	320	0	0	0	Beep beep

Analog out default values

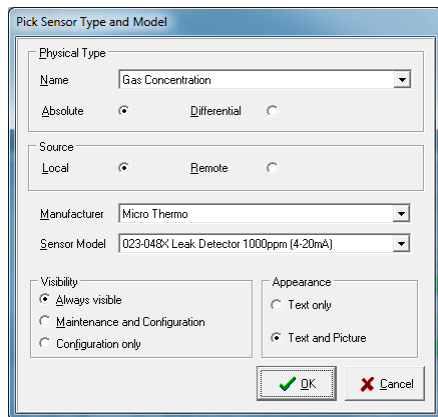
4-20mA @ range 0 to 1000 ppm

Alarm Relays default values

Relay	Enabled	NORMAL	LATCHING	ACT-ON	ACT-OFF	ON-DLY	OFFDLY
1	Yes	De-energ	OFF	400	320	0	0

See Operation manual to change configuration.

Fig 3: MT Alliance installation



Pick (drag) and place a sensor on the selected view

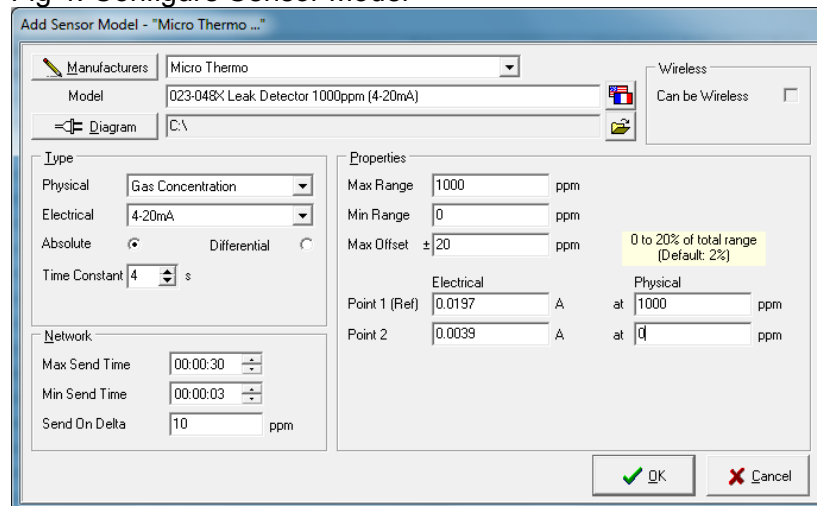
Name: Gas Concentration

Manufacturer: Micro Thermo

Sensor Model: 023-048X

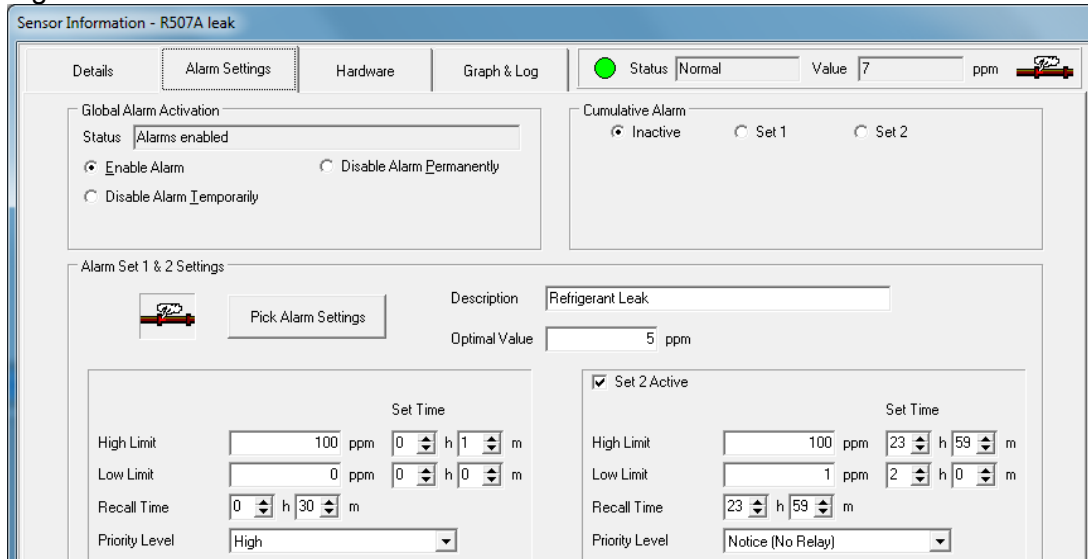
If 023-048X model does not exist you can add this model in the **Sensor model** window in the **Configure** menu (see Fig 4)

Fig 4: Configure Sensor Model



Click on the sensor icon then click on the **Alarm Settings** tab and make these settings.
 Connect relay of set 1 to high priority Alarm Company
 An alarm on set 2 means a repair is needed. Leave **Priority Level** to **Notice** and **Relay** to **None** to avoid nuisance alarms.

Fig 5



On the **Details** page add this note:
 “Readings between 1 and 10 ppm shows the sensor is powered”.

Fig 6

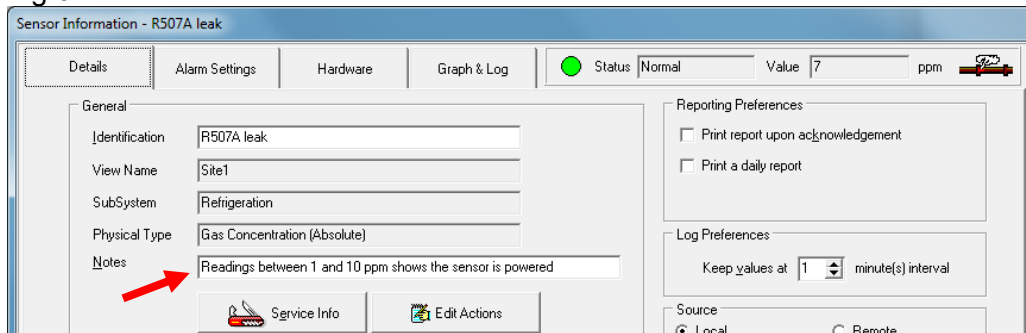


Fig 7: Normal reading (Non zero reading acts as a sensor heartbeat)

