

AquiTron

MSR Range

AT-MSC

Multi-Sensor Controller
For Refrigerant Gas Sensing



DATA SHEET



aquilar
leak detection solutions



AT-MSC

Multi Sensor Controller For Refrigerant Gas Sensing

The AT-MSC Multi Sensor Controller is based on state-of-the-art micro technology for continuous monitoring of the ambient air to detect toxic and combustible gases, refrigerants or oxygen in commercial and industrial applications. The AT-MSC can be used as a stand alone controller or configured with other products to suit the users requirements.

DESCRIPTION

The AT-MSC multi sensor controller allows connection of upto 3 sensors from the AT-MC series. The AT-MSC can be equipped with 3 AT-MC sensors with 4-20 mA signal (only a maximum of 3 sensors allowed). The controller monitors as a stand-alone centralised system measuring values and activates alarm relays if the set alarm thresholds for pre alarm and main alert are exceeded. In addition, you can directly connect to the BMS via an RS-485 interface and also as a 4-20mA output.

FEATURES & BENEFITS

- LCD Display, 3-colour status LEDs and buzzer
- For use with upto 3x AT-MC sensors max (4-20mA)
- x1 analog output & RS-485 (allows direct connection to BMS) with DG protocol (Modbus Inc)
- x3 alarm relay (x2 Alarm, x1 Fault)
- Audible and visual alarms
- Plug and play sensors makes installation and commissioning efficient
- Versatile product configuration

APPLICATIONS

The AT-MSC multi sensor controller is designed for detection and warning of toxic and combustible gases and refrigerant monitoring in areas where a smaller system is required. The AT-MSC is a stand alone monitoring system for upto 3 AT-MC sensors only, with additional onboard buzzer and display notifications.

The AT-MSC is housed in a NEMA 4x (polycarbonate) IP65 enclosure, and can be placed in environments of -25°C to +60°C ambient temperatures.

Installation can be in a small gas detection network that could be in mechanical rooms, warehouses, cold storage. Typical installations would be either inside or outside the door of an enclosed space to have local audible and visual alarms as required by safety standards.

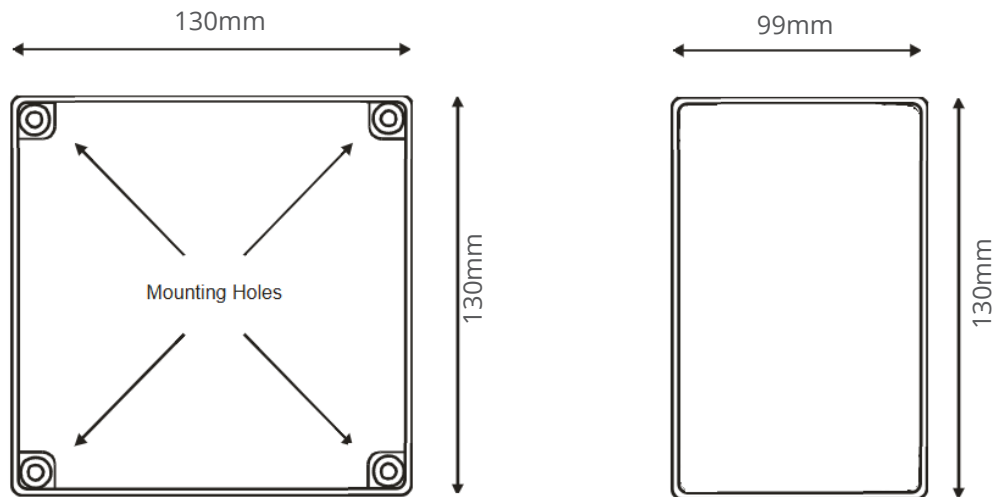
The AT-MSC is not designed to be installed in classified areas.

TECHNICAL INFORMATION

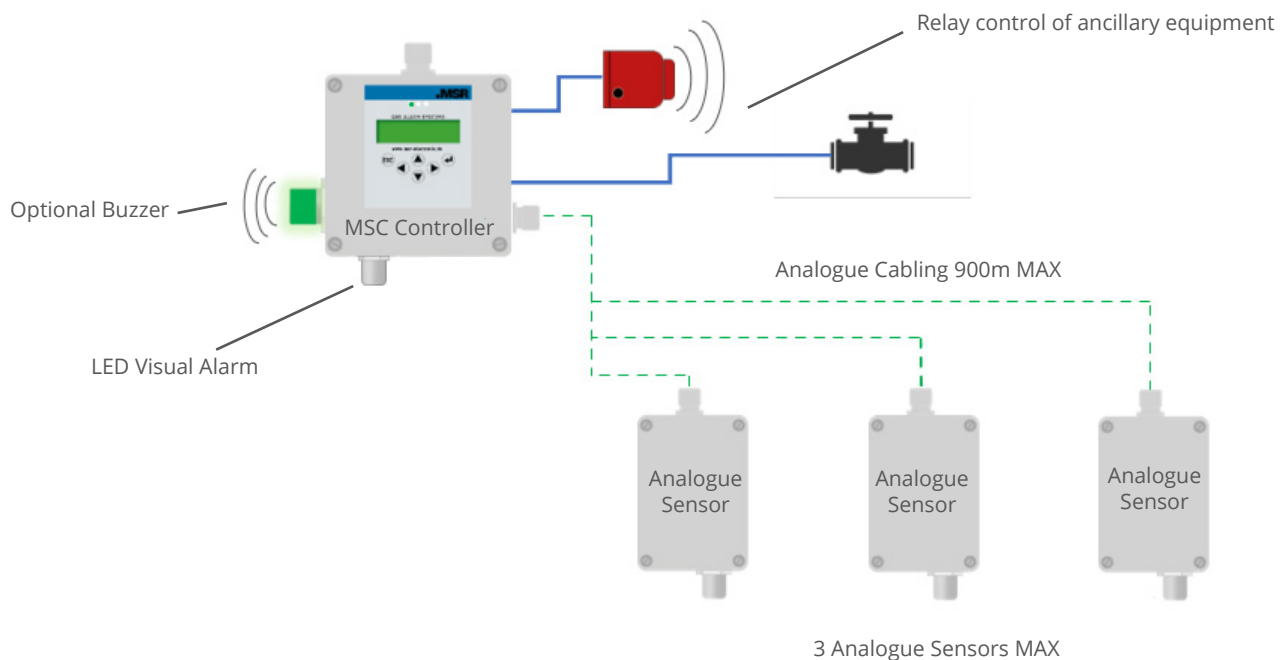
Power	100-240 Vac @ 50/60 Hz, 24 Vdc 15VA
Operating Temperature	-25°C - +60°C
Operating Humidity	15-95% RH non-condensing
Size (W×H×D) Approx mm	Housing Type E 130 x 130 x 99mm
Cable Entry	Standard 6x M20mm/25mm
Weight	0.6kg
Housing	RAL 7035 (Light Grey) Polycarbonate IP65
Configurable Relays	x 1 Fault Signal Relay 250 V AC, 5 A; 30 V DC, 2 A, potential-free, contacts (SPDT)
Alarm Relay	x 2 250 V AC, 5 A; 30 V DC, 2 A, potential-free, contacts (SPDT)
Analogue Input	x 3 4–20 mA, overload and short-circuit proof, input resistance 130 Ohms
Analogue Output Signal	Proportional, overload and short-circuit proof, load ≤ 500 Ohms 4–20 mA = measuring range 3.3–<4 mA = tolerable underrange 2.4–<4 mA = tolerable underrange (Pellistor) > 20–21.2 mA = tolerable overrange ≥ 21,2 mA= error overrange ≤ 2,0 mA = fault ≤ 1,0 mA = processor power failure
Local Bus Output	5 V DC, 250 mA max., overload, short-circuit & reverse-pol. protect.
Max Sensors	x 3 Sensors max
Sensor Type	AT-MC Sensors
Max Distance	900 Meters from AT-MSC
Flammability Classification	UL 94 V2
Analogue Output	Screw-type terminals 0.25-1.3mm ²
Power Supply, relay, fieldbus	Screw-type terminals 0.25-2.5mm ²
LC-Display Operation	2 Lines, 16 characters each, background highlighted, 2 colours
LC Display Operation	Menu driven via 6 pushbuttons
Display Power consumption	5 V, 60mA, 0.3VA
Display Temperature Range	-20°C - +60°C
Status LED Buzzer	Red/Yellow/Green (Alarm-fault-operation-service)
Acoustic Pressure/ Frequency	>85 dB (distance 0.1m) 2300 Hz 400Hz

*If there are any changes to the housing it has to be re-evaluated
All specifications were collected under optimal test conditions
We confirm compliance with the minimum requirements of the applicable standard

DIMENSIONS



CONFIGURATION EXAMPLES



APPROVALS

EMC Directives 2014/30/EU	Regulation of electromagnetic compatibility of equipment
Low Voltage Directive 2014/35/EU	Equipment within certain voltage limits provides a high level of protection for European citizens
IEC/EN 61010-1:2010	General safety requirements for the following types of electrical equipment and accessories
EN 50271	Functional safety and software reliability in gas detection systems
EN 50290 Type I	Standardisation of symmetrical, coaxial and optical cables used for infrastructure networks
IEC/EN 61508-1-3	Functional safety of electrical, electronic and programmable electronic (E/E/PE) safety systems
EN 50402	Systems for detection and measurement of combustible or toxic gases, vapours or of oxygen
IEC/EN 62990-1:Type SM	Performance requirements of detectors for toxic gases
EN 50104	Minimum requirements for electrical apparatus and measurement of combustible gases
EN 14624	Performance of portable locating leak detectors and of fixed gas detectors for all refrigerants
BS EN 378	Requirements in the design, manufacture, construction, installation, operation, maintenance, repair and disposal of refrigerating systems and appliances regarding local and global environments

ORDERING INFORMATION

8000	AT-MSC-230V- Multi-Sensor Controller 230Vac, inc. Housing & Audio/Visual Alarm Module
8001	AT-MSC--24V - Multi-Sensor Controller 24V, inc. Housing & Audio/Visual Alarm Module

Important: All information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each product for their application. Aquilar Limited makes no warranty as to the accuracy or completeness of the information, and disclaims any liability regarding its use. The only obligations of Aquilar Limited are those in the Aquilar Standard Terms and Conditions of Sale for this product, and in no case will Aquilar Limited be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use or misuse of the product. Specifications are subject to change without notice. In addition, Aquilar Limited reserves the right to make changes – without notification to Buyer – to processing or materials that do not affect compliance with any applicable specification.

AquiTron is a trademark of AquiTron Limited
Aquilar is a trademark of Aquilar Limited