

SUPREMATouch

Modular Fire & Gas Detection System

Fire & Gas Detection Solutions

MSA permanent gas detection systems are used throughout the world to protect plant and personnel from hazardous gases in a wide range of industries from simple applications to large systems including complete fire & gas systems.

SUPREMA^{Touch} modular design meets the requirements of this diverse range of industries and applications and complies with all relevant global safety standards. It builds on the success of the original innovative SUPREMA design and includes a large colour touch screen display, enhanced processing power and addressable fire and detector capability. It can be used with a wide range of detectors including flammable and toxic gas, oxygen, smoke, fire and heat and manual call points. A range of outputs are provided including relay, analogue and digital for communication between racks and which allows interfacing to external systems using Modbus or Profibus.

The modular SUPREMA^{Touch} design provides a fire & gas detection system that can be configured to meet the requirements of virtually any application including redundant systems with up to Safety Integrity Level SIL 3 rating (IEC 61508).

Whatever the application our long experience in fire and gas detection allows us to recommend the best combination of detectors, field devices, components and systems that will ensure reliable and secure protection of your personnel and facilities.



Modular Design for Individual Solutions

SUPREMA^{Touch} is compatible with all MSA fire and gas detectors and can accommodate a variety of third party devices such as 4–20 mA transmitters and heat and smoke sensors.

Open-collector driver outputs (24 V, 0.3 A) provide direct control of relays or other circuit elements such as contactors, switches or solenoid valves.

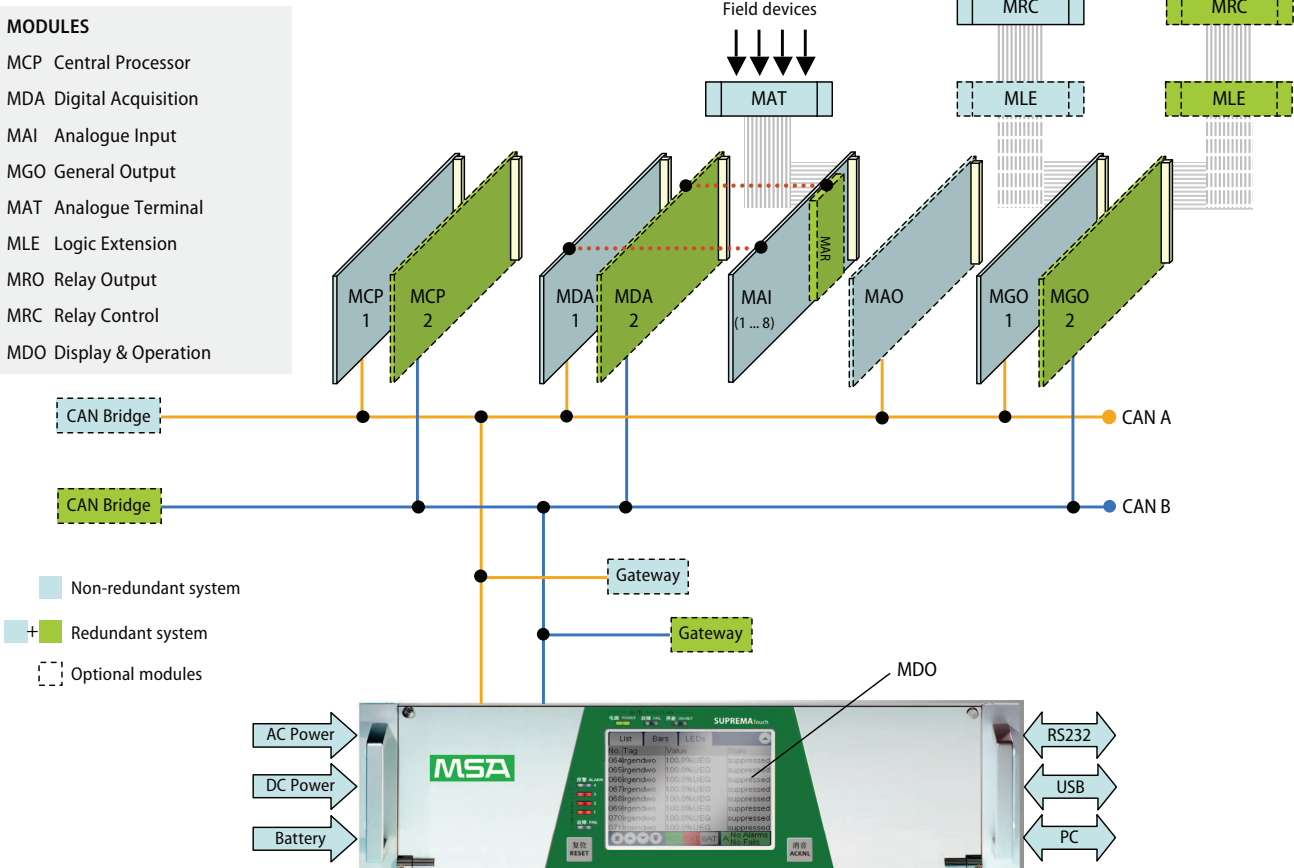
With SUPREMA^{Touch} digital signal transmission is possible via Modbus and Profibus and there is also the option for analogue outputs.

Designed around standard industrial 19" racks, SUPREMA^{Touch} provides signal processing for up to 256 inputs and 512 outputs and the ability to distribute the system over up to 8 racks using satellites to minimise installation cost. The modular design allows input and output connections to be mounted on the backplane or DIN rail mounted.

System Flexibility

- Innovative modular assembly
- Easy checkbox selection to link measurement input with appropriate output
- Simple alarm configuration by checkbox selection including voting and grouping
- Variable and customised system layout

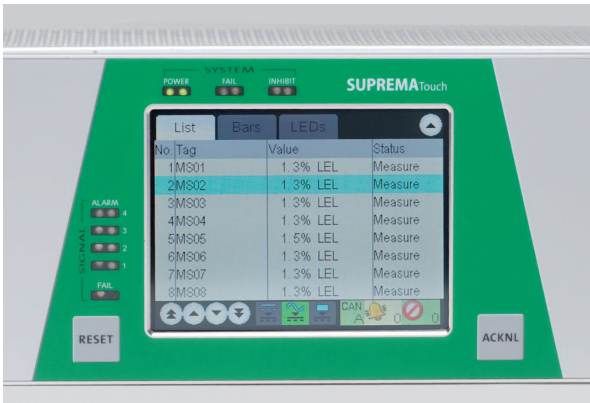
SUPREMA^{Touch} Block Diagram



Simple Operation

The user friendly touch screen user interface makes installation, configuration, commissioning and operation of the SUPREMATouch extremely simple. No programming skills are necessary.

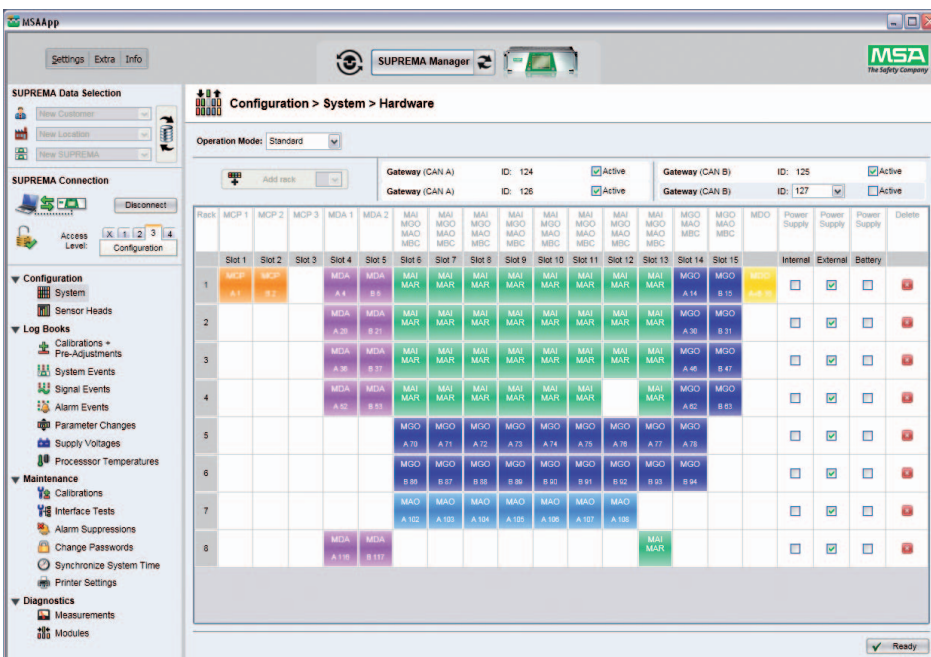
The status signals of up to 256 sensors can be linked and grouped with up to 512 outputs, by selecting a checkbox with a simple touch of the display or a mouse click at a connected PC.



- Colour LCD touch screen with LED back light
- Menu driven graphical user interface
- Detailed diagnostics and event logging
- No programming required
- Simple parameter configuration and calibration
- Comprehensive measurement input information
- Optional user defined sensor parameters
- Simple alarm assignment and configuration
- Digital output inhibit functions
- 3 level password security

SUPREMA Manager

MSA software is available for a USB connected PC which is especially useful during commissioning and regular sensor calibration of larger systems. This provides all the functions available at the SUPREMATouch display such as configuration and calibration, offline use and the storing and printing of reports as PDF documents.



This provides a user friendly environment for configuration (screen view shown), parameter setting and sensor calibration of large systems to minimise the cost of maintaining SUPREMATouch.

Made-to-Measure Safety

SUPREMA_{Touch} provides a control system that meets the user's safety requirements. The modular system allows I/O (Input/Output) connections to be rail or back plane mounted and be configured as desired and adapted to meet each specific monitoring task.

SUPREMA_{Touch} is capable of controlling all system functions, including inhibiting I/O, alarm activation, analogue output signals, handling I/O faults, managing voting allocation of status signals and switched outputs, control of annunciation panels and devices such as fans and dampers as well as interfacing to other systems (HVAC, ESD, etc.) through digital bus communications.

The SUPREMA_{Touch} digital bus technology ensures reliable communication between racks and provides the flexibility of being able to have up to 8 satellite racks per system located at distances up to 5000 m apart. This ensures system wiring is minimized and overall system costs are as low as possible. The SUPREMA_{Touch} system also interfaces to external bus systems such as Modbus and Profibus.

Features	Benefits
■ Compact modular design requires fewer cabinets	■ Space saving
■ Decentralised configuration	■ Use of satellites minimizes wiring
■ Plug-in ribbon cables	■ Easy installation and system extension
■ Future oriented technology	■ Reduces upgrade costs
■ Digital bus technology	■ Reliable communication to external bus systems
■ System configuration by checkbox selection	■ No programming skills required
■ Connections for 3 system power supplies	■ Automatic switchover to backup supply

SUPREMA_{Touch} is certified to all relevant standards in the field of fire and gas hazard detection:

- ATEX (EN 50104, EN 50271, EN 60079-29-1; EXAM)
- CSA, cCSAus
- SIL 3 (EN 50402, EN 61508; TÜV)
- CCCF (GB16808-2008)
- GOST-R



Technical Specifications

Enclosure	Standard 19" rack 3U high (up to 8 racks per system)
System	Satellites for decentralised input and outputs up to a distance of 5000 m Optional redundant configuration Event and fault diagnosis logging
Inputs	Up to 256 per system Up to 64 per rack
Outputs	Up to 512 per system Up to 80 per rack Switched open-collector driver (24 V, 300 mA) Relays – SPNO or SPST redundant (230 V, 3A) Optional solid state relays for low current applications Software-control of switched outputs/relays <ul style="list-style-type: none"> ■ creation of groups ■ n out of m alarms ■ alarm multiplication
Power supply	Operating voltage range – 18 to 32 VDC Optional rack power supply – 85 to 265 VAC, 150 W, 50/60 Hz Power supply connections for internal, external and battery backup (24 VDC) with automatic switch-over
Display	Colour LCD touch screen with backlight 5.7" TFT with 320 x 240 resolution
Controls and indicators	Alarm reset and acknowledge keys Front panel LED's for alarms 1, 2, 3 and 4, signal fail, inhibit, power and system fail 3 level password or keyswitch for secure access control
Sensors	Catalytic or IR for combustible 4–20 mA transmitters Electrochemical for toxic and oxygen Conventional smoke, heat and fire detectors Addressable smoke, heat and fire detectors via external fire panel
Approvals	<ul style="list-style-type: none"> ■ ATEX (EN 50104, EN 50271, EN 60079-29-1; EXAM) ■ CSA, cCSAus ■ SIL 3 (EN 50402, EN 61508; TÜV) ■ CCCF (GB16808-2008) ■ GOST-R
Interfaces	Optional interfaces to external bus systems (Modbus RTU and TCP, Profibus) 2 x RS-232 and 1 x USB electrically isolated interfaces for data transfer Printer report of system events (standard ASCII, 80 CHR)

Detailed ordering information available upon request.

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