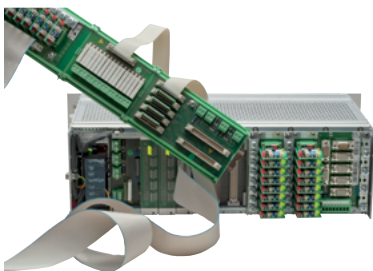




SUPREMATouch

Modular Fire & Gas Detection System



SAFEGUARDING PEOPLE, PLACES & THE PLANET.

Class-Leading Fire & Gas Detection Solutions

MSA's fire and gas detection systems are trusted worldwide to help safeguard people, facilities, and the environment from the risks of fire and hazardous gases. Backed by decades of experience in fixed gas and flame detection (FGFD), MSA delivers integrated solutions that combine advanced detectors, field devices, components, and systems—engineered to support reliable performance and operational safety.

The SUPREMATouch System offers flexible configuration and seamless integration across a wide range of applications. It supports multiple detector types, including flammable and toxic gas, oxygen, smoke, fire, and heat sensors, as well as manual call points. A variety of outputs—

relay and analog—are available, with straightforward interfacing to external systems via Modbus, Profibus or Profinet. Remote racks can be connected using digital communication for extended coverage and scalability.

Designed around a standard industrial 19" (483 mm) rack, the SUPREMATouch System provides signal processing for up to 256 sensor inputs and 512 relay outputs. It can be configured for demanding installations, including redundant architectures up to SIL 3, and is designed and tested to meet relevant global safety standards.

Advanced Enhancements Offer a Lower Cost of Ownership

The SUPREMATouch System delivers enhanced logic capabilities that provide functionality comparable to many programmable logic controllers (PLCs), supporting greater flexibility and efficiency in system design. Certified to key global standards for fire and gas hazard detection—including ATEX, SIL 3, CSA, and Marine—the SUPREMATouch System is designed to help optimize performance, simplify maintenance, and reduce total lifecycle costs.

Enhancements to the SUPREMATouch System include:

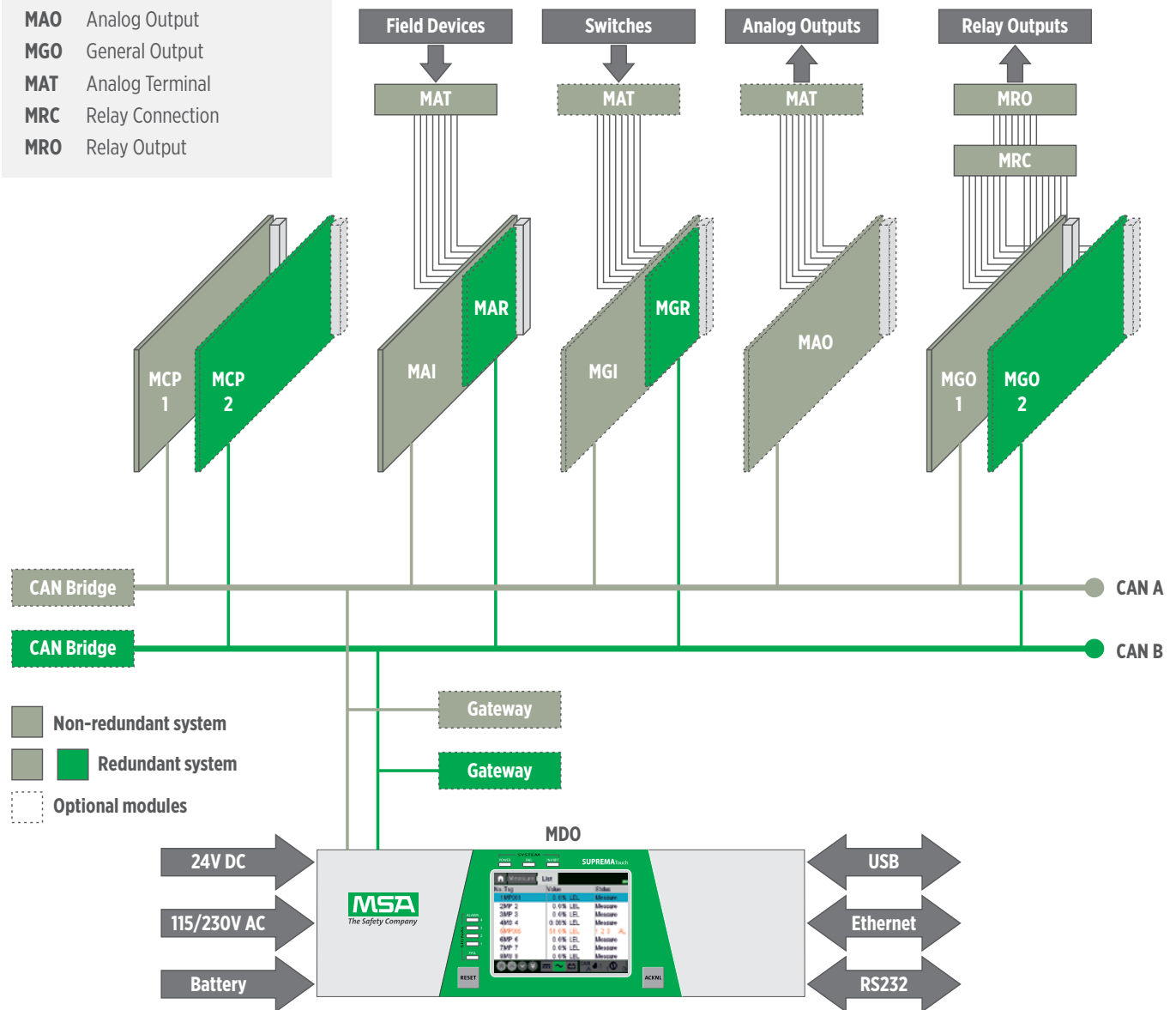
- Optimized analog input module MAI30 reduces system complexity
 - Unique input module for all sensor types with automatic detection
 - No additional sensor specific plug-in modules necessary
 - Optional HART support
- Extension of switching logic with time delays and multi-level logic
- Future-ready hardware
 - Dedicated switch inputs for acknowledge and reset of points and groups
 - USB and Ethernet
 - More efficient power supply
 - Improved user interface with modern intuitive tiles
- Additional calibration options
 - One-person-calibration
 - Group calibration
 - Remote calibration of HART transmitters
- Integrated webserver and network time synchronization
- Micro SD card support for data logging and backups
- Enhanced SUPREMA Manager software
 - Administrating several SUPREMA systems including reporting
 - Offline configuration and parametrization
 - Significantly more comfortable parametrization
- Compatible with MSA's complete range of gas and flame detectors
- System configuration can be intuitively executed via touchscreen
 - The user-friendly touch screen makes any operation of the SUPREMATouch System simple
- The status signals of up to 256 sensors can be linked and grouped by selecting a checkbox with a simple touch of the display
 - No programming skills are necessary
- Cloud connectivity available through integration of FGFD FieldServer IoT Gateways
 - Pre-programmed with SupremaTouch parameters for easy setup
 - MSA Grid Cloud Platform provides secure remote access for diagnostics, monitoring, alarming, and configuration of connected instruments
 - Dashboards display enriched data metrics to drive better decision making



System Flexibility from Modular Design

Modules

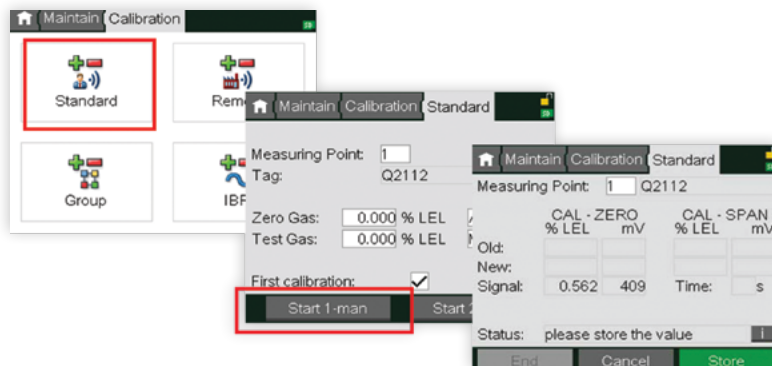
- MDO** Display & Operation
- MCP** Central Processing
- MAI** Analog Input
- MAR** Analog Input Redundancy
- MGI** General Input
- MGR** General Input Redundancy
- MAO** Analog Output
- MGO** General Output
- MAT** Analog Terminal
- MRC** Relay Connection
- MRO** Relay Output



Only seven basic modules are necessary to provide full functionality, namely MCP20, MDO20, MAI30, MGO20, MGI30, MAO20, and gateways.

Due to its proven modular design, the SUPREMATouch System easily fits most installations and has the ability to be expanded with the requirements of the plant. This concept ensures the maximum protection of people and facility safety with minimal additional outlay.

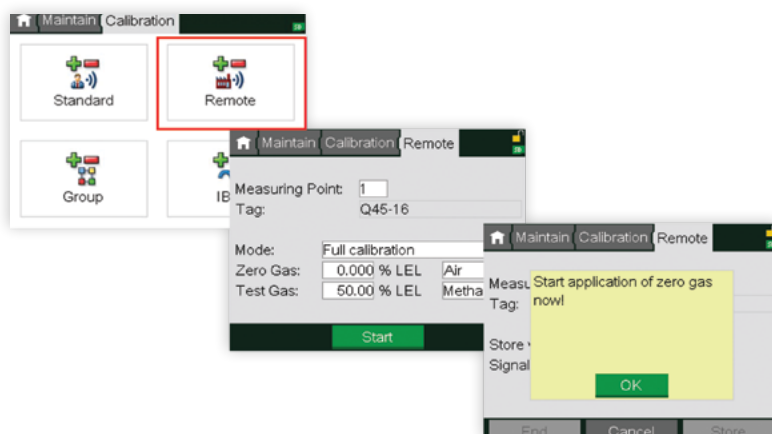
Efficient Calibration Features



One Person Calibration

Simplifies calibration procedure by automatically transferring the gas values—conforms to ATEX guidelines.

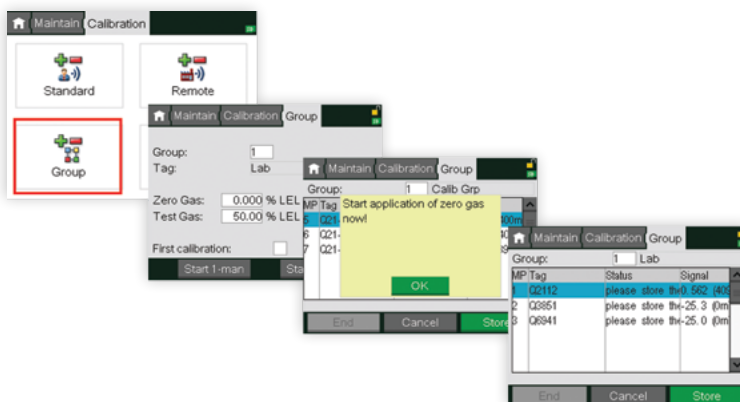
- Response time is measured (in accordance with ATEX)
- Direct lower total cost of ownership



Remote Calibration

The HART support offers the ability to calibrate MSA detectors in inaccessible areas or those without a control interface.

- Ideal for hard to reach areas
- No additional tools for calibration necessary
- The HART option enhances the gas detection controller system with advanced communication and diagnostics features.



Group Calibration

Able to simultaneously calibrate several compatible measuring points.

- Up to 32 measuring points per group
- Supports efficient servicing—helping save time and lower overall maintenance costs

SUPREMATouch Software

SUPREMA Manager

MSA's SUPREMA Manager 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 System display such as configuration and calibration, as well as offline use and the storing and printing of reports as PDF documents.

Highlights

- Supports advanced features of SUPREMATouch System
- More comfortable on parametrization, diagnosis, calibration, and maintenance
- System reports on documentation
- Graphic visualization and modification of complex new multi-level relay logic is shown as tree-view

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

System setup > Configuration > Hardware

Operation mode: Standard Signal if inhibited: hold

Gateways: Gateway (CAN A) Id: 127 Activate: Gateway (CAN B) Id: 122 Activate:
 Gateway (CAN A) Id: 127 Activate: Gateway (CAN B) Id: 123 Activate:

Rack	Slot															Front	Power supply			Delete									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		External	Internal	Battery										
1	MCP CAN A	MCP CAN B	MDC			MDA CAN A	MDA CAN B	MAI CAN A	MAI CAN B	MAD CAN A	MAD CAN B	MAD CAN A	MAD CAN B	MAD CAN A	MAD CAN B	MGO CAN A	MGO CAN B	16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
2		17	18	19	20 (27)	21 (20)									30 (31)	31 (30)	32	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
3			33	34	35	36 (37)	37 (36)									45 (47)	47 (46)	48	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
4			40	50	51	52 (54)	53 (52)							60		62 (63)	63 (62)	64	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
5															70 (71)	71 (70)	72 (73)	73 (72)	74 (75)	75 (74)	76 (77)	77 (76)	78 (79)	79 (78)	80	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6															86 (87)	87 (86)	88 (89)	89 (88)	90 (91)	91 (90)	92 (93)	93 (92)		94	95	96	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7																											<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8																											<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Add rack

Wizard Overview



SUPREMATouch System Technical Specifications

ENCLOSURE	Standard 19" (483 mm) rack 3U high (up to 8 racks per system)
SYSTEM	Satellites for decentralized input and outputs up to a distance of 5000 m (3.1 mi.) Optional redundant configuration Event and fault diagnosis logging
INPUTS	Up to 256 sensor inputs per system and 80 per rack Up to 64 switch inputs for acknowledge and reset per system
OUTPUTS	Up to 512 relay outputs and 256 analog outputs per system Up to 400 outputs per rack Switched open-collector driver (24 V, 300 mA) Relays—SPCO or SPST redundant (230 V, up to 5 A) 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 the 'm' alarms • Multi-level logic • Time delays Alarm multiplication
POWER SUPPLY	Operating voltage range—19.2 to 32 VDC Optional rack power supply—85 to 265 VAC, 250W, 47–63 Hz Power supply connections for internal, external, and battery backup (24 VDC) with automatic switch-over
DISPLAY	Color LCD touch screen with backlight 5.7" TFT with 320 x 240 resolution
CONTROLS & INDICATORS	Alarm reset and acknowledge keys Switch inputs for remote reset and acknowledge Front panel LEDs for alarms 1, 2, 3 and 4, signal fail, inhibit, power, and system fail 3 level password or keyswitch for secure access control
DETECTORS	4-20 mA transmitters, HART-enabled MSA transmitters Point: Catalytic, passive catalytic, infrared, electrochemical, semiconductor detectors Ultrasonic, open-path, MSIR, and UV/IR flame detectors Conventional smoke and heat detectors
APPROVALS	ATEX 2014/34/EU (EN 60079-29-1: 2016 + A1:2022 + A11:2022; EN 50104: 2019 + A1:2023, EN 50271:2018) EMC: 2014/30/EU (50270:2015+AC2016); LVD: 2014/35/EU cCSAus (CSAC22.2 No. 61010-1-04, UL 61010-1, CAN/CSAC22.2 No. 60079-29-1:17, UL 60079-29-1:2019) Functional Safety up to SIL 3 (IEC 61508:2010, EN 50402:2017, EN 50271:2018) Marine: MED 2014/90/EU; Type Approval
INTERFACES	Optional interfaces to external bus systems (Modbus RTU and TCP, Profibus, Profinet) 2 x RS-232 and 1 x USB electrically isolated interfaces for data transfer Ethernet, micro SD card Printer report of system events (standard ASCII, 80 CHR)
PC SOFTWARE	SUPREMA Manager

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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