SUPREMATouch
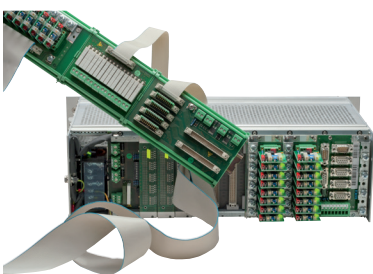
Modular Fire & Gas Detection System

Class-Leading Fire & Gas Detection Solutions

MSA's fire & gas detection systems are relied upon by a huge number of installations across a wide range of industries throughout the world to protect employees, facilities, and our environment from fire and hazardous gases. As a highly-experienced designer and manufacturer of fixed gas and flame detection equipment, MSA provides the optimal combination of detectors, field devices, components, and systems that will ensure reliable and secure protection of personnel and facilities. The SUPREMATouch System can be used with a wide variety of detectors including flammable and toxic gas, oxygen, smoke, fire and heat, and manual call points. A range of outputs are provided, including relay and analog, while interfacing to external systems is provided using Modbus or Profibus. Remote racks can be connected using digital communication. Designed around standard industrial 19" (483 mm) racks, the SUPREMATouch System provides signal processing for up to 256 sensor inputs and 512 relay outputs. It can be configured to meet the requirements of even the most demanding of applications, including redundant systems up to SIL 3, and complies with all relevant global safety standards.

New Enhancements offer a Lower Cost of Ownership

The SUPREMATouch System's new features will not only reduce your total cost of ownership, but with the latest enhancement of robust logic capabilities, it now mimics the advanced functionalities of many PLCs. This adaptable controller is still compatible with current SUPREMATouch System installations and is certified to all relevant standards in the field of fire and gas hazard detection (e.g. ATEX, SIL 3, CSA, DNV, CCCF, TPTC).

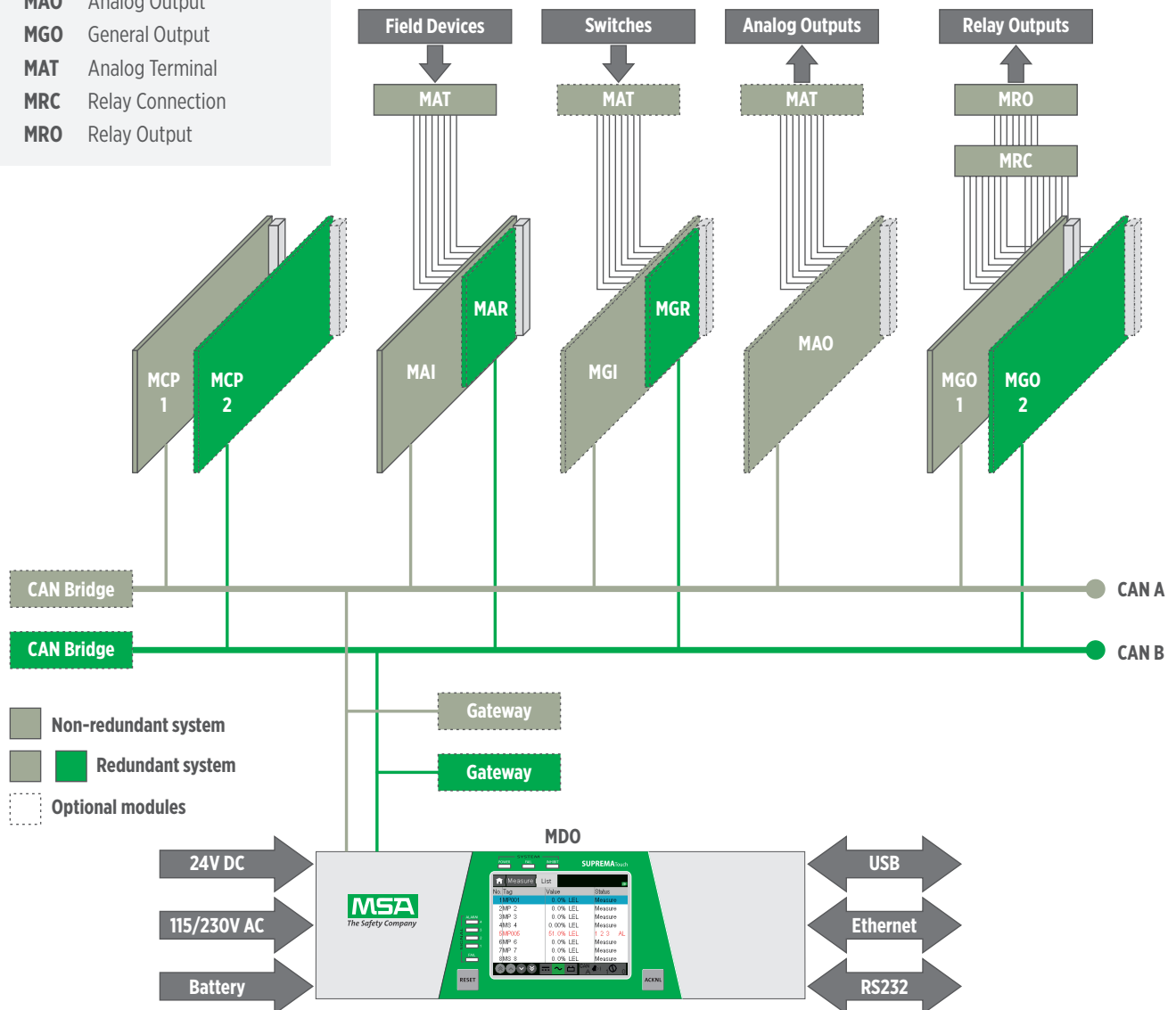### Enhancements to the SUPREMATouch System include:

- New 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

- New 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 FieldServer ProtoAir FGFD gateway
  - 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
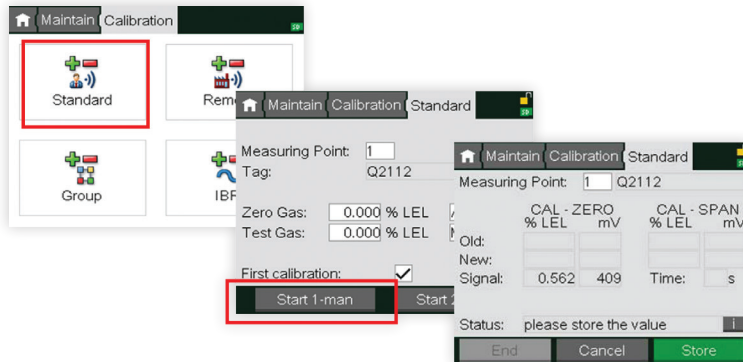
System Flexibility from Modular Design

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

Field Devices

Switches

Analog Outputs

Relay Outputs

MAT

MAT

MAT

MRO

MRC

MAR

MGR

MCP 1 · MCP 2

MAI

MGI

MAO

MGO 1 · MGO 2

CAN Bridge — CAN A

CAN Bridge — CAN B

Non-redundant system

Redundant system

Optional modules

Gateway

Gateway

MDO

24V DC

115/230V AC

Battery

MSA
The Safety Company

SUPREMATouch

USB

Ethernet

RS232

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.
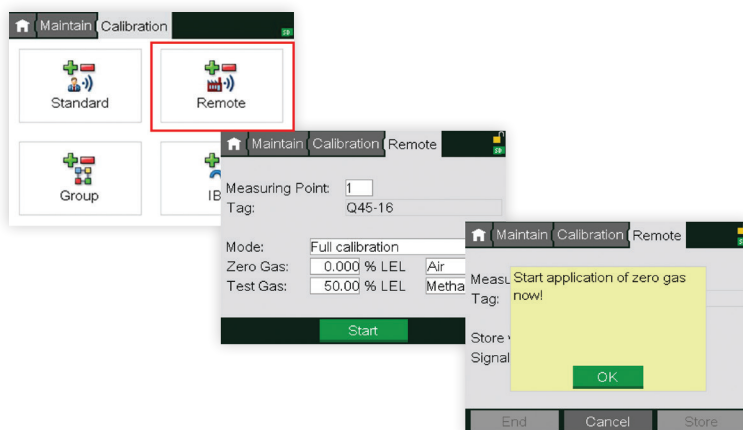
New Calibration Features

One Person Calibration

Simplifies calibration procedure by automatically transferring the gas values—conforms to ATEX guidelines.
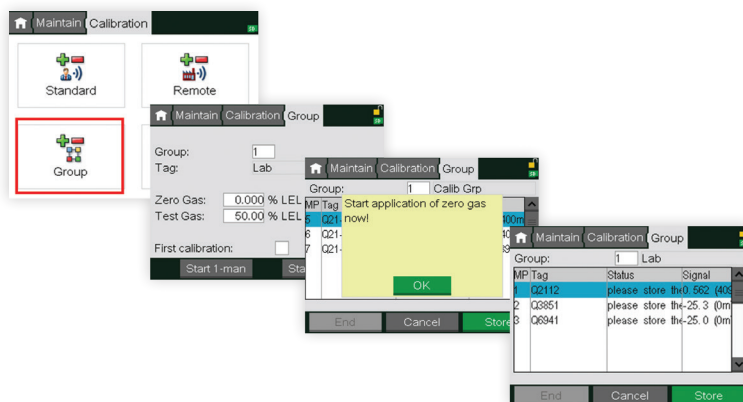
- Response time is measured (in accordance with ATEX)
- Direct lower total cost of ownership

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 on a gas detection controller system is outstanding in its class

Group Calibration

Able to simultaneously calibrate several compatible measuring points.

- Up to 32 measuring points per group
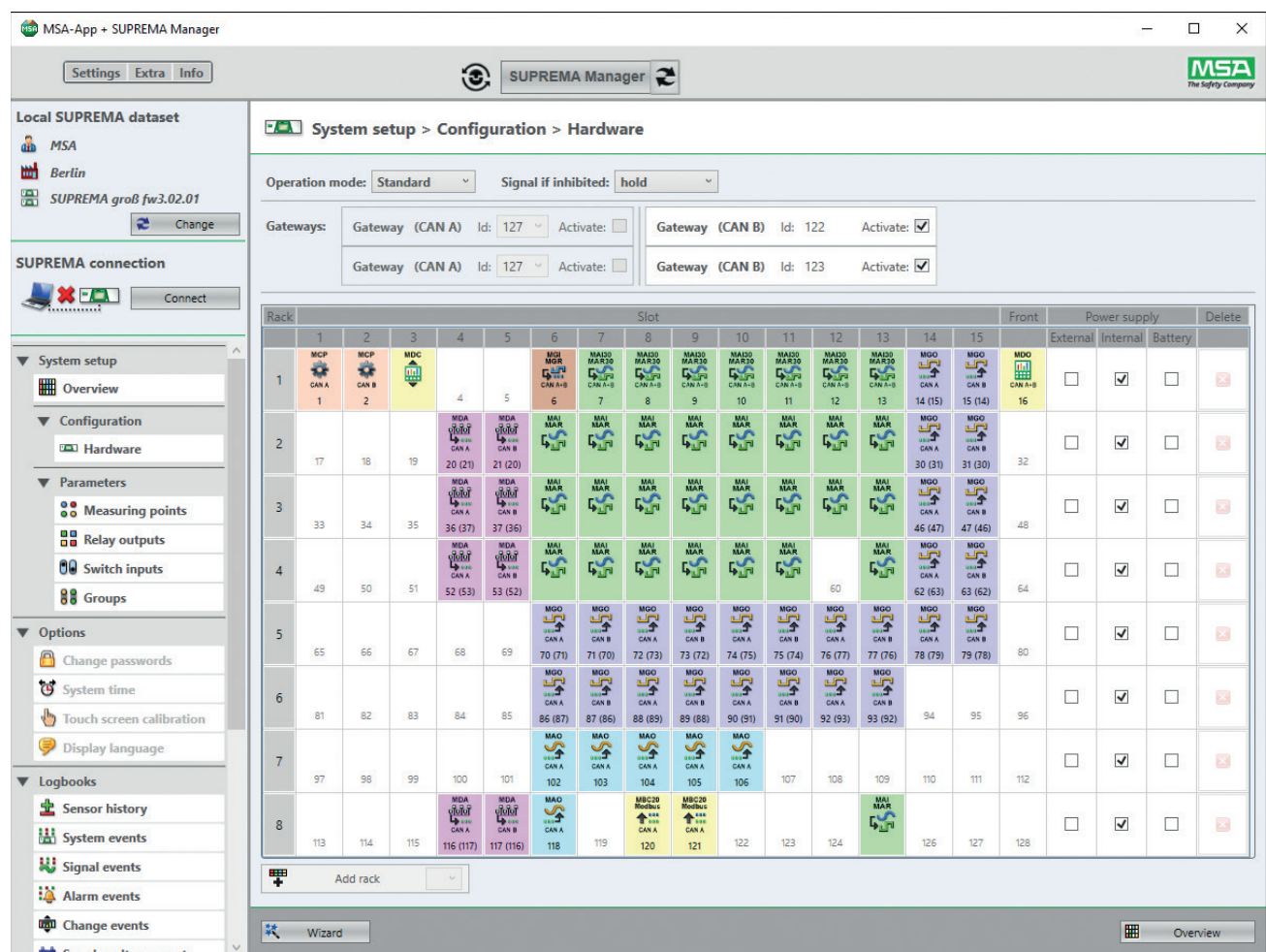- Saves time and money

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, offline use, and the storing and printing of reports as PDF documents.

Highlights

• Supports new 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 above)*, parameter setting, and sensor calibration of large systems to minimize the cost of maintaining the SUPREMATouch System.

SUPREMA Calibration Software

In addition to the SUPREMA Manager, MSA offers dedicated calibration software, which is able to calibrate passive sensors, support standard calibration, and provide zero adjustment for transmitters. Its main advantage, however, is that it provides the option to issue detailed calibration reports while based on user defined criteria.

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 and 64 switch inputs per system Up to 80 inputs per rack
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 • Creation of groups • n out of m alarms • Multi-level logic • Time delays Alarm multiplication
POWER SUPPLY	Operating voltage range—18 to 32 VDC Optional rack power supply—85 to 265 VAC, 250W, 50/60 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	Catalytic or IR for combustible 4–20 mA transmitters, transmitters with HART ability Electrochemical for toxic and oxygen Conventional smoke, heat, and fire detectors
APPROVALS	ATEX (EN 50104:2010, EN 50271:2010, EN 60079-29-1:2007; EN 50270:2015); Dekra-EXAM; EN 61010:2011 cCSAus (CSA) SIL 3 (EN 50402:2005+A1:2008, EN 61508:2010); TÜV CCCF (GB16808-2008) TP TC 020/2011, TP TC 004/2011 DNV-GL
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 Ethernet, micro SD card Printer report of system events (standard ASCII, 80 CHR)
PC SOFTWARE	SUPREMA Manager SUPREMA Calibration Both ATEX approved and Windows 7 & 10 compatible

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit *MSAsafety.com/offices*.