SST™

SAFETY SYSTEMS TECHNOLOGY (NV), Inc.

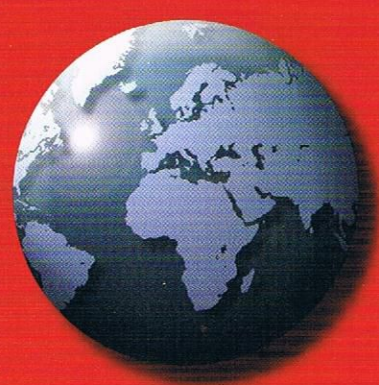
SETTING NEW STANDARDS IN RELIABLE SAFETY SOLUTIONS

ACCESSORIES

GAS SENSORS

OXYGEN SENSORS

MODULAR CONTROL SYSTEMS

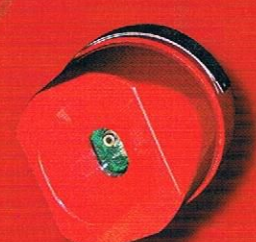


HEAT DETECTORS

TEST AND CALIBRATION EQUIPMENT

MANUAL STATIONS

SMOKE DETECTORS



FLAME DETECTORS

23282 Mill Creek Drive, Suite 215, Laguna Hills, California 92653 USA

OUR PRODUCTS

Safety Systems Technology manufactures a complete line of components for Fire Alarm Systems, Fire Extinguishing Systems and Gas Leak Detection Systems. Representative items with their major specifications are shown in this brochure. Complete data and technical assistance on each item, as well as other items not shown in this condensed list, is available via phone, fax, CD-ROM, or on our site at **www.safetysys.com**

COMPANY PROFILE

Safety Systems Technology (NV), Inc., more commonly known as "SST", is an industry leader in providing high quality, reliable and efficient fire, gas and safety protection devices suitable for use in manufacturing, petro-chemical, and other heavy industrial environments. Our management, having over 30 years of experience in all aspects of the fire and gas detection industry, guides a team of experienced design engineers and production personnel to insure that the company will continue to set new standards for innovative safety components and systems. We service a worldwide customer base with any and all protection system components, whether it be a single part ordered via the internet, or a complete, custom designed, assembled and installed "turnkey" system.

TYPICAL APPLICATIONS

Today's industrial applications require the latest and most sophisticated state-of-the-art detection and control components. Increasing regulatory, liability and environmental pressures force the industry to adhere to continual maintenance, upgrades, and improvement programs. In these applications, it is absolutely essential that the system and its components perform flawlessly in a more-often-than-not hostile environment. SST components and systems meet and exceed these criteria. Since the company's inception, SST has provided a variety of systems and sensors in such diverse industries as:

- Petrochemical
- Refineries
- Oil Production
- Oil/Gas Pipelines
- Cogeneration
- Hazardous Waste Storage
- Ships and Tankers
- Sewage Treatment
- Tunnels and Mining
- Utilities
- Aircraft Hangers
- Oil and Gas Exploration
- Drilling
- Automobile Manufacturing

TURNKEY SYSTEMS

Today's industrial applications often require a sophisticated, engineered systems approach. These systems consist of numerous state-of-the-art components and/or controls. SST products have been designed to easily and effectively integrate into turnkey systems along with other equipment. In fact, most of our authorized sales representatives and distributors provide compatible equipment for these turnkey systems. Applications include:

- Instrument and Process Control Panels
- Fire and Gas Detection & Suppression Control Panels
- Programmable Logic Controller (PLC) based Control Systems
- PLC based and Relay Logic Emergency Shutdown
- Water/Foam Deluge Systems
- Supervisory Control and Data Acquisition Systems
- "Clean Agent" Fire Extinguishing Systems

PRE & POST-INSTALLATION SUPPORT

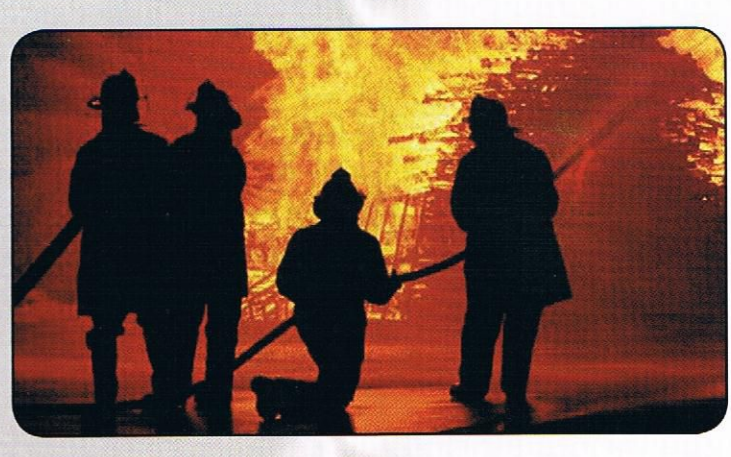
We want to be sure that your installation of our products is trouble-free and reliable throughout it's lifetime. Free application advice and technical support is always available via telephone, fax, or e-mail. A comprehensive stock of service and replacement parts for all SST products is maintained at our Southern California manufacturing facility. Factory trained technicians and applications specialists are available throughout the world.

ONE SOURCE FOR FIRE/GAS PROTECTION

Safety Systems Technology is in the unique position to provide you with both standard fire and/or gas detection products and custom designed and manufactured systems. We invite you to experience the superior difference that Safety Systems Technology innovative products and services can provide.

FIRE & GAS DETECTION COMPONENTS

The following pages show the products currently available from SST. If you don't see what you need, check our website (www.safetysys.com) for a comprehensive list of our product lines. All components are available for sale in any quantity. Place your order on our website, or contact the factory, or your authorized sales representative as shown on the back cover.



FLAME DETECTORS

- Detects 1 square foot gasoline fire at a distance of 70 feet.
- Fault condition signaled if viewing window is dirty or obstructed.
- Automatic Self Test Diagnostics.
- High current relay outputs for control or shutdown of external equipment.
- Analog Output transmits alarm/fault conditions to remote location over single pair of wires.
- 24 volt DC nominal operating voltage.
- NEMA 4X weatherproof and corrosion resistant enclosure approved for Class I Groups B,C,D and EEx dIIB T6 locations.

F110 Ultraviolet Flame Detector

- Fast response to the ultraviolet radiation from a flame.
- Most traditional method for flame detection. Perfect for additions to existing installations.
- Discriminates against sunlight, lightning, or black body radiation.

F120 Triple-Mode UV/IR Flame Detector

- Detects fires by measuring background Infrared radiation and "flicker" and/or Ultraviolet radiation associated with flame.
- Triple-mode detection provides more protection against false alarms than any other available flame detector.
- Combines the advantages of the Ultraviolet and Infrared technology in a single self-contained device.
- Three sensors measure UV radiation, IR flicker and IR background temperature changes.
- User programmable voting criteria permits "tuning" to the best detection algorithm for each application.

DETAILED TECHNICAL DATA ON FLAME DETECTORS:
www.safetysys.com/techdata/flame

SMOKE DETECTORS

- Meets requirements of NFPA Standard 72.
- Functional Test Capability without requiring smoke or other chemicals.
- Suitable for operation in high air flow areas and duct applications.
- Built-in red alarm LED on Detector.
- Optional remote LED, remote Test Switch, Supplementary Relay accessories.
- EMI/RFI resistant.
- Up to 55 detectors on a single NOVA-5000 detection loop.

S250 Ionization Smoke Detector

- Most widely used method for fire detection in non-hazardous locations.
- Fast response to flaming fires that produce invisible products of combustion.
- Dual Stainless Steel Ionization Chambers.

S260 Photoelectric Smoke Detector

- Responds to smoldering fires that produce visible smoke.
- No false alarms from cooking fumes or engine exhaust.
- Alarm verification feature using digital memory.

S260 Photoelectric Smoke Detector with built-in heat detector

- Smoke detection capability identical to standard S260 detector.
- Added 135°F self-restoring heat detector responds to over-temperature conditions.

DETAILED TECHNICAL DATA ON SMOKE DETECTORS:
www.safetysys.com/techdata/smoke

HEAT DETECTORS

T300 Fixed Temperature Rate Compensated Heat Detector

- Responds accurately and positively to fire threats... virtually eliminates costly false alarms.
- Repeatable -- resets itself, nothing to replace, can be tested.
- Versatile -- available in a wide range of temperature settings.
- Explosion proof -- UL listed and FM approved for hazardous locations.
- Accurate -- factory set to respond at rated temperature, regardless of the rate of temperature rise; not sensitive to momentary changes in temperature.

DETAILED TECHNICAL DATA ON HEAT DETECTORS: www.safetysys.com/techdata/heat

MANUAL PULL STATIONS

- UL, C-UL listed, and FM approved.
- Rugged die cast metal construction rated for indoor, outdoor and marine applications.
- Single action and dual action stations available.
- Key operated lock for resetting and testing.
- Clearly visible plastic "break rod" discourages false alarms.
- Identical appearance on both explosion-proof and general purpose stations.

M400 Explosion Proof Manual Fire Alarm Pull Station

- For Class I Group B,C,D, Class II Group E,F,G (IEC EEx dIIC T6) Locations.
- 3/4 inch NPT conduit fittings.

M450 General Purpose Manual Fire Alarm Pull Station

- For use in general purpose (non-hazardous) locations.
- Flush mounts on standard single-gang outlet box (Surface mounting boxes also available).
- New York City MEA accepted and California State Fire Marshal listed.
- ADA compliant.

DETAILED TECHNICAL DATA ON MANUAL STATIONS: www.safetysys.com/techdata/manual

COMBUSTIBLE GAS SENSORS

GC800 Combustible Gas Sensor

- Poison resistant catalytic sensing element.
- Stainless steel construction.
- CSA/NRTL listed for Class I Groups A,B,C,D. BASEEFA approved explosion-proof Ex sd IIc T6, EEx dIIc.
- Accessory transmitters convert output to 4-20 mA signal for connection to any input device, including NOVA-5000 modules, PLC's, SCADA or distributed control systems.

GIR900 Infrared Hydrocarbon Gas Sensor

- Unitized optical gas detector based on infrared operating principle.
- Immune to poisoning.
- Factory calibrated. No field calibration required. No moving parts, no maintenance.
- Detects any combustible hydrocarbon gas with no oxygen required.
- Calibration verified without declassifying the area.
- Reading immune to wind velocity.
- Suitable for on-shore or off-shore use.
- Maintains calibration even after exposure to high gas concentrations.
- Built-in 4-20 mA output transmitter.

GC801 Combustible / GIR901 Hydrocarbon Gas NOVA-Sensors®

- Supplied complete with GC800 or GIR900 as sensing element.
- Epoxy coated copper-free aluminum electronics enclosure with viewing window.
- Push-button switch initiates "one-man" calibration.
- Digital readout of gas concentration in % LEL.
- Alarm and Fault relay outputs for local control.
- 4-20 mA output suitable for connection to external equipment, including SST NOVA-5000 modules, PLC's, SCADA or distributed control systems.
- Suitable for Class I Division 1 Groups A,B,C,D.

DETAILED TECHNICAL DATA ON GAS SENSORS: www.safetysys.com/techdata/gas

TOXIC GAS SENSORS

GT810 Toxic Gas Sensor

- Available models for sensing H_2S, SO_2, CO, NH_3, CL_2, NO_2, (other gasses and volatile liquids on special order).
- Maintenance free electrochemical cell element.
- Explosion-proof stainless steel housing.
- 24 volt DC nominal operating voltage.
- Loop powered transmitter requires only two wires between sensor and 4-20 mA input device.
- Suitable for connection to any 4-20 mA input device, including NOVA- 5000 modules, PLC's, SCADA or distributed control systems.

GIR910 Carbon Dioxide Sensor

- Unitized optical gas detector based on infrared operating principle.
- Immune to poisoning.
- Factory calibrated. No field calibration required. No moving parts, no maintenance.
- Calibration can be verified without declassifying area.
- Reading immune to wind velocity.
- Suitable for on shore or off shore use.
- Built-in 4-20 mA output transmitter.

GT811/GIR911 Toxic Gas NOVA-Sensors®

- Supplied complete with GT810 or GIR910 as sensing element.
- Epoxy coated Copper-free aluminum electronics enclosure with viewing window.
- Push-button switch initiates "one-man" calibration sequence.
- Digital readout of gas concentration in PPM or percent volume.
- Alarm and Fault relay outputs for local control.
- 4-20 mA output suitable for connection to external equipment, including SST NOVA-5000 modules, PLC's, SCADA or distributed control systems. 24 volt DC nominal operating voltage.
- CompTest™ check of analog and relay outputs. Suitable for Class I Division 1 Groups A,B,C,D locations.
- Optional all stainless steel enclosure available.

OXYGEN SENSORS

GT820 Oxygen Deficiency/Enrichment Sensor

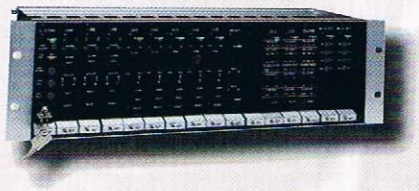
- Maintenance free electrochemical cell sensing element in stainless steel housing.
- Explosion proof sensor housing approved for Class I Groups B,C,D hazardous locations.
- Loop powered transmitter requires only two wires between sensor and 4-20 mA input device.
- Suitable for connection to any 4-20 mA input device, including SST NOVA-5000 modules, PLC's, SCADA or distributed control systems.

GT821 Oxygen Deficiency/Enrichment NOVA-Sensor®

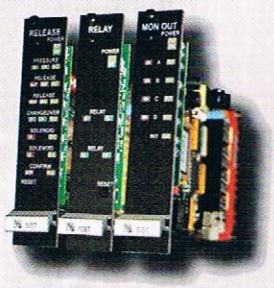
- Supplied complete with GT820 as sensing element.
- Epoxy coated copper-free aluminum electronics enclosure with viewing window.
- Push-button switch initiates "one-man" calibration.
- Digital readout of oxygen concentration to ±0.1% resolution.
- Alarm and Fault relay outputs for local control.
- 4-20 mA output suitable for connection to external equipment, including SST NOVA-5000 modules, PLC's, SCADA or distributed control systems.
- 24 volt DC nominal operating voltage.
- CompTest™ check of analog and relay outputs.
- Suitable for Class I Division 1 Groups B,C,D locations.
- Optional all stainless steel enclosure available.

CONTROL SYSTEM MODULES

- High performance, high reliability plug-in modules designed specifically for industrial, institutional and life safety applications.



- Each NOVA-5000 System is customized for the intended application by selecting the proper mix of System Modules.
- Integrates fire and gas detection capabilities into one system.
- Plug-in modules can be removed while power is on.
- Quick identification of new alarms versus previously acknowledged alarms.



- Supervises all field wiring for both open and short circuits.
- Remote alarm silence and reset capability.
- UL listed Control Unit for Fire Protective Signaling Systems, Releasing Devices, and Process Management Equipment.
- CE certified to EMC, Harmonic Emissions and immunity requirements for Fire, Intruder and Social Alarm Systems.

5010 Smoke/Fire Detection Input Module

- Use with smoke, heat or flame detectors, manual alarm stations, or other contact devices.
- Two independent channels per module, may be wired cross-zoned.
- Open circuit, short circuit and earth ground fault detection.
- Digital filtering to insure high rejection of noise transients.

5020 series Gas Detection Input Modules

- Use with combustible gas detectors (methane, propane, butane, hydrogen, etc.)
- Use with toxic gas detectors (H_2S, SO_2, CO, NH_3, CO_2 etc.)
- Use with Oxygen Detectors.
- Digital readout of gas concentration in %LEL, PPM or % volume.

5100 Voting Logic Module

- Reduces false alarms by requiring multiple alarms to initiate critical functions.
- Vote as one zone with 14 inputs of two zones with 6 inputs for each.
- Two or more modules may be "cascaded" together.

5110 Relay Logic Module

- Gold plated "dry contacts" interface to external equipment (annunciators, data acquisition systems, PLC's, computers, etc.)
- User programmable logic functions using wire-wrap jumpers.

5120 System Facilities Logic Module

- Provides system Alarm Acknowledge, Reset and Lamp Test capabilities.
- Trouble buzzer activates when any fault is detected in the NOVA-5000 System.

5230 Extinguishant Release Module

- UL listed control device for automatic release of fire extinguishing agent (CO_2, Foam, Water, FE-13™, etc.)
- Installer adjustable pre-release time delays with abort capability.
- Operates a single releasing solenoid, a redundant pair, or separate main and reserve systems.
- Automatic release of additional reserve extinguishing agent, if initial release fails to extinguish a fire.
- Monitors extinguishing agent supply for leaks.

5241 Alarm Output Module

- Use with alarm bells, horns, warning lights, door, etc.
- Wiring to alarm appliances supervised for open or short circuits per NFPA and UL requirements.
- Four independent alarm channels per module.

5300 series Module Mounting Racks

- 4, 8 or 16 Module mounting spaces for mounting any mix of NOVA-5000 modules.
- Printed circuit backplane with gold plated contact connectors for each module.
- 16 module version mounts in standard 19 inch width.
- Available mounted in explosion-proof enclosure.

DETAILED TECHNICAL DATA ON CONTROL SYSTEMS: www.safetysys.com/techdata/control

FIRE SUPPRESSION SYSTEMS

Clean Agent Releasing Equipment

- Designed and engineered per NFPA requirements for each application.
- Wide variety of suppression agents: CO_2, FE-13™, FM-200™, and others.
- Systems can be fully integrated into the NOVA-5000 Detection and Control System or designed to stand alone.
- Safety Systems Technology clean agent systems are effective where other types of suppression are not suitable... high inerting concentrations, low agent storage temperatures, and high ceiling heights. Safety Systems Technology designs meet all requirements of NFPA 2001 with no usage restrictions.

Turnkey Fire and Gas Systems

- Custom Designed per your specifications or requirements.
- Integrates Safety Systems equipment with that of other manufacturers.
- Submittal drawings for customer approval prior to construction.
- Witness testing by your client at our factory.
- Supplied complete with documentation, drawings, manuals, procedures, etc.
- Field start-up of installed system by factory trained technicians and/or engineers.

DETAILED TECHNICAL DATA ON CLEAN AGENTS: www.safetysys.com/techdata/sstclean

WE CAN SUPPLY ANY AND ALL FIRE AND GAS SYSTEM ACCESSORIES WITH YOUR ORDER!