

GT824 NOVA-SENSOR *ELITE*

OXYGEN MONITORING DETECTOR

OXYGEN DEFICIENCY AND ENRICHMENT



FEATURES & BENEFITS

- Intelligent oxygen monitoring detector
- Electrochemical cell provides increased accuracy, stability, reliability, and fast response
- 4-20 mA output
- User programmable LOW alarm and HIGH alarm settings for either oxygen deficiency and / or oxygen enrichment
- Voltage-free dry contact relays for local control
- Explosion-proof approved electronics housing Class I, Group A, B, C, D
- Stainless steel sensor housing
- Available up to IP66 rating
- Bright LCD screen displays oxygen levels in percent by volume
- Magnetic switch initiates test or calibration sequence
- Built-in automatic sensor replacement/maintenance and calibration reminder
- Step-by-step on-screen calibration instructions for ease of use and maintenance
- Shipped fully assembled and pre-calibrated
- Available with wireless transmitter as an accessory with text, e-mail notifications feature
- Available accessories include rain/waterspray shield, dust cover, duct mount, gas collection cone, and calibration kit
- 5 Year Warranty
- Made in USA

TYPICAL APPLICATIONS

- Any confined space
- Chemical plants
- Data centers
- Laboratories
- Oxygen storage facilities
- Manufacturing plants
- Medical facilities
- Nitrogen storage facilities
- Petrochemical plants
- Petroleum refining
- Testing facilities
- Wastewater treatment facilities

The SST Model GT824 Oxygen Monitoring Detector is a completely self-contained device that measures and displays the concentration of oxygen present in a protected area, performs local control functions, and optionally transmits this information to a central control point. Two alarm relays and a fault relay are included.

The detector includes a high reliability microprocessor based transmitter/controller in the associated explosion-proof housing. A bright LCD display readout shows the operating status and the actual concentration of oxygen. The transmitter converts this reading to a standard 4-20 mA signal. This signal may be connected to any remote device with a standard 4-20 mA input. The HIGH and LOW alarm relays operate at user adjustable alarm trip points for oxygen deficiency or oxygen enrichment. The fault relay operates upon loss of power or internal failure of the unit. Relays are suitable for controlling local HVAC or equipment shutdown.

The automatic calibration sequence is easily completed by just one person and the unit provides an on-screen step-by-step calibration instruction to insure error-free results.

The Model GT824 is suitable for the most demanding applications. A large body mass insures excellent vibrational characteristics when used for offshore use. Corrosion resistant materials permit uses in most environments.

MODEL GT824 OXYGEN MONITORING DETECTOR

SYSTEM SPECIFICATIONS

Sensor Type: Electrochemical cell

Modes: Normal operation, set-points, calibration, set-up

Sensor Life: Typically > 2 years
Available with > 3 years sensor

User Programmable Setpoints: Oxygen Deficiency - below 20.9%
 • High
 • Low
 Oxygen Enrichment - above 20.9%
 • High
 • Low
 Combination (O₂ Deficiency & Enrichment)
 • High - above 20.9%
 • Low - below 20.9%

Warranty: 5 years; 1 year for cell

Approvals: Explosion-proof approved housing
 Class I, Division I, Groups A B C D; Class I, Zone I, AEx d IIC; Type 4X
 ATEX: II 2G Ex d IIC Gb

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: Electronics -40°F to 185°F (-40°C to 85°C)

Storage Temperature: Sensors: 37°F to 68°F (3°C to 20°C)

Pressure Range: Atmospheric ± 20%

Operating Humidity: 0-100% RH, non-condensing

Ingress Protection: IP40 to IP66

MECHANICAL SPECIFICATIONS

Dimensions: 14.44x5.75x4.375 inches (159x146x111 mm)

Weight: 10.0 lbs. (4.5 kg) Aluminum;
16.0 lbs (7.2 kg) Stainless Steel

Controller Housing: Aluminum or Stainless Steel

Sensor Housing: Stainless Steel

ELECTRICAL SPECIFICATIONS

Input Power: 24 VDC nominal, 16 to 32 VDC
92 mA standby, 120 mA alarm

Relay Contact Ratings: 6 amps @ 28 VDC or 300 VAC resistive
1/8 HP @ 120/240VAC

Analog Signal: 0-20 mA (600 Ohms or less)
 Malfunction 0 mA
 Setup Mode/Calibrate 4 mA
 Zero Reading 4 mA
 0-25% by Vol 4-20 mA
 Over-range > 20 mA

Display: Graphic Liquid Crystal Display
 Displays target gas concentration in % by vol;
 Flashing screen in alarm mode;
 Low brightness setting in power save mode

Field Connections: 4-20 mA output - three-wire shielded cable
 All other connections: 22 AWG (.35 mm²) to 12 AWG (4.0 mm²)

Wireless Communication: Available with optional wireless transmitter with text, e-mail notification features

ORDERING INFORMATION

Part No.	Description
824-AL	Model GT824 Oxygen Monitor <i>Aluminum housing</i>
824-SS	Model GT824 Oxygen Monitor <i>Stainless Steel housing</i>
851-5	Waterspray shield and dust cover (IP66 Rating)
851-1	Rain shield, stainless steel
851-2	Rain shield, anodized aluminum
852-1	Dust cover, stainless steel, plain; requires rain shield part number 851-1 or 851-2
858-1	Remote calibration adapter, stainless steel
854-1	Duct mount, stainless steel, 5 inch sampling tube
20348-4	Replacement oxygen sensor, > 2 year life

Gas	Range in % by Vol	Max Range	Resolution	T90 Response Time	Operating Range
Oxygen (O ₂)	0-25 % by Volume	25% by Vol	0.1 %	< 15 sec.	-22°F to 131°F; -30°C to 55°C;

Specifications subject to change without notice.