



## DATA SHEET

**blacklinesafety**

### Features



Fall detection



No-motion detection



Two-way voice and  
text messaging



Push-to-talk



SOS alert



Check-in



Assisted-GPS



Indoor location  
technology



Gas alarms



Configuration  
modes



# G7<sup>c</sup>

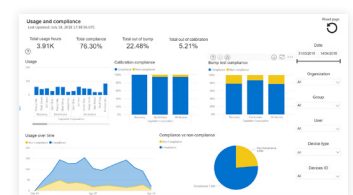
### THE WORLD'S HARDEST-WORKING CONNECTED MONITOR

Blackline Safety's G7c leverages integrated 4G/3G-cellular connectivity to wirelessly link your team to real people, while automating data analytics and compliance reporting. Should a gas leak, injury or health event occur, G7c confidently accounts for everyone's well-being and whereabouts in real-time, so no call for help ever goes unanswered.

The moment something happens, safety incident data is communicated to live monitoring personnel who can mobilize responders to an employee's exact location or trigger an evacuation in real-time. With a two-way speakerphone, monitoring personnel can communicate directly with the worker to provide comfort while also gathering critical insights and situational awareness for optimized emergency responses.

G7c delivers an exclusive customizable modular design, delivering the ability to expand functionality with a range of plug-and-play cartridges and a range of gas sensors. Choose from a Standard, Single-gas, Multi-gas diffusion or Multi-gas pump cartridge to address the needs of your work environment — everything is completely configurable to meet the needs of every industry, application and scenario.

With G7c, you have access to more information than ever before. Usage and event data automatically streams to the cloud when in areas of cellular coverage. Everything is time and location-stamped, powering our Blackline Analytics reporting platform. Bump test and calibration data is also communicated seamlessly for live compliance visibility and reporting. Teams can easily analyze their data without ever having to manually collect and compile anything. G7c does it all, so you don't have to.



Blackline Analytics reporting platform



Blackline Live safety monitoring portal

DETAILED SPECIFICATIONS

Functional settings

**Fall detection and No-motion detection:** Tri-axis accelerometer, tri-axis gyro, software processing, configurable sensitivity, configurable time for no-motion  
**SOS latch:** Pull latch to trigger SOS alert  
**Silent SOS:** Press and hold latch to trigger SOS alert  
**Low-battery:** Configurable threshold  
**Worker check-in:** Configurable timer (30 – 180 min, or off), automatic check-in when driving

Gas cartridge features

Under limit  
Over limit  
Time-weighted average (TWA)  
Short-term exposure limit (STEL)  
High gas alert  
Low gas alert  
Bump test and calibration notification  
Bump test and calibration failure

Size & weight

**G7 with Standard Cartridge**  
Size: 64 mm x 124 mm x 29 mm (2.52" x 4.88" x 1.06")  
Weight: 162 g (5.7 oz)

**G7 with Single-gas Cartridge**  
Size: 64 mm x 128 mm x 29 mm (2.52" x 5.04" x 1.06")  
Weight: 167 g (5.9 oz)

**G7 with Multi-gas diffusion Cartridge**  
Size: 66 mm x 150 mm x 29 mm (2.52" x 5.91" x 1.06")  
Weight: 192 g (6.8 oz)

**G7 with Multi-gas pump Cartridge\***  
Size: 66 mm x 151 mm x 38.5 mm (2.6" x 5.95" x 1.52")  
Weight: 238 g (8.4 oz)  
Target flow rate: 300ml/min  
Maximum hose length:  
100ft x 0.188" diameter (30.2m x 4.78mm) **or**  
50ft x 0.125"diameter (15.25m x 3.17mm)

Wireless updates

Device configuration changes: Yes  
Device firmware upgrade over-the-air (FOTA): Yes

User interface

Display: 168 by 144 pixel graphical, high contrast, liquid crystal display with front lighting  
Menu system: Driven by three-button keypad  
Power button: On/off  
SOS latch: Send emergency alert  
Multi-language support: Yes, EN, FR, ES, DE, IT, NL, PT

User notification

Green SureSafe® light: Blinking (powered), continuous (connected)  
Yellow top and front lights: Yellow pending alarm and yellow warning alarm  
Red top and front lights: Red alert communicated  
Blue LiveResponse™ top and front lights: Confirmation that a monitoring team has acknowledged the alert  
Alarm Indicators: Speaker, LED lights and vibration motor  
Speaker sound pressure level: ~95 dB @ 30 cm (~95 dB @ 11.8")  
Voice calling: Speakerphone and phone modes (G7c model only)

G7c wireless radio

**Wireless coverage:** 100 countries, 200 wireless carriers  
**North America:** : 3G/4G radio, 3G UMTS bands 2 and 5; 4G bands 2, 4 and 5  
**International:** 2G/4G radio, 2G G ESM bands E-GSM and PCS; 4G bands 3, 7 and 20  
**Antenna:** Internal regionally optimized  
**G7x wireless radio**  
Works with G7 Bridge satellite base station  
**Radio:** 902.0 – 928.0 MHz, 1 Watt  
**AS/NZ Radio:** 915.0-928.0 MHz  
**Antenna:** Internal  
**Radio link range:** 2 km (1.25 mi)

Location technology

**GPS Radio:** 48-channel high sensitivity  
**Assisted-GPS:** Yes (G7c model only)  
**GPS Accuracy:** ~5 m (16 ft) outdoors  
**Indoor location technology:** Blackline Safety location beacons  
**Location update frequency:** G7c 5 min, G7x 15 min defaults

Environmental

**Storage temperature:** -30°C to 60°C (-22°F to 140°F)  
**Operating temperature:** -20°C to 55°C (-4°F to 131°F)  
**Charging temperature:** 0°C to 45°C (32°F to 113°F)  
**Ingress Protection:** Designed to meet IP67

Power & battery

**Rechargeable Li-ion battery:** 1100 mAh Li-ion  
**Battery Life:** 18 hours at 20°C (68°F) under normal usage  
**Charge time:** 4 hours

Warranty

**G7:** two years limited warranty  
**Cartridges:** lifetime with service plan  
**Blackline Complete:** three year operating lease with three year warranty  
**Approvals**  
**G7c:** SAR, RoHS, CE, RCM  
**Unit ID 3570xxxxxx**  
**FCC ID:** W77G7C2 **IC:** 8255A-G7C2  
**Contains FCC ID:** XPY1EIQ24NN **IC:** 8595A-1EIQ24NN  
G7 TECHNICAL USER MANUAL || 57  
or  
**Unit ID 3567xxxxxx**  
**FCC ID:** W77G7C **IC:** 8255A-G7C  
**Contains FCC ID:** XPY1CGM5NNN, **IC:** 8595A-1CGM5NNN  
or  
**Unit ID 3566xxxxxx**  
**Contains FCC ID:** XPY1CGM5NNN, **IC:** 8595A-1CGM5NNN  
**Canada & USA:** Class I Division 1 Group A,B,C,D T4; Class I Zone 0 AEx da ia IIC T4; Ex da ia IIC T4 Ga  
**IECEX:** Ex da ia IIC T4 Ga  
**ATEX:** Ex da ia IIC T4 Ga  
**LEL:** CSA C22.2 No.152; ISA 12.13.01  
**LEL Pump Cartridge:** CSA C22.2 No.152; 0°C ≤ Ta ≤ 40°C; ANSI/ISA-12.13.01; -10°C ≤ Ta ≤ 40°C  
**G7x:** SAR, RoHS, RCM  
**FCC ID:** W77G7X **IC ID:** 8255A-G7X  
**Canada & USA:** Class I Division 1 Group A,B,C,D T4; Class I Zone 0 AEx da ia IIC T4; Ex da ia IIC T4 Ga  
**IECEX:** Ex ib IIC T4 Gb  
**LEL:** CSA C22.2 No.152; ISA 12.13.01  
**LEL Pump Cartridge:** CSA C22.2 No.152; 0°C ≤ Ta ≤ 40°C; ANSI/ISA-12.13.01; -10°C ≤ Ta ≤ 40°C

Gas	Sensor type	Sensor model	Range	Resolution
Ammonia (NH3)	Electrochemical	Citytech, Sensoric NH3 3E 100 SE	0–100 ppm	0.1 ppm
High-range ammonia (NH3)	Electrochemical	Sensoric NH3 E3 500 SE	0–500 ppm	1 ppm
Carbon monoxide (CO)	Electrochemical	Citytech, 4CF+ CiTiceL	0–500 ppm	1 ppm
High-range carbon monoxide (CO)	Electrochemical	Citytech 4CM	0–2000 ppm	5 ppm
Hydrogen resistant carbon monoxide (CO-H)	Electrochemical	Citytech 2CF3	0–500 ppm	1 ppm
Carbon dioxide (CO2)	NDIR	Gas Sensing Solutions, MiniIR	0–50,000 ppm	50 ppm
Chlorine (Cl2)*	Electrochemical	Citytech, Sensoric Cl2 3E 50	0–20 ppm	0.1 ppm
Chlorine dioxide (ClO2)*	Electrochemical	Sensoric ClO2 3E 1 O	0–2 ppm	0.01 ppm
COSH	Electrochemical	Citytech, 4COSH Dual Gas CO/ H2S Sensor	0–500 ppm CO, 0–100 ppm H2S	1 ppm CO, 0.1 ppm H2S
Hydrogen cyanide (HCN)	Electrochemical	Sensoric HCN 3E 30 F	0–30 ppm	0.1 ppm
Hydrogen fluoride (HF)*	Electrochemical	Sensoric HF 3E 10 SE	0-10 ppm	0.1 ppm
Hydrogen sulfide (H2S)	Electrochemical	City Technology, 4HS+ Hydrogen Sulfide CiTiceL	0–100 ppm	0.1 ppm
High-range hydrogen sulfide (H2S)	Electrochemical	City Technology, 4HS+ Hydrogen Sulfide CiTiceL	0-500 ppm	0.5 ppm
LEL-MPST <sup>TM</sup> <small>See Blackline's LEL-MPS datasheet for more information</small>	Molecular property spectrometer <sup>TM</sup>	Nevada Nano, LEL MPST <sup>TM</sup>	0–100% LEL	0.1% LEL
LEL-infrared (LEL-IR)	NDIR	MIPEX, 02-X-X-X.1	0–100% LEL	1% LEL
Nitrogen dioxide (NO2)	Electrochemical	City Technology, 4ND	0–50 ppm	0.1 ppm
Oxygen (O2)	Pumped electrochemical	City Technology, 4OxLL Longlife Oxygen CiTiceL	0–25% vol	0.1% vol
Ozone (O3)*	Electrochemical	Sensoric O3 3E 1	0–1 ppm	0.01 ppm
Photoionization (PID) ppm	PID	Ion Science, MiniPID 2	0–4,000 ppm	Dynamic resolution**, 0.1 ppm
Sulfur dioxide (SO2)	Electrochemical	City Technology, 4S Rev. 2 Sulfur Dioxide CiTiceL	0–100 ppm	0.1 ppm