FEDERAL SIGNAL

HAZARDOUS LOCATION

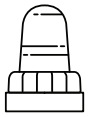
AUDIBLE AND VISUAL SIGNALING DEVICES



www.fedsig.com

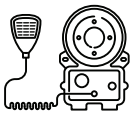


SIGNALING DEVICE PRODUCT CATEGORIES



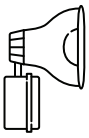
VISUAL SIGNALS

Critical warning lights for multiple applications and extreme environments. Our products include flashing, steady state indicators, and rotating lights. Visual signals can be used for process control, plant safety, or fire alarm and emergency evacuation.



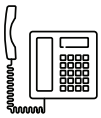
INTERCOMS

Two-way modular communication with custom system design and easy expansion. Available in wall-mount, safe area, and hazardous location.



AUDIBLE SIGNALS

Industrial audible alarms for fire alarm, fire and gas detection systems and other essential and diverse applications. Federal Signal's offering includes sirens, sounders, speakers, horns, bells, and much more.



TELEPHONY

Industrial telecommunication devices, IP and analog, suitable for safe area, watertight, and hazardous environments, including flameproof models.



PUBLIC ADDRESS

High performance standalone solutions or facility wide public address systems. High-powered audio amplifiers, tone generators, pre-recorded voice messaging and high-quality speakers accommodate any office, industrial, or hazardous location.



INITIATING DEVICES

Highly visible push buttons, break glass, and pull stations designed to minimize installation expense, discourage tampering, and withstand hazardous environments.



HAZARDOUS LOCATIONS

Class I, Division 2, Class I, Zone 2, (Class II Division 2, Zone 22)

A hazardous location is an area where flammable gases, vapors, liquids, or dust might be present in amounts that could start a fire or explosion under certain conditions. These risky materials may not always be in the air, but if they are released during normal work or accidents, they can create dangerous situations. Specially designed equipment is needed in these areas so it does not create sparks or heat that could set off an explosion.

COMMON EXAMPLES INCLUDE:

- Aircraft hangers
- Agricultural facilities
- Battery manufacturing plants
- Chemical plants
- Electronics manufacturing
- Fuel storage / service
- Industrial facilities
- Natural gas pipelines and pumping stations
- Textile mills and factories
- Petroleum refineries
- Pharmaceutical manufacturing
- Wastewater treatment plants
- Wherever you need us

Hazardous locations must follow strict rules from OSHA (Occupational Safety and Health Administration) and the NEC/CEC (National Electrical Code / Canadian Electrical Code).

Compliance with NEC/CEC guidelines and UL product safety standards helps organizations meet OSHA's workplace safety standards, promoting a safer work environment.

OSHA sets and enforces safety standards to protect workers from hazards, including those related to electrical safety.

OSHA Standard 1910.307: Hazardous (Classified) Location

Article 1910.307 covers the requirements for electric equipment and wiring in hazardous locations. Each room, section, or area should be considered individually in determining its classification.



NEC /CEC

NEC / CEC provides detailed regulations for safe electrical design, installation, and inspection. The NEC defines hazardous and explosion-proof environments in two classification systems.

1) NEC Article 500 / CEC Section 18

NEC Article 500 / CEC Section 18 categorizes hazardous and explosion-proof environments into Classes, Divisions, and Groups.

2) NEC Articles 505, 506 / CEC Section 18

NEC Article 505 / CEC Section 18 classifies locations with flammable gases and vapors or liquids into Zones and Gas Groups, and Article 506 classifies locations with combustible dusts or ignitable flyings/fibers into Zones and Groups.

NEC Article 500 / CEC Section 18	
CLASS	
Class I	Flammable vapors and gases may be present / can exist
Class II	Combustible dust may be found
Class III	Ignitable fibers/ flyings may be present
DIVISION: Area in which ignitable concentrations of hazards...	
Division I	Can exit under normal operation conditions
Division II	Are not likely to exist under normal operation conditions

NEC Articles 505, 506 / CEC Section 18	
ZONE: Area where ignitable concentrations of flammable gases, vapors, or liquids are...	
Zone 0	Present continuously or for long periods of time under normal operating conditions
Zone 1	Likely to exist under normal operating conditions
Zone 2	Not likely to exist under normal operating conditions
Area where ignitable concentrations of combustible dust or ignitable fibers/flyings are...	
Zone 20	Present continuously or for long periods of time under normal operating conditions
Zone 21	Likely to exist under normal operating conditions
Zone 22	Not likely to exist under normal operating conditions



Categories for HAZARDOUS LOCATIONS

Hazardous and explosion-proof environments are categorized into **gas, vapor, and dust groups** based on the type and ignition risk of flammable substances. This classification helps ensure the selection of appropriate safety measures and equipment. Additionally, T-codes, ranging from T1 to T6, indicate the maximum surface temperature of electrical equipment, preventing ignition of these flammable materials.

Gas, Vapor, and Dust Groups

NEC ARTICLE 500 / CEC SECTION 18	NEC ARTICLE 505, 506 / CEC SECTION 18
Class I, Division 1 and 2	**Zone 0, 1, and 2**
A (Acetylene)	IIC (Acetylene and Hydrogen)
B (Hydrogen)	IIB + H2 (Hydrogen)
C (Ethylene)	IIB (Ethylene)
D (Propane)	IIA (Propane)
Class II, Division 1 and 2	**Zone 20, 21, 22**
E (Combustible metal dust – Division 1 only)	IIIC (Combustible metals, dust, and fibers/flyings – Zone 20 and 21 only)
F (Combustible carbonaceous dust)	IIIB (Combustible dusts other than metal)
G (Combustible non conductive dust)	IIIB (Combustible dusts other than metal)
Class III	IIIA (Combustible or ignitable fibers/flyings other than metal)

T-Codes

Temperature Class	Maximum permissible surface temperature of equipment in °C
T6	85°C
T5	100°C
T4	135°C
T3	200°C
T2	300°C
T1	400°C

Before you choose or install any Federal Signal product, the area should be officially "classified" by a qualified professional. Federal Signal does not classify locations, but we strongly recommend getting this done. That's the only way to make sure you are choosing equipment that will be safe and compliant for your specific environment.

For more information, refer to the following resources:

National Electrical Code (NEC), Canadian Electrical Code (CEC), International Electrotechnical Commission (IEC), Occupational Safety and Health Administration (OSHA), Underwriters Laboratories (UL), NFPA 70, NFPA 497, and NFPA 499.

Visual signals are crucial for alerting, warning, and communicating important messages in industrial settings to ensure safety and efficiency. Federal Signal offers a wide range of industrial visual signals designed to meet the diverse needs of different industries.



COMMANDER®



HAZARDOUS LOCATION LIGHTS

	371DST	371LEDX	191XL	151XST	154XST
FEATURES					SUPERVISED; LOW IN-RUSH
VOLTAGE	12-24 Vdc 120 Vac 240 Vac	120 Vac	24 Vac/Vdc 120-240 Vac 277 Vac	12-24 Vdc 120 Vac 230-240 Vac	24 Vdc
LIGHT SOURCE	Strobe	LED	LED	Strobe	Strobe
LIGHT PATTERN	80 FPM	60 RPM	60 FPM Steady	80 FPM	60 FPM (CN) 80 FPM
LENS COLORS	● ● ○ ● ●	● ● ○ ● ● ●	● ● ○ ● ● ●	● ● ○ ● ● ●	● ● ○ ● ● ●
MOUNTING TYPE	Surface or 1-inch NPT Pipe	Surface or 1-inch NPT Pipe	Surface or ¾-inch NPT Pipe	Surface or ¾-inch NPT Pipe	Surface or ¾-inch NPT Pipe
NEMA/ IP RATINGS	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K
NEC AND ZONE RATINGS	CI D2, CII D2, CIII	CI D2, CII D2, CIII	CI D2, CII D1, CIII CI Zone 2, Zone 22	CI D2, CII D1,CIII	CI D2, CII D1,CIII
AGENCIES	UL/cUL	UL/cUL	UL/cUL	UL/cUL, CSA	UL/cUL, CSFM

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.

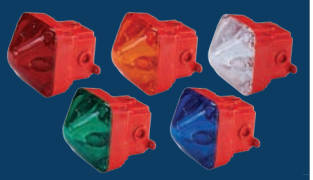


ELECTRARAY WARNING LIGHTS



FIREBALL

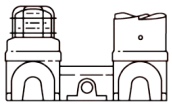
AUDIBLE SIGNALS VISUAL SIGNALS



DURALERT™

224XST	225X	225XST	225XL	FB2LEDX	DRTX
SUPERVISED, LOW IN-RUSH, HEARING IMPAIRED		LOW IN-RUSH			HEARING IMPAIRED
24 Vdc	120 Vac	12-24 Vdc 120 Vac 230-240 Vac	24 Vac/Vdc 120-240 Vac	12-24 Vdc 120-240 Vac	24 Vdc 120-240 Vac
Strobe	LED	Strobe	LED	LED	LED
80 FPM	90 RPM	80 FPM	60 FPM	Single Color: 60 FPM, 120 FPM, Steady Multicolor: 60 FPM, Simulated Strobe, Steady	4 Patterns: Steady, 60 FPM, 120 FPM, Simulated Strobe 4 Tones: Continuous, Temporal 3, Temporal 4, Hi/Lo
½-inch NPT Pipe	½-inch NPT Pipe	½-inch NPT Pipe	½-inch NPT Pipe	Surface or ½-inch NPT Pipe	Surface or ½-inch NPT Pipe
Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP67, IP69K	Type 4X IP66 Enclosure IP69K
CI D2, CII D2, CIII	CI D2, CII D2, CIII	CI D2, CII D2, CIII	CI D2, CII D2, CIII	CI D2, CII D2, CIII CI Zone 2, CII Zone 22	CI D2, CII D2, CIII
CSFM, CSA, UL/cUL, UL Fire	UL/cUL	UL/cUL, NSF	UL/cUL, CSFM, CSA	UL/cUL, CE/UKCA	UL/cUL, UL/ULC Fire

Note: Certifications and features are SKU specific. Please reference web pages and data sheets for more information.



Global Series®
Meeting stringent certifications, Global Series® is an innovative next generation product line of Glass Reinforced Polyester (GRP) signals that is modular, aesthetically appealing, and light weight in design.



High or Low Profile Lens



High Profile Lens

GLOBAL SERIES

	G-LED	G-STR (15J & 21J VERSIONS)
VOLTAGE	24 Vdc 120-240 Vac	24 Vdc 120 Vac 220-240 Vac
LIGHT SOURCE	LED	Strobe
LIGHT PATTERN	8 Flash patterns: Steady, Blink, Swell, Strobe, Rotate (CW) Rotate (CCW), Waggle, Pinwheel	Vdc: 60FPM, Vac: 60-90FPM
LENS COLORS		
MOUNTING TYPE	Surface, U-bracket or Ex de mount	Surface, U-bracket or Ex de mount
NEMA/ IP RATINGS	Type 4X IP66 Enclosure IP67, IP69K	Type 4X IP66 Enclosure IP67, IP69K
NEC AND ZONE RATINGS	CI D2, CII D2, CIII CI, Zone 1, Zone 21	CI D2, CII D2, CIII CI, Zone 1, Zone 21
AGENCIES	ABS, ATEX, CE, CSFM, EAC, GOST, IECEx, INMETRO, Marine, UL/cUL	ABS, ATEX, CE, CSFM, EAC, GOST, IECEx, INMETRO, Marine, UL/cUL, UL Fire

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.
Available in Red or Black body color.

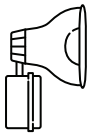


Surface mount U-bracket Ex de mount

GLOBAL SERIES

	G-SND SOUNDER	G-SPA AMPLIFIED SPEAKER	G-SPK LOUDSPEAKER
VOLTAGE	24 Vdc 120 Vac 230 Vac	24 Vdc 120 Vac 230 Vac	NA
RATED POWER	15 W	15 W	15 W (70 or 100 V_{rms})
SPL @ 10' dBA	100	100	100
TONES	15 selectable tones	NA	NA
MOUNTING TYPE	Surface, U-bracket or Ex de mount	Surface, U-bracket or Ex de mount	Surface, U-bracket or Ex de mount
NEMA/ IP RATINGS	Type 4X IP66 Enclosure	Type 4X IP66 Enclosure	Type 4X IP66 Enclosure
NEC AND ZONE RATINGS	CI D2, CII D2, CIII CI, Zone 1, Zone 21	CI D2, CII D2, CIII CI, Zone 1, Zone 21	CI D2, CII D2, CIII CI, Zone 1, Zone 21
AGENCIES	ABS, ATEX, CE, CSFM, EAC, GOST, IECEx, INMETRO, UL/cUL, UL Fire	ABS, ATEX, CE, CSFM, EAC, GOST, IECEx, INMETRO, UL/cUL	ABS, ATEX, CE, CSFM, EAC, GOST, IECEx, INMETRO, UL/cUL

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.
Available in Red or Black body color.



In industrial settings, audible signals play a crucial role in communicating important information to workers and enhancing overall safety. These signals are designed to alert individuals to specific events, hazards, or actions that require attention .

	 VIBRATONE® HORN	 VIBRATONE® ELECTRONIC HORN	 ELECTRONIC SIRENS
	350WBX	450EWBX	SST3GCX-MV
VOLTAGE	120 Vac 240 Vac	12 Vdc 24 Vdc	24 Vdc 120/240 Vac
RATED POWER	NA	NA	NA
SPL @ 10' dBA	100	24 Vdc: 99 12 Vdc: 94	101-108 (Tone dependent)
TONES	Coded* or sustained tones	Coded* or sustained tones	Wail, Yelp, and Horn
MOUNTING TYPE	Surface	Surface	Surface
NEMA/ IP RATINGS	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K
NEC AND ZONE RATINGS	CI D2, CII D2, CIII	CI D2, CII D2, CIII	CI D2, CII D2, CIII
AGENCIES	UL/cUL	CSFM, UL/cUL, UL/ULC Fire	UL/cUL

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.
* Switch power source ON/OFF for manual control of 350WBX/450EWBX continuous horn for coded applications.

SELECTONE®



UTM
Plug-in 32-tone module



Tone modules are sold separately

TM33-SD
Custom tone module







SELECTONE AMPLIFIED SPEAKERS				AMPLIFIED SPEAKERS	
300GCX	**302GCX**	**304GCX**	**314GCX**	**ASHH**	**ASUH**
24 Vac/Vdc 120 Vac 240 Vac	24 Vac/Vdc 120 Vac 240 Vac	24 Vdc	24 Vdc	24 Vdc	24 Vdc
15 W	30 W	15 W	30 W	15 W	30 W
0-110	0-114	0-108	0-112	108	0-112
Requires tone module*	Requires tone module*	Requires tone module*	Requires tone module*	Requires tone module*	Requires tone module*
Surface	Surface	Surface	Surface	Surface	Surface
Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K
CI D2, CII D2, CIII CI Zone 2, CII Zone 22	CI D2, CII D2, CIII CI Zone 2, CII Zone 22	CI D2, CII D2, CIII	CI D2, CII D2, CIII	CI D2, CII D2, CIII	CI D2, CII D2, CIII
CSFM, UL/cUL	CSFM, UL/cUL	CSFM, UL/cUL, UL/ULC Fire	CSFM, UL/cUL, UL/ULC Fire	CSFM, UL/cUL, UL/ULC Fire	CSFM, UL/cUL, UL/ULC Fire

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.

* With Audio Connector Kits, sold separately, SelecTone powered loudspeakers interface to external 1 V, 2.8 V, 10 V, 25 V, and 70 V audio sources. Reference data sheets or web pages for more information.

Federal Signal is a well-known manufacturer of public address speakers that are designed for various applications, including emergency notification systems, public safety, industrial settings, and commercial environments. These speakers are engineered to deliver clear and intelligible audio messages over long distances, ensuring effective communication in critical situations.

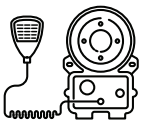




AUDIOMASTER® PUBLIC ADDRESS SPEAKERS

	AM15XD2	AM300GCX	AM302GCX
RATED POWER	15 W	15 W	30 W
EXTERNAL AUDIO SOURCE	8 Ohm	25/70 V_{rms} Volume Taps: 15 W, 9 W, 3 W, or 1.5 W	25/70 V_{rms} Volume Taps: 30 W, 15 W, or 9 W
dBA SPL AT 10'	110	110	114
APPLICATIONS	Voice communication and reproduced electronically generated warning tones	Voice communication and reproduced electronically generated warning tones	Voice communication and reproduced electronically generated warning tones
MOUNTING TYPE	Surface	Surface	Surface
NEMA/ IP RATINGS	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K
NEC RATINGS	Cl D2, CII D2, CIII	Cl D2, CII D2, CIII	Cl D2, CII D2, CIII
AGENCIES	UL/cUL	UL/cUL, UL Fire, CSFM	UL/cUL, UL Fire, CSFM

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.
AM300GCX and AM302GCX available in Grey or Red body color.



A Federal Signal intercom speaker is designed for clear, reliable communication in industrial settings. Built by Federal Signal Corporation, these speakers are part of intercom systems that enable two-way audio between different areas of a facility. Typically integrated into a base or substation, the speaker ensures high-quality sound for access control, instructions, or conversation.



	310X-MV
VOLTAGE	24 Vdc 120 Vac 240 Vac
dBA SPL @ 10	101
MOUNTING TYPE	Surface
NEMA/ IP RATINGS	Type 4X IP65 Enclosure
NEC RATINGS	CI D2, CII D2, CIII
AGENCIES	UL/cUL, CSA, Marine

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.

Federal Signal industrial telephony refers to the use of telephones in industrial settings, primarily for communication purposes. The VoIP (Voice over Internet Protocol) industrial telephones are becoming increasingly popular due to their cost-effectiveness, flexibility, and ease of use compared to traditional analog industrial telephones. VoIP industrial telephones offer additional software features such as self-monitoring and fault check functions, remote management, and lower installation and operating costs.



FT SERIES

	FT200C-A	FT200C-V
TYPE	Analog	VoIP
KEYPAD	✓	✓
VOLUME CONTROL HANDSET	N/A	✓
CABLE ENTRY	½-inch NPT conduit hub	½-inch NPT conduit hub
MOUNTING TYPE	Surface	Surface
MOUNTING PLATE	✓	✓
NEC RATINGS	CI D2, CII D1	CI D2
AGENCIES	UL/cUL	UL/cUL

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.

Built to perform when seconds matter, Federal Signal initiating devices give workers a fast, unmistakable way to activate alarms and safety systems at the source of an incident. Initiating devices serve as the critical first step, providing the manual control point that starts the chain of protection. With durable construction for hazardous environments and designs that discourage tampering, they help facilities protect people, equipment, and operations with confidence.





CALL POINTS

	CP-PB	CP-BG
SWITCH ELECTRICAL RATING	48 Vdc, 3 A Max	48 Vdc, 3 A Max
ACTIVATION	Push Button	Break Glass
MOUNTING TYPE	Surface	Surface
NEMA/ IP RATINGS	Type 4X IP66 Enclosure IP69K	Type 4X IP66 Enclosure IP69K
NEC RATINGS	CI D2, CI Zone 1, Zone 21	CI D2, CI Zone 1, Zone 21
AGENCIES	UL/cUL, UL/ULC Fire, EN54-11, ATEX/IECEx, CE/UKCA, SIL2	UL/cUL, UL/ULC Fire, EN54-11, ATEX/IECEx, CE/UKCA, SIL2

Note: Certifications and features are SKU specific. Please reference webpages and data sheets for more information.



FEDERAL SIGNAL

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ASSEMBLED IN THE USA

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