SWIFT™ Intelligent Wireless Detectors

Description

SWIFT™ (Smart Wireless Integrated Fire Technology) wireless detectors are intelligent (addressable) detectors that provide secure, reliable communication to the Fire Alarm Control Panel (FACP) using a Class A, mesh network. Wireless detectors can be used in the following types of conditions, where it is costly, obtrusive, or possibly dangerous to use traditional wired devices.

- concrete walls/ceilings
- buried wires
- surface-mount conduit
- asbestos

In addition, both wired and wireless devices can be present on the same FACP providing an integrated, wired-wireless solution to offer increased installation potential.

The mesh network (within the SWIFT System) creates a child-parent relationship (for example, backup communication) between the devices, so that each device has two parents providing a secondary path to transmit communications on every device. If one device can no longer operate for any reason, the remaining devices can continue to communicate directly with each other, or they can communicate through one or more intermediate devices. After an initial mesh network is formed, mesh restructuring automatically occurs. The mesh restructuring locates the strongest paths possible within the network.

The SWIFT System also engages frequency hopping to prevent system interference whether intentional or accidental. The operation of each device is subject to the following conditions in compliance with the FCC Standards, Part 15.

1. The device may not cause harmful interference.
2. The device must accept any interference received including interference that may cause undesired operation.

The SWIFT detection line includes the following detectors.

- Photoelectric detectors
  - The photoelectric detectors transmit a digital representation of the smoke density through a wireless mesh that transmits to a gateway and to an FACP.
- Acclimate™ standard fixed heat and rate-of-rise detectors that do the following:
  - Combines a photoelectric chamber and a 135° F fixed temperature heat detector.
  - Transmits an alarm signal due to heat in compliance with UL® Standard 521.
  - Uses sensors designed for an open area protection with 50 foot spacing capability as approved by UL Standard 521.

SWIFT, Smart Wireless Integrated Fire Technology

SWIFT Intelligent Wireless Detectors

Features

- Complies with UL® Standard 864 Listing.
- Connects to the E3 Series® or S3 Series fire alarm control panels.
- Supports up to 50 wireless devices per gateway, up to 200 wireless devices total per panel.
- Uses redundant wireless mesh technology to support Class A survivability.
- Employs frequency hopping to eliminate outside interferences.
- Engages each device to act as a signal repeater/ booster, avoiding large and costly separate repeater units.
- Combines mixed wired System Sensor devices and wireless devices on the same SLC loop.
- Includes multi-device alarm activation.
- Designed with tamper-proof construction.
- Has addressable code wheels.
- Provides alarm verification, variable sensitivity, and automatic drift compensation.
- Applies low battery, signal pre-warning.

SIGNALING LISTED S1949 FM APPROVED 3053714 7254-1703:0178 7272-1703:0179

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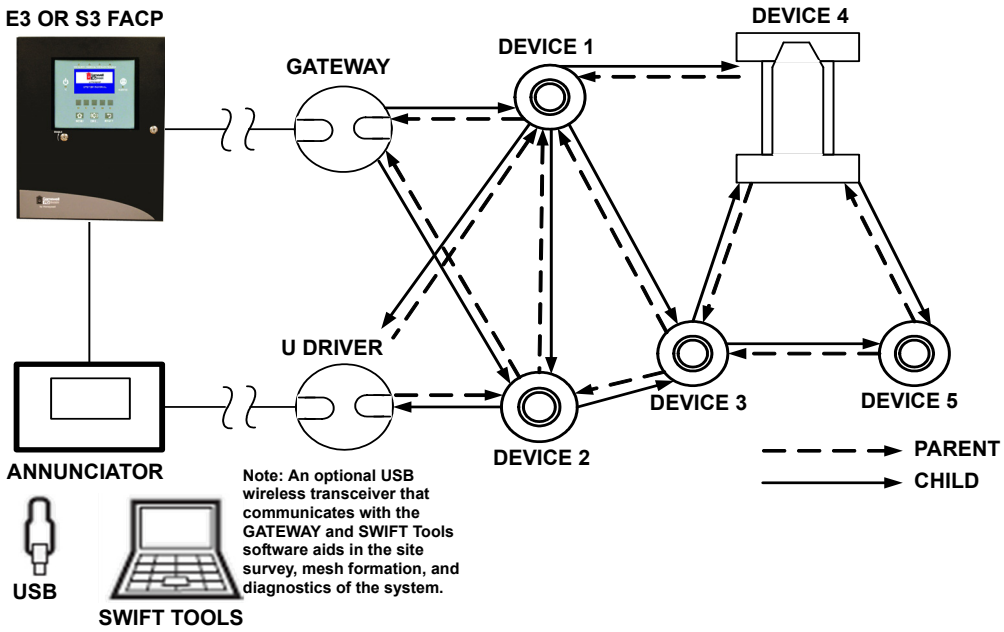

Figure 1 SWIFT Mesh Network

Description (Continued)

All sensors offer addressable code wheels and two LEDs. The LEDs are controlled by the panels. Operational modes include red, green and amber colors with various solid or blink patterns.

The devices transmit communication signals across the mesh network through a gateway to the FACP. Some systems may require a user interface and annunciator to display wireless specific messages. The FACP identifies the SWIFT wireless device as another addressable device on the system providing similar detection functions and outputs as a wired counterpart. In addition, both wired and wireless devices can be present on the same FACP to meet the needs of a given application. A SWIFT wireless System can use any combination of modules, smoke or heat detectors.

SWIFT Intelligent Wireless Detectors Specifications

Physical/Operating Specifications

Height:	2.4 inches (61mm) installed in B210W base
Diameter:	6.0 inches (152 mm) installed in B210W base
Device Weight (includes 4 batteries):	9.2 oz (261 g) installed in B210W base
Operating Temperature Range:	
Photo:	32°F to 120°F (0°C to 49°C)
Air Velocity:	0 - 4000 ft/min.
Operating Humidity Range:	10% to 93% non-condensing
Thermal Ratings:	Rate-of-Rise Detection: 15°F/min. (8.3°C/min.)
Fixed Temperature Setpoint:	135°F (57°C)

SWIFT Intelligent Wireless Detectors Specifications (Continued)

Electrical Specifications

Maximum Operating Voltage:	3.3 VDC
Maximum Standby Current:	210 µA @ 3.3 VDC (one communication every 23.8 seconds with LED blink enabled).
Maximum Alarm Current (LED on):	5 mA @ 3.3 VDC (LED on)
Radio Frequency Range:	902-928 MHz

Battery Specifications

Battery Type	4 Panasonic CR123A or 4 Duracell DL123A
Battery Life	1 year minimum
Battery Replacement	Upon TROUBLE BATTERY LOW display and/or during annual maintenance.

Ordering Information

Part Number	Description
WSD-P	Velociti Wireless Photoelectric Sensor
WSD-ACCLIMATE	Velociti Wireless Multi-Criteria Sensor
WTD-RH	Velociti Wireless Thermal Detector, Rate-Of-Rise, 135°
WTD-H	Velociti Wireless Thermal Detector, Fixed Temp, 135°
Base:	
B210W	Wireless 6” flanged Base includes a built-in magnet for wireless devices, installation and tamper states.
Accessory:	
W-USB	SWIFT Tools USB Adapter

***** Note: Consult with the Fire Alarm Control Panel Manufacturer to obtain the complete system requirements.