SWIFT™ Intelligent Wireless Modules

Description

SWIFT™ (Smart Wireless Integrated Fire Technology) wireless modules are intelligent (addressable) modules that provide secure, reliable communication to the Fire Alarm Control Panel (FACP) using a Class A, mesh network. Wireless modules 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
*   surface-mount conduit
*   buried wires
*   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.

SWIFT Monitor Module

The SWIFT monitor module is intended for use with a wireless gateway or wireless FACP to interface with a device having contacts used to signal status conditions. It is designed to provide an interface to the following types of contact devices.

*   security contacts
*   waterflow switches
*   pull stations.

The input to the monitor module is non-latching and does not require a reset. The device has a panel controlled LED indicator. The monitor module must be within 3 feet of the monitored device.

SWIFT Relay Module

The SWIFT relay module allows a compatible control panel to switch discreet contacts by code command. The relay contains an isolated set of Form-C contacts, which operate as a DPDT switch. Circuit connections to the relay are not supervised by the module. The SWIFT relay module can be used to activate the following functions:

*   remote power supply (in conjunction with a monitor module).
*   elevator recall.
*   door holders and fan shutdown of wired devices.
*   SWIFT devices within the same mesh network.

The module also includes a panel-controlled LED indicator.

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SWIFT, Smart Wireless Integrated Fire Technology

SWIFT Intelligent Wireless Modules

Features

*   Complies with UL® Standard 864 Listing.
*   Connects to E3 Series® or S3 Series fire alarm control panels.
*   Each mesh supports up to 48 wireless devices per gateway.
*   Uses redundant wireless mesh technology to support Class A survivability.
*   Employs frequency hopping to eliminate outside interference.
*   Engages each device to act as a signal repeater/booster, avoiding large and costly separate repeater units.
*   Combines mixed wired Velociti® devices and wireless devices on the same SLC loop.
*   Includes multi-device alarm activation.
*   Designed with tamper-proof construction.
*   Has addressable code wheels.
*   Applies low battery, signal pre-warning.

Ordering Information

Part Number	Description
WAM-MM	Wireless Monitor Module
WAM-RC	Wireless Addressable Module-Relay Control
Accessory:	
W-USB	SWIFT Tools USB Adapter

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

SIGNALING

UL LISTED S1949 FM APPROVED 3053714 7300-1703:0181

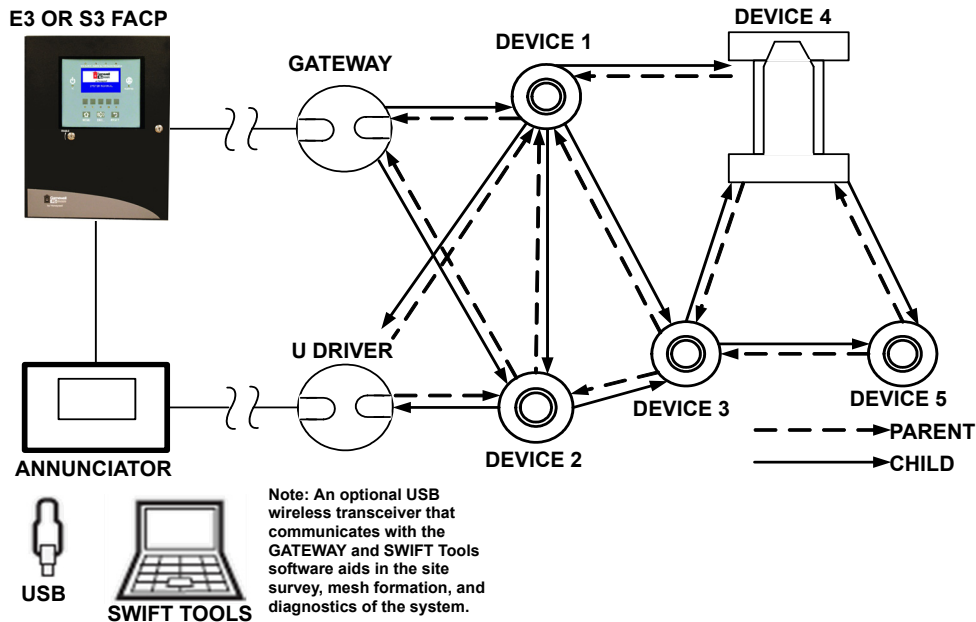ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

Figure 1 SWIFT Mesh Network

Description (Continued)

All sensors offer addressable code wheels and one LED. The LED is 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.

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.

SWIFT Intelligent Wireless Modules Specifications

Physical/Operating Specifications

Dimensions:	H:4¼" x W:4¼" x D:1½" (H:10.79 x W:10.79 x D:3.8 cm)
Device Weight with 4 batteries & face-plate:	7.9 oz (224 g)
Operating Temperature Range:	32°F to 120°F (0°C to 49°C)
Operating Humidity Range:	10% to 93% non-condensing

SWIFT Intelligent Wireless Modules Specifications (Continued)
Electrical Specifications

Maximum Operating Voltage:	3.3 VDC
Average Operating Current:	210 µA, 3.9k EOL
Maximum Current Draw:	5.0 mA (LED on)
EOL Resistance:	3.9K Ohms
Maximum IDC Wiring Resistance:	10 Ohms
Maximum IDC Voltage:	3.2 Volts
Maximum Average IDC Current:	5.5 µA
Maximum Transmit RF Power:	17dBm
Radio Frequency Range:	902-928 MHz

Relay Module Specifications
Electrical Specifications

Maximum Operating Voltage:	3.3 VDC
Average Operating Current:	210 µA
Maximum Current Draw:	5 mA (LED on)
Maximum Transmit RF Power:	17 dBm
Radio Frequency Range:	902-928 MHz

Current Rating	Maximum Voltage	Load Description	Application
2 A	25 VAC	PF = 0.35	Non-coded
3 A	30 VDC	Resistive	Non-coded
2 A	30 VDC	Resistive	Coded
0.46 A	30 VDC	(L/R = 20ms)	Non-coded
0.7 A	70.7 VAC	PF = 0.35	Non-coded
0.9 A	125 VDC	Resistive	Non-coded
0.5 A	125 VAC	PF = 0.75	Non-coded
0.3 A	125 VAC	PF = 0.35	Non-coded

Table 1: Relay Contact Ratings

Battery Specifications

Battery Type:	4 Panasonic CR123A or 4 Duracell DL123A
Battery Life:	2 year minimum
Battery Replacement:	Upon TROUBLE BATTERY LOW display and/or during annual maintenance