5Simplex

UL, ULC, CSFM Listed; FM Approved*

True Alarm Fire Alarm Systems

Fire Alarm Network Annunciators; Fire Alarm Ethernet Switches

Features

Provides a dedicated Fire Alarm local area network (LAN) for connection of a TrueSite workstation server to remote clients:

- Fire Alarm Ethernet Switches provide up to eight wired Ethernet connections with individual earth fault supervision
- Wired Ethernet cable distance of up to 328 ft (100 m)
- Fire Alarm Ethernet Switches can be interconnected to extend connection capacity and/or distance using either Ethernet wired ports or fiber optic ports
- Fiber optic cable switch connections provides a distance of up to 1.24 miles (2 km) for multimode fiber, and up to 9.3 miles (15 km) for single-mode
- Fire Alarm Ethernet Switches are UL listed to Standard 864 and ULC listed to Standard S527
- Switches are available without earth fault supervision for special applications not requiring fire alarm listings
- For additional TrueSite Workstation server and client information, refer to data sheet \$4190-0016

Available with three connection options:

- Eight Ethernet wired ports with RJ-45 terminations
- Four wired ports and two single-mode fiber optic ports (SC connectors)
- Four wired ports and two multimode fiber optic ports (SC connectors)

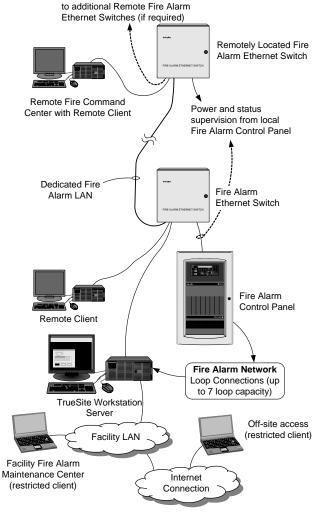
Earth faults are reported three ways:

- An on-board IDNet Supervised IAM is available for connection to a compatible Simplex[®] fire alarm control panel
- An on-board trouble relay provides contact transfer
- On-board LEDs identify fault location per port

Description

Overview. Fire Alarm Ethernet Switches combine an Ethernet switch module with an earth detection circuit (for wired Ethernet connections), housed in a dedicated cabinet. Using Fire Alarm Ethernet Switches allows interconnection of a TrueSite workstation server, and multiple TrueSite workstation clients, into a dedicated Fire Alarm LAN. When networked, the TrueSite workstation clients can monitor and (if authorized) control fire alarm system activity. If additional connections or increased distances are required, Fire Alarm Ethernet Switches can be connected to additional switches.

Switch Details. The Fire Alarm Ethernet Switch uses an Ethernet switching hub to bridge between connected data links. It also has the ability to segment the Ethernet network in separate collision domains for network survivability.



Fire Alarm Ethernet Switch Connection Reference

Switch Operation. Data packets are inspected to determine the source and destination address of each packet, then forwarded accordingly. Simultaneous data exchanges are allowed on different data links, resulting in more throughput. Operation is either half-duplex or full-duplex.

Switch Communications Support. Wired Ethernet Communication protocols include 10Base-T or 100Base-TX, allowing network Ethernet connection speeds of 10 Mbps or 100 Mbps. Models with fiber optic ports allow Fire Alarm Ethernet Switches to be interconnected using the advantages of fiber optics connections. Fiber optics ports operate at 100Base-FX.

* Refer to product selection details on page 2 for listing specifics. This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7300-0026:336 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

Description (Continued)

Earth Fault Detection. When an earth fault is detected by the Earth Detection Module, it triggers a general trouble for external monitoring. Monitoring is performed by either communicating with the on-board IDNet IAM or by monitoring the trouble relay contacts.

Detailed Earth fault status is indicated by the on-board status LEDs (see list on page 4).

Product Selection

Note: Ethernet Switch equipment and accessories are ordered as options for use with TrueSite Workstation upper level product selection model numbers per the System Order Reference section below. For additional TrueSite Workstation information, refer to data sheet S4190-0016.

System Order Reference (to be selected per order type)

Model	Description			
4190-8401	TrueSite Workstation, Standard Operation			
4190-8402 TrueSite Workstation, Redundant Operation				
4190-8403	TrueSite Workstation Fire Proprietary Supervising Station			
4190-8410	4190-8410 TrueSite Workstation Remote Client			
4190-8901	Aftermarket Hardware Additions			

Fire Alarm Ethernet Switches (agency listed for fire alarm)

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	Model	Connections	Description	Listings	
	4190-6050	Eight wired Ethernet connections		UL 864, ULC S527; Each TrueSite	
	4190-6054	Four wired Ethernet connections and two single-mode fiber optic connections	Fire Alarm Ethernet Switch, 24 VDC, red cabinet; with Earth Detection on wired	Workstation Server and Client requires a 4190-6010 Transient Suppressor, see below; power is provided by a listed fire alarm power supply	
	4190-6055	Four wired Ethernet connections and two Multimode fiber optic connections	connections		

Ethernet Switches (not agency listed for fire alarm)

Model	Connections	Description	Listings	
4190-6051	Eight wired Ethernet connections		UL 864 Recognized component, does	
4190-6056	Four wired Ethernet connections and two single-mode fiber optic connections	Ethernet Switch only; 6 W @ 10-36 VDC; 6 VA @ 8-24 VAC; use Power Adapter per below	not include Earth detection module or cabinet Dimensions: 5-11/16" x 7-3/8" x 1-3/4" (145 mm x 187 mm x 44.5 mm)	
4190-6057	Four wired Ethernet connections and two Multimode fiber optic connections			

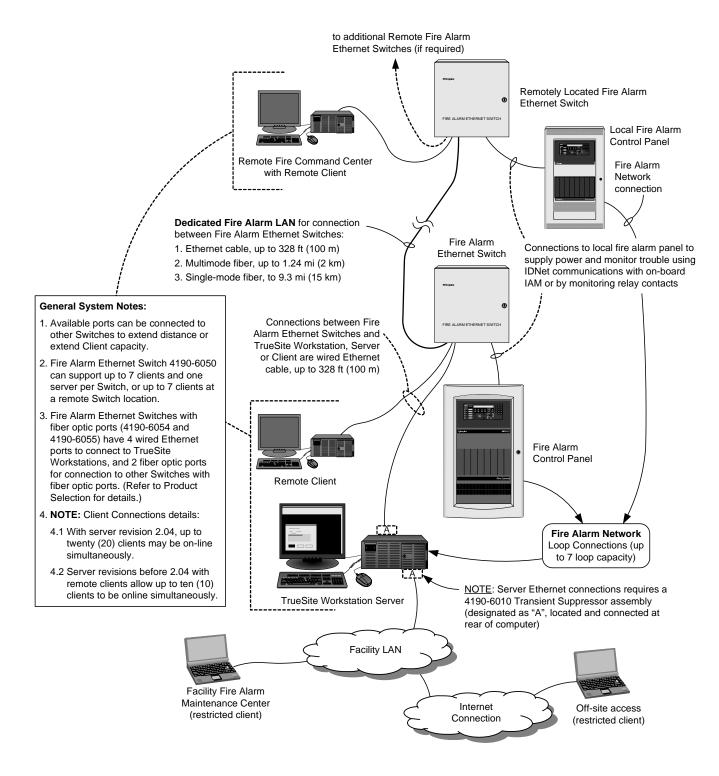
Ethernet Switch Power Adapters (select one for each 4901-6051, 4190-6056, or 4190-6057; Power Adapters are NOT for use with Fire Alarm Ethernet Switches 4190-6050, 4190-6054, or 4190-6055, they require connection to a fire alarm power supply)

Model	Description	Ratings	Housing Size
4190-6052	Wall Mount Power Adapter with 6 ft (1.8 m) cord	Input: 120 VAC, 60 Hz, 20 W Output: 24 VAC, 650 mA	2-1/4" W x 2-15/16" H x 1-7/8" D (56 mm x 74 mm x 48 mm)
4190-6053			2-5/16" W x 3-3/16" H x 1-15/16" D (58 mm x 80 mm x 49 mm)

Transient Suppressor for LAN/WAN Connection

Mode	Model Description			
4190-6010)10	Required for agency listing; recommended for each TrueSite Workstation Server and Remote Client computer connection; mounts on rear of PC frame for desktop or rackmount computers		

For additional information, refer to Installation Instructions 579-903.



Specifications

Electrical

Input Power Input Current 300 mA maximum Survival (as a survival supply 1 mount of the survival surviv		Input Voltage	24 VDC nom	inal from listed fire alarr	m nower supply		
Common Trouble Relay Form C contact rated 0.3 A @ 125 VAC resistive; 1 A @ 30 VDC resistive Wiring Connections for Power, IDNet Communications, and Trouble Relay Contacts Ethernet Cable Connections Ethernet Cable Data Rates 10 Mbps and 100 Mbps Ethernet Cable Distance (for connection between Fire Alarm Ethernet Switches) Fiber Optic Cable Distance (for connection between Fire Alarm Ethernet Switches) Fiber Optic Cable Connections Fiber Optic Cable Connections Type SC connectors Color Function Green Power-on LED On when power is present Ethernet Detection Module Diagnostic LEDs Parth Monitor Yellow Tyellow Tyel	Input Power	ut Power — '		1 113			
Wiring Connections for Power, IDNet Communications, and Trouble Relay Contacts Ethernet Cable Connections Ethernet Cable Data Rates Ethernet Cable Data Rates Ethernet Cable Distance Ethernet Cable Distance Fiber Optic Cable Distance (for connection between Fire Alarm Ethernet Switches) Fiber Optic Cable Connections Fiber Optic Cable Connections Fiber Optic Cable Connections Fiber Optic Cable Distance (for connection between Fire Alarm Ethernet Switches) Fiber Optic Cable Connections Fiber optic Cable Cabl	Common Tourible D	· ·					
Screw terminals for 18 to 12 AWG (0.82 mm² to 3.31 mm²)	· · · · · · · · · · · · · · · · · · ·		Form C contact rated 0.3 A @ 125 VAC resistive; 1 A @ 30 VDC resistive				
Ethernet Cable Data Rates 10 Mbps and 100 Mbps Up to 328 ft (100 m) at 10 Mbps with Cat3 cable Up to 328 ft (100 m) at 100 Mbps with Cat3 cable Up to 328 ft (100 m) at 100 Mbps with Cat5 cable Fiber Optic Cable Distance (for connection between Fire Alarm Ethernet Switches) Model Fiber and Distance 4190-6054 Single-mode fiber up to 9.3 miles (15 km) 19 dB Fiber Optic Cable Connections Type SC connectors Color Function Description Green Power-on LED On when power is present Red IAM LED Flashes to indicate IDNet communications are being received Yellow Common Earth Fault LED Earth Monitor Disabled LED, one per Ethernet Port Indicate sharp on the per Ethernet Port Indicate sharp on the power is present Ethernet Switch Module Diagnostic LEDs Color Function Description Green Power-on LED On when power is present Flashes to indicate IDNet communications are being received On steady when an earth fault is detected on any of the Ethernet ports If port has earth detection disabled, LED is on steady If port has earth detection enabled, LED flashes to indicate that port has an earth fault Color Function Description Green Power-on LED On when power is present Ethernet Switch Module Diagnostic LEDs Termer Switch Module Diagnostic LEDs 13-1/2" W x 13-1/2" H x 3-5/16" D (343 mm x 343 mm x 84 mm), with locking door, lift-off hinge on left side; refer to page 4 for additional information Environmental Temperature 32° to 120° F (0° to 49° C) indoor operation only	IDNet Communications, and		Screw terminals for 18 to 12 AWG (0.82 mm² to 3.31 mm²)				
Ethernet Cable Wiring Distance Up to 328 ft (100 m) at 10 Mbps with Cat3 cable Up to 328 ft (100 m) at 100 Mbps with Cat5 cable	Ethernet Cable Cor	nnections	RJ-45 jacks				
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A190-6054 Single-mode fiber up to 9.3 miles (15 km) 19 dB	Ethernet Cable Will	ing distance	Up to 328 ft (100 m) at 100 Mbps with Cat5 cable				
(for connection between Fire Alarm Ethernet Switches) A 190-6054 Single-mode fiber up to 9.3 miles (15 km) 19 dB A 190-6055 Multimode fiber up to 1.24 miles (2 km) 13 dB Fiber Optic Cable Connections Type SC connectors Color Function Description Green Power-on LED On when power is present Red IAM LED Flashes to indicate IDNet communications are being received Yellow Common Earth Fault Consabled LED, one per Ethernet Port Earth Monitor Disabled LED, one per Ethernet Port If port has earth detection disabled, LED is on steady If port has earth detection enabled, LED flashes to indicate that port has an earth fault Ethernet Switch Module Diagnostic LEDs Green Power-on LED On when power is present Ethernet Switch Module Diagnostic LEDs Green Link Indicator One per port, indicates a valid Ethernet link has been established Yellow Data Rate One per port, indicates when data is transferring at 100 Mbps Mechanical Cabinet Specifications 13-1/2" W x 13-1/2" H x 3-5/16" D (343 mm x 343 mm x 84 mm), with locking door, lift-off hinge on left side; refer to page 4 for additional information Environmental Temperature 32° to 120° F (0° to 49° C) indoor operation only	Fiber Optic Cable D	Distance	Model	Fiber and Distance	Optical Budget		
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Color Function Description	Ethernet Switches)		4190-6055	Multimode fiber up to 1	1.24 miles (2 km)	13 dB	
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Per Ethernet Port Indicate that port has an earth fault			Yellow	Disabled LED, one	If port has earth detection disabled, LED is on steady		
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hinge on left side; refer to page 4 for additional information Environmental Temperature 32° to 120° F (0° to 49° C) indoor operation only	Mechanical						
Temperature 32° to 120° F (0° to 49° C) indoor operation only							
	Environmental						
Humidity Range Up to 90% RH at 90° F (32° C) non-condensing	Temperature	Temperature 32° to 120° F (0° to 49° C) indoor operation only					
	Humidity Range						

Box depth = 3-5/16" (84 mm) -Box width 13-1/2" (343 mm)--11-1/2" (292 mm)-Door shown for **Ethernet Switch** reference, 13-3/4" Module square (349 mm) (©) 11-7/8" 13-1/2" (302 mm) (343 mm) Earth detection module (0) Wiring connection terminal blocks 0 Removable mounting plate Cable input area NOTE: Only use bottom for conduit entrance; knockouts are located at arrows

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Model 4190-6050 (8 wired ports) shown for reference; fiber optic connections for Models 4190-6054 and 4190-6055 are made directly to the Ethernet Switch Module

