

CYBERCAT® 254 INTELLIGENT FIRE ALARM CONTROL SYSTEM

DESCRIPTION

Fike's CyberCat 254 (P/N 10-066) is a state-of-the-art true intelligent digital peer-to-peer modular fire alarm control system. It is ideal for all life safety and property protection applications and is intended for both commercial and industrial use. It is designed with extensive programmability that allows the almost-instantaneous relay of information and the ability to perform process management tasks with ease including HVAC shutdowns, Emergency Voice Evacuation, damper control, doors closure, elevator recall, security, and CCTV/Building Management Awareness.

This cost-effective panel comes standard with one Signaling Line Circuit (SLC) that supports 254 devices, with any mix and match of sensors and modules. The CyberCat utilizes extreme intelligence via its eclipse based sensors including photoelectric, photoelectric with heat, ionization, photoelectric duct, and heat detectors. It also utilizes Eclipse™ based modules such as the monitor, mini-monitor, relay, intelligent pull station and control modules. With CyberCat, every device communicates as a peer on the signaling line circuit. These peers not only communicate up-to-the-second information to the control panel, but also communicate with each other. Each device is capable of generating accurate and highly detailed information. Conventional fire alarm systems give a general idea of the fire's location, while the CyberCat's intelligent sensors indicate precisely which device is in an alarm state. This intelligence provides incredible speed with response times as little as one-quarter second between manual pull station and notification appliance. Its flexibility allows you to attach the intelligent devices that are required for your specific application.

The System is programmed with either the Windows based field configuration software C-LINX™ or through a comprehensive password protected front-panel keypad programming options. This option allows you to quickly update and adapt to any future requirements or changes in the system such as changes in occupancy or remodeling. The sophisticated control panel circuitry coupled with the software allows you to read specific information and sensitivity levels of the different Eclipse devices. The sensors also compensate for any changes due to age, contamination, or other environmental factors.

SYSTEM OPERATION

The CyberCat Control system operates on a "Zone and State" relationship. In this design, all input and output devices must be assigned to at least one zone or to all zones (254 are available), each one defining an area to be protected. Input devices can be assigned up to four zones (one zone is typical) and output devices may be assigned up to 254 zones.

These devices use the SLC signaling line circuits to exchange status information with other devices as well as with the control panel. When an input is activated, it is configured to cause its associated zone to enter into an operational state. Any detection device will cause its associated zone to enter into an alarm state. The output devices are configured to activate to protect and evaluate the endangered zone. This system is completely modular, allowing you the flexibility to design a system that is just right for your application. A typical configuration is shown on page 2 that illustrates the communications of a CyberCat system.



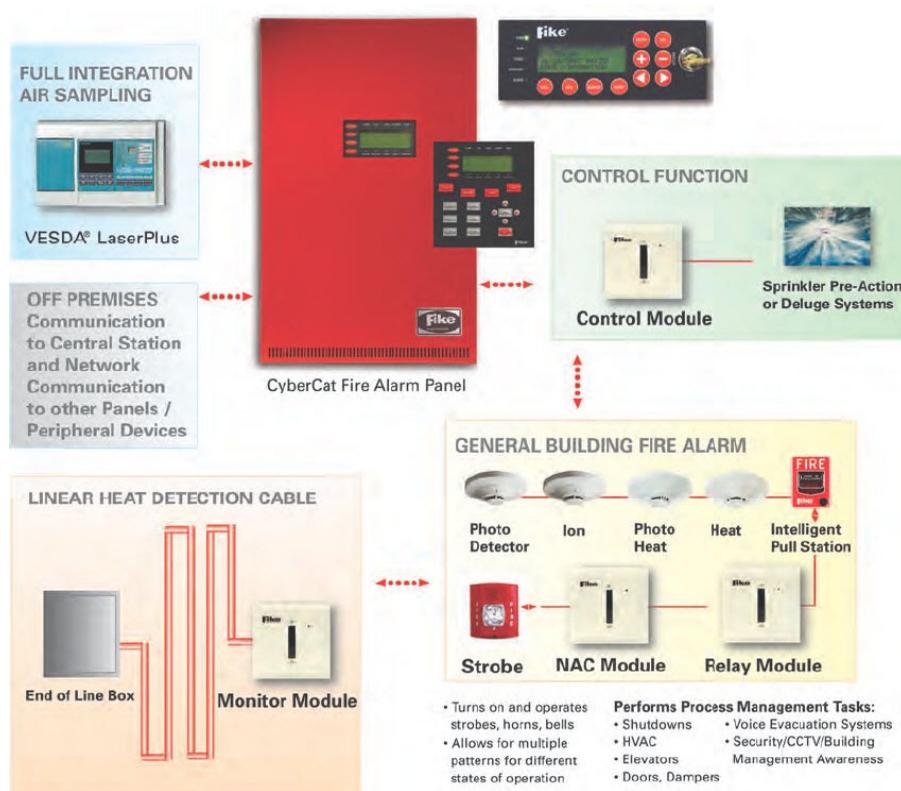
Fike CyberCat 254

APPROVALS:

- UL - S2203
- FM - 3020297
- City of Denver
- City of Chicago
- CSFM - 7165-0900: 0137
- MEA - 490-04-E



TYPICAL CONFIGURATION



STANDARD FEATURES

The Cybercat features are designed to save lives and protect your valuable capital investments through unprecedented speed, intelligence and flexibility. These features include:

- All Cybercat panels come standard with a controller, transformer and enclosure (see ordering information for details)
- 254 user defined zones
- 80 character, backlit LCD display
- Real time clock
- 3200 event history buffer
- Critical process monitoring
- One-person walktest capability
- Disable by circuit or zone
- Drill function at panel and remote
- Provides solenoid releasing operation
- Alarm verification capability
- Easy to add/remove devices
- Diagnostic menus
- Removable terminal blocks for field wiring
- Local piezo with distinct event tones
- 10 Status LEDs to easily identify system status
- Optional point ID DACT Module available
- Supports up to 31 peripheral devices such as Remote Display, LED Graphic and Zone Annunciators
- Two standard enclosures sizes available with optional deadfront panel options (refer to data sheet D.1.26.01)

CYBERCAT 254 CONTROLLER SPECIFICATIONS

The controller contains the power supply, microprocessor, hardware interface, display and keypad.

Enclosure

- Steel Enclosure 23.6" H x 14.35" W x 4" D (Back-box dimensions)
- Flush or surface mounting
- Removable door for ease of installation
- Available in red or black
- Dead Front option available to isolate panel's internal electronics and wiring

Power

- 6 amps useable alarm power
- Operation from 120VAC/60 Hz or 240 VAC/50 Hz transformer
- Two 24V DC, 2A continuous auxiliary power outputs
- One 24VDC, 2A resettable auxiliary power output
- Supports up to 75AH of batteries
- Controller consumes 0.275A @ 24 VDC in normal standby and alarm

Signaling Line Circuit

- Address devices with Infrared (IR) tool, similar to remote control device
- One SLC loop, NFPA style 4, 6 or 7
- 254 devices
- True peer-to-peer digital protocol for extremely fast and reliable communications
- Auto address function
- Automatic day/night sensitivity adjustment
- Automatic holiday sensitivity adjustment
- Acclimate operation for sensors
- IR Tool provides ability to read sensitivity levels or perform remote test of device
- Devices contain multi-color LED for quick reference of device status
- Sensors provide early warning pre-alarm detection and can also provide a summing feature (up to eight sensors)
- Maximum Resistance: 70 ohms
- Maximum Capacitance: .60 μ f
- 12,000 ft. maximum distance total from panel to last device

NAC Circuit

- Two NAC circuits standard
- Rated at 24VDC, 2.0 Amps maximum
- Built-in synch protocol for System Sensor® and Gentex® devices

Operating Environment

- 32 - 120°F (0 - 49°C)
- 93% relative humidity, non-condensing

OPTIONAL MODULES AND PERIPHERAL DEVICES

Point ID Dact (Digital Alarm Communicator Transmitter) Module (P/N 10-2528)*

The DACT provides interface with Central Station monitoring systems. It is available with 5 contact zones of connection OR the intelligent serial interface which provides point ID information. The Contact ID form is the preferred reporting format. It provides a four digit account code followed by a three digit event code, a two-digit group number, and a three digit contact number, all of which are used to provide specific point identification. This DACT can also provide an SIA or 4/2 Pulse reporting format. Note: 10-2476 is same as 10-2528 with enclosure for external mounting.

Fike Relay Module (P/N 10-2204)*

The CRM4 provides 4 additional independently programmed relays. CyberCat Control Panel supports up to 2 CRM4 modules (if either options are not unused) on the main controller board. Each relay may be wired across normally open or normally closed contacts. Dimensions: 3-1/2" L x 1-1/2" H x 2" D. Weight: 0.10 lbs.

Fike Reverse Polarity Module (CRPM) (P/N 10-2254)*

The reverse polarity module provides the ability for UL Remote Station supervision. This supervision is typically performed with a direct, leased line connection. It interfaces to the main control board using four standoffs supplied with the RPM. Dimensions: 3-1/2" L x 1-1/2" H x 2" D. Weight: 0.08 lbs.

14 Button Remote Display Unit (P/N 10-2646)*

The Fike fourteen button remote display (FRD), provides remote annunciation of Fike's intelligent control panels. The FRD is provided with a 80 character, backlit display which performs two display functions. First, it duplicates information provided by the control panel. Additionally the FRD has the capability of viewing system conditions such as alarm, trouble, supervisory, etc. The FRD also includes six buttons (Enter, Escape, +/-, left/right arrow) that are used for navigation through events as well as configuration of the device. Additionally it has eight programmable buttons that can be configured for things such as reset, silence, acknowledge, drill, or process. A key lock is included for additional security access.

10 Button Remote Display Unit (P/N 10-2631)*

The Fike ten button remote display (FRD), provides remote annunciation of Fike's intelligent control panels. The FRD is provided with a 80 character, backlit display which performs two display functions. First, it duplicates information provided by the control panel. Additionally the FRD has the capability of viewing system conditions such as alarm, trouble, supervisory, etc. The FRD also includes six buttons (Enter, Escape, +/-, left/right arrow) that are used for navigation through events as well as configuration of the device. Additionally it has four dedicated buttons that perform the following functions: drill, silence, acknowledge, and reset. A key lock is included for additional security access.

* See ordering information for individual data sheet that gives additional specifications

2 Button Remote Display Unit (P/N 10-2630)*

The Fike two button remote display (FRD), provides remote annunciation of Fike's intelligent control panels. The FRD is provided with an 80 character, backlit display which performs two display functions. First, it duplicates information provided on the main control panel. Additionally, the FRD has the capability of viewing system conditions such as alarm, trouble, supervisory, etc.

Fike Zone Annunciator (P/N 10-2667)*

The Fike twenty zone remote annunciator is used with Fike's intelligent control systems to provide remote annunciation for up to twenty zones at a location remote from the control panel. The module provides a tabular display that incorporates 20 red alarm and 20 yellow trouble/supervisory LEDs. Each LED is programmable and can provide visual indication of alarm, trouble/supervisory conditions for zones or individual points. Communication between the intelligent control panels and remote annunciator is via the RS485 peripheral bus. When an event from the control panel is received the appropriate LED will illuminate based on the annunciator's configuration.

Fike Network Module (P/N 10-2482)*

The Network Module provides the ability to network up to 128 control panels. This typically would consist of other CyberCat fire alarm panels. The CyberCat network uses a "common zone" functionality. Zones 1-254 are common to all panels on the network and any input will cause activation of all outputs for the same zone, regardless of which panel the devices are connected to. Regardless of zone number, every state (alarm, trouble etc.) that occurs is displayed by all panels on the network.

Fike Fiber Optic Network Card (P/N 10-2624)*

The Network Module (P/N 10-2624) provides the ability to network up to 128 control panels. This network would typically consist of other CyberCat or Cheetah Xi fire control panels. The network uses a "common zone" functionality. Zones 1-254 are common to all panels on the network and any input will cause activation of all outputs for the same zone, regardless of which panel the devices are connected to (except abort and predischARGE on Cheetah Xi). Regardless of zone number, every state (alarm, trouble etc.) that occurs can be displayed by all panels on the network.

Fike Ethernet Module (P/N 10-2627)*

This Module provides the ability to remote monitoring of multiple CyberCat panels via Ethernet/IP. This module is connected to the CyberCat via the peripheral connections at P6 and will be configured as a peripheral device. In order to utilize the remote monitoring capability, a network ID must be assigned to each panel for identification purposes. This module connects to the Panel at P6 per ± and also requires 24 volts DC from the panel to P6 24A ±. See the 06-388 Ethernet Module manual for more details.

Fike Multi-Interface (P/N 10-2583)*

The primary function of the multi-interface module is that it is used as a printer interface for the CyberCat control panels. It provides specific event and point information to be communicated from the panel to the printer. It is compatible with either a Epson FX-890 or equivalent IEEE 1284 standard printer or for UL required applications the Keltron 90 series UL listed fire alarm printer.

PROGRAMMING CONFIGURATION

Software

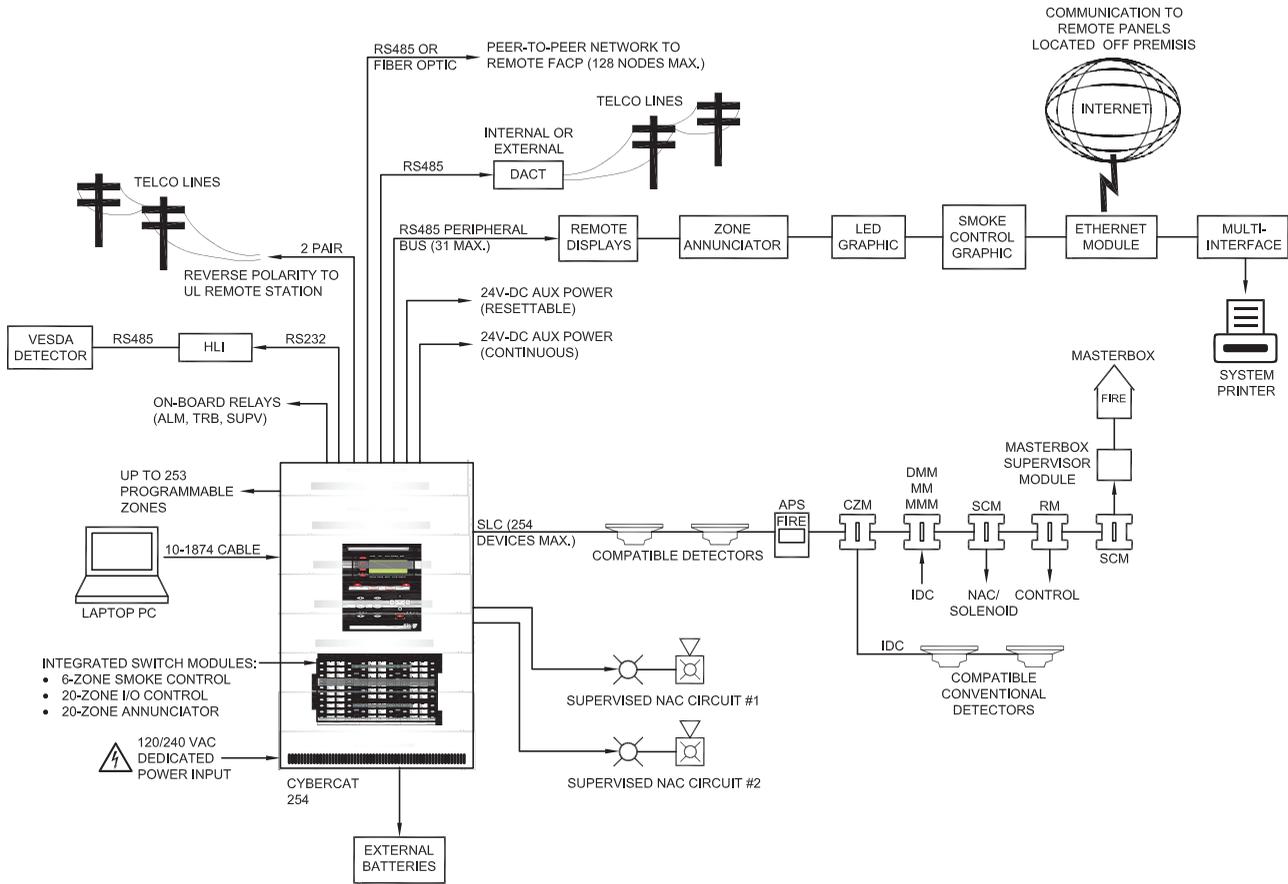
All configuration variables can be assigned using C-LINX software. This software provides the designer the capability to provide a pre-engineered design. The user can review the construction plans to assign the zones. The configuration can also be set to identify the exact device circuit operation desired along with the custom message information.

IR Configuration Tool (P/N 55-051)*

This optional hand-held infrared remote control is available on the CyberCat system. This small device can be used in the field to simplify installation, testing and service. It operates with 2 AA batteries and can read device information such as loop, address, branch and service dates and initiate device test. This tool:

- Communicates bi-directionally with any CyberCat device
- Easily addresses devices by setting the loop and address
- Quickly reads sensitivity levels, date serviced, device type, loop and address, manufacture date
- Immediately records the date serviced
- Instantly initiates walk test of any sensor or module
- Accesses and tests hard-to-reach sensor or module (such as duct detector) through any other device on loop

FIELD WIRING DIAGRAM



ORDERING INFORMATION

Fike P/N	Description	Individual Datasheet #
10-066-c-p-L	CyberCat 254 System, includes Controller, Enclosure, and Transformer c: (R=Red, B=Black) p: (1=120V, 2= 240V) L=Lexan	D.1.09.01
10-2525	CyberCat 254 System Controller (included with 10-066-c-p-L)	D.1.09.01
10-2519-c	Dead Front Option c: (R=Red, B=Black)	
Optional Modules		
10-2204	CRM4 - Relay Module	D.1.14.01
10-2254	CRPM - Reverse Polarity Module	D.1.15.10
10-2482	Network Module	D.1.17.01
10-2624	Multi-Mode Fiber Optic Network Module	D.1.21.10
Peripheral Devices		
10-2630	2 Button Expanded Protocol Remote Display	P.1.103.01
10-2631	10 Button Expanded Protocol Remote Display	P.1.107.01
10-2646	14 Button Expanded Protocol Remote Display	P.1.108.01
10-2667	Zone Annunciator	P.1.118.01
10-2627	Ethernet Module	D.1.22.01
10-2583	Multi-Interface Module	P.1.85.01
10-2528	Point ID DACT (Internal Mounting)	D.1.18.01

Intelligent Sensors		
63-1052	Photoelectric Smoke Sensor Non-Isolator Version	P.1.88.01
63-1058	Photoelectric Smoke Sensor Isolator Version	P.1.88.01
63-1053	Photo/Heat Combination Sensor Non-Isolator Version	P.1.89.01
63-1059	Photo/Heat Combination Sensor Isolator Version	P.1.89.01
60-1039	Thermal Sensor Non-Isolator Version	P.1.90.01
60-1040	Thermal Sensor Isolator Version	P.1.90.01
67-033	Ion Sensor Non-Isolator Version	P.1.91.01
67-034	Ion Sensor Isolator Version	P.1.91.01
63-1057	Duct Sensor Non-Isolator Version	P.106.01
63-1062	Duct Sensor Isolator Version	P.106.01
63-1056	Duct Housing	P.106.01
Intelligent Sensor Bases		
63-1054	6" Sensor Base Non-Isolator Version	P.1.98.01
63-1060	6" Sensor Base Isolator Version	P.1.98.01
63-1055	4" Sensor Base Non-Isolator Version	P.1.99.01
63-1061	4" Sensor Base Isolator Version	P.1.99.01
63-1064	Sounder Base	P.101.01
63-1063	Relay Base	P.101.01
Intelligent Modules		
55-045	Mini-Monitor Module Non-Isolator Version	P.1.93.01
55-050	Mini-Monitor Module Isolator Version	P.1.93.01
55-041	4" Monitor Module Non-Isolator Version	P.1.92.01
55-046	4" Monitor Module Isolator Version	P.1.92.01
20-1063	Intelligent Pull Station Non-Isolator Version	P.1.65.01
20-1064	Intelligent Pull Station Isolator Version	P.1.65.01
55-042	Supervised Control Module Non-Isolator Version	P.1.94.01
55-047	Supervised Control Module Isolator Version	P.1.94.01
10-2360	Series Solenoid Diode/Resistor (Needed for solenoids)	
10-2413	Masterbox Interface	
55-043	Relay Module Non-Isolator Version	P.1.95.01
55-048	Relay Module Isolator Version	P.1.95.01
55-055	Zone Interface Module Non-Isolator Version	P.1.114.01
55-060	Zone Interface Module Isolator Version	P.1.114.01
55-056	Dual Monitor Module Non-Isolator Version	P.1.115.01
55-061	Dual Monitor Module Isolator Version	P.1.115.01
Programming Parts		
55-051	Infrared (IR) Remote Control Tool	P.1.97.01
06-327	C-LINX Software	
10-1874A	Interface Communication Cable (DB9 to RJ11)	
10-1874B	Interface Communication Cable (USB to RJ11)	
02-11139	Communication Cable Converter (USB to DB9)	
10-2477	DACT Programmer	