FIKE CYBERCAT™ 254
INTELLIGENT FIRE ALARM CONTROL SYSTEM

Data Sheet

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 shutdowns, HVAC, Voice Evacuation Systems, Dampers, Doors, Elevators, and Security, CCTV/Building Management Awareness.

This cost-effective panel comes standard with one Signaling Line Circuit (SLC) that supports 254 devices. The 254 devices may be 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 configured for 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.

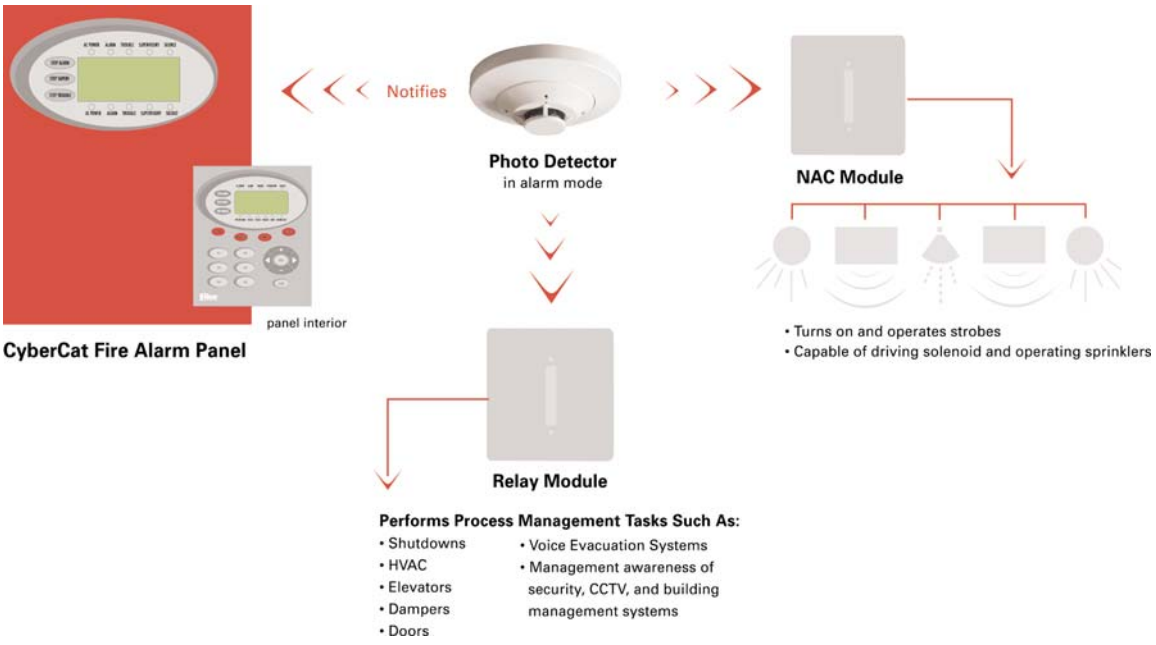
Fike Cybercat 254

APPROVALS

- UL S2203
- FM 3020297
- City of Denver
- CSFM 7165-0900: 137

Form No. D.1.09.01-4

DESCRIPTION (Cont.)



STANDARD FEATURES/SPECIFICATIONS

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

General

- Two 24VDC, 2A NAC (bell) circuits on main board with built in System Sensor or Gentex synchronization protocol
- 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
- 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

STANDARD FEATURES/SPECIFICATIONS (Cont.)

Power

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

Signaling Line Circuit

- Address devices with Infrared (IR) tool, similar to remote control device
- One SLC loop, NFPA style 4 or 6
- 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)

NAC Circuit

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

CONTROL SYSTEM MODULES

Cybercat Controller (P/N 10-2525)

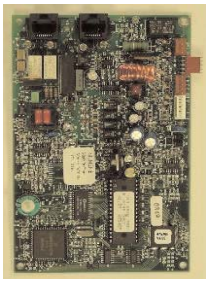
The Controller contains the power supply, microprocessor, hardware interface, display and keypad. The controller's internal power supply provides 2 Amps Normal Standby Current/6 Amps Alarm Current.

Enclosure

- Steel Enclosure 23.6" H x 14.35" W x 4" D (Back-box dimensions)
- Enclosure is equipped with a 0.50" wide lip to facilitate flush mounting
- Removable door for ease of installation
- Two door options available; with or without lexan cover on oval opening
- Available in red or black
- Dead Front option available

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.



CONTROL SYSTEM MODULES (Cont.)

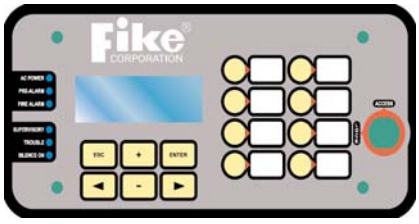
Fike Relay Module (P/N 10-2204)

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.

Fike Remote LCD Display (P/N 10-2321)



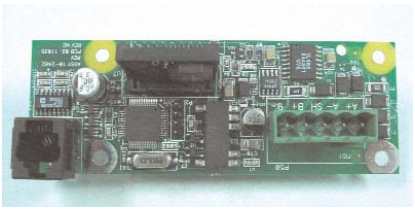
This module provides information about the host CyberCat System in a remote location. It receives the intelligent data stream from the RS485 output of the CyberCat. The remote display provides the capability to remotely reset, silence, and acknowledge the main control panel. Security to the unit is available via the standard Fike key. It mounts to a 5 gang masonry box (Raco 694). The unit can be surface or flush mounted.
Dimensions: 9-7/32" L x 3-3/4" H x 2-1/2" D. Weight: 2 lbs.

Fike Zone Annunciator (P/N 10-2373)

The Zone Annunciator provides instant visual status of up to 10 zones of fire protection. Each zone has a red Alarm LED and yellow Trouble/Supervisory LED. Each LED is individually programmable for zone(s) and state(s). Each LED can be labeled using Avery Label 6467 or 5418. The annunciator also has an internal piezo to provide instant audible notification of status change. It is intended to be powered via the CyberCat panel 24VDC auxiliary power. It communicates with the main control panel via RS485 communication. The annunciator provides the capability to remotely reset, silence and acknowledge the main control panel. Security to the unit is available via the standard Fike key. It mounts to a 5 gang masonary box (Raco 694). The unit can then be surface or flush mounted.

The following system modules are available for the CyberCat Control System:

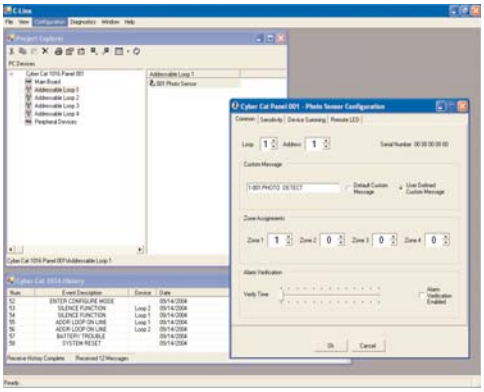
Fike Network Module (P/N 10-2482)



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.

Part Number	Description
10-064-c-p-d	CyberCat System-Includes Controller, Enclosure, and Transformer c:(R=Red, B=Black) p:(1=120V, 2=240V) d:(B=Blank; L= Lexan)
10-2525	Cybercat System Controller (included with 10-066-c-p-d)
10-2528	DACT, 5 zone with Serial interface
10-2204	CRM4 - Relay Module
10-2254	CRPM - Reverse Polarity Module
10-2321	FIKE Remote Display
10-2373	Zone Annunciator
10-2482	Network Module
10-11x	LED Graphic
10-2519-c	Dead Front Option c: (R=Red, B=Black)

CYBERCAT/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

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

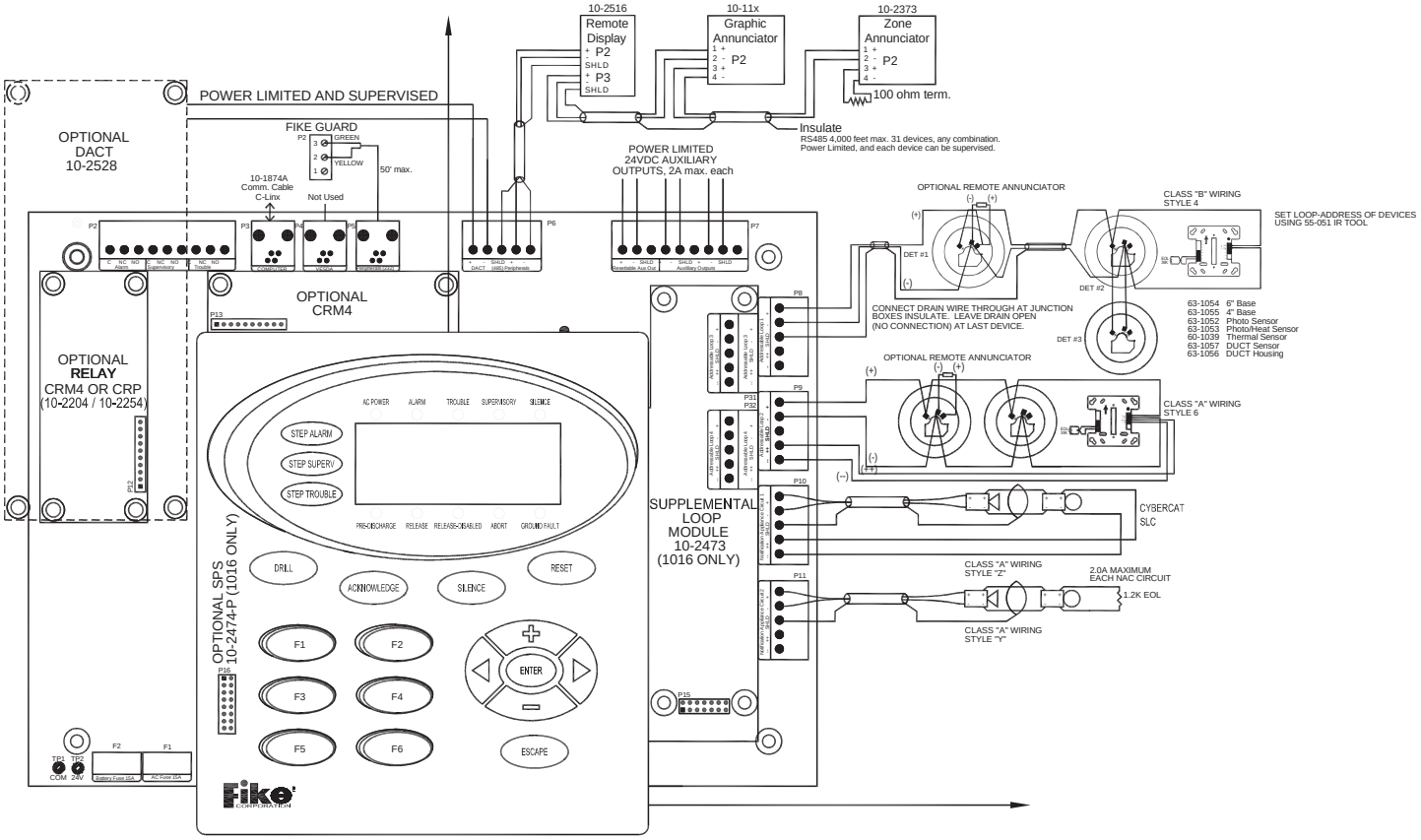
Field Wiring

Although the installation instructions provided for each module should be used for installation, please see the a general wiring diagram on the following page.

Wiring Specifications

- Maximum Resistance: 70 ohms
- Maximum Capacitance: .06 uf
- 12,000 ft. maximum distance total from panel to last device.

Field Wiring Diagram



The following parts are used for configuration, testing and diagnostics of the CyberCat:

Part Number	Description
55-051	Infrared (IR) Remote Control Tool for Programming/Testing Devices
06-327	C-LINX Software
10-1874A	Interface Cable for C-LINX Software (DB9 to RJ11)
10-2477	DACT Programmer
10-1874B	Interface Cable USB to DB9

CYBERCAT INTELLIGENT DEVICES

Photoelectric Smoke Sensor (P/N 63-1052/63-1058)
The photo sensor provides peer-to-peer digital protocol for reliable, fast communications. The sensor includes a tri-color LED for instant indication of device status. An acclimate feature is defaulted ON to provide optimum fire detection response. This feature allows sensors to respond to a particular environment and its operating parameters are maintained within non-volatile RAM in the sensor. Dual Alarms (night and day sensitivity) with threshold settings between 1.3 - 3.6%ft. Dual Pre-Alarms with threshold setting between 0.5 - 4.0%ft.

Photo/Heat Combination Sensor (P/N 63-1053/63-1059)
The photo/heat sensor provides peer-to-peer digital protocol for reliable fast communications. The sensor has the ability to alarm from either or both different types of detection and includes a tri-color LED for instant indication of device status. Dual electronic thermistors add 135° F fixed temperature thermal sensing to the standard photoelectronic sensor. Even though this is a dual sensing device, it only uses one address on the SLC loop.

Thermal Sensor (P/N 60-1039/60-1040)
The thermal sensor provides peer-to-peer digital protocol for reliable fast communications. The sensor includes a tri-color LED for instant indication of device status. The spot-type heater sensor is designed to be programmable for a set-point range of 135° to 174ºF for ordinary detection or 175° to 190ºF for intermediate detection. Detectors in the ordinary range may be programmed for either fixed temperature or 15ºF rate of rise operation. The detection set-point is software programmable in single degree increments from 135° to 190ºF.

Ion Sensors (P/N 67-033/67-034)
Provides peer-to-peer digital protocol for reliable, fast communications. The sensor includes a tri-color LED for instant indication of device status. An acclimate feature is defaulted ON to provide optimum fire detection response. Dual alarms (day and night sensitivity) with threshold settings between 80-50 uAmps MIC are available. Dual pre-alarms with threshold settings between 100-40 uAmps MIC are also available. Configurable for acclimate, alarm verfication, and drift compensation.

Sensor Base (P/N 63-1054/63-1060 6" and P/N 63-1055/63-1061 4")
The 6" sensor base will mount directly to 3-1/2 " and 4" octagon boxes, 4" square boxes (with or without plaster rings) and single gang boxes. The base is approximately 2 inches larger than the sensor, providing a contouring effect and covering the junction box. It is used with any of the CyberCat sensors.

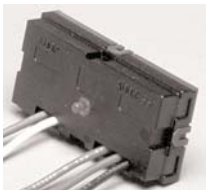
The 4" sensor base will mount to 3-1/2" octagon boxes, 4 inch square boxes with plastic rings and European boxes with 50, 60, and 70 mm screw spacing. This base is approximately the same size as the sensor head and can be used with any of the CyberCat sensors.

Sounder Base (P/N 63-1064)
The sounder base is designed to be used with any CyberCat intelligent sensors. It does require 24VDC external power. When the sensor's remote annunciator is activated, the associated horn sounds. The sound output is greater than 85 dBA measured in a UL reverberant room. The sounder base is 1.1 inches deep. Electrical boxes must be 4-inches square by at least 1.5 inches deep- 2 1/8 inches is recommended. Fully programmable for any system device or zone state activation.

Relay Base (P/N 63-1063)
The relay base is designed to be used with any CyberCat intelligent sensors. A form C latching relay contacts are included for control of an auxilary function. The relay will operate 3.7 seconds (nominally) after activation of the sensor head remote annunciator output. The relay base is 1.1 inches deep. Electrical boxes must be 4-inches square by at least 1.5 inches deep- 2 1/8 inches is recommended. Fully programmable for any system device or zone state activation. ***Note:*** the relay base does not require 24 VDC.

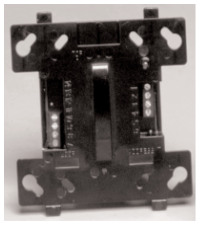
INTELLIGENT MODULES

Fike's intelligent modules provide a fire alarm dry contact device directly connected to the CyberCat intelligent loop. Each module may be assigned to a single zone or up to four zones. Any number of UL listed contact closure devices may be used.



Mini-Monitor Module (55-045/55-050)

2-3/4" x 1-3/4" miniature module for mounting in the small junction box behind a monitoring device. This device will monitor a Class B wired input device using the 39K ohm end of the line resistor.



4" Square Monitor Module (55-041/55-046)

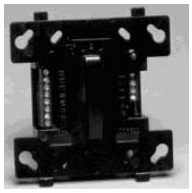
Mounted with cover plate on a 4" square junction box. This device will monitor a Class B or Class A wired input device. Class B wiring requires a 39K ohm end of line resistor.

Pull Station Monitor Module (P/N 20-1063/20-1064)

The intelligent pull station has all of the same addressable input module electronics inside the pull station for one complete addressable pull station. Activation is accomplished by pushing in and pulling down as instructed. A hardware key is issued to reset the device.

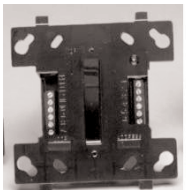
Supervised Control Module (P/N 55-042/55-047)

The Supervised Control Module (SCM) provides building notification appliance circuits (NAC), an intelligent interface to the CyberCat Intelligent loop. It also has the capability of operating solenoids rated up to 2 Amps @ 24VDC or two @ 12VDC in series. Mounts in a 4" x 4" x 2-1/8" junction box. Wide range of multi-state operations.



Relay Module (P/N 55-043/55-048)

The Relay Module provides building dry contact output interface via the intelligent loop. Two configurable (single operation) relay Form C contacts rated for 2 Amps @ 30VDC, 0.5a @ 120VAC. Wide range of operating modes including multi-zone operation, up to 4 different states and multi-state programming. Operating parameters are maintained in non-volatile RAM for quick and reliable response to emergency conditions. This module mounts on a 4" x 4" x 2-1/8" junction box. ***Note:*** the relay module does not require 24 VDC.



Duct Sensor (Sensor is P/N 63-1057/63-1062; Housing is P/N 63-1056)

The Duct Housing contains a circuit board that provides connection to standard remote accessories and also provides a relay contact output is fully programmable and transfers upon activation of the DUCT detector.. Four different lengths of sampling tube are available for duct penetration including 1.5, 3.0, 5.0 and 10.0. ***Note:*** the duct sensor does not require 24 VDC.

Length	Part Number
1.5'	02-3721
3.0'	02-3722
5.0'	02-3723
10.0'	02-3724