

Surge Suppressors



DEVELOPED BY

Fike
704 SW 10th Street
P.O. Box 610
Blue Springs, Missouri 64013 U.S.A.
Phone: (888) 628-FIKE (3453)
(816) 229-3405
Fax: (866) 211-9239

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TRADEMARKS

Fike[®] is a registered trademark of Fike.

QUALITY

Fike has maintained ISO 9001 certification since 1996. Prior to shipment, we thoroughly test our products and review our documentation to assure the highest quality in all respects.

WARRANTY

Fike provides a one-year limited manufacturer's warranty on this product. All warranty returns must be returned from an authorized Fike Distributor. Contact Fike's Marketing department for further warranty information.

Fike maintains a repair department that is available to repair and return existing electronic components or exchange/purchase previously repaired inventory component (advance replacement). All returns must be approved prior to return. A Material Return Authorization (MRA) number must be indicated on the box of the item being returned. Contact the appropriate Regional Sales Manager for further information regarding product return procedures.

LIMITATIONS OF LIABILITY

Installation in accordance with this manual, applicable codes, and the instructions of the Authority Having Jurisdiction is mandatory. Fike can not be held liable for any incidental or consequential damages arising from the loss of property or other damages or losses resulting from the use or misuse of Fike products beyond the cost of repair or replacement of any defective components. Fike reserves the right to make product improvements and change product specifications at any time.

While every precaution has been taken during the preparation of this manual to ensure the accuracy of its content, Fike assumes no responsibility for errors or omissions.



DOCUMENT HISTORY

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ABOUT THIS MANUAL

This document describes the use and wiring of various surge suppression devices approved for use with Fike's SHP-Pro™, Cheetah Xi™ 50, Cheetah Xi™, CyberCat™ 50, CyberCat™ 254 and CyberCat™ 1016 control panels and associated field devices.

The first-time installer and/or user should thoroughly read and understand the instructions contained within this manual before installing any of the surge suppression devices listed. These instructions must be followed to avoid damage to the equipment itself or adverse operating conditions caused by improper wiring.

PRODUCT SUPPORT


If you have a question or encounter a problem not covered in this document, you should first try to contact the distributor who installed the Fike system. Fike has a worldwide distribution network. Each distributor sells, installs, and services Fike equipment. Look on the back of the cabinet door, there should be a sticker with an indication of the distributor who installed the system. If you cannot locate the distributor, please call Fike Customer Service for locating your nearest distributor, or go to our web-site at www.fike.com. If you are unable to contact your installing distributor or you simply do not know who installed the system, you can contact Fike Technical Support at (800) 979-FIKE (3453) for Commercial Products and (888) 628-FIKE (3453) for Fire Alarm Products, Monday through Friday, 8:00 am to 4:30 pm CST.

SAFETY INFORMATION

Important safety admonishments are used throughout this document to warn of possible hazards to persons or equipment.

Caution

Cautions are used to indicate the presence of a hazard which will or may cause damage to the equipment if safety instructions are not followed or if the hazard is not avoided.

 **Note:** Provides information on installation, operation, maintenance, performance or general tips that are important but not hazardous to anything or anyone.



INTRODUCTION

All of Fike’s control panels and field devices have transient protection built-in to protect the system electronics from both internally and externally induced transients, in accordance with Underwriters Laboratories (UL) requirements; however, the level of protection provided is suited for low level short-duration voltage surges. To protect the system electronics from transients of higher amplitude, such as a lightning strike, additional transient protection must be installed to allow the damaging transient (spike) to be bypassed to ground before it gets to the protected system electronics, thereby reducing the potential for false alarms and/or damage to the system electronics. This document outlines the compatible surge protection devices that can be used with Fike’s control systems.

AGENCY STANDARDS AND COMPLIANCE

When installed in accordance with the following standards, the surge suppressors can be connected to any of the Fike control panels and field devices listed in Section 1.3 of this document.

- NFPA 70 - NEC, Article 285 Surge-Protective Devices (SPDs), 1 kV or Less
- NFPA 70 - NEC, Article 300 Wiring Methods
- NFPA 70 - NEC, Article 760 Fire Protective Signaling Systems
- NFPA 72 - National Fire Alarm Code
- UL 864 – Control Units and Accessories for Fire Alarm Systems

RELATED DOCUMENTATION

Exhibit 1: Related Documentation

Part Number	Description
06-297	SHP-Pro™ Product Manual
06-369	Cheetah Xi™ 50 Product Manual
06-356	Cheetah Xi™ Product Manual
06-368	CyberCat™ 50 Product Manual
06-326	CyberCat™ 254/106 Product Manual
06-388	10-2627, Ethernet Module Product Manual
06-367	10-2583, Multi-Interface Module Product Manual
06-158	68-023, VESDA High Level Interface
06-229	10-2413, Masterbox Interface
06-576	10-2726, Amplifier Card Product Manual
06-523	Signifire™ IP Camera Operations and Installation Manual

COMPATIBLE SURGE SUPPRESSORS

There are ten (10) surge protectors manufactured by EDCO that are approved for use with Fike's control panels and field devices. The following table identifies which surge suppressor is to be used with each control panel circuit or device.

Exhibit 2: SHP-Pro Surge Suppressor Compatibility Table

Panel /Module	Terminal - Description	40-1027 (PC642-008LC) ^{1,2}	40-1020 (HSP-121A)	40-1023 (PHC-043) ¹	40-1032 (LCDP-008)	40-1021 (SLCP-030) ¹	40-1029 (PC2-TEL) ^{1,3}	40-1022 (FAS-1-033HC)	40-1034 (FAS-2-033HC)	40-1019 (FAS-120AC)	40-1031 (LCDP-060) ⁴	40-1033 (DRS-130RMS)
SHP-Pro P/N 10-2452	P1 - 24 VAC (Term. 1 & 2)		X							X		
	P1 - Battery (Term. 3 & 4)			X								
	P2 - Relay 1 (Term. 1 - 3)		X	X						X		
	P2 - Relay 2 (Term. 4 - 6)		X	X						X		
	P2 - Relay 3 (Term. 7 - 9)		X	X						X		
	P3 - Detect 1 (Term. 1 & 2)							X	X			
	P3 - Detect 2 (Term. 4 & 5)							X	X			
	P3 - Input 3 (Term. 6 & 7)							X	X			
	P3 - Input 4 (Term 9 & 10)							X	X			
	P3 - Input 5 (Term 11 & 12)							X	X			
	P4 - Aux. Out Res. (Term. 1 & 2)			X								
	P4 - Aux. Out (Term. 2 & 3)			X								
	P5 - Audible 1 (Term. 1 & 2)			X								
	P5 - Audible 2 (Term. 4 & 5)			X								
	P5 - Audible 3 (Term. 6 & 7)			X								
	P5 - Agent Release (Term. 9 & 10)			X								
	P5 - Solenoid (Term. 11 & 12)			X								
Class A Input P/N 10-2450	P3A - Detect 1 (Term. 1 & 2)							X	X			
	P3A - Detect 2 (Term. 3 & 4)							X	X			
	P3A - Input 3 (Term. 5 & 6)							X	X			
	P3A - Input 4 (Term. 7 & 8)							X	X			
	P3A - Input 5 (Term. 9 & 10)							X	X			
Class A Output P/N 10-2448	P5A - Audible 1 (Term. 1 & 2)			X								
	P5A - Audible 2 (Term. 3 & 4)			X								
	P5A - Audible 3 (Term. 5 & 6)			X								
	P5A - Agent Release (Term. 7 & 8)			X								
	P5A - Solenoid (Term. 9 & 10)			X								

¹ Requires universal base P/N 40-1028 (PCB1B), sold separately.
² Use of this device will affect the available line resistance by 7 ohms.
³ Use of this device will affect the available line resistance by 9 ohms.
⁴ Alternate listed surge suppressor, P/N 10-2666 (Ditek DTK-MRJ45C5E).



Exhibit 3: Cheetah Xi 50 and CyberCat 50 Surge Suppressor Compatibility Table

Panel /Module	Terminal - Description	40-1027 (PC642-008LC) ^{1,2}	40-1020 (HSP-121A)	40-1023 (PHC-043) ¹	40-1032 (LCDP-008)	40-1021 (SLCP-030) ¹	40-1029 (PC2-TEL) ^{1,3}	40-1022 (FAS-1-033HC)	40-1034 (FAS-2-033HC)	40-1019 (FAS-120AC)	40-1031 (LCDP-060) ⁴	40-1033 (DRS-130RMS)
Cheetah Xi 50 P/N 10-2622	P1 - 24 VAC (Term. 1 & 2)		X							X		
	P1 - Battery (Term. 3 & 4)			X								
	P2 - Relay 1 (Term. 1 - 3)		X	X						X		
	P2 - Relay 2 (Term. 4 - 6)		X	X						X		
	P2 - Relay 3 (Term. 7 - 9)		X	X						X		
	P3 - Computer Interface ⁵											
	P4 - VESDA HLI						X					
	P5 - Peripherals (RS232) ⁶						X					
	P6 - Aux. Out (Term. 1 & 2)			X								
	P6 - Aux. Out (Term. 3 & 4)			X								
	P6 - Peripheral (Term. 5 & 6)	X										
	P6 - DACT (Term. 8 & 9)	X										
	P7 - Addr. Loop (Term. 1 - 5)						X					
	P8 - NAC 1 (Term. 1 - 5)			X								
	P9 - NAC 2 (Term. 1 - 5)			X								
CyberCat 50 P/N 10-2620	P1 - 24 VAC (Term. 1 & 2)		X							X		
	P1 - Battery (Term. 3 & 4)			X								
	P2 - Relay 1 (Term. 1 - 3)		X	X						X		
	P2 - Relay 2 (Term. 4 - 6)		X	X						X		
	P2 - Relay 3 (Term. 7 - 9)		X	X						X		
	P3 - Computer Interface ⁵						X					
	P4 - VESDA HLI						X					
	P5 - Peripherals (RS232) ⁶						X					
	P6 - Aux. Out (Term. 1 & 2)			X								
	P6 - Aux. Out (Term. 3 & 4)			X								
	P6 - Peripheral (Term. 5 & 6)	X										
	P6 - DACT (Term. 8 & 9)	X										
	P7 - Addr. Loop (Term. 1 - 5)						X					
	P8 - NAC 1 (Term. 1 - 5)			X								
	P9 - NAC 2 (Term. 1 - 5)			X								

¹ Requires universal base P/N 40-1028 (PCB1B), sold separately.
² Use of this device will affect the available line resistance by 7 ohms.
³ Use of this device will affect the available line resistance by 9 ohms.
⁴ Alternate listed surge suppressor, P/N 10-2666 (Ditek DTK-MRJ45C5E).
⁵ Temporary connection used for programming only.
⁶ Peripherals connection (P5) is not used on the Cheetah Xi™ 50 panel.

Exhibit 4: CyberCat 254/1016 Surge Suppressor Compatibility Table

Panel /Module	Terminal - Description	40-1027 (PC642-008LC) ^{1,2}	40-1020 (HSP-121A)	40-1023 (PHC-043) ¹	40-1032 (LCDP-008)	40-1021 (SLCP-030) ¹	40-1029 (PC2-TEL) ^{1,3}	40-1022 (FAS-1-033HC)	40-1034 (FAS-2-033HC)	40-1019 (FAS-120AC)	40-1031 (LCDP-060) ⁴	40-1033 (DRS-130RMS)
CyberCat 254/1016 P/N 10-2525 & 10-2472	P1 - 24 VAC (Term. 1 & 2)		X							X		
	P1 - Battery (Term. 3 & 4)			X								
	P2 - Relay 1 (Term. 1 - 3)		X	X						X		
	P2 - Relay 2 (Term. 4 - 6)		X	X						X		
	P2 - Relay 3 (Term. 7 - 9)		X	X						X		
	P3 - Computer Interface ⁵						X					
	P4 - VESDA HLI						X					
	P5 - Peripherals (RS232)						X					
	P6 - DACT (Term. 1 & 2)	X										
	P6 - Peripheral (Term. 4 & 5)	X										
	P7 - Aux. Out Res. (Term. 1 & 2)			X								
	P7 - Aux. Out (Term. 4 & 5)			X								
	P7 - Aux. Out (Term. 7 & 8)			X								
	P8 - Addr. Loop 1 (Term. 1 - 5)						X					
	P9 - Addr. Loop 2 (Term. 1 - 5) ⁶						X					
	P10 - NAC 1 (Term. 1 - 5)			X								
P11 - NAC 2 (Term. 1 - 5)			X									

¹ Requires universal base P/N 40-1028 (PCB1B), sold separately.
² Use of this device will affect the available line resistance by 7 ohms.
³ Use of this device will affect the available line resistance by 9 ohms.
⁴ Alternate listed surge suppressor, P/N 10-2666 (Ditek DTK-MRJ45C5E).
⁵ Temporary connection used for programming only.
⁶ Loop 2 available on CyberCat™ 1016 panel only.



Exhibit 5: Cheetah Xi Surge Suppressor Compatibility Table

Panel /Module	Terminal - Description	40-1027 (PC642-008LC) ^{1,2}	40-1020 (HSP-121A)	40-1023 (PHC-043) ¹	40-1032 (LCDP-008)	40-1021 (SLCP-030) ¹	40-1029 (PC2-TEL) ^{1,3}	40-1022 (FAS-1-033HC)	40-1034 (FAS-2-033HC)	40-1019 (FAS-120AC)	40-1031 (LCDP-060) ⁴	40-1033 (DRS-130RMS)
Cheetah Xi 1016 P/N 10-2542	P1 - 24 VAC (Term. 1 & 2)		X							X		
	P1 - Battery (Term. 3 & 4)			X								
	P2 - Relay 1 (Term. 1 - 3)		X	X						X		
	P2 - Relay 2 (Term. 4 - 6)		X	X						X		
	P2 - Relay 3 (Term. 7 - 9)		X	X						X		
	P3 - Computer Interface ⁵						X					
	P4 - VESDA HLI						X					
	P5 - Peripherals (RS232)						X					
	P6 - DACT (Term. 1 & 2)	X										
	P6 - Peripheral (Term. 4 & 5)	X										
	P7 - Aux. Out Res. (Term. 1 & 2)			X								
	P7 - Aux. Out (Term. 4 & 5)			X								
	P7 - Aux. Out (Term. 7 & 8)			X								
	P8 - Addr. Loop 1 (Term. 1 - 5)						X					
	P9 - Addr. Loop 2 (Term. 1 - 5)						X					
	P10 - NAC 1 (Term. 1 - 5)			X								
P11 - NAC 2 (Term. 1 - 5)			X									

¹ Requires universal base P/N 40-1028 (PCB1B), sold separately.
² Use of this device will affect the available line resistance by 7 ohms.
³ Use of this device will affect the available line resistance by 9 ohms.
⁴ Alternate listed surge suppressor, P/N 10-2666 (Ditek DTK-MRJ45C5E).
⁵ Temporary connection used for programming only.

Exhibit 6: Supplemental Card and Addressable Device Surge Suppressor Compatibility Table

Panel /Module	Terminal - Description	40-1027 (PC642-008LC) ^{1,2}	40-1020 (HSP-121A)	40-1023 (PHC-043) ¹	40-1032 (LCDP-008)	40-1021 (SLCP-030) ¹	40-1029 (PC2-TEL) ^{1,3}	40-1022 (FAS-1-033HC)	40-1034 (FAS-2-033HC)	40-1019 (FAS-120AC)	40-1031 (LCDP-060) ⁴	40-1033 (DRS-130RMS)
RPM P/N 10-2254	P42 - Circuit 1 & 2		X	X						X		
SLM P/N 10-2473	P31 – Addressable Loop 3 (Term. 1-5) P32 – Addressable Loop 4 (Term. 1-5)					X						
SPS P/N 10-2474-p	P21 – AC XFMR (Term. 1 & 2)			X								
	P21 – Battery Input (Term. 3 & 4)			X								
	P22 - Aux. Out (Term. 1 – 9)			X								
RS485 Net P/N 10-2482	P50 - RS485 (Term. A+, A-, SH, B+, B-)	X										
CRM-4 P/N 10-2204	P4 - Relays 1 – 4 (C, NC, NO)		X	X						X		
Ethernet Module P/N 10-2627	P1 - 24 VDC In/Out (Term. 1 - 5)			X								
	P2 - 485 In/Out (Term. 8 - 12)	X										
	P3 - RJ45 (Ethernet connection)										X	
MIM P/N 10-2583	P1 - 24 VDC Input (Term. 1 - 3)			X								
	P1 - 24 VDC Output (Term. 4 & 5)			X								
	P1 - 24 VDC to Printer (Term. 6 & 7)			X								
	P1 - 485 Bus Out (Term. 8 -10)	X										
	P1 - 485 Bus Input (Term. 11 & 12)	X										
	P5 - RS232 PC graphic connection						X					
	P7 - 485 Cheetah Network connection	X										
HLI P/N 68-023	P9 - VESDAnet (In/Out)	X										
	P10 - 24 VDC (In/Out)			X								
	RS232 cable to control panel						X					
Mini Monitor Module P/N 55-045 P/N 55-050 (I)	Contact Input (purple/yellow)			X								
Monitor Module P/N 55-041 P/N 55-046 (I)	Contact Input (Term. 7 - 10)			X								
Dual Monitor Module P/N 55-056 P/N 55-061 (I)	Contact Inputs 1 & 2 (Term. 7 – 10)			X								
Zone Monitor Module P/N 55-055 P/N 55-060 (I)	Contact Inputs (Term. 11 – 14)							X	X			

¹ Requires universal base P/N 40-1028 (PCB1B), sold separately.
² Use of this device will affect the available line resistance by 7 ohms.
³ Use of this device will affect the available line resistance by 9 ohms.
⁴ Alternate listed surge suppressor, P/N 10-2666 (Ditek DTK-MRJ45C5E).



Exhibit 7: Supplemental Card and Addressable Device Surge Suppressor Compatibility Table

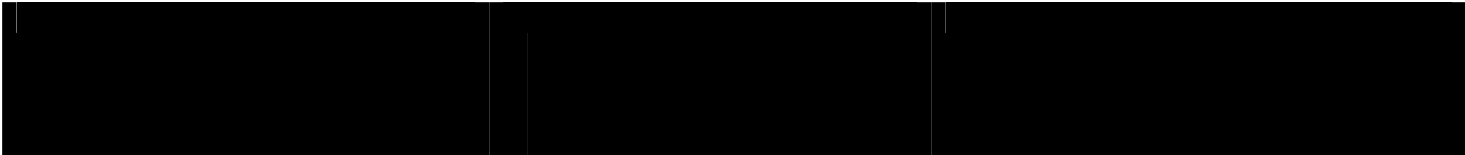
Panel /Module	Terminal - Description	40-1027 (PC642-008LC) ^{1,2}	40-1020 (HSP-121A)	40-1023 (PHC-043) ¹	40-1032 (LCDP-008)	40-1021 (SLCP-030) ¹	40-1029 (PC2-TEL) ^{1,3}	40-1022 (FAS-1-033HC)	40-1034 (FAS-2-033HC)	40-1019 (FAS-120AC)	40-1031 (LCDP-060) ⁴	40-1033 (DRS-130RMS)
Supervised Control Module P/N 55-042 P/N 55-047 (I)	NAC Connection (Term. 11 – 14)			X								
	Solenoid Connection (Term. 11 – 14)			X								
Relay Module P/N 55-043 P/N 55-048 (I)	Relay Connection (Term. 7 – 12)		X	X						X		
Releasing Control Module P/N 55-052 P/N 55-053	ARM/IRM Connection (Term. 11 – 12)			X								
	Solenoid Connection (Term. 13 – 14)			X								
Master Box Interface P/N 10-2413	P1 - Signal Input (Term. 1 & 2)			X								
	P1 - Trip coil connection (Term. 3 & 4)			X								
	P1 - 24 VDC power input (Term. 5 & 6)			X								
DACT P/N 10-2528 P/N 10-2476	Phone Lines (1 & 2)						X					
SigniFire Camera	Ethernet Connection				X							
	Trouble contacts			X								
	Alarm contacts			X								
	Supervisory Contacts			X								
Amplifier P/N 10-2726	P11 - P15 - Speaker circuits											X
	P8 - NAC			X								
	P6 - Peripheral Bus	X										
	P7 - Audio Network	X										
	P4 - Contact Input			X								
	P12 - VAC		X							X		
	P1 - Trouble relay		X	X						X		

¹ Requires universal base P/N 40-1028 (PCB1B), sold separately.
² Use of this device will affect the available line resistance by 7 ohms.
³ Use of this device will affect the available line resistance by 9 ohms.
⁴ Alternate listed surge suppressor, P/N 10-2666 (Ditek DTK-MRJ45C5E).

INSTALLATION

Devices shall be mounted external to the Fike enclosure in a UL listed gang-box in accordance with the requirements of NFPA 72 (National Fire Alarm Code) and NFPA 70 (National Electrical Code).

For detailed installation instructions, refer to the information supplied with each device.



704 SW 10th Street
P.O. Box 610
Blue Springs, Missouri 64013

Tel: (816) 229-3405
Fax: (816) 229-0314
www.fike.com

