

Lighting and Fire Alarm Training System Add-On 588476 (3468-00)

FESTO

LabVolt Series

Datasheet

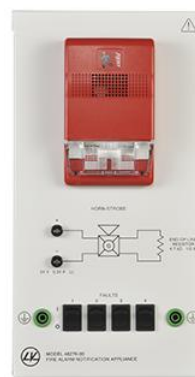
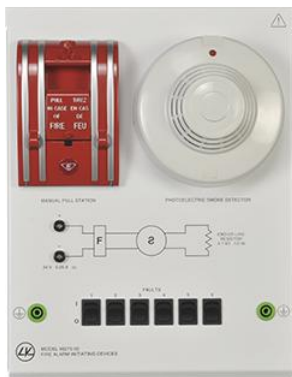


Table of Contents

General Description	2
List of Equipment	2
List of Manuals	2
Table of Contents of the Manual(s)	2
Optional Equipment	2
System Specifications	2
Equipment Description	3
Optional Equipment Description	7

General Description

The Lighting and Fire Alarm Training System Add-On complements the Multi-Zone Wireless Control Training System, Model 3467. It covers human-machine interfaces (HMI) with a supervisory controller connected to the training system, and provides an introduction to lighting control and fire alarm in a building.

List of Equipment

Qty	Description	Model number
1	Supervisory Controller	588277 (46260-00)
1	Network Relay	588283 (46269-00)
1	Network Station	588284 (46270-00)
1	Single-Zone Fire Alarm Control Panel	588285 (46274-00)
1	Fire Alarm Initiating Devices	588286 (46275-00)
1	Fire Alarm Notification Appliance	588287 (46276-00)
1	Test Lead Kit	588294 (46295-08)

List of Manuals

Description	Manual number
Wireless Multi-Zone HVAC Control (Instructor Guide)	589223 (52130-10)
Wireless Multi-Zone HVAC Control (Student Manual)	589227 (52130-00)

Table of Contents of the Manual(s)

Wireless Multi-Zone HVAC Control (Student Manual) (589227 (52130-00))

- 1 Supervisory Controller
- 2 Lighting Control
- 3 Fire Alarm System – Part 1
- 4 Fire Alarm System – Part 2

Optional Equipment

Qty	Description	Model number
1	Electricity Fundamentals (Manuals on CD-ROM)	585314 (89688-A0)

System Specifications

Parameter	Value
Physical Characteristics	
Intended Location	Installed in the workstation of the Multi-Zone Wireless Control Training System
Dimensions (H x W x D)	TBE

Parameter	Value
Net Weight	TBE

Equipment Description

Supervisory Controller 588277 (46260-00)



The Supervisory Controller is primarily used to monitor and control the local network of controllers. A graphical interface, accessed through a remote computer, regroups the necessary information on the system (temperatures, CO2 levels, opening of dampers, etc.) and provides direct control over the inputs and the outputs. This interface (HMI) is particularly useful to troubleshoot the

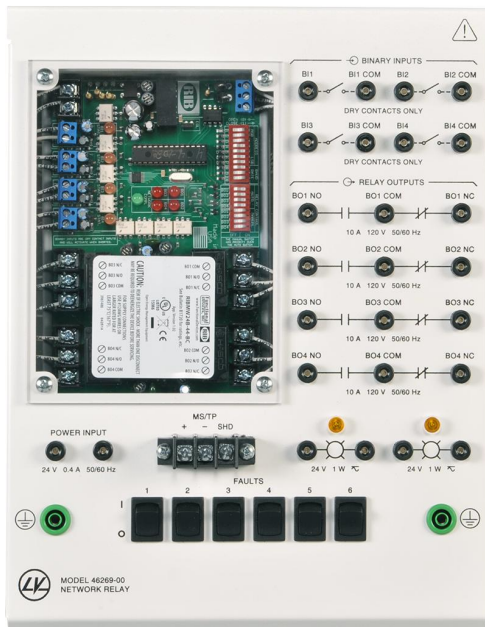
HVAC system. In addition to the HVAC equipment, the Supervisory Controller also manages lighting systems and other electrical equipment to ensure the comfort of the occupants.

The Supervisory Controller module connects to other devices via several communication protocols, such as Ethernet (access to the interface), Zigbee (wireless network), and BACnet (FC bus communications). The module requires power from the Power Source, Model 46200.

Specifications

Parameter	Value
Power Requirements	85-264 V ac – 0.65 A – 47-63 Hz
Communication Protocols	
Communication Protocols	Ethernet
	Zigbee
	BACnet
Physical Characteristics	
Dimensions (H x W x D)	TBE
Net Weight	TBE

Network Relay 588283 (46269-00)



The Network Relay consists of a deported set of inputs (I) and outputs (O) for the supervisory controller. The state of the different I/Os transits via the BACnet communication protocol to and from the supervisory controller. LEDs corresponding to each input and output are turned on or off on the circuit board to reflect the state of the inputs and outputs. Two LEDs, Light 1 and Light 2, represent large fluorescent lights installed in a zone.

The Network Relay is powered using the 24 V ac terminals of the Control Transformer, Model 46208. The module also includes six fault-insertion switches to teach the principles of troubleshooting, as well

as two ground terminals.

Specifications

Parameter	Value
Power Requirements	24 V – 0.4 A – 50/60 Hz
Communication Protocol	BACnet
Binary Inputs	
Number	4
Type	Dry contacts
Relay Outputs	
Number	4
Contacts	1 normally open and 1 normally closed
Ratings	120 V – 10 A – 50/60 Hz
LEDs	
Number	2
Ratings	24 V ac – 1 W
Fault-Insertion Switches	6
Physical Characteristics	
Dimensions (H x W x D)	292 x 225 x 90 mm (11.5 x 8.86 x 0.35 in)
Net Weight	TBE

Network Station 588284 (46270-00)



The Network Station consists of two light switches whose state is communicated to the supervisory controller via the BACnet protocol. The module allows manual operation of the lights on the Network Relay, Model 46269.

The Network Station is powered using the 24 V ac terminals of the Control Transformer, Model 46208. The module also includes four fault-insertion switches to teach the principles of troubleshooting, as well as two ground terminals.

Specifications

Parameter	Value
Power Requirements	24 V – 8 mA – 50/60 Hz
Communication Protocol	BACnet
Light Switches	
Number	2
Fault-Insertion Switches	4
Physical Characteristics	
Dimensions (H x W x D)	292 x 149 x 90 mm (11.5 x 5.87 x 0.35 in)
Net Weight	TBE

Single-Zone Fire Alarm Control Panel 588285 (46274-00)



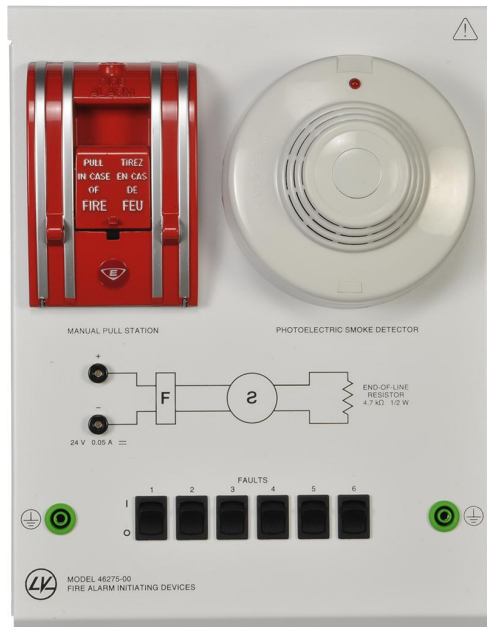
The Single-Zone Fire Alarm Control Panel receives signals from the Fire Alarm Initiating Devices, Model 46275, and sends emergency signals to the Fire Alarm Notification Appliance, Model 46276, (to alert the occupants). The control panel is also fitted with alarm and trouble relays that interface with other systems in a building to indicate alarm events or circuit troubles. The front panel of the control panel consists of three main sections: indicator LEDs, control buttons, and connections.

The Single-Zone Fire Alarm Control Panel includes two standby batteries mounted in the module to power the system during temporary power interruption. The module also includes three fault-insertion switches to teach the principles of troubleshooting, as well as two ground terminals.

Specifications

Parameter	Value
Power Requirements	24 V – 1.8 A – 50/60 Hz
Initiating Device	24 V dc – 0.05 A
Notification Appliance	24 V dc – 1 A
Alarm Relay	
Contacts	1 normally open and 1 normally closed
Ratings (dc)	30 V dc – 1 A
Ratings (ac)	120 V ac – 0.5 A – 50/60 Hz
Trouble Relay	
Contacts	1 normally open and 1 normally closed
Ratings (dc)	30 V dc – 1 A
Ratings (ac)	120 V ac – 0.5 A – 50/60 Hz
Fault-Insertion Switches	4
Physical Characteristics	
Dimensions (H x W x D)	TBE
Net Weight	TBE

Fire Alarm Initiating Devices 588286 (46275-00)



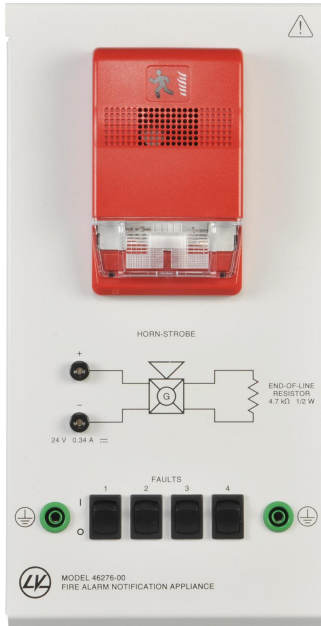
The Fire Alarm Initiating Devices module consists of a manual pull station and a photoelectric smoke detector. Initiating devices are used to detect and send information to the control panel when a risk or an abnormal condition is detected.

The module includes six fault-insertion switches to teach the principles of troubleshooting, as well as two ground terminals.

Specifications

Parameter	Value
Power Requirements	24 V dc – 0.05 A
Includes:	
Includes:	Manual pull station
	Photoelectric smoke detector
End-of-Line Resistor	4.7 k Ω – 0.5 W
Fault-Insertion Switches	6
Physical Characteristics	
Dimensions (H x W x D)	292 x 225 x 90 mm (11.5 x 8.86 x 0.35 in)
Net Weight	TBE

Fire Alarm Notification Appliance 588287 (46276-00)



The Fire Alarm Notification Appliance module consists of a horn-strobe station and an end-of-line resistor. The horn-strobe station is a notification appliance that uses audible and visible signals to alert the occupants to take action in the event of a fire or any other emergency.

The module also includes four fault-insertion switches to teach the principles of troubleshooting, as well as two ground terminals.

Specifications

Parameter	Value
Power Requirements	24 V dc – 0.34 A
End-of-Line Resistor	4.7 kΩ – 0.5 W
Fault-Insertion Switches	4
Physical Characteristics	
Dimensions (H x W x D)	292 x 149 x 90 mm (11.5 x 5.87 x 0.35 in)
Net Weight	TBE

Test Lead Kit 588294 (46295-08)

The Test Lead Kit contain all the test leads required to complete the exercises presented in the course material.

Optional Equipment Description

Electricity Fundamentals (Manuals on CD-ROM) (Optional) 585314 (89688-A0)

List of Manuals

Description	Manual number
Wireless Multi-Zone HVAC Control (Student Manual) _____	590316 (20588-00)
Wireless Multi-Zone HVAC Control (Instructor Guide) _____	590318 (20588-10)
HVAC Direct Digital Control (Student Manual) _____	590320 (20589-00)
HVAC Direct Digital Control (Instructor Guide) _____	590322 (20589-10)
Forced-Air Systems (Student Manual) _____	590326 (20671-00)
Forced-Air Systems (Instructor Guide) _____	590328 (20671-10)
Wireless Multi-Zone HVAC Control (Student Manual) _____	591521 (52130-00)
Wireless Multi-Zone HVAC Control (Instructor Guide) _____	591523 (52130-10)
Electricity Fundamentals (Student Manual) _____	592198 (89688-00)
Electricity Fundamentals (Instructor Guide) _____	592200 (89688-10)

Reflecting the commitment of Festo Didactic to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

Festo Didactic reserves the right to make product improvements at any time and without notice and is not responsible for typographical errors. Festo Didactic recognizes all product names used herein as trademarks or registered trademarks of their respective holders. © Festo Didactic Inc. 2019. All rights reserved.

Festo Didactic SE

Rechbergstrasse 3
73770 Denkendorf
Germany

P. +49(0)711/3467-0
F. +49(0)711/347-54-88500

Festo Didactic Inc.

607 Industrial Way West
Eatontown, NJ 07724
United States

P. +1-732-938-2000
F. +1-732-774-8573

Festo Didactic Ltée/Ltd

675 rue du Carbone
Québec QC G2N 2K7
Canada

P. +1-418-849-1000
F. +1-418-849-1666

www.labvolt.com

www.festo-didactic.com