

## DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

# **CITY OF PORTLAND**



This is to certify that TRIADLLC WATERVILLE

Job ID: 2011-02-490-FAFS

PERMIT ISSUED

CBL: 016 -- J-017-001 -- MAR 1 8 20

## City of Portland

has permission to Storage room/Electrical Room

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured A final inspection, must be completed by owner before this building or part thereof is occupied. If a before this building or part thereof is lathed or otherwise of occupancy is required, it must be closed-in. 48 HOUR NOTICE IS REQUIRED. certificate Code Enforcement Officer / Plan Reviewer **Fire Prevention Officer** THIS CARD MUST BE PROMINING THE Var in the months. PENA, TY FOR RESIDENT

### PERMIT ISSUED BUILDING PERMIT INSPECTION PROCEDURES Please call 874-8703 or 874-8693 (ONLY) MAR 1 8 2011 or email: buildinginspections@portlandmaine.gov

City of Portland

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.
- Permits expire in 6 months. If the project is not started or ceases for 6 months.
- If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.

l.

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUOPIED.



## PERMIT ISSUED

' MAR 1 8 2011

Strengthening a Remarkable City. Building a Community for Lafe . non port and manager

### City of Portland

Director of Planning and Urban Development Penny St. Louis

Job ID: 2011-02-490-FAFS

Located At: 29 WATERVILLE

CBL: <u>016 - - J - 017 - 001 - - - - -</u>

### **Conditions of Approval:**

### Zoning

- 1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
- 2. This property shall remain as three residential condominiums. Any change of use shall require a separate permit application for review and approval.

### Fire

This permit is for automatic sprinkler supervision only. Pull station has been waived.

The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.

In field installation shall be installed per code as conditions dictate.

Records cabinate, FACP, annunciator(s), and pull stations shall be keyed alike.

Central Station monitoring for addressable fire alarm systems shall be by point.

All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".

Installation of a Fire Alarm or sprinkler system requires a Knox Box to be installed per city ordinance.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

### City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

## PERMIT ISSUED

Job No:	Date Applied:		CBL:		111000		
2011-02-490-FAFS	2/23/2011		016 J - 017 - 001				
				IMA	R T 8 201		
Location of Construction:	Owner Name:		Owner Address:	Phone:			
29 WATERVILLE STREET	TRIAD LLC WATERVI	LLE	17 CHESTNUT ST	City	of Portland		
			PORTLAND, ME -	MAINE 04101	orronand		
Business Name:	Contractor Name:		Contractor Addre	ess:		Phone:	
	Desrochers, Peter S		14 Garland RD SH	APLEIGHMAINE04076			
						651-2918	
Lessee/Buyer's Name	Phone:		Permit Type:			Zone	
Lessee/Buyer's Name. Filone.			Permit Type: Zone: FIRE ALARM - Fire Alarm				
						R-6	
Dest Lies	Draw aged Lleas		CentefWerler				
Past Use:	Proposed Use:		COSLOT WORK:			CEO District:	
Three residential condos	los –	5000.00					
	install fire alarm		Fire Dept:			Inspection:	
				Approved w/ a	enditions	Use Group:	
				Denied		Туре:	
			-				
			Signature: Hay	Signature:			
Proposed Project Description	:		Pedestrian Activi	ities District (P.A.D.)			
29 Waterville – fire alarm							
Permit Taken By:				Zoning Annual			
Termit Taken By.				Zoning Approva	1		
		Special Zo	one or Reviews	Zoning Appeal	Historic Pr	eservation	
1 This permit application d	oes not preclude the	Shorelan	d		1		
Applicant(s) from meeting applicable State and				Variance	Not in Dis	t or Landmark	
Federal Rules.		Wetland	s		Dear and	Doquiro Dovisso	
2. Building Permits do not include plumbing.		Flood Zo	one	Miscellaneous		cequire Keview	
septic or electrial work.				Conditional Use	Requires I	Review	
3. Building permits are void	d if work is not started	Subdivis	ion		Approved		
within six (6) months of	the date of issuance.	Site Plan	i i	Interpretation	Approved		
False informatin may inv	alidate a building			Approved	w/Conditions		

\_\_\_\_Maj \_\_\_\_Min \_\_\_\_MM

Date: Obulcondit

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour

2 28/11

\_\_\_\_\_

to enforce the provision of the code(s) applicable to such permit.

permit and stop all work.

SIGNATURE OF APPLICANT

ADDRESS

Denied

Date:

Denied

Date:

FRI

# Fire conditions

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System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

## Job Summary Report Job ID: 2011-02-490-FAFS

#### Report generated on Feb 25, 2011 2:47:38 PM

2123 Used use - 3 reriduntial Canados. #10-0214

Job Type:		Fire Alarm / Sup	opression	Job Descr	iption:	29 Waterville	a Job Yea	<b>ar:</b> 2	011
Building Job S	tatus Code:	Initiate Plan Re	view	Pin Value:		740	Tenant	Name:	
Job Application	n Date:			Public Bui	lding Flag:	Ν	Tenant	Number:	
Estimated Valu	le:	3,000		Square Fo	otage:				
<b>Related Partie</b>	s:			TRIAD WA	TERVILLE			Property Owner	
				Southern N	Maine Cabling	- Peter Desro	ochers	FIRE ALARM INS	TALLER
				Job	Charges				
Fee Code Description	Charge Amount	Permit Charge Adjustment	Net Charge Amount	Payment Date	Receipt Number	Payment Amount	Payment Adjustment Amount	Net Payment Amount	Outstanding Balance

Location ID: 2730

						Locat	tion Det	tails					
Alternate Id	Parcel Number	Census Tract	GIS X	GIS Y C	GIS Z	GIS Reference	e Longi	itude Lai	titude	2			
U00076	016 J 017 001		М				-70.24	45311 43.0	56404	-1			
			Locat	tion Type	Sub	division Code	Subdivis	sion Sub C	ode	Related Person	าร	Address(es)	-
			1								29 W/	ATERVILLE STREET WEST	_
Location Use	Code Variance Co	ode Use Zone	Code	Fire-Zone	Code	Inside Outsi	de Code	District C	Code	General Locati	on Code	Inspection Area Code	Jurisdiction Code
VACANT LAND		NOT APPLIC	CABLE	(R-6)	)							DISTRICT 1	EAST END
				$\sim$		Struc	ture De	tails					
Structure:	3 unit building	permit#100	0214										
Occupancy	Type Code:												
Structure	Type Code Stri	ucture Status Ty	pe Sq	uare Foot	tage	Estimated Val	ue	Ade	dress				
Three - Four F	amily Building 0						29 V	WATERVILL	E STR	LEET WEST			
Longitude	atitude GIS X	GISY GISZ G	SIS Refe	erence						User De	efined Pr	operty Value	

Permit #: 20111551

Permit Data							
Location Id	Structure Description	Permit Status	Permit Description	<b>Issue Date</b>	<b>Reissue Date</b>	<b>Expiration Date</b>	
2730	3 unit building permit#100214	Initialized	Storage room/Electrical Room				



### **Fire Alarm Permit**

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

-

Installation address: 29 Waterville St.	CBL: 16317
Exact location: (within structure)Storage_ Boom / El	ectics/ Room
Type of occupancy(s) (NFPA & ICC): _ Residential Condo	
Building owner: Waterville Triad LLC	
System Designer (point of contact): Mark Cumming	S PE
Designer phone: 207-442-7200	E-mail: Wmark @fireriskmgt.com
Installing contractor: Southern Maine Cabling	_Certificate of Fitness No:
Contractor phone:	E-mail: Pete @ Southern maine cabling.com
This is a new application: YES ONO New (Incl	AES Master Box: YES ON NO
Amendment to an existing permit: YES O NO Q Perm	nit no: 6
The following documents shall be provided with this application:	
Floor plans Scope of Work	COST OF WORK: \$ 2647.00
Wiring diagram	PERMIT FEE: $SO$ (\$10 PER \$1 000 + \$30 FOR THE FIRST \$1 000)
Annunciator details pdf copy (may be e-mailed)	(JIOTEK 31,000 + 350 FOK THE FIRST \$1,000)
Input/ Output Matrix Designer qualifications	DECEIVED
Equipment data sheets Battery/ voltage drop calcs	REUL
Electrical Permit Pulled (check alarm/com)	FEB 2 3 2011
Master box approval only: YES NO (If yes check <i>New AES Master Box</i> above)	Dept. of Building Inspections
The <u>designer</u> shall be the responsible party for this application. D	ownload a new copy of this application at
www.portlandmaine.gov/fire for every submittal. Submit all plans in e	lectronic PDF in <u>addition</u> to readable 11 ½ x 17s to
the Building Inspections Department, 389 Congress Street, Room Prior to acceptance of any fire alarm system, a complete commissioni	315, Portland, Maine 04101.
fire system contractors and the Fire Department, and proper document	ation of such test(s) provided.
All installation(s) must comply with the City of Portland Technical Sta	andard for Signaling Systems for the Protection of
Life and Property, available at <u>www.portlandmaine.gov/fire</u> .	

Applicant signature:	Date: 2-23-11	
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Form # P 01

### **ELECTRICAL PERMIT** City of Portland, Me.



To the Chief Electrical Inspector, Portland Maine:

The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the City of Portland Electrical Ordinance, National Electrical Code and the following specifications:

Date\_ Permit # 16=7-1 CBL#

TAL

LOCATION: 29 Wsterville St	METER MAKE & #
CMP ACCOUNT #	OWNER Wsterville Trist LLC
TENANT	PHONE #

				10	TAL LACIT	
OUTLETS		Receptacles	Switches	Smoke Detector	.20	
FIXTURES		Incandescent	Fluorescent	Strips	.20	
SERVICES		Overhead	Underground	TTL AMPS <800	15.00	
		Overhead	Underground	>800	25.00	
Temporary Service		Overhead	Underground	TTL AMPS	25.00	
					25.00	
METERS		(number of)			1.00	
MOTORS		(number of)			2.00	^
RESID/COM		Electric units			1.00	
HEATING		oil/gas units	Interior	Exterior	5.00	1
APPLIANCES		Ranges	Cook Tops	Wall Ovens	2.00	
		Insta-Hot	Water heaters	Fans	2.00	L L
		Dryers	Disposals	Dishwasher	2.00	
		Compactors	Spa	Washing Machine	2.00	(
		Others (denote)		$\sim$	2.00	`
MISC. (number of)		Air Cond/win		V2.	3.00	
		Air Cond/cent		Pools	10.00	
		HVAĆ	EMS	Thermostat	5.00	
		Signs		line voi	10.00	
		Alarms/res		3	5.00	
	1	Alarms/com		Ten Ten	15.00	15.00
		Heavy Duty(CRKT)		FED MOD d	2.00	
		Circus/Carnv		Sullor 121	25.00	
		Alterations		of of p	5.00	
	-	Fire Repairs		DepCip	15.00	
		E Lights			1.00	
		E Generators			20.00	
PANELS		Service	Remote	Main	4.00	
TRANSFORMER		0-25 Kva			5.00	
	-	25-200 Kva			8.00	
		Over 200 Kva			10.00	
				TOTAL AMOUNT DUE		
		MINIMUM FEE/COMI	MERCIAL 55.00	MINIMUM FEE 45	5.00	55.00

CONTRACTORS NAME\_ ADDRESS 14 ME OVO76 LIMITED LIC. # Sher acres Pigl 651-2919 207-TELEPHONE \_

MASTER LIC. # MS60020136

SIGNATURE OF CONTRACTOR

White Copy - Office •

## **Input/ Output Matrix**

Sprinkler gate valve switches – causes supervisory condition Sprinkler Pressure switch- causes supervisory condition Sprinkler flow switch- causes alarm condition Fire Panel smoke detector- causes alarm condition

## Scope of Work

Install new conventional fire panel to monitor sprinkler system gate valves & pressure switches. Tie fire panel into central station.

### MS-5UD/MS-10UD(E) Series

#### Five Zone Fire Alarm Control Panel Ten Zone Fire Alarm Control Panel

### Control/Communicators

FIRE-LITE ALARMS

by Honeywell

#### General

The **MS-5UD-3** is a five-zone FACP (Fire Alarm Control Panel) and the **MS-10UD-7(E)** is a ten-zone FACP. These control panels provide reliable fire signaling protection for small to medium-sized commercial, industrial, and institutional buildings. Both panels include built-in communicators for Central Station Service and remote upload/download.

Each of these FACPs is compatible with System Sensor's microprocessor-based i<sup>3</sup> series detectors. These conventional smoke detectors can transmit a maintenance trouble signal to the FACP indicating the need for cleaning and a supervisory "freeze" signal when the ambient temperature falls below the detector rating. Additionally, both the MS-5UD-3 and MS-10UD-7 are compatible with conventional input devices such as two- and four-wire smoke detectors, pull stations, waterflow devices. Refer to the *FireeLite Device Compatibility Document* for a complete listing of compatible devices.

Outputs include four NACs (Notification Appliance Circuits), three programmable Form-C relays (factory programmed for Alarm, Trouble, and Supervisory) and 24 VDC special application resettable and nonresettable power outputs. The FACPs supervise all wiring, AC voltage, battery level and telephone line integrity.

Activation of a compatible smoke detector or any normallyopen fire alarm initiating device will activate audible and visual signaling devices, illuminate an indicating LED, sound the piezo sounder at the FACP, activate the communicator and FACP alarm relay, and operate an optional module used to notify a remote station or initiate an auxiliary control function.

New options include a UL listed printer, PRN-6F and FireLite's ACT Internet Monitoring module. The FireWatch Series internet monitoring modules IPDACT-2 and IPDACT-2UD permit monitoring of alarm signals over the Internet saving the monthly cost of two telephone lines. Although not required, the secondary telephone line may be retained providing backup communication over the public switched telephone line.

**NOTE:** The **MS**-10UD-7E offers the same features as the **MS**-10UD-7 but allows connection to 240 VAC. Unless otherwise specified, the information in this data sheet applies to both the 120 VAC and the 240 VAC versions of these panels.

NOTE: For ULC-listed models, see df-60440.

#### Features

- Listed to UL Standard 864, 9th edition.
- Built-in DACT (Digital Alarm Communicator/Transmitter).
- Style B (Class B) IDC (Initiating Device Circuit)
  - MS-5UD-3 five IDCs.
  - MS-10UD-7 ten IDCs.
- Style Y (Class B) NAC (Notification Appliance Circuit) special application power
  - MS-5UD-3 four NACs.
  - MS-10UD-7 four NACs.
- Notification Appliances may be programmed as – Silence Inhibit.
  - Auto-Silence.



- Strobe Synchronization for System Sensor, Wheelock, Gentex, Faraday, or Amseco devices.
- Selective Silence (horn-strobe mute).
- Temporal or Steady Signal.
- Silenceable or Nonsilenceable.
- Optional CAC-5X Style Z (Class A) Converter Module for NACs and IDCs (2 required for MS-10UD-7).
- Form-C Relays for Alarm, Trouble and Supervisory Contact Ratings 2.0 A@ 30 VDC or 30 VAC (resistive).
- 3.0 A total system current for MS-5UD-3.
- 7.0 A total system current for MS-10UD-7.
- Optional Dress Panel DP-51050
- Optional Trim Ring TR-CE for semi-flush mounting.
- 24 volt operation.
- Low AC voltage sense.
- Alarm Verification.
- PAS (Positive Alarm Sequence).
- Automatic battery trickle charger.
- Up to eight ANN-BUS annunciators:
  - Optional 8 zone Relay Module ANN-RLY.
  - Optional LED Annunciator Module ANN-LED,
  - Optional Remote Annunciator ANN-80.
  - Optional Remote Printer Gateway ANN-S/PG.
  - Optional LED Annunciator Driver ANN-I/O.
- Optional 4XTMF module (conventional reverse polarity/city box transmitter).

#### PROGRAMMING AND SOFTWARE:

- Can be programmed at the panel with no special software or additional equipment.
- Programmable Make/Break Ratio.
- Upload/Download (local or remote) of program and data via integral DACT.

## SYSTEM SPECIFICATIONS

#### **System Capacity**

#### **Electrical Specifications**

- MS-5UD-3 (FLPS-3 Power Supply): 120 VAC, 60 HZ, 1.0 A
- MS-10UD-7 (FLPS-7 Power Supply): 120 VAC, 60 HZ, 3.90 A
- MS-10UD-7E (FLPS-7 Power Supply): 240 VAC, 50 HZ, 2.20 A.
- Wire size: minimum 14 AWG (2.0 mm<sup>2</sup>) with 600 V insulation, supervised, nonpower-limited

#### **Cabinet Specifications**

Door: 19.26" (48.92 cm.) high x 16.82" (42.73 cm.) wide x 0.72" (1.82 cm.) deep. **Backbox:** 19.00" (48.26 cm.) high x 16.65" (42.29 cm.) wide x 5.25" (13.34 cm.) deep. **Trim Ring** (**TR-CE):** 22.00" (55.88 cm.) high x 19.65" (49.91 cm.) wide.

#### **Shipping Specifications**

Dimensions:

- 20.00" (50.80 cm.) high
- 22.5" (57.15 cm.) wide
- 8.5" (21.59 cm.) deep.

Weight: 27 lb (12.20 kg)

#### **Temperature and Humidity Ranges**

This system meets NFPA requirements for operation at 0 –  $49^{\circ}C/32 - 120^{\circ}F$  and at a relative humidity  $93\% \pm 2\%$  RH (noncondensing) at  $32^{\circ}C \pm 2^{\circ}C$  ( $90^{\circ}F \pm 3^{\circ}F$ ). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of  $15 - 27^{\circ}C/60 - 80^{\circ}F$ .

#### **Agency Listings and Approvals**

The listings and approvals below apply to the basic MS-5UD-3 and MS-10UD-7 control panels. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL Listed: File S624
- FM Approved
- CSFM: 7165-0075:214
- MEA: MEA: 333-07-E

NOTE: For ULC-listed models, see df-60440.

#### **NFPA Standards**

The MS-5UD/MS-10UD(E) Series complies with the following NFPA 72 Fire Alarm Systems requirements:

- LOCAL (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- AUXILIARY (Automatic, Manual and Waterflow) (requires 4XTMF).
- REMOTE STATION (Automatic, Manual and Waterflow) (Where a DACT is not accepted, the alarm, trouble and supervisory relays may be connected to UL 864 listed transmitters. For reverse polarity signaling of alarm and trouble, 4XTMF is required.)
- PROPRIETARY (Automatic, Manual and Waterflow).
- CENTRAL STATION (Automatic, Manual and Waterflow, and Sprinkler Supervised).
- OT, PSDN (Other Technologies, Packet-switched Data Network)

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.



For more information, contact Fire-Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105. www.firelite.com

### Initiating Device Circuits - TB4 (and TB 6 on MS-10UD-7 only):

- Alarm Zones 1 5 on TB 4 (MS-5UD-3 and MS-10UD-7).
- Alarm Zones 6 10 on TB6 (MS-10UD-7 only).
- · Supervised and power-limited circuitry.
- Operation: All zones Style B (Class B).
- Normal Operating Voltage: Nominal 20 VDC.
- Alarm Current: 15 mA minimum.
- Short Circuit Current: 40 mA max.
- Maximum Loop Resistance: 100 ohms.
- End-of-Line Resistor: 4.7K ohm, 1/2 watt (P/N 71252 ULlisted).
- Standby Current: 2 mA.

Refer to the *Fire*-Lite Device Compatibility Document for listed compatible devices.

#### Notification Appliance Circuits – TB5 (and TB 7 on MS-10UD-7 only):

- Four NACs
- Operation: Style Y (Class B)
- Special Application power
- Supervised and power-limited circuitry
- Normal Operating Voltage: Nominal 24 VDC
- Maximum Signaling Current: 3.0 A for MS-5UD-3, 2.5 A maximum per NAC; 7.0 A for MS-10UD-7(E), 3.0 A maximum per NAC.
- End-of-Line Resistor: 4.7K ohm, 1/2 watt (Part #71252)
- Max. Wiring Voltage Drop: 2 VDC

Refer to the *Fire*-Lite Device Compatibility Document for compatible listed devices.

#### Form C Relays - TB8:

- Relay 1 (factory default programmed as Alarm Relay)
- Relay 2 (factory default programmed as fail-safe Trouble Relay)
- Relay 3 (factory default programmed as Supervisory Relay)
  Special Application Resettable Power TB9:
- Jumper selectable by JP31 for resettable or nonresettable power.
- Operating voltage: 24 VDC nominal.
- Maximum available current: 500 mA appropriate for powering four-wire smoke detectors.
- Power-limited circuit.

Refer to the *FireeLite Device Compatibility Document* for listed compatible devices.

**Remote Sync Output - TB2:** Remote power supply synchronization output, only required for the MS-5UD-3. 24 VDC nominal special application power. Maximum current is 40 mA. End-of-Line Resistor: 4.7K ohm. Supervised and power-limited circuit.

#### **Product Line Information**

**MS-5UD-3:** Five-zone, 24-volt Fire Alarm Control Panel (includes backbox, FLPS-3 power supply, technical manual, and a frame & post operating instruction sheet).

**MS-10UD-7:** Ten-zone, 24-volt Fire Alarm Control Panel (includes backbox, FLPS-7 power supply, technical manual, and a frame & post operating instruction sheet).

MS-10UD-7E: Same as above with 240 VAC FLPS-7.

**IPDACT, IPDACT-2/2UD Internet Monitoring Module:** Mounts in bottom of enclosure with optional mounting kit (PN IPBRKT). Connects to primary and secondary DACT telephone output ports for internet communications over customer provided ethernet internet connection. Requires compatible Teldat Visoralarm Central Station Receiver. Can use DHCP or static IP. (See data sheet df-52424 for more information.)

IPBRKT: Mounting kit for IPDACT in common enclosure.

**IPSPLT:** Y Adaptor option to allow connection of both panel dialer outputs to one cable input to IPDACT (sold separately).

#### **OPTIONAL MODULES**

**CAC-5X:** Optional (Class A) Converter Module. Converts Style B (Class B) Initiating Device Circuits to Style D (Class A); and Style Y (Class B) Notification Appliance Circuits to Style Z (Class A). Connects to J2 on the MS-5UD-3 and MS-10UD-7(E) main circuit board and to J7 on the MS-10UD-7(E).

**NOTE:** Two Class A Converter Modules are required for the tenzone panel.

**4XTMF:** Transmitter module. Provides a supervised output for local energy municipal box transmitter and alarm and trouble reverse polarity. Includes a disable switch and disable trouble LED. A module jumper option allows the reverse polarity circuit to open with a system trouble condition if no alarm conditions exists. Mounts to the main circuit board connectors J4 and J5.

#### **COMPATIBLE ANNUNCIATORS**

**ANN-80:** Remote LCD Annunciator. Mimics the information displayed on the FACP's LCD. Red. (For white, order: **ANN-80-W**.)

**ANN-LED:** LED Annunciator with three LEDs for each zone: Alarm, Trouble, and Supervisory. Mounts in the DP-51050(B) dress panel. (For white, order: **ANN-80-W**.)

**ANN-RLED:** LED Annunciator with three alarm (red) indicators for up to 30 input zones or addressable points. (See DF-60241).

**ANN-RLY:** Relay module. Mounts inside the cabinet. Provides ten Form C relays.

**ANN-S/PG:** Serial/parallel printer gateway. Provides a connection for a serial or parallel printer.

**ANN-I/O:** Driver module. Provides connections to a user-supplied graphic annunciator.

#### ACCESSORIES

**DP-51050:** Optional dress panel. Restricts access to the system wiring while allowing access to the membrane switch panel.

**BB-26:** Battery backbox, holds up to two 25 AH batteries and CHG-75.

BB-55: Battery backbox, holds up to two 25 AH batteries.

TR-CE: Optional trim-ring for semi-flush mounted cabinets.

PRN-6F: UL listed printer.

#### USER INTERFACE:

- · Built-in DACT (Digital Alarm Communicator/Transmitter).
- Integral 80-character LCD display with backlighting and keypad.
- Real-time clock/calendar with automatic daylight savings adjustments.
- · ANN-BUS for connection to remote annunciators.
- · Audible or silent walk test capabilities.
- · Piezo sounder for alarm, trouble, and supervisory.

#### **Controls and Indicators**

#### LED INDICATORS

- FIRE ALARM (red)
- SUPERVISORY (yellow)
- TROUBLE (yellow)
- AC POWER (green)
- ALARM SILENCED (yellow)

#### CONTROL BUTTONS

- ACKNOWLEDGE
- ALARM SILENCE

- SYSTEM RESET (lamp test)
- DRILL

#### **Terminal Blocks**

#### AC Power - TB1:

- MS-5UD-3 (FLPS-3 Power Supply): 120 VAC, 50/60 HZ, 1.00 A.
- MS-10UD-7 (FLPS-7 Power Supply): 120 VAC, 50/60 HZ, 3.80 A.
- MS-10UD-7E (FLPS-7 Power Supply): 240 VAC, 50 HZ, 2.20 A.

Wire size: minimum 14 AWG (2.00 mm<sup>2</sup>) with 600 V insulation. Supervised, nonpower-limited.

#### Battery (sealed lead acid only) - J12:

- Maximum Charging Circuit Normal Flat Charge: 27.6 VDC
  @ 1.4 A. Supervised, nonpower-limited.
- Maximum Charger Capacity: 18 AH battery for MS-5UD-3, and 26 AH battery for MS-10UD-7(E). [Two 18 Ah batteries can be housed in the FACP cabinet. Larger batteries require separate battery box such as the BB-26 or BB-55.]
- · Minimum Battery Size: 7 AH.



#### **Cabinet Measurements**

### **ANN-80**

#### 80-Character LCD Serial Annunciator

df-52417:c • B-90

by Honeywell

#### Annunciators

#### General

The ANN-80 annunciator is a compact, backlit, 80-character LCD fire annunciator that mimics the Fire Alarm Control Panel (FACP) display. It provides system status indicators for AC Power, Alarm, Trouble, Supervisory, and Alarm Silenced conditions. The ANN-80 and the FACP communicate over a two-wire serial interface employing the ANN-BUS communication format. Connected devices are powered, via two additional wires, by either the host FACP or a remote UL-listed, filtered power supply. ANN-80 is red; for white, order ANN-80-W.

The ANN-80 displays English-language text of system point information including device type, zone, independent point alarm, trouble or supervisory status, as well as any custom alpha labels programmed into the control panel. It includes control switches for remote control of critical system functions. (A keyswitch prevents unauthorized operation of the control switches.)

Up to eight ANN-80s may be connected to the ANN-BUS of each FACP. No programming is required, which saves time during system commissioning.

#### **Features**

- · Listed to UL Standard 864, 9th Edition.
- Backlit 80-character LCD display (20 characters x 4 lines).
- Mimics all display information from the host panel.
- Control switches for System Acknowledge, Signal Silence, Drill, and Reset.
- Control switches can be independently enabled or disabled at the FACP.
- Keyswitch enables/disables control switches and mechanically locks annunciator enclosure
- · Keyswitch can be enabled or disabled at the FACP.
- Enclosure supervised for tamper.
- System status LEDs for AC Power, Alarm, Trouble, Supervisory, and Alarm Silence.
- Local sounder can be enabled or disabled at the FACP.
- ANN-80 connects to the ANN-BUS terminal on the FACP and requires minimal panel programming.
- Displays device type identifiers, individual point alarm, trouble, supervisory, zone, and custom alpha labels.
- · Time-and date display field.
- Surface mount directly to wall or to single, double, or 4\* square electrical box.
- Semi-flush mount to single, double, or 4<sup>\*</sup> square electrical box. Use ANN-SB80KIT for angled view mounting.
- Can be remotely located up to 6,000 feet (1,800 m) from the panel.
- Backlight turns off during AC loss to conserve battery power but will turn back on if an alarm condition occurs.
- May be powered by 24 VDC from the host FACP or by remote power supply (requires 24 VDC).
- · Up to eight ANN-80s can be connected on the ANN-BUS.

#### **Controls and Indicators**

- AC Power
- Alarm
- Trouble



- Supervisory
- Alarm Silenced

#### Specifications

- Operating voltage range: 18 VDC to 28 VDC.
- Current consumption @ 24 VDC nominal (filtered and nonresettable): 40 mA maximum.
- Ambient temperature: 32°F to 120°F (0°C to 49°C).
- Relative humidity: 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°F).
- 5.375" (13.65 cm.) high x 6.875" (17.46 cm.) wide x 1.375" (3.49 cm.) deep.
- · For use indoors in a dry location.
- All connections are power-limited and supervised.

#### Agency Listings and Approvals

The listings and approvals below apply to the ANN-80. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL: S2424
- FM approved
- CSFM: 7120-0075:211
- MEA: 442-06-E

#### **The ANN-BUS**

#### POWERING THE DEVICES ON THE ANN-BUS FROM AUXILIARY POWER SUPPLY

The ANN-BUS can be powered by an auxiliary power supply when the maximum number of ANN-BUS devices exceeds the ANN-BUS power requirements. See the FACP manual for more information.

#### ANN-BUS DEVICE ADDRESSING

Each ANN-BUS device requires a unique address (ID Number) in order to communicate with the FACP. A maximum of 8 devices can be connected to the FACP ANN-BUS communication circuit. See the FACP manual for more information.

#### WIRE REQUIREMENTS: COMMUNICATIONS CIRCUIT

The ANN-80 connects to the FACP ANN-BUS communications circuit. To determine the type of wire and the maximum wiring distance that can be used with FACP ANN-BUS accessory modules, it is necessary to calculate the total worst case current draw for all modules on a single 4-conductor bus. The total worst case current draw is calculated by adding the individual worst case currents for each module.

**NOTE:** For total worst case current draw on a single ANN-BUS refer to appropriate FACP manual.

After calculating the total worst case current draw, the following table specifies the maximum distance the modules can be located from the FACP on a single wire run. The table ensures 6.0 volts of line drop maximum. In general, the wire length is limited by resistance, but for heavier wire gauges, capacitance is the limiting factor.

These cases are marked in the chart with an asterisk (\*). Maximum length can never be more than 6,000 feet (1,800 m), regardless of gauge used. See table below.

#### WIRE REQUIREMENTS: POWER CIRCUIT

- 14 to 18 AWG (0.75 2.08 mm<sup>2</sup>) wire for 24 VDC power circuit is acceptable. Power wire distance limitation is set by 1.2 volt maximum line drop form source to end of circuit.
- All connections are power-limited and supervised.
- A maximum of eight ANN-80 modules may be connected to this circuit.

<b>Communication Pa</b>	air Wiring Dist	ance: FACP t	o Last ANN-B	US Module
Total Worst Case Current Draw (amps)	22 Gauge	18 Gauge	16 Gauge	14 Gauge
0.100	1,852 ft.	4,688 ft.	* 6,000 ft.	*6,000 ft.
0.200	926 ft.	2,344 ft.	3,731 ft.	5,906 ft.
0.300	617 ft.	1,563 ft.	2,488 ft.	3,937 ft.
0.400	463 ft.	1,172 ft.	1,866 ft.	2,953 ft.
0.500	370 ft.	938 ft.	1,493 ft.	2,362 ft.
0.600	309 ft.	781 ft.	1,244 ft.	1,969 ft.
0.700	265 ft.	670 ft.	1,066 ft.	1,687 ft.
0.800	231 ft.	586 ft.	933 fl.	1,476 ft.
0.900	206 ft.	521 ft.	829 ft.	1,312 ft.
1.000 (max.)	185 ft.	469 ft.	746 ft.	1,181 ft.

#### WIRING CONFIGURATION

The following figure illustrates the wiring between the FACP and ANN-BUS devices.



FACP Wiring to ANN-BUS Device

#### **ORDERING OPTIONS:**

ANN-80: Red 80 character LCD Annunciator.

ANN-80-W: White, 80 character LCD Annunciator.

ANN-SB80KIT-R: Red surface mount backbox with angled wedge.

ANN-SB80KIT-W: White surface mount backbox with angled wedge.

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.



For more information, contact Fire+Lite Alarms, Phone: (800) 627-3473, FAX: (877) 699-4105. www.firelite.com

# FIRE-LITE ALARMS

## MS-10UD-7 Battery Calculation

	Secondary Power Source Requirements									
	Sec	cond	ary Non-Alarm	Curr	ent (amps)	Se	con	dary Alarm C	urre	nt (amps)
Device Type	Qty		Current Draw	1	Total	Qty	T	Current Drav	/	Total
1. System										
Main Circuit Board	1	X	0.127000	=	0.127000	1	X	0.265000	=	0.265000
4XTMF	0	X	0.005000	=		0	X	0.011000	=	
CAC-5X	0	X	0.001000	=		0	X	0.001000	=	
IPDACT-2	0	x	0.093000	=		0	X	0.136000	=	
IPDACT-2UD	0	X	0.098000	=		0	X	0.155000	=	
2. Annunciators										
ANN-80	1	X	0.015000	=	0.015000	1	X	0.040000	=	0.040000
ANN-RLY	0	X	0.015000	=		0	X	0.075000	=	
ANN-I/O	0	X	0.035000	=	<u>_</u>	0	X	0.200000	=	
ANN-I/O LEDs	0	X	0.000000	=		0	X	0.010000	=	And and a second
ANN-S/PG	0	X	0.045000	=		0	X	0.045000	=	
ANN-(R)LED	0	×	0.028000	=		0	X	0.068000	=	
3. Conventional Detection	and a second a									
Two-Wire Detector Heads	1	X	0.050000	=	0.050000	1948-57	1975	The Links		C. Tellersterre
Four-Wire Detector Heads	0	X	0.000000	=		See See				
Number of IDC's Used Minus 1		1. A				0	X	0.040000	=	
EOLR-1	0	X	0.020000	=		0	X	0.020000	=	
4. Other Devices		-								
Miscellaneous Device 1	0	X	0.000000	=		0	X	0.000000	=	
Miscellaneous Device 2	0	X	0.000000	=		0	X	0.000000	=	
Miscellaneous Device 3	0	X	0.000000	=		0	X	0.000000	=	
Miscellaneous Device 4	0	X	0.000000	=		0	X	0.000000	=	
Miscellaneous Device 5	0	X	0.000000	=		0	X	0.000000	=	
5. Notification Appliances	-			a financial						
NAC 1	And Allowed and		ALL THE R		Company Providence	0	X	0.000000	=	
NAC 2	Charles -					0	X	0.000000	=	
NAC 3						0	×	0.000000	=	
NAC 4			AND REAL PROPERTY.		and the second	0	X	0.000000	=	
Current Draw from TB9 (nonalam)	0	X	0.000000	=		0	X	0.000000	=	
		Tota	al Standby Lo	ad	0.192000	Г	ota	I Alarm Loa	d	0.305000

by Honeywell

## MS-10UD-7 Battery Calculation

	Calculation in Total Sheet		50 JA		
		Requ	uired Standb	y Time	in Hours
			24 Ho	ours	
Standby Load Current	0.19200 Amps	X	24	=	4.608 AH
		Requ	uired Alarm	fime in	Minutes
			15 Mir	utes	
Alarm Load Current (Amps)	0.30500 Amps	Х	0.25	=	0.076 AH
		Tot	al Current L	bad	4.684 AH
	Multiply by the Derating Factor		1.2	=	x 1.20
	Total A	mpere	Hours Requi	red	5.62 AH
	Recommended Batteries:	E	BAT-1270 - 7/	AH Bat	teries
Battery Check					
The batteries can be charged by the MS	S-10UD-7 Charger.				
The batteries can be housed in the MS-	10UD-7 Cabinet.	_			
Current Draw Check	AND THE REAL PROPERTY AND A DESCRIPTION OF				
NAC#1 current is within the limitations of	of the circuit.				
NAC#2 current is within the limitations of	of the circuit.				
NAC#3 current is within the limitations of	of the circuit.				
NAC#4 current is within the limitations of	of the circuit.				
MS-10UD-7 Control Panel:					

The output current is within the panel's limitations.



## Photoelectric Smoke Detectors

System Sensor i<sup>3™</sup> series smoke detectors represent significant advancement in conventional detection. The i<sup>3</sup> family is founded on three principles: installation ease, intelligence, and instant inspection.



#### **Features**

- · Plug-in detector line, mounting base included
- Large wire entry port
- In-line terminals with SEMS screws
- Mounts to octagonal and single-gang back boxes, 4-square back boxes, or direct to ceiling
- Stop-Drop 'N Lock attachment to base
- Removable detector cover and chamber
- Built-in remote maintenance signaling
- Drift compensation and smoothing algorithms
- Simplified sensitivity measurement
- Wide-angle, dual-color LED indication
- Loop testing via EZ Walk feature
- Built-in test switch

**Installation ease.** The i<sup>3</sup> line redefines installation ease with its plug-in design. This allows an installer to pre-wire bases (included with heads). The large wire entry port and in-line terminals provide ample room for neatly routing the wiring inside the base. The base accommodates a variety of back box mounting methods as well as direct mounting with drywall anchors. To complete the installation, i<sup>3</sup> heads plug into the base with a simple Stop-Drop 'N Lock<sup>\*</sup> action.

**Intelligence.** i<sup>3</sup> detectors offer a number of intelligent features to simplify testing and maintenance. Drift compensation and smoothing algorithms are standard with the i<sup>3</sup> line to minimize nuisance alarms. 2-wire i<sup>3</sup> detectors can generate a remote LED-indicated maintenance signal when connected to the 2W-MOD2 loop test/maintenance module or a panel equipped with the i<sup>3</sup> protocol. The SENS-RDR, a wireless device, displays the sensitivity of i<sup>3</sup> detectors in terms of percent-per-foot obscuration.

**Instant inspection.** The i<sup>3</sup> series provides wide-angle red and green LED indicators for instant inspection of the detector's condition: normal standby, out-of-sensitivity, alarm, or freeze trouble. When connected to the 2W-MOD2 loop test/maintenance module or a panel with the i<sup>3</sup> protocol, the EZ Walk loop test feature is available on 2-wire i<sup>3</sup> detectors. This feature verifies the initiating loop wiring by providing LED status indication at each detector.

#### **Agency Listings**



### i Smoke Detector Specifications

#### Architectural/Engineering Specifications

Smoke detector shall be a System Sensor i<sup>3</sup> Series model number\_\_\_\_\_\_\_ listed to Underwriters Laboratories UL 268 for Fire Protection Signaling Systems. The detector shall be a photoelectric type (Model 2W-B, 4W-B) or a combination photoelectric/thermal (Model 2WT-B, 4WT-B) with thermal sensor rated at 135°F (57.2°C). The detector shall include a mounting base for mounting to 3½-inch and 4-inch octagonal, single-gang, and 4-inch square back boxes with a plaster ring, or direct mount to the ceiling using drywall anchors. Wiring connections shall be made by means of SEMS screws. The detector shall allow pre-wiring of the base and the head shall be a plug-in type. The detector shall have a nominal sensitivity of 2.5 percent-per-foot nominal as measured in the UL smoke box. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The detector shall provide dual-color LED indication that blinks to indicate power up, normal standby, out of sensitivity, alarm, and freeze trouble (Model 2WT-B, 4WT-B) conditions. When used in conjunction with the 2W-MOD2 module, 2-wire models shall include a maintenance signal to indicate the need for maintenance at the alarm control panel and shall provide a loop testing capability to verify the circuit without testing each detector individually.

Electrical Specifications									
Operating Voltage		Nominal Minimur Maximu	: 12/24 V non-polarized m: 8.5 V m: 35 V						
Maximum Ripple Vo	oltage	30% pea	k to peak of applied voltage						
Standby Current		2-wire: 5	0 μA maximum average; 4-wire: 5	0 µA maximum average					
Maximum Alarm Cu	urrent	2-wire: 1	30 mA limited by control panel; 4	wire: 20 mA @12 V, 23 mA @ 24 V					
Peak Standby Curre	ent	2-wire: 1	00 μA; 4-wire: n/a						
Alarm Contact Ratin	ngs	2-wire: n	/a; 4-wire: 0.5 A @ 30 V AC/DC						
<b>Physical Specificati</b>	ions								
Dimensions (including base) 5.3 inc			ches (127 mm) diameter; 2.0 inches (51 mm) height						
Weight 6.3 oz (1.			78 g)						
Operating Temperature Range 2W-8			d 4W-B. 32°F to 120°F (0°C to 49°C	); 2WT-B and 4WT-B: 32°F to 100°F (0°C to 3	7.8°C)				
Operating Humidity Range 0 to 95			RH non-condensing						
Thermal Sensor		135°F (5	7.2°C) fixed						
Freeze Trouble		2WT-B a	and 4WT-B only: 41°F (5°C)						
Sensitivity		2.5%/ft r	t nominal						
Input Terminals		14 to 22	AWG						
Mounting 3½-inc 4-inch Single 4-inch Direct			3½-inch octagonal back box 4-inch octagonal back box Single-gang back box 4-inch square back box with a plaster ring Direct mount to ceiling						
LED Modes		0		Power-Up Sequence for LED Indi	cation				
LED Mode	Green LED		Red LED	Condition	Duration				
Power up	Blink every 10 s	econds	Blink every 10 seconds	Initial LED status indication	80 seconds				
Normal (standby)	Blink every 5 se	conds	off						
Out of sensitivity	off		Blink every 5 seconds						

#### **Ordering Information**

off

off

Freeze trouble

Alarm

Model	Thermal	Wiring	Alarm Current	
2W-B	No	2-wire	130 mA max. limited by control panel	
2WT-B	Yes	2-wire	130 mA max. limited by control panel	
4W-B	No	4-wire	20 mA @ 12 V, 23 mA @ 24 V	
4WT-B	Yes	4-wire	20 mA @ 12 V, 23 mA @ 24 V	
Accessories		(A. 15)		
2W-MOD2	2-wire loop test / maintenance module		RT	Removal / replacement tool
SENS-RDR	Sensitivity reader		A77-AB2	Retrofit adapter bracket, 6.6 inch (16.76 cm) diameter

Blink every 10 seconds

Solid



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