

TECHNICAL MATERIAL SUBMITTAL

4010ES Fire alarm system





COMPANY PROFILE





Harmonic
FOR INTEGRATED TRADING



CORPORATE **Harmonic**

www.harmoniceg.com

Mission & Vission

Mission

Our Mission is to meet our valuable clients' business goals by being easy to do business with, friendly and flexible in the way we work, pricing fairly, and always treating our customers with commitment and respect.

We - Harmonic - Guarantee our client to receive a truly reliable product with the fairest prices within the market

Vission

Excellent In What We Do,

Build a safe and secure environment for our community. To provide the highest standard and best value service to the community. Be the best fire protection company, working hard to ensure our communities are at the center of what we do. We are committed to keeping people safe, improving quality of life and making our area a better place to live, work and visit.

Division Specialization



We're proud to mention that Harmonic team includes highly qualified technical office and representatives Experienced in fire fighting systems, who provide accurate quotations, submittals and acceptance testing as required. These fire protection professionals stand ready to address and meet your Fire Fighting and Fire Alarm needs, and are backed by knowledge and experience.

Thank you :)

We are a company specialized
in Fire fighting & Fire Alarm

Our Scope

Fire Detection System

Harmonic supply and install Simplex Fire Alarm products that will enhance the safety of your facility. Our safety solutions include fire detection detectors and notification systems, battery operated fire, smoke, Heat and gas detectors, Fire rated cables, Automatic fire alarms and much more.



Simplex



Gas Suppression System

Harmonic supply and install Tyco/LPG Gas Suppression Systems as apart of Fire Fighting Solutions. Our systems have been certified by UL/FM. We provide FM-200 & FK 5-1-12 as a Clean Agent Fire Suppression Systems and CO2 System. They are known for their efficiency at fire fighting.

Valves And Sprinklers

Harmonic provides All kind of valves Brand Reliable that must be used at automatic water systems. We supply and install the largest of landing valves, Hydrants and angle hose valves. All of our products are suitable for dry and wet systems and will play an important role in your fire defense.



Reliable

Our Scope

Fire Extinguishers

Harmonic provides All kind of Bavaria fire extinguishers to meet every type of emergency. Our fire extinguishers are fully certified and have been rigorously tested. We have the following types of Fire Extinguishers CO₂, Dry Powder, Water, Foam, Clean Agent and Wet Chemical



Foam Suppression System

Harmonic supply and install Viking Foam-Water Suppression Systems to meet the requirements of our customers in the fire fighting systems. Our systems have been certified by UL/FM. We provide mobile foam concentrates, proportioning devices, discharge devices, and mobile foam equipment.

Fire Pumps

Harmonic supplies UL/FM certified Brand Fire King fire pumps that comply with the highest international standards. Fire pumps are a crucial part of a fire sprinkler system and will form an important part of your building's fire protection system.



Project Case Study



Aya Mall – New cairo



Amazon Warehouses



Epic Mall



Mind House Mall



The Office Mall



Madinaty D Mall

Project Case Study



MSA University – 6 October



Al – Azhar Library



Port Said University



Cairo University



Suez University



Helwan university

Project Case Study



Girga Permits Unit



Banha Hospital



Egyptian Medicine



Shebin Medical Center



Hasaniya Medical Center



Serum And Vaccinum

Project Case Study



HP Food Factory



CFC Site Elsewedy



Facsera Factory



Acdimia Factory



Kapci For Painting



Stones Egypt

Project Case Study



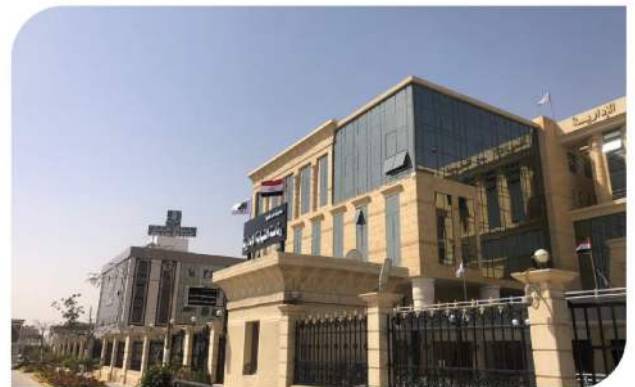
Cairo Bank



Agriculture Bank



QNB Bank



Administrative Prosecution



Jirga Passport Center



Military entity

Project Case Study



Petromaint Alexandria



Ibn Sina stores



Ismailia Engineers Syndicate



Alasher prison



Aksa Maadi Building



New Capital

OUR PARTNERS



CRANE

SHIELD





Harmonic For Integrated Trading is an innovation company dedicated and specialized in providing company solutions to all fire safety related issues & all the Fire Protection Products .

We are agents of Simplex in Fire alarm and reliable in valves and sprinklers and Fire King for fire pumps

CONTACT US

Address:

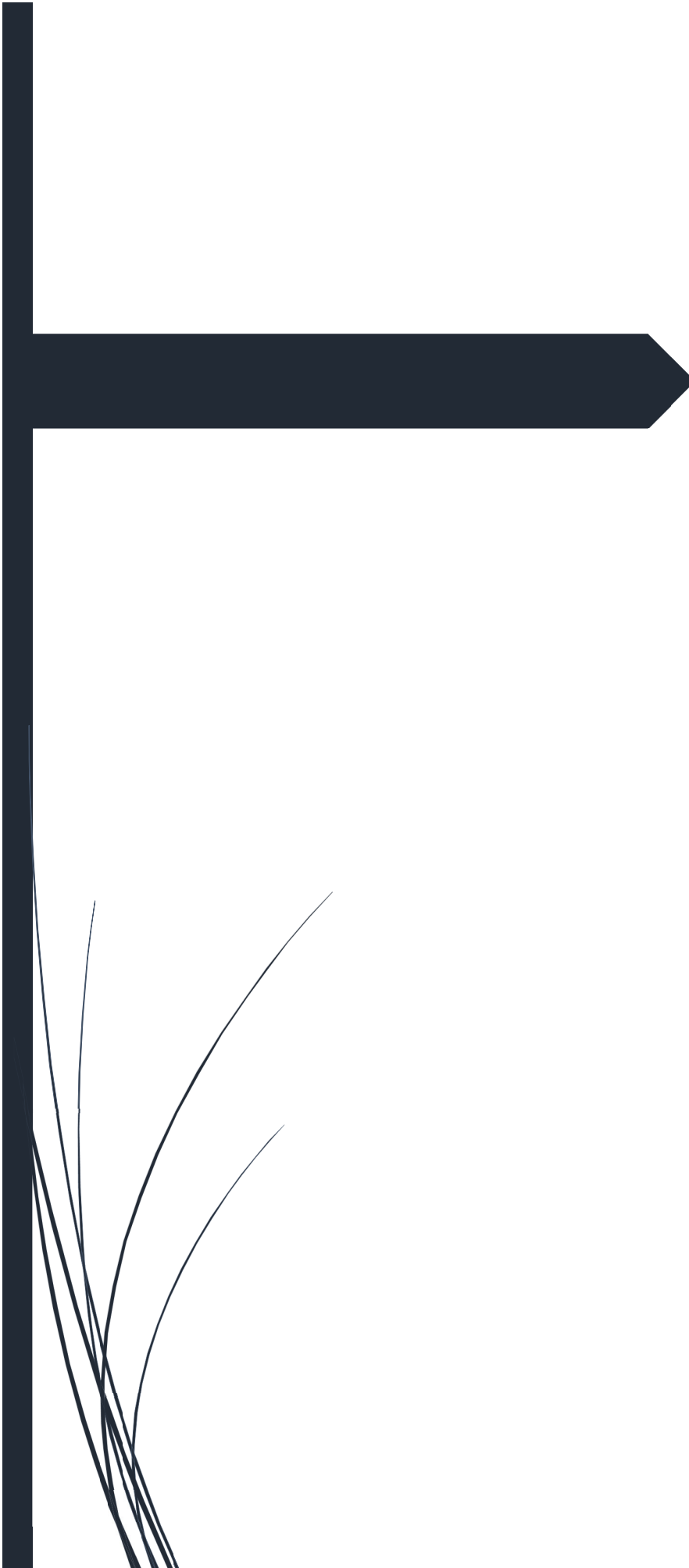
63 El-redaa Tower, Abd-
elmohsen el wesemey
Alf-Maskan, Gesr Al-Suies Cairo City

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010-9232-4486

Mail:

info@harmoniceg.com





A Tyco International Company

*Jason Crouch
Simplex Business Manager
Middle East, Africa & Russia
50 Technology Drive
Westminster, MA
01441 USA*

Monday, 06 January 2014

RESCO (Red Sea Industrial Supply & Contracting Co)
P.O. Box 2761
Jeddah
21461 Saudi
Arabia

To Whom It May Concern:

Subject: Simplex Products in Saudi Arabia

This is to confirm that RESCO (Red Sea Industrial Supply & Contracting Co) is an approved distributor for our range of Simplex Fire Detection, Master Clock, Extinguishing, Nurse Call and Access Control Systems in Saudi Arabia.

RESCO (Red Sea Industrial Supply & Contracting Co) has been established in the region and a valued business partner for over 35 years and can provide complete integration and support of our products and systems including high level integration to third party systems.

RESCO (Red Sea Industrial Supply & Contracting Co) is authorized to design, supply, install, test, commission and service/maintain our range of products in the above territory which is supported with a team of certified trained engineers and technicians.

Please do not hesitate to contact me should you require any further information or clarification. Yours sincerely,

A handwritten signature in black ink, appearing to be 'J. Crouch', written over a horizontal line.

Jason Crouch
Simplex Business Manager – MEAR

Resco

Hassan M. Mazhar & Co.

Red Sea Industrial Supply & Cont. Co.

رسكو

شركة حسن مجذوب و شركاه

البحر الأحمر للتموين الصناعي والتعهدات

Date: Feb 10, 2023

M/S Harmonic for Integrated Trading.
100063 – Abdulmohsen Al Wasaimy – Ein Shams
Cairo - Egypt

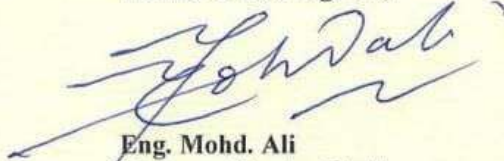
TO WHOM IT MAY CONCERN

Subj. Simplex Fire Alarm System Reseller

We, Resco, the distributors and agent of Simplex-USA in Saudi Arabia, have been working with M/s Harmonic for Integrated Trading since many years. They are our authorized Resellers, Installers as well as Integrators. They have supplied, installed and successfully commissioned several Simplex Fire Alarm projects in Egypt. They are very professional in their job and we have trained their team for installation, programming and testing of Simplex's systems.

Please do not hesitate to contact us for any information or clarification.

Thanks & best regards,



Eng. Mohd. Ali
Manager, Simplex Division
RESCO, Red Sea Industrial Supply & Cont. Co.
Tel. No. 966-2-665-2966/3215/3015 ext. 500
Fax No. 966-2-665-3165
Mobile: 0502667177
email: main@resco-saudi.com



وزارة التموين والتجارة الداخلية

جهاز تنمية التجارة الداخلية

الإدارة المركزية للسجل التجارى

مكتب سجل تجارى جنوب القاهرة المميز

مستخرج من السجل التجارى رقم: ٩١١٨٥ (أفراد محل رئيسى-الفروع القائمة . من اجمالي)
الرقم القومى للمنشأة: ٧١٩٤٨٤٨٨ الرقم الموحد للسجل التجارى (٩١١٨٥ ٠٠٠٠٠ ١٠٠٢٠)
أى كشط أو شطب أو تعديل أو تحشير أو اختتام بخلاف شعار الجمهورية يُلغى هذه الوثيقة

صفحة رقم ١ من ٢

٠٠٥٤٠٦-٠٣-٢٠٢٤ ١٠:٣٩:٢٣



(أ) عنوان الفروع والوكالات التابعة تحتل الرئيسى أو المركز العام (ب) عنوان الفروع أو الوكالة (ج) رقم حقه قيد الفروع	(أ) عنوان المحل الرئيسى (ب) عنوان المركز العام للشركة أو الجمعية التعاونية (ج) رقم قيد المحل الرئيسى أو المركز العام (أى حقه قيد الفروع)	١- التاريخ الذى بدأ فيه التاجر أعماله (أ) التجارية بجمهورية مصر العربية ٢- تاريخ الترخيص بمنزلة التجارة (ب) تاريخ إنشاء الشركة وتاريخ انتهائها وتاريخ الترخيص بمنزلة التجارة أو موافقة هيئة الاستثمار (ج) تاريخ افتتاح الفروع أو الوكالة	(أ) نوع التجارة أو (ب) الفروع من ناليس شركة أو الجمعية التعاونية	(أ) اسم التاجر وألقبه وتاريخ ومحل ميلاده وجنسيته (ب) أسماء وألقاب الشركاء المسئولين بالتضامن فى شركات التضامن أو التوصية البسيطة وتاريخ ومحل الميلاد لكل منهم وجنسيته (ج) أسماء وألقاب الشركاء أو غيرهم المتوطين بهم إدارة شركة ومن لهم حق التوقيع باسمها وصلة كل منهم وتاريخ ومحل ميلاده وجنسيته ومدى سلطتهم فى الإدارة والتوقيع (د) أسماء وألقاب أعضاء مجلس الإدارة فى شركات المساهمة أو الجمعية التعاونية ووكالاتها المتميزين وصلة كل منهم وتاريخ ومحل ميلاده وجنسيته ومدى سلطتهم فى الإدارة والتوقيع (هـ) اسم وألقاب مدير الفروع الرئيسى أو الوكالة العامة فى جمهورية مصر العربية وتاريخ ومحل ميلاده وجنسيته إذا كان المركز العام للشركة فى الخارج (٢)	١- الاسم التجارى (أ) ٢- حصة التجارية ٣- الاسم الذى يظهر به التاجر تجارته ٤- نوع الشركة ٥- عنوان الشركة أو اسمها أو اسم الجمعية التعاونية ٦- حصة التجارية (ج) حصة التجارية لتفريع	(أ) رقم الإيداع (ب) تاريخ الإيداع (ج) رقم قيد فى السجل التجارى (٢) (أ) رقم إيداع طلب التجديد (ب) تاريخ إيداع طلب التجديد (ج) تاريخ التجديد
(أ) *** (نهاية البيانات) ***	(أ) القاهرة عين شمس ٦٣ أ ش عبدالمحسن الويسى *** (نهاية البيانات) ***	(أ) ١- تاريخ الافتتاح ٢٠٢٣/٠١/٢٣ ٢- تاريخ الترخيص ٢٠٢٣/٠٢/١٥ *** (نهاية البيانات) ***	(أ) توريدات عموميه ومقاولات (فيما عدا توريد العماله وتوريد مستلزمات الكمبيوتر ومستلزمات الطباعة والدعاية والإعلان) ١١٣٢١ [١] ٢٠٢٣/١٠/١٢ تجارة الأجهزة الكهربائية وتوريد وتركيب وصياله أجهزة التكييف والتهديد وأنظمة اذار الحريق وانظمة الأطفاء (فيما عدا توريد العماله والأمن والحراسة والكاميرات اللاسلكية والأنترنهت وذلك بعد الحصول على التراخيص اللازمة) (موافقه أمنية رقم ١٣٨ لسنه ٢٠٢٣) ١١١	(أ) احمد محمد الشربيني مواليد ١٩٩٥/٠٢/٠٥ مصر-الدقهلية رقم قومى ٢٩٥٠٢٠٥١٢٠٣٨٣١ تاجر-كامل الاهلية ١١١ *** (نهاية البيانات) ***	١- احمد محمد الشربيني الشربيني ١١١ ٢- هارموتك للتوريدات العمومية والمقاولات ١١١ ٣- احمد محمد الشربيني الشربيني ١١١ ١١٣٢١ [١] ٢٠٢٣/١٠/١٢ ٢- تعديل السمة التجارية لتصبح هارموتك للتجارة العمكاملة ١١١ قانون ٣٤ لسنة ١٩٧٦ (أ) أفراد خاص	أ - ٢٠٧٤ ب - ٢٠٢٣/٠٢/١٦ ج - ٩١١٨٥ سأرى حتى ٢٠٢٨/٠٢/١٥ *** (نهاية البيانات) ***

إسم طالب المستخرج احمد محمد الشربيني الشربيني
وقد سددت الرسوم (خلاف مقابل التميز) وقدرها : ١٠٥ جنيه (عدد ١ نسخة) بموجب قسيمة . مجموعة ٠ فى ٢٠٢٤/٠٣/٠٦
إصدار مكتب جنوب القاهرة المميز تحريرا فى ٢٠٢٤/٠٣/٠٦ مسئول الطباعة هدى علي محمد محي الدين علي
** الآن... يمكنك تحديث بيانات سجلك التجارى من خلال خدمة الواتس أب ٠١٠٦٣٣٣٣٥٠٤ **

جهاز تنمية التجارة الداخلية

إدارة المركزية للسجل التجاري

مكتب سجل تجاري جنوب القاهرة المتميز

مستخرج من السجل التجارى رقم: ٩١١٨٥ (الفرد محل رئيسي- الفروع القمعة من اجمالي ١)
م القوسى للمنشاء: ٧١١٩٤١٨٨ الرقم الموحد للسجل التجارى (٩١١٨٥ ١٠٠٢٠٠٠٠٠)
أى كسط أو شطب أو تعديل أو تحشير أو أختام بخلاف شعار الجمهورية يلقى هذه الوثيقة

صفحه رقم ۲ من ۲

١٠٥٤ ٠٦-٠٣-٢٠٢٤ ١٠:٣٩:٢٣

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اسم طالب المستخرج احمد محمد الشربيني الشربيني

وقد سددت الرسوم (خلاف مقابل التميز) وقدرها : ١٠٥ جنيهه (عدد ١ نسخه) بموجب قسيمة ، مجموعة ، في ٢٠٢٤/٠٣/٠٦

إصدار مكتب جنوب القاهرة المميز تحريراً في ٢٠٢٤/٠٣/٠٦ مسنول الطباعة هدى على محمد محي الدين على

• الآن... يمكنك تحديث بيانات سجلك التجاري من خلال خدمة الواتس أب ٠١٠٦٣٣٣٣٥٠٤ ••

الممسوحة ضوئياً بـ CamScanner



جمهورية مصر العربية
وزارة المالية
مصلحة الضرائب المصرية



فردى

عين شمس/٠٠٠

هارمونك للتجارة المتكاملة

احمد محمد الشربيني الشربيني

١٠٠٠٦٣ ش عبدالمحسن الوسىمى عين شمس

تجارة الجملة غير المتخصصة



كود النشاط 4690

بدء النشاط : ٢٠٢٣/٠١/٢٣

٢٠٢٨/٠٢/١٥

٢٠٢٣/٠٢/١٦

٧١١-٩٤٨-٤٨٨

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جمهورية مصر العربية وزارة المالية مصلحة الضرائب المصرية

البطاقة الضريبية

يحظر إستخدام هذه البطاقة إلا بمعرفة الممول أو وكيله القانوني.
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في حالة الفقد أو السرقة يرجى الإتصال
بمصلحة الضرائب المصرية على أرقام
(02)27929911/16395



نموذج (٣) ض.ق.م

شهادة تسجيل

الضريبة على القيمة المضافة



منطقة : شرق القاهرة ثان

مأمورية : الزيتون

العنوان : ٢٠٤ شارع النزهة - الدور السادس و السابع

هذه شهادة منا بأن : هارمونك للتجارة المتكاملة - احمد محمد الشربيني الشربيني

العنوان : ٦٣ أش عبدالمحسن الوسيمي عين شمس

قد تم تسجيله وفقاً لنصوص قانون الضريبة على القيمة المضافة

تحت رقم : 488 - 948 - 711

وذلك اعتباراً من : 2023/03/19

تحريراً في : 2023/03/19

2028/03/18



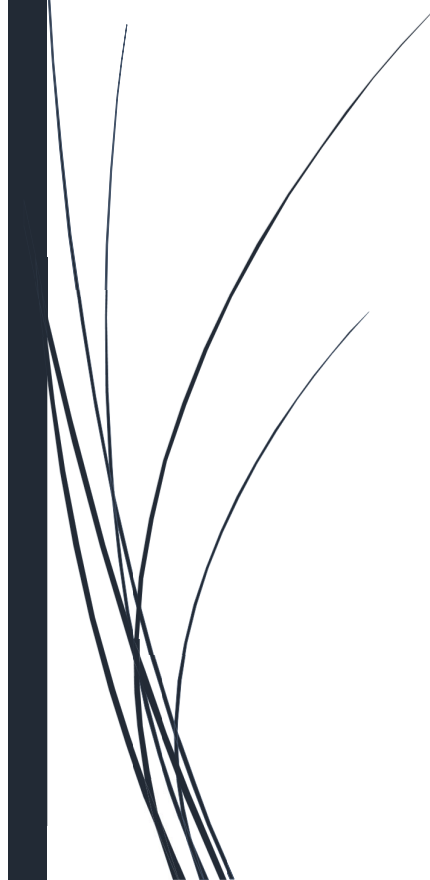
مدير الإدارة

رئيس المأمورية

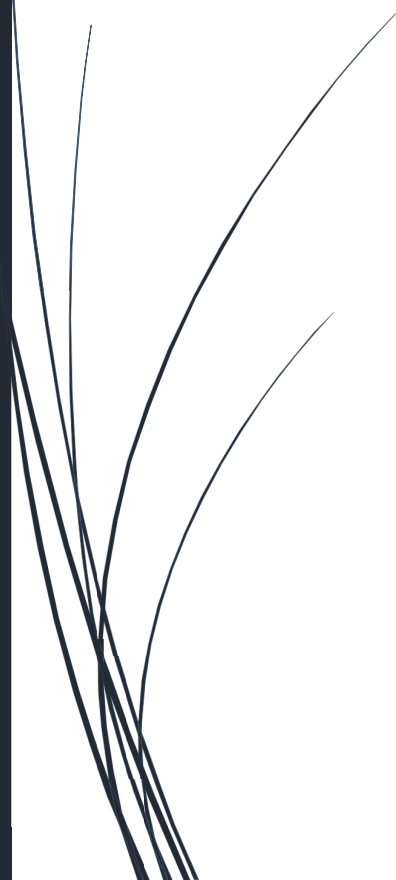
(رافقت خليل علام)

DATASHEETS

Adressable System



DATASHEETS



Control Panel : 4010 -9501

Features

Compatible with Simplex ES Net and 4120 fire alarm networks

Basic system features:

- Models available with Color ES Touch Screen Display or Monochrome 2 line x 40 character display.
- Capacity for up to 1000 addressable IDNet points, or up to 1000 addressable MX Loop points and up to 127 VESDA SLI points, with up to 2000 points of annunciation and up to 20 internal and external card addresses
- CPU assembly includes dedicated Compact Flash memory for on-site system information storage and convenient Ethernet service port access
- 8 A power supply with up to 2 A of auxiliary power and battery charger capacity for up to 110 Ah batteries (UL) or up to 50 Ah batteries (ULC); 33 Ah max in one bay control cabinet, 50 Ah max with 4100-0650 battery shelf in two bay control cabinet
- 4 onboard Class A or B, 3 A NACs and one programmable auxiliary relay output rated for 2 A @ 32 VDC
- Remote annunciator module support through Remote Unit Interface (RUI) communications port, either Class B or Class A operation
- 48 LED Control Unit mount annunciation provides 40 Red and 8 Yellow pluggable LEDs (select models), optional LED kits are available for custom LED configurations

Optional Main System Supply 2 and door mounted modules, and other options include:

- City Connect Module, with or without disconnect switches
- Alarm Relay module
- Battery brackets for seismic area protection

Optional block space modules include:

- Fire Alarm Network Interface Card (NIC) for ES Net or 4120
- Peer to-Peer network communications, supports either Class B or Class X operation
- Ethernet connectivity options include ES Net Network Interface Card, Building Network Interface Card (BNIC), SafeLINC Internet Interface, and BACpac Ethernet Portal
- Dual RS-232 Module, for printer or third party interface
- VESDA Air Aspiration High Level Interface
- Serial DACT
- Four point Auxiliary Relay Module
- Modem or TCP/IP Physical Bridge Network Modules, Class B or Class X
- Additional IDNet and MX Loop addressable channels
- 8-Point Zone/Relay Module
- 4-Point Auxiliary Relay Module with or without feedback

Compatible with Simplex remotely located:

- IP communicator compatibility
- 4606-9102 Remote LCD Annunciator, 4100-9400 Series ES Touch Screen Displays, 4100-9400 Series Remote InfoAlarm Command Centers, and 4602 Series Status Command Units (SCU) and Remote Command Units (RCU) Annunciators
- 4190 Series Fiber Modems and Physical Bridges
- 4081 Series, 110 Ah Battery Chargers
- 4100-7400 Series Graphic Annunciators

- 4009 IDNet NAC Extenders (4009A)
- 4003EC Small Voice Control Units
- 4098-9757 QuickConnect2 and legacy 4098-9710 QuickConnect TrueAlarm smoke sensors



Figure 1: 1-Bay Cabinet with 2 x 40 Monochrome LCD Display



Figure 2: 1-Bay Cabinet with 2 x 40 Monochrome LCD Display and LED Annunciation



Figure 3: 2-Bay Cabinet with 2 x 40 Monochrome LCD Display

4010ES Agency listings*

- UL 864 - Control Units, System (UOJZ); Control Unit Accessories, System, Fire Alarm (UOXX); Control Units, Releasing Device Service (SYZV); Smoke Control System Equipment (UUKL)
- UL 1076 - Proprietary Alarm Units (APOU)
- UL 1730 - Smoke Detector Monitors and Accessories (UULH)
- UL 2017 - Emergency Alarm System Control Units, CO detection (FSZI); Process Equipment Management (QVAX)
- ULC-S527 - Control Units, System, Fire Alarm (UOJZ7); Control Unit Accessories, System, Fire Alarm (UOXX7); Control Units, Releasing Device Service (SYZV7)
- ULC-S559 - Central Station Fire Alarm System Units (DAYR7)
- ULC/ORD-C1076 - Proprietary Burglar Alarm System Units (APOU7)
- ULC/ORD-C100 - Smoke Control System Equipment, (UUKL7)

Introduction

4010ES series fire detection and control units

4010ES series fire detection and control units provide leading installation, operator, and service features for customer applications in the mid-range addressable fire alarm systems market. An onboard Ethernet port provides fast external system communications to expedite installation and service activity. Dedicated Compact Flash memory

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7165-2269:0541 for allowable values and/or conditions concerning material presented in this document. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

archiving provides secure on-site system information storage of electronic job configuration files.

Modular design

A variety of functional modules are available to meet specific system requirements. Selections allow control units to be configured for either Stand-Alone or Networked fire control operation.

Mechanical description

- The mounting box provides convenient stud markers for drywall thickness and nail hole knockouts for quicker mounting
- Smooth box surfaces are provided for locally cutting conduit entrance holes exactly where required
- The hinged user interface control unit easily opens for internal access
- NACs are mounted directly on power supply assemblies providing minimized wiring loss, compact size, and readily accessible terminations
- Modules are power-limited except as noted, such as relay modules
- Doors include tempered glass inserts; boxes and doors are available in platinum or red
- Box and door or retainer assemblies are included with basic control unit assemblies
- Cabinet assembly is rated NEMA 1 and IP 30
- Cabinet assembly design has been seismic tested and is certified to IBC and CBC standards as well as to ASCE 7 categories A through F, requires battery brackets as detailed on data sheet *Battery Brackets for Seismic Activity Applications S2081-0019*

Control unit hardware

Master Controller and Main System Supply 2

Mounted in the upper section of the 4010ES cabinet. See the loading reference diagrams in [Cabinet one and two bay loading reference](#).

4010ES Block Space Option Cards

4010ES Block Space Option Cards mount to the left of the 4010ES Main System Supply 2. In two bay cabinets block space option cards also mount below the 4010ES ESS.

Other 4010ES options

The 4010ES City Connect module or the optional Alarm Relay module mount directly to the Main System Supply 2. These options are mutually exclusive.

The battery compartment

The battery compartment is located in the bottom of the 4010ES cabinet. The cabinet allows for up to 33 Ah battery capacity for 1 bay systems, and 50 Ah for 2 bay systems. 50 Ah batteries also require the use of a 4100-0650 battery shelf.

Figure 13 identifies mounting locations for optional 4010ES modules.

Software feature summary

- TrueAlarm individual analog sensing with front panel information and selection access
- Dirty TrueAlarm sensor maintenance alerts, service and status reports including almost dirty
- TrueAlarm magnet test indication appears as distinct test abnormal message on display when in test mode
- TrueAlarm sensor peak value performance report
- Install Mode allows grouping of multiple troubles for uninstalled modules and devices into a single trouble condition
- Module level ground fault searching assists installation and service by locating and isolating modules with grounded wiring
- Recurring Trouble Filtering allows the control unit to recognize, process, and log recurring intermittent troubles, such as external

wiring ground faults, but only sends a single outbound system trouble to avoid nuisance communications

- WALKTEST silent or audible system test performs an automatic self-resetting test cycle

Compatible peripheral devices

The 4010ES is compatible with an extensive list of remote peripheral devices including printers and both conventional and addressable devices including TrueAlarm analog sensors.

Addressable device control

The 4010ES provides standard addressable device communications for IDNet compatible devices. Using a two wire communications circuit, you can interface individual devices such as manual fire alarm stations, TrueAlarm sensors, conventional IDC zones, and sprinkler waterflow switches to the addressable controller to communicate their identity and status.

Addressability facilitates the display of the location and condition of the connected device on the operator interface LCD and on remote system annunciators. With addressable devices, you can individually control and monitor control circuits such as fans or dampers.

Addressable operation

Each addressable device on the communication channel is continuously interrogated for status condition such as: normal, off-normal, alarm, supervisory, or trouble. Both Class B and Class A pathway operation are available. Sophisticated poll and response communication techniques ensure supervision integrity and allow for T-tapping of the circuit for Class B operation. Devices with LEDs pulse the LED to indicate receipt of a communications poll. Use the control unit to turn the LED on steady.

IDNet addressable channel capacity

The Main System Supply 2 provides an electrically isolated IDNet2 signaling line circuit (SLC) that supports up to 250 addressable monitor and control points intermixed on the same pair of wires. Additional 250 address IDNet 2+2 Modules with **four** short circuit isolating output loops are available. IDNet2 and IDNet 2+2 Module SLCs are isolated from other system reference voltages to reduce common mode noise interaction with adjacent system wiring.

Table 1: IDNet 2 and IDNet 2+2 SLC wiring specifications

Specification		Rating
Maximum distance from control unit for each device load	0 to 125	4000 ft (1219 m); 50 ohms
	126 to 250	2500 ft (762 m); 35 ohms
Total wire length allowed with T-taps for Class B wiring		Up to 12,500 ft (3.8 km); 0.60 μ F
Maximum capacitance between IDNet channels		1 μ F
Wire type and connections		Shielded or unshielded, twisted or untwisted wire. See note.
Connections		Terminals for 18 to 12 AWG (0.82 mm ² to 3.31 mm ²)
Installation instructions		579-989
Compatibility includes: IDNet communicating devices and TrueAlarm sensors including QuickConnect and QuickConnect2 sensors. For more information, refer to data sheet <i>S4090-0011</i> .		
Note: Some applications may require shielded wiring. Review your system with your local Simplex product supplier.		

TrueAlarm system operation

Addressable device communications include operation of TrueAlarm smoke and temperature sensors. Smoke sensors transmit an output value based on their smoke chamber condition and the CPU maintains a current value, peak value, and an average value for each sensor.

Status is determined by comparing the current sensor value to its average value. Tracking this average value as a continuously shifting reference point filters out environmental factors that cause shifts in sensitivity.

Programmable sensitivity

The programmable sensitivity of each sensor is selectable at the control unit for different levels of smoke obscuration (shown directly in percent) or for specific heat detection levels. To evaluate whether the sensitivity should be revised, the peak value is stored in memory and can be easily read and compared to the alarm threshold directly in percent.

CO sensor bases

CO sensor bases combine an electrolytic CO sensing module with a TrueAlarm analog sensor to provide a single multiple sensing assembly using one system address. You can enable or disable the CO sensor. It can be used in LED or Switch mode and custom control. You can make it public for communication across a fire alarm network. Refer to data sheet *TrueAlarm CO Sensor Bases for Smoke, Heat, and Photo/Heat Sensors using IDNet Communications S4098-0052* for details.

TrueAlarm heat sensors

You can select TrueAlarm heat sensors for fixed temperature detection, with or without rate-of-rise detection. Utility temperature sensing is also available, typically to provide freeze warnings or alert to HVAC system problems. Readings are selectable as either Fahrenheit or Celsius.

TrueSense early fire detection

Multi-sensor 4098-9754 provides photoelectric and heat sensor data using a single 4010ES IDNet address. The control unit evaluates smoke activity, heat activity, and their combination, to provide TrueSense early detection. For more details on this operation, refer to data sheet *TrueAlarm Multi-Sensor Model A4098-9754 Providing TrueSense Early Fire Detection S4098-0024*.

Diagnostics and default device type

Sensor status

TrueAlarm operation allows the control unit to automatically indicate when a sensor is almost dirty, dirty, and excessively dirty. The NFPA 72 requirement for a test of the sensitivity range of the sensors is fulfilled by the ability of TrueAlarm operation to maintain the sensitivity level of each sensor. CO sensors track their 10 year active life status providing indicators to assist with service planning. Indicators occur at: 1 year, 6 months, and when end of life is reached.

Modular TrueAlarm sensors

Modular TrueAlarm sensors use the same base and different sensor types (smoke or heat sensor) and can be easily interchanged to meet specific location requirements. This allows intentional sensor substitution during building construction when conditions are temporarily dusty, instead of covering smoke sensors, causing them to be disabled. Heat sensors may be installed without reprogramming the control unit. The control unit will indicate an incorrect sensor type, but the heat sensor will operate at a default sensitivity to provide heat detection for building protection at that location.

Master controller (CPU)

- The 4010ES Master Controller includes dedicated Compact Flash mass storage memory for on-site system information storage and convenient Ethernet service port access
- Convenient front panel accessed Ethernet port for quick and easy download of site-specific programming and firmware enhancements. Firmware enhancements are made through software downloads to the onboard flash memory.
- Every downloaded job is automatically stored to Compact Flash without overwriting earlier versions providing a means for recovering previous configurations

- Downtime is reduced because the system stays running during download
- Modifications can be uploaded as well as downloaded for greater service flexibility
- Mass Storage allows job specific files to be stored in the control unit such as test and inspection reports, record drawings, specifications, and more
- RUI (Remote Unit Interface) communications port supports either Class B or Class A operation for remote annunciation equipment

Basic control unit description

4010ES control units include:

- The Main System Supply 2 provides the power source and the input/output connections for the basic 4010ES control unit listed below
- An operator interface, master controller with Compact Flash, IDNet or MX Loop addressable device SLC(s) with short circuit isolating loops configurable for Class B or Class A operation.
- 8 A power supply with up to 2 A of auxiliary power, 110 Ah (UL)/50 Ah (ULC) battery charger (33 Ah maximum in one-bay cabinet, 50 Ah maximum with 4100-0650 battery shelf in two-bay control cabinet); four Class A or Class B NACs rated @ 3 A each for Special Application Appliances, selectable for synchronized strobe, or SmartSync horn/strobe operation over two wires; and 2 A for Regulated 24 DC operation; one programmable auxiliary relay rated for 2 A @ 32 VDC.
- One RUI Class B or Class A communications port for remote annunciation devices, cabinet and door.
- Support for up to 20 internal and external card addresses. Other standard options may be provided depending on model. See [Basic control unit model selection](#), [one bay control units](#) and [Basic control unit model selection](#), [two bay control units](#) for additional details on specific models.

8-Point Zone/Relay module details

- **Select as IDC or Relay;** configure up to eight Class B IDCs, or up to four Class A IDCs; or up to eight Relay outputs rated 2 A resistive @ 30 VDC (N.O. or N.C.); or combinations of IDCs and Relays; each zone is separately configurable as an IDC or Relay output.
- **IDC support:** each IDC supports up to 30, two-wire devices. Zone relay modules may be powered directly from the control unit power supply or through the optional 25 VDC regulator module where required for 2-wire detector compatibility. Refer to *2-Wire Detector Compatibility Chart 579-832* for additional details.
- **IDC EOL resistor values are selectable as:** 3.3 kOhms, 2 kOhms, 2.2 kOhms, 3.4 kOhms, 3.9 kOhms, 4.7 kOhms, 5.1 kOhms, 5.6 kOhms, 6.34/6.8 kOhms, and 3.6 kOhms + 1.1 kOhms. For more details refer to *Zone/Relay Module Installation Instructions 579-1236*.

Color ES touch screen display

The Color ES Touch Screen Display interface offers intuitive operation similar to a tablet or smart phone. With a larger area format versus an individual text line display, more information is available at a glance, and minimal key presses are needed to access detailed information.

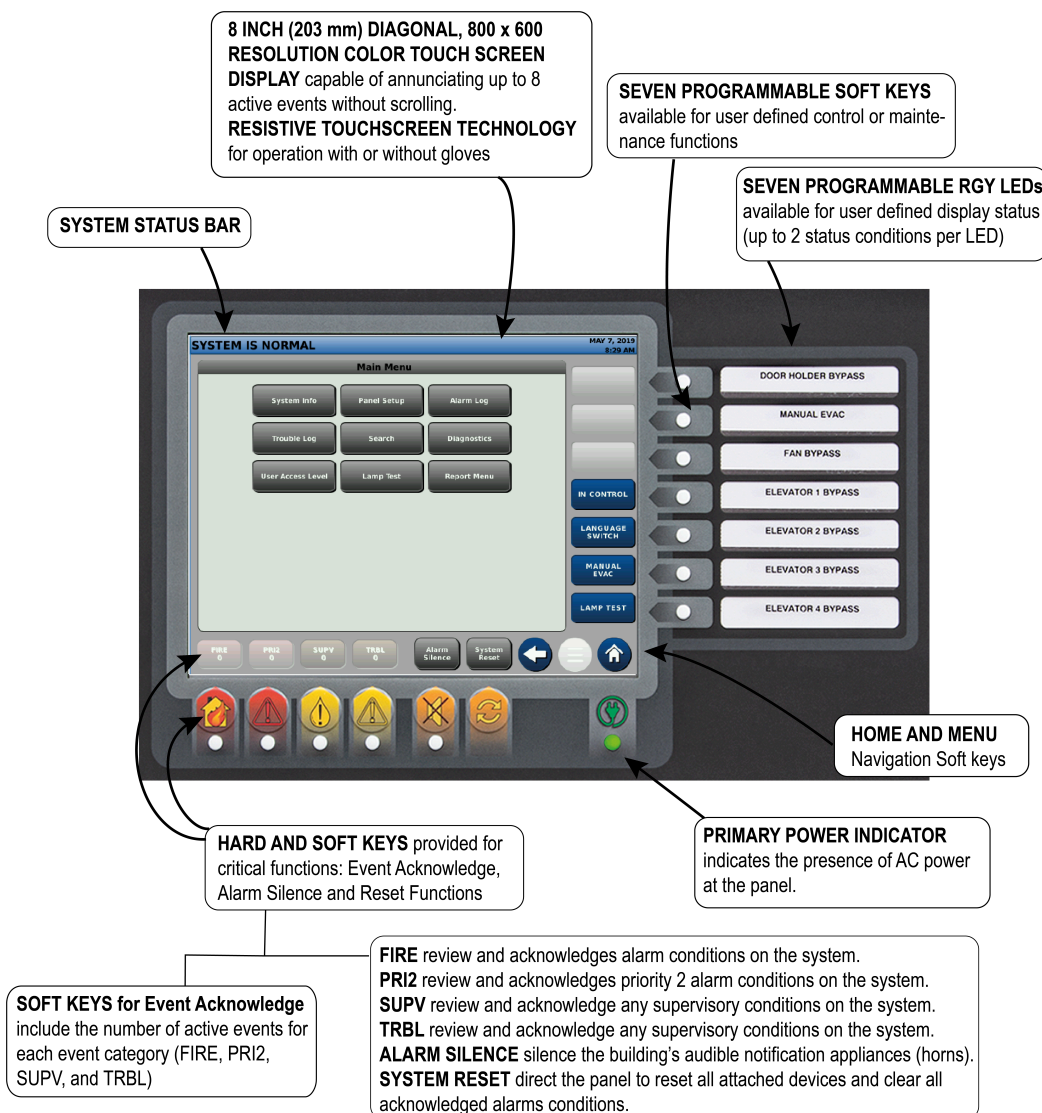


Figure 4: ES Touch screen display operator interface

Features

ES Touch Screen Displays provide customized operating experience

- Event activity display choices include: First 8 Events; or First 7 Events with emphasis on Most Recent; or First 6 Events with emphasis on First and Most Recent, individually selectable for each event type.
- System reports are easily viewable. You can read logs with minimal scrolling.
- Up to two languages are available for each system, easily selected by programmable key press
- You can vector by point or zone, information sent to remote ES Touch Screen Displays.
- Both Hard and Soft keys available for the following critical functions: Event Acknowledge, Alarm Silence, and Reset Functions
- Resistive touchscreen technology allows for operation with or without gloves.
- Seven programmable RGY LEDs available for user-defined display status. Up to two status conditions for each LED.
- Seven programmable Soft keys available for user-defined control or maintenance functions
- PRI2 Soft key label can be changed to CO to annunciate Carbon Monoxide detection status
- You can program the ES Touch Screen Display to report individual points or groups of points as a single zone.
- You can display a custom watermark background file of a company logo or other desired display content.
- Seismically compliant under the State of California Statewide Office of Housing and Development (OSHPD) Special Seismic Certification (SSC) program guidelines. Refer to *Simplex Seismic Application Guide (579-1213)* and *Battery Brackets for Seismic Activity Applications (S2081-0019)* for details.

Display properties

- 8 inch (203 mm) diagonal, 800 x 600 resolution color touch screen display capable of annunciating up to 8 active events without scrolling
- Bright white LED backlighting provides efficient and long lasting illumination; backlight is dim in quiescent state, automatically switches to full power on touch or on event activity in system.

Description

ES Touch Screen Displays for 4010ES fire alarm systems provide a large display with extended information content, dual language support including UTF-8 character languages, and an intuitive control key interface with the following features:

- Each 4010ES control panel supports up to 8 ES Touch Screen Displays, one main and seven remote. It can enable one ES Touch Screen Display to take-control and to designate access levels for interfaces not in-control; you can assign programmable LEDs to in-control status indications.
- Menu-driven format conveniently prompts operators for the next action required
- Direct point callup displays individual points alphabetically and then homes in on the logical choice as more point information is entered
- Event categories are color coded for quick visual representation; Red for Alarm and Priority 2 Events; Yellow for Supervisory and Trouble events
- Date formats are either MM/DD/YY or DD/MM/YY
- Time formats are either 24 hour or 12 hour with AM/PM
- System Normal screen supports a color background (watermark) for company name, company logo, or other desired display content.

Example display screens

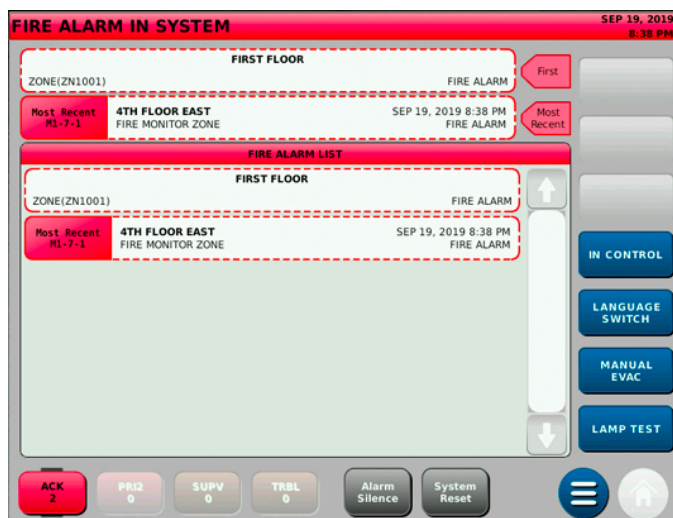


Figure 5: First and most recent alarm display

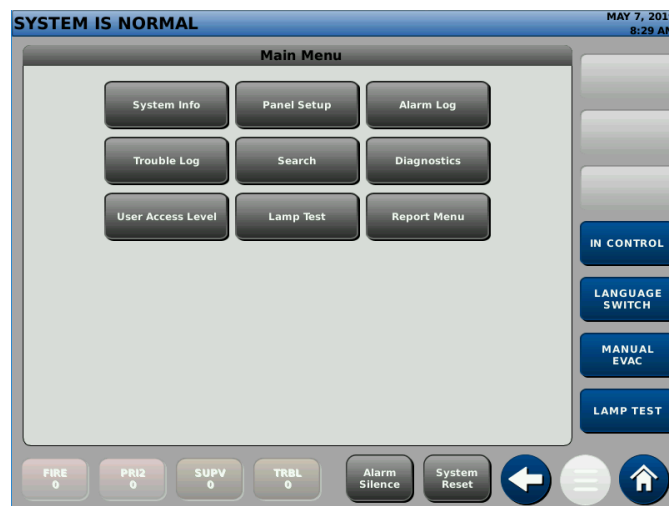


Figure 6: Main Menu



Figure 7: First eight active Trouble events list



Figure 8: Direct point callup

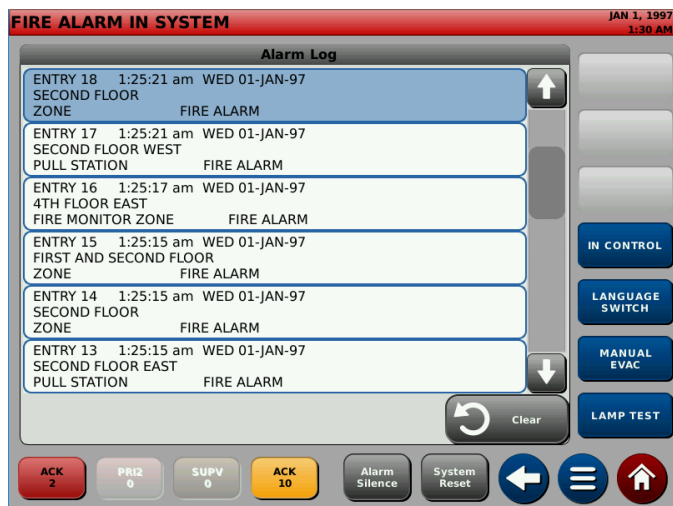


Figure 9: Alarm history log

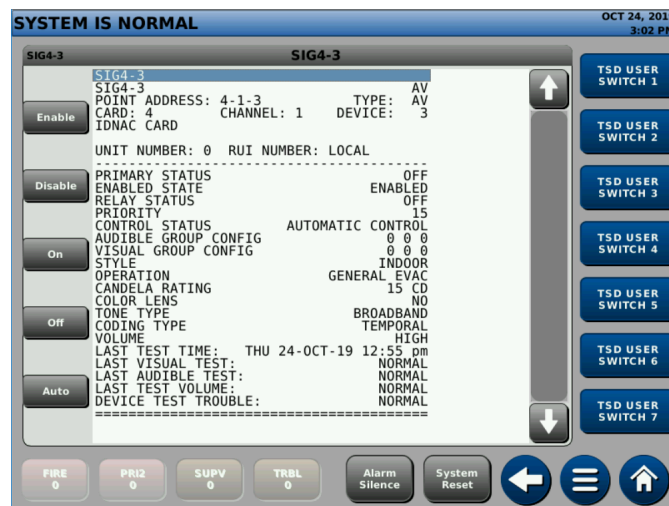


Figure 10: Detailed point status screen for TrueAlert ES appliance

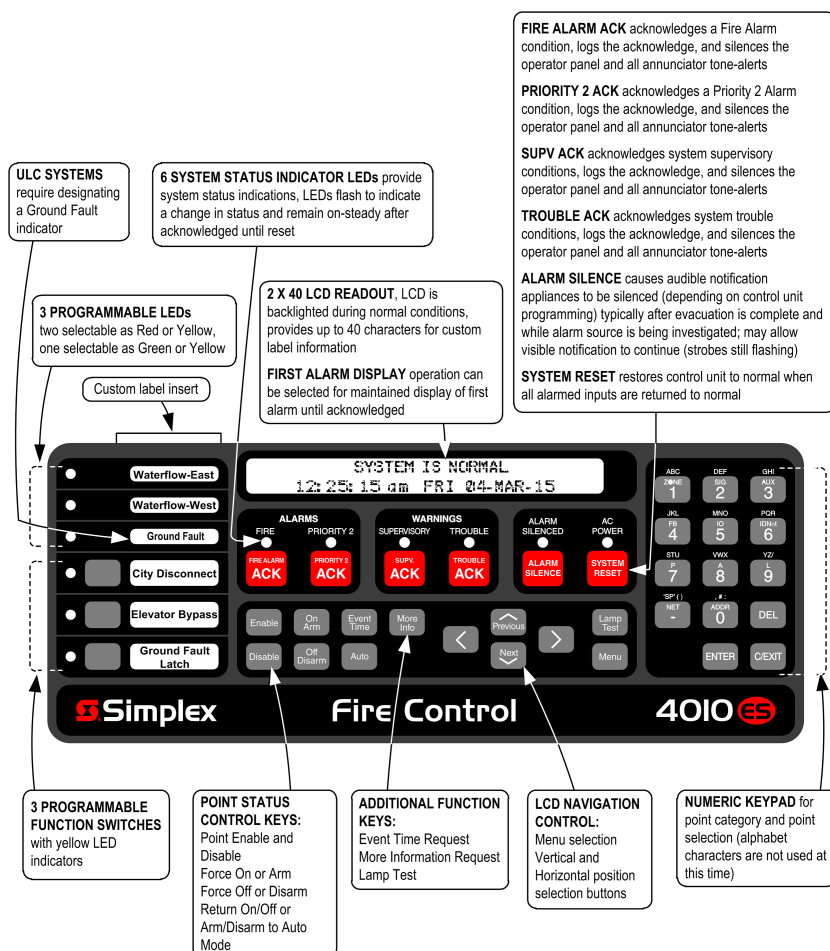
Specifications

Table 2: General ES touch screen display specifications

Specification	Rating
Resolution	800 x 600 pixels (RGB)
Size / Type	8 inch (203 mm) Diagonal / Color Touch Screen
Touch Screen Technology	Resistive
Event Display	Up to 8 Events without scrolling
Normal Screen Custom Watermark File Format	680 x 484 pixels. BMP, JPG, TIFF, GIF or PNG file format
Environmental	Operating Temperature: 32°F to 120°F (0°C to 49°C) Operating Humidity: Up to 93% RH, non-condensing at a maximum of 90°F (32°C).

Operator Interface with Monochrome 2x40 LCD Features

- Provides convenient and extensive operator information using a logical, menu-driven display
- Multiple automatic and manual diagnostics for maintenance reduction
- Convenient PC programmer label editing
- Password access control
- Alarm and Trouble History Logs for up to 2000 total events are available for viewing from the LCD, or capable of being printed to a connected printer, or downloaded to a service computer


Figure 11: Operator interface

Basic control unit model selection, one bay control units

Supervisory and Alarm current specifications are for determining battery standby requirements. Current specifications include an active RUI channel. Models with an IDNet channel include 20 IDNet device LEDs activated in alarm. Models with MX communications include module base current. Actual IDNet or MX channel device current is not included, see [Addressable device load specifications for battery standby](#) for details. For models with 48 LED Annunciation, alarm also includes 24 LEDs activated.

Table 3: Basic control unit model selection, one bay control units

Model	Control unit color	Language and voltage	Listing	Features	Supv. current	Alarm current	Available option blocks
4010-9401 4010-9401BA	Red	English 120 VAC	UL, FM	Basic Control Unit with 2x40 LCD Operator Interface and one two-loop Isolated IDNet2 Communications Channel, Class A or Class B operation, with support for up to 250 addressable IDNet points	316 mA	430 mA	Three 4 in. x 5 in. blocks
4010-9402 4010-9402BA	Platinum	English 120 VAC	UL, FM				
4010-9501 4010-9501BA	Red	English 220 VAC to 240 VAC	UL, FM				
4010-9502 4010-9502BA	Platinum	English 220 VAC to 240 VAC	UL, FM				
4010-9403	Red	English 120 VAC	UL, ULC, FM	Same features as above with 48 LED annunciation	336 mA	495 mA	
4010-9404	Platinum	English 120 VAC	UL, ULC, FM				
4010-9505	Red	English 220 VAC to 240 VAC	UL	Basic Control Unit with 2x40 LCD Operator Interface and (1) ESMX Loop Channel Class A or B with support for up to 250 addressable MX Loop points	364 mA	432 mA	Three 4 in. x 5 in. block

Note: Model numbers ending in BA are assembled in the USA.

Basic control unit model selection, two bay control units

Note: Supervisory and Alarm current specifications are for determining battery standby requirements. Current specifications include an active RUI channel. Models with IDNet channels include 20 IDNet device LEDs activated in alarm for each channel. Models with MX communications include unloaded module current only. Actual IDNet or MX channel device current is not included, see [Addressable device load specifications for battery standby](#) for details.

Table 4: Basic control unit model selection, two bay control units

Model	Control unit color	Language and voltage	Listings	Features	Available option blocks	Supv. current	Alarm current
4010-9421 4010-9421BA	Red	English 120 VAC	UL, FM	Basic Control Unit with 2x40 LCD Operator Interface , one two-loop isolated IDNet2 Communications Channel and one four-loop Isolated IDNet 2+2 Communications Channel Module, Class A or Class B operation, with support for up to 500 addressable IDNet points	Ten 4 in. x 5 in. blocks	391 mA	545 mA
4010-9422 4010-9422BA	Platinum	English 120 VAC	UL, FM				
4010-9423	Red	English 120 VAC	UL, ULC, FM	Same features as above with 48 LED annunciation; alarm current includes 24 annunciator LEDs activated		411 mA	610 mA
4010-9428	Platinum	English 120 VAC	UL, ULC, FM				
4010-9425 4010-9425BA	Red	English 120 VAC	UL, FM	Same as 4010-9421 except with InfoAlarm Operator Interface		473 mA	611 mA
4010-9426 4010-9426BA	Platinum	English 120 VAC	UL, FM				
4010-9435	Red	120 VAC (multiple languages available, contact your local Simplex product supplier for details)	UL, ULC, CSFM	Basic control unit with ES Touch Screen Operator Interface and one two-loop Isolated IDNet2 Communications Channel, one four-loop Isolated IDNet 2+2 Communications Channel Module, Class A or Class B operation, with support for up to 500 addressable IDNet points		486 mA	661 mA
4010-921 4010-9521BA	Rd	English 220 VAC to 240 VAC	UL, FM	Basic Control Unit with 2x40 LCD Operator Interface , one two-loop isolated IDNet2 Communications Channel and one four-loop Isolated IDNet 2+2 Communications Channel Module, Class A or Class B operation, with support for up to 500 addressable IDNet points	391 mA	545 mA	
4010-9522	Platinum	English 220 VAC to 240 VAC	UL, FM				
* Products with suffix "BA" are assembled in the USA.							

Addressable device load specifications for battery standby

Table 5: Addressable device load specifications for battery standby

Addressable channel	Device load	Supervisory current	Alarm current
IDNet2 and IDNet 2+2 Channel Device Currents. 20 device LEDs in alarm are included with control unit and module currents See Table 6 for current draw for each IDNet device.	With 50 devices add	40 mA	50 mA
	With 125 devices add	100 mA	125 mA
	With 250 devices add	200 mA	250 mA
ESMX Loop Card	With 250 devices add	1.135 A	1.135 A
25V Regulator for MX Loop	4 A output alarm, 2.5 A standby add	4.68 A	3.0 A
	3.5 A output alarm, 2.0 A standby add	4.2 A	2.4 A
	3.0 A output alarm, 1.5 A standby add	3.6 A	1.8 A
	2.5 A output alarm, 1.0 A standby add	2.87 A	1.2 A
	2.0 A output alarm, 0.5 A standby add	2.4 A	630 mA

Table 6: Current draw for each IDNet device

Condition	Current
Standby	0.8 mA
Alarm, with LED off	1.0 mA
Alarm, with LED on	3.0 mA
Note: A maximum of 20 devices with LED on is supported for each channel. Additional device LEDs do not turn on.	

Block space option card selection

Note: Maximum block option module quantities may require two-bay cabinets. One-bay cabinets are limited to three option block spaces total. See Figure 13 for option module availability. Supervisory and Alarm current specifications consider no load on addressable channels except as noted. See [Addressable device load specifications for battery standby](#) for battery standby.

Table 7: Single block option modules

Model	Features	Supervisory current	Alarm current	Option block usage
4010-9912	Serial DACT Note: Must mount in Block D under Main System Supply 2	30 mA	40 mA	One block (must mount in top bay, block D)
4010-9908	4-point Aux Relay Module	15 mA	60 mA	One block (11 maximum)
4010-9916	Voltage Regulator Module, 22.8 VDC to 26.4 VDC (25 VDC nominal); isolated and resettable output; includes earth detection circuit and trouble relay for status monitoring. One 4010-6305 harness, see below, is required for each 4010-9935 module powered from the 4010-9916.	3 A maximum with 2.5 A load	4.9 A maximum with 4 A load	One block (one maximum)
4010-9918	Dual RS-232 Module		60 mA	One block (three maximum)
4010-9915	BACpac Ethernet Portal Module; requires 4010-9918 RS-232 Module, no address required		123 mA	One block (one maximum)
4010-9901	VESDA HLI		60 mA	One block (11 maximum)
4010-9935	8-point zone/relay 4 in. x 5 in. flat module. Supports eight Class B or four Class A IDCs. Mounts in any open block in a master controller or expansion bay. Alarm current shown is for 8 Class B IDCs using 3.3K end-of-line-resistors with 4 in. alarm and 4 in. standby. Standby current shown is for all 8 IDCs in standby. Refer to Zone/Relay Module Installation Instructions 579-1236 for additional information.	83 mA	295 mA	One block (11 maximum)
4010-9936	4 DPDT Auxiliary Relays with feedback, contacts rated for 2A Resistive/0.5A Inductive @ 30 VDC or 0.5A Resistive/0.5A Inductive @ 120VAC. See 579-1306 installation instructions for additional information	18 mA	65 mA	One block (11 maximum)

Table 7: Single block option modules

Model	Features	Supervisory current	Alarm current	Option block usage
4100-6305	5 25V regulator harness for 8-point zone/relay module. One required for each 8-point zone/relay module, powered by the 4100-9916 25V regulator module. You can power a maximum of five 8-point zone/relay modules from the 4100-9916 for each bay.	N/A		
4010-9929	IDNet 2+2 Module, 250 point capacity; electrically isolated output with four short circuit isolating Class B or Class A output loops; alarm currents for 50 and above devices, includes 20 device LEDs in alarm. See Table 5 for individual device currents.	No device	50 mA	One block (three max)
		50 devices	90 mA	
		125 devices	150 mA	
		250 devices	250 mA	
			60 mA	
			150 mA	
			225 mA	
			350 mA	

Table 8: Dual vertical block (flat) modules**

Model	Features	Option block Usage	Supervisory current	Alarm
4010-9928	For one bay control units only. Dual Vertical Block Card Mounting Kit, allows selecting two, dual Vertical Block (flat) modules from the list below; mounts at right angle to chassis, note block usage details	Two Vertical Blocks (one max, mounts in top bay, block space A and B only)	N/A	N/A
4010-9923	SafeLINC Internet Interface	2 Vertical Blocks (1 max)	115 mA	115 mA

* UL, ULC, and CSFM Listed.

** For details on other dual vertical block network options refer to data sheets S4100-0029, S4100-0056, S4100-0057, **S4100-0076** , and S4100-0061 .

Table 9: Additional option modules with special option block usage

Model	Features	Option block usage	Supervisory current	Alarm
4010-6311	ESMX Loop Card supports up to 250 points	One 4 in. x 5 in. block	118 mA (no devices)	118 mA (no devices)
4010-6312	ESMX Optional Loop Mezzanine Card	N/A	4 mA (no devices)	4 mA (no devices)

Additional control unit feature selection (block space is not used)

Table 10: Additional control unit features

Model	Features	Supervisory current	Alarm current	Mounting requirements
4010-9909	City Connect Module w/ disconnect switches	20 mA	36 mA	Mounts on Main System Supply (one max)
4010-9910	City Connect Module	20 mA	36 mA	Mounts on Main System Supply (one max)
4010-9911	Alarm Relay Module	15 mA	37 mA	Mounts on Main System Supply (one max)
4100-5128	Battery Distribution Terminal Block, mounts to side of box, required when battery connection leaves the 4010ES box. Also used in the 4100ES fire alarm control unit.			

Network interface and Network Media Card product selection

4010ES fire alarm control units are compatible with Simplex ES Net network or 4120 network fire alarm products.

- Refer to datasheet **S4100-0076** for additional information on compatible ES Net fire alarm products.
- Refer to datasheet **S4100-0056** for additional information on compatible 4120 network fire alarm products.
- Refer to datasheet **S4100-0061** for additional information on the BNIC.

Cabinet dimension reference

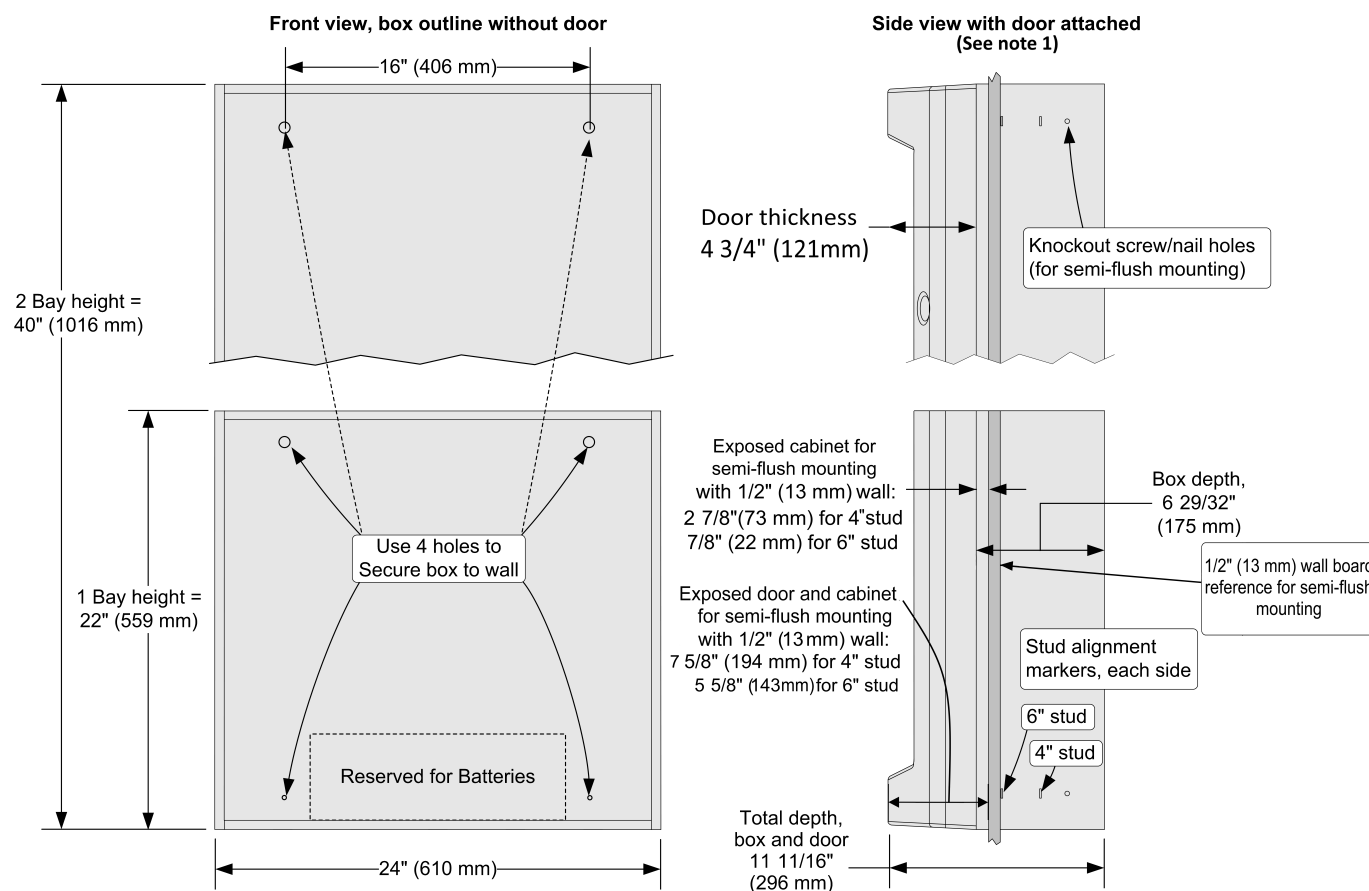


Figure 12: Cabinet dimension reference

Note: Side view dimensions are shown with minimal cabinet and door protrusion from the exterior wall. For 6 in. stud construction with minimum protrusion shown, the door will open 90 degrees. To allow the door to open 180 degrees, the exposed cabinet dimension from the exterior wall must be a minimum of 3 in. (76 mm) for both 4 in. and 6 in. stud construction.

Cabinet one and two bay loading reference

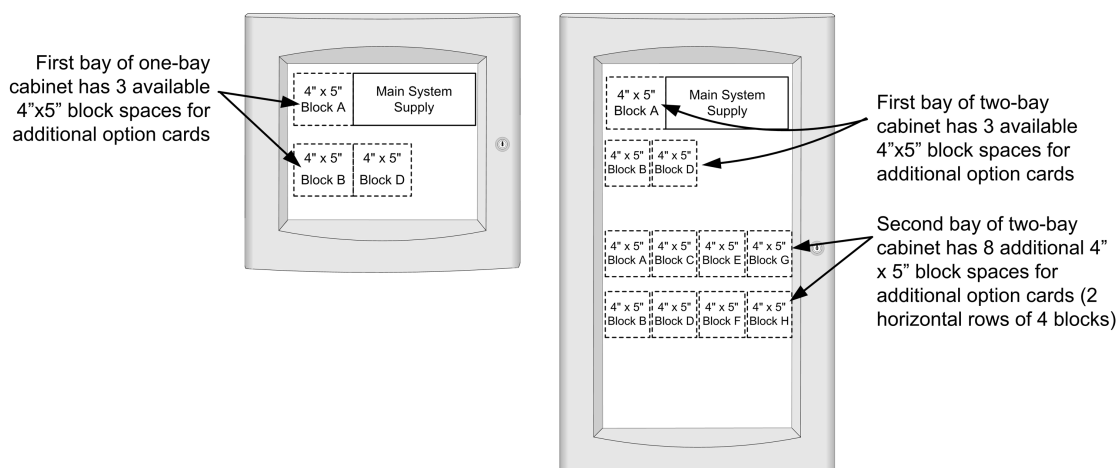


Figure 13: Loading reference

Note: Some spaces may be used by basic control unit features.

Miscellaneous accessories

Table 11: LED kits (LEDs are pluggable, use to change color for local application requirements)

Model	Description
4100-9843	8 Yellow LED Kit
4100-9844	8 Green LED Kit
4100-9845	8 Red LED Kit
4100-9855	8 Blue LED Kit
4100-0650	Battery Shelf, required for 50 Ah batteries in two bay cabinets only
4010-9831	French Applique Kit for ES Touch Screen Display Panels (order separately as required for Canadian French panels)

Table 12: Factory Programming Tools

Model	Description
4010-0831	Custom Labels and Programming (requires 4010-8810)
4010-8810	Factory Programming (select)

General specifications

Table 13: General specifications

Specification	Rating		
AC input current	120 VAC Models	4 A maximum, 120 VAC @ 60 Hz nominal	
	Battery	9 A maximum @ 24 VDC (during battery operation)	
Power supply output ratings (nominal 28 VDC on AC, 24 VDC on battery backup)	Total power supply output rating	Including module currents and auxiliary power outputs; 8 A total for Special Application appliances; 4 A total for Regulated 24 DC power (see below for details)	Output switches to battery backup during mains AC failure or brownout conditions
	Auxiliary power tap	2 A maximum, rated 19.1 VDC to 31.1 VDC	
Special Application appliances, maximum of 70 appliances for each NAC	Simplex 4901, 4903, 4904, and 4906 Series horns, strobes, and combination horn or strobes and speaker or strobes. Contact your Simplex product representative for compatible appliances.		
Regulated 24 DC appliances	Power for other UL listed appliances; use associated external synchronization modules where required		
Battery charger rating (sealed lead acid batteries)	Battery capacity range	See data sheet S2081-0012 for further details.	
	Charger characteristics and performance	Temperature compensated, dual rate, recharges depleted batteries within 48 hours per UL Standard 864; to 70% capacity in 12 hours per ULC Standard S527	
Battery current	9 A maximum @ 24 VDC (during battery operation)		
Environmental	Operating temperature	32°F to 120°F (0°C to 49°C)	
	Operating humidity	Up to 93% RH, non-condensing @ 90°F (32°C) maximum	
Additional technical reference	Installation instructions	579-989	
	Operating instructions	579-969	

4010ES card address allocation

The 4010ES has a maximum internal and external card address limit of 20 card addresses. See Table 14 below to calculate 4010ES card address allocation.

Table 14 is a list of 4010ES equipment and the quantity of card addresses they consume.

1. For the applicable control unit, write in the card address consumption value in the card address allocation column. Select one control unit only.
2. For the option cards to be installed on the 4010ES, write in the Card address consumption value in the card address allocation column.
3. Total the card address allocation column. The total must not exceed 20.

Table 14: Card address allocation

Model	Description	Card address consumption	Card address allocation
Control Units - select one			
4010-9401 4010-9401BA 4010-9402 4010-9402BA 4010-9501 4010-9501BA 4010-9502 4010-9502BA 4010-9505	2x40 Display, (1) IDNet2 Communications Channel; or (1) ESMX Channel, 1-Bay Box	2	
4010-9403 4010-9404	2x40 Display, one IDNet2 Communications Channel, 48 Pluggable LED Module, one bay Box	3	
4010-9423 4010-9428	2x40 Display, one IDNet2 and one IDNet2+2 Communications Channel, 48 Pluggable LED Module, two bay Box	4	
4010-9421 4010-9421BA 4010-9422 4010-9422BA 4010-9521 4010-9521BA 4010-9522	2x40 Display, one IDNet2 Communications Channel and one IDNet 2+2 Communications Channel, 2-Bay Box	3	
4010-9425 4010-9425BA 4010-9426 4010-9426BA	InfoAlarm Display, one IDNet2 and one IDNet 2+2 Communications Channel, 2-Bay Box	4	
4010-9526BA	InfoAlarm Display, (1) IDNet2 Communications Channel, 2-Bay Box	3	
4010-9435	ES Color Touch Screen Display, one IDNet2 Communications Channel and one IDNet 2+2 Communications Channel, 2 Bay Box	4	
Control Unit Option Cards - select as required			
4010-9901	Flat VESDA HLI Card	1	
4010-9922	Flat 4120 Network Interface Card	1	
4010-6310	Flat ES Net Network Interface Card	1	
4010-9908	4 Point Flat Aux Relay Module	1	
4010-9912	Serial DACT	1	
4010-9923	SafeLINC Internet Interface Card	1	
4010-9914	Building Network Interface Card	1	
4010-6311	ESMX Loop Card	1	
4010-6312	ESMX Optional Mezzanine Card	0	
4010-9918	Dual RS-232 Module	1	
4010-9935	8 point zone/relay 4x5" flat module	1	
4010-9929	IDNet 2+2 Communications Module	1	
4010-9936	4-Point Auxiliary Relay Module with feedback	1	
Remote Annunciation - select as required			

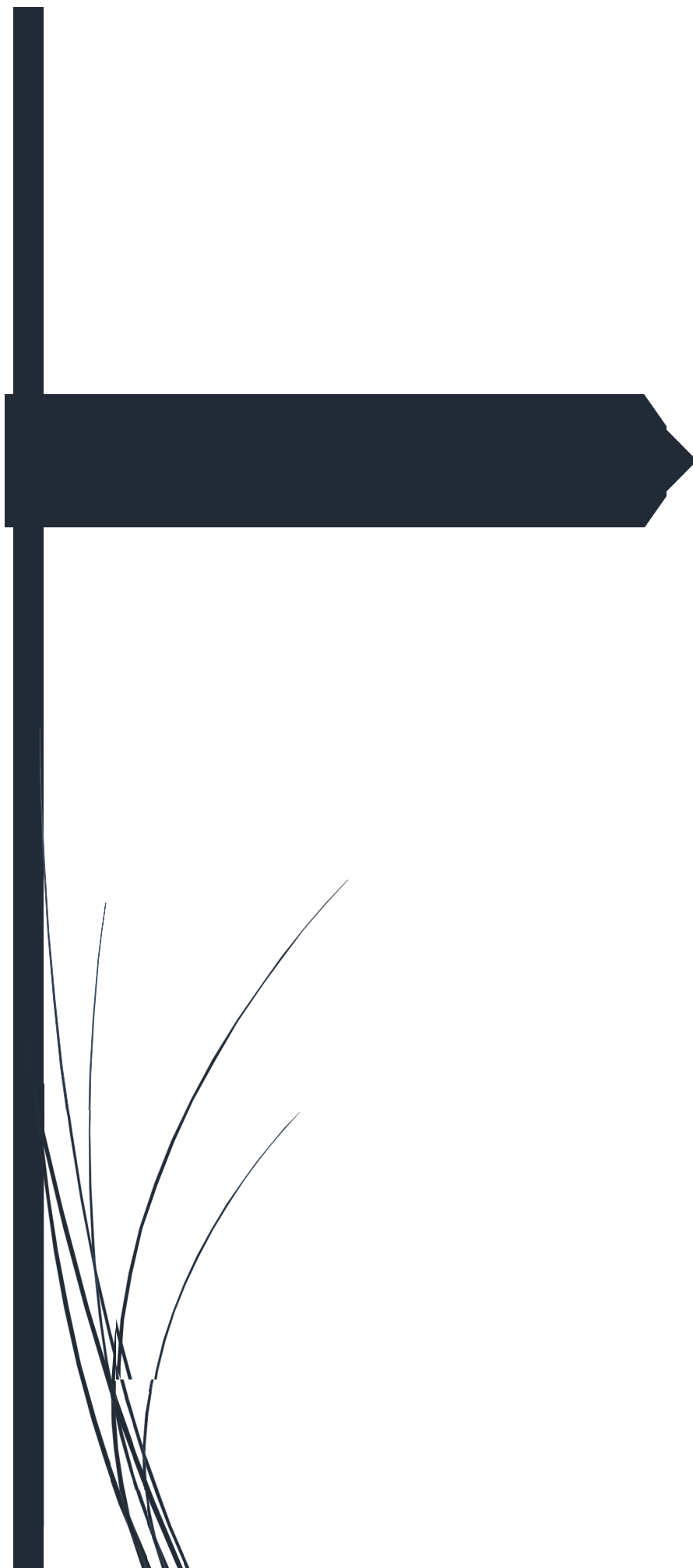
Table 14: Card address allocation

Model	Description		Card address consumption	Card address allocation
4100-9401	Remote InfoAlarm Command Center	Red Cabinet, English	2	
4100-9403		Platinum Cabinet, English	2	
4100-9421		Red Cabinet, French	2	
4100-9423		Platinum Cabinet, French	2	
4100-9441		Red Cabinet, with blank inserts for key labels	2	
4100-9443		Platinum Cabinet, with blank inserts for key labels	2	
4100-9404	Remote ES Touch Screen Display	Red Cabinet	1	
4100-9405		Platinum Cabinet		
4606-9102	4010ES RUI LCD Annunciator, English		1	
4606-9102BA	4010ES RUI LCD Annunciator, English		1	
4606-9102CF	4010ES RUI LCD Annunciator, French		1	
4602-9101	Status Command Unit (SCU) LED Annunciator		1	
4602-9102	Remote Command Unit (RCU) LED Annunciator w/control		1	
4602-9150	Graphic I/O RCU/SCU Assembly for custom annunciator Control Units		1	
4602-7101	Graphic I/O RCU/SCU Assembly for custom annunciator Control Units		1	
4602-7001	RCU for cabinet mount		1	
4602-6001	SCU for cabinet mount		1	
4100-7401	24 Point I/O Graphic Module (requires mounting cabinet)		1	
4100-7402	64/64 LED Switch Controller for custom annunciator Control Units		1	
4100-7403	32 Point LED Driver Module for custom annunciator Control Units		1	
4100-7404	32 Point Switch Input Module for custom annunciator Control Units		1	
	Total card addresses - not to exceed 20		TOTAL	
Note: (BA) means available with or without BA suffix; products with suffix BA are assembled in the USA				

Additional 4010ES and network product reference

Table 15: Additional 4010ES and network product reference

Subject	Data sheet
Serial DACT (SDACT) for 4100ES, 4010ES, 4007ES	S2080-0009
Seismic Battery Brackets Reference	S2081-0019
4003EC Voice Control Unit	S4003-0002
4009 IDNet NAC Extender	S4009-0002
4010ES FACUs with Conventional Notification	S4010-0004
4010ES Extinguishing Release Applications	S4010-0005
4010ES Extinguishing Release Applications (INTL)	S4010-0007
InfoAlarm Command Center for the 4010ES FACUs	S4010-0008
InfoAlarm Command Center for the 4010ES FACUs (INTL)	S4010-0009
4010ES FACUs with Addressable Notification	S4010-0011
4010ES FACUs with Addressable Notification (INTL)	S4010-0012
External 110 Ah Battery Charger for 4100ES, 4010ES	S4081-0002
Graphic I/O Modules for 4100ES, 4010ES, 4007ES	S4100-0005
Interface to VESDA Air Aspiration Detection Systems	S4100-0026
Multiple Signal Fiber Optic Modems for 4120 Networks	S4100-0049
BACpac Ethernet Module	S4100-0051
4120 Network Products and Specifications	S4100-0056
Building Network Interface Card (BNIC)	S4100-0061
SafeLINC Internet Interface	S4100-0062
ES Net Network Products and Specifications	S4100-0076
NDU with ES-PS Power Supplies for 4120 Network	S4100-1036
Remote ES Touch Screen Displays for 4100ES and 4010ES Panels	S4100-1070
NDU with ES-PS Power Supplies for ES Net	S4100-1077
TrueSite Workstation	S4190-0016
TrueSite Incident Commander	S4190-0020
24-Pin Dot Matrix Fire Alarm System Remote Printer	S4190-0027
SCU/RCU Annunciators	S4602-0001
4606-9102 Remote LCD Annunciator	S4606-0002



UL18 -12



Physical Specification

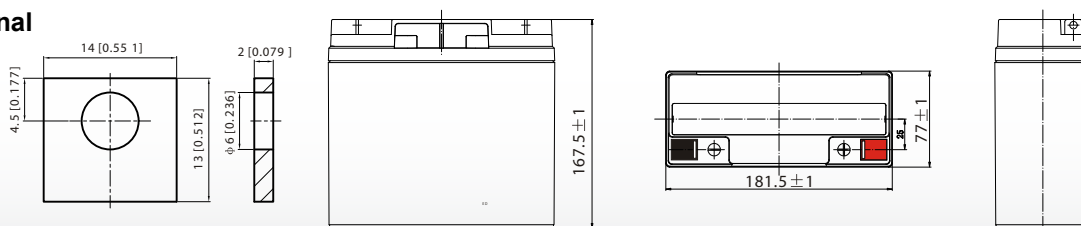
Part Number:	UL18-12
Length:	181.5 ± 2 mm (7.14 inches)
Width:	77 ± 2 mm (3.03 inches)
Container Height:	167.5 ± 2 mm (6.59 inches)
Total Height (with terminal):	167.5 ± 2 mm (6.59 inches)
Approx Weight:	Approx 5.32kg (11.73lbs)

Specifications

	Nominal Voltage	12V
	Nominal Capacity (20HR)	18AH
Terminal Type	Standard Terminal	F3
	Optional Terminal	F12
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	ABS (UL94:VO)
Rated Capacity	18.0 AH/0.90A	(20hr, 1.80V/cell, 25°C / 77°F)
	16.7 AH/1.67A	(10hr, 1.80V/cell, 25°C / 77°F)
	15.3 AH/3.06A	(5hr, 1.75V/cell, 25°C / 77°F)
	13.8 AH/4.59A	(3hr, 1.75V/cell, 25°C / 77°F)
	11.3 AH/11.3A	(1hr, 1.60V/cell, 25°C / 77°F)
Max Discharge Current	270A (5s)	
Internal Resistance	Approx 16mΩ	
Discharge Characteristics	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F)
		Charge: 0 ~ 40°C (5 ~ 104°F)
		Storage: -15 ~ 40°C (5 ~ 104°F)
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 5.4A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
	Standby Use	No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C
	Capacity affected by Temperature	40°C (104°F) 103% 25°C (77°F) 100% 0°C (32°F) 86%
Design Floating Life at 20°C	5 Years	
Self Discharge	Ultracell batteries may be stored for up to 6 months at 25°C(77°F) and then a refresh charge is required. For higher temperatures the time interval will be shorter.	

Dimensions

F3 Terminal



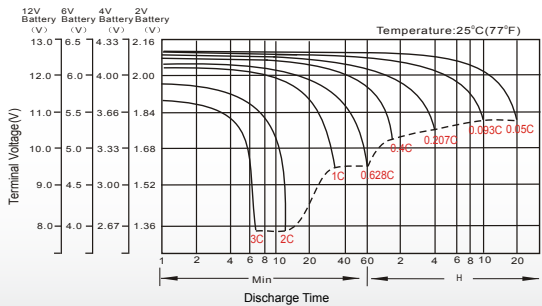
Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	34.3	26.0	22.7	19.9	15.6	11.6	9.36	5.56	4.17	3.39	2.87	2.49	1.98	1.63	0.89
1.80V/cell	41.9	30.8	26.5	22.7	17.2	12.7	10.1	5.97	4.39	3.54	2.98	2.57	2.03	1.67	0.90
1.75V/cell	47.5	33.8	28.4	24.1	18.1	13.3	10.6	6.18	4.55	3.64	3.04	2.62	2.07	1.70	0.91
1.70V/cell	52.7	36.8	30.3	25.4	18.9	13.8	10.9	6.34	4.67	3.73	3.11	2.68	2.10	1.72	0.92
1.65V/cell	57.2	39.2	32.2	26.6	19.8	14.3	11.3	6.51	4.75	3.79	3.17	2.72	2.12	1.74	0.93
1.60V/cell	60.9	41.7	34.1	28.0	20.5	14.9	11.7	6.69	4.86	3.87	3.22	2.76	2.15	1.76	0.94

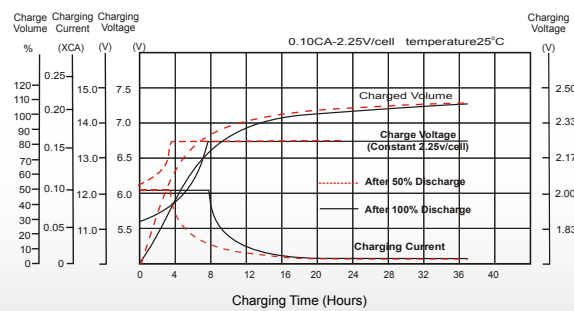
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	65.0	49.8	43.8	38.7	30.5	22.9	18.5	11.1	8.33	6.79	5.77	5.01	3.99	3.31	1.81
1.80V/cell	78.7	58.5	50.9	43.9	33.5	24.9	20.0	11.8	8.74	7.08	5.97	5.16	4.10	3.38	1.82
1.75V/cell	88.4	63.7	54.3	46.4	35.1	26.0	20.9	12.2	9.02	7.24	6.07	5.25	4.15	3.41	1.83
1.70V/cell	97.2	68.9	57.5	48.7	36.6	26.9	21.5	12.5	9.24	7.40	6.20	5.34	4.20	3.45	1.84
1.65V/cell	104.7	72.8	60.7	50.8	38.1	27.8	22.2	12.8	9.39	7.51	6.30	5.41	4.24	3.48	1.86
1.60V/cell	110.4	77.0	63.9	53.2	39.4	28.8	22.9	13.1	9.57	7.65	6.38	5.47	4.28	3.51	1.87

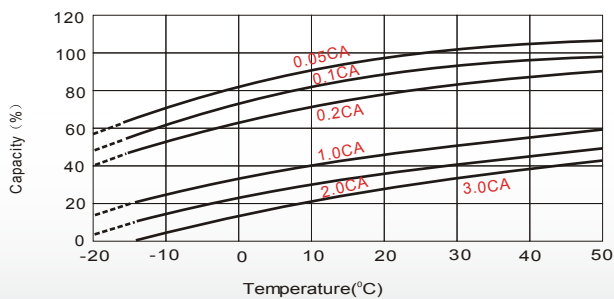
Discharge Characteristics



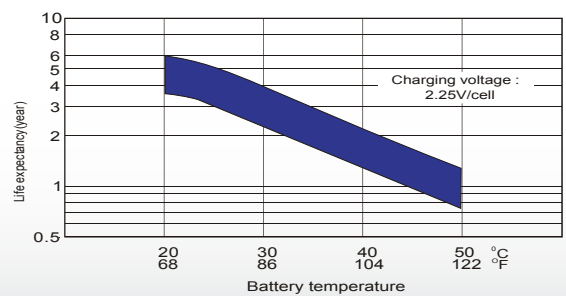
Float Charging Characteristics



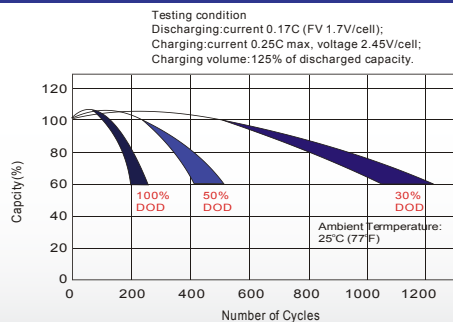
Temperature Effects in Relation to Battery Capacity



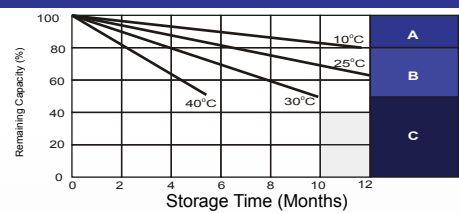
Effect of Temperature on Long Term Float Life



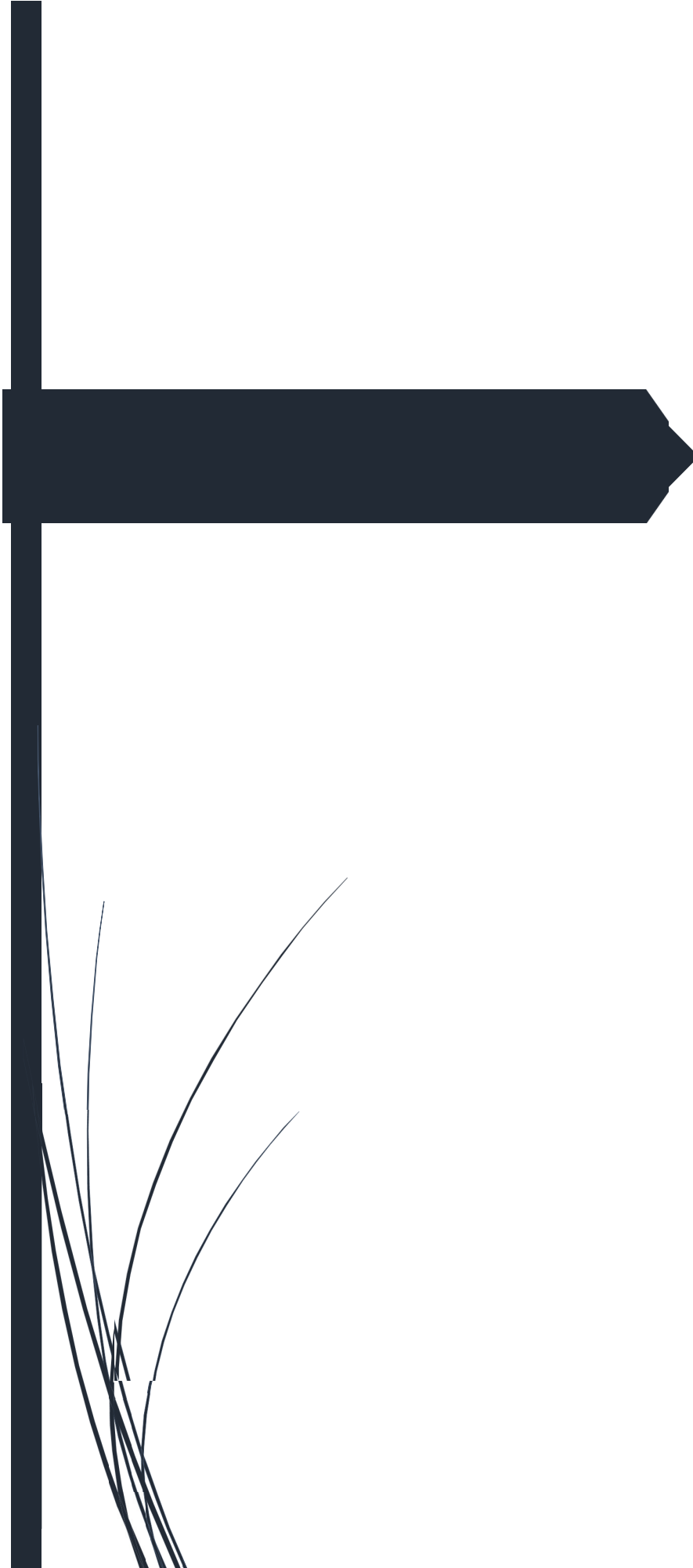
Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary required
(Carryout supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.25V/cell.
3. Charged for 8 ~ 10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.



Features

Remote LCD annunciator for use with Simplex® model 4010ES fire alarm control panels

LCD readout provides:

- Two lines of 40 characters each
- Wide viewing angle, super-twist design
- LED backlighting

Control switches and status LEDs for:

- Alarm, Priority 2, Supervisory, or Trouble acknowledge (keyswitch access controlled)
- Alarm silence, System reset
- Three programmable control switches with yellow LEDs and provisions for custom labeling

Additional features:

- Information is transmitted over a single unshielded twisted pair; separate wiring is required for 24 VDC control panel power (see p. 3 for more information)
- Tone-alert sounder provides local audible indication
- Lamp and LCD are functionally tested each time the keyswitch is turned on
- Mounts flush on standard 6-gang electrical box
- Up to up to 20 internal and external card addresses per 4010ES fire alarm control panel

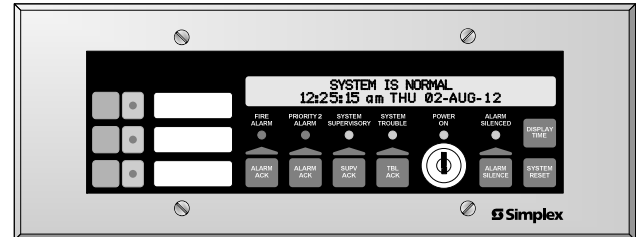
Mounting and trim options (ordered separately, see page 3 for more details):

- Surface mount box model 2975-9206
- Brushed stainless steel trim model 4603-9111

Description

Local Annunciation. 4606-9102 LCD Annunciator allows 4010ES fire alarm control panels to provide information and control switches at convenient locations away from the control panel. The LCD is an 80 character, back-lit, alphanumeric display with information presented in clear and descriptive English. Typical content includes: point status (alarm, trouble, etc.), alarm type (smoke detector, manual station, etc.), number of system alarms, supervisory conditions, troubles, and custom location labels up to 40 characters long.

Communications. Data communications require a single unshielded twisted pair that supports other annunciators on the same communications channel.



4606-9102 LCD Annunciator

Description (Continued)

Indications. Alarm, Priority 2, Supervisory, and Trouble conditions are also indicated by dedicated LEDs and a tone-alert audible indication. Each condition has a dedicated acknowledge push-button switch that silences the tone-alert but leaves the LED on until all conditions in that category are restored to normal.

Activity Scrolling. Repeated operation of the appropriate acknowledge switch will scroll the LCD display showing activity in the sequence of occurrence. The internal tone-alert also sounds to indicate the operation of any of the push-button switches.

Operation

Keyswitch Access. All switches on the annunciator are controlled by the "ENABLE" keyswitch with a key that is removable only in the disabled position. A brief Lamp/LCD test is performed whenever the keyswitch is changed from enabled to disabled.

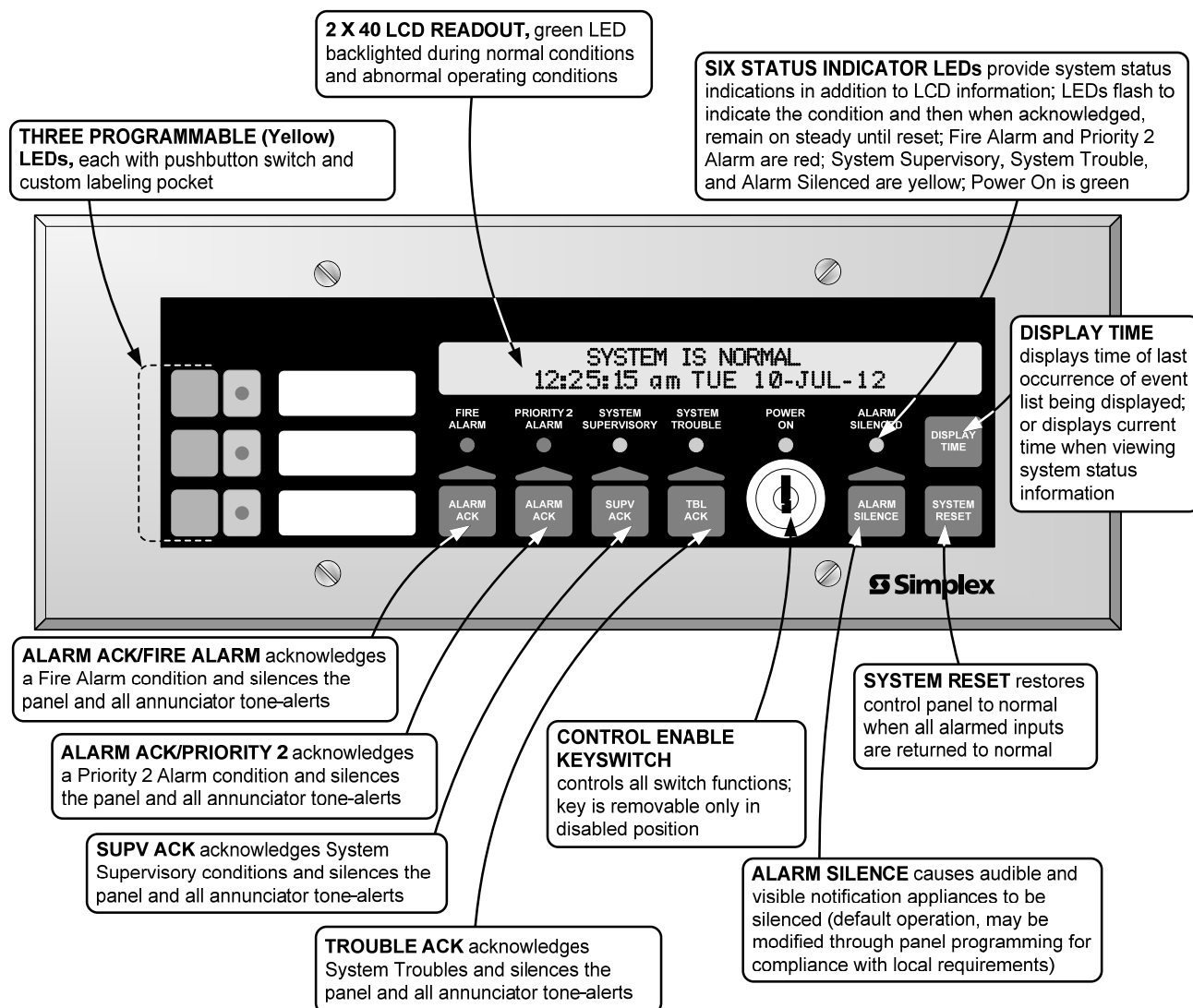
Enabled Operations. When enabled, notification appliances can be deactivated by pressing the "ALARM SILENCE" switch. Pressing the "SYSTEM RESET" switch restores the system to normal operation. When system activity is normal, the LCD displays the time, date, and "SYSTEM IS NORMAL."

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7300-0026:0370 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. NYC Fire Dept COA #6095. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

Product Selection

Model	Description	
4606-9102	Remote LCD Annunciator with beige trim for use with 4010ES fire alarm control panels	Refer to specifications on page 3 for additional details
4603-9111	Brushed stainless steel trim option	
2975-9206	Matching surface mount box; ivory finish	
2081-9044	Overvoltage protector; required where annunciator communications and power wiring exits and enters a building; refer to data sheet S2081-0016 for details	

4606-9102 Operator Information



4606-9102 LCD Annunciator Specifications

General Operating Specifications (refer to Installation Instructions 579-977 for additional information)

Voltage	18 to 32 VDC, system supplied
Normal Operating Current	110 mA (with LED backlighting on)
Battery Standby Current	65 mA (during battery backup, LED backlighting is turned off after 30 seconds without switch activity)
Alarm Current	140 mA maximum (LED backlighting is on and tone-alert is sounding)
Operating Temperature Range	32° to 120° F (0° to 49° C)
Operating Humidity Range	Up to 93% RH, non-condensing at 100° F (38° C)

Communications

For 4010ES Panels*	Type	RUI (Remote Unit Interface) external annunciator communications line SLC (signaling line circuit)
	Capacity	Up to 20 total internal and external card addresses

Wiring Requirements

RUI Data	Standard Wiring Type	Unshielded twisted pair (UTP), 18 AWG (0.82 mm ²) for most applications, see below
	Wiring Characteristics	0.58 µF (580 nF) maximum capacitance between conductors; 35 Ω maximum total line resistance
	Wiring Applications Requiring Shielded, Twisted Pair (STP)	1. Wiring that leaves the building. Also requires Isolated Loop Circuit Protectors on each end, refer to data sheet S2081-0007 for 2081-9027 (200 mA), or S2081-0008 for 2081-9028 (5 A) 2. Wiring run in 500 ft (152 m) or more of conduit. 3. Wiring closely bundled with standard IDNet communications or TrueAlert addressable communications (not required when run with IDNet+ communications).
	Class B "T-Tap" wiring distance	Up to 10,000 ft (3048 m) total wiring; up to 2500 ft (762 m) to farthest device
	Class X wiring distance	Up to 2500 ft (762 m)
Power Wiring		18 to 12 AWG (0.82 mm ² to 3.31 mm ²) wires for 24 VDC system power
Earth Wiring		A dedicated earth ground connection to the electrical box is required for proper ESD and EMI protection; wire in accordance with NFPA 70 (<i>National Electrical Code</i>) Article 250

Mounting Information

Trim Dimensions		4 ½" H x 11 13/16" W (114 mm x 300 mm)
Assembly Depth		1 5/16" (33 mm), 1 ½" at terminal block location (38 mm)
Standard Trim Finish		Steel, painted beige
4603-9111, Optional Trim		Brushed stainless steel (ordered separately); supplied with both slotted and tamper resistant screws
Boxes for Flush Mounting (supplied separately)	Masonry boxes	Six-gang box, Steel City GW-635-G, 3 ½" (89 mm) deep or equal
	Single gang boxes	Six, single gang boxes, 3 ½" (89 mm) deep minimum, RACO # 590 or equal
	Box selection note	Conduit entrance is box dependent, refer to Installation Instructions 579-977 for additional mounting information and conduit entry requirements

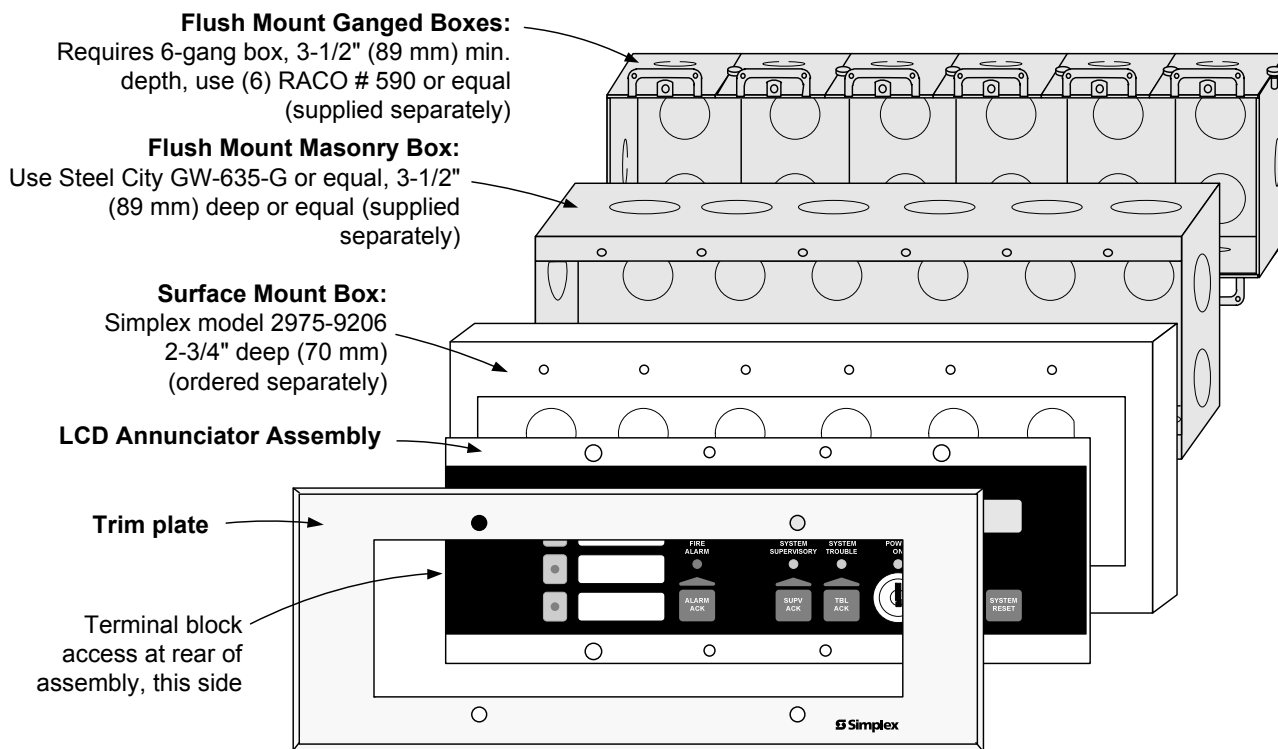
2975-9206, Surface Mount Box Option (ordered separately)

Dimensions	12" W x 4 5/8" H x 2 3/4" D (305 mm x 117 mm x 70 mm)
Finish	Painted steel, ivory finish

* Refer to the 4010ES control panel data sheet for additional panel information.

Mounting Information

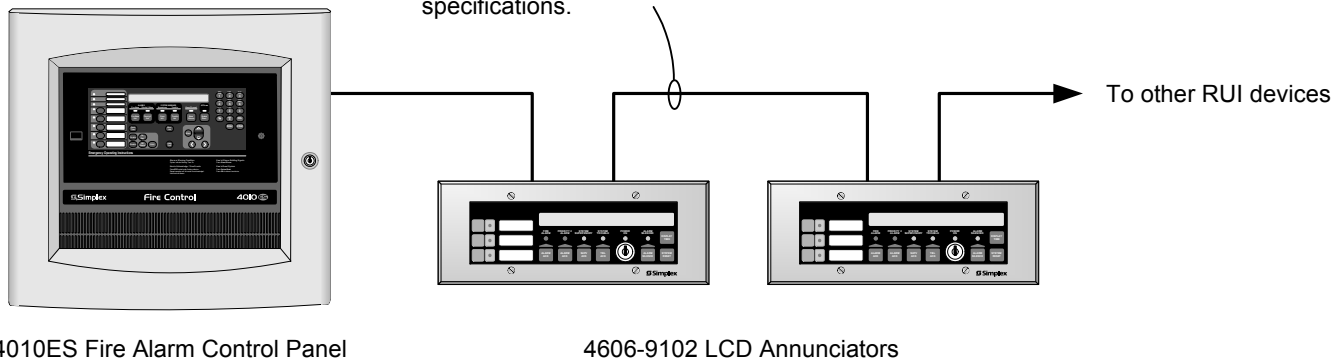
Note: Review box choice with assembly layout before selecting conduit entrance location to allow easy access to terminals



Wiring Reference

Interconnection Wiring Notes:

1. Communications require 18 to 12 AWG unshielded twisted pair.
2. Power requires two, 18 to 12 AWG wires for 24 VDC system power, plus Earth Ground to each electrical box.
3. Refer to Installation Instructions 579-977 for additional wiring specifications.



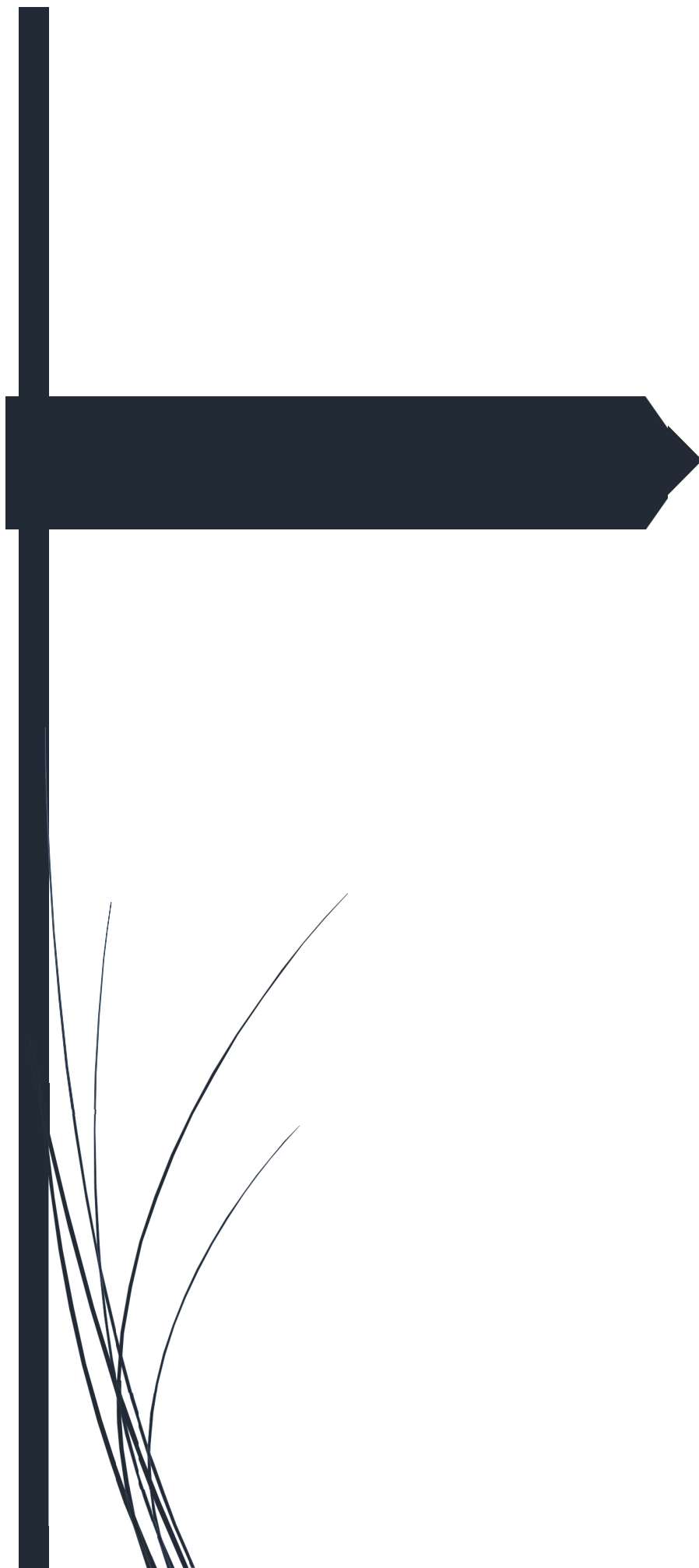
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S4606-0002-7 8/2016

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Features

TrueAlarm analog sensing provides the following features

- Digital transmission of analog sensor values using IDNet or MAPNET II two-wire communications

For use with the following Simplex products

- 4007ES, 4010, 4010ES, 4100ES, and 4100U Series control units ; and 4008 Series control units with reduced feature set (refer to data sheet [S4008-0001](#) for details)
- 4020, 4100, and 4120 Series control units, Universal Transponders, and 2120 TrueAlarm CDTs equipped for MAPNET II operation

Fire alarm control unit provides the following features

- Peak value logging with accurate analysis of each sensor for individual sensitivity selection
- Sensitivity monitoring meets NFPA 72 sensitivity testing requirements; automatic individual sensor calibration check verifies sensor integrity
- Automatic environmental compensation, multi-stage alarm operation, and display of sensitivity directly in percent for each foot
- Display and print detailed sensor information in plain English language

Photoelectric smoke sensors provide the following features

- Sensitivity levels from 0.2% to 3.1%. See [TrueAlarm sensors](#) for more information.

Heat sensors have these features

- Three fixed temperature sensing thresholds: 135°F, 155°F and 190°F
- Rate-of-rise temperature sensing
- Utility temperature sensing
- Listed to UL 521 and ULC-S530

General features

- Ceiling or wall mounting
- Listed to UL 268 7th Edition and ULC-S529
- NEMA 1 rated. See [TrueAlarm analog sensing product selection chart](#) for more information.
- Louvered smoke sensor design enhances smoke capture by directing flow to chamber; entrance areas are minimally visible when ceiling mounted
- Designed for EMI compatibility
- Magnetic testing
- Different bases support a supervised or unsupervised output relay, or a remote LED alarm indicator

Additional base reference

- For isolator bases, refer to data sheet [S4098-0025](#)
- For sounder bases, refer to data sheet [S4098-0028](#)
- For photo/heat sensors, refer to data sheet [S4098-0024](#) , single address and [S4098-0033](#) , dual address

Description

Digital communication of analog sensing

TrueAlarm analog sensors provide an analog measurement digitally communicated to the host control panel using Simplex addressable communications. The control unit analyses the data, determines an

average value and stores it. Comparing the sensor's present value against its average value and time, determines an alarm or other abnormal condition.

Intelligent data evaluation

Monitoring each sensor's average value provides a continuously shifting reference point. A software filtering process compensates for environmental factors, such as dust and dirt, and component aging, to provide an accurate reference for evaluating new activity. This filtering reduces the probability of false or nuisance alarms caused by shifts in sensitivity, either up or down.

Control unit selection

The control unit stores peak activity for each sensor to assist in evaluating specific locations. The host control unit determines the alarm set point for each TrueAlarm sensor, selectable as more or less sensitive as the individual application requires.

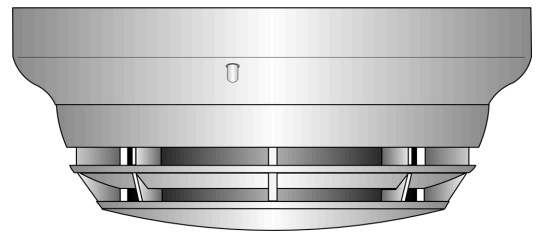


Figure 1: 4098-9714 TrueAlarm photoelectric sensor mounted in base

Timed/multi-stage selection

You can program the sensor alarm set points for timed automatic sensitivity selection, such as more sensitive at night, less sensitive during day. You can program the control unit to provide multi-stage operation for each sensor.

Sensor alarm and trouble LED indication

Each sensor base's LED pulses to indicate communications with the unit. If the control unit determines a sensor is in alarm, is dirty, or has some other type of trouble, the details are annunciated at the control unit and the sensor's base LED will turn on steadily. During a system alarm, the control unit will control the LEDs such that an LED indicating a trouble will return to pulsing to help identify the alarmed sensors.

TrueAlarm sensor bases and accessories

Sensor base features

Base mounted address selection

- Address remains with its programmed location
- Accessible from front, DIP switch under sensor

General features

- Automatic identification provides default sensitivity when substituting sensor types
- Integral red LED for power-on, pulsing, or alarm or trouble, steady on
- Locking anti-tamper design mounts on standard outlet box
- Magnetically-operated functional test

* These products have been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listings 7272-0026:218, 7271-0026:231, 7270-0026:216, and 7300-0026:217 for allowable values and/or conditions concerning material presented in this document. Additional listings may be applicable, contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

Sensor bases

4098-9792, standard sensor base

4098-9789, sensor base with wired connections

- 2098-9808 remote LED alarm indicator or 4098-9822 relay (relay is unsupervised and requires separate 24 VDC)

Supervised relay bases not compatible with 2120 CDT:

- **4098-9791, 4-wire sensor base**, use with remote or locally mounted 2098-9737 relay, requires separate 24 VDC
- **4098-9780, 2-wire sensor base**, use with remote or locally mounted 4098-9860 relay, no separate power required
- Supervised relay operation is programmable and can be manually operated from control unit
- Includes wired connections for remote LED alarm indicator **or** 4098-9822 relay, relay is unsupervised and requires separate 24 VDC

Sensor base options

2098-9737, remote or local mount supervised relay

- DPDT contacts for resistive/suppressed loads
- power limited rating of 3 A at 28 VDC
- non-power limited rating of 3 A at 120 VAC, requires external 24 VDC coil power

4098-9860, remote or local mount supervised relay

- SPDT dry contacts, power limited rating of 2 A at 30 VDC, resistive; non-power limited rating of 0.5 A at 125 VAC, resistive

4098-9822, LED annunciation relay

- Activates when base LED is on steady, indicating local alarm or trouble
- DPDT contacts for resistive/suppressed loads, power limited rating of 2 A at 28 VDC; non-power limited rating of 1/2 A at 120 VAC, (requires external 24 VDC coil power)

4098-9832, adapter plate

- Required for surface or semi-flush mounting to 4 in. square electrical box and for surface mounting to 4 in. octagonal box
- Can be used for cosmetic retrofitting to existing 6 3/8 in. diameter base product

2098-9808, remote red LED alarm indicator

- Mounts on single gang box



Figure 2: Remote red LED alarm indicator

Description

TrueAlarm sensor bases contain integral addressable electronics that constantly monitor the status of the detachable photoelectric or heat sensors. Each sensor's output is digitized and transmitted to the system fire alarm control unit every four seconds.

You can easily interchange different TrueAlarm sensor types to meet specific location requirements. This feature allows intentional sensor substitution during building construction. When conditions are temporarily dusty, you can install heat sensors without reprogramming the control unit, as covering smoke sensors causes them to be disabled. Although the control unit will indicate an incorrect sensor type, the heat sensor will operate at a default sensitivity providing heat detection for building protection at that location.

Mounting reference

Electrical Box Requirements: (boxes are by others)

Without relay in the box: 4" octagonal or 4" square, 1-1/2" deep; single gang, 2" deep

With relay in the box: 4" octagonal or 4" square, 1-1/2" deep, with 1-1/2" extension ring

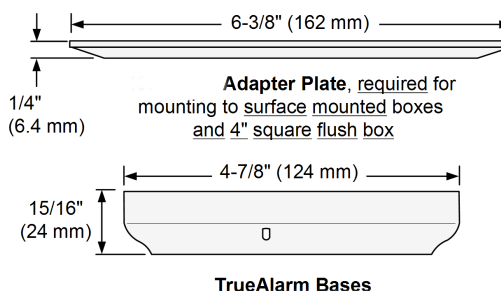
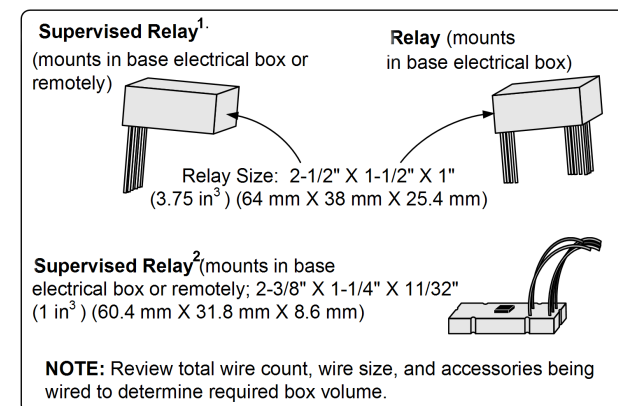
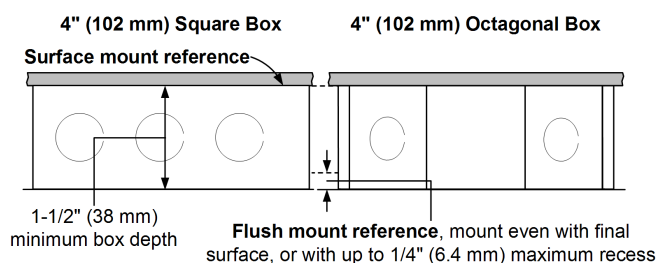


Figure 3: Mounting reference

Table 1: Product mounting - SKU reference

Product	SKU
Relay	4098-9822
Supervised relay	Example 1 2098-9739 Example 2 4098-9860
Adapter plate	4098-9832
TrueAlarm bases	4098-9780, 4098-9789, 4098-9791, 4098-9792

TrueAlarm sensors

Features

- Sealed against rear air flow entry
- Interchangeable mounting
- EMI/RFI shielded electronics
- Heat sensors:
 - Selectable rate compensated, fixed temperature sensing with or without rate-of-rise operation
 - Rated spacing distance between sensors:

Fixed Temp. Setting	UL and ULC Spacing	FM Spacing, Either Fixed Temperature Setting
135°F (57.2°C) 190°F (88°C)	60 ft x 60 ft (18.3 m)	20 ft x 20 ft (6.1 m) for fixed temperature only; RTI = Quick
155°F (68°C)	40 ft x 40 ft (12.2 m)	50 ft x 50 ft (15.2 m) for fixed temperature with either rate-of-rise selection; RTI = Ultra Fast

Note: 190°F (88°C) ratings apply only to the 4098-9734 sensor.

Smoke sensors

- Photoelectric technology sensing
- 360° smoke entry for optimum response
- Built-in insect screens

4098-9714 photoelectric sensor

TrueAlarm photoelectric sensors use a stable, pulsed LED light source and a silicon photodiode receiver to deliver consistent and accurate low power smoke sensing. There are three user-selectable sensitivities for special applications for each individual sensor: 0.2%, 0.5%, and 1% for each foot. Standard sensitivity is 1.25% to 3.1% for each foot. The fire alarm control unit runs an algorithm that can vary the sensitivity for normal applications between 1.25% and 3.1% for each foot.

Note: Fixed sensitivity settings higher than 1.0% for each foot are not UL268 7th Edition compliant.

The sensor head design provides 360° smoke entry for optimum response to smoke from any direction. Due to its photoelectric operation, air velocity is not normally a factor, except for impact on area smoke flow.

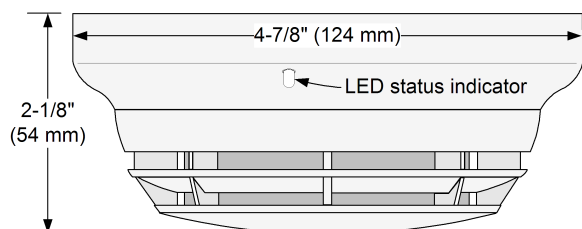


Figure 4: 4098-9714 photoelectric sensor with base

4098-9733 and 4098-9734 heat sensors

TrueAlarm heat sensors are self-restoring and provide rate-compensated, fixed temperature sensing, you can select with or without rate-of-rise temperature sensing. Due to its small thermal mass, the sensor accurately and quickly measures the local temperature for analysis at the fire alarm control unit.

You can select rate-of-rise temperature detection at the control unit for either 15°F or 20°F (8.3°C or 11.1°C) for each minute. Fixed temperature sensing is independent of rate-of-rise sensing and you can program it to operate at 135°F or 155°F (57.2°C or 68°C). The 4098-9734 sensor provides an additional 190°F (88°C) set point.

In a slowly developing fire, the temperature may not increase rapidly enough to operate the rate-of-rise feature. However, an alarm will be initiated when the temperature reaches its rated fixed temperature setting.

You can program TrueAlarm heat sensors as a utility device to monitor for temperature extremes in the range of 32°F to 155°F (0°C to 68°C). This feature can provide freeze warnings, or alert you to HVAC system problems. Refer to panel specifications for availability.

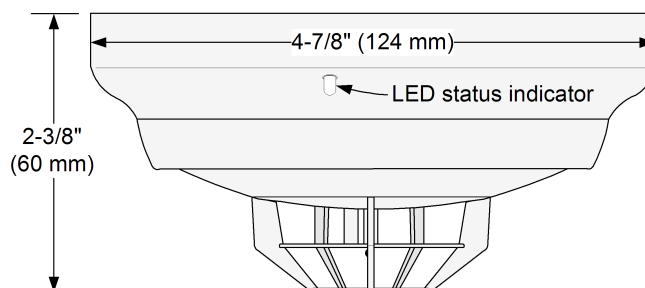


Figure 5: 4098-9733 heat sensor with base

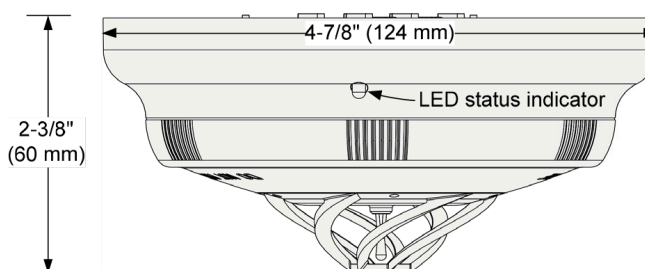


Figure 6: 4098-9734 high temperature heat sensor with base

WARNING: In most fires, hazardous levels of smoke and toxic gas can build up before a heat detection device would initiate an alarm. In cases where Life Safety is a factor, the use of smoke detection is highly recommended.

Application reference

Sensor locations should be determined only after careful consideration of the physical layout and contents of the area to be protected. Refer to NFPA 72, *the National Fire Alarm and Signaling Code*. On smooth ceilings, a smoke sensor spacing of 30 ft (9.1 m) can be used as a guide.

For detailed application information including sensitivity selection, refer to *Installation Instructions 574-709*.

TrueAlarm analog sensing product selection chart

Table 2: TrueAlarm sensor bases (for use with sensors 4098-9714 and 4098-9733)

SKU	Color	Description	Compatibility	Mounting requirements
4098-9792 GSA4098-9792	White	Standard sensor base	No options	4 in. octagonal or 4 in. square box, 1 1/2 in. min. depth; or single gang box, 2 in. min. depth
4098-9776	Black			
4098-9789 4098-9789IND GSA4098-9789	White	Sensor base with connections for remote LED alarm indicator or unsupervised relay	2098-9808 remote alarm indicator or 4098-9822 unsupervised relay	4 in. octagonal or 4 in. square box
4098-9775	Black			
4098-9791	White	4-wire sensor supervised relay base with connections for LED indicator or unsupervised relay	2098-9737 supervised remote relay	Note: Box depth requirements depend on total wire count and wire size, see Table 4 for reference.
Note: NOT compatible with the 2120 CDT			2098-9808 remote alarm indicator or 4098-9822 unsupervised relay	
4098-9780 GSA4098-9780	White	2-wire sensor supervised relay base with connections for LED indicator or unsupervised relay	4098-9860 supervised remote relay	
Note: NOT compatible with the 2120 CDT			2098-9808 remote alarm indicator or 4098-9822 unsupervised relay	

Note: SKU numbers ending in IND are assembled in India. SKU numbers with GSA prefix are assembled in the USA.

Refer to *Application Manual 574-709* and *Installation Instructions 574-707* for additional information.

Table 3: TrueAlarm sensors

SKU	Color	Description	Compatibility	Mounting requirements
4098-9714				
4098-9714-IND	White	Photoelectric smoke sensor	Bases 4098-9775, 4098-9776, 4098-9792, 4098-9789, 4098-9791, and 4098-9780	Refer to base requirements
GSA4098-9714				
4098-9774	Black			
4098-9733	White	Heat sensor		
GSA4098-9733				
4098-9778	Black			
4098-9734	White	High temperature heat sensor		
GSA4098-9734				

Note:

- All of these SKUs are NEMA 1 rated.
- The 4098-9734 Heat Sensor is compatible with IDNet on the 4100ES, 4010ES, and 4007ES only.
- SKU numbers with GSA prefix are assembled in the USA.

Table 4: TrueAlarm sensor/base accessories

SKU	Description	Compatibility	Mounting requirements
2098-9737	Supervised relay, mounts remote or in base electrical box	For use with 4098-9791 base	Remote mounting requires 4 in. octagonal or 4 in. square box, 1 1/2 in. minimum depth
4098-9860	Supervised relay, mounts remote or in base electrical box	For use with 4098-9780 base	Base mounting requires 4 in. octagonal box, 2 1/8 in. deep with 1 1/2 in. extension ring
2098-9808	Remote red LED alarm indicator on single gang stainless steel plate	Bases 4098-9789, 4098-9791, and 4098-9780	Single gang box, 1 1/2 in. minimum depth
4098-9822	Unsupervised relay, tracks base led status. Note: Mounts only in base electrical box.	Bases 4098-9789, 4098-9791, and 4098-9780	4 in. octagonal box, 2 1/8 in. deep with 1 1/2 in. extension ring
4098-9832	Adapter plate	Bases 4098-9792, 4098-9789, 4098-9791, and 4098-9780	Required for surface or semi-flush mounted 4 in. square box and for surface mounted 4 in. octagonal box

Note: 2098-9808 is NEMA 1 rated.

Specifications

Table 5: General operating specifications

Specification	Rating
Communications and sensor supervisory power	IDNet or MAPNET II communications, auto-selected, one address for each base
Communications connections	Screw terminals for in/out wiring, 18 to 14 AWG, 0.82 mm ² to 2.08 mm ²
Remote LED alarm indicator current	1 mA typical, no impact to alarm current
Remote LED alarm indicator and relay connections	Color coded wire leads, 18 AWG, 0.82 mm ²
UL listed operating temperature range	32°F to 100°F, 0°C to 38°C
Operating temperature range	with 4098-9733 Heat Sensor 32°F to 122°F, 0°C to 50°C
	with 4098-9714 Smoke Sensor 15°F to 122°F, -9°C to 50°C
	with 4098-9734 Heat Sensor 32°F to 150°F, 0°C to 66°C
Storage temperature range	0°F to 140°F, -18°C to 60°C
Humidity range	10% to 95% RH
4098-9714 smoke sensor air velocity rating	0 to 4000 ft/min, 0 to 1220 m/min
Housing color	Frost white or black

Table 6: 4098-9791 Base with supervised remote relay 2098-9737

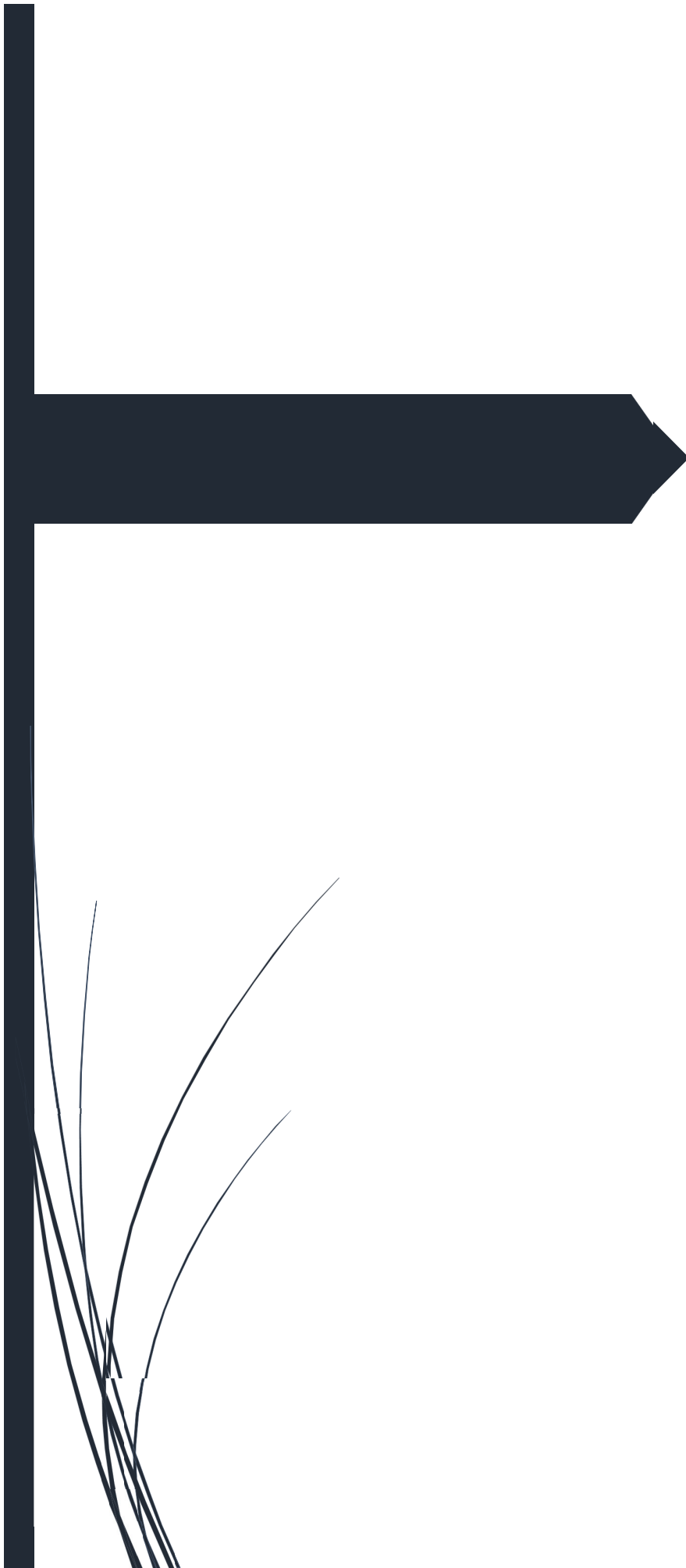
Specification	Rating
Externally supplied relay coil voltage	18 VDC to 32 VDC, nominal 24 VDC
Supervisory current	270 µA, from 24 VDC supply
Alarm current with 2098-9737 relay	28 mA, from 24 VDC supply
Note: See Sensor base options for contact ratings.	

Table 7: 4098-9780 Base with supervised remote relay 4098-9860

Specification	Rating
Power	Supplied from communications

Table 8: 4098-9822 Unsupervised relay, requirements for bases 4098-9789, 4098-9791, and 4098-9780

Specification	Rating
Externally supplied relay coil voltage	18 VDC to 32 VDC, nominal 24 VDC
Supervisory current	Supplied from communications
Alarm current	13 mA from separate 24 VDC supply
Note: See Sensor base options for contact ratings.	





UL, ULC, CSFM Listed; FM Approved;
MEA (NYC) Acceptance*

TrueAlarm Multi-Point Analog Sensing

TrueAlarm Multi-Sensor Model 4098-9754
Providing TrueSense Early Fire Detection

Features

TrueAlarm photoelectric smoke sensing and heat sensing combined in one housing to provide:

- Smoke activity accurately monitored by TrueAlarm photoelectric sensing technology
- Thermal activity accurately monitored by TrueAlarm thermistor sensing technology
- And **TrueSense detection**, a correlation of smoke activity and thermal activity providing intelligent fire detection earlier than with either activity alone

For use with Simplex® 4007ES, 4010ES, 4100ES, and 4100U fire alarm control panels:

- TrueAlarm analog sensor information is digitally communicated to the control panel via IDNet two-wire communications
- Special point types allow the 4098-9754 multi-sensor to communicate smoke and heat analog sensing data **using only one IDNet address**
- Individual sensor information is processed by the host control panel to determine sensor status and to determine whether conditions are normal, off-normal, or alarm
- (4100U fire alarm control panels require software revision 11 or higher with multi-point compatible IDNet transmission modules)

Alarms can be determined by either:

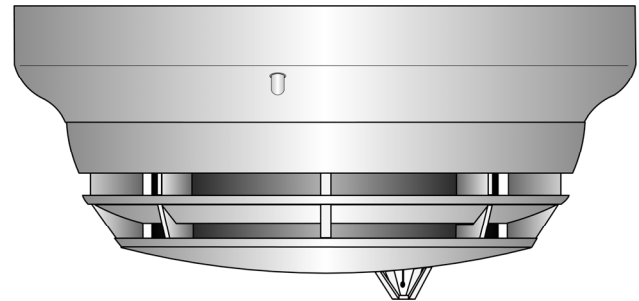
- Smoke detection with selectable sensitivity from 0.2 to 3.7 %/ft obscuration (refer to additional information on page 2)
- Heat detection selectable as fixed temperature or fixed with selectable rate-of-rise
- TrueSense intelligent analysis of the combination of smoke and heat activity

Additional design features:

- Functional and architecturally styled enclosures for ceiling or wall mounting
- Smoke sensor louver design that directs air flow to chamber enhancing smoke capture
- Built-in magnetic test feature
- Compatible with standard bases (including relay control), sounder bases, and isolator bases
- Designed for EMI compatibility

UL listed to Standard 268

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listings 7272-0026:218 and 7300-0026:217 for allowable values and/or conditions concerning material presented in this document. Accepted for use – City of New York Department of Buildings – MEA35-93E. Refer to page 4 for ULC listing status. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.



TrueAlarm Multi-Sensor 4098-9754
Mounted in Standard Sensor Base

TrueAlarm Multi-Sensor Description

TrueAlarm multi-sensor model 4098-9754 combine the established performances of a TrueAlarm photoelectric smoke sensor with a fast-acting and accurate TrueAlarm thermal sensor to provide both features in a single sensor/base assembly.

Digital Communication of Analog Sensing.

Analog information from each sensor is digitally communicated to the control panel where it is analyzed. Photoelectric sensor input is stored and tracked as an average value with an alarm or abnormal condition being determined by comparing the sensor's present value against its average value. Thermal data is processed to look for absolute or rate-of-rise temperature as desired.

Intelligent Data Evaluation. Monitoring each photoelectric sensor's average value provides a software filtering process that compensates for environmental factors (dust, dirt, etc.) and component aging, providing an accurate reference for evaluating new activity. The result is a significant reduction in the probability of false or nuisance alarms caused by shifts in sensitivity, either up or down. Status indications of dirty and excessively dirty are automatically generated allowing maintenance to be performed per device.

Control Panel Selection. Peak activity per sensor is stored to assist in evaluating specific locations. The alarm set point for each TrueAlarm sensor is determined at the control panel, selectable as more or less sensitive as the individual application requires.

Multi-Point Reporting and CO Base Reference.

Reporting 4098-9754 "sub-points" under its single address varies with the base used. Multi-point details are listed in data sheet S4090-0011.

Using the 4098-9754 with CO sensor bases is detailed in data sheet S4098-0052.

Description (Continued)

Timed/Multi-Stage Selection. Alarm set points can be programmed for timed automatic sensitivity selection (such as more sensitive at night, less sensitive during day). Control panel programming can also provide multi-stage operation per sensor. For example, a 0.2% level may cause a warning to prompt investigation while a 2.5% level may initiate an alarm.

Sensor Alarm and Trouble LED Indication. Each sensor base's LED pulses to indicate communications with the panel. If the control panel determines that a sensor is in alarm, or that it is dirty or has some other type of trouble, the details are annunciated at the control panel and that sensor base's LED will be turned on steadily. During a system alarm, the control panel will control the LEDs such that an LED indicating a trouble will return to pulsing to help identify the alarmed sensors.

TrueAlarm Analog Sensor Features

General mechanical:

- Housing is sealed against rear air flow entry
- Electronics are EMI/RFI shielded

Smoke sensing:

- Photoelectric light scattering sensing technology
- 360° smoke entry for optimum response
- Chamber screen provides protection from dirt, dust, and insects

Heat sensing:

- Fast response thermistor design
- Rate compensated, self-resetting operation
- Control panel can select per sensor for fixed temperature sensing, rate-of-rise temperature sensing, or the combination of both

Photoelectric Sensing Details

TrueAlarm photoelectric sensors use a stable, pulsed infrared LED light source and a silicon photodiode receiver to provide consistent and accurate low power smoke sensing. Seven levels of sensitivity are available for each individual sensor, ranging from 0.2% to 3.7% per foot of smoke obscuration. Sensitivities of 0.2%, 0.5%, and 1% are for special applications in clean areas. Standard sensitivities are 1.5%, 2.0%, 2.5%, 3.0%, and 3.7%. Application type and sensitivity are selected and then monitored at the fire alarm control panel.*

Sensor head design provides 360° smoke entry for optimum smoke response. Because of the photoelectric sensing technology, the 4098-9754 sensor is UL listed for air velocity of up to 4000 ft/min. However, care must be taken in determining sensor locations to avoid areas where local airflow may also impact any smoke flow. (Refer to the application reference section on this page.)

Heat Sensing Details

TrueAlarm heat sensors monitor a fast reacting thermistor providing operation that is self-restoring and rate compensated. Due to its small thermal mass, the sensor accurately and quickly measures the local temperature for analysis at the fire alarm control panel. The control panel allows alarm selection to be per sensor as fixed temperature, or rate-of-rise temperature, or the combination of both.

Temperature Detection. Rate-of-rise temperature detection is selectable at the control panel for either 15° F (8.3° C) or 20° F (11.1° C) per minute. Fixed temperature sensing is independent of rate-of-rise sensing and selectable to operate at 135° F (57.2° C) or 155° F (68° C). In a slow developing fire, the temperature may not increase rapidly enough to operate the rate-of-rise feature. However, an alarm will be initiated when the temperature reaches its selected fixed temperature setting.

Utility Temperature Monitoring. TrueAlarm heat sensors can be programmed as a utility device to monitor for temperature extremes in the range from 32° F to 122° F (0° C to 50° C). This feature can provide freeze warnings or alert to HVAC system problems.

TrueSense Detection Details

Control Panel Sensor Analysis. Each multi-sensor's smoke and heat sensing element provides data for evaluation at the fire alarm control panel where four independent detection modes are evaluated. They are:

- Fixed temperature heat detection
- Rate-of-rise heat detection
- TrueAlarm photoelectric smoke detection
- And TrueSense correlation detection

Comparing Photoelectric Activity and Thermal Activity.

TrueSense analysis correlates both thermal activity *and* smoke activity at a single multi-sensor location using an extensively tested covariance relationship. As a result, TrueSense detection improves response to conditions indicative of faster acting, hot flaming fires when compared to the response of either photoelectric smoke activity or thermal activity alone.

High Integrity Detection. TrueSense operation provides early fire detection and maintains the established high level of immunity to false alarms and nuisance alarms that is inherent with TrueAlarm sensor operation.

Application Reference

Sensor locations should be determined after careful consideration of the physical layout and contents of the area to be protected. Refer to NFPA 72, the *National Fire Alarm and Signaling Code*. On smooth ceilings, smoke sensor spacing of 30 ft (9.1 m) may be used as a guide.*

* For detailed application information, refer to *4098 Detectors, Sensors, and Bases Application Manual*, document number 574-709.

Multi-Sensor Base Features

Base mounted address selection allows the address of the multi-sensor base to remain with its programmed location when the sensor is removed for service.

Integral red LED indicates power-on by pulsing, or alarm or trouble when steady on, reflecting status of either sensor. The exact status of the specific sensing element is annunciated at the fire alarm control panel.

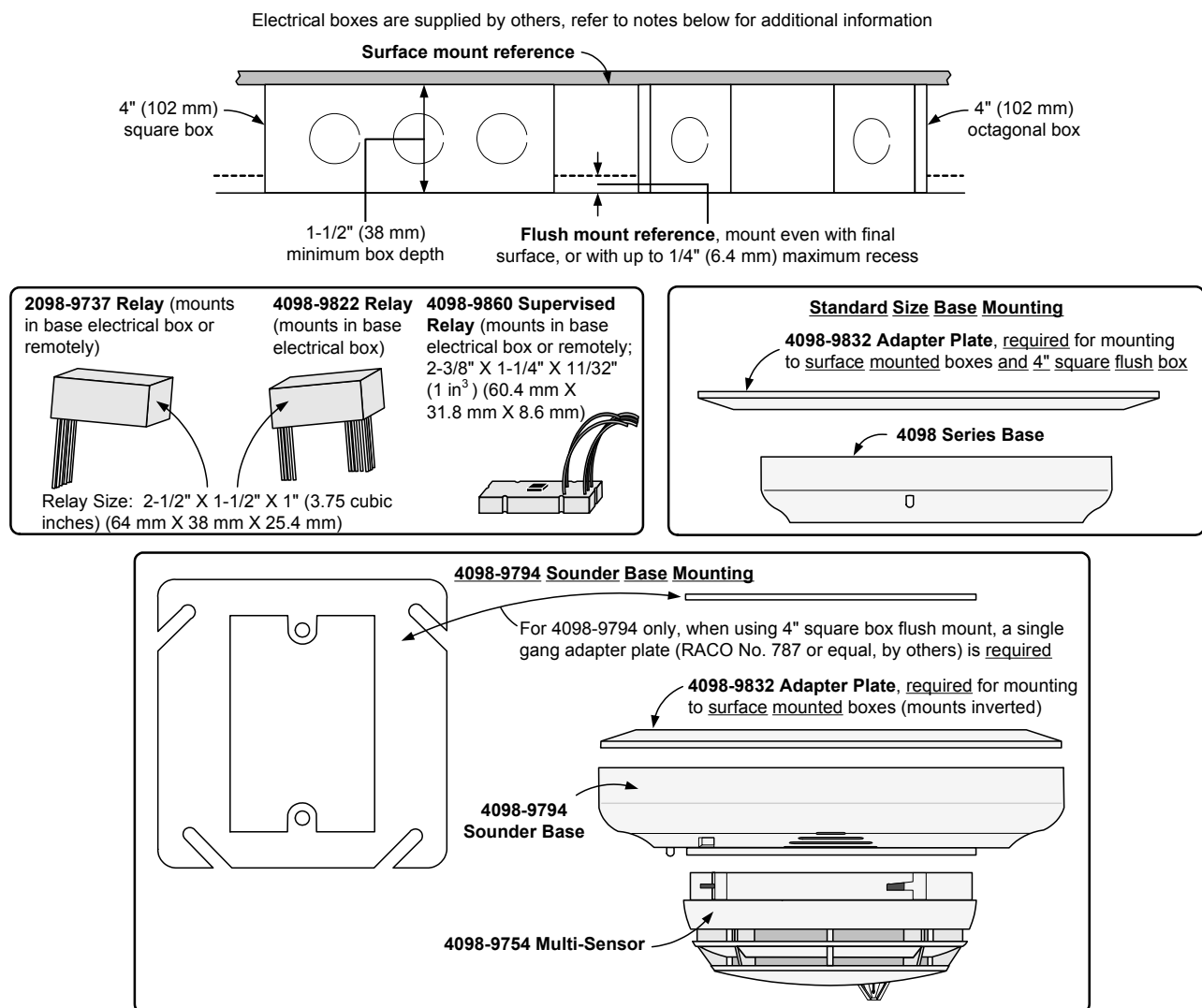
Fire Alarm Control Panel Features

- Individual smoke sensitivity and temperature operation is selectable for each sensor
- Sensitivity monitoring that satisfies NFPA 72 sensitivity testing requirements

Mounting Reference

Fire Alarm Control Panel Features (Cont'd)

- Peak value logging allows accurate analysis for sensitivity selection
- Automatic, once per minute individual sensor calibration check verifies sensor integrity
- Multi-stage alarm operation
- Selectable alarm verification
- Automatic environmental compensation and determination of dirty and excessively dirty
- TrueSense analysis of smoke and heat activity
- Ability to display and print detailed sensor information in plain English language
- Smoke sensitivity displayed in percent per foot and temperature readings selectable as Fahrenheit or Celsius



NOTES:

1. Review wire size, wire count, box type, and whether a locally mounted relay is used before determining box size.
2. When a locally mounted relay is used, mount relay in electrical box and use 1-1/2" extension ring (by others) on 4" square or octagonal box of 1-1/2" or 2-1/8" depth as required.
3. Flush mounting also fits a single gang box, 2-1/8" (51 mm) deep if compatible with wiring requirements. (Not applicable if a locally mounted relay is used.)
4. Refer to Systems Manual 574-709 for additional information.

Serin



TrueAlert® Multi-Candela Notification Appliances

UL, ULC, CSFM Listed; FM Approved;
MEA (NYC) Acceptance*

SmartSync™ Operation Audible/Visible Notification
with Horn and Synchronized Flash, Non-Addressable

Features

Audible/visible (A/V) notification appliances with efficient electronic horn and high output xenon strobe, available for wall or ceiling mount

- Operation is compatible with ADA requirements (refer to important installation information on page 3)
- Rugged, high impact, flame retardant thermoplastic housings are available in red or white with clear lens

Operates over a two-wire SmartSync circuit to provide:

- Horns that are controlled separately from strobes on the same two-wire circuit
- “On-until-silenced” and “on-until-reset” operation on the same two-wire pair
- SmartSync horn activation of Temporal pattern, March Time pattern (at 60 BPM), or on continuously
- Strobe appliances on the same circuit operating at a synchronized 1 Hz flash rate
- Class B (Style Y) operation requires connection to a compatible SmartSync NAC or to SmartSync Control Module (SCM) 4905-9938
- Class A (Style Z) operation when connected to the 4905-9938 SCM or with 4100U series fire alarm control panel NACs

Wall mount A/Vs features:

- Wiring terminals are accessible from the front of the housing providing easy access for installation, inspection, and testing
- Covers are available separately to convert housing color

Optional adapters and wire guards:

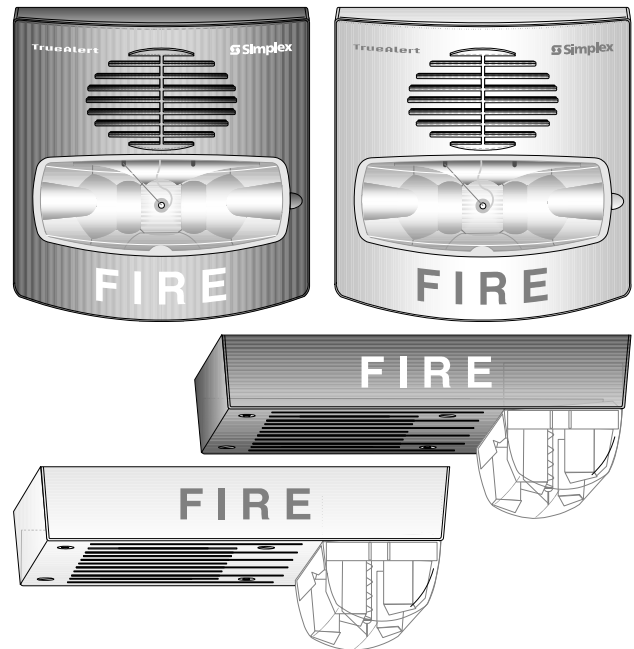
- Wall mount A/V adapters are available to cover surface mounted electrical boxes and to adapt to Simplex® 2975-9145 boxes
- UL listed red wire guards are available for wall or ceiling mount A/Vs

Visible notification appliance (strobe):

- 24 VDC xenon strobe; intensity is selectable as 15, 30, 75, or 110 candela with visible selection jumper secured behind strobe housing
- UL listed to Standard 1971
- Regulated circuit design ensures consistent flash output and provides controlled inrush current

Audible notification appliance (horn):

- Low current, 24 VDC electronic horn with harmonically rich sound output suitable for either steady or coded operation (Temporal or 60 BPM March Time pattern)
- UL listed to Standard 464



Wall and Ceiling Mount A/Vs

Description

Multi-Candela TrueAlert A/Vs with horn and synchronized strobe provide convenient installation to standard electrical boxes. The enclosure designs are both impact and vandal resistant and provide a convenient strobe intensity selection. Since each model can be selected for strobe intensity output, on-site model inventory is minimized and changes encountered during construction can be easily accommodated.

Wall mount A/V housings are a one-piece assembly (including lens) that mounts to a single or double gang, or 4” square standard electrical box. The cover can be quickly removed (a tool is required) and covers are available separately for color conversion.

Ceiling mount A/Vs install using standard 4” electrical boxes. Color choice is determined by model number.

Strobe Intensity Selection

During installation, a selection plug at the back of the housing determines the desired strobe intensity. An attached flag with black letters on a highly visible yellow background allows the selected intensity to be seen at the side of the strobe lens.

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7125-0026:317 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEA35-93E. Refer to page 2 for listing status of wire guards. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.

** Simplex multi-candela SmartSync two-wire horn/strobe appliance operation is protected under one or more of the following U.S. Patent Numbers: 5,559,492; 5,622,427; 5,865,527; 5,886,620; 6,281,789; 6,954,137; 7,005,971; and 7,006,003.

Strobe Application Selection

Proper selection of visible notification is dependent on occupancy, location, local codes, and proper applications of: the *National Fire Alarm Code* (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA).

Synchronized Strobes

Multiple Strobes. When multiple strobes and their reflections can be seen from one location, synchronized flashes reduce the probability of photo-sensitive reactions as well as the annoyance and possible distraction of random flashing. The multi-candela strobes of these A/Vs are synchronized by the controlling SmartSync operation NAC.

Product Selection

Multi-Candela A/Vs

Model	Mounting	Housing Color	"FIRE" Lettering	Description
4906-9127	Wall	Red	White	Horn with Multi-Candela Strobe; strobe intensity selectable as: 15, 30, 75, or 110 candela; operates with SmartSync two-wire control
4906-9129		White	Red	
4906-9128	Ceiling	Red	White	
4906-9130		White	Red	

Wall Mount A/V Adapters

Model	Description	Dimensions
4905-9937	Red Surface Mount Adapter Skirt; use to cover 1-1/2" (38 mm) deep surface mounted boxes	5-3/8" H x 5-1/4" W x 1-5/8" D (136 mm x 133 mm x 41 mm) depth with strobe = 4-3/8" (111 mm)
4905-9940		
4905-9931	Red Adapter Plate for mounting to Simplex 2975-9145 box (typically for retrofit, may be mounted vertical or horizontal)	8-5/16" x 5-3/4" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)
2975-9145	Red Mounting Box, requires Adapter Plate 4905-9931	7-7/8" x 5-1/8" x 2-3/4" D (200 mm x 130 mm x 70 mm)

SmartSync Control Module

Model	Description	Dimensions
4905-9938	SmartSync Control Module with Class B or Class A output; mounts in 4" (102 mm) square box; refer to data sheet S4905-0003 for details	4" x 4-1/8" x 1-1/4" D (102 mm x 105 mm x 32 mm)

Replacement Covers for Wall Mount A/Vs

Model	Description	Dimensions
4905-9994	Red cover with white "FIRE" lettering	5-1/8" H x 5" W x 1-1/2" D (130 mm x 127 mm x 38 mm)
4905-9995	White cover with red "FIRE" lettering	

Wire Guards and Ceiling Mount A/V Adapter

Model	Description	Dimensions
4905-9961*	Wall mount red wire guard with mounting plate, compatible with semi-flush or surface mounted boxes	6-1/16" H x 6-1/16" W x 3-1/8" D (154 mm x 154 mm x 79 mm)
4905-9927*	Red Wire Guard for mounting to flush mounted electrical box	8-1/2" x 6-1/8" x 3" (216 mm x 156 mm x 76 mm)
4905-9928*	Ceiling Mount Red Adapter Plate, required to mount guard to surface mounted electrical box	9" x 7" (229 mm x 178 mm)
4905-9915	White Surface Mount Adapter Box Extension, use to cover 1-1/2" deep surface mounted boxes	4-3/4" x 6-7/8" x 1-1/2" deep, (121 mm x 175 mm x 38 mm)
4905-9916		

* UL listed by Space Age Electronics Inc.

SmartSync Two-Wire Control

SmartSync operation mode allows a two-wire circuit to provide the ability to activate both the horn and strobe on the same NAC and then allow the horn to be silenced while the strobe remains flashing. The horn operates as "on-until-silenced" while the strobe operation is "on-until-reset."

SmartSync Control Sources

- **4006, 4008, 4100U, and 4010 Fire Alarm Control Panels** (refer to individual product data sheets for more information)
- **4009 IDNet NAC Extender** (refer to data sheet S4009-0002)
- **SmartSync Control Module (SCM)** 4905-9938 (refer to data sheet S4905-0003)

Additional SmartSync compatible notification appliances include separate horns and combination horn/strobe notification appliances.

A/V Specifications

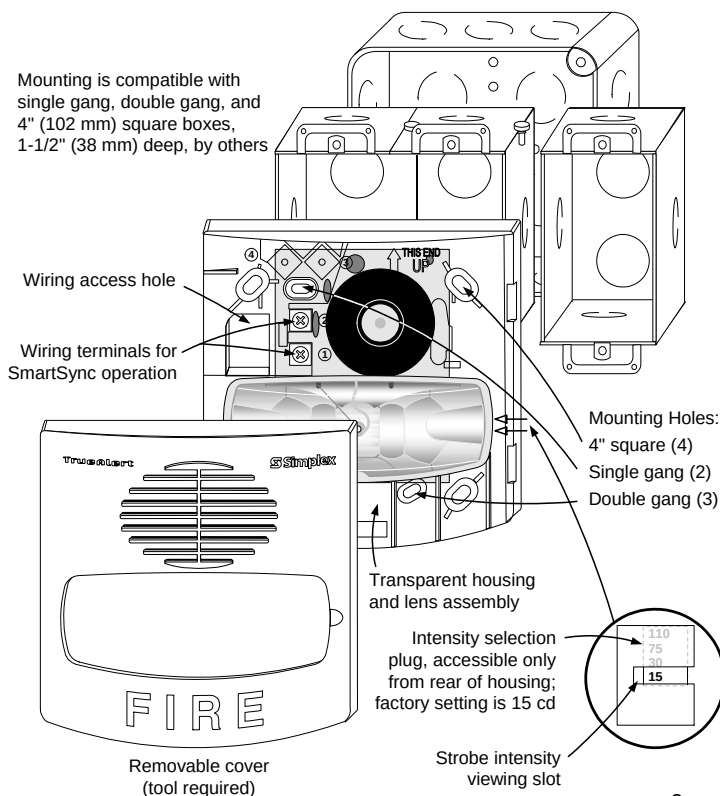
Wall Mount or Ceiling Mount, Common Specifications

Rated Voltage Range	UL Listed Rating	Regulated 24 DC; see Note 1 below					
	ULC Listed Rating	20 VDC to 30 VDC per ULC S526-M878					
Flash Rate and Synchronized NAC Loading		1 Hz; with up to 35 synchronized strobes maximum per NAC					
Environmental; Temperature and Humidity		32° to 122° F (0° to 50° C); 10% to 93%, non-condensing at 100° F (38° C)					
Connections		Terminal blocks for 18 AWG to 12 AWG (0.82 mm ² to 3.31 mm ²); two wires per terminal for in/out wiring					
Horn Output Characteristics		2400 to 3700 Hz sweep, modulated at 120 Hz rate					
Horn Output Ratings @ 10 ft (3 m) (see Note 2)	Voltage	16 VDC		24 VDC		33 VDC	
	Sound Type (see Note 2)	Steady	Coded	Steady	Coded	Steady	Coded
	UL 464 Reverberant Chamber	86 dBA	82 dBA	88 dBA	84 dBA	90 dBA	86 dBA
	Anechoic Chamber	92 dBA	91 dBA	94 dBA	95 dBA	96 dBA	96 dBA
Wall Mount	Housing Dimensions (with lens)	5-1/8" H x 5" W x 2-3/4" D (130 mm x 127 mm x 70 mm)					
	Maximum RMS Current Rating per Strobe Setting (see Note 3 below)	15 cd	30 cd	75 cd	110 cd		
		75 mA	116 mA	221 mA	285 mA		
	Reference RMS Currents at other voltages	18 VDC: 70 mA 24 VDC: 60 mA	101 mA 84 mA	184 mA 143 mA	243 mA 185 mA		
Ceiling Mount	Housing Dimensions (with lens)	4-3/4 L" x 6-7/8" W x 2-5/8" D (121 mm x 175 mm x 67 mm)					
	Maximum RMS Current Rating per Strobe Setting (see Note 3 below)	15 cd	30 cd	75 cd	110 cd		
		86 mA	132 mA	250 mA	320 mA		
	Reference RMS Currents at other voltages	18 VDC: 81 mA 24 VDC: 70 mA	119 mA 97 mA	216 mA 167 mA	283 mA 217 mA		

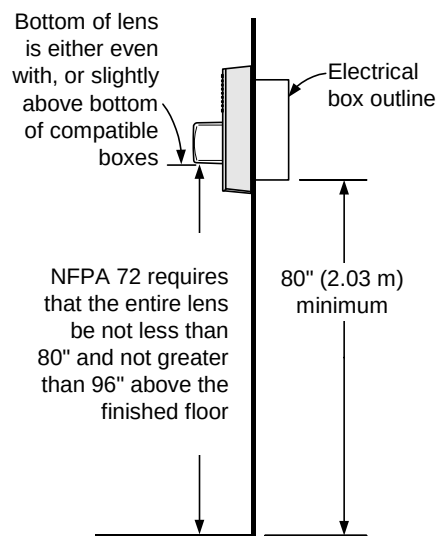
NOTES:

1. "Regulated 24 DC" refers to the voltage range of 16 to 33 VDC per UL Standard 1971, *Signaling Devices for the Hearing Impaired*, changes effective May 1, 2004. This voltage range is the absolute operating range. Operation outside of this range may cause permanent damage to the appliance. Please note that 16 VDC is the lowest operating voltage that is allowed at the last appliance on the NAC under worst case conditions.
2. Coded values are typical of the output measured with a Temporal coded or a March Time coded pulse and with a sound level meter reading on a "fast" setting. Under the same test conditions, coded horn output "peak" sound level readings are typically 4 dBA higher. Anechoic horn output ratings are typically more representative of actual installed sound output.
3. Currents are with horn on steady. The maximum RMS current listed is the device nameplate rating. Strobe designs are constant wattage and the maximum RMS current rating occurs at the lowest allowable operating voltage. (RMS is root mean square and refers to the effective value of a varying current waveform.)

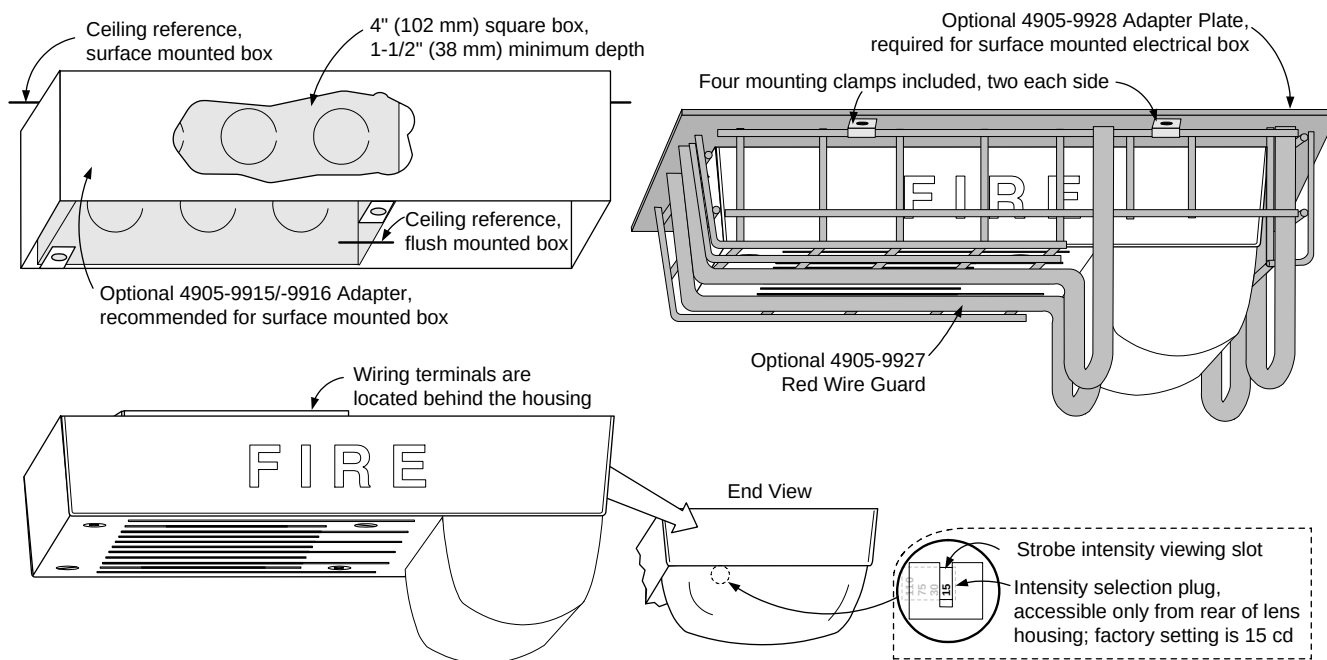
Installation Reference, Surface or Semi-Flush Mounting



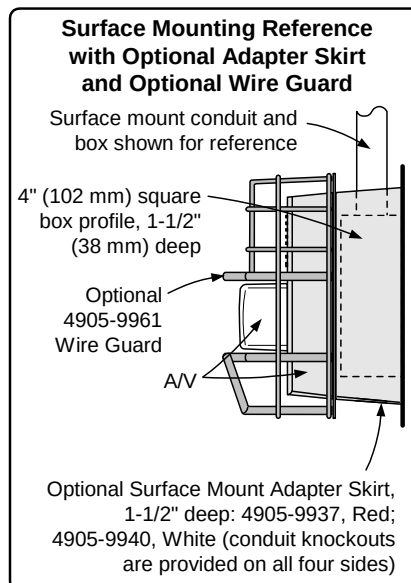
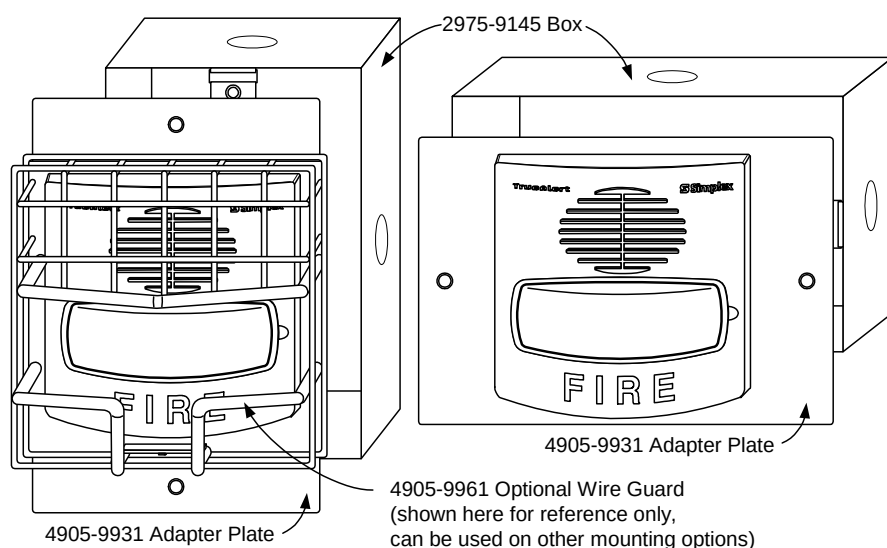
IMPORTANT! WALL MOUNT INSTALLATION HEIGHT REFERENCE



Ceiling Mount A/V and Guard Installation Reference



Wall Mount Installation Reference; Adapter Plate, Guard, and Adapter Skirt



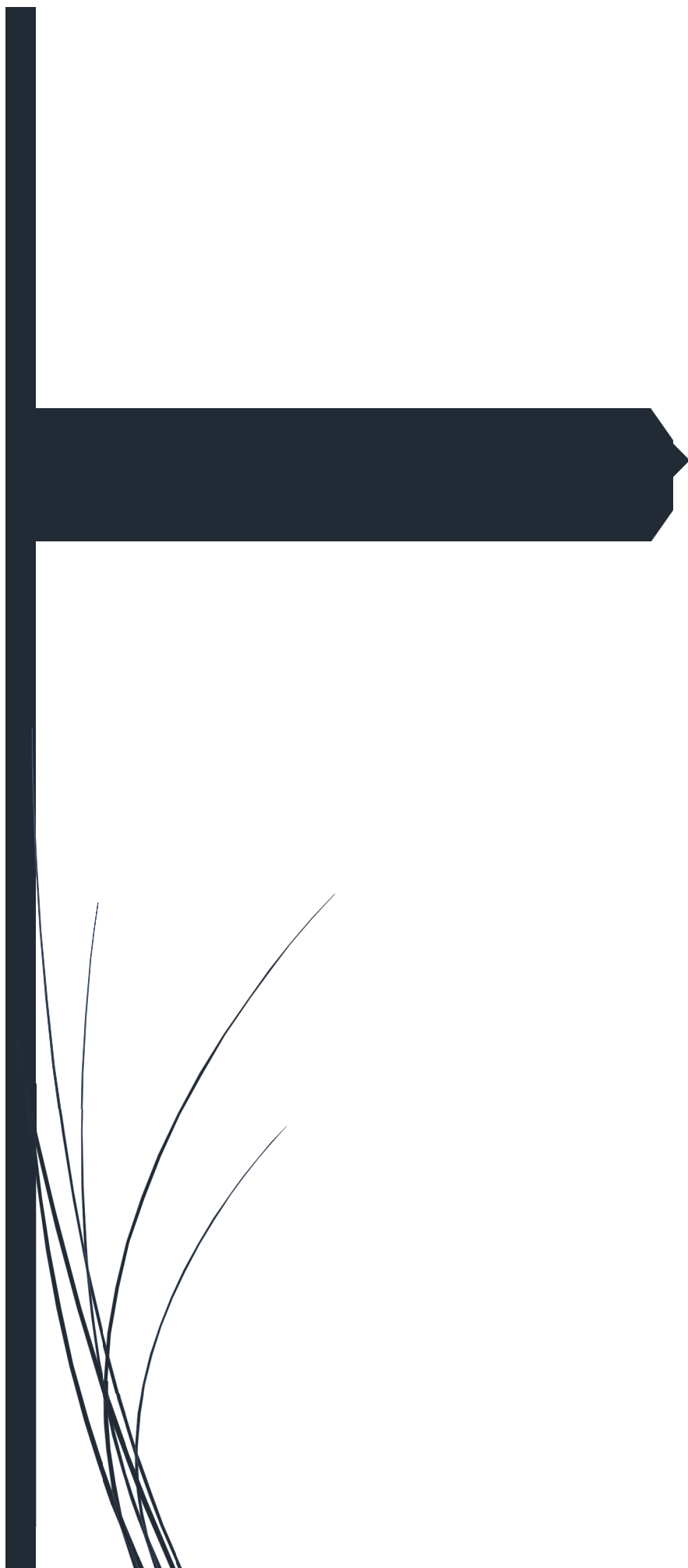
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TrueAlert® Multi-Candela Notification Appliances

UL, ULC, CSFM Listed;
FM Approved*

Weatherproof Notification Appliances (non-addressable)
Wall Mount Visible Only (V/O) and Audible/Visible (A/V)

Features

Weatherproof 24 VDC notification appliances for extended temperature and extended humidity operation:

- NEMA 3R rated enclosure with ratings for indoor or outdoor applications
- Rugged, high impact, flame retardant thermoplastic housings are available in red or white with clear lens
- Red housings are for indoor or outdoor applications and provide UV light stable color
- White housings are for indoor applications with limited UV light exposure
- Mounting is to matching weatherproof boxes (required), ordered separately
- Wiring terminals are accessible from the front of the housing providing easy access for installation, inspection, and testing

Agency listings reference:

- UL listed to Standard 1638 for outdoor applications with strobe rated at 75 cd (WP75)
- UL listed to Standard 1971 for indoor applications with strobe intensity selectable as 15, 60, or 75 candela; indoor applications are compatible with ADA requirements (refer to important installation information on page 4)
- Separate models are ULC listed to Standard S526 (strobes) and S525 (horns) for outdoor applications with strobe intensity selectable as 5, 20, or 30 candela (available in red only)

Operation details:

- A visible intensity selection jumper is secured behind the strobe housing
- Polarized input allows connection to compatible reverse polarity, supervised notification appliance circuit (NAC)
- Regulated circuit design ensures consistent flash output and provides controlled inrush current
- A/V appliances have an efficient electronic horn

Synchronized strobe compatibility:

- Simplex® fire alarm control panels and NAC Extenders when selected to provide strobe synchronization or SmartSync™ two-wire control**
- Separate strobe Synchronization Modules or SmartSync Control Modules (SCMs) that convert conventional NAC inputs to a Smartsync output

SmartSync two-wire operation provides:

- Horns controlled separately from strobes on the same two-wire circuit, activated as Temporal pattern, March Time pattern (at 60 BPM), or on continuously



Weatherproof A/V (top) and Strobe (middle), side view of A/V on Weatherproof Mounting Boxes (bottom)

Description

Weatherproof multi-candela TrueAlert appliances provide V/O and A/V SmartSync operation for indoor and outdoor, extended temperature and extended humidity applications. The enclosures are impact and vandal resistant and provide a convenient strobe intensity selection. Since each model can be selected for intensity output, on-site model inventory is minimized and changes encountered during construction can be easily accommodated.

Strobe Intensity Selection

During installation, a selection plug at the back of the housing determines the desired strobe intensity. An attached flag with black letters on a yellow background allows the selected intensity to be seen at the side of the strobe lens.

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7125-0026:331 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.

** Simplex multi-candela SmartSync two-wire horn/strobe appliance operation is protected under one or more of the following U.S. Patent Numbers: 5,559,492; 5,622,427; 5,865,527; 5,886,620; 6,281,789; 6,954,137; 7,005,971; and 7,006,003.

Strobe Application Reference

Proper selection of weatherproof notification is dependent on occupancy, location, local codes, and proper applications of: the *National Fire Alarm Code* (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA). Requirements may differ from indoor appliance applications, contact your local authority having jurisdiction (AHJ) to assist in determining requirements.

SmartSync Two-Wire Control

SmartSync operation mode allows a two-wire circuit to provide the ability to activate both the horn and strobe on the same NAC and then allow the horn to be silenced while the strobe remains flashing. The horn operates as “on-until-silenced” while the strobe operation is “on-until-reset.”

SmartSync Control Sources

SmartSync two-wire control is available from:

- 4006, 4008, 4100U, and 4010 Fire Alarm Control Panels (refer to individual product data sheets for more information)
- 4009 IDNet NAC Extenders (refer to data sheet S4009-0002)
- SmartSync Control Module (SCM) Model 4905-9938 (refer to data sheet S4905-0003)
- Additional SmartSync compatible notification appliances include separate horns and combination horn/strobe notification appliances.

Product Selection

UL Listed TrueAlert Weatherproof Multi-Candela Notification Appliances

Model	Type	Housing	“FIRE” Lettering	Description	UL 1971 Intensity Rating	UL 1638 Intensity Rating
4906-9105	Strobe (V/O)	Red	White	UL listed weatherproof appliance with multi-candela strobe; requires weatherproof box below	15, 60, or 75 cd	75 cd (setting WP75)
4906-9106		White	Red			
4906-9131	Horn/Strobe (A/V)	Red	White			
4906-9132		White	Red			

ULC Listed TrueAlert Weatherproof Multi-Candela Notification Appliances

Model	Type	Housing	“FIRE” Lettering	Description	ULC Intensity Ratings
4906-9113	Strobe (V/O)	Red	White	ULC listed weatherproof appliance with multi-candela strobe; requires weatherproof box below	5, 20, or 30 cd
4906-9143	Horn/Strobe (A/V)				

Wall Mount Weatherproof Boxes (Required)

Model	Description	Dimensions
4905-9828	Red	Surface Mount Weatherproof Mounting boxes 5-1/2" H x 6-1/8" W x 1-5/8" D (140 mm x 156 mm x 41 mm)
4905-9829	White	

Aftermarket Red Bilingual (French/English) Covers (for field installation)

Model	Description	
4905-9832	Red strobe (V/O) cover	White “FEU/FIRE” lettering
4905-9833	Red horn/strobe (A/V) cover	

Synchronization Module Reference (refer to data sheet S4905-0003 for additional information)

Model	Description	Dimensions
4905-9914	Class B	Synchronized Flash Module; epoxy encapsulated with in/out 18 AWG (0.82 mm ²) wire leads, rated for 2 A NAC, requires 10 mA for power 1-3/8" x 2-7/16" x 13/16" (35 mm x 62 mm x 20 mm)
4905-9922	Class A	
4905-9938	SmartSync Control Module with Class B or Class A output; mounts in 4" (102 mm) square box	4" x 4-1/8" x 1-1/4" D (102 mm x 105 mm x 32 mm)

Specifications

Rated Voltage Range		Regulated 24 VDC; see Note 1 below
Flash Rate		1 Hz; Up to 24 synchronized strobes maximum per NAC
Temperature Range	UL 1971 Listed Rating	32° to 122° F (0° to 50° C); selectable 15/30/75 cd
	UL 1638 Listed Rating	-31°F to 150°F (-35° C to 66°C); 75 cd rating
	ULC S526 & S525 Listed Rating	-40°F to 150°F (-40° C to 66°C); 5/20/30 cd rating
Humidity Range	UL 1971 Listed Rating	10% to 93%, at 100° F (38° C)
	UL 1638, ULC S526, & ULC S525	up to 98%, at 104 °F (40° C)
Wiring Connections		Terminal blocks for 18 AWG to 12 AWG (0.82 mm ² to 3.31 mm ²); two wires per terminal for in/out wiring

Horn Output; Models 4906-9131, 4906-9132, & 4906-9143; UL & ULC Ratings as noted

Output Sound Characteristics	2400 to 3700 Hz sweep, modulated at 120 Hz rate						
Horn Output Ratings @ 10 ft (3 m) (see Note 2)	Voltage	16 VDC		24 VDC		33 VDC	
	Sound Type (see Note 2)	Steady	Coded	Steady	Coded	Steady	Coded
	UL 464 Reverberant Chamber	80 dBA	76 dBA	83 dBA	79 dBA	86 dBA	81 dBA
	ULC S525 Anechoic Chamber	96 dBA	96 dBA	99 dBA	99 dBA	101 dBA	101 dBA

Maximum RMS Current Ratings (see Note 3 below)

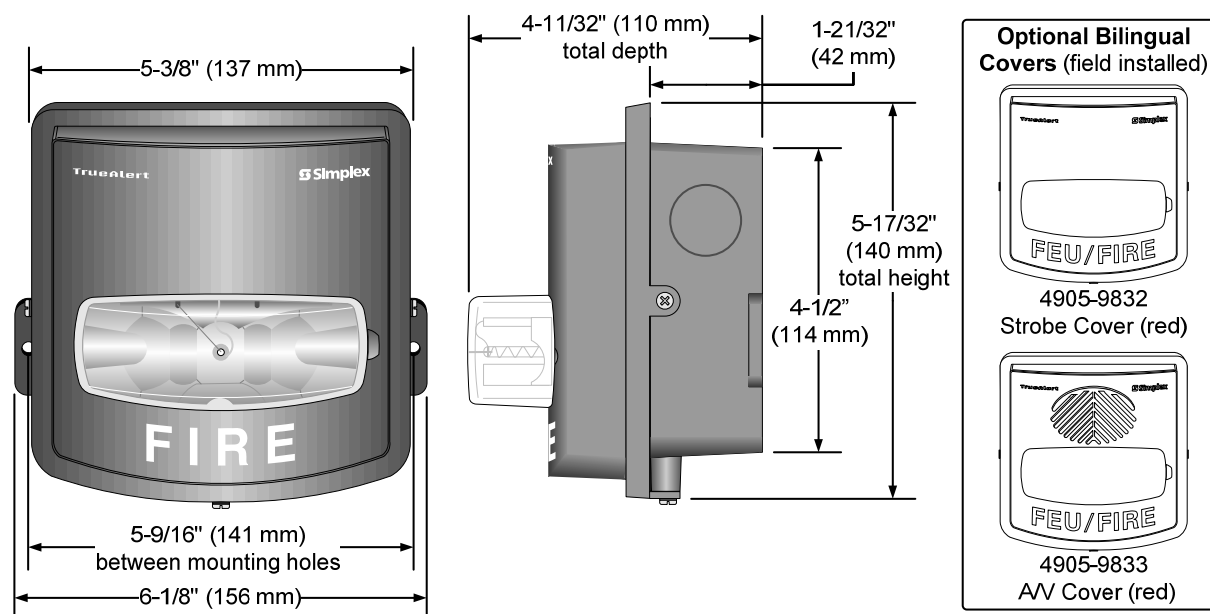
Model	Intensity Selection/Temperature	UL 1971 Ratings (32° F to 122° F)			UL 1638 Ratings 75 cd (WP75)	
		15 cd	60 cd	75 cd	32° F to 150°F (0° C to 66°C)	-31° F to below 32°F (-35° C to 0° C)
V/O Models 4906-9105 & 4906-9106		77 mA	192 mA	231 mA	189 mA	273 mA
A/V Models 4906-9131 & 4906-9132		91 mA	204 mA	249 mA	205 mA	277 mA

Model	ULC S526/S525 Ratings per Intensity Selection		
	5 cd	20 cd	30 cd
V/O Model 4906-9113	115 mA	270 mA	295 mA
A/V Model 4906-9143	125 mA	275 mA	322 mA

NOTES:

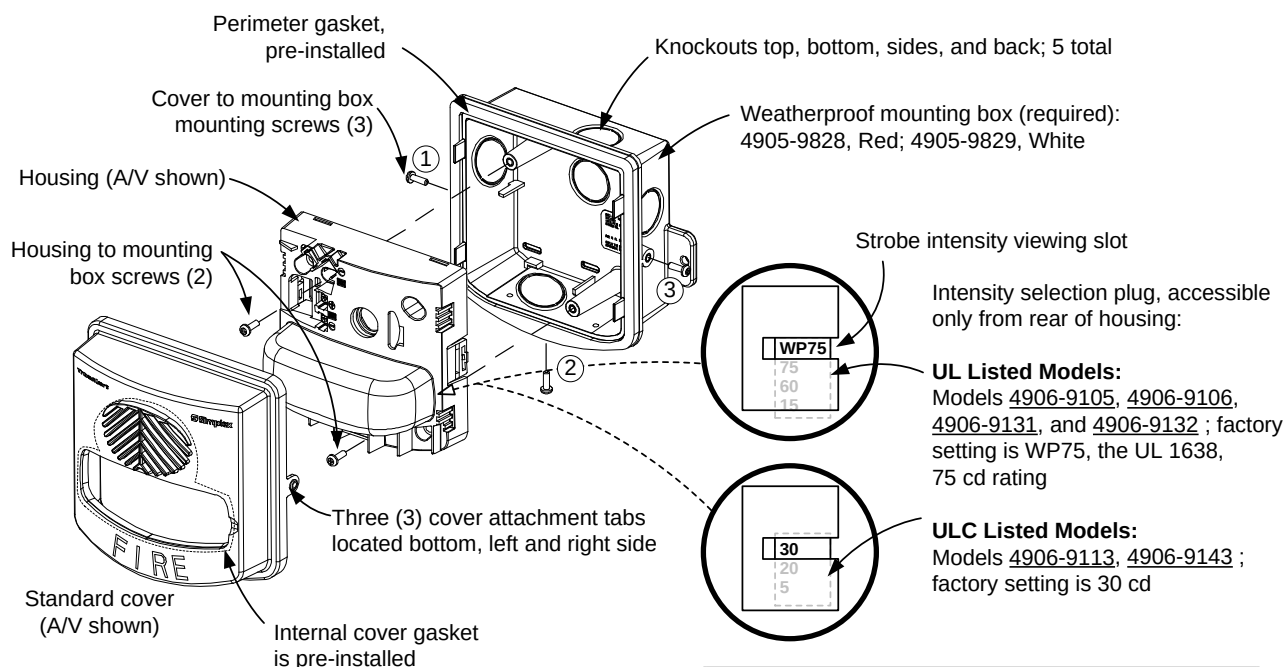
1. "Regulated 24 VDC" refers to the voltage range of 16 to 33 VDC per UL 1971 and UL 1638. This voltage range is the absolute operating range. Operation outside of this range may cause permanent damage to the strobe. Please note that 16 VDC is the lowest operating voltage that is allowed at the last appliance on the NAC under worst case conditions.
2. Coded values are typical of the output measured with a Temporal coded or a March Time coded pulse and with a sound level meter reading on a "fast" setting. Under the same test conditions, coded horn output "peak" sound level readings are typically 4 dBA higher. Anechoic horn output ratings are typically more representative of actual installed sound output
3. Currents of A/Vs are with horn on steady. The maximum RMS current listed is the device nameplate rating. Strobe designs are constant wattage and the maximum RMS current rating occurs at the lowest allowable operating voltage. (RMS is root mean square and refers to the effective value of a varying current waveform.)

Dimension and Optional Cover Reference

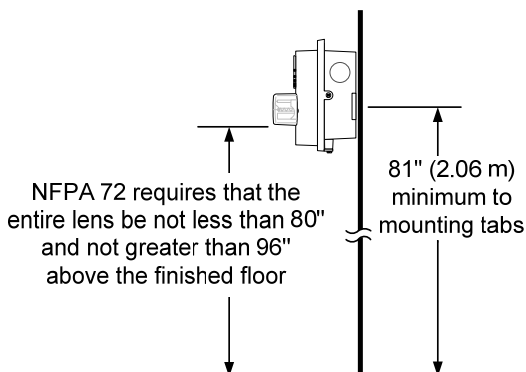


Weatherproof Appliance Installation Reference

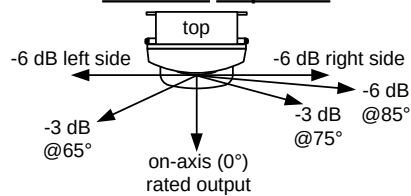
NOTE: For detailed installation information, refer to Installation Instructions 579-857 for UL listed products, and Installation Instructions 579-885 for ULC listed products.



IMPORTANT! INDOOR WALL MOUNT INSTALLATION HEIGHT REFERENCE

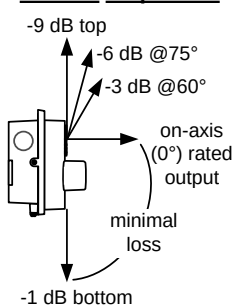


Horizontal Dispersion



A/V Sound Dispersion per ULC S525
(anechoic testing performed at 3 m (10 ft))

Vertical Dispersion



**Polar Light Dispersion Reference, Each Intensity Selection;
Percent of Rated Light Output at 77° F (25° C)**

Vertical Dispersion			Horizontal Dispersion		
Angle Below Axis	UL 1971 Minimum	Typical Output	Angle from Axis	UL 1971 Minimum	Typical Output
0	100%	322%	0	100%	320%
5	90%	217%	±5	90%	214%
10	90%	168%	±10	90%	177%
15	90%	179%	±15	90%	175%
20	90%	210%	±20	90%	174%
25	90%	184%	±25	90%	170%
30	90%	149%	±30	75%	169%
35	65%	172%	±35	75%	157%
40	46%	189%	±40	75%	151%
45	34%	203%	±45	75%	138%
50	27%	152%	±50	55%	130%
55	22%	166%	±55	45%	121%
60	18%	166%	±60	40%	117%
65	16%	164%	±65	35%	109%
70	15%	163%	±70	35%	105%
75	13%	159%	±75	30%	98%
80	12%	138%	±80	30%	90%
85	12%	113%	±85	25%	78%
90	12%	88%	±90	25%	67%

WP75 Intensity Selection Light Output Reference

Angle	On-Axis 0°	Vertical, Below Axis		Horizontal, Left/Right of Axis	
		45°	90°	45°	90°
UL 1638 Minimum Candela Rating (over temperature range)	75	35	10	32	15
Typical Candela at 77° F (25° C)	215	103	24	94	39

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TrueAlert® Multi-Candela Notification Appliances

UL, ULC, CSFM Listed; FM Approved;
MEA (NYC) Acceptance*

Visible Notification Appliances with Synchronized Flash;
Non-Addressable, SmartSync™ Operation Compatible

Features

Visible only (V/O) 24 VDC notification appliances with high output xenon strobe, available for wall or ceiling mount:

- UL listed to Standard 1971
- Intensity is selectable as 15, 30, 75, or 110 candela with visible selection jumper secured behind strobe housing
- Operation is compatible with ADA requirements (refer to important installation information on page 3)
- Polarized input allows connection to compatible reverse polarity, supervised notification appliance circuit (NAC)
- Regulated circuit design ensures consistent flash output and provides controlled inrush current
- Rugged, high impact, flame retardant thermoplastic housings are available in red or white with clear lens

Strobes provide synchronized flash for use with:

- 4006, 4008, 4010, and 4100U Series fire alarm control panels with NACs selected to provide strobe synchronization or SmartSync two-wire control**
- 4009 IDNet™ NAC Extenders
- Separate strobe Synchronization Modules that are available for Class B or Class A operation
- Separate SmartSync Control Modules (SCMs) that provide Class B or Class A output from conventional NAC inputs

Strobe housings provides flexible, easy, and convenient semi-flush or surface wall mounting:

- Rear of housing does not extend into box
- Wall mount strobes easily mount to single gang, double gang, or 4-inch square outlet box
- Ceiling mount strobes mount to single gang boxes

Wall mount strobe features:

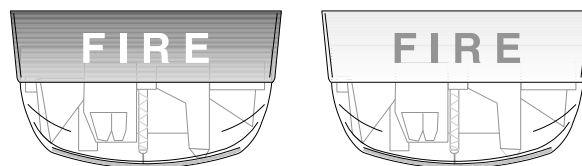
- Wiring terminals are accessible from the front of the housing providing easy access for installation, inspection, and testing
- Covers are available separately to convert housing color

Optional adapters and wire guards:

- Wall mount strobe adapters are available to cover surface mounted electrical boxes and to adapt to Simplex® 2975-9145 boxes
- UL listed red wire guards are available for wall or ceiling mount strobes



Wall Mount Strobes



Ceiling Mount Strobes

Description

Multi-Candela TrueAlert synchronized strobes

provide convenient installation to standard electrical boxes. The enclosure designs are both impact and vandal resistant and provide a convenient strobe intensity selection. Since each model can be selected for intensity output, on-site model inventory is minimized and changes encountered during construction can be easily accommodated.

Wall mount strobe housings are a one-piece assembly (including lens) that mounts to a single or double gang, or 4" square standard electrical box. The cover can be quickly removed (a tool is required) and covers are available separately for color conversion.

Ceiling mount strobes install using standard single gang electrical boxes. Color choice is determined by model number.

Strobe Intensity Selection

During installation, a selection plug at the back of the housing determines the desired strobe intensity. An attached flag with black letters on a highly visible yellow background allows the selected intensity to be seen at the side of the strobe lens.

Strobe Application Reference

Proper selection of visible notification is dependent on occupancy, location, local codes, and proper applications of: the *National Fire Alarm Code* (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA).

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7125-0026:316 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Refer to page 2 for listing status of wire guards. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.

** Simplex multi-candela SmartSync two-wire horn/strobe appliance operation is protected under one or more of the following U.S. Patent Numbers: 5,559,492; 5,622,427; 5,865,527; 5,886,620; 6,281,789; 6,954,137; 7,005,971; and 7,006,003.

Synchronized Strobes

Multiple Strobes. When multiple strobes and their reflections can be seen from one location, synchronized flashes reduce the probability of photo-sensitive reactions as well as the annoyance and possible distraction of random flashing. These multi-candela strobes are synchronized over a two-wire circuit when connected to compatible NACs, to compatible Synchronized Flash Modules, or to SmartSync Control Modules.

SmartSync Two-Wire Control

Some applications desire the audible notification appliances to be capable of being silenced before the alarm condition is reset (on-until-silenced) while the visible notification appliances are kept activated until the alarm condition is reset (on-until-reset). SmartSync operation mode provides this function using a single circuit (two-wire operation).

SmartSync Control Sources

Class B SmartSync two-wire control is available from:

- **4006, 4008, 4100U, and 4010 Fire Alarm Control Panels** (refer to individual product data sheets for more information)
- **4009 IDNet NAC Extender** (refer to data sheet S4009-0002)
- **SmartSync Control Module (SCM)** 4905-9938 (refer to data sheet S4905-0003)

Class A SmartSync two-wire control is available from 4100U NACs and from the 4905-9938 SCM.

Additional SmartSync compatible notification appliances include separate horns and combination horn/strobe notification appliances.

Product Selection

Multi-Candela Visible Notification Appliances (Strobes)

Model	Mounting	Housing Color	"FIRE" Lettering	Description
4906-9101	Wall	Red	White	Multi-candela strobe with intensity selectable as: 15, 30, 75, or 110 candela; synchronized flash rate; SmartSync two-wire control compatible
4906-9103		White	Red	
4906-9102	Ceiling	Red	White	
4906-9104		White	Red	

Wall Mount Strobe Adapters

Model	Description		Dimensions
4905-9937	Red	Surface Mount Adapter Skirt; use to cover 1-1/2" (38 mm) deep surface mounted boxes	5-3/8" H x 5-1/4" W x 1-5/8" D (136 mm x 133 mm x 41 mm)
4905-9940	White		Total depth with strobe = 4-3/8" (111 mm)
4905-9931	Red Adapter Plate for mounting to Simplex 2975-9145 box (typically for retrofit, may be mounted vertical or horizontal)		8-5/16" x 5-3/4" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)
2975-9145	Red Mounting Box, requires Adapter Plate 4905-9931		7-7/8" x 5-1/8" x 2-3/4" D (200 mm x 130 mm x 70 mm)

Ceiling Mount Strobe Adapter

Model	Description	Dimensions
4905-9910	Surface Mount Adapter Plate; zinc plated; required for mounting to handy box; not needed when using 4905-9926 guard	4-7/8" x 3-1/8" x 0.060" D (124 mm x 79 mm x 1.5)

Synchronization Modules (refer to data sheet S4905-0003 for additional information)

Model	Description		Dimensions
4905-9914	Class B	Synchronized Flash Module; epoxy encapsulated with in/out 18 AWG (0.82 mm ²) wire leads, rated for 2 A NAC, requires 10 mA for power	1-3/8" x 2-7/16" x 13/16" (35 mm x 62 mm x 20 mm)
4905-9922	Class A		
4905-9938	SmartSync Control Module with Class B or Class A output; mounts in 4" (102 mm) square box		4" x 4-1/8" x 1-1/4" D (102 mm x 105 mm x 32 mm)

Replacement Covers and Guards

Model	Description		Dimensions
4905-9992	Red cover with white "FIRE" lettering	For Wall mount strobes	5-1/8" H x 5" W x 1-1/2" D (130 mm x 127 mm x 38 mm)
4905-9993	White cover with red "FIRE" lettering		
4905-9961*	Wall mount	Red wire guard with mounting plate, compatible with semi-flush or surface mounted boxes	6-1/16" H x 6-1/16" W x 3-1/8" D (154 mm x 154 mm x 79 mm)
4905-9926*	Ceiling mount		6-1/8" x 4-3/8" x 2-7/8" deep (156 mm x 111 mm x 73 mm)

* UL listed by Space Age Electronics Inc.

Strobe Specifications

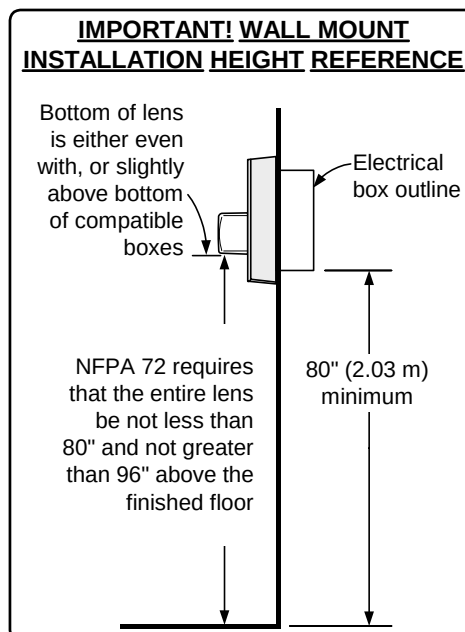
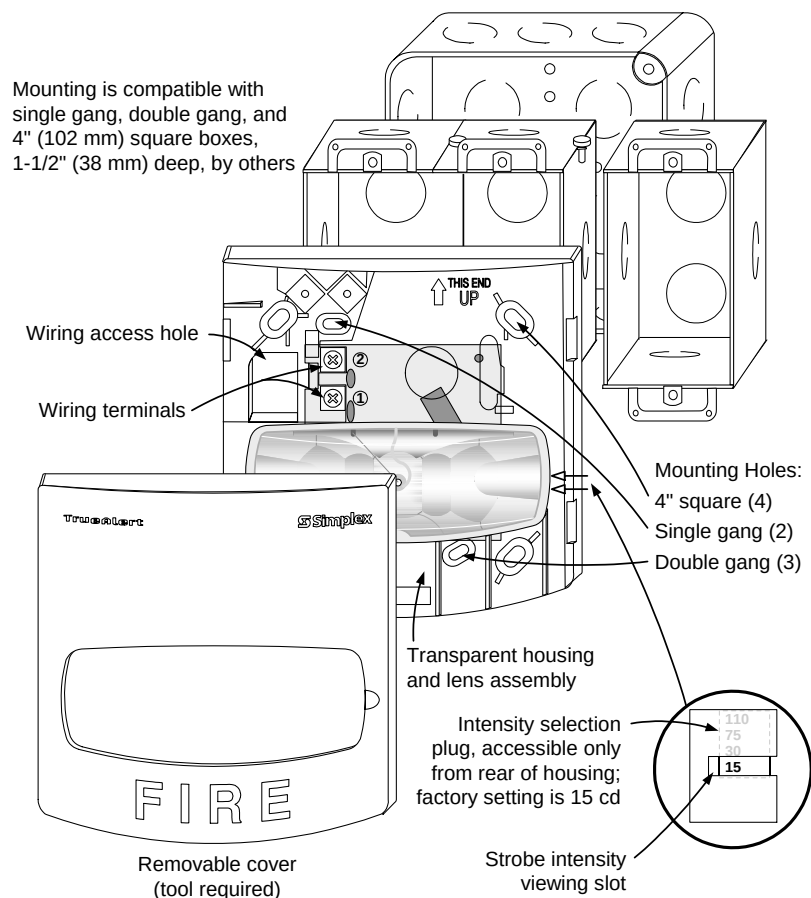
Wall Mount or Ceiling Mount, Common Specifications

Rated Voltage Range		UL Listed Rating	Regulated 24 VDC; see Note 1 below			
		ULC Listed Rating	20 VDC to 30 VDC per ULC S526-M878			
Flash Rate		1 Hz				
Synchronized NAC Loading		Up to 35 synchronized strobes maximum per NAC				
Temperature Range		32° to 122° F (0° to 50° C)				
Humidity Range		10% to 93%, non-condensing at 100° F (38° C)				
Connections		Terminal blocks for 18 AWG to 12 AWG (0.82 mm ² to 3.31 mm ²); two wires per terminal for in/out wiring				
Wall Mount	Housing Dimensions (with lens)		5-1/8" H x 5" W x 2-3/4" D (130 mm x 127 mm x 70 mm)			
	Maximum RMS Current Rating per Strobe Setting (see Note 2 below)		15 cd	30 cd	75 cd	110 cd
			60 mA	94 mA	186 mA	252 mA
	Reference RMS Currents at other voltages	18 VDC	55 mA	85 mA	169 mA	226 mA
		24 VDC	41 mA	63 mA	123 mA	164 mA
Ceiling Mount	Housing Dimensions (with lens)		4-3/4" L x 2-5/16" W x 2-5/8" D (121 mm x 75 mm x 67 mm)			
	Maximum RMS Current Rating per Strobe Setting (see Note 2 below)		15 cd	30 cd	75 cd	110 cd
			75 mA	125 mA	233 mA	316 mA
	Reference RMS Currents at other voltages	18 VDC	64 mA	102 mA	199 mA	266 mA
		24 VDC	49 mA	76 mA	146 mA	195 mA

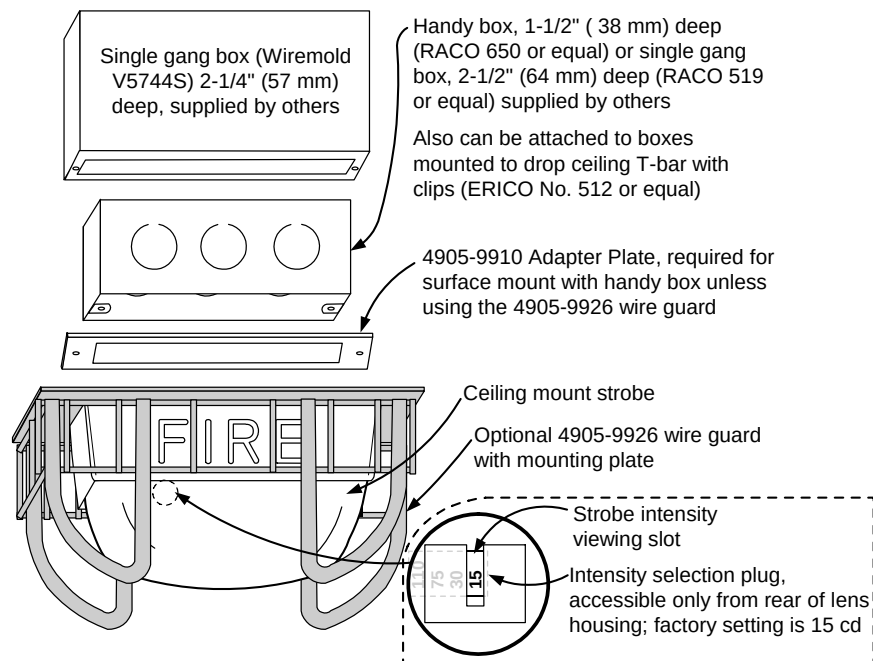
NOTES:

1. "Regulated 24 VDC" refers to the voltage range of 16 to 33 VDC per UL Standard 1971, *Signaling Devices for the Hearing Impaired*, changes effective May 1, 2004. This voltage range is the absolute operating range. Operation outside of this range may cause permanent damage to the strobe. Please note that 16 VDC is the lowest operating voltage that is allowed at the last appliance on the NAC under worst case conditions.
2. The maximum RMS current listed is the device nameplate rating. Strobe designs are constant wattage and the maximum RMS current rating occurs at the lowest allowable operating voltage. (RMS is root mean square and refers to the effective value of a varying current waveform.)

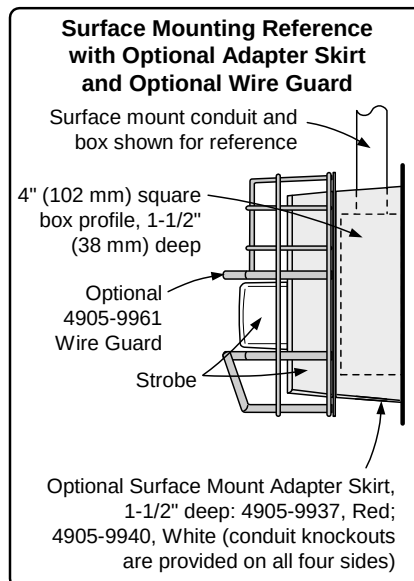
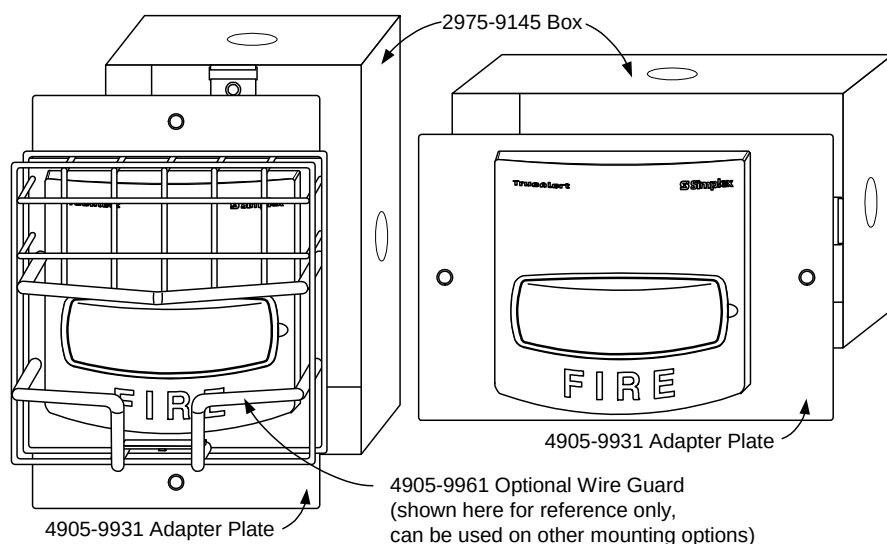
Installation Reference, Surface or Semi-Flush Wall Mounting



Ceiling Mount Strobe Installation Reference



Wall Mount Installation Reference; Adapter Plate, Guard, and Adapter Skirt



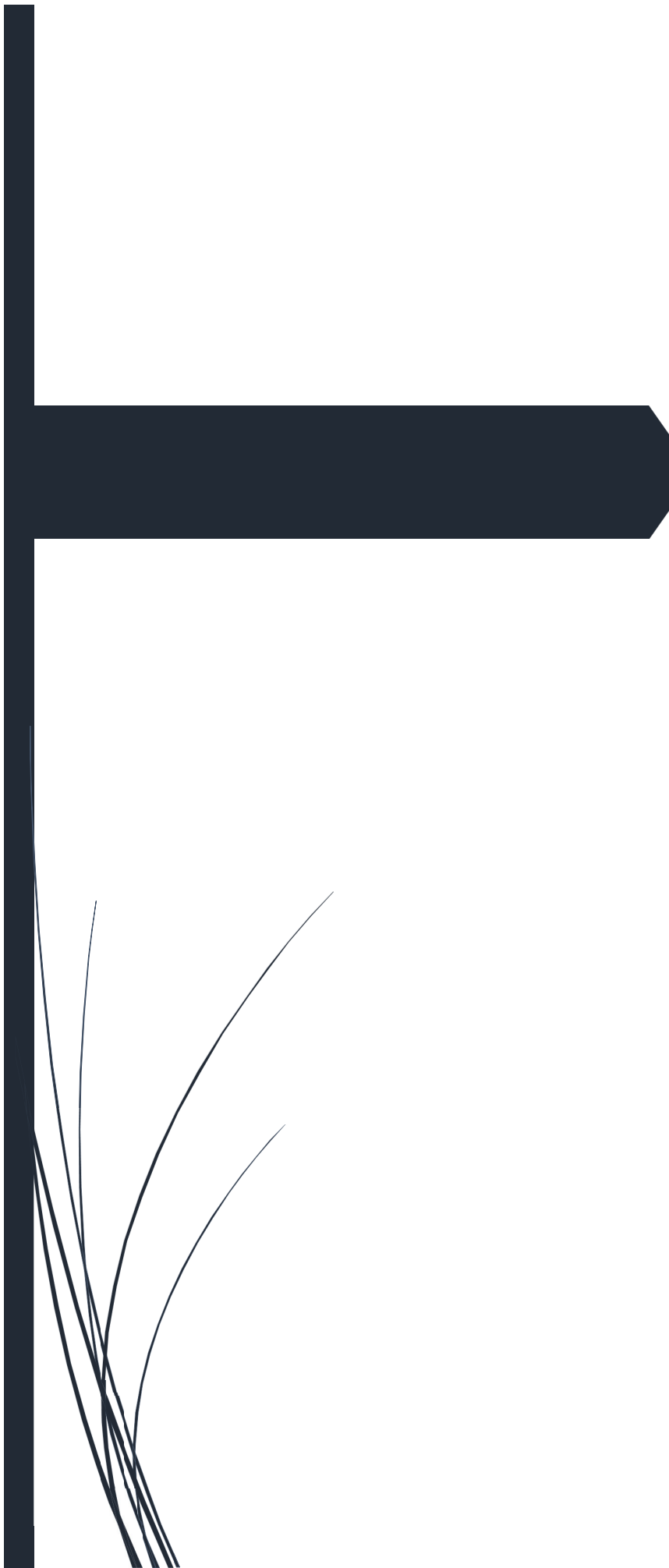
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Features

Individually addressable manual fire alarm stations with:

- Power and data supplied by IDNet or MAPNET II addressable communications using a single wire pair
- Operation that complies with ADA requirements
- Visible LED indicator that flashes during communications and is on steady when the station has been activated
- The NO GRIP Single Action Station and Retrofit Kit are available with a more easily operated pull lever for applications where anticipated users may find the standard station lever difficult to activate
- Pull lever that protrudes when alarmed
- Break-rod supplied (use is optional)
- Models are available with single or double action (breakglass or push) operation
- UL listed to Standard 38
- NEMA 1 rated. See [Addressable manual station product selection](#) for more information.

Compatible with the following Simplex control panels:

- Model Series 4007ES, 4008, 4010, 4010ES, 4100ES, 4100U, 4020, 4100, and 4120 fire alarm control panels equipped with either IDNet or MAPNET II communications
- Model Series 2120 Communicating Device Transponders (CDTs) equipped with MAPNET II communications

Compact construction:

- Electronics module enclosure minimizes dust infiltration
- Allows mounting in standard electrical boxes
- Screw terminals for wiring connections

Tamper resistant reset key lock, keyed same as Simplex fire alarm cabinets.

Multiple mounting options:

- Surface or semi-flush with standard boxes or matching Simplex boxes
- Flush mount adapter kit
- Adapters are available for retrofitting to commonly available existing boxes

Description

The Simplex addressable manual station combines the familiar Simplex manual station housing with a compact communication module that is easily installed to satisfy demanding applications. Its integral individual addressable module (IAM) constantly monitors status and communicates changes to the connected control panel through IDNet or MAPNET II communications wiring.

Operation

Activation of the 4099-9004 single action manual station requires a firm downward pull to activate the alarm switch. Completing the action breaks an internal plastic break-rod which is visible below the pull lever, use is optional. The use of a break-rod can be a deterrent to vandalism without interfering with the minimum pull requirements needed for easy activation. The pull lever latches into the alarm position and remains extended out of the housing to provide a visible indication.

Single Action NO GRIP Station 4099-9021. For applications such as California Building Code, Title 24, which requires "Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist" the model 4099-9021 station provides a more easily operated pull lever compared to standard stations. Retrofit of existing stations is available using the 4099-9805 Retrofit kit.

Double Action Stations (Breakglass) require the operator to strike the front mounted hammer to break the glass and expose the recessed pull lever. The pull lever then operates as a single action station.



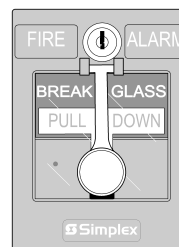
4099-9004
Single action



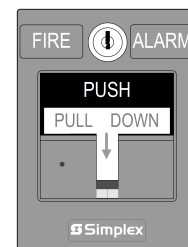
4099-9021 NO
GRIP Single action



4099-9805 NO
GRIP Retrofit kit



4099-9005 Breakglass



4099-9006 Push



With 2099-9828
Institutional Cover kit

Double Action Stations (Push Type) require that a spring loaded interference plate, marked PUSH, be pushed back to access the pull lever of the single action station.

Station reset requires the use of a key to reset the manual station lever and deactivate the alarm switch. If you use the break-rod, you must replace it.

Station testing is performed by physical activation of the pull lever. You can also perform electrical testing by unlocking the station housing to activate the alarm switch.

Specifications

Refer to 4099 MAPNET II/ IDNet Addressable Manual Pull Station with LED Installation Instructions 579-1135 for additional information.

Table 1: Specifications

Specification	Rating
Power and communications	IDNet or MAPNET II communications, 1 address for each station
Address means	DIP switch, 8 position
Wire connections	Screw terminal for in/out wiring, for 18 AWG to 14 AWG wire (0.82 mm ² to 2.08 mm ²)
UL listed temperature range	32°F to 120°F (0°C to 49°C) intended for indoor operation
Humidity range	Up to 93% RH at 100°F (38°C)
Housing color	Red with white raised lettering
Material	Housing and pull lever are Lexan polycarbonate or equal
Pull lever color	White with red raised lettering
Housing dimensions	5 in. H x 3 3/4 in. W x 1 in. D (127 mm x 95 mm x 25 mm)

Addressable manual station semi-flush mounting

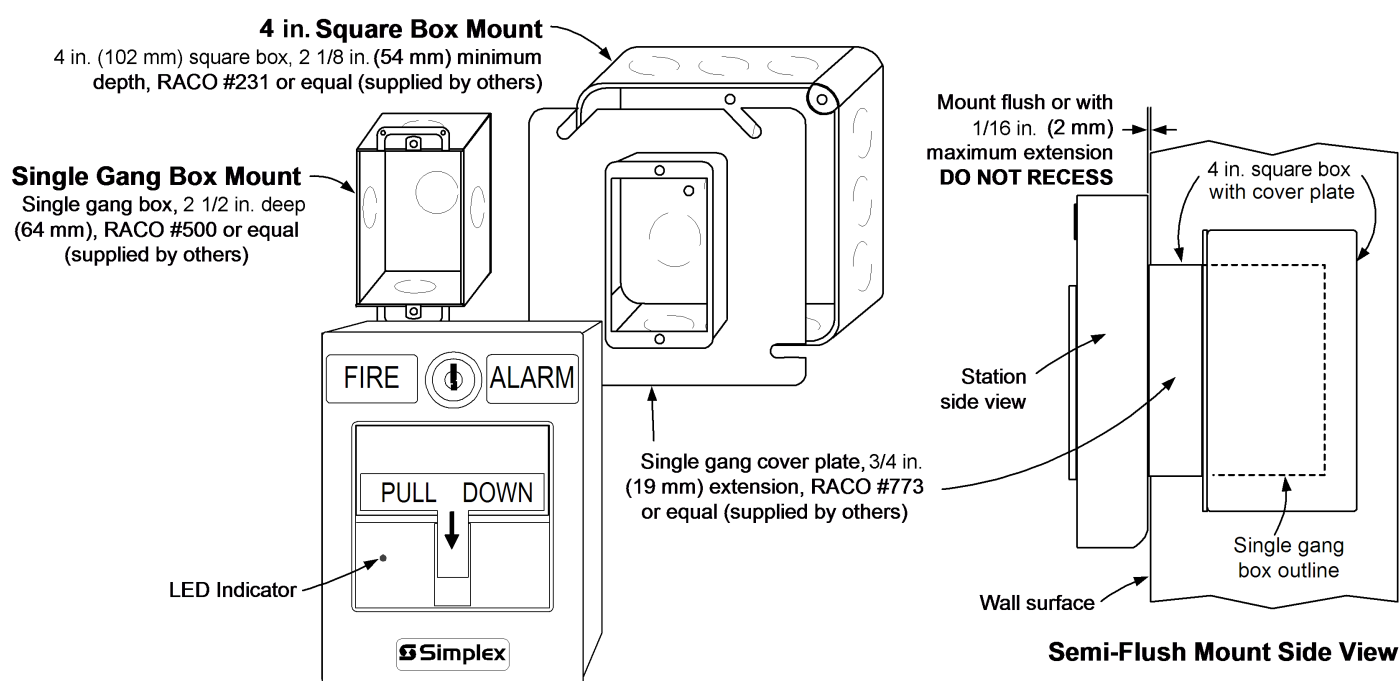


Figure 1: Addressable manual station semi-flush mounting

Addressable manual stations surface mounting

Preferred mounting. For surface mounting of these addressable manual stations, the preferred electrical boxes are shown in Figure 2.

Additional mounting reference. See [Addressable manual station, additional mounting information](#) for Wiremold box mounting compatibility.

Figure 2 shows the 2975-9178 box and the 2975-9022 cast box.

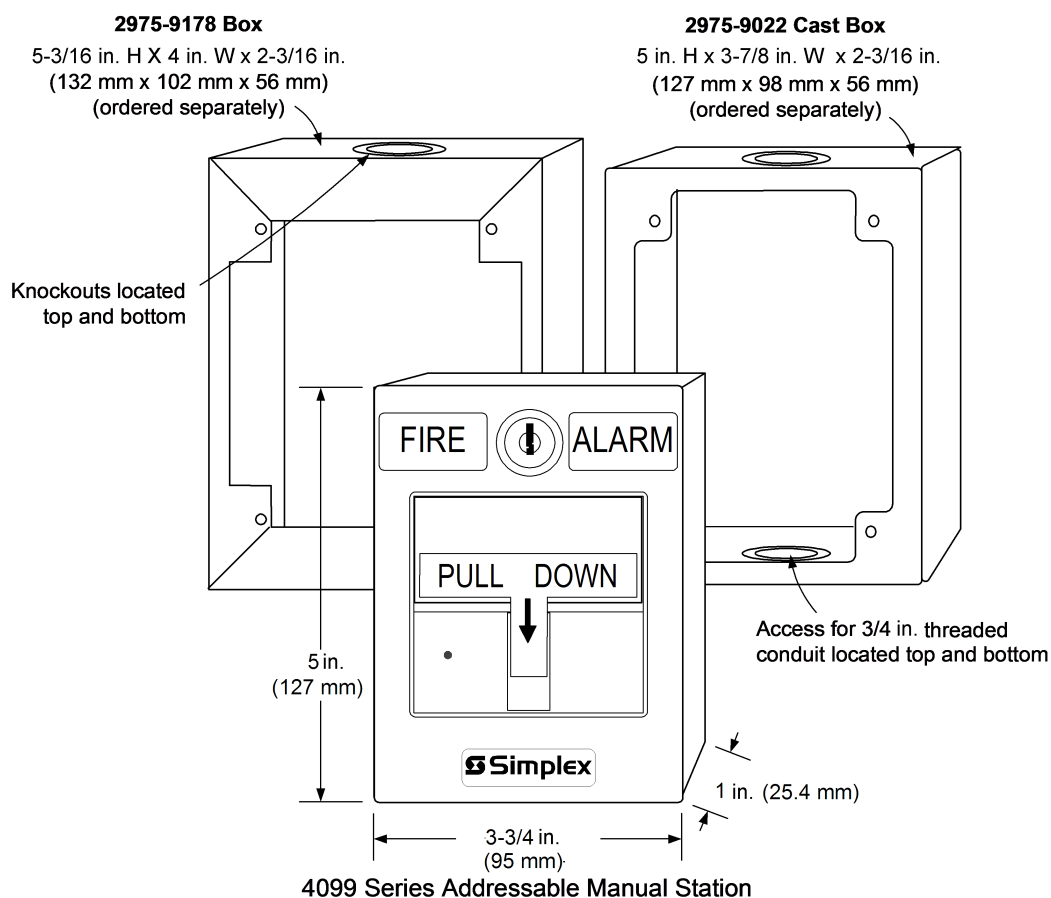


Figure 2: 4099 Series addressable manual station

Surface mount side view with internal detail

Figure 3 shows the 2975-9178 box.

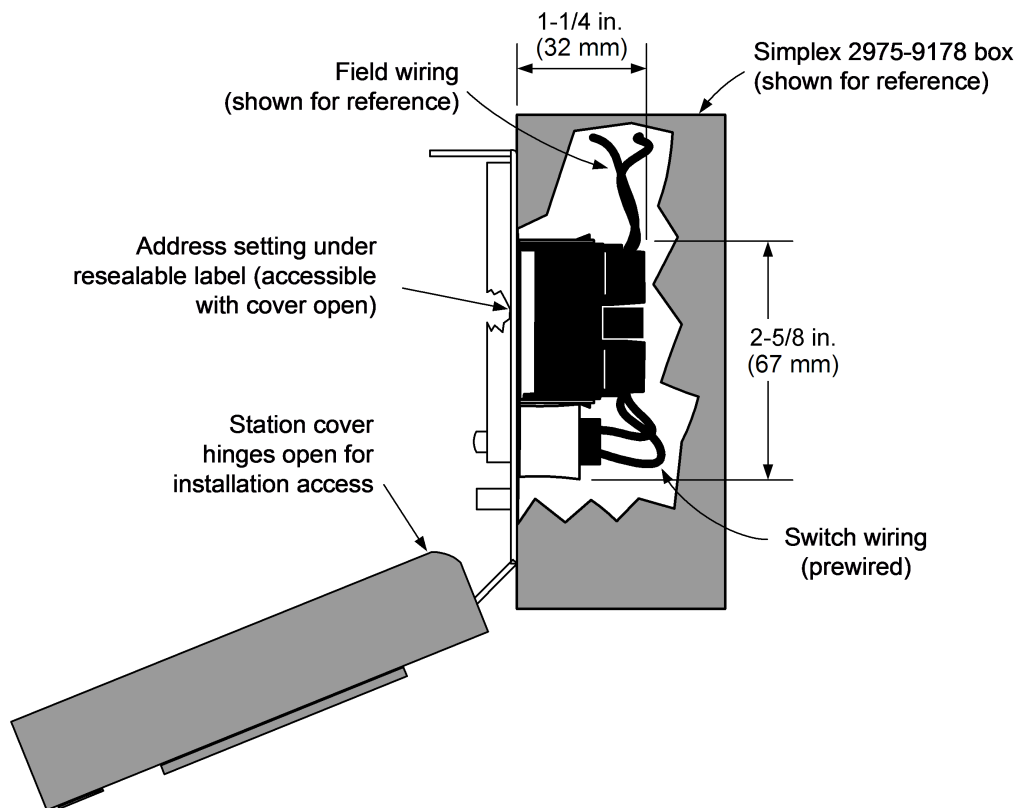


Figure 3: Surface mount side view with internal detail

Application reference

Refer to NFPA 72, the *National Fire Alarm and Signaling Code*, and all applicable local codes for complete requirements for manual stations. The following summarizes the basic requirements:

1. Stations shall be located in the normal path of exit and distributed in the protected area such that they are unobstructed and readily accessible.
2. Mounting shall be with the operable part not less than 42 in. (1.07 m) and not more than 48 in. (1.22 m) above floor level.
3. At least one station shall be provided on each floor. Additional stations shall be provided to obtain a travel distance not more than 200 ft (61 m) to the nearest station from any point in the building.
4. When manual station coverage appears limited in any way, additional stations should be installed.

Addressable manual station, additional mounting information

For retrofit and new installations, additional compatible mounting boxes and the required adapter plates are shown in Figure 4. Figure 4 shows the 2099-9814 surface trim for Wiremold boxes and the 2099-9813 semi-flush trim for 2 gang switch boxes.

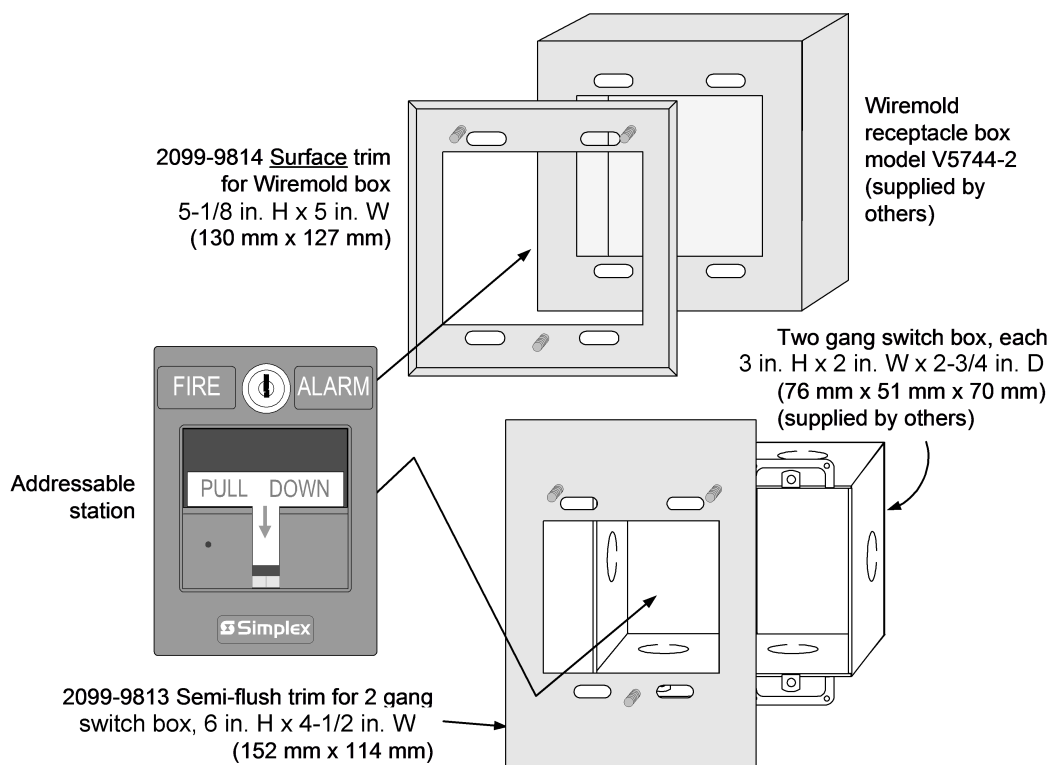


Figure 4: Addressable manual station, additional mounting information

Addressable manual station, flush mounting information

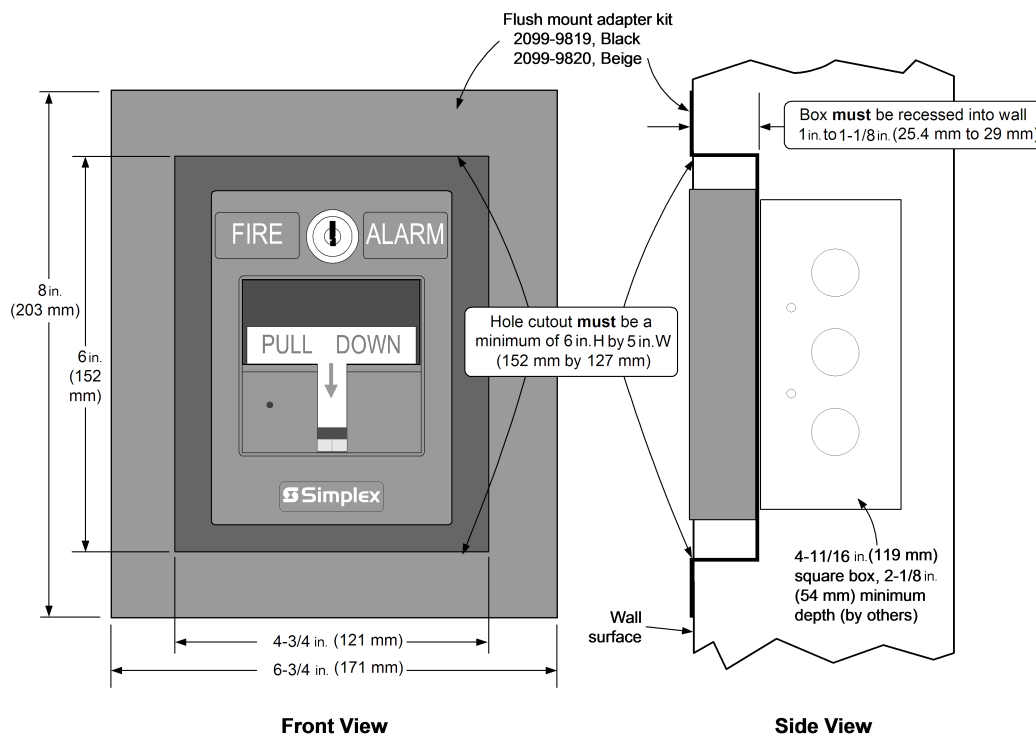


Figure 5: Addressable manual station, flush mounting information

The flush mount adapter kit is available in beige (2099-9820) or black (2099-9819).

Addressable manual station product selection

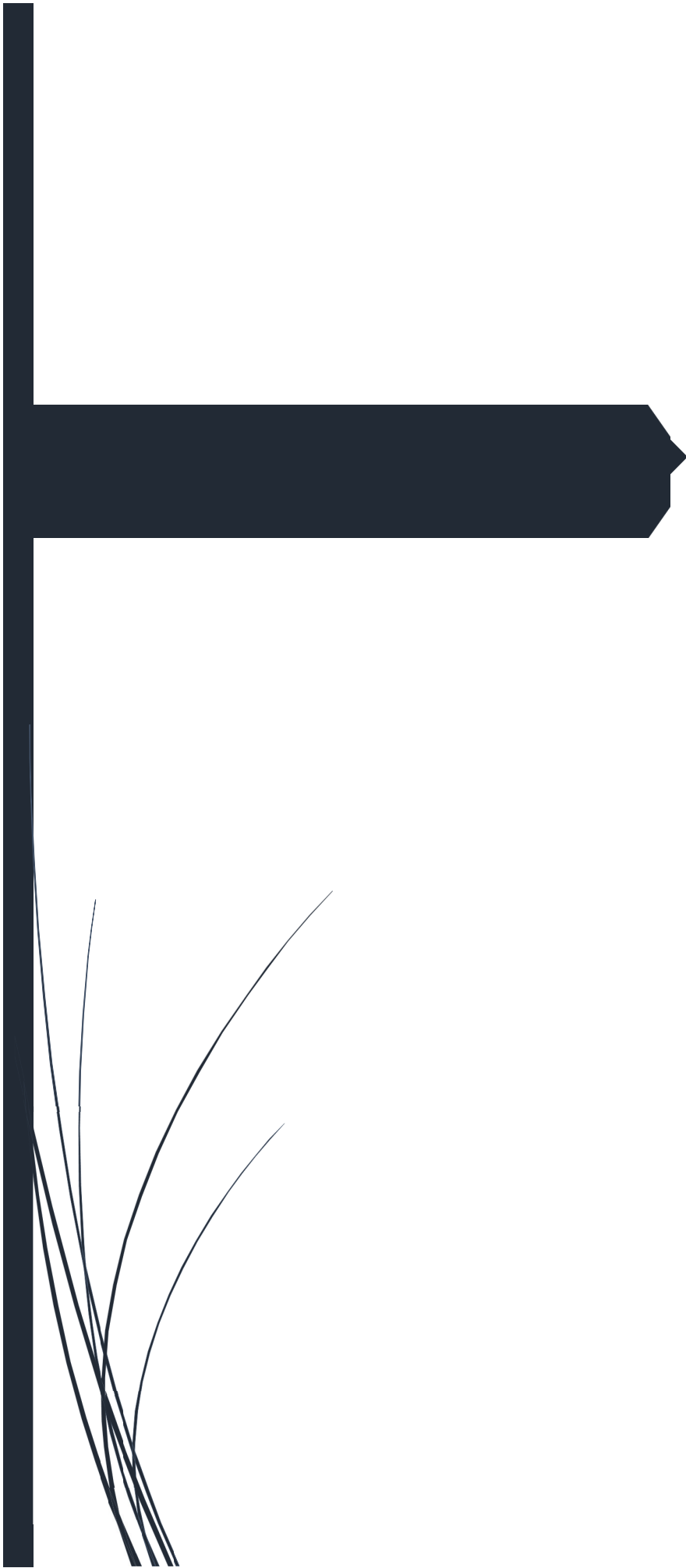
Table 2: Addressable manual station product selection red housing with white letters and white pull lever

Model	Description	Housing	Pull lever	Listings
4099-9004, see note	Single Action, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM
4099-9004CB, see note	Single Action, Bilingual English and French	FEU FIRE	TIREZ PULL	ULC
4099-9004CF, see note	Single Action, French	ALARME FEU	ABAISSÉZ	
4099-9004PO, see note	Single Action, Portuguese	FOGO ALARME	PUXE	UL, FM
4099-9004SP, see note	Single Action, Spanish	ALARMA FUEGO	JALE	
4099-9005, see note	Double Action, Breakglass operation, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM
4099-9005PO, see note	Double Action, Breakglass operation, Portuguese	FOGO ALARME	PUXE	UL, FM
4099-9005SP, see note	Double Action, Breakglass operation, Spanish	ALARMA FUEGO	JALE	
4099-9006, see note	Double Action, Push operation, English	FIRE ALARM	PUSH PULL DOWN	UL, ULC, FM, CSFM
4099-9006PO, see note	Double Action, Push operation, Portuguese	FOGO ALARME	EMPURRE PUXE	UL, FM
4099-9006SP, see note	Double Action, Push operation, Spanish	ALARMA FUEGO	EMPUJE JALE	
4099-9021, see note	Single Action NO GRIP operation, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM

Note: NEMA 1 rated when used with 2975-9178 back box.

Table 3: Accessories

Model	Description
2975-9022	Cast aluminum surface mount box, red
2975-9178	Surface mount steel box, red
2099-9813	Semi-flush trim plate for double gang switch box, red
2099-9819	Flush mount adapter kit, black
2099-9820	Flush mount adapter kit, beige
4099-9805	Retrofit Kit for field conversion of a single action station to a NO GRIP station; refer to the <i>NO GRIP Actuator (4099-9805) Installation Instructions 579-1007</i> for details
2099-9803	Replacement breakglass
2099-9804	Replacement break-rod
2099-9828	Institutional cover kit for field installation on 4099-9004; Note: Covers LED indicator
2099-9814	Surface trim plate for Wiremold box V5744-2, red
2099-9822	Replacement retaining clip for breakglass
252-019	B key for manual station reset.





UL, ULC, CSFM Listed; FM Approved;
MEA (NYC) Acceptance*

Multi-Application Peripherals

IDNet and MAPNET II Communicating Devices,
Individual Addressable Modules (IAMs)

Features

IDNet or MAPNET II addressable communications supply both data and power over a single wire pair to provide:**

- Supervised Class B monitoring of normally open, dry contacts
- Total wiring distance from IAM to supervision resistor(s) of up to 500 ft (152 m)
- Monitored connection is compatible with Simplex® 2081-9044 Overvoltage Protectors for outdoor wiring or electrically noisy applications
- For use in indoor locations up to 158° F (70° C) such as attic spaces or similar applications

For use with following Simplex control panels:

- Model Series 4007ES, 4008, 4010, 4010ES, and 4100ES fire alarm control panels for IDNet communications
- Model Series 4100/4100U/4100ES, 4120, 4020, and 2120 Communicating Device Transponders (CDTs) equipped with MAPNET II communications

Model 4090-9001:

- Enclosed design minimizes dust infiltration
- Mounts in standard single gang electrical box
- Screw terminals for wiring connections
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation (requires mounting bracket, ordered separately)

Model 4090-9051:

- Encapsulated design for extended exposure to high humidity (LED is not present on this model)
- Color coded 18 AWG leads for wiring

IDNet communications provides current limited monitoring:

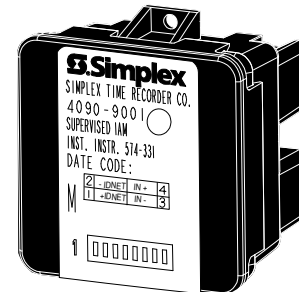
- Provides monitoring of tamper switch (supervisory) and waterflow switch (alarm) on same circuit using one point
- Available with IDNet communications only

Multiple operation modes are available and are selectable at the control panel:

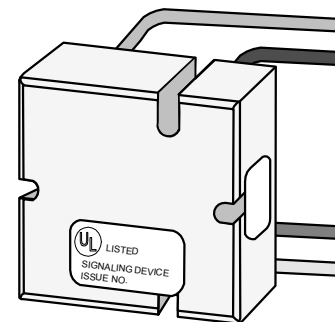
- Contact closure status can be tracked
- Momentary contact closure conditions can be selected at the panel to be latched or tracked (not available with the 2120 CDT)

UL listed to Standard 864

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4090-9001 Supervised IAM
(shown approximately 3/4 size)



4090-9051 Supervised IAM
(shown approximately 3/4 size)

Description

Individual addressable modules (IAMs) receive both power and communications from a two-wire MAPNET II or IDNet circuit. They provide location specific addressability to a single initiating device (such as single station smoke detector alarm contacts or heat detector contacts) or multiple devices at the same location by monitoring normally open dry contacts and the wiring to an end-of-line resistor.

Model 4090-9001 is packaged in a thermoplastic housing and provides screw terminal connections and a status indicating LED.

Model 4090-9051 is an encapsulated package with wire leads. It does not provide a status indicating LED.

Operation

Contact Closure. Closure of the monitored contact(s) initiates an alarm or other response as programmed at the fire alarm control panel. An open in the monitored circuit wiring will cause a trouble to be reported.

Panel Selections. Selections can be made at the control panel to maintain the alarm condition if the initiating device contacts are momentary, such as from a rate-of-rise heat detector, or to track the device contact status (not available with the 2120 CDT).

Current Limited Operation Applications

For use with IDNet communications only, these IAMs can provide quad-state sensing of normal, open circuit, short circuit, and current limited conditions. (Program type is “T-sense.”) With the proper end-of-line and current limiting resistors, dual functions such as tamper switch and waterflow switch monitoring can be determined and communicated by a single addressable point.

IAM Product Selection

Model	Description
4090-9001	Supervised IAM, mounted in thermoplastic housing with screw terminals; see applicable options below
4090-9051	Supervised IAM, encapsulated with wire leads

Optional Trim Plates and Mounting Bracket for Model 4090-9001

Model	Description
4090-9806	For semi-flush mounted box
4090-9807	For surface mounted box
4090-9810	Mounting bracket, mounts IAM to electrical box and provides screw holes for trim plate, required for optional trim plates

End-of-Line Resistor Harnesses (ordered separately as required)

Model	Reference No.	Description
4081-9004	733-886	6.8 kΩ, 1/2 W; Standard end-of-line resistor harness for N.O. contact supervision
4081-9003	733-896	4.7 kΩ, 1/2 W
4081-9005	733-984	1.8 kΩ, 1/2 W

Use for current limited monitoring applications

Specifications

Electrical

Power and Communications	MAPNET II or IDNet, auto selected, 1 address per IAM	
Input Requirements	Normally open, dry contacts	
Wire Connections	4090-9001	Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 mm ² to 2.08 mm ²)
	4090-9051	Color coded wire leads, 18 AWG (0.82 mm ²), 8" long (203 mm)
Reference Documents	Installation Instructions	574-331 for 4090-9001; 579-572 for 4090-9051
	Field Wiring Diagrams	842-073 for IDNet operation; 841-804 for MAPNET II operation

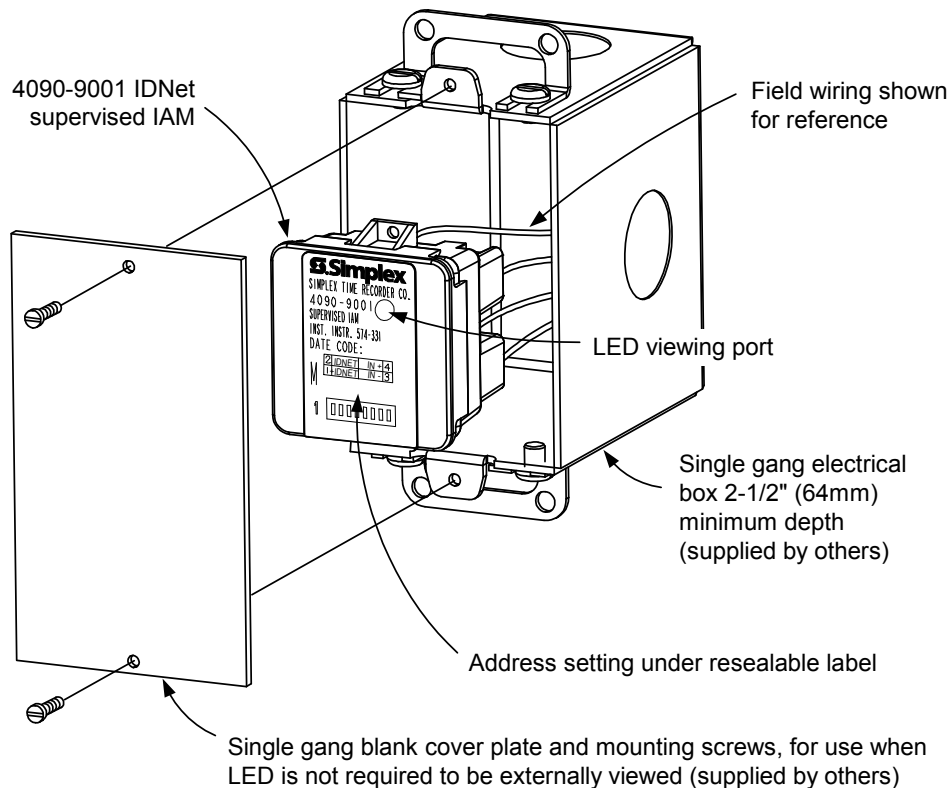
Wiring Distances

Distance from IAM to Contacts	500 ft (152 m) maximum without protectors
	400 ft (122 m) maximum with 2081-9044 Overvoltage Protectors
Wiring Distance Reference per channel, MAPNET II or IDNet Communications	2500 ft (762 m) maximum from fire alarm control panel
	10,000 ft (3048 m) maximum total wiring distance (including T-Taps)

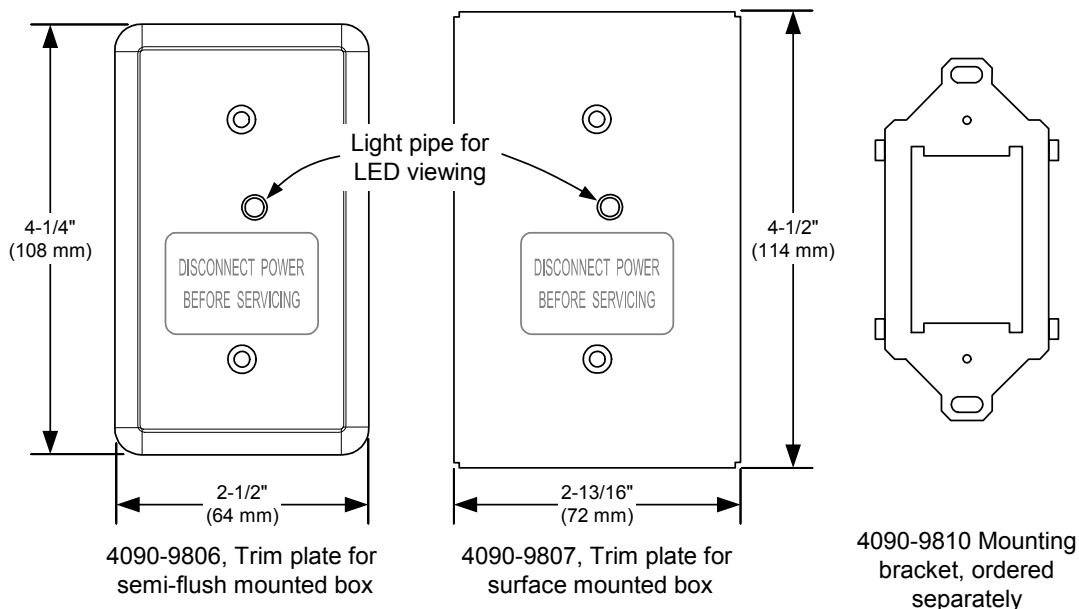
Mechanical

Dimensions	4090-9001	1-9/16" W x 1-3/4" H x 1-1/4" D (40 mm x 44 mm x 32 mm)
	4090-9051	1-9/16" W x 1-9/16" H x 9/16" D (40 mm x 40 mm x 14 mm)
Housing Material, 4090-9001	Black thermoplastic	
Encapsulation Material, 4090-9051	Epoxy, beige	
Temperature Range	32° to 158° F (0° to 70° C); intended for indoor operation	
Humidity Range	Up to 93% RH at 100° F (38° C)	

Mounting Information



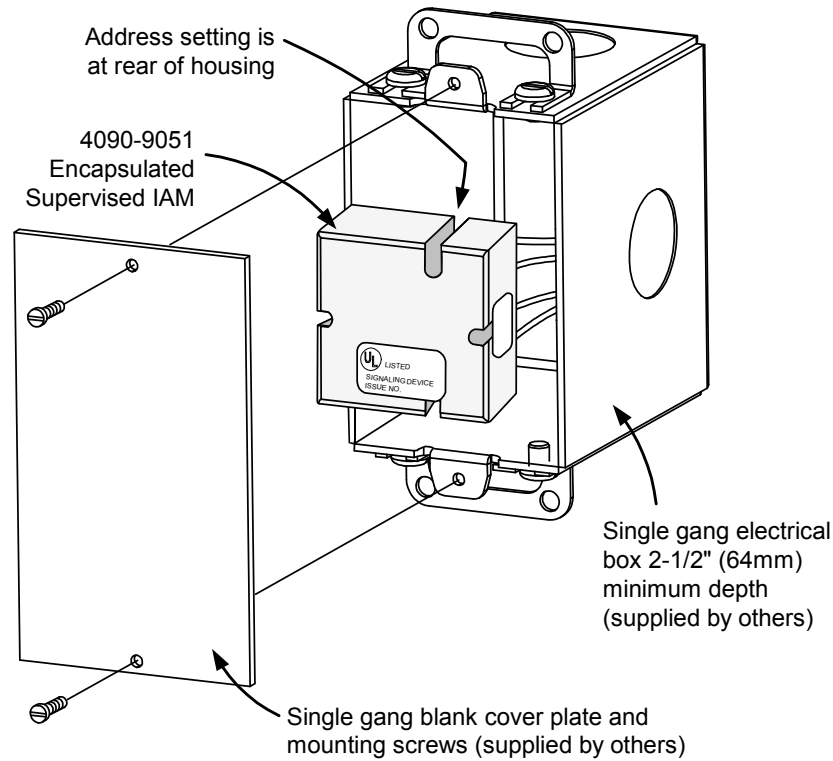
Mounting Reference, Single Gang Blank Cover Plate

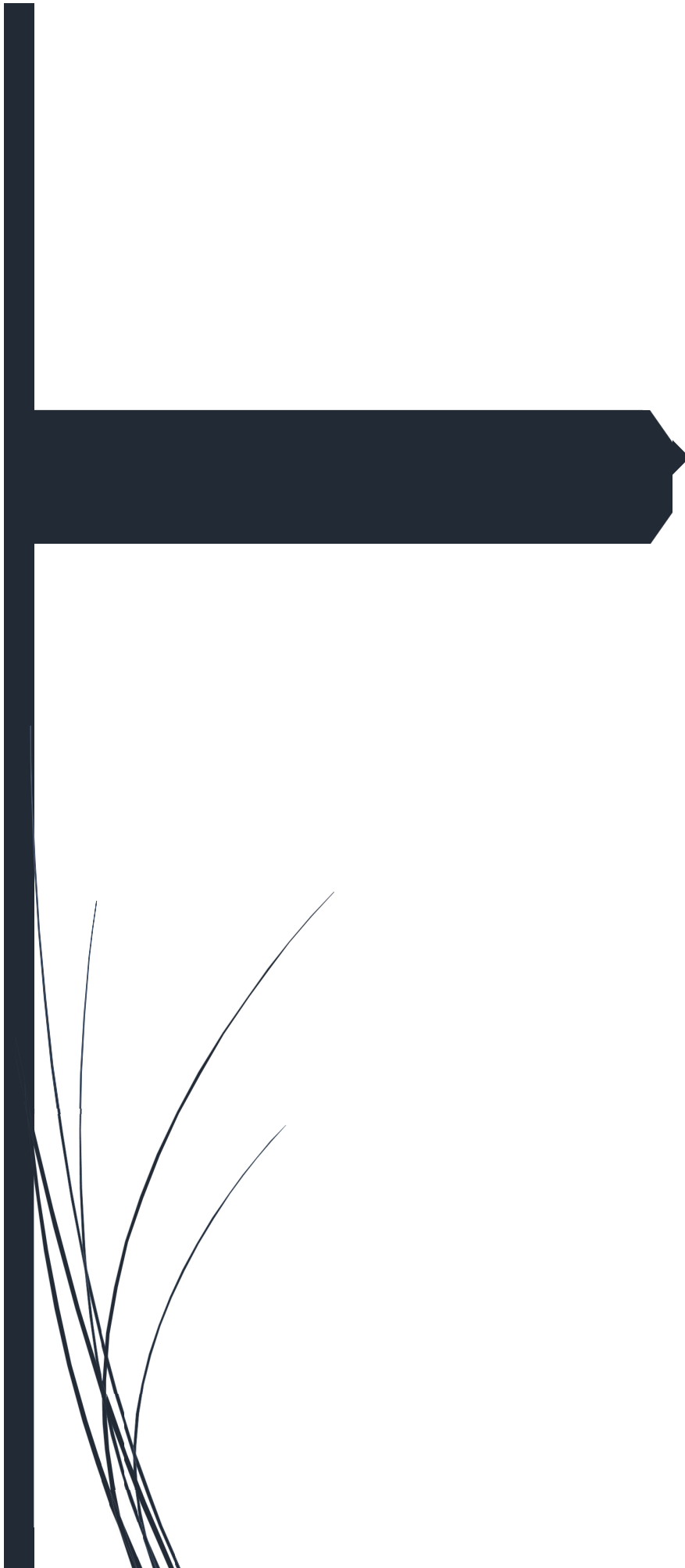


NOTE: These mounting plates require mounting bracket 4090-9810.

Optional Trim Plates and Mounting Bracket for Visible LED

4090-9051 Mounting Information







UL, ULC, CSFM Listed; FM Approved;
MEA (NYC) Acceptance*

Multi-Application Peripherals

IDNet Communicating Devices
Model 4090-9002 Relay IAM

Features

Individual Addressable Relay Module (Relay IAM):

- IDNet addressable control for use with Simplex® fire alarm control panel models 4007ES, 4008, 4010, 4010ES, 4100ES, and 4100U
- A single addressable point provides control and status tracking of a Form “C” contact
- Low power latching relay design allows IDNet communications to supply both data and module power
- Relay is set to OFF on initial power up and upon loss of IDNet communications

Compact, sealed construction:

- Enclosed design minimizes dust infiltration
- Mounts in standard 4” (102 mm) square electrical box, optional adapter bracket is available to mount in a 4 11/16” (119 mm) square electrical box
- Screw terminals for wiring connections
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation

UL listed to Standard 864

Description

IDNet Relay IAMs allow fire alarm control panels to control a remotely located Form “C” contact using IDNet addressable communications for both data and module power. Typical applications would be for switching local power for control functions such as elevator capture, or control of HVAC components, pressurization fans, dampers, etc. Relay status is also communicated requiring only one device address.

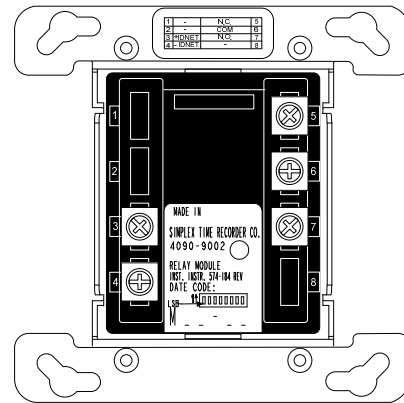
Product Selection

Model	Description
4090-9002	Relay IAM

Optional Adapter and Trim Plates

Model	Description	
4090-9813	Adapter plate to fit 4 11⁄16" (119 mm) square electrical box	
4090-9801	For semi-flush mounted box	Trim Plate, galvanized steel, with LED viewing window; includes mounting screws
4090-9802	For surface mounted box	

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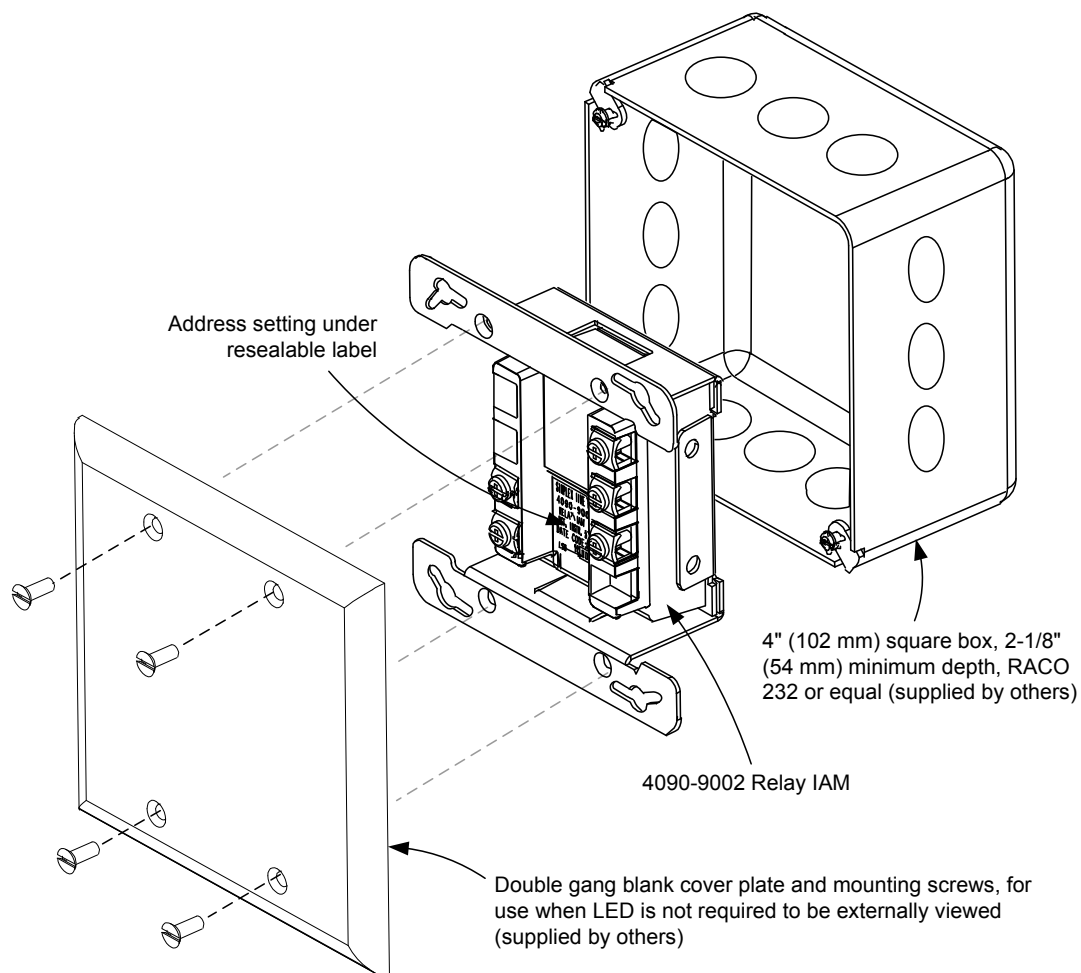


4090-9002 IDNet Relay IAM Package
(shown approximately 1/2 size)

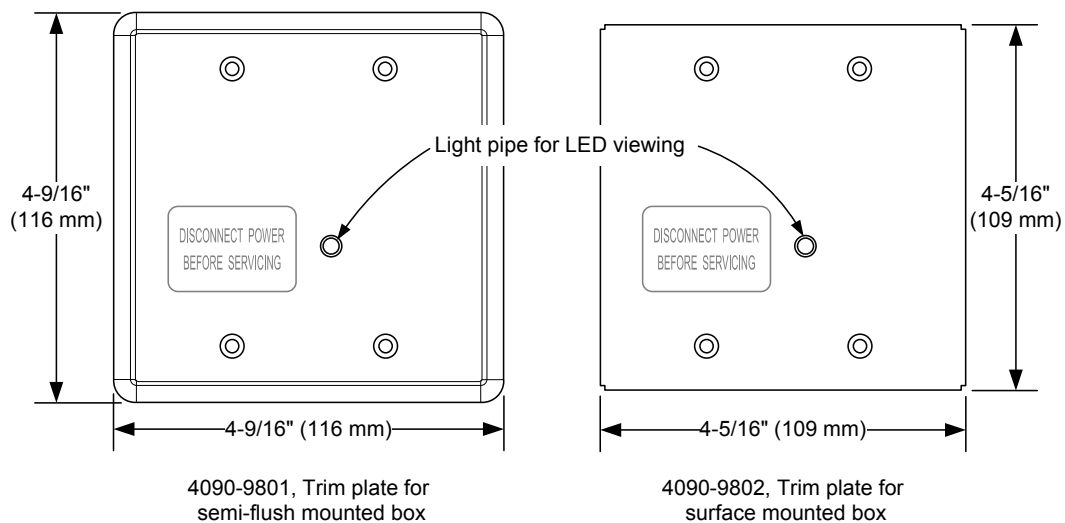
Specifications

Communications	IDNet communications, 1 address per device	
Relay IAM Power	Supplied by IDNet communications	
Contact Ratings* (not rated for incandescent switching)		
Type	Form C, SPDT	
Power-Limited	2 A @ 24 VDC, resistive	from listed fire alarm supply
	1 A @ 24 VDC, inductive	
Nonpower-Limited	0.5 A @ 120 VAC, resistive	
* Provide circuit fusing and transient suppression as required per application. DC inductive loads can typically be diode suppressed; 120 VAC loads may require RC networks or varistors, depending on device type. Refer to the installation instructions for additional information.		
Wire Connections	Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 to 2.08 mm ²)	
IDNet Communications Wiring Reference	Up to 2500 ft (762 m) from control panel	
	Up to 10,000 ft (3048 m) total wiring distance (including T-Taps)	
	Compatible with Simplex 2081-9044 Overvoltage Protectors	
Dimensions	4 1⁄8" H x 4 1⁄8" W x 1 3⁄8" D (105 mm x 105 mm x 35 mm)	
Housing Material	Black thermoplastic	
Mounting Plate	Sheet metal, galvanized	
Temperature Range	32° to 120° F (0° to 49° C), intended for indoor operation	
Humidity Range	Up to 93% RH at 100° F (38° C)	
Installation Instructions	574-184	

Relay IAM Mounting Information



Mounting Reference, Double Gang Blank Cover Plate



Optional Trim Plates for Visible LED

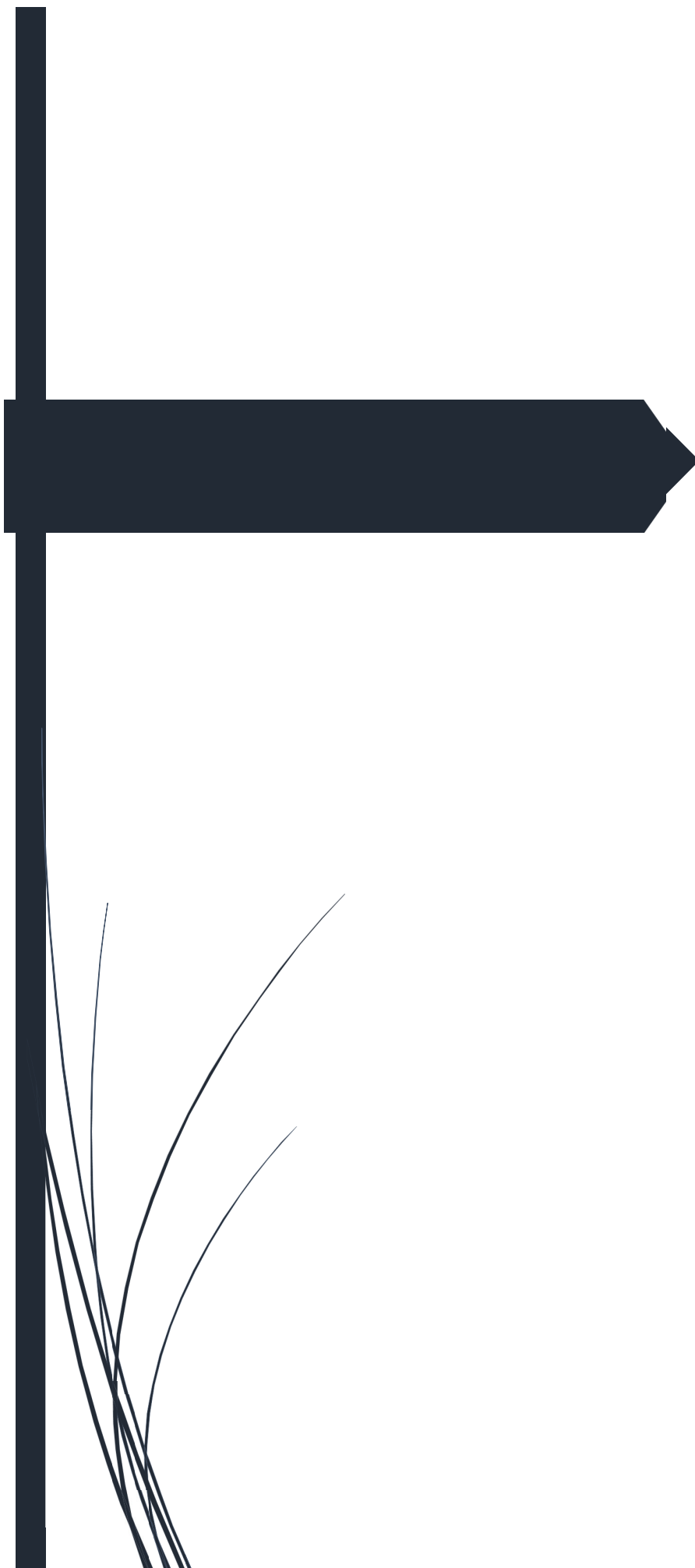
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Multi-Application Peripherals

IDNet or MAPNET II Communicating Devices
4090-9101 and 4090-9106, Zone Adapter Modules

Features

IDNet or MAPNET II communications compatible Monitor ZAMs (Zone Adapter Modules) provide an addressable interface to a conventional initiating device circuit (IDC)

Available for Class B or Class A IDCs:

- 4090-9101, Class B monitoring for 2-wire or 4-wire initiating devices, with power reset connections for 4-wire devices
- 4090-9106, Class A monitoring for 2-wire initiating devices
- Zone device power is supplied separately (typically from fire alarm control panel)
- Refer to device compatibility list on page 2

For use with the following Simplex® fire alarm control panels:

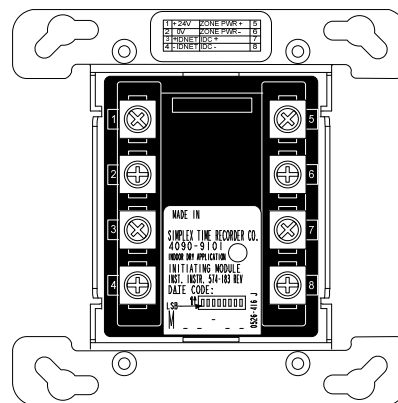
- Model Series 4007ES, 4008, 4010, 4010ES, 4100ES, and 4100U fire alarm control panels using IDNet communications
- Model Series 4100/4100U, 4120, 4020, and 2120 Communicating Device Transponders (CDTs) equipped with MAPNET II communications

Compact, sealed construction:

- Enclosed design minimizes dust infiltration
- Mounts in standard 4" (102 mm) square electrical box
- Screw terminals for wiring connections
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation
- UL listed to Standard 864

Description

IDNet/MAPNET II Monitor ZAMs allow a single addressable point to monitor a conventional initiating device circuit (IDC) populated with 2-wire or 4-wire initiating devices. Refer to page two for compatible devices.



4090 Series ZAM Package
(shown approximately 1/2 size)

Specifications

Communications	IDNet or MAPNET II, 1 address per device
ZAM Input Voltage	18.9 to 32 VDC (nominal 24 VDC)
ZAM Current @ 24 VDC	Supervisory = 16 mA maximum Alarm = 72 mA maximum (actual current is determined by total device requirements)
4090-9101 ZAM, Zone Supervision Resistor	3.3 kΩ, 1 W
Wire Connections	Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 to 2.08 mm ²)
IDNet or MAPNET II Wiring	Up to 2500 ft (762 m) from fire alarm control panel
	Up to 10,000 ft (3048 m) total wiring distance (including T-Taps)
	Compatible with Simplex 2081-9044 Overvoltage Protectors
Dimensions	4 1/8" H x 4 1/8" W x 1 3/8" D (105 mm x 105 mm x 35 mm)
Housing Material	Black thermoplastic
Mounting Plate Material	Sheet metal, galvanized
Temperature Range	32° to 120° F (0° to 49° C) intended for indoor operation
Humidity Range	Up to 93% RH at 100° F (38° C)

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7300-0026:223 for allowable values and/or conditions concerning material presented in this document. Accepted for use – City of New York Department of Buildings – MEA35-93E. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

Product Selection

ZAM Modules

Model	Description
4090-9101	Zone Adapter Module for Class B monitoring of 2-wire or 4-wire initiating devices; with power reset connections for 4-wire devices
4090-9106	Zone Adapter Module for Class A monitoring of 2-wire initiating devices

Optional Adapter and Trim Plates

Model	Description
4090-9813	Adapter plate to fit 4 $1\frac{1}{16}$ " (119 mm) square electrical box
4090-9801	For semi-flush mounted box
4090-9802	For surface mounted box
Trim plate with LED viewing window, includes mounting screws; galvanized steel	

End-of-Line Resistor Harness

Model	Reference No.	Description
4081-9002	733-893	3.3 k Ω , 1 End-of-Line Resistor Harness for 4090-9101, Class B zone monitoring

Monitor ZAM Two-Wire Initiating Device Compatibility Reference Chart

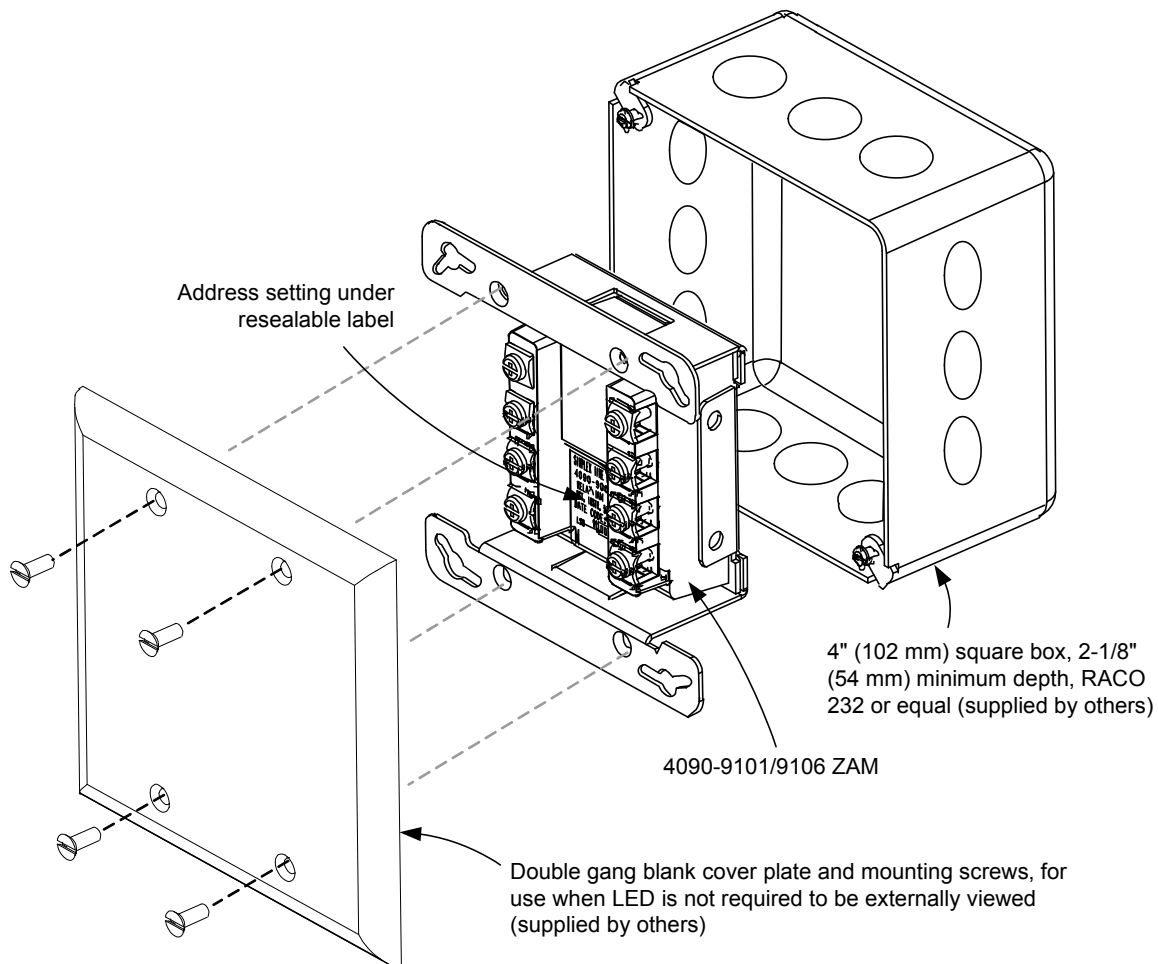
Description	Model	Compatible Bases	Maximum Quantity
Direct connect photoelectric smoke detector	2098-9209	No base required	20
Electronic heat detectors	4098-9401		
	4098-9402		
	4098-9403		
	4098-9404		
	4098-9612	4098-9788	20
	4098-9613	4098-9684	
	4098-9614	4098-9683	1
	4098-9615		
Photoelectric smoke detectors	4098-9601	4098-9788	20
	4098-9602	4098-9683	1
	4098-9605		
Ionization smoke detector	4098-9603	4098-9788	20
		4098-9683	1
Duct detector housing with 4098-9601 detector	4098-9685	N.A.	20

Reference for Existing Equipment

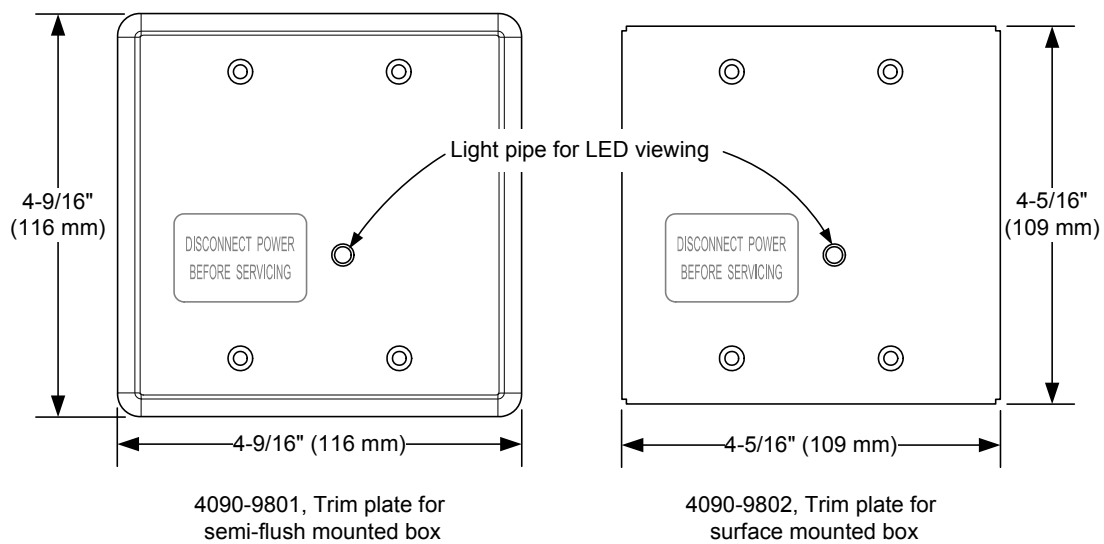
Description	Model	Compatible Bases	Maximum Quantity
Smoke detectors	2098-9201	2098-9211	20
	2098-9202		
	2098-9203	2098-9637	1
	2098-9576		
Electronic heat detectors	4098-9407	2098-9211	20
	4098-9408		
	4098-9409		
	4098-9410		

NOTES:

- Four-wire detector operation is compatible with conventional listed contact closure initiating devices.
- Four-wire detectors require detector voltage to be connected to resettable power terminals.
- Refer to installation instructions 574-183 and field wiring diagram 842-073 for additional information.
- Contact your local Simplex product supplier for additional compatible devices.



Mounting Reference, Double Gang Blank Cover Plate



Optional Trim Plates for Visible LED



CERTIFICATE OF COMPLIANCE

Certificate Number S771
Report Reference S771-2011-07-01
Date 2023-March-24

Issued to: Simplex Time Recorder Co
6 Technology Park Dr
Westford MA, 01886 US

**This is to certify that
representative samples of** CONTROL UNITS, SYSTEM
See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: See addendum page.

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.


Deborah Jennings-Conner, VP Regulatory Services

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number S771
Report Reference S771-2011-07-01
Date 2023-March-24

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Models:

UL Fire Alarm and Security Equipment:

Models 4010—9401, 4010-9402, 4010-9403, 4010-9404, 4010-9405, 4010-9406, 4010-9421, 4010-9422, 4010-9423, 4010-9425, 4010-9426, 4010-9428, 4010-9435.

Models 4010-9501, 4010-9502, 4010-9503, 4010-9504, 4010-9505, 4010-9521, 4010-9522, 4010-9523, 4010-9524, 4010-9525, 4010-9526, 4010-9527, 4010-9528, 4010-9529, 4010-9530.

Models 4010—9601, 4010-9602, 4010-9603, 4010-9604, 4010-9606, 4010-9609, 4010-9610, 4010-9621, 4010-9622, 4010-9623, 4010-9624, 4010-9633.

Models 4010-9701, 4010-9702, 4010-9711, 4010-9712, 4010-9721, 4010-9722, 4010-9731.

Models A010-9401, A010-9402, A010-9421, A010-9422, A010-9425, A010-9426, A010-9501, A010-9502, A010-9521, A010-9522, A010-9526.

Models A010-9601, A010-9602, A010-9621, A010-9622, A010-9623, A010-9624, A010-9711, A010-9712, A010-9722.

Models(+) 4010-9401BA, 4010-9402BA, 4010-9501BA, 4010-9502BA, 4010-9503BA, 4010-9504BA, 4010-9421BA, 4010-9422BA, 4010-9425BA, 4010-9426BA, 4010-9521BA, 4010-9522BA, 4010-9523BA, 4010-9524BA, 4010-9525BA, 4010-9526BA, 4010-9527BA, 4010-9528BA, 4010-9529BA, 4010-9530BA, 4010-9602BA.

(+)Note: “BA” at the end of the model number designates “built in America”.

UL Fire Alarm and Security Subassembly:

Models 4010-9901, 4010-9907, 4010-9922, 4010-9924, 4010-9925, 4010-9908, 4010-9909, 4010-9910, 4010-9911, 4010-9912, 4010-9913, 4010-9914, 4010-9915, 4010-9916, 4010-9917, 4010-6311, 4010-6312, 4010-9918, 4010-9920, 4010-9921, 4010-9935 and 4190-6105, and 4010-9936. Model A010-9917 (Autocall).

ULC Fire Alarm Equipment:

Models 4010-9403, 4010-9404, 4010-9405, 4010-9406, 4010-9423, 4010-9425, 4010-9426, 4010-9428, 4010-9430, 4010-9435, 4010-9525, 4010-9526, 4010-9603, 4010-9604, 4010-9606, 4010-9608, 4010-9609, 4010-9610, 4010-9633, 4010-9731.

ULC Fire Alarm and Security Equipment:

ULC Fire Alarm Subassembly:



Deborah Jennings-Conner, VP Regulatory Services

UL LLC



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CERTIFICATE OF COMPLIANCE

Certificate Number S771
Report Reference S771-2011-07-01
Date 2023-March-24

Models 4190-6105, 4010-9901, 4010-9908, 4010-9909, 4010-9910, 4010-9911, 4010-9912, 4010-9914, 4010-9915, 4010-9916, 4010-9918, 4010-9920, 4010-9921, 4010-9922, 4010-9924, 4010-9925

ULC Fire Alarm and Security Subassembly:
Model 4010-9935.
Model 4010-9936 Auxiliary Relay Module

Standards:

UL 864 Control Units And Accessories For Fire Alarm Systems, UL 2017 General-Purpose Signaling Devices And Systems, UL 1076 Proprietary Burglar Alarm Units And Systems, UL 1730 Smoke Detector Monitors And Accessories For Individual Living Units Of Multifamily Residences And Hotel/Motel Rooms, ULC-S527 Control Units for Fire Alarm Systems, CAN/ULC-S559-13 Equipment for Fire Signal Receiving Centers and Systems, and ULC/ORD C1076 Proprietary Burglar Alarm Units And Systems.

Deborah Jennings-Conner

Deborah Jennings-Conner, VP Regulatory Services

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20150105-S1199
Report Reference S1199-19970626
Issue Date 2015-JANUARY-05

Issued to: SIMPLEX TIME RECORDER CO
50 TECHNOLOGY DR
WESTMINSTER MA 01441

**This is to certify that
representative samples of**

SMOKE-AUTOMATIC FIRE DETECTORS
Smoke detector, system type photoelectric, Models
GSA4098-9601, JTY-GF-CN 4098-9601, GSA4098-9602,
4098-9602TSP, 4098-9605, and GSA4098-9605.

Smoke detectors, Models 4098-9601, 4098-9602.

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: Smoke Detectors For Fire Alarm Systems, UL 268.
Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Assistant Chief Engineer, Global Inspection and Field Services
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number S772
Report Reference S772-1991-08-09
Date 2023-June-21

Issued to: Simplex Time Recorder Co
6 Technology Park Dr
Westford MA, 01886 US

This is to certify that BOXES, NONCODED
representative samples of See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 38, Manual Signaling Boxes for Fire Alarm Systems
CAN/ULC-S528-14, Manual Stations for Fire Alarm
Systems, Including Accessories

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.


Deborah Jennings-Conner, VP Regulatory Services

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number S772
Report Reference S772-1991-08-09
Date 2023-June-21

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Fire Alarm Equipment:

USL Non-coded Boxes, Type 2099-9101, -9102, -9103, -9104, -9105, -9107, -9108, -9147, -9148, -9149, -9152, -9754, -9755, -9756, -9757, -9758, -9759 and -9762.

CNL1, CNL2 Non-coded Boxes, Type 2099-9101, -9102, -9104, -9107, -9149, -9152, -9754.

USL Non-coded boxes, Type 4099-9001, -9002, -9003, -9004, -9005, -9006, -9010, -9011, -9012, -9015, -9020, and -9021 addressable boxes. Intended for use with the manufacturer's separately Listed 4010, 4100, and 4008 control units.

CNL1, CNL2 Non-coded boxes, Type 4099-9004, -9005, -9006, -9015, and -9021 addressable boxes. Intended for use with the manufacturer's separately Listed 4010, 4100, and 4008 control units.

CNL2 Non-coded boxes, Type 4099-9004CB, -9004CF addressable boxes. Intended for use with the manufacturer's separately Listed 4010, 4100, and 4020 control units.

USL Non-coded boxes, Type 4099-5201, -5202 addressable boxes. Intended for use with the manufacturer's separately Listed 4100 control unit. Type 4099-9004SP, -9004PO, -9005SP, -9005PO, -9006SP, -9006PO. Intended for use with the manufacturer's separately Listed 4010, 4100, and 4008 control units. Type 4099-5205 addressable box. Marketed for use with a third party's Listed control unit. Type A4099-5201, -5202 addressable boxes. Intended for use with the manufacturer's separately Listed Autocall 4100ES control unit.

USL Non-coded boxes, Type 4099-5212, -5213, -5214, -5215, -5216 addressable boxes. Intended for use with the manufacturer's separately Listed 4010ES & 4100ES control unit.

Fire Alarm Subassembly:

USL Alarm Box Accessory, ADA Conversion Kit Type 4099-9805. Intended for use with the manufacturer's noncoded box models 2099-9101, -9102, -9107, -9754, -9755 and models 4099-9004, -5201 and -5214.

CNL1, CNL2 Alarm Box Accessory, ADA Conversion Kit Type 4099-9805. Intended for use with the manufacturer's noncoded box models 2099-9101, -9102, 9107, 9754 and model 4099-9004.

Deborah Jennings-Conner

Deborah Jennings-Conner, VP Regulatory Services

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20150105-S1199
Report Reference S1199-19970626
Issue Date 2015-JANUARY-05

Issued to: SIMPLEX TIME RECORDER CO
50 TECHNOLOGY DR
WESTMINSTER MA 01441

**This is to certify that
representative samples of** SMOKE-AUTOMATIC FIRE DETECTORS
Smoke Detector, Models 4098-9601C, 4098-9602C, 4098-9601and 4098-9602.

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: Smoke Detectors for Fire Alarm Systems, ULC S529.

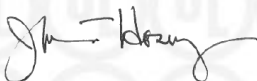
Additional Information: See the ULC Online Certification Directory at www.ulc.ca
for additional information

Only those products bearing the ULC Listing Mark should be considered as being covered by ULC's
Listing and Follow-Up Service.

The ULC Listing Mark generally includes the following elements: the symbol ULC in a circle:  with
the word "LISTED"; a control number (may be alphanumeric) assigned by ULC; and the product
category name (product identifier) as indicated in the appropriate ULC Directory.

To confirm the status, validate the above information via the online directory.

Look for the ULC Listing Mark on the product.



Joseph Hosey, General Manager, Director of Sales - Canada

UNDERWRITERS LABORATORIES OF CANADA INC.

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licensee of ULC. For questions, please contact a local ULC Customer Service Representative at www.ul.com/contactus



CERTIFICATE OF COMPLIANCE

Certificate Number 20150819-E31205
Report Reference E31205-20040115
Issue Date 2015-AUGUST-19

Issued to: SIMPLEX TIME RECORDER CO
50 TECHNOLOGY DR
WESTMINSTER MA 01441

**This is to certify that
representative samples of**

AUDIBLE-SIGNAL APPLIANCES; VISUAL AND VISUAL-
AUDIBLE SIGNAL APPLIANCES, FIRE ALARM,
INCLUDING ACCESSORIES; SIGNALING APPLIANCES
AND EQUIPMENT FOR THE HEARING IMPAIRED.
See Addendum Page

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:

UL 464, Audible Signal Appliances.
UL 1971, Signaling Devices for the Hearing Impaired.
CAN/ULC-S525-07, Audible Signal Devices for Fire Alarm
Systems, Including Accessories.
ULC-S526, Visible Signal Devices for Fire Alarm Systems,
Including Accessories.

Additional Information:

See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number 20150819-E31205
Report Reference E31205-20040115
Issue Date 2015-AUGUST-19

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Fire Alarm Equipment:

Audible signal appliance for fire alarm use with signaling appliance for the hearing impaired, Models **4906-6127**, 4906-9127, 4906-9129, 4906-9139, 4906-9141 wall mount and Models 4906-6128, 4906-9128, 9906-9130, 4906-9140, 4906-9142 ceiling mount horn/strobes for indoor use only.

Audible Signal Appliance Accessories – Model 4905-9838 Sound Damper, Model 4905-9937/-9940 surface mount skirts.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20180306-S3079
Report Reference S3079-20090124
Issue Date 2018-MARCH-06

Issued to: SIMPLEX TIME RECORDER CO
50 TECHNOLOGY DR
WESTMINSTER MA 01441

**This is to certify that
representative samples of**

VISUAL-SIGNAL APPLIANCES FOR FIRE-PROTECTIVE
SIGNALING SYSTEMS
AUDIBLE-SIGNAL APPLIANCES
SIGNALING APPLIANCES AND EQUIPMENT FOR THE
HEARING IMPAIRED
See Addendum

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:

UL 464, Audible Signal Appliances
UL 1638, Visual Signaling Appliances - Private Mode
Emergency and General Utility Signaling
UL 1971, Signaling Devices for the Hearing Impaired
CAN/ULC-S525-07, Audible Signal Devices for Fire Alarm
Systems, Including Accessories
CAN/ULC-S526-07, Visible Signal Devices for Fire Alarm
Systems, Including Accessories

Additional Information:

See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number 20180306-S3079
Report Reference S3079-20090124
Issue Date 2018-MARCH-06

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Fire Alarm Equipment:

USL-1 Horn/Strobe models 4906-9131, 4906-6131, and 4906-9132.

USL-2 Strobe models 4906-9105 and 4906-9106.

CNL-1 Horn/Strobe model 4906-9143.

CNL-2 Strobe model 4906-9113.

USL-1, CNL-1 Weatherproof backbox models 49WPBB-AVVOWR and 49WPBB-AVVOWW.



Bruce Mahrenholz, Director North American Certification Program

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CERTIFICATE OF COMPLIANCE

Certificate Number 20130809-S771
Report Reference S771-19971107
Issue Date 2013-AUGUST-09

Issued to: SIMPLEX TIME RECORDER CO
50 TECHNOLOGY DR
WESTMINSTER MA 01441

**This is to certify that
representative samples of**

CONTROL UNIT ACCESSORIES, SYSTEM; CONTROL
AND COMMUNICATION EQUIPMENT
See Addendum

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:

UL864, Control Units and Accessories for Fire Alarm
Systems
UL1711, Amplifiers for Fire Protective Signaling Systems
UL2572, Mass Notification Systems

Additional Information:

See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Listing Mark should be considered as being covered by UL's
Listing and Follow-Up Service.

The UL Listing Mark generally includes the following elements: the symbol UL in a circle:  with the
word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category
name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.



William R. Carney, Director, North American Certification Programs
UL LLC

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contact a local UL Customer Service Representative at www.ul.com/contactus



CERTIFICATE OF COMPLIANCE

Certificate Number 20130809-S771
Report Reference S771-19971107
Issue Date 2013-AUGUST-09

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Fire Alarm Equipment - Supervised IAM (4090-9001TSP, CN-4090-9001) monitor module; Relay IAM (4090-9002TSP,) Relay Module; Class "A" ZAM (4090-9106TSP,) Initiating Module; Class "B" ZAM (4090-9101TSP, CN-4090-9101) Initiating Module, Two Point I/O Module (2190 9173).

Fire Alarm and Emergency Equipment - 4090-9001 Supervised IAM, 4090-9051 Encapsulated IAM, 4090-9002 Relay IAM, 4090-9101 Class B ZAM, 4090-9106 Class A ZAMs.



William R. Carney, Director, North American Certification Programs
UL LLC

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Programmable Fire Alarm Control Panel Series 4010ES

Certificate Number: FM23FPUS0123-2

Company

Simplex Time Recorder LLC

6 Technology Park Drive, Westford , Massachusetts 01886

United States of America

<http://simplexgrinnell.com>



Detection, Fire Alarm and Signaling Equipment | Fire Alarm Control Panels | **Local Protective Signaling, Fire**

Detection, Fire Alarm and Signaling Equipment | Fire Alarm Control Panels | **Central Station Signaling Systems, Fire**

Detection, Fire Alarm and Signaling Equipment | Fire Alarm Control Panels | **Automatic Releases for Extinguishing Systems and Other Fire Protection Equipment**

Detection, Fire Alarm and Signaling Equipment | Fire Alarm Control Panels | **Proprietary Signaling Systems, Fire**

Fixed Extinguishing Systems | Deluge and Preaction Systems | **Automatic Releases, Preaction and Deluge Sprinkler Systems**

Detection, Fire Alarm and Signaling Equipment | Fire Alarm Control Panels | **Remote Station Signaling Systems, Fire**

Programmable Fire Alarm Control Panel Series 4010ES

Description of Equipment:

4010ES Programmable Fire Alarm Control Panel Series	
Software version	6.04
Single Bay Base Panel Models	4010-9401, 4010-9402, 4010-9403, 4010-9404, 4010-9405, 4010-9406, 4010-9501, 4010-9502 thru 4010-9604, 4010-9606, 4010-9701, 4010-9702, A010-9601, A010-9602.
All single bay models are provided with 2 by 40 LCD displays as are the two bay models ending in -9X21 through -9X24.	
Two Bay Base Panel Models	4010-9421, 4010-9422, 4010-9423, 4010-9424, 4010-9425, 4010-9426, 4010-9428, 4010-9430, 4010-9435, 4010-9521, 4010-9522, 4010-9525, 4010-9526, 4010-9608, 4010-9609, 4010-9610, 4010-9621, 4010-9622, 4010-9623, 4010-9624, 4010-9633, 4010-9711, 4010-9712, 4010-9722, 4010-9731, A010-9621, A010-9622, A010-9623, A010-9624, A010-9711, A010-9712, A010-9722, 4010-9401AR, 4010-9501AR, 4010-9403AR
The two bay models 4010-9X25 and -9X26 are provided with a large screen display.	



AutoCall models (model numbers may be followed by a "BA" suffix [Built in America])

A010-9401, A010-9402, A010-9501, A010-9502, A010-9421, A010-9422, A010-9521, A010-9422, A010-9526, A010-9425 A010-9426

Models ending in -94XX or 96XX are rated 120 V, 60 HZ, while models ending in -95XX or -97XX are rated 240 V, 50/60 Hz.

Models 4010-9403, 4010-9404, 4010-9405, 4010-9406, 4010-9423, 4010-9424, 4010-9428, 4010-9430, 4010-9603, 4010-9604, 4010-9608, 4010-9609, 4010-9610, 4010-0906 are provided with a 48 LED module for meeting the eight simultaneous event requirement for Canada, with the display for the 4010-9403, 4010-9404, 4010-9423, 4010-9428, 4010-9609, 4010-9610, 4010-9603 in English and display for the 4010-9405, 4010-9406, 4010-9424, 4010-9430, 4010-9608, 4010-9606 in French.

All models provide one IDNet circuit except for the models 4010-9X21 and -9X22 which provide four IDNet channels by addition of the model 4010-9929, A010-9929 IDNet 2+2 module.

Photoelectric smoke sensors (IDNet compatible)

4098-9714, A4098-9714, 4098-9774, A4098-9774, GSA4098-9714, A4098-9714, A4098-9714BA, and JTY-GM-CN 4098-9714, A4098-9714

Ionization smoke sensors (IDNet compatible)

4098-9717, GSA4098-9717

photoelectric smoke with integral heat sensors (IDNet compatible)

4098 -9754, 4098-9779, GSA4098-9754

heat sensors (IDNet compatible)

4098-9733, 4098-9778, GSA4098-9733, JTY-ZOM-CN4098-9733, 4098-9734 and GSA4098-9734

Bases

4098-9780, GSA4098-9780, 4098-9789, 4098-9775, GSA4098-9789, 4098 -9791, 4098-9792, 4098-9776, GSA4098-9792, JTY-GM-CN4098-9792, 4098-9793, 4098-9777, GSA4098-9793, 4098-9794, GSA4098-9794, 4098-9795, GSA4098-9795, 4098-9796, GSA4098-9796, 4098-9770, 4098-9771, 4098-9772 (520Hz Sounder Bases), 4098-9773 (520Hz Sounder Bases)



Sensor Heads with Bases

4098-9733E, 4098-9734E sensor heads with bases 4098-9780E, 4098-9789E, 4098-9791E, 4098-9792E, 4098-9793E, 4098-9794E.

In-Duct Sensors

4098-9750, 4098-9751

Duct Housing with sampling tubes duct sensors

4098-9755, 4098-9756

Reflective Beam Detector

4098-9019

Compatible IDNet devices

addressable manual stations

4099-9001, 4099-9002, 4099-9003, 4099-9004, 4099-9005, 4099-9006, 4099-9010, 4099-9011, 4099-9012, 4099-9013, 4099-14, 4099-9015, 4099-9020, 4099-9021

Supervised individually addressable module (IAM)

4090-9001, 4090-9051

Relay IAM with Unsupervised Feedback

4090-9119

Relay IAM with Supervised Feedback

4090-9118

Six Point I/O IAM

4090-9120

Relay IAM

4090-9002

Dual Relay IAM

4090-9008

8 Amp Relay IAM

4090-9010



Signal IAM	4090-9007
Addressable IDNet isolator	4090-9116
Addressable power isolator	4090-9117
Security IAM	4090-9121
Class B zone adapter modules (ZAM), compatible with two-wire detectors	4090-9101, CN4090-9101
Class A zone adapter modules (ZAM), compatible with two-wire detectors	4090-9106
Other optional Modules	
modular network interface	4010-9902, 4010-9922
Wired (RS-485)	4010-9818
Fiber communication media modules	4010-9819
[old NFPA 72 designation: Style 4] Class B	4010-9905, 4010-9926
[old NFPA 72 designation: Style 7] Class X TCP/IP Physical Bridge	4010-9906, 4010-9927
Building Zone and Relay Card	4010-9914, 4100-9935, 4010-9936 or 4010-9916, software rev. 1.02, configuration programmer software 3.06.

**Building Network Interface card used to communicate with control via an Ethernet connection**

City circuit modules

4010-9909, 4010-9010

Relay modules

4010-9908, 4010-9911

Dual RS-232 interface card

4010-9918

Twenty-Five Volt Regulator module

4010-9916

Zone modules compatible with two-wire detectors

4010-9920 Class B, 4010-9921 (Class A)

Dual Class A Isolator (DCAI)

4010-9930

VESDA interface

4010-9901

Zone and IDNet assemblies that support two-wire detectors are compatible with the following:

Smoke detectors with bases

2098-9201, 2098-9202, 2098-9203, 2098-9544 , and 2098-9576 smoke detectors with 2098-9211, 2098-9637 bases.

Heat detectors with bases

4098-9401, 4098-9402, 4098-9403, 4098-9404, 4098-9612, 4098-9613, 4098-9614, 4098-9615 heat detectors, 4098-9788, 4098-9683, 4098-9684 bases.

Detectors with bases

4098-9601, 4098-9602, 4098-9603, 4098-9605 detectors with 4098-9788, 4098-9683 bases.

4098-9681, 4098-9685, 4098-9688 duct sensor housings with 4098-9601 smoke detector.



4120 Fiber Media Bidi card components

4190-6301 [single mode left (SM – L)], 4190-6302 [single mode right (SM – R)], 4190-6303 [multi mode left (MM – L)], and 4190-6304 [multi mode right (MM – R)].

Standby Battery Power components:

24hr Standby

6.2 to 50AH Batteries

Battery shelf

4100-0650

Expansion battery chargers (110AH)

4081-9306, 4081-9308

Optional Annunciators

Remote user interfaces

4100-9401, 4100-9402, 4100-9421, 4100-9422, 4100-9441, 4100-9442

Remote LCD annunciators

4606-9102, 4606-9102C F

Optional Remote accessories

Fiber Optic communication modules and expansion cabinets

4190-9021, 4190-9022 (single mode) or 4190-9024, 4190-9025 (multimode), 4190-9023 (single-mode) or 4190-9026 (Multi-mode) Right-Port Fiber Optic communication module.

4009 TrueAlert Power Supply (4009 TPS)

2975-9229, 2975-9330 cabinet, 4009-9813 Transponder Interface Card, 4100-5120, 4100-5121, 4100-5122 TrueAlert Power Supplies.



IDNAC Repeaters

4009-9601, 4009-9602, 4009-9814 optional Class A Adapter Module, used with 4010-96XX, 4010-97XX control units.

TrueAlert signal line Isolator Modules

4905-9849

High Performance Photo Sensor with fixed temperature 135°F (57°C) heat

Photo sensors

4098-9764, A4098-9764, 4098-9764BA, A4098-9764BA, 4098-9764BK, A4098-9764BK, 4098-9764EA.

Bases

4098-9775, 4098-9776, 4098-9780, 4098-9792, 4098-9789, 4098-9791, 4098-9772, 4098-9794, 4098-9770, 4098-9771, 4098-9773, 4098-9777, 4098-9793

The Connected Services Gateway Module (CSGM) 4010-2500 and 4010-2501 [Simple Power Over Ethernet Switch (SPES)] include: IP DACT with a dual phone line interface, RJ45 10/100 Base-Tx Ethernet interface, cellular interface for connection to a central station.

DACT supports –

ADEMCO Contact ID,

DSC Fiber protocol (cellular or Ethernet).

The CSGM with the IP links can also connect to the panel as a remote service monitor interface [similarly to currently listed TrueInsight Remote Gateway].

The CSGM mounts inside the panel.

The gateway can be mounted remotely and powered through the SPES, mounted in the panel (using the same space the CSGM occupied),

ethernet connection up to 100m away. This connection supports Class B only.

When the CGSM is remote mounted, it must use the CSGM external enclosure (3 colors) with the following PIDs: 2975-9234 (R), 2975-9235 (P), 2975-9236 (B)

4010-6400 is the CSGM with Verizon Cellular Carrier, LTE.

4010-6401 is the CSGM with AT & T Cellular Carrier, 3G W/2G Fallback, for 4010ES.

4010-6402 is the Verizon Cellular Carrier, LTE option, for the External Enclosure.

4010-6403 is the AT & T Cellular Carrier, 3G W/2G Fallback option, for the External Enclosure.

4010-9931 IP Communication Module is the CSGM with alternate software.

AT&T LTE 4G AT&T Gateway module firmware: 1.1.x.xxxx



AT&T 4G/LTE Cellular module kit for IP Communicator/Connected Service Gateway modules mounted in the 4010ES FACU.

4010-6416

AT&T 4G/LTE Cellular module kit for IP Communicator/Connected Service Gateway modules mounted in the external mounted enclosure, for External Enclosure in the 4010ES FACU.

4010-6416

IP Communicator and Connected Services Gateway Module mounted in the 4010ES FACU.

4010-2504

Panel PIDs with the 4010-2500 option added from the factory:

1Bay,2X40,IDNET,120V,W/CS,R-EN, Same as 4010-940, 4010-9401AR, A010-9401 with 4010-2500 added.

4010-9451

1Bay,2X40,IDNET,120V,W/CS,P-EN, Same as 4010-9402 with 4010-2500 added.

4010-9452

1Bay,2X40,LED,IDNET,120,CS,R-E, Same as 4010-9403, 4010-9403AR, with 4010-2500 added.

4010-9453

1Bay,2X40,LED,IDNET,120,CS,P-E, Same as 4010-9404 with 4010-2500 added.

4010-9454

1Bay,2X40,LED,IDNET,120,CS,R-F, Same as 4010-9405 with 4010-2500 added.

4010-9455

1Bay,2X40,LED,IDNET,120,CS,P-F, Same as 4010-9406 with 4010-2500 added.

4010-9456



2Bay,2X40,2IDNET,120V,CS,R-EN, Same as 4010-9421 with 4010-2500 added.

4010-9471

2Bay,2X40,2IDNET,120V,CS,P-EN, Same as 4010-9422 with 4010-2500 added.

4010-9472

2Bay,2X40,LD,2IDNET,120,CS,R-E, Same as 4010-9423 with 4010-2500 added.

4010-9473

2Bay,InfoAlm,2IDNET,120,CS,R-E, Same as 4010-9425 with 4010-2500 added.

4010-9475

2Bay,InfoAlm,2IDNET,120,CS,P-E, Same as 4010-9426 with 4010-2500 added.

4010-9476

2Bay,2X40,MSS,2IDN,120,LD,CS,P, Same as 4010-9428 with 4010-2500 added.

4010-9478

2B,2X40,MSS,2IDN,120,LD,CS,P-F, Same as 4010-9430 with 4010-2500 added.

4010-9480

1Bay,2X40,ESS,IDNET,120,CS,R-E, Same as 4010-9601 with 4010-2500 added.

4010-9651

1Bay,2X40,ESS,IDNET,120,CS,P-E, Same as 4010-9602 with 4010-2500 added.

4010-9652

1B,2X40,LD,ESS,IDNT,120,CS,R-E, Same as 4010-9603 with 4010-2500 added.

4010-9653



1B,2X40,LD,ESS,IDNT,120,CS,P-E, Same as 4010-9604 with 4010-2500 added.

4010-9654

1B,2X40,ESS,IDNET,120,CS,PL-FR, Same as 4010-9606 with 4010-2500 added.

4010-9656

2B,2X40,L,ES,2IDN,120,CS,PL-FR, Same as 4010-9608 with 4010-2500 added.

4010-9658

2B,2X40,LED,ESS,2IDN,120V,CS,R, Same as 4010-9609 with 4010-2500 added.

4010-9659

2B,2X40,LED,ESS,2IDN,120V,CS,P, Same as 4010-9610 with 4010-2500 added.

4010-9660

2Bay,2X40,ESS,2IDNET,120V,CS,R, Same as 4010-9621 with 4010-2500 added.

4010-9671

2Bay,2X40,ESS,2IDNET,120V,CS,P, Same as 4010-9622 with 4010-2500 added.

4010-9672

2Bay,Info,ESS,2IDNET,120V,CS,R, Same as 4010-9623 with 4010-2500 added.

4010-9673

2Bay,Info,ESS,2IDNET,120V,CS,P, Same as 4010-9624 with 4010-2500 added.

4010-9674

ES Net is the next generation networking solution for Simplex fire alarm control panels. ES Net is a networking platform similar to the 4120 Network. ES Net communication module/cards with network supporting Ethernet, DSL, or fiber media connection types using optional media modules at high speeds up to 100Mbit/sec. ES Net will support up to 99 ES Net nodes.



ES Net Dual Channel Ethernet Media Card

4010-6306

ES Net Dual Channel DSL Media Card

4010-6307

ES Net Dual Channel Single-Mode Fiber Media Card

4010-6308

ES Net Dual Channel Multimode Fiber Media Card

4010-6309

ES Net Network Interface Card - FLAT Type

4010-6310

ES Net Network Bridge – FLAT Type

4010-6320

ES Network NIC Vertical mounting bracket

4010-9934

The 4120 Fiber Modem Transceiver is a small board that mounts on top of the main Fiber Modem PCA to convert an electrical signal to an optical signal and vice versa. A newly designed Transceiver board with the following new part numbers are being listed as a replacement.

4120 Network fiber modems for internal mounting in FACUs

4100-6120	Single-Mode	Left-Port Assembly	Fiber	Modem	Use for direct mounting onto a 4100ES/4100U expansion bay.
4100-6122	Multi-Mode				
4100-6121	Single-Mode	Right-Port Assembly	Fiber	Modem	
4100-6123	Multi-Mode				



4120 Expansion cabinet and related modem assemblies for remote mounting

4190-9035	Single-Mode	Red	Expansion Cabinet with Left-Port Fiber Modem Assembly 4010ES
4190-9038	Multi-Mode		
4190-9036	Single-Mode	Beige	
4190-9039	Multi-Mode		
4190-9037	Single-Mode	Fiber Optic Modem Right-Port Assembly (For Expansion Cabinet Only}	Expansion Cabinet Only
4190-9040	Multi-Mode		

Annunciator LED Switch controller cards

Model	Description
4100-1451	Local LED/Switch controller card
4602-1451	Remote LED/Switch controller card

Annunciator Modules

Model	Description
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4602-1457

Vertical remote command unit module

4100-1458

8 rotary switch HOA module

4100-1459

8 red-green-yellow (RGY) LED module

4100-1460

16 RGY LED module

4100-1461

8 button and 8 RGY LED module

4100-1462

8 button and 16 RGY LED module

4100-1463

16 button and 16 RGY LED module

4100-1464

8 red-green-blue (RGB) LED module

Annunciator Enclosures

Model

Description

4602-1453

Two slot alterable, wall mount - Red

4602-1471

Two slot alterable, flush mount - Red

4602-1454

Four slot alterable, wall mount - Red

4602-1472

Four slot alterable, flush mount - Red



4602-1455	Five slot door, color LCD, wall mount - Red
4602-1473	Five slot door, color LCD, flush mount - Red
4602-1456	Five slot door, 2x40 LCD module, wall mount - Red
4602-1474	Five slot door, 2x40 LCD module, flush mount - Red
4602-1475	ES Annunciator blank plate, five slot door - Black
4602-1476	ES Annunciator blank plate, LED module - Black
4602-1479	Two slot alterable, wall mount - Platinum
4602-1484	Two slot alterable, flush mount - Platinum
4602-1480	Four slot alterable, wall mount - Platinum
4602-1485	Four slot alterable, flush mount - Platinum
4602-1481	Five slot door, color LCD, wall mount - Platinum
4602-1486	Five slot door, color LCD, flush mount - Platinum
4602-1482	Five slot door, 2x40 LCD module, wall mount - Platinum
4602-1487	Five slot door, 2x40 LCD module, flush mount - Platinum



2975-9237

Cabinet back box - Red

2975-9238

Cabinet back box - Red

Non-Configurable Annunciator

Model

Color

Description

4602-1452

Red

Two slot non-configurable wall mount

4602-1478

Platinum

4602-1470

Red

Two slot non-configurable flush mount

4602-1483

Platinum

Central Station Signaling Systems, Fire

The Programmable Fire Alarm Control Panel Series 4010ES using revision 6.04 operating [executive/configuration] software is equipped with digital alarm communicator transmitter 4010-9912 with software version 2.01 at the protected premises transmitting signals to two or more Approved versions of the Silent Knight Model 9000, Bosch Radionics Models D6500 and D6600, FBI Model CP-220FB or Ademco Model 685 digital alarm communicator receivers (DACR) in the central station via a signaling channel established through the public switched telephone network. One back-up receiver, switchable within 30 seconds, is required for up to five on-line receivers. Equipment suitable for operation in ambient temperatures from 32° to 120°F (0° to 49°C). The DACT must be provided with a minimum of 24 hours of standby power.

Automatic Releases for Extinguishing Systems and Other Fire Protection Equipment



The Programmable Fire Alarm Control Panel Series 4010ES uses revision 6.04 operating [executive/configuration] software. The IDNet signaling line circuits must be configured for [old NFPA 72 designation: Class A, Style 6] Class A wiring for this application. Models 4090-9005 and -9006 Suppression Release Peripherals connect to the notification appliance circuit from the 4010ES fire alarm control panel. These peripherals monitor the output releasing appliance circuit wiring for opens and shorts. Each releasing appliance circuit must connect to a 2081-9046 coil supervision module which in turn is connected to a compatible 24 V dc solenoid. The solenoid and water control valve combination must be FM Approved. The solenoid and valve combinations are located in the Automatic Water Control Valve listings. 24 V dc batteries rated up to 110 AH are available to provide 90 hours of emergency operation.

Proprietary Signaling Systems, Fire

The Programmable Fire Alarm Control Panel Series 4010ES uses revision 6.04 operating [executive/configuration] software. Simplex Model 4190-9013 or 4190-9027 printer used for permanent recording of signals. Standby batteries from 6.2 to 50 AH are available to provide 24 hour emergency power. Model 4100-0650 battery shelf can be provided to prevent the batteries from shifting inside of the enclosure. Up to 110 AH of emergency battery power can be provided by utilizing the Models 4081-9306 or -9308 expansion battery chargers. Equipment suitable for operation in ambient temperatures from 32° to 120° F (0° to 49°C).

Automatic Releases, Preaction and Deluge Sprinkler Systems

The Programmable Fire Alarm Control Panel Series 4010ES uses revision 6.04 operating [executive/configuration] software. The IDNet signaling line circuits must be configured for [old NFPA 72 designation: Class A, Style 6] Class A wiring for this application. Models 4090-9005 and -9006 Suppression Release Peripherals connect to the notification appliance circuit from the 4010ES fire alarm control panel. These peripherals monitor the output releasing appliance circuit wiring for opens and shorts. Each releasing appliance circuit must connect to a 2081-9046 coil supervision module which in turn is connected to a compatible 24 V dc solenoid. The solenoid and water control valve combination must be FM Approved. The solenoid and valve combinations are located in the Automatic Water Control Valve listings. 24 V dc batteries rated up to 110 AH are available to provide 90 hours of emergency operation.

Remote Station Signaling Systems, Fire



The Programmable Fire Alarm Control Panel Series 4010ES using revision 6.04 operating [executive/configuration] software is equipped with digital alarm communicator transmitter 4010-9912 with software version 2.01 at the protected premises transmitting signals to two or more Approved versions of the Silent Knight Model 9000, Bosch Radionics Models D6500 and D6600, FBI Model CP-220FB or Ademco Model 685 digital alarm communicator receivers (DACR) in the central station via a signaling channel established through the public switched telephone network. One back-up receiver, switchable within 30 seconds, is required for up to five on-line receivers. Equipment suitable for operation in ambient temperatures from 32° to 120° F (0° to 49° C). The DACT and DACR must be provided with a minimum of 60 hours of standby power.

Details

Category	Local Protective Signaling, Fire
Class of Work	3010 - Fire Alarm Systems
Certification Type	FM Approved
Release Control Panel Grouping (For use with Solenoid Valves)	Group 3 - Rated 22W and below
Certificate Number	FM23FPUS0123-2
Listing Country	United States of America



Detection, Fire Alarm and Signaling Equipment | Notification Appliances | **Notification Appliances**

Models 4906-9105, -9106, -9131, -9132, -9113,-9143

Product Description

TrueAlert® series 4906 strobes and horn/strobe combinations. Models 4906-9105, -9106, -9131, -9132, -9113 and -9143 for wall installations. The following appliances are strobes only (V/O): 4906-9113 (red housing), 4906-9106 (white housing) and 4906-9105 (red housing). The following appliances are horn/strobe combinations (A/V): 4906-9143 (red housing) , 4906-9132 (white housing) and 4906-9131 (red housing). Used in 24 volt DC fire alarm systems. Model 4905-9938 module used for synchronization and tone selection (steady, Temporal or March Time). All units utilize multicandela strobe slide switch for candela selections: Canadian models (4906-9113; -9143) have 5, 20 and 30 candela selection switch. The US models (Models 4906-9105, -9106, -9131 and -9132) have 15, 60, 75 and WP75 candela selection. Strobes and horn/strobe combinations come in two wire settings only. All the appliances are NEMA 3R rated for outdoor use if utilized with either model 4905-9828 (red housing) or 4905-9829 (white housing) weatherproof back box. The weatherproof appliances use either model 4905-9832 (V/O) or model 4905-9833 (A/V) weatherproof escutcheon.

Details

Category	Notification Appliances
Class of Work	3150 - Audible Signal Appliances
Certification Type	FM Approved
Listing Country	United States of America

Company

Simplex Time Recorder LLC
6 Technology Park Drive,
Westford , Massachusetts 01886
United States of America
<http://simplexgrinnell.com>