Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 07/17/13

INERGEN FIRE SUPPRESSION SYSTEM

MEDICAL MUTUAL –
(LAN ROOM)

1 CITY CENTER STREET
PORTLAND, ME. 04101

JUNE 2013

20 THOMAS DRIVE
WESTBROOK, ME. 04092

PHONE: (207) 842-6440
DIRECT: (207) 482-2343

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PARTS LIST - MECHANICAL

QTY.	PART NO.	MRF.	DESCRIPTION
3	426259	ANSUL	435 CU.FT. CYLINDER W/CV98 VALVE-CR W/439 CU.FT. AC
3	427082	ANSUL	200 BAR FLEX HOSE
1	73327	ANSUL	HF ELECTRIC ACT. SHP ASM
1	428949	ANSUL	BOOSTER ACTUATOR SHIP ASM
1	70846	ANSUL	LVR ACT HDL/PIN
1	832336	ANSUL	ACTUATION HOSE, SWIVEL, STAINLESS BRAIDED, 24 IN., 1/4 IN. FEMALE
1	416679	ANSUL	1" ORIFICE UNION ASM
1	437900	ANSUL	PRESSURE SWITCH DPST
1	416265	ANSUL	INERGEN ALARM NAMEPLATE INSIDE
1	416266	ANSUL	INERGEN ALARM NAMEPLATE OUTSIDE
1	426140	ANSUL	1/2" NOZZLE ASSEMBLY, 180 DEGREE
1	426142	ANSUL	1" NOZZLE ASSEMBLY, 180 DEGREE
1	417708	ANSUL	NOZZLE DEFLECTOR SHIELD, INERGEN, 1/2 IN.
1	417714	ANSUL	NOZZLE DEFLECTOR SHIELD, INERGEN, 1 IN.
1	879639	ANSUL	BACK FRAME ASSSEMBLY FOR THREE CYLINDERS
1	873092	ANSUL	CYLINDER CLAMP FOR THREE
2	418502	ANSUL	CARRIAGE BOLT W/LOCK WASHERS
2	873257	ANSUL	UPRIGHT
1	873553	ANSUL	SINGLE CYLINDER, FT, LS
1	873554	ANSUL	SINGLE CYLINDER, FT, RS

PARTS LIST - ELECTRICAL

QTY.	PART NO.	MRF.	DESCRIPTION
1	4004-9302	SIMPLEX	4004 R RELEASING PANEL
1	4004-9860	SIMPLEX	AUXILIARY RELAY MODULE (2 MAX)
2	2081-9272	SIMPLEX	6.2 AH BATTERY
1	2081-9046	SIMPLEX	2 AMP. COIL SUPERVISORY MODULE
1	2080-9057	SIMPLEX	ABORT SWITCH
1	2080-9060	SIMPLEX	MAINTENANCE SWITCH
1	2099-9149	SIMPLEX	MANUAL PULL STATION
1	4099-9802	SIMPLEX	PULL STATION LABEL KIT
4	4098-9601	SIMPLEX	PHOTOELECTRIC DETECTOR, 2.8%
4	4098-9788	SIMPLEX	DETECTOR 2-WIRE BASE
1	MT-24MCW-AR	WHEELOCK	HORN/STROBE A/V MULTITONE RED-AGENT
1	RSS-24MCW-AR	WHEELOCK	STROBE V/O WALL RED-AGENT

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UL EX-45

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CV-98 Valve / Cylinder Shi

Date: 07/17/13

Description

The cylinder is factory filled with INERGEN® agent. A single cylinder may be used or multiple cylinders can be manifolded together to obtain the required quantity of agent for total flooding. The cylinder valve can be actuated electrically, pneumatically, and/or manually with approved valve actuation components. All valves are equipped with an anti-recoil feature.

The cylinders are shipped with a maintenance record card and protective shipping cap attached to the threaded neck of each cylinder. This cap entirely encloses and protects the valve while in shipment.

The equivalent length of the valve is equal to 20 ft. (6.1 m) of 1/2 in. Sch. 40 pipe.

Component	Material	Approvals
Cylinder	Steel	Meets DOT 3AA2300
Valve	Brass	
Safety Relief Valve	Brass	
Valve/Cylinder Assembly		FM Approved UL Listed (EX-4510)
Shipping Cap	Steel	

Shipping Assembly Part No.	Nominal Cylinder Size ft.3	(m3)	Actual INERGEN Agent Quantity ft.3	m3	Approximate Weight lb.	(kg)	Dimension A in.	(cm)	Dimension B in.	(cm)
Shipping Assemblies – Red Standard Paint										
426147	200	(5.7)	205	(5.8)	128	(58)	52.7	(129)	8.5	(21.6)
426148	250	(7.1)	266	(7.5)	169	(77)	57.7	(147)	9.3	(23.5)
426149	350	(9.9)	355	(10.1)	217	(98)	59.7	(152)	10.7	(27.3)
426620	LC-350	(9.9)	355	(10.1)	217	(98)	60.2	(152.9)	10.5	(26.7)
426594	LC-425	(12.0)	429	(12.1)	246	(111.6)	70.5	(179.1)	10.5	(26.7)
426150	435*	(12.3)	439	(12.4)	260	(117.9)	66.9	(170.0)	11.0	(27.9)
Shipping Assemblies – Red Corrosion Resistant Paint										
426256	200	(5.7)	205	(5.8)	128	(58)	52.7	(129)	8.5	(21.6)
426257	250	(7.1)	266	(7.5)	169	(77)	57.7	(147)	9.3	(23.5)
426258	350	(9.9)	355	(10.1)	217	(98)	59.7	(152)	10.7	(27.3)
426621	LC-350	(9.9)	355	(10.1)	217	(98)	60.2	(152.9)	10.5	(26.7)
426595	LC-425	(12.0)	429	(12.1)	246	(111.6)	70.5	(179.1)	10.5	(26.7)
426259	435	(12.3)	439	(12.4)	260	(117.9)	66.9	(170.0)	11.0	(27.9)

* NOTE: For Shanghai version, order Part No. 430935.

Canadian TC Approved

Shipping Assembly Part No.	Nominal Cylinder Size ft.3	(m3)	Actual INERGEN Agent Quantity ft.3	m3	Approximate Weight lb.	(kg)	Dimension A in.	(cm)	Dimension B in.	(cm)
Shipping Assemblies – Red Enamel Paint										
426712	200	(5.7)	205	(5.8)	128	(58)	52.7	(129)	8.5	(21.6)
426713	250	(7.1)	266	(7.5)	169	(77)	57.7	(147)	9.3	(23.5)
426714	350	(9.9)	355	(10.1)	217	(98)	59.7	(152)	10.7	(27.3)
427551	LC-425	(12.0)	429	(12.1)	246	(111.6)	70.5	(179.1)	10.5	(26.7)
426715	435	(12.3)	439	(12.4)	260	(117.9)	66.9	(170.0)	11.0	(27.9)
Shipping Assemblies – Red Epoxy CR Paint										
426716	200	(5.7)	205	(5.8)	128	(58)	52.7	(129)	8.5	(21.6)
426717	250	(7.1)	266	(7.5)	169	(77)	57.7	(147)	9.3	(23.5)
426718	350	(9.9)	355	(10.1)	217	(98)	59.7	(152)	10.7	(27.3)
427552	LC-425	(12.0)	429	(12.1)	246	(111.6)	70.5	(179.1)	10.5	(26.7)
426719	435	(12.3)	439	(12.4)	260	(117.9)	66.9	(170.0)	11.0	(27.9)

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CV-98 INERGEN Valve

The CV-98 valve has a ten (10) year warranty. **The valve requires no internal maintenance.** The valve is sealed closed and must not be disassembled. If there is ever a malfunction of the CV-98 valve, the complete valve must be sent back to Ansul for warranty replacement. **If the external seal is broken, the warranty is voided.**

NOTE: Use Flexible Discharge Bend, Part No. 427082, when attaching valve to supply pipe or manifold.

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CV98/CV90/AP-8 Valve Flexibl

Date: 07/17/13

Description

The CV98/CV90/AP-8 valve Flexible Discharge Bend (Part No. 427082) is a 5/8 in. (1.59 cm) I.D. extra-heavy flexible hose which connects the valve discharge outlet to the fixed piping or header manifold. The discharge bend has a female 1.3-12-UN-3B thread for connecting to the valve outlet and a male 1/2 in. NPT thread for connecting to the fixed piping or manifold. The discharge bend will withstand a pressure of 9000 psi (621 bar). Its flexible connection allows for easy alignment of multiple cylinder banks to fixed piping. Each bend has a built-in check valve that prevents loss of agent should the system discharge while any cylinder is removed.

Shipping Assembly Part No.	Description
427082	Flexible discharge bend
842430	Washer

Component	Material	Thread Size/Type		Approvals
		Valve End	Manifold End	
5/8 in. Flexible Discharge Bend	SAE 100 R2 Type AT	1 5/16-12-UN-3B Female	1/2 NPT Male	U.S. Coast Guard (162.038/7/0) UL (EX-2968) FM Approved

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Valve E

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Date: 07/17/13

Description

Electrical actuation of an agent cylinder and/or selector valves is accomplished by an HF electric actuator interfaced through an AUTOPULSE® Control System. This actuator can be used in hazardous environments where the ambient temperature range is between 0 °F to 130 °F (–18 °C to 54 °C). The HF electric actuator meets the requirements of N.E.C. Class I, Div. 1, Groups B, C, D and Class II, Div. 1, Groups E, F, G. A maximum of two HF electric actuators can be used on a single AUTOPULSE release circuit. When utilizing only one HF electric actuator, an in-line resistor, Part No. 73606, is required in the supervised release circuit.

The actuator specifications are:

Nominal Voltage	Rated Voltage Minimum	Rated Voltage Maximum
12 VDC @ 0.57 amps	10.4 VDC*	14.0 VDC

In auxiliary or override applications, a manual-local override valve actuator or a manual cable pull actuator can be installed on top of the HF electric actuator by removing the safety cap.

A reset tool is required to reset the actuator after operation. The actuator contains a standard 1/2 in. threaded female straight connector for electrical conduit hookup.

Shipping Assembly Part No.	Description
73327	HF electric actuator
75433	HF Reset Tool

Component	Material	Thread Size/Type	Approvals
HF Electric Actuator	Body: Brass Plunger: Stainless Steel	1/2 in. Straight Female	UL (EX-4510) FM Approved

*Minimum operating voltage is 9.0 VDC.

Description

The Booster Actuator, Part No. 428949, is used when electric actuation is required on the selector valve or the CV-98 cylinder valve. The actuator mounts directly to the component and then a HF electric actuator mounts to the top of the booster actuator.

The Booster Actuator requires resetting after actuation. A Reset Tool, Part No. 429847, is available for this use.

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Pressur

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Date: 07/17/13

Description

The pressure reducer/union is required to restrict the flow of INERGEN® agent thus reducing the agent pressure down stream of the union. The 3000 psi (206.9 bar) NSCWP union contains a stainless steel orifice plate which is drilled to the specific size hole required based on the flow calculation.* The orifice plate provides readily visible orifice identification. The orifice union is available in six sizes: 1/2 in., 3/4 in., 1 in., 1 1/4 in., 1 1/2 in., and 2 in. NPT.

All pressure reducer/unions must be installed in the piping with the orifice identification tab on the pressure inlet side of the system. The 1 1/4 in., 1 1/2 in. and 2 in. orifice unions must be installed per the direction of the flow arrow stamped on the body.

Shipping Assembly Part No.	Description	A	B	C
416677	1/2 in. NPT pressure reducer/union	2.06 in. (5.2 cm)	1.18 in. (2.9 cm)	1.95 in. (4.9 cm)
416678	3/4 in. NPT pressure reducer/union	2.38 in. (6.1 cm)	1.50 in. (3.8 cm)	2.38 in. (6.1 cm)
416679	1 in. NPT pressure reducer/union	2.63 in. (6.7 cm)	1.78 in. (4.5 cm)	2.77 in. (7.0 cm)
416680	1 1/4 in. NPT pressure reducer/union	2.94 in. (7.5 cm)	2.04 in. (5.2 cm)	3.31 in. (8.4 cm)
416681	1 1/2 in. NPT pressure reducer/union	3.31 in. (8.4 cm)	2.31 in. (5.9 cm)	3.70 in. (9.4 cm)
416682	2 in. NPT pressure reducer/union	3.56 in. (9.0 cm)	2.85 in. (7.2 cm)	4.39 in. (11.2 cm)

Component	Material	Thread Size	Approvals
Pressure Reducer/ Union	Body: Forged Steel Orifice Plate: Stainless Steel	1/2, 3/4, 1, 1 1/4, 1 1/2, 2 in. NPT	FM Approved UL Listed (EX-4510)

NOTE: Refer to "Nozzle/Pressure Reducer Range Chart" in Design Section for detailed orifice range information.

* Orifice diameter must be specified when placing order.

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Date: 07/17/13

180° Discharge Nozzle

Description

Discharge nozzles are designed to direct the discharge of INERGEN® agent using the stored pressure from the cylinders. Ten sizes of nozzles are available. The system design specifies the orifice size to be used for proper flow rate and distribution pattern*. The nozzle selection depends on the hazard and location to be protected. The 180° nozzle is commonly used when nozzle placement is at the wall. Standard nozzles are constructed of brass.

An index mark is stamped on the bottom of the nozzle to indicate the aiming direction.

Component	Material	Thread Size
Nozzle	Body: Brass	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 NPT

Shipping Assembly Part No.	Description
426138	1/4 in. NPT nozzle
426139	3/8 in. NPT nozzle
426140	1/2 in. NPT nozzle
426141	3/4 in. NPT nozzle
426142	1 in. NPT nozzle
426143	1 1/4 in. NPT nozzle
426157	1 1/2 in. NPT nozzle
426144	2 in. NPT nozzle
426145	2 1/2 in. NPT nozzle
426146	3 in. NPT nozzle

Size	A-In.	B-In.	C-In.
1/4 in.	5/8	1 9/16	21/32
3/8 in.	3/4	1 5/8	23/32
1/2 in.	15/16	1 31/32	27/32
3/4 in.	1 1/8	2 5/32	7/8
1 in.	1 13/32	2 9/16	1
1 1/4 in.	1 3/4	2 3/4	1 1/16
1 1/2 in.	2	2 31/32	1 1/16
2 in.	2 3/8	3	1
2 1/2 in.	3	3 1/2	1
3 in.	3 1/2	4 1/8	1 1/4

NOTE: Refer to "Nozzle/Pressure Reducer Range Chart" in Design Section for detailed orifice range information.

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Stainless Stee

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Description

The Stainless Steel Actuation Hose is used to connect the actuation line flared tees between each agent tank. The hose has the same thread, 7/16-20, as the flared tees. The actuation hose allows flexibility between the rigid actuation piping and the tank valve.

Shipping Assembly Part No.	Description
831809	16 in. (40.6 cm) Stainless Steel Hose
832335	20 in. (50.8 cm) Stainless Steel Hose
832336	24 in. (60.9 cm) Stainless Steel Hose

Component	Material	Thread Size	Approvals
Stainless Steel Hose	Stainless Steel	Female 7/16-20 (Both ends)	UL Listed (EX-4510) FM Approved

Additional actuation fittings are available:

Part No.	Description
831810	Male Elbow (7/16-20 x 1/4 in. NPT)
831811	Male Tee (7/16-20 x 7/16-20 x 1/4 in. NPT)
832338	Male Straight Connector (7/16-20 x 1/4 in. NPT)

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Warning Plate – Inside R

Date: 07/17/13

Description

The warning plate is available for mounting inside the hazard area to warn the personnel to vacate the hazard area when the alarm sounds. The warning plate is furnished with four mounting holes for ease of installation. The plate is constructed of aluminum.

Shipping Assembly Part No.	Description
416265	Warning Plate – inside room with alarm

Component	Material	Mounting Hole Size	Approvals
Warning Plate	Aluminum	1/4 in. (.64 cm)	FM Approved UL Listed (EX-4510)

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Warning Plate – Outside Roor

Date: 07/17/13

Description

The warning plate is available for mounting outside the hazard area to warn the personnel that the space is protected by an INERGEN® system and no one should enter after a discharge without being properly protected. The warning plate is furnished with four mounting holes for ease of installation.

Shipping Assembly Part No.	Description
416266	Warning Plate – outside room

Component	Material	Mounting Hole Size	Approvals
Warning Plate	Aluminum	7/32 in. (.56 cm)	FM Approved UL Listed (EX-4510)

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Cyl

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Description

The cylinder bracketing is designed to rigidly support the installed INERGEN® agent cylinders. The bracketing components are constructed of heavy structural steel. Bracket assemblies are available in modules for two to six cylinders and can also be connected together for any combination over six. Bracketing can be assembled to support single row, double row or back-to-back rows of cylinders. Bracketing components are painted with a red enamel coating. Uprights and back frame assemblies can be bolted or welded together, which ever makes the installation more convenient.

Component	Material	Approvals
Bracketing	Steel	FM Approved UL Listed (EX-4510)

Shipping Assembly Part No.	Description
845120	200 ft.^{3} (5.7 m^3) cylinder strap (single cylinder)
845244	200 ft.^{3} (5.7 m^3) cylinder channel with nuts and bolts (single cylinder)
845121	250 ft.^{3} (7.1 m^3) cylinder strap (single cylinder)
845261	250 ft.^{3} (7.1 m^3) cylinder channel with nuts and bolts (single cylinder)
845122	350 ft.^{3} (9.9 m^3), 425 ft.^{3} (12.0 m^3), 435 ft.^{3} (12.3 m^3) cylinder strap (single cylinder)
845245	350 ft.^{3} (9.9 m^3), 425 ft.^{3} (12.0 m^3), 435 ft.^{3} (12.3 m^3) cylinder channel with nuts and bolts (single cylinder)
879638	Back frame assembly (2 cylinder)
879639	Back frame assembly (3 cylinder)
879640	Back frame assembly (4 cylinder)
879641	Back frame assembly (5 cylinder)
879642	Back frame assembly (6 cylinder)
873257	Upright, for 200, 250, 350, and 435 ft.^{3} (12.3 m^3) cylinders (used either for right side, left side or center (center upright required when connecting seven or more cylinders in a row))
426592	Upright, for 425 ft.^{3} (12.0 m^3) cylinder (used either for right side, left side, or center (center upright required when connecting seven or more cylinders in a row))
873553	Single row or back-to-back row bracket foot (left side)
873554	Single row or back-to-back row bracket foot (right side)
873555	Double row bracket foot (left side)
873556	Double row bracket foot (right side)
418508	Center upright foot
879413	Connector (required to hook together back frames for seven or more cylinders)
873250	10.5 in. (26.7 cm) carriage bolt with nut (for single row 200 ft.^{3} (5.7 m^3) cylinders)
873251	11 in (27.9 cm) carriage bolt with nut (for single row 250 ft.^{3} (7.1 m^3) cylinders)
873252	12.5 in. (31.8 cm) carriage bolt with nut (for single row 350 ft.^{3} (9.9 m^3) and 425 ft.^{3} (12.0 m^3) cylinders)
418502	13 in. (33.0 cm) carriage bolt with nut (for single row 435 ft.^{3} (12.3 m^3) cylinders)
873253	21 in. (53.3 cm) carriage bolt with nut (for double row 200 ft.^{3} (5.7 m^3) cylinders)
873254	22 in. (55.9 cm) carriage bolt with nut (for double row 250 ft.^{2} (7.1 m^3) cylinders)
873255	26 in. (66 cm) carriage bolt with nut (for double row 350 ft.^{3} (9.9 m^3) and 425 ft.^{3} (12.0 m^3) cylinders)
418503	27 in. (68.6 cm) carriage bolt with nut (for double row 435 ft.^{3} (12.3 m^3) cylinders)
873091	Cylinder clamp (2 cylinders)
873092	Cylinder clamp (3 cylinders)
871683	Weigh rail support – single row
871682	Weigh rail support – double row
871684	Weigh rail support – back-to-back rows
423027	Weigh rail support back-to-back double row

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Multi-Cylinder

Single Cylinde

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Simplex

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

Release Control Fire A

4004R Suppression Releasing Pa
Extinguishing, Deluge and Preaction

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Date: 07/17/13

Features

Fire alarm control panel designed specifically for suppression release operation with:

- Four initiating device circuits (IDCs)
- Two notification appliance circuits (NACs)
- Two releasing appliance circuits (RACs)
- Two special purpose monitor inputs (SPMs) that accept manual release request and manual abort request for Agent Release systems, and waterflow and supervisory for Preaction or Deluge systems
- Three auxiliary relays with selectable functions
- Easily selected activity timing options

Suppression release operation includes:

- Automatic extinguishing release
- Deluge and preaction sprinkler system release
- Dual or single hazard area protection
- *Combined agent release* ***and*** *preaction operation***
- IDCs are selectable for cross-zoning or for activation from a single detection input
- Short circuit RAC supervision
- Compatible with Listed/Approved 24 VDC or 2, 12 VDC series connected actuators

Audible Escalation of Events:

- Single Audible Appliance Tone: Stage 1 activates Temporal or 20 bpm March Time pattern; Stage 2 activates 120 bpm March Time pattern to indicate release timer active; Release activates On Steady to indicate release timer expired and actuator is activated
- *Dual Audible Appliance Control*** (Single Hazard): RAC 2 provides a third NAC for dedicated Stage 1 Bell control; NACs 1 & 2 indicate release as On Steady

Operator interface provides:

- Status LEDs per circuit for Alarm, Trouble, and Supervisory (where appropriate)
- Acknowledge, Alarm Silence, and System Reset
- Operating mode selection and timer selections when in programming mode

Related system components:

- Coil supervision module 2081-9046, one per RAC
- Maintenance Switch, one per RAC
- Abort Switch

Listed to

- UL Standard 864 and ULC Standard S527

Introduction

Dedicated for Suppression Release. 4004R Suppression Release Panels provide conventional fire alarm control circuits and are equipped with the features required for a wide variety of single or dual hazard suppression release applications. Capabilities include automatic extinguishing agent release and deluge and preaction sprinkler control.

** Requires Software Revision 4.01 or higher.

4004R Suppression Release Panel
One-Line System Reference Drawing

Introduction *(Continued)*

Flexible I/O Capabilities. Four IDCs allow for either four separately monitored zones or two, cross-zoned connections. Two SPMs allow dedicated manual inputs for release or abort; for waterflow and supervisory, or release/abort and pressure, depending on system type. Two releasing appliance circuits (RACs) supervise to the actuator coils and activate the actuators when required. The two NACs and the three panel auxiliary relays provide status condition information.

Easy Program Selections. The operator panel has a program mode that allows selection of panel operation type and detailed operating selections using an easily selected sequential programming operation.

History Log. The last 50 events are stored in non-volatile memory. This information is accessed by connecting a technician's computer to the service port which is also used to set the date and time.

Panel Feature Description

Operator Panel. The operator panel has alarm and trouble status indicating LEDs for each input and output, visible through the locking cabinet door (refer to diagram on page 4). Unlocking the door provides access to the Acknowledge, Alarm Silence, and System Reset pushbutton switches.

* 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 7165-0026:314 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

Panel Feature Description *(Continued)*

(Refer to specifications on page 6 for more information.)

Four Class B IDCs provide coverage for either two cross-zoned areas or four separately zoned areas. IDCs are capable of supporting up to 30 Simplex current-limited smoke detectors or electronic heat detectors (see list on page 2) as well as manual stations and other compatible contact closure initiating devices. IDCs are capable of Class A operation with an optional adapter module and can be programmed as Style C (short or open initiates a trouble) for use with current limited devices only. Single hazard agent release applications monitor pressure switches with IDC 3 and tamper switches with IDC 4.

Two Class B Special Purpose Monitoring Circuits (SPMs) are dedicated for manual release or abort, waterflow and supervisory, or release/abort and pressure, depending on system type. Inputs are normally open switches. An abort switch stops release while activated and upon deactivation, the release operation occurs after a selectable time delay. Manual release inputs override abort switches and activate the release after selectable delays of from 0 to 30 seconds in 5 second increments. For Dual Hazard applications, current limited abort operation is required. SPMs are programmable as Style C and capable of Class A operation with the optional adapter module.

Two Class B NACs are provided for reverse polarity, notification appliance operation, each rated 2 A. Class A operation is available with the optional adapter module. NAC operation is selectable per application. Synchronized strobe operation requires a separate 4905 Series Strobe Synchronization Module (see product selection below), and a continuous, steady-on (non-coded) input from the NAC.

Two Class B Releasing Appliance 2 A each, these circuits are dedicat control actuators. RAC cutout timi cutout, 45 seconds, or 1, 3, 3.5, 4, 5 or 64 minutes. For bell/horn/strobe applications, RAC 2 functions as a

Auxiliary Power Output. Two sets provided, one for continuous opera resettable operation, rated for 750 r Resettable terminals are provided for 4-wire smoke detector power.

Standard Panel Auxiliary Relay Outputs. Three relay outputs are available, selectable as normally open or normally closed, rated 2 A @ 30 VDC, 0.35 p.f. inductive:

Aux Relay 1 (Trouble) is energized when Normal and is de-energized with a common Trouble condition.

Aux Relays 2 and 3 respond differently depending on the system type and whether single or dual hazard. Typical functions are:

For Single Hazard Operation, Aux Relay 2 is the common Alarm relay. Aux Relay 3 can be selected to indicate pre-discharge (release time delay started), common supervisory, waterflow, or pressure switch relay, depending on the system type.

For Dual Hazard Operation, Aux Relay 2 is for Hazard Area 1 common Alarm; Aux Relay 3 is for Hazard Area 2 common Alarm.

Power Supply and Battery Charger. During alarm, the power supply provides 3 A at 25.5 VDC, filtered and regulated. The temperature compensated battery charger provides 27.5 VDC for charging batteries suitable for up to 90 hour standby and 10 minutes of alarm. External battery chargers and cabinets can be used for more battery backup.

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Product Selection

Release Control Panels

Model	Color	Listings	Description
4004-9301	Beige	UL, ULC, CSFM, & FM	Basic Releasing Panel; operates with AC input of: 120/220/230/240 VAC, 50/60 Hz (auto-select); includes: four IDCs, two NACs, two SPMs, two RACs, 3 auxiliary relays, and 3 A power supply with battery charger, cabinet and door
4004-9302	Red	UL, ULC, CSFM, FM, & MEA (NYC)	

Expansion Modules

Model	Description	Reference	
4004-9860	Auxiliary Relay Module; four dual contact relays selectable as N.O. or N.C.; rated 7 A @ 120 VAC resistive, 5 A @ 30 VDC, 0.35 p.f. inductive; unsupervised contacts	Two maximum	Select as required
4004-9864	Two Circuit Class A Adapter Module for IDCs, SPMs, or NACs	Four maximum	

System Batteries (See data sheet S4081-0001 for external battery cabinets with chargers and for larger battery sizes)

Model	Description	Reference
2081-9272	6.2 Ah battery, 12 V	Select one battery model per system standby requirements; two batteries are required
2081-9274	10 Ah battery, 12 V	
2081-9288	12.7 Ah battery, 12 V	

Release Control Systems Accessories (refer to additional information listed on page 3)

Model	Description
2081-9046	Coil Supervision Module, **one required per RAC**; refer to pages 6 and 7 for detail
2081-9048	Abort Supervision Module; encapsulated 560Ω, 1/2 W resistor; for Dual Hazard SPM; allows non-current limited Abort and Manual Release stations to be on same circuit; refer to pages 6 and 7 for detail
4081 Series	End-of-Line Resistor Harnesses; refer to data sheet S4081-0003
2099 Series	Manual Stations for Releasing Applications; refer to data sheet S2099-0010
4905-Series	Strobe synchronization modules; 4905-9914 for Class B, 4905-9922 for Class A; see data sheet S4905-0003 for details

Reference Information, Compatible Simplex Detectors and other System Comp

Model	Type			
4098-9601	Standard detector		Photoelectric smoke detectors for 2-wire and 4-wire bases	
4098-9605	Reduced sensitivity detector			
4098-9602	Combination smoke and heat detector			
4098 Series	Ionization Smoke Detectors; 2-wire and 4-wire models			
4098-9612	135° F (57°C)	Fixed heat detector	Electronic heat detectors for 2-wire and 4-wire bases	S4098-0014
4098-9614	200° F (93°C)			
4098-9613	135° F (57°C)	Fixed with rate-of-rise heat detector		
4098-9615	200° F (93°C)			
2099-9149	Standard		Manual Release Station with selectable release labels; double action push, N.O. contact	S2099-0010
2099-9152	Style C, with 560 Ω internal resistor			
2080-Series	Maintenance Switches, flush or surface mount; indicator lamps require 24 VDC wiring			S2081-0010
	Abort Switches, surface or flush mount; available standard or with 1.2 kΩ, 1 W resistor			

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Expansion Modules and Accessories

Auxiliary Relay Module 4004-9860 provides four additional relays. Dual hazard applications will require two modules for auxiliary relay operation. Each relay module has a manual disconnect switch that controls relays 2 through 4. (Trouble Relay 1 is not controlled.) Relay outputs are required to be connected to a 15 A maximum circuit breaker. (Relay specifications are detailed on page 6.)

Auxiliary Relay Module Operation:

Relay 1 activates on a common **trouble** associated with its hazard or a system trouble.

Relay 2 activates on a common **alarm** associated with its hazard.

Relay 3, selected for *original* operation, activates for pressure switch, waterflow switch, or release timer as required per application type (hazard specific), or activates with the second zone for cross-zoned systems (hazard specific). "Original" operation allows direct panel replacement if required.

Relay 3, **selected for *enhanced* operation,** (software 4.01 or higher)**,** activates to indicate pre-discharge, supervisory, or waterflow (application specific).

Relay 4 activates when the hazard specific RAC activates or with pressure switch input (application specific).

Dual Circuit Class A Adapter Module 4004-9864. This module converts two Class B circuits to Class A operation. It consumes no additional current and is compatible with IDCs, SPMs, and NACs. Up to four modules may be mounted within the 4004R cabinet.

Abort Switches. For manual abort requests, these abort switches are available with or without a built-in 1.2 kΩ, 1 W resistor and are mounted on single-gang stainless steel plates. Abort switches are connected to the SPM inputs per system requirements.

Activity abort occurs while the switch is pushed and continues after releasing the switch for the selected Abort Release Time Delay. (See drawing below.)

Maintenance Switch. Proper service of release appliance circuits requires the ability to securely disconnect the release circuit during installation and maintenance. Simplex maintenance switches are controlled by keyswitch and initiate a supervisory condition when in disconnect/disable position. Models with lamp are on a double-gang plate and are powered from separate 24 VDC wiring. Mounting is on stainless steel plates and models are available as either surface or flush mount. (See drawing below.)

For additional Maintenance and Abort Switch information refer to data sheet S2080-0010.

Abort Switch

Maintenance Switch

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Programming Modes and Selection Choices

Sequence	Select one of 13 Application Modes *(numbered 1 through 13 in italics)*				
1	Agent Release	Single Hazard	Cross-Zoned	*1*	Combined (RACs acti
			Either Zone	*2*	
		Dual Hazard	Cross-Zoned	*3*	Independe separate)
			Either Zone	*4*	
	Preaction/Deluge	Single Hazard	Cross-Zoned	*5*	Combined (RACs acti
			Either Zone	*6*	
		Dual Hazard	Cross-Zoned	*7*	Independent Release (RACs are separate)
			Either Zone	*8*	
	Agent Release; Single Hazard	Cross-Zoned	*9*	NYC Abort (not UL listed)	
	Agent Release & Preaction; Single Hazard	Cross-Zoned	*10*	RAC 2 provides Preaction Control; RAC 1 is Agent Release Control	
		Either Zone	*11*		
	Agent Release, Bell/Horn/Strobe; Single Hazard	Cross-Zoned	*12*	RAC 2 operates as NAC 3 for Stage 1 Bell Control (separate sound from release alarm)	
		Either Zone	*13*		

Sequence	Programming Mode Description		Description	
2	Select Relay Operation for Application Modes 1-9		Select “Original” operation mode or “Enhanced" mode (refer to Auxiliary Relay 3 information on page 3 for details)	
3	IDC and SPM Circuit Style		Class B/Class A or Style C	
4	Automatic Release Time Delay		Selectable in 5 second increments from 0 to 60 seconds (default is 60 seconds)	
5	RAC Cutout Timer		No cutout, 45 seconds, or 1, 3, 3.5, 4, 5, 6, 7, 21, 25, 34, 44, or 64 minutes	
6	Manual Release Time Delay		0, 5, 10, 15, 20, 25, or 30 seconds	
7	Abort Release Time Delay		UL Standard 864 listed	Immediate or 10 seconds remaining
			Not UL Standard 864 listed	IRI abort (cross-zoned systems only), NYC abort, or original release delay
8	NAC Coding (where selectable)		Temporal pattern or 20 beats per minute (first cross-zone alarm)	
9	NAC Operation	Standard Operation	No inhibit or one minute inhibit selected as: both on until silence, NAC 1 on until reset and NAC 2 on until silence, or both on until reset;	
		Pre-Discharge Operation	**NOTE:** For Halon 1301, Halon 1211, or clean agent release, a pre-discharge NAC must be configured to warn of impending discharge, the release timer selects the duration of the pre-discharged signal	
10	Supervisory Latching		Latching or non-latching	
11	Supervisory Notification		LED and tone-alert only, or with: NAC 2 also on; Aux Relay 3 also on; or both NAC 2 and Aux Relay 3 also on	

Operator Panel Function Reference

Release Control System Reference

Automatic Extinguishing Release Systems automatically activate actuators for the release of a fire extinguishing agent (dry chemical, water spray, foam, CO_2, Clean Agent, etc.) in response to fire detection device input.

Automatic Extinguishing Release Systems with Separate Bell Control (single hazard) (SW rev. 4.01 or higher). RAC 2 operates as a bell control NAC. When cross-zoned, stage 1 alarm activates the bell until the release timer starts. When not cross-zoned, stage 1 alarm activates the bell until expiration of the release timer. In both cross-zoned and non cross-zoned applications, NAC2 may be programmed to indicate either a tamper switch supervisory condition or the start of the release timer using a cadence pattern operation.

UL and FM Extinguishing Release System Panels must have a minimum of 24 hours of standby power. Initiating devices must be Listed/Approved for the application, and may be wired either Class A or B. Actuators must be electrically compatible with the control panel circuits and power supplies, and are wired Class B to provide coil supervision. (See details in next section.)

Deluge and Preaction Sprinkler Systems automatically activate water control valves in response to fire detection device input.

Deluge Sprinkler Systems employ open sprinkler heads and provide water flow when the fire detection system activates a common automatic water control valve. They are used to deliver water simultaneously through all of the open sprinkler heads. This type of system is applicable where the immediate application of large quantities of water over large areas is the proper fire response.

Preaction Sprinkler Systems are similar to deluge systems except that normally closed sprinkler heads are used and supervisory air pressure is maintained in the pipe. Operation requires both an activated sprinkler head and an activated fire alarm initiating device.

Combined Agent Release and Preaction Systems provides agent release *and* preaction control. (Available with software revision 4.01 or higher.) For applications where agent release may not be sufficient for fire control, sprinklers are put in preaction mode to allow waterflow to continue the fire response. (Preaction is assumed, selected deluge could be provided, determined by the sprinkler installation, panel operation is the same.)

UL requirements for Fire Alarm Systems Listed for Automatic Release or Deluge and Preaction Sprinkler Systems are the same as described above for Automatic Extinguishing Release Systems.

FM Approved requirements for Fire Alarm Systems for Automatic Release of Deluge and Preaction Sprinkler Systems require operation of specific compatible FM Approved Automatic Water Control Valves, a minimum secondary power capacity of 90 hours, and all circuits for the automatic release initiating devices must be capable of operation during a single open circuit fault condition (Class A).

Release Control System Re

1. Actuators are connected as two-
   notification/releasing circuits **w**
   actuator per circuit to ensure s
   applicable, two, 12 VDC actuat
   12 VDC actuator and a manufac
   resistor may be used.
2. Coil Supervision Module, mode
   wired electrically before the actuator and located in the actuator wiring junction box. (See diagram on page 7.)
3. For UL Listed Automatic Extinguishing Release valves and actuators, refer to list on page 7.
4. For FM Approved Automatic Extinguishing Release, secondary standby must be a minimum of 24 hours with 5 minutes of alarm. Actuators must be electrically compatible.
5. For FM Approved Deluge and Preaction Sprinkler operation: IDCs must be Class A, wired to Listed/Approved devices; secondary standby capacity must be a minimum of 90 hours with 10 minutes of alarm; and the specified compatible Automatic Water Control Valves/Actuator must be used. (See list on page 8.)
6. Power supply loading and wiring distances must be per Installation Instructions 579-354.
7. Battery standby must be selected for proper actuator operation and may require a minimum voltage of 23 VDC depending on the actuator. Detailed battery calculation reference information is contained in Installation Instructions 579-354.
8. Maintenance Switches, one per RAC, are required per NFPA 72®, the *National Fire Alarm Code®*, to allow the system to be tested or serviced without actuating the fire suppression systems. *Their use may not be allowed in some jurisdictions, always confirm local requirements.* When used, Simplex Maintenance Switches are required to ensure that operation initiates a supervisory condition.

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Additional System Device Information

1. Simplex Abort Switches are available when abort operation is required. When used, wire on Special Purpose Monitoring Circuits (SPMs) as Class A or Class B; Simplex model Abort Switches are required.
2. Manual Release Stations are used for direct activation of the release actuators with the appropriate time delay implemented by the fire alarm control panel.
3. See pages 2 and 3 for additional reference information.

Additional Information

This data sheet is a summary of the extensive operating features and options available with the 4004R Release Control Panel. Complete details are covered in the *4004R Installation, Programming, and Operating Instructions* manual (publication 579-354) shipped with each 4004R. Compatible system devices are listed on page 3. For general information, refer to Factory Mutual Research Corporation (FMRC) "FMRC Approval Guide," FM Approval standard "Deluge Systems and Preaction Systems."

PLEASE NOTE: *Proper operation of release control systems requires that the system design, installation, and maintenance be performed correctly and in accordance with all applicable local and national codes, and equipment manufacturer's instructions. No liability for total system operation is assumed or implied.*

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Specifications (Refer to diagram on page 7 and Instructions 579-354 for additional information)

Power Ratings		
AC Input	Voltage Ratings	120 VAC, 60 Hz; 220/230/240 VAC, 50/60 Hz, auto-select
	Current Ratings	2 A maximum @ 120 VAC input; 1 A maximum @ 240 VAC i
Power Supply Output		3 A maximum available for external loads
Battery Charger		Temperature compensated, capable of recharging batteries r standby and 10 minute alarm (contingent on auxiliary power l
Standby Current		100 mA; with IDCs fully loaded, tone-alert silenced, trouble LE
Alarm Current		264 mA + external loads; (2 zones in alarm & 2 internal relays, NACs and RACs on)
Standard Circuit Ratings (**NOTE:** Total DC current = 3 A maximum; see NAC ratings for details)		
Initiating Device Circuits (IDCs)	Supervisory	3 mA maximum; 3.3 kΩ end-of-line resistor per circuit
	Alarm Current	75 mA maximum
	Output Voltage	28 VDC maximum
	Capacity	Each IDC supports up to 30 detectors (smoke or electronic heat) and manual stations as required; wiring distance is limited to 50 Ω maximum
Special Purpose Monitoring Circuits (SPMs)	Application	For Manual Release, Abort Switches, or Supervisory functions only; not for detectors; wiring distance is limited to 50 Ω maximum
	For Dual Hazard Applications	Dual Hazard Application Abort Switches require a current limiting resistor of 1.2 kΩ, 1 W, or an external Abort Supervision Module per SPM
	Supervisory	6 mA; 3.3 kΩ end-of-line resistor per circuit
	Activated	75 mA maximum
	Output Voltage	28 VDC maximum
Notification Appliance Circuits (NACs)	Alarm Current	Special Application appliance rating = 2 A maximum on a NAC **NOTE:** Special Application appliance rating = full 3 A power supply rating
		Regulated 24 DC appliance power = 1.5 A maximum on a circuit **NOTE:** Regulated 24 DC **strobe** load = 1.35 A maximum total for power supply
	Output Voltage	Alarm = 26 VDC max.; supervisory = 29 VDC maximum; 10 kΩ end-of-line resistor
	Synchronized Strobe Operation	Requires NAC dedicated to strobe control with non-coded output; use an external Synch Module (4905-9914, Class A, or 4905-9922, Class B, see data sheet S4905-0003 for details); up to 33 strobes can be synchronized per 4004R
Notification Appliance Reference	Special Application Appliances	Simplex 4901 Series horns, 4904 and 4906 Series strobes, 4903 Series 4-wire horn/strobes; refer to Installation Instructions 579-354 for additional details
	Regulated 24 DC Appliances	Power for other appliances listed to UL Standard 1971 or UL Standard 464; use associated external synchronization modules where required
Release Appliance Circuits (RACs)	Output Current	2 A maximum per circuit
	Output Voltage	Activated = 26 VDC maximum; non-alarm = 29 VDC maximum; 10 kΩ end-of-line resistor
Auxiliary Power Output; for Special Application loads only		Two outputs are available, continuous operation or resettable operation; combined output is 750 mA maximum; output voltage = 19.25 to 27 VDC
Auxiliary Relay Outputs (Trouble, Aux Relay 2, Aux Relay 3)		Contacts rated 2 A @ 30 VDC, 0.35 p.f., inductive, selectable as N.O. or N.C. by jumper
Wiring Connections for Above and AC Input		Terminals rated for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2)
Auxiliary Module Ratings		
Class A Adapter Module 4004-9684		Two circuits per module, rated same as circuits; not applicable to RACs (no additional current required)
Auxiliary Relay Module 4004-9860	Relay Type	Four relays with two outputs per relay; individually selectable as N.O. or N.C.
	AC Ratings	7 A @ 120 VAC, resistive
	DC Ratings	5 A @ 30 VDC, 0.35 power factor, inductive
	Module Current	12 mA standby; 70 mA with all four relays energized; @ 24 VDC
	Wiring	Terminals rated for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2)
2081-9046 Coil Supervision Module and 2081-9048 Abort Supervision Module (see page 7 for additional details)		
Construction		Epoxy encapsulated
Dimensions		1-3/8" W x 2-7/16" L x 1-1/16" H (34 mm x 62 mm x 27 mm)
Wiring		18 AWG (0.82 mm^2) wire leads, color coded
Coil Supervision Module Current Rating		2 A maximum; internally fused at 3 A, non-replaceable
Abort Supervision Module Resistance		560 Ω, 1/2 W
Environmental Ratings		
Operating Temperature Range		32° to 120°F (0° to 49° C)
Operating Humidity Range		up to 93% RH, non-condensing @ 100.4° F (38° C) maximum

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4004R System Connection Reference

GENERAL WIRING NOTE:

Wiring shown is for reference only, refer to installation instructions for detailed wiring information.

Compatible UL Listed Valves and Actuators

MFG.	Model Number	MFG.	Model Number
ANSUL	*AUTOMAN II-C Assembly (solenoid 17728; coil 25924)	ASCO	8210A107 (097617-005D coil) 1/2” NPS, 5/8” orifice, 24 VDC
	AUTOMAN II-C Explosion-Proof Releasing Device (solenoid 31492; coil 31438)		8210G207 (238310 coil) 1/2” NPS, 1/2” orifice
	*AUTOMAN II-C Assembly (solenoid 68739; coil 25924)		8211A107 (097617-005D coil) 24VDC
	Solenoid Electric Actuator (solenoid 73111; coil 73097)		HV2628571 (23810 coil) N.C. 1/2” NPS, 1/2” orifice
	*CV90 HF Electric Actuator 73327 (may use 73606 in-line resistor)		HV2648581 (23810 coil) N.O. 1/2” NPS, 1/2” orifice
			R8210A107 (097617-005D coil) 1/2” NPS, 5/8” orifice
	LP CO2 w/ASCO solenoid 422934		T8210A107 (097617-005D coil) 1/2” NPS, 5/8” orifice
	LP CO2 double action 24 VDC solenoid 430948	Pyro-Chem	ECH Electrical Control Head (551201)
	LP CO2 3-way selector valve solenoid 433419		Explosion-Proof Electric Actuator (570147)
	Electric Actuator 24 VDC solenoid 570537		Removable Electric Actuator (570209) 0.2 A
Skinner	71395SN2ENJ1NOH111C2 (Skinner coil H111C2) 1/4”, NPS, 1/16”		
	73212BN4TN00NOC111C2 (Skinner coil C111C2) 1/2”, 5-300 psi		
	73212BN4TNLVNOC322C2 (Skinner coil C322C2) 1/2”, NPS, 0.92 A, 250 psi		
	73218BN4UNLVNOH111C2 (Skinner coil H111C2)		
	73218BN4UNLVNOC111C2 (Skinner coil C111C2) 1/2”, NPS, 5/8 in. orifice		
Star Sprinkler	Model D deluge valve, with solenoid 5550		

* 12 VDC coils, either wire two in series for 24 VDC activation, or, if available from manufacturer, use series resistor

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FM Approved Water Control Valves

Group	Manufacturer	Model Number	Details
A	Skinner	LV2LBX25*	24 VDC, 11 W, 458 mA, 1/2 inch NPS, 1/2 inch orifice
B	ASCO	T8210A107	24 VDC, 16.8 W, 700 mA, 1/2 inch NPS, 5/8 inch orific
		R8210A107	
		8210A107	
C	Star Sprinkler	5550	24 VDC, part of Model D deluge valve
D	ASCO	8210G207	24 VDC, 10.6 W, 440 mA, 1/2 inch NPS, 1/2 inch orific
E	Skinner	73218BN4UNLVNOC111C2*	24 VDC, 10 W, 420 mA, 1/2 inch NPS, 5/8 inch orifice
		73212BN4TN00N0C111C2	24 VDC, 10 W, 420 mA, 1/2 inch NPS, 5/8 inch orifice; 5-300 psi
F	Skinner	73212BN4TNLVNOC322C2	24 VDC, 22 W, 1/2 inch NPS, 920 mA, 250 psi (1725 kPa), 1/2 inch orifice
G	Skinner	71395SN2ENJ1NOH111C2	24 VDC, 10 W, 420 mA, 1/4 inch NPS, 1/16 inch orifice, 250 psi (1725 kPa) rated working pressure
I	Vitaulic	Series 753-E solenoid valve	24 VDC, 8.7 W, 1⁄2 inch NPS, 364 mA, 300 psi (2069 kPa), 1⁄2 inch orifice
J	Viking	11591 and 11592	Normally closed (NC) — Explosion proof solenoid valves, 24 VDC, 10 W, 1⁄2 inch NPS, 300 psi (2069 kPa), 4.1 Cv
		11595 and 11596	Normally open (NO)
K	Viking	11601 and 11602	NC solenoid valve, 24 VDC, 9 W, 1⁄2 inch NPS, 250 psi (1725 kPa), 6.2 Cv

* For new applications, LV2LBX25 has been replaced by model number 73218BN4UNLVNOC111C2.

Mounting Reference Information

(Front view module placement reference showing mounting hole dimensions, optional Class A adapter modules, and optional relay modules)

(Top and side views are shown with door installed)

NOTE: For semi-flush mounting, cabinet must extend 1-1/2" (38 mm) minimum from wall surface

NOTE: A system ground must be provided for Earth Detection and transient protection devices. This connection shall be made to an approved, dedicated Earth connection per NFPA 70, Article 250, and NFPA 780.

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Multi-Application Pe
and Acc

Batteries a

System Batteries, 6.2

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FEATURES

- **Rechargeable, sealed lead-acid design:**
  - Lead-calcium grid structure
  - Immobilized electrolyte in absorbent separator
  - High reliability dual seal construction
  - Low maintenance, no need to add water
  - Low self-discharge characteristics
- **One-piece, high impact polystyrene cell cover**
- **UL 924 recognized pressure relief valves**
- **Available in a variety of capacities**

Sealed Lead-Acid Batteries for Panel Mounting

DESCRIPTION

Simplex rechargeable sealed-lead acid batteries provide reliable and repeatable discharge and recharge characteristics for use in fire alarm and other systems applications. They are designed with immobilized electrolyte in an absorbent separator, allowing them to provide rated capacity on the first cycle.

Because of their sealed construction, packaging is allowed within the system electronics enclosure (see Figure 1, page 2). When this is applicable, the quantity of system cabinets and the battery wiring distances are both minimized.

SPECIFICATIONS

Nominal Voltage Rating.....12 V/battery

Discharge Rating.....20 Hour Rate

Typical Charge/Discharge Cycles.....100 to 150

Preferred Charge Temperature Range ....60° F to 90° F (15.6° C to 32.2° C)

– These batteries meet the requirements of UL, ULC, and Factory Mutual for use with respective equipment battery chargers as listed on page 3. Contact Simplex for proper battery selection per system requirements.

APPLICATIONS

Charging. These batteries are intended to be used with compatible Simplex battery chargers.

Series Connections. These batteries are required to be connected in series to produce 24 V system voltage. Battery sets must be of identical voltage, model number, appearance, and approximately the same date of manufacture for proper operation.

Testing. Battery capacity testing is recommended to be performed by using a sealed lead-acid battery tester designed to withdraw a minimum of battery charge. The preferred tester applies a variety of amplitude and duration controlled test pulses that compares terminal voltage against those predicted for the specific battery size. (Testing is available through Simplex Service.)

Disposal. Battery chemicals and materials can be recycled. Refer to information shipped with the battery or on its case. Return to the battery manufacturer or to a similarly qualified battery processing facility for proper disposal.

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SEALED LEAD ACID BATTERY CONSTRUCTION DETAILS:
(actual appearance will vary with battery size)

Figure 1. Battery Construction Reference

BATTERY SPECIFICATIONS AND SELECTION CHART

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Battery Mechanical Specifications*

	Ah, 20 Hour Rate (Ah)			Height with Terminals	
2081-9272	**6.2**	6 1/8” (156 mm)	2 5/8” (67 mm)	4” (102 mm)	
2081-9274	**10**	6” (153 mm)	4 1/16” (103 mm)	4” (102 mm)	
2081-9288	**12.7**	6” (153 mm)	4” (102 mm)	4” (102 mm)	9 lbs (4.1 kg)
2081-9275	**18**	7 1/4” (184 mm)	3 3/8” (86 mm)	6 5/8” (168 mm)	14.3 lbs (6.5 kg)
2081-9287	**25**	6 5/8” (168 mm)	5” (127 mm)	7” (178 mm)	19.4 lbs (8.8 kg)
2081-9271 (rectangular)	**33**	12 1/2” (318 mm)	3 3/8” (86 mm)	7 1/16” (179 mm)	26.6 lbs (12.1 kg)
2081-9276 (square)	**33**	7 3/4” (197 mm)	5 1/4” (133 mm)	6 3/4” (171 mm)	26.5 lbs (12 kg)
2081-9296	**50**	9 1/2” (241 mm)	5 1/2” (140 mm)	8 7/8” (225 mm)	41.8 lbs (19 kg)

* Dimensions and weight are per battery and are for reference only. Exact size may vary. Refer to the chart below for panel mounting compatibility. These batteries are 12 V each and series connected for 24 V system use. **When installed in a fire alarm control panel, they are to be of identical voltage, appearance, model number, and approximately the same date of manufacture.**

Battery Selection Chart for Fire Alarm Control Panel Mounting

		Simplex Control Panel Series (see legend and notes below)						
							4020 (2, 4 or 6-Unit)	**4100/4120** (2, 4 or 6-Unit)
2081-9272	**6.2**	Yes					Yes	Yes
2081-9274	**10**							
2081-9288	**12.7**	Yes		Yes	Yes	Yes		
2081-9275	**18**				Ext	Note 1		
2081-9287	**25**			Ext		Yes	Ext	
2081-9271 (rectangular)	**33**					Note 3	Note 2	Ext
2081-9276 (square)	**33**						Ext	Yes
2081-9296 (Note 4)	**50**							Ext

Yes = Can be placed in the respective equipment cabinet
Ext = External battery cabinet required, refer to selection chart on page 4
Shaded area = Not applicable

NOTES:

1. 4010 Cabinets will accommodate 2081-9275, 18 Ah batteries, but will not allow bottom entry conduit.
2. 4020 Cabinets will accommodate 2081-9271, 33 Ah batteries, but will not allow bottom entry conduit.
3. Use 4081 series companion cabinet and charger, refer to page 4.
4. Refer to individual fire alarm control panel product data sheets for additional battery application information.
5. These batteries meet the requirements of UL, ULC, and Factory Mutual for use with respective equipment battery chargers listed above. Contact Simplex for proper battery selection per system requirements.

EXTERNAL BATTERY CHARGER AND CABINET REFERENCE

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Date: 07/17/13

External Battery Cabinets

		Externally Mounted Battery Cabinets with Chargers			Battery Cabinets without C (connects to charger in pa				
				4081 Series†					
2081-9275	**18**	Yes			Yes			Yes	
2081-9287	**25**								
2081-9271	**33**								Yes
2081-9276									
2081-9296	**50**			Yes					

* Batteries smaller than those listed are normally mounted in the product cabinet.

** Refer to Simplex data sheet S2081-0002 for additional information on these remote battery cabinet/charger products.

† Refer to Simplex data sheet S4081-0001 for additional information.

Yes = Can be placed in the respective equipment cabinet

Shaded area = Not applicable

External Battery Cabinet Specifications

Model	Description		Color	Dimensions
2081-9281	2-Unit, 4100 style cabinet without charger, with solid door and battery shelf, primarily intended for 50 Ah batteries		Beige	25 3/4" W x 20 3/4" H x 6 3/4" D (654 mm x 527 mm x 171 mm)
2081-9282			Red	
2081-9270†	External battery cabinet without charger		Red	26 1/2" W x 12" H x 12" D (673 mm x 305 mm x 305 mm)
2081-9301†	External battery cabinet **with charger**			
2081-9303†	External battery cabinet **with charger** and **with meters** for voltage and current			
4009-9801	External battery cabinet without charger, with solid door and battery harness, for close-nippled mounting to fire alarm control panel cabinet	For up to **18 Ah** batteries	Beige	16 1/4" W x 13 1/2" H x 4 1/8" D (413 mm x 343 mm x 105 mm)
4009-9802		For up to **33 Ah** batteries		25 3/4" W x 20 3/4" H x 4 1/8" D (654 mm x 527 mm x 105 mm)
4081 Series††	Companion cabinet and charger for the 4010 fire alarm control panel	For up to **50 Ah** batteries	Available in beige or red	22 1/2" W x16 3/4" H x 8 3/8" D (572 mm x 425 mm x 213 mm)

† Refer to Simplex data sheet S2081-0002 for additional information.

†† Refer to Simplex data sheet S4081-0001 for additional information.

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

Releasing Syste

Fire Suppression System Abort Switch
Appliance Circuit (RAC) Maint

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Features

Abort switches provide a manual Fire Suppression System release abort request:

- Pushbutton momentary switch is mounted on a stainless steel single-gang plate
- A protruding collar protects the switch from accidental contact (collar is removable if required)
- Available flush or surface mount
- Flush mounting requires standard single-gang box
- Surface mounting includes a red mounting box
- Models are available with internal 1.2 kΩ resistor for current limited operation

Maintenance switches provide a secure and visible disconnect means for servicing Fire Suppression System Releasing Appliance Circuits (RACs):

- Maintained position keyswitch is mounted on a stainless steel double-gang plate
- Key is removable in either normal or disabled position
- Disabled position opens connection to output circuit and places a 16.2 kΩ resistor across the input circuit to initiate a supervisory condition at the host panel
- Disconnect indicator lamp is a bright incandescent bulb with red lens, powered from separate 24 VDC
- Available for flush or surface mount
- Flush mounting requires a standard double-gang box
- Surface mount models includes a red mounting box

UL listed to Standard 864

Abort Switch
(shown 1/2 size)

Maintenance Switch with Disconnect Indicator Lamp
(shown 1/2 size)

Description

Releasing systems typically require maintenance disconnect switches and often require abort switches. These abort and maintenance switches are clearly labeled and combine easy operation with rugged construction for high integrity operation.

* Refer to page 2 for specific product listings. **NOTE:** MEA is not applicable to Maintenance Switches. FM is not applicable to Abort Switches.

As indicated on page 2, 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 Listing 7300-0026:313 for allowable values and/or conditions concerning material presented in this document. Abort switches are accepted for use – City of New York Department of Buildings – MEA35-93E. Maintenance switches were not approved by FM as of document revision date. 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.

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Product Selection (see page 3 for specifications)

Abort Switches

Model	Description	Listing Status	Details
2080-9056	Flush mount	UL, ULC, & CSFM listed; MEA (NYC) Acceptance	Single-gang size; includes 3 position cc with one contact block installed
2080-9057	Surface mount; includes red mounting box		

Abort Switches for 4004R Series Suppression Release Panel Current Limited Operatio..

Model	Description	Listing Status	Details
2080-9067	Flush mount	UL, ULC, & CSFM listed; MEA (NYC) Acceptance	Single-gang size; includes 1.2 kΩ, 1W resistor for current limited operation and 3 position contact block housing with one contact block installed
2080-9068	Surface mount; includes red mounting box		

Maintenance Switches with Disconnect Indicator Lamp

Model	Description	Listing Status	Details
2080-9059	Flush mount	UL, ULC, & CSFM listed	Double-gang size; includes 3 position contact block housing with 2 contact blocks installed; disabled position opens connection to output and places a 16.2 kΩ resistor across the input circuit; resistor is removable if required for retrofit
2080-9060	Surface mount; includes red mounting box		

Accessories for Field Installation

Model	Description
2080-9061	Additional Contact Block for Abort or Maintenance Switch; 1 Form C contact; UL recognized component for use with these switches; listings and approvals are not applicable

Abort Switch Installation Reference

Maintenance Switch Installation Reference

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Specifications

Electrical Ratings	
Abort Switch; One Contact block	Silver contacts; 1 N.O. & 1 N.C.; rated 2 A resistive @ 30 VDC
Maintenance Switch with Lamp; Two Contact blocks	Circuit control: Silver contacts; 1 N.O. & 1 N.C.; rated 2 A resistive @ 30 VDC
	Lamp control: Silver contacts; 1 Form C; rated 2 A resistive @ 30 VDC
Maintenance Switch Indicator Light (models 2080-9059 and 2080-9060)	Replaceable 2 W incandescent bulb; 24 to 30 VDC typical; 83 mA @ 24 VDC; requires separate 24 VDC
Wiring Connections	
Abort Switch	Terminal blocks for in/out wiring; 18 to 14 AWG wire (0.82 mm^2 to 2.08 mm^2)
Abort Switch with Current Limited Resistor	Terminal blocks for first wire connection; 18 to 14 AWG wire (0.82 mm^2 to 2.08 mm^2); 18 AWG wire lead for second wire connection
Maintenance Switch	18 AWG (0.82 mm^2) color coded wire leads for suppression circuit; terminal blocks for lamp wiring; 18 to 14 AWG wire (0.82 mm^2 to 2.08 mm^2)
Environmental Ratings	
Temperature Range	32° F to 120° F (0° C to 49° C)
Humidity Range	Up to 93% at 90°F (32° C)

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*MEA (NYC) Acceptance**

Releasing Syste

Non-Coded
for Relea

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Features

Manual fire alarm stations for releasing applications:

- Double action push and pull operation with a normally open (N.O.) contact
- Current limited model is available with series connected 560 Ω resistor for Style C operation (current limited = alarm; open or short = trouble)
- Operation complies with ADA requirements
- Pull lever protrudes when alarmed
- Break-rod is supplied (use is optional)
- Label kit provides six varieties of releasing applications (ordered separately)
- 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

UL listed to Standard 38

Operation

Double Action Push Type Manual Release Stations require that a spring loaded interference plate (marked PUSH) be pushed back to access the pull lever of the single action station, reducing the possibility of an accidental activation. A firm downward pull of the lever then activates the alarm switch, breaking an internal plastic break-rod, visible below the pull lever.

Break-rod use is optional. Use of a break-rod can provide an additional reduction of the possibility of an accidental activation without interfering with the minimum pull requirements needed for easy activation.

When activated, the pull lever latches into the alarm position and remains extended out of the housing to provide a visible indication.

Station reset requires the use of a key to reset the manual station lever and deactivate the alarm switch. (If the break-rod is used, it must be replaced.)

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

Double Action Push Type Manual Release Station (shown with sample release label)

Label Kit 4099-9802

Label Selection

A blank area on the front of the station allows the selection of a label to match the specific release application (label kit is ordered separately).

(Refer to data sheet S2099-0007 for standard Simplex manual stations.)

* 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 7150-0026:175 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. 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.

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Product Selection

Double Action, Push Operation, Manual Release Stations

Model	Description	
2099-9149	Standard operation, N.O. contact	Manual release station, red housing with wh pull lever; requires label kit 4099-9802
2099-9152	For Style C operation, N.O. contact with series connected 560 Ω resistor	
4099-9802	Label kit; select the label required for the specific release application; types include Extinguishing, Carbon Dioxide, Foam System, Sprinkler, and Manual	

Accessories

Model	Description		Reference
2975-9178	Surface mount red box	Steel	Refer to page 3 for dimensions
2975-9022		Cast aluminum	
2099-9813	Semi-flush trim plate for double gang switch box, red		Typically for retrofit, refer to page 4 for details
2099-9814	Surface trim plate for Wiremold box V5744-2, red		
2099-9819	Flush mount adapter kit	Black	Refer to page 4 for details
2099-9820		Beige	
2099-9804	Replacement break-rod		

Specifications

Wire Connections	Screw terminal for in/out wiring, for 18 to 14 AWG wire (0.82 mm^2 to 2.08 mm^2)
Temperature Range	32° to 140° F (0° to 60° C) intended for indoor operation
Humidity Range	Up to 90% RH at 90° F (38° F)
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” H x 3-3/4” W x 1” D (127 mm x 95 mm x 25 mm)

Semi-Flush Mounting Reference

Surface Mounting Reference

Preferred Mounting. For surface mounting, the preferred electrical boxes are shown in the illustration to the right.

Additional Mounting Reference. Refer to page 4 for Wiremold box mounting compatibility.

2099 Series Manual Release Station

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Surface Mount Side View

RESURGAM, CITY OF PORTLAND, MAINE
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Additional Mounting Information

For retrofit and new installations, additional compatible mounting boxes and the required adapter plates are shown in the illustration to the right.

Flush Mounting Information

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TrueAlarm® Sm

TrueAlarm Photoelectric for Two-Wire and

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Date: 07/17/13

Features

Photoelectric smoke detector with on-board TrueAlarm sensitivity drift compensation†

UL listed to Standard 268

Functional chamber enclosure:

- Louvered design enhances smoke capture by directing flow to chamber
- Entrance areas are minimally visible when ceiling mounted

Multi-function indicator LED indicates normal and alarm conditions

Magnetically operated functional test:

- Initiates alarm and verifies performance
- Identifies general sensitivity status using detector LED

Models available in two sensitivity settings:

- 4098-9601, Standard Sensitivity, nominal 2.8%/ft obscuration
- 4098-9605, Special Application Sensitivity, nominal 3.5%/ft obscuration

Available base options:

- Bases for 2-wire or 4-wire operation
- Auxiliary alarm relay output

Optional remote alarm indicating LED

Description

Simplex TrueAlarm photoelectric detectors provide many of the proven TrueAlarm analog sensing features for applications where detectors are connected to conventional 2-wire or 4-wire initiating device circuits (IDCs). Each TrueAlarm detector has an on-board microprocessor that evaluates its photoelectric light scattering chamber activity and makes an intelligent decision based on light obscuration history as to whether an alarm condition is present.

TrueAlarm detectors are packaged in a patented housing that minimizes the visibility of the air intake louvers from the normal viewing locations while maintaining a high performance smoke capture ability†. Bases are available for remote alarm LED indicator connections and auxiliary relay outputs.

4098-9601 TrueAlarm Photoelectric Detector Mounted in Base

Specifications

Voltage	15 to 32 VDC, from Fire Alarm Control Panel IDC
Standby Current	100 µA @ 24 VDC
Alarm Current, 2-Wire Operation	Up to 86 mA maximum, exact current is determined by alarm current limiting of connected IDC
Alarm Current, 4-Wire Operation	24 mA typical @ 24 VDC
Auxiliary Relay Ratings	Refer to page 2 under Product Selection
Air Velocity Range	0-2000 ft/min (0-610 m/min)
Altitude	Up to 8,000 ft (2438 m)
UL Listed Temp. Range	32° to 100° F (0° to 38° C)
Operating Temp. Range	15° to 122° F (-9° to + 50° C)
Humidity Range	10% to 95% RH from 32° to 122° F (0° to 50° C) non-condensing
Color	Frost White
Dimensions	4 7/8" Dia. x 1 7/8" H, mounted in base (124 mm x 48 mm), refer to p.3 for detail

* ULC listed models are designated with a "C" suffix such as 4098-9601C.

** 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 7272-0026:219 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. Additional listings may be applicable, contact Simplex for the latest status.

† Simplex TrueAlarm smoke detector operation is protected by one or more of the following U.S. Patents: 5,155,468; 5,173,683; 5,543,777; 5,400,014; 5,552,765; 5,552,763; DES. 377,460.

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TrueAlarm Smoke Detector Features

Intelligent Data Evaluation. Conventional smoke detectors will typically drift toward being too sensitive due to the accumulation of dust and dirt. With TrueAlarm analog detection, data from the photoelectric chamber is monitored and analyzed at the detector to provide a continuously shifting reference point.

Drift Compensation. The data evaluation and its shifting reference point provide a software filtering process that compensates for environmental factors (dust, dirt, etc.) and component aging, establishing an accurate reference for evaluating new activity. With this filtering, the resulting drift compensation provides a significant reduction in the probability of false or nuisance alarms caused by shifts in sensitivity – either up or down.

Magnetic Test Information. Status information is available by performing the magnetic test and observing the detector LED pulses. The LED will normally go directly into alarm with the magnet
off-normal condition, the LED puls
condition and then goes into alarm.

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Application Reference

Detector Locations. Locations s
only after careful consideration of t
contents of the area to be protected. Refer to NFPA 72, the *National Fire Alarm Code*.

For further detailed installation information, refer to *4098 Detectors, Sensors, and Bases Application Manual* (574-709).

Sensitivity Selection. The 4098-9601 standard sensitivity detector is recommended for most applications. When a special application for a reduced sensitivity detector is required, the 4098-9605 should be considered. Consult Simplex for assistance in determining the proper selection.

Product Selection

Smoke Detectors

Model	Description	Nominal Sensitivity	Compatibility
4098-9601	TrueAlarm Photoelectric Detector	2.8%/ft (standard)	Compatible with detector bases: 4098-9788, 4098-9682, and 4098-9683
4098-9605		3.5%/ft	

Compatible Bases

Model	Description	Details
4098-9788	**2-Wire Base** with connections for Remote Alarm LED Indicator	• IDC and LED connections are screw terminals for in/out wiring, 18 to 14 AWG
4098-9682	**4-Wire Base** with Auxiliary Alarm Relay Contacts and connections for Remote LED Alarm Indicator	**Relay Ratings, Single Form "C", For Suppressed Loads:** • Power limited, 3 A @ 28 VDC • Non-power limited, 3 A @ 120 VAC **Wiring Connections (In/Out where required):** • Relay contacts and IDC wiring, color coded 18 AWG leads • LED wiring, screw terminals for 18 to 14 AWG
4098-9683	**2-Wire Base with Auxiliary Alarm Relay** & connections for Remote LED Indicator **NOTE**: Must be connected as the only device on the IDC to ensure relay operation.	**Relay Ratings, Dual Form "C", For Suppressed Loads:** • Power limited, 1 A @ 28 VDC • Non-power limited, 1/2 A @ 120 VAC **Wiring Connections (In/Out where required):** • Relay contacts and IDC (-), color coded 18 AWG leads • IDC (+) and LED wiring, screw terminals for 18 to 14 AWG

Detector Accessories

Model	Description	Details
4098-9832	Adapter Plate	• Required for mounting to 4" square box, fits 4" octagonal box • May be used when retrofitting existing bases • Compatible with 4098-9788, -9682, & -9683 detector bases
4098-9830	Remote LED Indicator	• Mounted on single gang stainless steel plate
2098-9739	Encapsulated 24 VDC End-of-Line Relay	• Required for 4-wire circuits using 4098-9682 base, one per circuit, select mounting type as required
2098-9735	Plate Mounted 24 VDC End-of-Line Relay	

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Detector Status LED Indications

LED Indication	Status
Pulses approximately every 4 seconds	Normal
Steady On	Alarm

LED Response to Magnetic Test *

LED Indication	Followed By	Status	
LED turns ON	Alarm is initiated	**Normal**, sensitivity is within compensation range	None
LED pulses *quickly*, 6 times in 3 seconds, then turns ON	Alarm is initiated	**More sensitive**, out of normal compensation range	Cleaning or other **service is required**
LED pulses *slowly*, 4 times in 8 seconds, then turns ON	Alarm is initiated	**Less sensitive**, out of normal compensation range	
	Does not initiate Alarm	**Detector is malfunctioning**	**Service is required**

* Testing requires placing a magnet at the designated location on the detector cover for 4 seconds. Refer to Application Manual 574-709 for further test and maintenance information.

Dimensions and Reference Information

4098-9832 Adapter Plate

4098-9601 & -9605 Dimensions Mounted on Base

4098-9830 Remote LED Indicator (not to scale)

Mounting Information

(Electrical boxes are supplied by others.)

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Electrical Box Requirements:
Without relay (base 4098-9788):
4" octagonal or 4" square, 1 1/2" deep
Single gang, 2" deep
With relay (bases 4098-9682 and 4098-9683):
4" octagonal, 1 1/2" deep, with 1 1/2" extension ring
4" square, 1 1/2" deep, with 1 1/2" extension ring

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Series RSS and RSSP Strobe

Series RSS

Series RSS

Series RSSWP

Description

The Wheelock patented Series RSS Strobe Appliances and Series RSSP Strobe Plates have lower current draw while maintaining outstanding performance, reliability and cost effectiveness. These versatile appliances will satisfy virtually all requirements for indoor, wall or ceiling mount applications.

Strobe options for wall mount models include 1575 or the Wheelock Patented MCW multi-candela strobe with field selectable candela settings of 15/30/75/110cd or the high intensity MCWH strobe with field selectable 135/185cd. Ceiling mount models include the patented MCC multi-candela ceiling strobe with field selectable intensities of 15/30/75/95cd or the high intensity MCCH strobe with field selectable 115/177cd.

All models may be synchronized using the Wheelock DSM Sync Modules, Wheelock Power Supplies or other manufacturers panels incorporating the Wheelock Patented Sync Protocol. Synchronized strobes can eliminate possible restrictions on the number of strobes in the field of view. Wheelock's synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy as well as meeting the requirements of NFPA 72.

The Wheelock Series RSS Strobes employ a Patented Integral Strobe Mounting Plate that can be mounted to a single gang, double gang, 4" square, 100mm European backboxes or the SHBB surface backbox. If the flush backbox has side or top space between it and the finished wall, the NATP (Notification Appliance Trimplate) may be used. It provides an additional .65" of trim for the Appliance. An attractive cover plate is provided for a clean, finished appearance on all models.

The Series RSSP Multi-Candela Strobe Plates are a cost effective way to retrofit required wall strobe appliances to bells, horns, chimes, multitones or speakers and easily mounts to standard 4" backboxes or for surface mount use with the Wheelock SBL2 surface backbox.

Features

- Approvals include: UL Standard 1971, New York City (MEA), California State Fire Marshal (CSFM), Factory Mutual (FM), and Chicago (BFP) See approvals by model in Specifications and Ordering Information
- ADA/NFPA/UFC/ANSI compliant. Meets OSHA 29 Part 1910.165
- Wall mount Multi-Candela models are available with Field Selectable Candela Settings of 15/30/ 75/110cd or 135/185cd. Single Candela models are available in 1575cd
- Ceiling mount Multi-Candela models are available with field selectable candela settings of 15/30/75/95cd or 115/177cd. (Square)
- Strobes produce 1 flash per second over the regulated voltage range
- 12 and 24 VDC models with wide UL "Regulated Voltage" using filtered (DC) or unfiltered VRMS input voltage
- Synchronize using the Wheelock sync modules or panels with built-in Wheelock Patented Sync Protocol
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wire

For Weatherproof Series RSS See Datatsheet S9004

S5391 151-92-E 7125-0785:141 7300-0785:154

NOTE: All CAUTIONS and WARNINGS are identified by the symbol ⚠. All warnings are printed in bold capital letters.

⚠ WARNING: PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE US APPLYING THIS PRODUCT. VISIT WWW.COOPERNOTIFICATION.COM OR CONTACT COOPER WHEELOCK FOR THE CURRENT INSTA FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS AND/OR OTHERS.

RESURGAM CITY OF PORTLAND, MAINE

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General Notes:

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range". Note that NFPA-72 s to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective Strobe intensity based on UL Standard 1971.
- **"Regulated Voltage Range" is the newest terminology used by UL to identify the voltage range. Prior to this char terminology "Listed Voltage Range".**

Table 1: Average RMS Current*

RSS/RSSP 24VDC Models	RSS/RSSP - Wall Mount							Ceiling Mount					
	241575W	24MCW				24MCWH		24MCC				24MCCH	
	1575cd	15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
UL max*	0.090	0.060	0.092	0.165	0.220	0.300	0.420	0.065	0.105	0.189	0.249	0.300	0.420

RSS/RSSP 24VDC Models	RSS/RSSP Wall Mount
	121575W
12 vdc	**0.152**
UL max*	0.255

* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

Table 2: Audibles/Speakers for RSSP Strobe Plate

Product	Series
Multitone Appliances	AMT, MT
Horns	AH, NH, HS
Motor Bells	MB-G6/G10
Speakers	ET-1010/1080, E70, ET70
Chimes	CH70

Wiring Diagrams

SERIES RSS/RSSP APPLIANCE

SERIES RSS/RSSP APPLIANCES SYNCHRONIZED WITH DSM MODULE SINGLE CLASS "A" NAC CIRCUIT

SERIES RSS/RSSP APPLIANCES SYNCHRONIZED WITH MULTIPLE DSM MODULES

DSM Interconnecting wiring shown. Maximum of twenty (20)

STROBE/PLATE ASSEMBLY
AUDIBLE & VISIBLE APPLIANCE OPERATE IN UNISON

STROBE/PLATE ASSEMBLY
AUDIBLE & VISIBLE APPLIANCE OPERATE INDEPENDENTLY

For detail using DSM Sync Module refer to Data Sheet S3000 or Installation Instructions P83177 for DSM. For wiring information on the power supplies refer to Wheelock Power Supplies.

SERIES RSS/RSSP APPLIANCES WITH WHEELOCK POWER SUPPI

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Specifications and Ordering Information

Model	Order Code	Wall Mount	Ceiling Mount	Non-Sync	Strobe Candela	24 VDC	12 VDC	Color RED	Color WHITE	Mounting Options***	Square or Round	Agency Approvals				
												UL	MEA	CSFM	FM	BFP
RSS-24MCW-FR	940	X	-	X	15/30/75/110	X	-	X	-	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-24MCW-FW	9401	X	-	X	15/30/75/110	X	-	-	X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-24MCW-AR****	9773	X	-	X	15/30/75/110	X	-	-	X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-241575W-FR	7471	X	-	X	15 (75 on Axis)	X	-	X	-	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-241575W-FW	7788	X	-	X	15 (75 on Axis)	X	-	-	X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-121575W-FR	7476	X	-	X	15 (75 on Axis)	-	X	X	-	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-121575W-FW	7468	X	-	X	15 (75 on Axis)	-	X	-	X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-24MCC-FW	3158	-	X	X	15/30/75/95	X	-	-	X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	-
RSS-24MCC-FR	3157	-	X	X	15/30/75/95	X	-	X	-	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	-
RSS-24MCCH-FW	3461	-	X	X	115/177	X	-	-	X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	-
RSS-24MCWH-FR	3465	X		X	135/185	X		X		B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	-
RSS-24MCWH-FW	3464	X		X	135/185	X			X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	-
RSSWP-2475W-FR**	9013	X	-	X	180@ 77°F 75@ -31°F	X	-	X	-	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	-
RSSWP-2475W-FW**	3034	X	-	X	180@ 77°F 75@ -31°F	X	-	-	X	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	-
RSSP-121575W-FR	7798	X	-	X	15 (75 on Axis)	-	X	X	-	D,E,Z	Square	X	-	X	X	X
RSSP-24MCW-FR	9402	X	-	X	15/30/75/110	X	-	X	-	D,E,Z	Square	X	X	X	X	X
RSSP-241575W-FR	7793	X	-	X	15 (75 on Axis)	-	-	X	-	D,E,Z	Square	X	X	X	X	X
RSSP-24MCWH-FR	9482	X		X	135/185	X		X		B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	-	-

All models sync with Wheelock DSM or Wheelock Power Supplies.
Models are available in either Red or White. Call Customer Service for Order Code & Delivery.
**For Weatherproof Series RSS Strobe specifications see data sheet S9004.
***Refer to data sheet S7000 for mounting options.
**** "A" stands for Agent Lettering.

Architects and Engineers Specifications

The visual notification appliances shall be Wheelock Series RSS Strobe Appliances or approved equals. The S and be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Se be listed for indoor use and shall meet the requirements of FCC Part 15 Class B. The strobe appliances shall p one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Strobe Plates are to be installed, they shall be the Wheelock Series RSSP Strobe Plate and shall have the sa as the Wheelock Series RSS.

The Series RSS Strobe shall be of low current design. Where Multi-Candela appliances are specified, the strob field selectable settings and shall be rated per UL Standard 1971 at 15/30/75/110cd or 135/185cd for wall mount 115/177cd for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 1575 c specified when 15 candela UL Standard 1971 Listing with 75 candela on axis is required (e.g. ADA compliance).

When synchronization is required, the appliance shall be compatible with Wheelock's DSM Sync Modules, Wheelock Power Supplies or other manufacturers panels with built-in Wheelock Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate. The strobes shall be designed for indoor surface of flush mounting.

The Series RSS Strobe Appliances shall incorporate a Patented, Integral Strobe Mounting Plate that shall allow mounting to single-gang, double-gang, 4-inch square, 100mm European type backboxes, or the SHBB Surface Backbox. If required, an NATP (Notification Appliance Trimplate) shall be provided. An attaching cover plate shall be provided to give the Appliance and attractive appearance. The Appliance shall not have any mounting holes or screw heads visible when the installation is completed.

The Series RSSP Multi-Candela or single candela Strobe Plate shall mount to either a standard 4 inch square backbox for flush mounting, or the Wheelock SBL2 backbox for surface mounting.

All notification appliances shall be backward compatible.

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NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock, Inc. standard terms and conditions.

NEMA Member

WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

S0410 RSS/RSSP 07/11

NJ Location
273 Branchport Ave.
Long Branch, NJ 07740
P: 800-631-2148
F: 732-222-8707
www.coopernotification.com

Cooper Notification is Wheelock® MEDC SAFEPATH® WAVES Roam Secure

COOPER Notification

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Series MT and MT Strobe Multitone El

Date: 07/17/13

SERIES MT STROBE

MT4-115-WH

SERIES MT-12/24

Description:

The Wheelock Series MT and MT Strobe Multitone electronic appliances offer a choice of eight (8) nationally and internationally recognized alerting sounds: Horn, Bell, March Time Horn, Code-3 Tone, Code-3 Horn, Slow Whoop, Siren or Hi/Lo Tone. The Code-3 Horn and tone patterns are engineered to comply with NFPA/ANSI Temporal Pattern specifications without requiring additional equipment. With MT and MT Strobe appliances, one alarm appliance meets most of your signaling needs. The MT strobes can be synchronized using the Wheelock DSM Sync Modules, Wheelock Power Supplies or other manufacturers panel incorporating the Wheelock Patented Sync Protocol.

The MT Strobes are designed for ADA applications while meeting or exceeding the latest requirements of NFPA 72, ANSI 117.1, UFC and UL Standard 1971 as well as meeting ADA requirements concerning photosensitive epilepsy.

Each MT and MT Strobe appliance has two installer selective sound output levels: STANDARD dBA and HIGH dBA. Non-strobe versions provide selectable voltage capability in one unit, 12VDC or 24VDC. Strobe versions are specific for either 12VDC or 24VDC and all models may be used with filtered or unfiltered (full-wave-rectified) input voltages. Separate input terminals are available, shunt wires are provided to enable both tone and strobe to operate simultaneously from a single input.

The Series MT Multitone Strobe appliances are UL Listed for indoor wall mount applications under Standard 1971 for Signaling Devices for the Hearing Impaired and under Standard 464 for Audible Signaling Appliances.

Features:

- Approvals include: UL Standard 1971, UL Standard 464, California State Fire Marshal (CSFM), New York City (MEA), Factory Mutual (FM) and Chicago (BFP) See approvals by model in Specifications and Ordering Information
- Designed to meet or exceed ADA/NFPA/UFC/ANSI Standards and Accessibility Guidelines
- Complies with OSHA 29, Part 1910.165
- Series MT appliances have IN and OUT wiring terminations that accept two #12 to #18 American Wire Gauge (AWG) wires at each terminal. Inputs are polarized for compatibility with standard reverse polarity type supervision
- One alarm appliance with (8) eight selective signals to provide superior sound penetration for various ambient and wall conditions with two field selectable sound output levels
- Code-3 Horn and Tone meet ANSI/NFPA temporal pattern for standard emergency evacuation signaling
- Audible and strobe can operate from a single NAC circuit or from separate NAC circuits with any of the (8) eight audible sounds
- MT Strobe models are available with Wheelock patented MCW Multi-Candela strobes with field selectable candela settings at 15/30/75/110cd or with single candela 1575cd strobes. Synchronize using the Wheelock Sync Modules or panels with built-in Wheelock Patented Sync Protocol
- Selectable input voltage on non-strobe versions. Strobe versions are factory set for either 12 or 24VDC, with wide-Listed voltage range, filtered (DC) and FWR
- No additional trimplate required for flush mounting

For Weatherproof MTWP See Data Sheet S9004

E5946

151-92-E

7135-0785:118 (MT4)
7125-0785:155 (MT)
7125-0758:156 (MTWP)

NOTE: All CAUTIONS and WARNINGS are identified by the symbol ⚠. All warnings are printed in bold cap
⚠ WARNING: PLEASE READ THESE SPECIFICATIONS AND INSTALLATION INSTRUCTIONS CAREFUL
SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIO
WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THES
PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND S
DEATH TO YOU AND/OR OTHERS.

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General Notes:

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range" (16-33v for 8-17.5v for 12VDC units). Regulated Voltage Range is the newest terminology used by UL to identify the listed
- All candela ratings represent minimum effective Multitone Strobe intensity based on UL Standard 1971.
- MT Strobe models are UL Standard 1971 Listed for indoor use with a temperature range of 32°F to 120°F (0°C maximum humidity of 93% ±2%. The MT-12/24, MTWP and MT4 models and listed for outdoor use at -31°F to 15 66°C) and maximum humidity of 95% (See Data Sheet S9004 or Installation Instruction Sheet P84150 for more detail on MTWP). MTWP and MT4 strobes are listed under UL 1638.
- MT Audible is UL Standard 464 Listed.

Alarm Tones

TONE	ALARM TONES PATTERN DESCRIPTION
HORN	BROADBAND HORN (Continuous)
BELL	1560 Hz MODULATED (0.07 sec. ON/Repeat)
MARCH TIME HORN	HORN (0.25 sec. ON/0.25 sec. OFF/Repeat
CODE-3 HORN	HORN (ANSI S3.41 Temporal Pattern)
CODE-3 TONE	500 Hz (ANSI S3.41 Temporal Pattern)
SLOW WHOOP	500-1200 Hz SWEEP (4.0 sec. ON/0.5 sec. OFF/Repeat)
SIREN	600-1200 Hz SWEEP (1.0 sec. ON/Repeat)
HI/LO	1000/800 Hz (0.25 sec. ON/Alternate)

Table 1: dBA and Current Ratings for Multitone Audible Portion

	RMS Current (amps)										dBA @ 10ft (UL Reverberant)					
	24 VDC				12 VDC				120 VAC		24 VDC		12 VDC		120 VAC	
	HI Output		STD Output		HI Output		STD Output		HI Output	STD Output	HI Output	STD Output	HI Output	STD Output	HI Output	STD Output
	@ 24 VDC	UL max*	@ 24 VDC	UL max*	@ 24 VDC	UL max*	@ 24 VDC	UL max*	UL max*	UL max*						
Horn	0.074	0.108	0.033	0.044	0.145	0.176	0.023	0.034	0.050	0.042	92	87	90	77	85	82
Bell	0.040	0.053	0.018	0.024	0.077	0.095	0.014	0.020	0.041	0.039	86	80	85	69	82	75
March Time Horn	0.067	0.104	0.033	0.038	0.109	0.142	0.023	0.034	0.050	0.040	89	84	89	74	85	79
Code-3 Horn	0.069	0.091	0.026	0.035	0.100	0.142	0.023	0.034	0.050	0.042	88	83	88	73	82	75
Code-3 Tone	0.061	0.075	0.026	0.035	0.088	0.105	0.015	0.021	0.042	0.040	85	80	84	70	79	75
Slow Whoop	0.069	0.098	0.028	0.037	0.100	0.142	0.025	0.035	0.050	0.042	90	89	89	75	85	82
Siren	0.080	0.104	0.027	0.036	0.122	0.152	0.021	0.030	0.045	0.041	89	84	89	75	85	82
HI/LO	0.044	0.057	0.020	0.026	0.089	0.114	0.018	0.026	0.042	0.039	86	81	86	71	82	79

Table 2: Strobe Current Ratings

	RMS Current (amps)						
Model	MT-121575	MT-241575	MTWP-2475	MT-24MCW			
Candela	1575cd	1575cd	180cd	15cd	30cd	75cd	110cd
@ 24VDC	0.152	0.060	0.094	0.041	0.063	0.109	0.140
UL max*	0.255	0.090	0.138	0.060	0.092	0.165	0.220

Note: If the strobe and audible operate on the same circuit, add the strobe current from Table 2 to the audible current from Table 1.

* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

Wiring Diagrams (for all models)

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Specifications and Ordering Information

Model Number	Order Code	Input Voltage	Rated Candela	Mounting Options***	Agency Approvals				
					UL	MEA	CSFM	FM	BFP
MT-12/24-R	5023	12/24	-	D,E,F,L,M,O,P,R	X	X	X	X	X
MT-12/24-W	5024	12/24	-	D,E,F,L,M,O,P,R	X	X	X	X	X
MT-241575W-FR#	8422	24	15 (75 on AXIS)	D,E,F,L,M,O,P,R	X	X	X	X	-
MT-24MCW-FR	3301	24	15/30/75/110	D,E,F,L,M,O,P,R	X	-	X	-	-
MT-24MCW-FW	3303	24	15/30/75/110	D,E,F,L,M,O,P,R	X	-	X	-	-
MT-24MCW-AR***	3304	24	15/30/75/110	D,E,F,L,M,O,P,R	X	-	X	-	-
MT-121575W-FR#	8421	12	15 (75 on AXIS)	D,E,F,L,M,O,P,R	X	X	X	X	-
MT-121575W-NW	9747	12	15 (75 on AXIS)	D,E,F,L,M,O,P,R	X	X	X	X	-
MTWP-2475W-FR**	8420	24	180 @ 77°F (25°C)	M	X	X	X	X	-
MTWP-2475W-NW**	9744	24	180 @ 77°F (25°C)	M	X	X	X	X	-
MT4-115-R	6223	120 VAC	-	D,E,J,K,N,O,R	X	X	X	-	X
MT4-115-S	6142	120 VAC	-	D,E,J,K,N,O,R	X	X	X	-	X
MT4-115-WH-VFR##	6224	120 VAC	15	D,E,J,K,N,O,R	X	X	X	-	X
MT4-12/24-R	5308	12/24	-	D,E,J,K,N,O,R	X	X	X	X	-
MT4-12/24-S	7997	12/24	-	D,E,J,K,N,O,R	X	X	X	X	-

NOTE:

**MTWP-2475W is Weatherproof and rated for 180 cd @ 77°F (25°C). See Data Sheet S9004 or Installation Instruction P84150.
***For additional information on mounting please refer to Data Sheet S7000.
1575 strobes are UL Listed for 15cd with 75cd on AXIS.
Series WH Strobe is listed for UL Standard 1638 only. See Instruction Sheet P83160.
*** "A" Stands for Agent Lettering.

WARNING: CONTACT WHEELOCK FOR THE CURRENT "INSTALLATION INSTRUCTIONS" P82467 MT-12/24, P84155 MT w/Strobe P84150 MTWP WEATHERPROOF "GENERAL INFORMATION" SHEET (P82380) ON THESE PRODUCTS. THESE DOCUMENTS DO UNDERGO PERIODIC CHANGES. IT IS IMPORTANT THAT YOU HAVE CURRENT INFORMATION ON THESE PRODUCTS. THESE MATERIALS CONTAIN IMPORTANT INFORMATION THAT SHOULD BE READ PRIOR TO SPECIFYING OR INSTALLING THESE PRODUCTS, INCLUDING:

- **TOTAL CURRENT REQUIRED BY ALL APPLIANCES CONNECTED TO SYSTEM SECONDARY POWER SOURCES.**
- **FUSE RATINGS ON NOTIFICATION APPLIANCE CIRCUITS TO HANDLE PEAK CURRENTS FROM ALL APPLIANCES ON THOSE CIRCUITS.**
- **COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW.**
- **THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR RATED INPUT VOLTAGE RANGE.**
- **INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES.**
- **USE STROBES ONLY ON CIRCUITS WITH CONTINUOUSLY APPLIED OPERATING VOLTAGE. DO NOT USE STROBE ON CODED OR INTERRUPTED CIRCUITS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF AS THE STROBE MAY NOT FLASH.**
- **FAILURE TO COMPLY WITH THE INSTALLATION INSTRUCTIONS OR GENERAL INFORMATION SHEETS COULD RESULT IN IMPROPER INSTALLATION, APPLICATION, AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION,WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.**
- **CONDUCTOR SIZE (AWG), LENGTH AND AMPACITY SHOULD BE TAKEN INTO CONSIDERATION PRIOR TO DESIGN AND INSTALLATION OF THESE PRODUCTS, PARTICULARLY IN RETROFIT INSTALLATIONS.**

Wheelock products must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

Architects and Engineers Specifications

The notification appliance shall be a Wheelock Series MT audible/visual appliance or equivalent. Notificatior electronic and use solid state components. Electromechanical alternatives are not approved. Each electronic ap eight (8) field selectable alarm tones. The tones shall consist of: HORN, BELL, MARCH TIME HORN, CODE TONE, SLOW WHOOP, SIREN and HI/LO. Tone selection shall be by durable dip switch assembly and not cl Multitone Audible appliance shall be UL Listed under Standard 464 for Audible Signal Appliances. The audible be able to operate from a single NAC circuit while producing any of these tones. The appliance shall provide two STANDARD and HIGH dBA. The HIGH dBA setting shall provide a minimum 5 dBA increase in sound output at r HIGH anechoic dBA measurement at 10 feet at the alarm HORN SETTING shall be 99 dBA minimum. Operati either 12 VDC or 24 VDC using filtered power or unfiltered power supply (full-wave-rectified). All models shall standard reverse polarity type supervision and IN/OUT field wiring using terminals that accept #12 to #18 AWG

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Combination audible/visual appliances shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens or equivalent with solid state circuitry. Strobe shall produce a flash rate of one (1) flash per second minimum over the voltage range. The MT strobe intensity shall be rated per UL and Listed under Standard 1971 for Signaling Devices for the Hearing Impaired for 1575cd multi-candela with field selectable 15/30/75/110 candela settings. The 1575 candela strobe shall be specified when 15 candela or with 75 candela intensity on-axis is required. Strobe Models shall incorporate circuitry for synchronized strobe flash and shall be designed for compatibility with Wheelock DSM Sync Modules, Wheelock Power Supplies or other manufacturers panels with built-in Wheelock Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the module fails to operate (i.e., contacts remain closed), the strobes shall revert to a non-synchronized default flash rate. Strobe activation shall be via independent input or from the same input circuit as the audible.

The combination audible/visual appliances shall be installed indoors and may be surface or flush mounted. They shall mount to standard electrical hardware requiring no additional trimplate or adapter. The aesthetic appearance shall not have any mounting holes or screw heads visible when the installation is completed. The appliance shall be finished in a textured red color.

The Series MT-12/24, MTWP and MT4 appliances may be installed indoor or outdoor with the proper back box.

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock Inc. standard terms and conditions.

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S2000 MT 06/11

NJ Location
273 Branchport Ave.
Long Branch, NJ 07740
P: 800-631-2148
F: 732-222-8707
www.coopernotification.com

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