SIEMENS

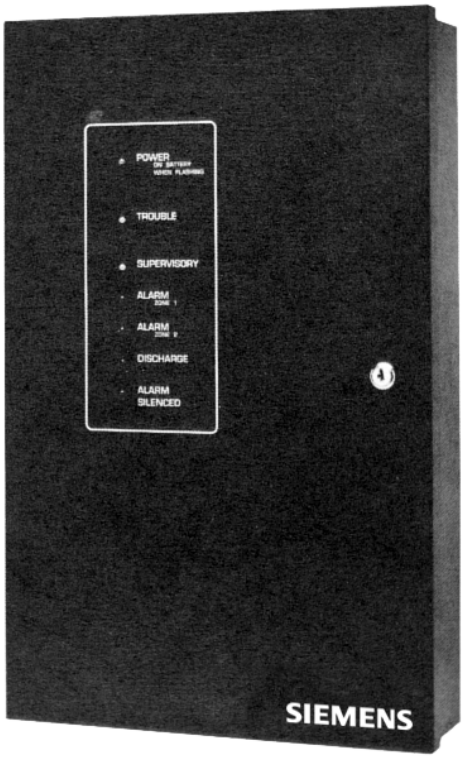
CP-2ER Control Panel

Model CP-2ER

ENGINEER AND ARCHITECT SPECIFICATIONS

- Class A* or B** Options
- Cross Zoned Detection Circuits
- Power Limited Option on Notification Appliance Circuits
- 19 LED's Indicating Various Normal & Off Normal Conditions
- Discharge Delay Time Selection
- 24 or 60 Hour Battery Back-Up
- Manual or Automatic Release
- FM-200™ Release Disconnect Switch
- UL Listed, as Complying with Either NFPA 72, 12A, 13 or 2001
- FM, CSFM and NYMEA Approval

*NFPA Style D **NFPA Style B



Introduction

The Siemens Building Technologies, Fire Safety Division Control Model CP-2ER is a two-zone local control unit which meets the requirements of NFPA 72 or a two-zone releasing device panel approved in accordance with NFPA 72, 12A, 13 and 2001 for cross zone protection. When the CP-2ER Control Panel is used as a releasing device, two Class A* or Class B** detection circuits are arranged so that both zones must be activated in order to discharge the agent automatically into the protected area.

The Control Panel provides for the external connection of supervised manual discharge switches for releasing of agent as well as several other supervised input and output functions. Essentially, every supervised feature has its own separate fault indicator for ease of trouble-shooting the system, should a fault occur.

Displayed through the front cover are the usual visual indicators for power, system alarm, and system trouble, as well as several additional specific function indicators. Within the Control Panel are a fire alarm RESET/LAMP TEST switch, an ALARM SILENCE switch, a SUPERVISORY SILENCE switch, a TROUBLE SILENCE switch and a RELEASE DISCONNECT switch. The separate visual fault indicators are displayed within the panel for all supervised features.

Addition of power limited Module PLM-35 allows power limited wiring of alarm notification circuits. This permits alarm circuit wiring to be run in the same conduit with initiating device wiring or with other power limited circuit wiring. Isolated relay contacts are provided for: System alarm — DPDT, System trouble — SPDT, Predischarge/discharge — SPDT, and normally open.

Description/Operation

1. **Automatic Discharge Operation**

A single zone alarm condition results in:

1. Alarm lock-in of that zone
2. Visual alarm indication of that zone.
3. General alarm condition of panel which includes:
   a. Change of state of fire alarm relay contacts.
   b. General alarm audible circuit activated.

Upon activation of both zones, the discharge delay sequence begins. The discharge delay period may be preselected by the Rotary Switch.

As the discharge delay period begins (both zones alarmed), and the general alarm audible circuit is de-energized, the predischarge relay contacts (TB3, terminals 10 through 14) change state (See Option No. 4). The predischarge audible

circuit, along with its associated visual indicator, is cycled at a 2 Hz rate with a 50 % duty cycle during the selected discharge delay period. At the conclusion of the discharge delay period, the agent release circuit is energized for approximately 1 minute, while the discharge audible is energized in a steady-on condition until either it is silenced or the panel is reset to a non-alarm condition.

2. Manual Discharge Operation Selection

a. Operation of the MANUAL DISCHARGE switch results in a discharge delay period, as selected, before actual discharge begins, provided the delay selected is 30 seconds or less. When the discharge delay selector is set for more than 30 seconds, the MANUAL DISCHARGE switch operation gives a 30-second delay period maximum.
b. Operation of the MANUAL DISCHARGE switch results in immediate discharge, regardless of delay period selected.

3. **Abort Station Operation Selection**

a. When used, abort function is operational if, only one, but not two, of the detection device circuits has activated. Release of the ABORT switch, after both detection circuits have activated, results in the regular preselected discharge delay period as selected.
b. Discharge may be aborted at any time before selected discharge delay period has expired and discharge has begun. Release of the ABORT switch after both detection circuits have activated results in continuation of the unexpired discharge delay period as selected.
c. Discharge may be aborted at any time before selected discharge delay period has expired. Release of the ABORT switch after both detection circuits have activated results in a complete discharge delay period as selected.

4. **Predischarge/Discharge Delay Operation Selection**

a. Relay contacts change state on any of the following conditions without any delay period.
   - Both detection circuits have activated
   - MANUAL DISCHARGE switch has been operated.
   - Normally open MANIFOLD DISCHARGE monitor switch has closed.
b. Relay contacts change state at conclusion of selected discharge delay period, when operated by activating both detection circuits, or by activating manual discharge switch.

5. The agent release disconnect switch is a normally closed single-pole switch in the release circuit. Moving the switch to its disconnect position causes a "Agent Discharge Trouble" indication and prevents a discharge. This switch is used during servicing of the system as a safeguard against unwanted discharge.

6. **NFPA 72, 12A, 13 or 2001**

As shipped from the factory, the CP-2ER is arranged to meet the NFPA 72 requirements; that is, an alarm in either of the two initiating zones will cause general alarm to sound. Once the general alarm is silenced, an alarm in the other initiating zone will cause the general alarm to sound again. The replacement of the service selection plug will automatically change the alarm program to comply with NFPA 12A, 13 and 2001 requirements.

Engineer and Architect Specifications

For Use With Extinguishing System:

The control panel for release of the extinguishing system shall be a Fire Safety Model CP-2ER. It shall be FM, CSFM and NYMEA approved and UL listed for releasing device service in accordance with NFPA 72 (National Fire Alarm Code), 12A (Releasing of Halon 1301), 13 (Preaction) and 2001 (Releasing of clean agent). It shall provide "Class A" (NFPA Style D) and "Class B" (NFPA Style B) detection options and 10 selectable discharge delay options up to 45 seconds.

It shall provide the following abort options:

1. Abort operational only if only one detection zone has activated. Full discharge delay follows release of abort switch after both zones have activated.
2. Abort operational anytime before discharge delay has expired. Continuation of unexpired discharge delay follows release of abort switch.
3. Same as #2, except full discharge delay follows release of abort switch.

It shall provide the following manual discharge options:

1. Operation of manual discharge switch results in delay period prior to discharge.
2. Operation of manual discharge switch results in immediate discharge.

For Use With Alarm System:

The control panel for the manual or automatic fire alarm system shall be Fire Safety Model CP-2ER. It shall be FM approved and UL listed as a local control unit in accordance with NFPA 72, 12A, 13 and 2001. It shall provide "Class A" (NFPA Style D) and "Class B" (NFPA Style B) options on two initiating device circuits.

Electrical Information

Input 120 VAC (102-132) 50/60 Hz.
Three (3) wire, 2 amp. max.

Ordering Information

Note: When ordering specify whether batteries shall be 24 or 60 hour standby capacity.

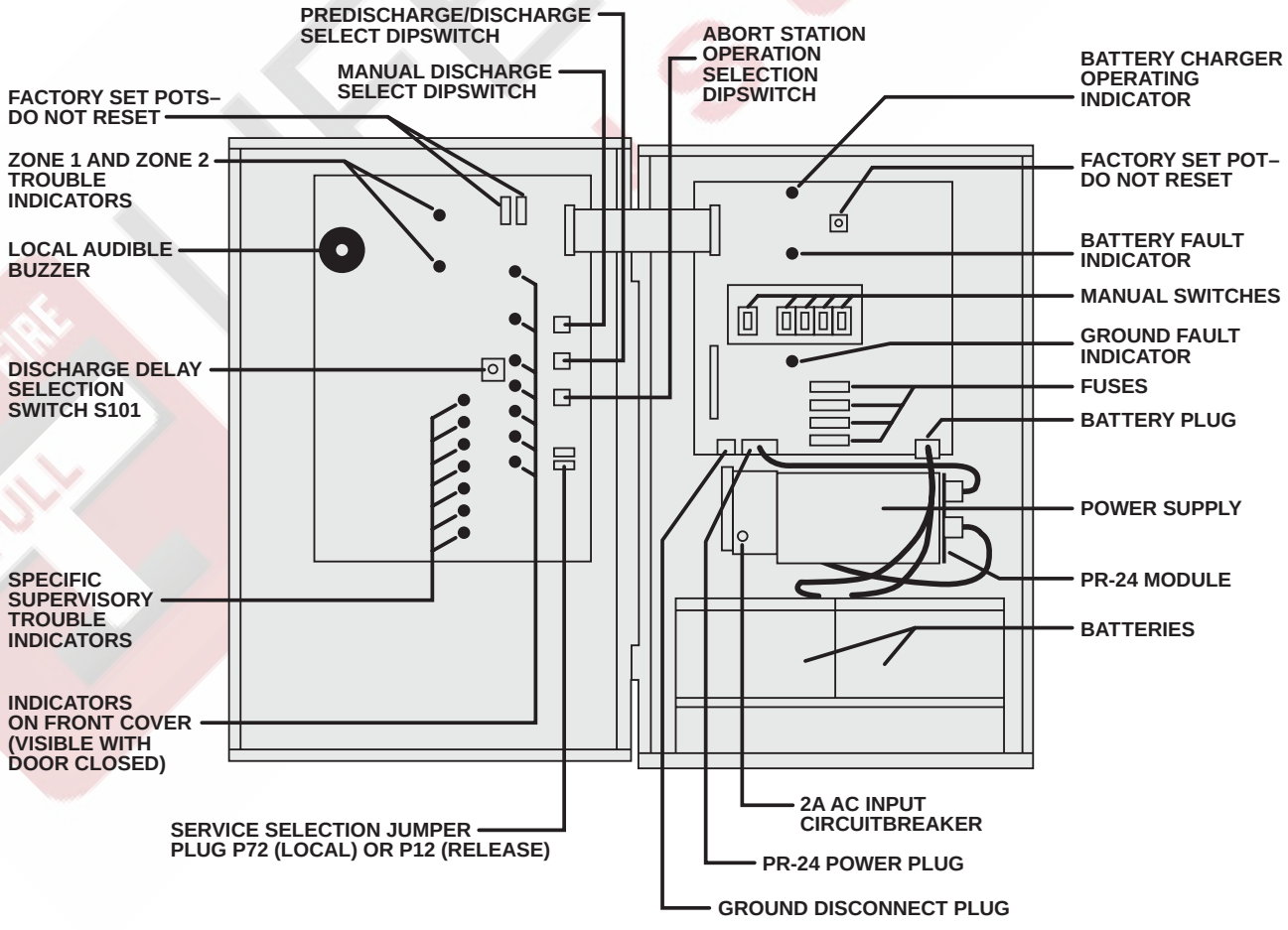
Model Number	Description	Shipping Weight
CP-2ER	Control Panel	*31 lbs. (14.1 kg.)
BP-24**	24 Hr. Battery Pack for CP-2ER 175-084476 (5AH)	10.6 lbs. (4.8 kg.)
BP-60**	60 Hr. Battery Pack for CP02ER 174-084477 (10AH)	19.4 lbs. (8.8 kg.)

* Excluding Batteries

** Batteries must be ordered separately for CP-2ER. 1 pc. BP-24 or 1 pc. BP-60 must be ordered for battery backup.

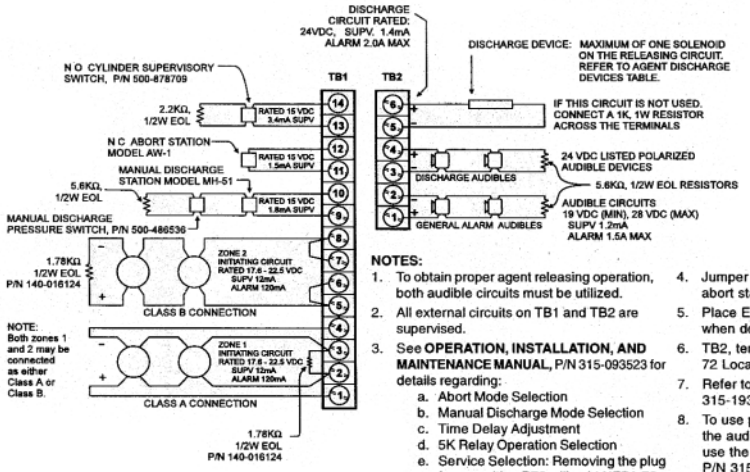
VISUAL INDICATORS	Color
Visual Indicators Externally Visible	
• **POWER** —Steady on indicates main power is normal. —Flashing on/off indicates panel is operating from the backup battery supply.	Green
• System **TROUBLE** — Indicates a general system trouble.	Yellow
• System **SUPERVISORY** — Indicates a general system supervisory	Yellow
• **ALARM ZONE 1**	Red
• **ALARM ZONE 2**	Red
• Predischarge/DISCHARGE alarm operates in flashing mode upon cross zone (Zone 1 and Zone 2) activation condition until preselected time delay has expired. Operates in steady mode upon, and following, actual discharge.	Red
• Audible **ALARM SILENCED** indicates that either the general alarm audible device or predischarge/discharge audible device circuit has been silenced.	Red
Visual Indicators Internally Visible (Must open panel door to be viewed)	
• **BATTERY FAULT** indicates high/low (or open) battery fault condition or open battery circuit.	Yellow
• **GROUND FAULT**	Yellow
• Abort station circuit fault **(ABORT TROUBLE)**	Yellow
• Manual release station circuit fault **(MANUAL DISCHARGE TROUBLE)**	Yellow
• Release circuit fault **(AGENT DISCHARGE TROUBLE)**	Yellow
• Zone 1 initiation circuit fault **(ZONE 1 TROUBLE)**	Yellow
• Zone 2 initiation circuit fault **(ZONE 2 TROUBLE)**	Yellow
• General alarm audible circuit fault **(GENERAL ALARM TROUBLE)**	Yellow
• Predischarge/discharge audible alarm circuit fault **(PREDISCHARGE TROUBLE)**	Yellow
• **CYLINDER PRESSURE TROUBLE**	Yellow
• **CYLINDER PRESSURE SUPERVISORY**	Yellow
• **BATTERY CHARGER** Charging current operation	Light Red
Internally Operated Switch Functions	
• System **RESET/LAMP TEST** switch (momentary)	
• Audible **ALARM SILENCE** switch (momentary)	
• System audible **SUPERVISORY SILENCE** switch	
• System audible **TROUBLE SILENCE** switch	
• **RELEASE DISCONNECT** switch	

OPTION DIPSWITCHES



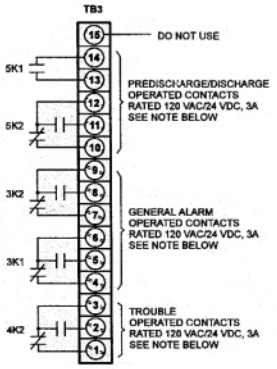
Model CP-2ER CONNECTION DIAGRAM

Approved for Manual or Automatic alarm for the following categories: Local control unit in accordance with NFPA 72 Local; suitable for NFPA connection; suitable also for releasing device service in accordance with NFPA 12A, 13, and 2001. Refer to Note 3e.



NOTES:

1. To obtain proper agent releasing operation, both audible circuits must be utilized.
2. All external circuits on TB1 and TB2 are supervised.
3. See **OPERATION, INSTALLATION, AND MAINTENANCE MANUAL,** P/N 315-093523 for details regarding:
   a. Abort Mode Selection
   b. Manual Discharge Mode Selection
   c. Time Delay Adjustment
   d. 5K Relay Operation Selection
   e. Service Selection: Removing the plug from position P72 will void NFPA 72 Local approval
4. Jumper terminal 11 to terminal 12 of TB1 when abort station is not used.
5. Place EOL resistor across associated terminals when designated devices are not used.
6. TB2, terminals 3, 4, 5, and 6 are not used for 72 Local Service
7. Refer to **OPERATING INSTRUCTIONS,** P/N 315-193524.
8. To use power limited wiring to NFPA 70, NEC, the audible circuits, terminals 1-4 of TB2 must use the PLM-35 module. Refer to Instructions P/N 315-093495. Initiating circuits, TB1, terminals 1-14, are power limited as they are.



NOTE: The contacts are shown in supervisory condition (5K and 3K relay de-energized; 4K relay energized).

For Compatible Notification Appliances to be used with the CP-2ER, please reference Siemens Building Technologies, Fire Safety Division "Compatible Notification Appliances" P/N 315-096363

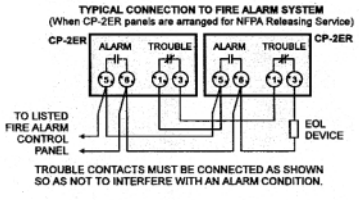
DETECTORS

May use up to 30 smoke detectors (selected from any of the compatible detectors listed below) or may use shorting devices, detector relays, or remote lamps (Refer to the related detector instructions).

COMPATIBLE DETECTORS

DETECTOR COMPATIBILITY IDENTIFIER	BASE COMPATIBILITY IDENTIFIER	INSTALLATION WIRING INSTRUCTIONS
DI-3/3H	DB-3S	P/N 315-081943-15
DI-4A	DB-4	P/N 315-085257-11
DI-6	DB-4	P/N 315-085257-11
DI-A3/A3H	DB-3S	P/N 315-081943-15
DI-B3/B3H	AD-3I/3ILP	P/N 315-093234-3
	AD-3RI/3RP	P/N 315-086591-7
	SA-3I/3P	P/N 315-086593-6
DT-3P	DB-3S	P/N 315-084401-5
DT-11	DB-11	P/N 315-095429-1
PE-3/3T	DB-3S	P/N 315-090875-6
PE-11/11T	DB-11	P/N 315-094198-3

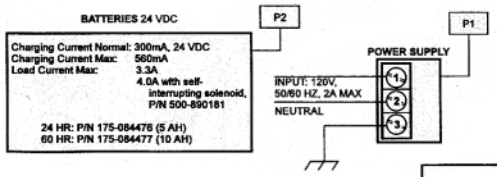
CP-2ER is the compatibility identifier



AGENT DISCHARGE DEVICES

Application	Make	Solenoid Model	Max Line Resistance
NFPA12A (Halon)	Pytronics	500-962631, 24V	6 ohm
	Pytronics	500-266652, 24V	6 ohm
	Pytronics	500-063377, 24V	6 ohm
	Pytronics	500-066929, 24V	6 ohm
NFPA13 (Preaction Deluge)	Skinner	LVaBX25, 24V	3 ohm
	ASCO	TB210A 107, 24V	3 ohm
	ASCO	R6210A, 24V	3 ohm
	ASCO	6210A 107, 24V	3 ohm
NFPA 2001	Pytronics	CPYEC-6*	3 ohm
	Pytronics	CPYEC-12**	3 ohm
	Pytronics	CPYEC-24	3 ohm

* Use 4 CPYEC-6 in Series Only (No Mixtures of Solenoids w/different voltages on each releasing circuit)
** Use 2 CPYEC-12 in Series Only (No Mixtures of Solenoids w/different voltages on each releasing circuit)



DESIGNATION	RATING	CIRCUIT
F1	5A	Battery
F2	2A	General Alarm Audibles
F3	2A	Discharge Audibles
F4	3A	Discharge Circuit

SIEMENS

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