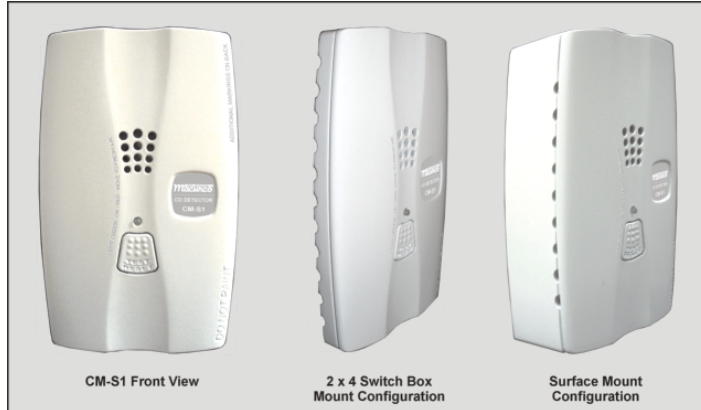


# Carbon Monoxide Detector

FOR USE WITH ALARM CONTROL PANELS



## CM-S1

- SPDT alarm relay
- LED for operating status
- 12-24 VDC Power
- Flush or surface mount
- Long life sensor
- All units individually calibrated

### FEATURES

- **Listed to UL Standard 2075** for carbon monoxide detectors.
- **Tested to UL Standard 2034** for carbon monoxide detectors.
- Surface mounts to a wall using the supplied enclosure rear housing.
- Flush mounts in a 2 X 4 (1-1/2 inch deep minimum ) single gang switch, or handy electrical box.
- Small, low profile, attractive unit in a white plastic case.
- Detector alarms at multiple levels of exposure to **carbon monoxide** based on time weighted averages of the gas present.
- Inexpensive, easy to install. Microcomputer control allows mostly automatic operation.
- Test & Reset switch conducts internal tests and actuates alarm relay.
- Visual display: **GREEN** - Normal operation.  
**FLASHING AMBER** - Trouble Contact your installer or Macurco Tech Support  
**RED** - Danger! Move to fresh air (hazardous condition is present.)
- **Solid state sensor.** No maintenance or periodic sensor replacement needed.
- **SPDT Relay** to connect to Alarm Control Panels or switch external alarm devices.
- **Buzzer:** Produces repeating loud tone bursts during alarm, and chirps if sensor trouble is found.

### SPECIFICATIONS

Voltage:	12-24 VDC
Current (standby / alarm @ 12-24V):	20 mA / 40mA (250mA peak for 14ms/sec)
Power (standby / alarm @ 12V):	¼ Watt / ½ Watt
Power (standby / alarm @ 24V):	½ Watt / 1Watt
Size:	3-1/8 X 5-1/8 X 1-1/2 inch
Alarm Relay:	SPDT, 1 Amp, 60VDC, 60VA
Buzzer Rating:	85 dBA at 10 Feet
Shipping Weight:	One pound
Oper. Temp. Range:	32° to 120° F
Alarm Setting:	Per UL 2034 (Oct.98)
Color:	White

(May be used with a UL Listed Class 2 Power Supply)



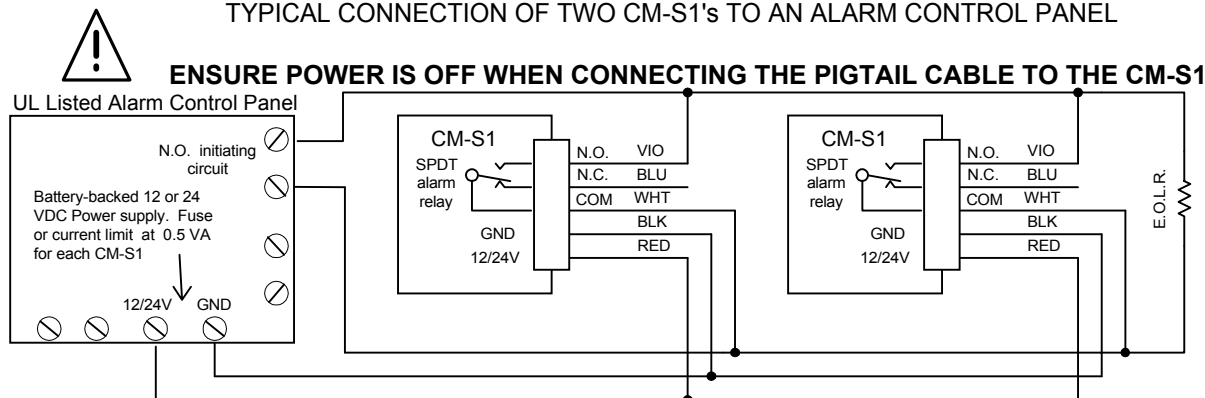
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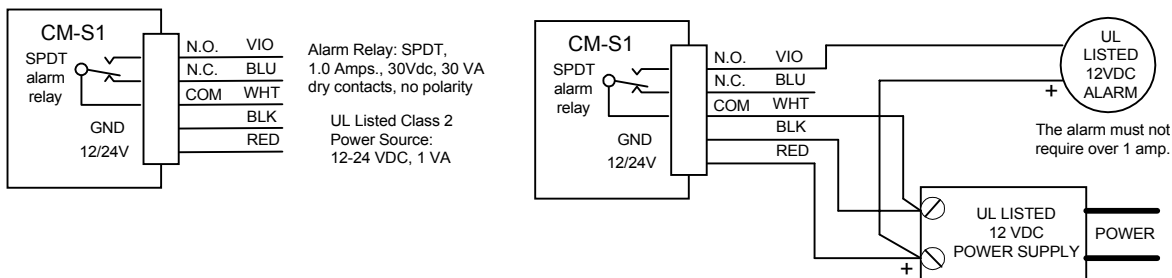
## TYPICAL CONNECTION OF TWO CM-S1's TO AN ALARM CONTROL PANEL



1. The CM-S1 is for use with U.L. Listed Alarm Control Panels (Fire or Fire/Burglar type or Critical Process Management Equipment) that have 12 to 24 Vdc power and 12 to 24 Vdc alarm initiating circuits.
2. The Alarm Control Panel (UL Listed Fire or Fire/Burglar type or Critical Process Management Equipment) must be dedicated to CO detection or have alarm devices that provide a distinctive alarm for carbon monoxide detection. Do not connect the CM-S1 to Fire Alarm Circuits.
3. The CM-S1 is intended for installation in buildings in non-hazardous locations such as residences, retail stores, office buildings, and institutional buildings.
4. The CM-S1 is NOT intended for use in industrial applications such as refineries, chemical plants, etc. The CM-S1 is NOT intended for use in parking garages, as the controller of exhaust systems.
5. LOCATION: Place the unit at a level where people breathe: about 5 feet (1.5 meters) above the floor. Mount the CM-S1 in a vertical position on a wall or column. Do NOT mount the CM-S1 in a corner.
6. SPACING: Use the same spacing as for smoke detectors-- 30 foot (9 meters) centers, 900 sq. feet (83 sq. meters) per detector.
7. INSTALLATION: As shipped, the CM-S1 faceplate is mounted on the enclosure's rear-housing component. This enclosure configuration allows the unit to mount flush on a wall. Wiring is routed through an access area on the base of the rear housing. A thin mid-plate enclosure component is also supplied with the CM-S1. Using the supplied screws, this mid-plate component is used to mount the CM-S1 on a 2 x 4 single-gang, or "handy" electrical box, provided by the installer. The CM-S1's faceplate component (with the detector attached) is then mounted on the mid-plate component. Electrical connections to the CM-S1 are made via the supplied five-conductor pigtail cable. The pigtail cable is first connected to the control panel wiring by means of the supplied wire-nuts (refer to the diagrams for proper pigtail wiring). The pigtail cable's connector then snaps into the mating connector on the back of the CM-S1 detector, allowing easy installation and replacement of the CM-S1. For proper detector operation, ensure that the CM-S1 is connected to a **continuous** source of power (not controlled by a wall switch). The CM-S1 power consumption figures represent worst-case conditions and will vary as the applied DC voltage varies.
8. The alarm control panel zone inputs must be terminated with end of line resistors (E.O.L.R.), that are provided with the panel.
9. When using the CM-S1 with normally closed initiating circuits, use the "N.C." and "COM" alarm relay connections.

The CM-S1 has not been evaluated as a stand-alone unit by U.L.

### CM-S1 CONTROLLING A REMOTE ALARM



10/04