

S-TECH PRODUCT SPECIFICATION FOR U.S. CONSTRUCTION  
AS PER THE LATEST UL STANDARD ON CO ALARMS  
UL2034 EFFECTIVE OCTOBER 1<sup>ST</sup>, 1998

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Carbon Monoxide Alarms

Specification

July 2000

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PART 1 – GENERAL

1.1 Related Work

- .1 Comply with required Electrical Specification.

1.2 Submittal

- .1 Submit shop drawings for all components of the hard-wired single station carbon monoxide alarm to the property owner for approval.
- .2 Samples, shop drawings, and other matter submitted by the Contractor of responsibility for full compliance with the specifications shall be approved by the property owner.

1.3 References

- .1 UL2034 Standard for Safety, Single and Multiple Station Carbon Monoxide Alarms.
- .2 National Electrical Code.
- .3 Local Electrical Code.
- .4 Local City Carbon Monoxide By-Law, the State Building Code or equivalent and updates of same.

1.4 Quality Assurance

- .1 All components shall be UL approved, listed and labelled.

1.5 Description of System

- .1 System includes:
  - .1 For the installation of carbon monoxide alarms, the contractor shall carry out the following work at the locations specified as per appended Schedule #1:-
    - .1 supply and install a minimum of one new single station carbon monoxide alarm per dwelling unit, 120V AC 60 Hz, to carry out carbon monoxide gas detection and alarm.

- .1 carbon monoxide alarms shall be listed for wire-in single-station.

#### 1.6 Requirements of regulatory agencies

- .1 System:
  - .1 Subject to the approval of Local Fire Services or Building Inspection Authority as and when required.

#### 1.7 Shop Drawings

- .1 Submit shop drawings to include:
  - .1 Layout of equipment.
  - .2 Location (s) of carbon monoxide alarm installations.
  - .3 Complete wiring diagram.

#### 1.8 Operation and Maintenance Data

- .1 On completion of the installations, contractor shall provide to the property owner (or tenant when noted) the following:
  - .1 Operation and maintenance data, or owner's manual, for carbon monoxide alarms installed.
  - .2 Technical data – illustrated parts lists with parts catalogue numbers.
  - .3 Provide to each tenant a copy of owner's manual and product packaging on completion of installation of carbon monoxide alarm.
  - .4 The property owner/tenant should test the carbon monoxide alarm quarterly as per manufacturer's instruction such as pressing the test button and using a carbon monoxide alarm tester, i.e. Alarmate AM-00, AM-58, AM-U or equivalent.

#### 1.9 Warranty and Service

- .1 Provide one year's free labor on maintenance from date of commissioning.
- .2 Provide a minimum of five years' warranty on device.

### PART 2 – PRODUCTS

#### 2.1 Materials

- .1 Carbon monoxide alarms shall be UL approved, listed and labelled, such as S-TECH models listed on page 4.

- .2 Carbon monoxide alarms shall conform to UL2034 Standard effective October 1<sup>st</sup>, 1998.
- .3 Carbon monoxide alarms shall be of the micro controller based circuit design, metal oxide semi-conductor or electrochemical type, and electrically powered.
- .4 Sample carbon monoxide alarm complete with manufacturer's instruction, to be submitted for evaluation at no cost to the property owner, within 3 working days on request.
- .5 If required, bidder must provide verification that the carbon monoxide alarm offered meets the specifications within 3 working days of request at no cost to the property owner.
- .6 State Make and Model of alarm offered.

### PART 3 – EXECUTION

#### 3.1 Installation

- .1 The single station carbon monoxide alarms shall be installed as per manufacturer's instruction and the Local City By-law, if there is any.
- .2 Installation requirement for electrical wiring to be as per Local Installation Rule.
- .3 Each wire-in carbon monoxide alarm shall have no switch between the carbon monoxide alarm and the power distribution panel.
- .4 If site condition allows, carbon monoxide alarms shall preferably be installed near sleeping area, wall-mounted, at least six inches away from the ceiling, with test/reset button at bottom. For sloped ceilings, installed carbon monoxide alarm at least three feet horizontally from peak.
- .5 Carbon monoxide alarms are **NOT** to be installed in the following areas:
  - .1 Kitchens.
  - .2 Dead air space (e.g. the wall space within 4 inches of the ceiling).
  - .3 Near ceiling fans.
  - .4 Near doors and windows that open to the outside, near fresh air vents, or anywhere that is drafty.
  - .5 Areas where the temperature is colder than 40°F or hotter than 100°F.
  - .6 Near extremely damp or humid areas like bathrooms.
  - .7 Any other areas identified by the manufacturer's instruction as being not suitable.

- .6 Contractor shall be responsible for making good all disturbed wall and ceiling surfaces and touch up paint to match existing. **Any fumes created from painting must be purged to avoid false alarm.**
- .7 Contractor shall submit a copy of the appended Schedule #2 to the property owner at the end of each and every work day.

3.2 Field Quality Control

- .1 Upon completion of the installation, the contractor shall test every carbon monoxide alarm for proper response in the presence of the property owner or the property owner's representative and (if required) officials of the Local Fire Services. Personnel other than the contractor who may have installed or furnished any device should be notified of the test and asked to supply appropriate information. The contractor shall provide instruments, metres, equipment and personnel required to conduct the tests. An itemized test report as per Schedule #2 will then be submitted to the owner detailing and certifying all results of the tests. After completion of the 100% system test and submission of Schedule II, the Contractor will set up a final inspection with the property owner or the property owner's consultant. The system must operate for at least 30 days prior to this inspection.
- .2 The system should be inspected and functionally tested by the property owner and/or technical service/appointed agent on a random sampling basis.
- .3 Testing of installed carbon monoxide alarm shall be in accordance with the manufacturer's instruction such as pushing the reset button and using a carbon monoxide alarm tester 'Alarmate AM-00, AM-58, AM-U' or equivalent to test the sensor.

*\*S-TECH Carbon Monoxide Alarms:*

- STCO-058            120Volt Carbon Monoxide Alarm, Direct Plug In, Single Station.*
- STCO-100HN        120Volt Carbon Monoxide Alarm, Direct Wire In, Single Station.*
- STCO-100HWFN    120Volt Carbon Monoxide Alarm, Direct Wire In, Multiple Station with Interconnect.*
- STCO-100HWRN    120Volt Carbon Monoxide Alarm, Direct Wire In, Multiple Station with Interconnect with 1 set Relay Contacts.*
- STCO-850           120Volt Carbon Monoxide Alarm with LED Digital Display, Direct Plug In, Single Station.*

**SCHEDULE #1**  
**Locations for Carbon Monoxide Alarms Installation**

<b>Requirement: Single-Station Wire-in Carbon Monoxide Alarms</b>			
<b>Location</b>	<b>Item</b>	<b>Unit Number</b>	<b>Drawing</b>

**SCHEDULE #2  
Installation Details and Field Test Results**

Appendix

<b>Requirement: Single station Wire –in Carbon Monoxide Alarms</b>					
Date	Address	Unit Number	Location of Installation in Dwelling	Drawing	Field Tested and Acceptable

Signature of Contractor's Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

