AUTOCALL

*UL, ULC Approved**

Features

Isolator base for TrueAlarm analog sensors using IDNet addressable communications:

- Compatible with Autocall 4007ES, 4010ES, or 4100ES Series fire alarm control panel IDNet Signaling Line Circuits (SLCs) providing: IDNet, IDNet+, IDNet 1+, IDNet 2, or IDNet 2+2 output loops (see Multi-Floor Isolator Example 1 on page 2 and Multi-Floor Isolator Example 2 on page 3).
- Can be installed up to 250 total allowing isolation directly to the device level
- Operation is for ceiling or wall mounting
- Base mounted LED indicates sensor status
- Designed for EMI compatibility
- UL listed to Standard 268; ULC listed to Standard S529

Short circuit wiring isolation:

- Input is automatically separated from output when an output communications short circuit occurs

Earth fault isolation reduces time to fix wiring problems:

- Built-in control panel diagnostics assist in locating earth fault conditions – the most common installation wiring problem

Isolator base A4098-9793 is compatible with:

- Photoelectric sensor model A4098-9714
- Heat sensor model A4098-9733
- Multi-sensor model A4098-9754

For Class B or Class A wiring:

- Communications are received from either input or output allowing bases with Class A wiring to isolate short circuits while still operating their sensors

Description

TrueAlarm Sensing and IDNet communication isolation.

The A4098-9793 IDNet Communications Isolator Base provides Autocall TrueAlarm analog sensor operation and also provides IDNet communications isolation to improve installation convenience and increase system integrity. Isolation is automatically activated at the base when an output short circuit is detected and isolation can also be selected per base manually from the control panel to assist with troubleshooting wiring problems.

Operation.

Isolator bases power-up in isolation mode and are directed to connect by the control panel. If the output wiring is acceptable, the isolator base will connect to the rest of the circuit. If the output wiring is shorted, the isolator remains isolated.

Status Tracking.

The isolator reports back to the panel when it is in isolator mode and the extent of shorted wiring is reported back to the panel by identifying device addresses that are not communicating. [Isolators are assigned sequentially to low number addresses to expedite Signaling Line Circuit (SLC) power-up. Refer to Installation Instructions 574-709AC and 574-707AC for additional information.]

Earth Faults.

During installation, earth faults often occur and finding these faults normally requires extensive wiring disconnection. With the A4098-9793 isolator base, wiring suspected to have earth faults can be isolated to assist in their discovery and repair.

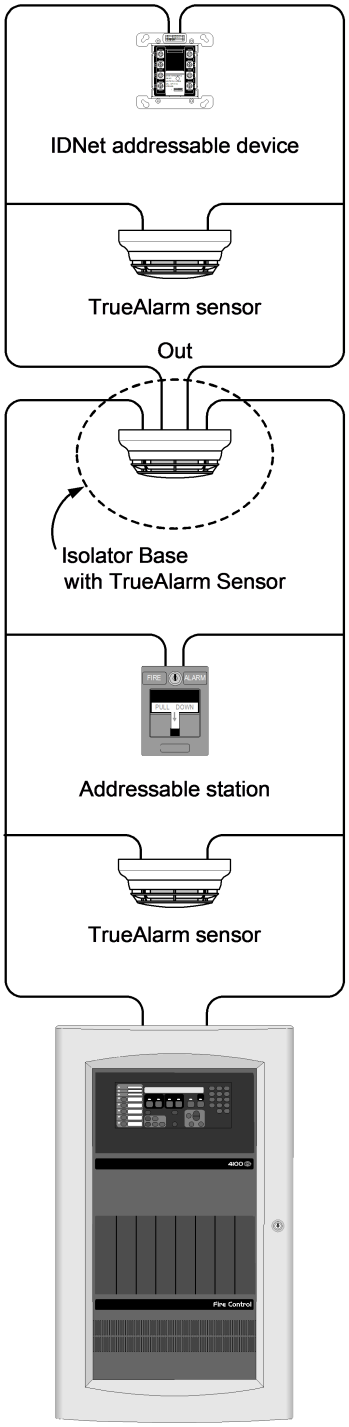


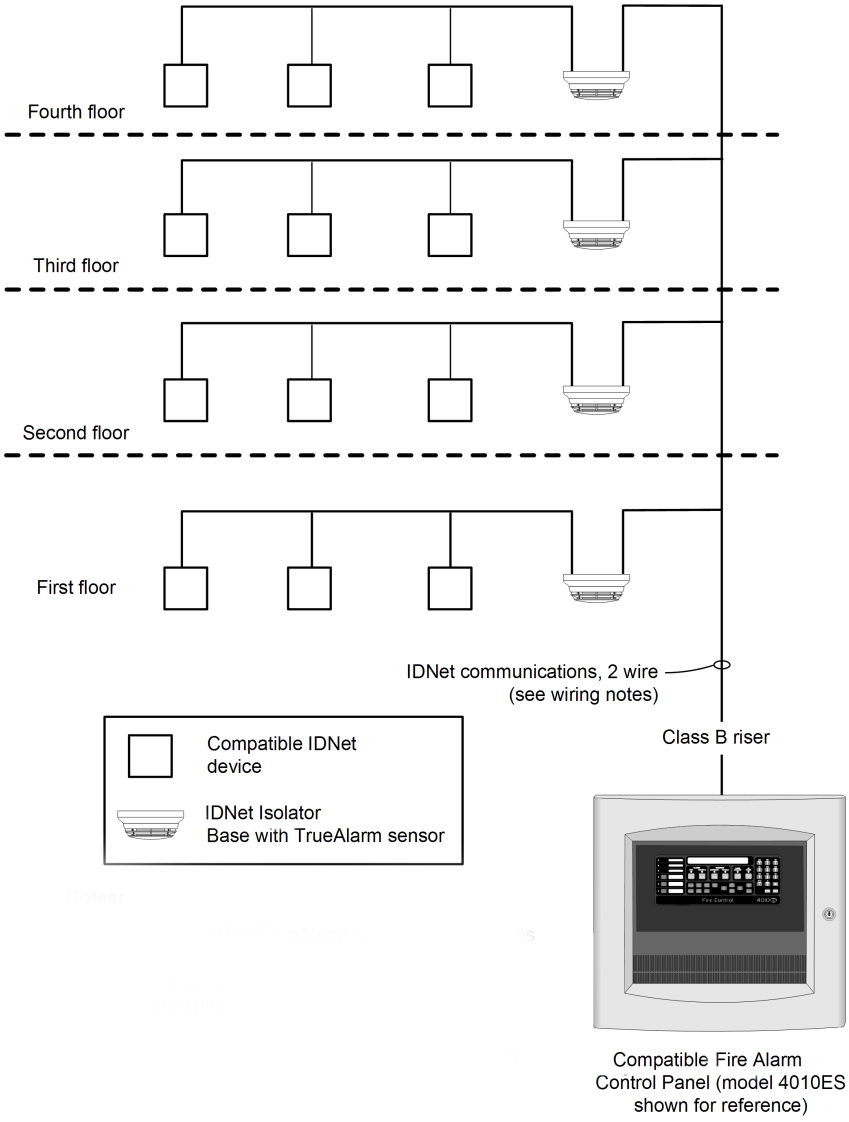
Fig 1: IDNet Channel with a Single A4098-9793 Isolator Base (4100ES Fire Alarm Control Panel shown for reference)

* Additional listings may be applicable; contact your local product supplier for the latest status.

Multi-Floor Isolator Example 1

The one-line diagram on this page shows a multiple floor example with Class B IDNet communications for each floor starting at an isolator base. If any floor wiring beyond the isolator base should experience a short circuit, each floor can be individually separated from the next, preventing the short circuit from disabling the entire IDNet communications wiring.

In the event of an earth connection, each floor can be individually isolated using the built-in control panel diagnostics. With individual floor control, the earth fault can be isolated to the floor level to narrow the search area.



Wiring Notes:

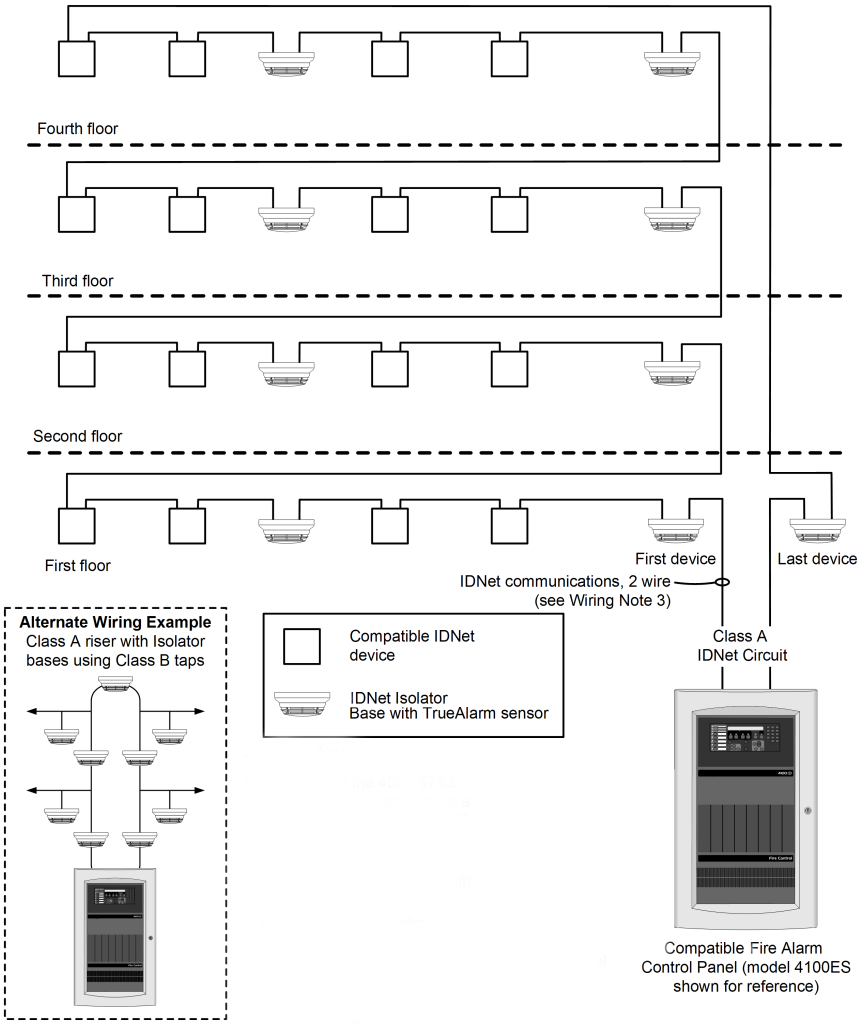
1. Operation of the A4098 TrueAlarm Isolator base requires connection to a compatible 4007ES, 4010ES, or 4100ES IDNet communications channel.
2. Maximum line resistance between the panel and an isolator, and between two isolators, is 10 Ω or 780 ft (238 m) with 18 AWG wire.
3. This is a one-line drawing showing only IDNet communications wiring.
4. Some IDNet devices require additional wiring for power. Refer to specific devices for details.

Multi-Floor Isolator Example 2

The illustration below is a modification of Example 1. Wiring for each floor has an additional isolator base and the IDNet circuit is wired as a Class A connection. With the addition of these isolator bases, wiring between floors can be better protected in the event of a short circuit. Also, in the event of an earth connection, the additional isolator base per floor allows earth fault isolation to be achieved with better precision.

Diagnostic Assistance. Communications from an IDNet 2, IDNet 2+2, or IDNet+ output provide individual short circuit isolation and allow individual output control to provide assistance in locating wiring faults.

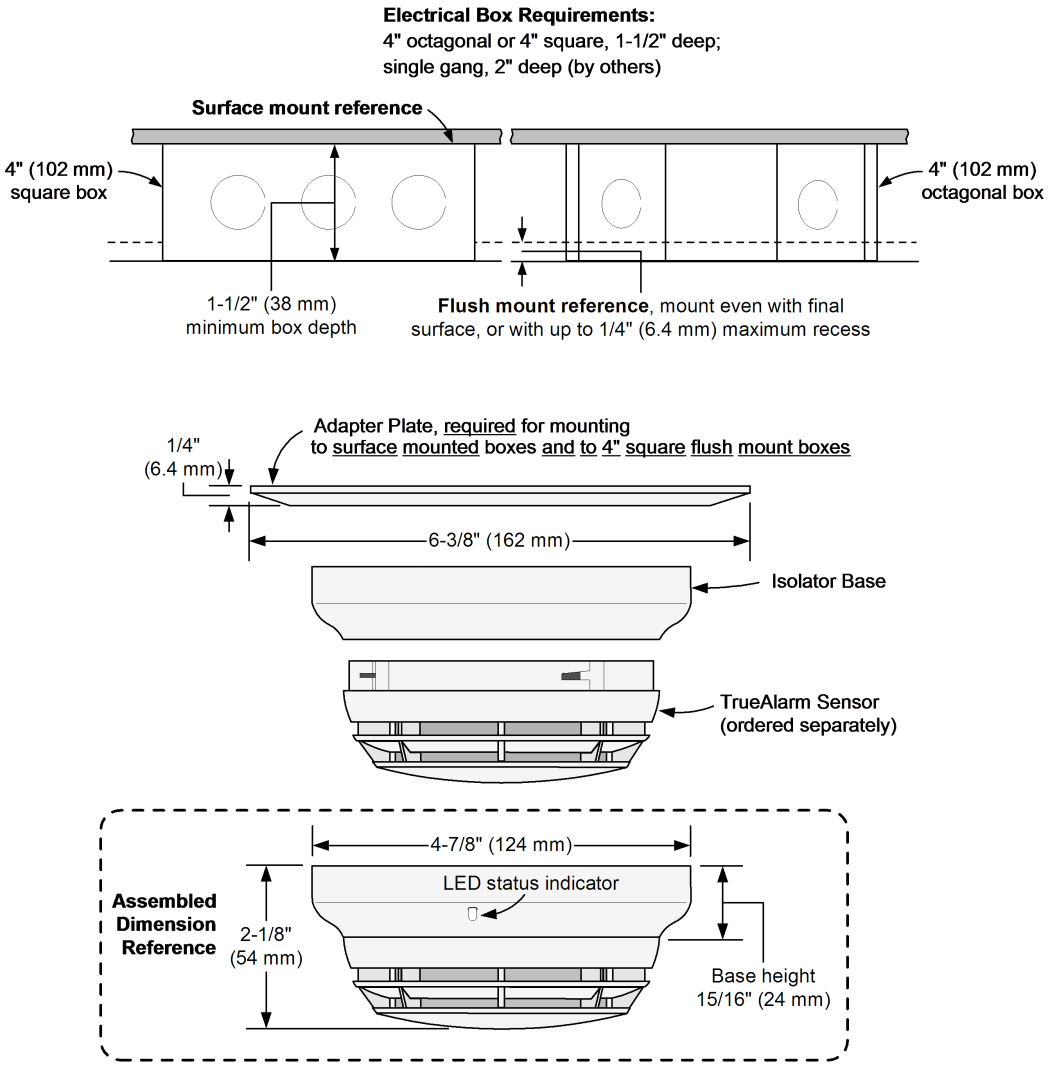
Note: When wiring Class A IDNet communications provided by IDNet or IDNet 1+ outputs, locate isolators as the first and last devices in the loop, close to the panel, to provide loop short circuit isolation operation (as shown below).



Wiring Notes:

1. Operation of the A4098-9793 TrueAlarm Isolator Base requires connection to a compatible 4007ES, 4010ES, or 4100ES IDNet communications channel.
2. For Class A communications from IDNet or IDNet 1+ outputs, locate IDNet Isolators as the first and last device in the loop, close to the panel, to optimize loop short circuit protection. This is not required with IDNet 2, IDNet 2+2, or IDNet+ outputs.
3. Maximum line resistance between the panel and an isolator, and between two isolators, is 10 Ω or 780 ft (238 m) with 18 AWG wire.
4. This is a one-line drawing showing only IDNet communications wiring.
5. Some IDNet devices require additional wiring for power. Refer to specific devices for details.

Mounting Information



Specifications (for additional information refer to Installation Instructions 574-709AC and 574-707AC)

Power and Communications	IDNet communications, one address per base
Distance Specification	Maximum line resistance between panel and isolator, or between isolators is 10 ohms; [18 AWG (0.82 mm2) = 780 ft (238 m)]
IDNet Connections	Screw terminals for in/out wiring, 18 to 14 AWG (0.82 to 2.08 mm^2)
UL Listed Temperature Range	32° F to 100° F (0° C to 38° C)
Operating Temperature Range	15° F to 122° F (-9° C to 50° C)
Storage Temperature Range	0° F to 140° F (-18° C to 60° C)
Humidity Range	10 to 95% RH, from 32° F to 122° F (0° C to 50° C)
Housing Color	Frost White (A4098-9793) or Black (A4098-9777)

Table 1: Sensor Compatibility (sensors are ordered separately)

Product	Data Sheet
A4098-9714, Photoelectric Sensor	*AC4098-0019*
A4098-9774, Photoelectric Sensor	
A4098-9733, Heat Sensor	
A4098-9778, Heat Sensor	
A4098-9754, TrueSense Multi-Sensor	*AC4098-0024*
A4098-9779, TrueSense Multi-Sensor	

Table 2: Additional Isolator Products

Product	Datasheet
A4090-9116, Remote IDNet Isolator Module (not available with 4010 control panels)	*AC4090-0005*
A4090-9117, 24 V Addressable Power Isolator (not available with 4008 or 4010 control panels)	*AC4090-0006*