

Description

The Series 21 range of analog addressable fire detectors from Harding Instruments are advanced in design and have unique features that benefit the installer and end user.

The range includes photoelectric (DET2104) smoke detector, heat detectors (DET2101) and a multisensor (DET2105). All have an unobtrusive profile, a zero insertion force base, user friendly addressing and extended data and alarm functions.

Application of XP Detectors

The type of S21 detector used follows well established principles of system design. Selecting an optimum detector type will depend on the type of fire risk and the type of environment the detector is used.

For general use, smoke detectors are recommended since they give the highest level of protection. S21 smoke detectors may be photoelectric, ionization or multisensor types. It is generally accepted that ionization detectors have a high sensitivity to flaming fires whereas photoelectric detectors have a high sensitivity to smoky smoldering fires. As a result of this, ionization detectors are widely used for property protection or in areas where flash fires could occur as in cooking areas, and photoelectric detectors are generally used for life protection due to their early warning capabilities.

The multisensor is basically a photoelectric detector and will therefore respond well to the smoke from smoldering fires. The multisensor also senses air temperature. This temperature sensitivity allows the multisensor to also give a response to fast burning, flaming fires which is similar to that of an ionization detector. The multisensor can therefore be used as a direct substitute for an ionization detector and offers the detection capabilities of both photoelectric and ionization detectors.

Where the environment is smoky or dirty under normal circumstances, a heat detector may be more appropriate. It must be recognized, however, that any heat detector will respond only when the fire is well established and generating a high heat output.

Addressing and Communications

Each type of S21 device responds to interrogation and command from the Harding Addressable Loop Module (ALM3-IP) to which it is attached. The device communicates to the panel information on status, command bits, type, location, and other information that allows an alarm to be raised even when the device is not itself being interrogated. Message error checking is also provided.



Features

- Sleek, non-fading white polycarbonate enclosure
- Zero insertion force base
- Multisensor reduces need for use of ionization detectors
- Drift compensation to keep sensing window open and nuisance alarms eliminated
- Thermal detectors adjustable in 1 degree increments
- Patented programming card eliminates addressing errors during system installation and maintenance
- Alarm flag sends signal to system even when device is not being interrogated
- Wide variety of complimenting addressable input/output devices for use in conjunction with detectors
- Wide variety of detector base options including relay and synchronized temporal sounder bases
- Line isolators and isolator bases also available
- RoHS Compliant

Listing

UL File: (S36048)

UL File: (S36049)

A unique, patented programming card provides simple, user friendly and accurate identification of detector locations whereby a coded card, placed into the side of the base, is read by any detector that is inserted into the base. Using the addressing card simplifies and speeds up the installation and commissioning processes. Addressing errors during maintenance and service are eliminated. Any similar type detectors that are maintained or inadvertently put back into the wrong location will *not* impact device programming or any of the output events that are generated by a device address including information that is automatically reported to a central receiving service under emergency situations. If the wrong detector type is installed, the Harding system will report a type mismatch Trouble.

The S21 detectors provide an alarm facility that automatically puts an alarm flag on the data stream and reports its address when the pre-set UL 864/10th edition thresholds are exceeded. The Harding ALM3-IP monitors S21 devices for such conditions and activates the pre-programmed output functions as implemented by the system designer, installer or system maintenance personnel.

The Harding ALM3-IP also monitors S21 devices for their average return values during ambient conditions which may naturally climb over time due to the infiltration and accumulation of dirt and dust, and adjusts the detectors alarm threshold to compensate. This feature is generally known as drift compensation and guarantees that the detector's sensing window or range does not diminish over time. The drift compensation feature keeps the sensing window of the S21 device at factory new conditions and helps eliminate unwanted or nuisance alarms. When the device has reached its drift compensation limit and can be adjusted no further, the ALM3-IP will put a 'dirty-detector' signal on the system alerting maintenance personnel that the S21 device needs to be cleaned.

The thermal detector is not drift compensated. Thermal detectors return a value to the ALM3-IP that is an actual reading temperature in the area immediately surrounding the placement of the thermal device. S21 thermal detectors (DET2101) can be adjusted from the Harding fire control system in one degree increments (Celsius). This allows system designers, installers or system maintenance personnel to install DET2101 thermal detectors in areas that are normally hot (as in attic or rooftop usage) and adjust the detector's temperature alarm threshold to the precise level necessary to protect the property and eliminate unwanted or nuisance alarms.

Harding offers a wide variety of base options for the S21 detector line that are necessary for proper system design and building protection. Standard bases are available in 4 or 6 inch dimensions. Sounder bases, relay bases, line isolators and isolator bases are also available. Please see DS- DET2310 for specifics on addressable/intelligent base options, DS-DET2300 for specifics on line isolators and isolator bases, DS-DET2401/2402 for intelligent duct detectors and DS-DET2810/2812 for information regarding the complete line of compatible addressable line devices that complement the S21 detector offering.

Document # DS-DET2100-1.0 • Copyright © 2019 Harding Instrument Co. Ltd. • All Specifications subject to change without notice • Printed in Canada



9564 Yellowhead Trail NW Tel 780.462.7100
Edmonton, AB T5G 0W4 Fax 780.450.8396
sales@harding-tech.com www.harding-tech.com



Represented by: