

MERIDIANTM

Photoelectric Smoke Detectors & Alarms

FEATURES:

- Advanced 90° photoelectric detection pattern and patented smoke chamber for superior detection and dust resistance
- Unique high signal-to-noise ratio and superior RFI immunity to prevent false alarms
- Excellent smoke access provides reliable detection for all smoke flow directions and velocities
- User verification of sensitivity
- Solid-state LED indicator light
- Locking/non-locking mounting plate
- Attractive styling for any decor
- UL and ULC listed



MeridianTM

Revolutionary design incorporating an advanced 90° photoelectric detection pattern, a uniquely designed smoke chamber, and high RFI immunity make Meridian smoke detectors and alarms the first choice for superior detection reliability, and prevention of false alarms.

MN-240 SERIES - 4 WIRE SMOKE DETECTORS

- RED solid state LED indicator light
- Form 'A' (normally opened, alarm closed) alarm relay (standard); optional Form 'C' (normally opened/normally closed) auxiliary relay
- 57°C (135°F) fixed temperature heat sensor option
- Optional Loud 85dB piezoelectric alarm sounder
- Audible trouble indication (in sounder-equipped units) if the unit has insufficient smoke sensitivity
- ULC listed S529 / UL listed UL 268

MODELS

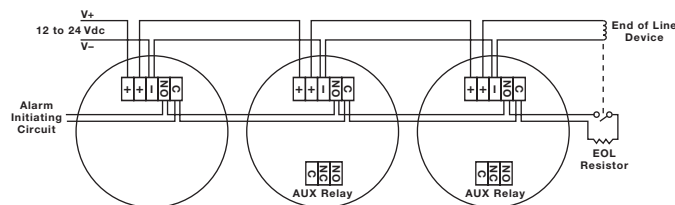
MN240	Form 'A' alarm relay
MN240T	Form 'A' alarm relay, fixed temp 135°F (57°C) sensor
MN240R	Form 'A' alarm relay, Form 'C' auxiliary relay
MN240RT	Form 'A' alarm relay, Form 'C' auxiliary relay, fixed temp 135°F (57°C) sensor
MN240S	Form 'A' alarm relay, sounder
MN240ST	Form 'A' alarm relay, sounder, fixed temp 135°F (57°C) sensor
MN240SR	Form 'A' alarm relay, sounder, Form 'C' auxiliary relay
MN240SRT	Form 'A' alarm relay, sounder, Form 'C' auxiliary relay, fixed temp 135°F (57°C) sensor

OPERATION

On alarm, the detector sends an alarm signal to the control panel, and activates the optional sounder and auxiliary relay. When the smoke clears from the chamber, the sounder stops while the detector and auxiliary relay remain latched in the alarm state until reset by turning off the power supply for 2 seconds from the control panel.

Detectors with the Temperature Sensor (T) option cannot be reset until the high heat condition is relieved.

WIRING DIAGRAM



SPECIFICATIONS

Nominal operating voltage 12 - 24Vdc or VFWR
 Maximum operating voltage range 10 - 30Vdc, or 10 - 26.4VFWR

	Standby Current		Alarm Current @ 12V & 24V
	@ 12V	@ 24V	
MN240	15 µA	45 µA	35 mA
MN240T	25 µA	60 µA	35 mA
MN240R	15 µA	45 µA	60 mA
MN240RT	25 µA	60 µA	60 mA
MN240S	15 µA	45 µA	45 mA
MN240ST	25 µA	60 µA	45 mA
MN240SR	15 µA	45 µA	70 mA
MN240SRT	25 µA	60 µA	70 mA

Relay rating (resistive)

Form 'A' relay 1A at 30Vdc/VAC
 Form 'C' relay 2A at 30Vdc/VAC

Temp sensor 135°F (57°C) fixed

Smoke sensitivity 2.4%/ft obscuration ±0.5%/ft
 2.4%/305mm ±0.5%/305mm

Operating environment 32 - 122°F (0 - 50°C)
 5% - 95% RH, non-condensing

Field test Magnet-activated switch and/or
 Gemini 501 Smoke Alarm Analyzer

MN-220 SERIES - 2 WIRE SMOKE DETECTORS

- RED solid state LED indicator light
- Optional Form 'C' auxiliary relay
- 57°C (135°F) fixed temperature heat sensor option
- Magnet-activated sensitivity test switch
- ULC listed S529 / UL listed UL268

MODELS

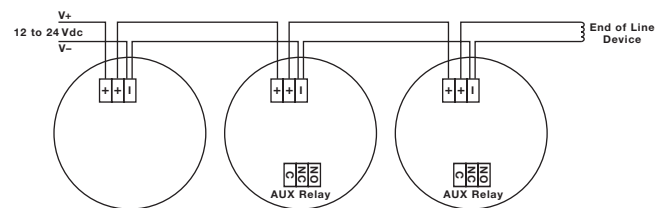
MN220	2-wire detector
MN220T	2-wire detector, fixed temp 135°F (57°C) sensor
MN220R	2-wire detector, Form 'C' auxiliary relay
MN220RT	2-wire detector, Form 'C' auxiliary relay, fixed temp 135°F (57°C) sensor

OPERATION

On alarm, the detector sends an alarm signal to the control panel and activates the optional auxiliary relay. When the smoke clears from the chamber the detector and auxiliary relay remain latched in the alarm state until reset by turning off the power supply for 2 seconds from the control panel.

Detectors with the Temperature Sensor (T) option cannot be reset until the high heat condition is relieved.

WIRING DIAGRAM



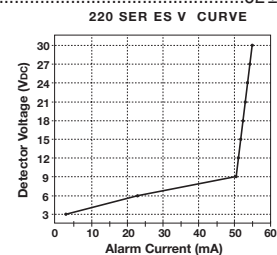
SPECIFICATIONS

Nominal operating voltage 12 - 24Vdc or VFWR

Maximum operating voltage range 10 - 30Vdc, or 10 - 26.4VFWR

	Standby Current	
	@ 12V	@ 24V
MN220	15 µA	50 µA
MN220T	25 µA	60 µA
MN220R	15 µA	50 µA
MN220RT	25 µA	60 µA

Alarm Current 52 ± 2mA @ 12 & 24Vdc



Electrical compatibility : DSC model MN220 detectors are system fire detectors. When used in 2-wire operation, the detectors and controls must have compatibility listing with Underwriters' Laboratories.

Auxiliary relay rating (resistive)

Form 'C' relay 2A at 30Vdc/VAC

Temp sensor 135°F (57°C) fixed

Smoke sensitivity 2.4%/ft obscuration ±0.5%/ft
 2.4%/305mm ±0.5%/305mm

Operating environment 32 - 122°F (0 - 50°C)
 5% - 95% RH, non-condensing

Field test Magnet-activated switch and/or
 Gemini 501 Smoke Alarm Analyzer

MN-140 SERIES - DC POWERED SMOKE ALARM

- GREEN solid-state LED indicator light
- Loud 85dB piezoelectric alarm sounder
- Interconnect up to 20 detectors
- Removable terminals for easier wiring
- Optional Form 'A' (normally open, alarm closed) and/or Form 'C' (normally open/normally closed) alarm relays
- 57°C (135°F) fixed temperature heat sensor option
- Test Button for user to perform sensitivity test
- Automatic self-test every 40 seconds with audible trouble indication if the detector has insufficient smoke sensitivity
- ULC listed S531

MODELS

MN-140	Form 'A' alarm relay, sounder, interconnect
MN-140T	As MN-140 plus 57°C (135°F) sensor
MN-140R	As MN-140 plus Form 'C' auxiliary relay
MN-140RT	As MN-140 with Form 'C' auxiliary relay, 57°C (135°F) sensor
MN-140C	Form 'C' alarm relay, sounder, interconnect
MN-140CT	As MN-140C plus 57°C (135°F) sensor
MN-140CH	As MN-140C plus isolated 57°C (135°F) sensor as heat detector with Form 'A' relay

OPERATION

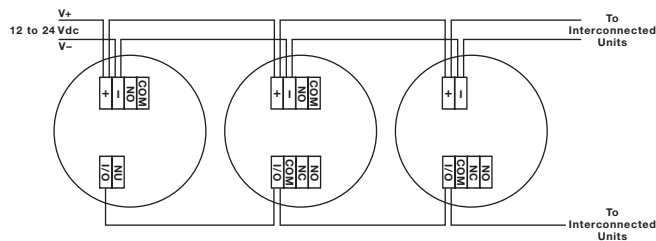
On alarm, the detector sends an alarm signal to the control panel, and activates the sounder and optional auxiliary relays. When the smoke clears from the chamber the detector automatically resets itself.

Detectors with the Temperature Sensor (T) option will not reset until the high heat condition is relieved.

Interconnected Units

Up to 20 detectors may be interconnected. When one detects smoke or heat, it and all interconnected "remote" detectors will sound. Units detecting smoke or heat will activate their alarm and auxiliary relays, and their LEDs will shut OFF. Detectors not detecting smoke or heat will not activate their relays and their LEDs will remain ON. This will assist in locating the detector(s) that initiated the alarm.

WIRING DIAGRAM



SPECIFICATIONS

Nominal operating voltage	12 - 24Vdc or V _{FWR}
Maximum operating voltage range	10 - 30Vdc, or 10 - 26.4V _{FWR}
Standby current	17 mA
Alarm Current	
MN140(T)	40mA maximum
MN140C(T)	45mA maximum
MN140R(T)	65mA maximum
MN140CH	65mA maximum
Relay rating (resistive)	
Form 'A' relay	1 A at 30Vdc/Vac
Form 'C' relay	2A at 30Vdc/Vac
Temp sensor	135°F (57°C) fixed
Smoke sensitivity	2.5%/ft obscuration ±0.5%/ft 2.5%/305 mm ±0.5%/305 mm

Operating environment	32 - 122°F (0 - 50°C) 5% - 95% RH, non-condensing
Field test	Pushbutton and/or Gemini 501 Smoke Alarm Analyzer

WLS906 WIRELESS SMOKE ALARM

- RED solid-state LED indicator light
- Loud 85dB piezoelectric alarm horn
- Uses six AA batteries and special circuit design to provide extra long battery life
- Battery removal sensor alerts user to missing battery
- Visible flash light and audible trouble chirp for low battery warning
- Automatic self-test once every 40 seconds provides an audible trouble indication if the unit has insufficient smoke sensitivity
- Test Button allows user to perform sensitivity test and get a local indication of test result
- Magnet-activated reed-switch allows user to perform system test
- Equipped with an RF transmitter for communication with DSC's WLS900 Wireless and Power 832 Security Systems
- ULC listed S531, Listed to UL217 and UL268

OPERATION

On alarm, the detector activates the sounder and sends an RF alarm signal to the control panel. When the smoke clears from the chamber the detector automatically resets itself.

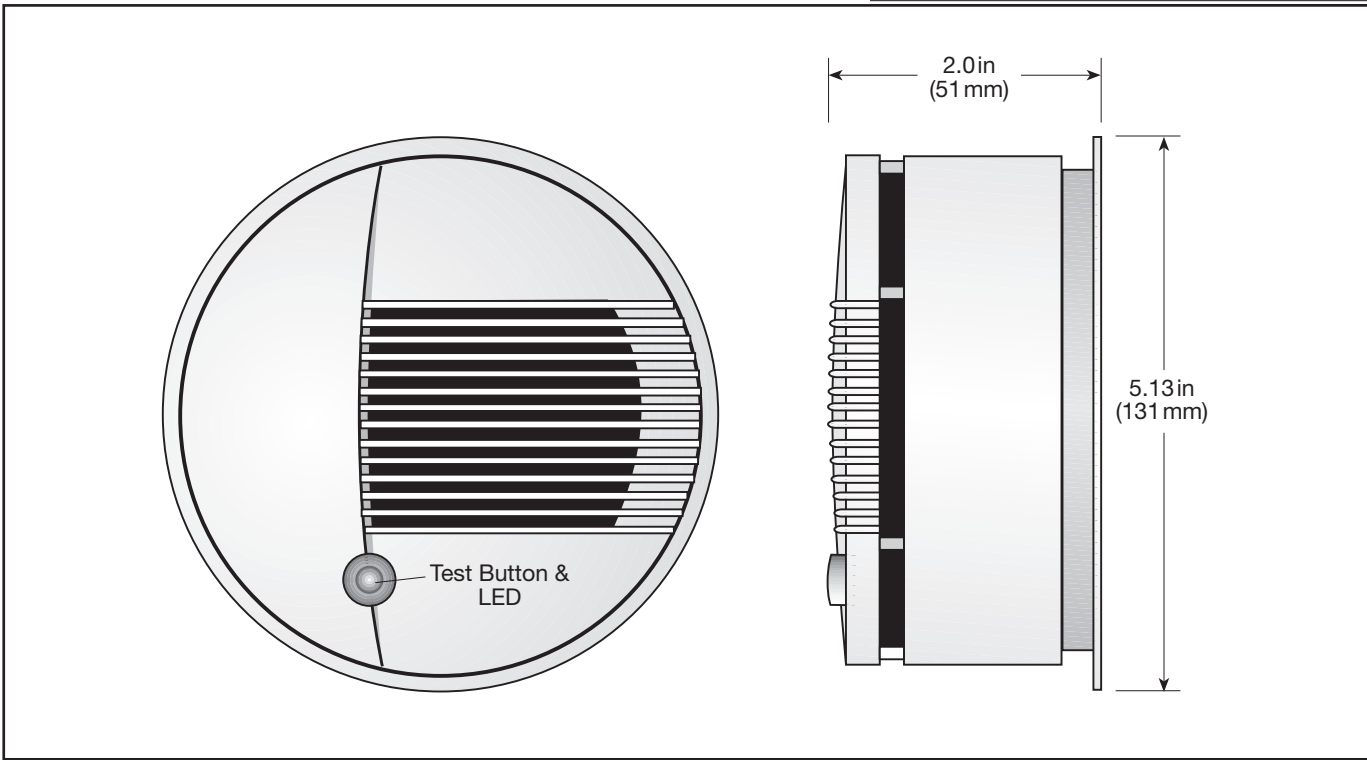
ALARM INDICATIONS

Condition	Sounder	Alarm LED	RF Transmission
No smoke	silent	flash every 40-50sec	supervision ^{††}
Smoke	alarm	flash every 0.67sec	alarm
Automatic self test - functioning normally	silent	flash every 40-50sec	supervision ^{††}
Automatic self test - insufficient sensitivity	chirp between LED flashes	flash every 40-50sec	fire trouble
Push button sensitivity test - functioning normally	alarm	flash every 0.67sec	supervision ^{††}
Push button sensitivity test - insufficient sensitivity	silent	flash every 40-50sec	fire trouble
Magnet sensitivity test - functioning normally	alarm	flash every 0.67sec	alarm
Magnet sensitivity test - insufficient sensitivity	silent	flash every 40-50sec	fire trouble
Low battery	chirp simultaneous with LED flash	flash every 40-50sec	fire trouble

^{††} transmits every 12 minutes

SPECIFICATIONS

Operating voltage	9V (six AA alkaline batteries)
Smoke sensitivity	2.4%/ft obscuration ±0.5%/ft 2.4%/305 mm ±0.5%/305 mm
Operating environment	32 - 122°F (0 - 50°C) 5% - 95% RH, non-condensing
Field test	Pushbutton, magnet-activated reed switch and/or Gemini 501 Smoke Alarm Analyzer



ARCHITECTS SPECIFICATIONS

Smoke detectors shall be photoelectric 2-wire, 4-wire, or wireless as required to suit the type of alarm panel being installed and the prevailing UL or ULC requirements for the type of building and application.

Smoke detectors shall have a 90 degree detection pattern and shall provide reliable detection for all smoke flow directions and velocities. They shall be resistant to false alarms due to RFI and dust.

All detectors shall allow field sensitivity testing with a magnet or integral push-button and all shall have built-in automatic self-testing for sensitivity with audible indication of test failure.

Detectors located in areas where alarm panel siren may not be heard, shall have a built-in sounder which activates when an alarm occurs.

Detectors located in areas where temperatures may rise to 135°F (57°C) before sufficient smoke is generated to generate an alarm, shall have an integral heat sensor to activate an alarm.

Wired detectors shall operate in a voltage range of 10-30Vdc or 10-26.4V_{FWR}.

Wireless detectors shall be capable of operating as stand-alone and in wireless communication with a remote alarm panel. They shall operate on 9V, AA size alkaline batteries. When in alarm or low battery condition, they shall chirp a built-in 85dB alarm sounder. If they are installed as part of a system with a remote wireless alarm panel, they shall also transmit alarm, low battery, and regular supervisory (at least every 12 minutes) signals to the alarm panel.

* Specifications are subject to change without notice