



AIR PRODUCTS AND CONTROLS INC. INSTALLATION GUIDE FOR MSR- SERIES REMOTE ACCESSORIES

MSR-50 Series

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PRODUCT DESCRIPTION

The MSR Series remote accessories offer the most comprehensive set of features, functionality and ease of installation ever available in a duct smoke detector remote accessory. They are compatible with the range of duct smoke detectors as described herein. All MSR-Series remote accessories are compatible with standard Decora style cover plates (base color choice plate included).

The MSR-50 Series

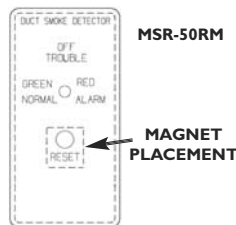
The 50-Series offer a magnet operated test function (MSR-50RM Products) or a key-operated test and reset function (MSR-50RK Products). Both are available with only a single gang remote indicator/control (or with the addition of a single gang strobe assembly / strobe and sounder assembly. (MSR-A and MSR-AV Products).

MSR-50RM

The MSR-50RM provides a hidden magnet test switch and a pushbutton reset. The indicator/control assembly provides:

- Tri-color visual indication of detector Pilot, Trouble and Alarm conditions
- Magnet operated detector Test function
- Pushbutton operated detector Reset function
- Lever-operated quick connect "No-Tools" four-position terminal block
- Port for plugging in Audio/Visual assembly

To put the detector in alarm, place a magnet over the RESET button on the faceplate of the accessory. The detector will stay in Alarm until the RESET pushbutton is pressed. Also the RESET button can be used to reset a detector-initiated alarm.



MSR-50RK

The MSR-50RK indicator/control assembly provides:

- Tri-color visual indication of detector Pilot, Trouble and Alarm conditions
- Key-operated detector Test and Reset function
- Lever-operated quick connect "No-Tools" four-position terminal block
- Port for plugging in Audio/Visual assembly



MSR-50RM



MSR-50RK



MSR-50A



MSR-50SA

MSR- Series Audible and Visible Alarm Indicators

The **MSR-AV**, **MSR-A** and **MSR-V** are designed to provide and/or augment the Audible and Visual Alarm indications of the MSR-50RM, MSR-50RK and MSR-100R Remote Accessories. They will fit in a second-gang configuration and require no additional wiring, other than to plug into the main control.

MSR-AV – Remote Alarm Module Combination Sounder (Audible) and Strobe (Visual)

MSR-A – Remote Alarm Sounder Module (Audible)

MSR-V – Remote Alarm Sub-Assembly Strobe (Visual) for use with MSR-50A Remote Alarm Sounder Module

Note: The MSR-AV, MSR-A and MSR-V are intended for Private Mode Audible and Visual notification only. They are not intended for Public Mode Audible and Visual evacuation and relocation signaling.

Note: An MSR-V combined with an MSR-A will provide the same functionality as an MSR-AV. All "V" code units come with Strobe Lens decals for optional use. "SMOKE" in blue lettering and "FIRE" in red lettering, 2 each in both vertical and horizontal orientations. All units require one gang of space in a standard deep gang box – not supplied.

Installation

To install an MSR-A or MSR-AV Module to a Controller (MSR-50RM, MSR-50RK or MSR-100R), simply plug the provided polarized connector into the Controller's pins which are indicated as "STROBE" on the back of those units.

To install an MSR-V Sub-Assembly to an MSR-A Module simply position the three link pins on the MSR-V Sub-Assembly over the three provided plug holes in the MSR-A Module's front cover and push firmly until the pins are seated and the four snap-in legs on the MSR-V Sub-Assembly completely snap-in and latch to the mating surfaces provided on the MSR-A Module. It should be noted that when connecting the MSR-AV or MSR-A to an MSR-100R, a louder yet redundant Audible Alarm signal will be obtained compared to the built-in Alarm / Trouble buzzer in the MSR-100R.

MSR-AV and MSR-A Module Audible Sounder Output Configurations

The sound output level is selectable at either 83 db (low) or 87 db (high). The unit is shipped pre-set to the higher level. To change the selection to the lower tone simply remove the pre-installed jumper plug where shown (at right).

The sound output format on these units is selectable for Steady Tone or Temporal (Code 3) Pattern. The unit is shipped with the output format programmed for Temporal (Code 3). Simply remove the pre-installed jumper plug where shown (at right) for Steady Tone.

Note: As with all final completed installations, equipment should be completely tested to insure proper functionality.

MECHANICAL SPECIFICATIONS

Power Requirements:

MSR-50RM

Standby:	06mA
Detector Alarm:	22mA
Remote Alarm Test:	37mA
Detector Alarm w/Sounder:	57mA
Detector Alarm w/Sounder & Strobe:	92mA
Remote Alarm w/Sounder:	72mA
Remote Alarm w/Sounder & Strobe:	107mA

MSR-50RK

Standby:	06mA
Alarm:	22mA
Alarm w/Sounder:	138mA
Alarm w/Sounder & Strobe:	92mA

MSR-50AV

Standby current:	0.0 mA
Alarm current:	70.0 mA
Alarm db:	68 db @ 10 ft (high); 53 db @ 10 ft (low)
Alarm candela:	2.0 on axis
Temperature:	0°C to 49°C (32°F to 120°F)

MSR-50A

0.0 mA
35.0 mA
69 db @ 10 ft (high); 54 db @ 10 ft (low)
N/A
0°C to 49°C (32°F to 120°F)

MSR-50V

0.0 mA
70.0 mA
N/A
2.0 on axis
0°C to 49°C (32°F to 120°F)

Dimensions:	Single Gang Plate: 4½" (114.3mm)H x 2¾" (69.85mm)W Double Gang Plate: 4½" (114.3mm)H x 4½" (114.3mm)W
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Wiring: 14-28AWG, Solid or Stranded

Approvals: UL Listed for use with Air Products and Controls duct smoke detectors referenced herein including all RW- Series, SM- Series and SL- Series duct smoke detectors. Listings and Approvals shown are for MSR-50RK and MSR-50RM Series ONLY
UL URRQ.57425 • CSFM 7300-1004:107 • MEA 73-92-E Vol.3 I

PACKAGE CONTENTS AND STROBE CONSTRUCTION

Remote accessories that include the indicator/control unit are shipped with the following parts:

- Installation Instructions
- Indicator/Control Unit with back box mounting screws (back box not supplied)
- Keys for Test/Reset function (MSR-50RK) OR Magnet for magnet test function (MSR-50RM)
- Decora Style Cover Plate with mounting screws (single gang)

Remote accessories that include the indicator/control unit and sounder module are shipped with the following parts:

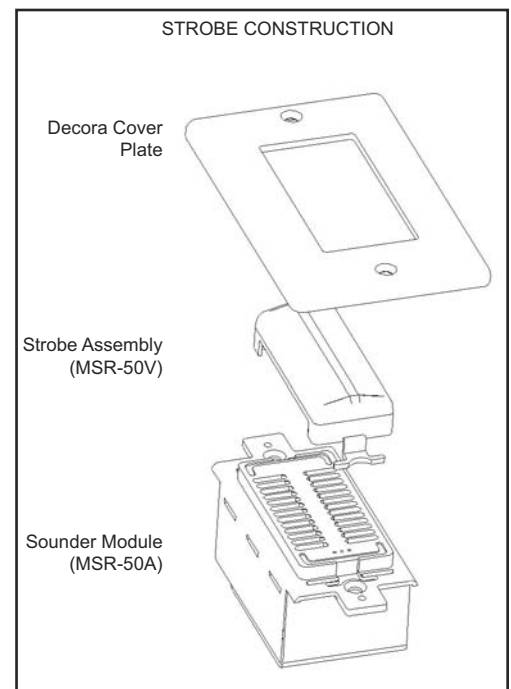
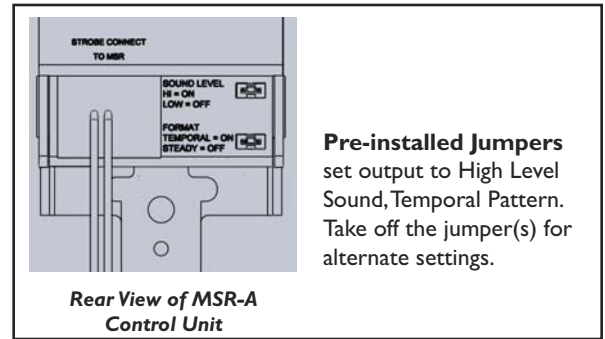
- Indicator/Control Unit package
- Sounder Module with back box mounting screws (back box not supplied)
- Decora Style Cover Plate with mounting screws (double gang)

Remote accessories that include the indicator/control unit, sounder module and strobe assembly are shipped with the following parts:

- Indicator/Control Unit package
- Sounder Module package
- Strobe Assembly
- Strobe Lens Decals for optional use: "SMOKE", "FIRE"
(1 of each version in horizontal orientation plus 1 each vertically set)

Strobe Assembly Units may be ordered separately but are only functional when paired with the MSR-50A Sounder Module. Strobe Assemblies are shipped with:

- Installation Instructions
- Strobe Assembly
- Strobe Lens Decals for optional use: "SMOKE", "FIRE"
(1 of each version in horizontal orientation plus 1 each vertically set)



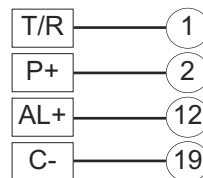
WIRING INSTRUCTIONS

⚠ NOTE: For proper installation, testing, operation and maintenance of a duct smoke detector, please refer to the detector installation guide. The following wiring diagrams are applicable only to compatible, current limited, UL Listed remote accessories from Air Products and Controls. Use of any other devices may result in damage to the duct smoke detector or those devices, potential injury, and will void any applicable warranties

SL-2000 Series Duct Smoke Detectors

⚠ NOTE: The trouble LED will extinguish on the MSR-50 when the detector cover is removed, or if the smoke detector head is removed and the cover replaced, indicating a trouble condition as labeled.

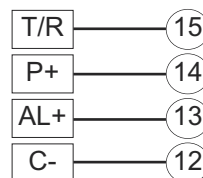
⚠ NOTE: If duct smoke detectors are interconnected for common functions, please refer to unit installation guide for connection options for remote alarm functions.



HS-100 Series Special Application Duct Smoke Detectors

⚠ NOTE: The trouble LED will extinguish on the MSR-50 if the smoke detector head is removed indicating a trouble condition as labeled.

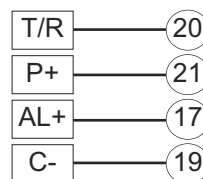
⚠ NOTE: If duct smoke detectors are interconnected for common functions, please refer to unit installation guide for connection options for remote alarm functions.



SM-50I Series Duct Smoke Detectors

⚠ NOTE: The trouble LED will extinguish on the MSR-50 if the smoke detector head is removed indicating a trouble condition as labeled.

⚠ NOTE: If duct smoke detectors are interconnected for common functions, please refer to unit installation guide for connection options for remote alarm functions.



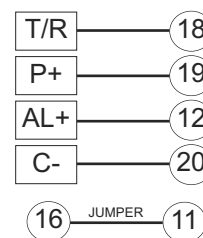
2650-560APC and 2650-56I APC Duct Smoke Detectors

⚠ NOTE: A jumper wire must be placed between Terminals 16 and 11 to facilitate alarm functionality.

⚠ NOTE: The trouble LED will extinguish on the MSR-50 if the smoke detector head is removed indicating a trouble condition as labeled.

⚠ NOTE: Use of an MSR remote accessory with these detector models requires the dedicated use of one set of alarm contacts.

⚠ NOTE: These models of duct smoke detectors are not intended for interconnection when using the MSR- Series Remote Accessories. For further information and assistance with this application, call our technical hotline.



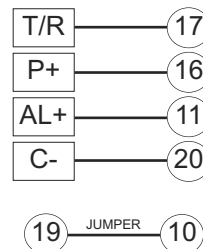
RWJ, RWF Series Duct Smoke Detectors

⚠ NOTE: A jumper is required between Terminals 19 and 10 to facilitate the alarm functionality. If the trouble contacts of the RWJ Series detector are being used for other switching applications, or for connection to a Fire Alarm Control Panel, the on-board RWJ option jumper must be removed (cut). Failure to remove the RWJ option jumper could result in damage to the Fire Alarm Control Panel or other connected equipment.

⚠ NOTE: The trouble LED will extinguish on the MSR-50 if the smoke detector head is removed indicating a trouble condition as labeled.

⚠ NOTE: Use of an MSR remote accessory with these detector models requires the dedicated use of one set of alarm contacts.

⚠ NOTE: These models of duct smoke detectors are not intended for interconnection when using the MSR- Series Remote Accessories. For further information and assistance with this application, please contact our technical hotline.



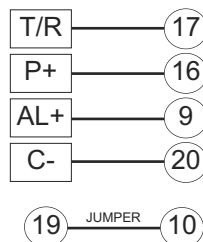
RWX, RWL, RWH Series Duct Smoke Detectors

⚠ NOTE: For connection of MSR remote accessories to the **RWX Series, RWL Series and RWH Series**, a jumper wire must be placed between Terminals 19 and 10 to facilitate alarm functionality.

⚠ NOTE: The trouble LED will extinguish on the MSR-50 if the smoke detector head is removed indicating a trouble condition as labeled.

⚠ NOTE: Use of an MSR remote accessory with these detector models requires the dedicated use of one set of alarm contacts.

⚠ NOTE: These models of duct smoke detectors are not intended for interconnection when using the MSR- Series Remote Accessories. For further information and assistance with this application, please contact our technical hotline.



AVAILABLE ACCESSORIES FOR USE WITH AIR PRODUCTS DUCT SMOKE DETECTORS

SMOKE TEST GAS

TG-1000	Solo Aerosol Test Gas with Spray Nozzle
TG-2000	Solo Aerosol Test Gas with Nozzle for SL- Series Test Port

NOTCHED SAMPLING TUBES (SL- SERIES)

STN-1.0	For duct widths of 6" TO 1.0'
STN-2.5	For duct widths of 1.0' TO 2.5'
STN-5.0	For duct widths of 2.5' TO 5.0'
STN-10.0	For duct widths of 5.0' TO 10.0'

WEATHERPROOF ENCLOSURES

WP-1	Weatherproof Enclosure for RW- and SM- Series Detectors
WP-2000	Weatherproof Enclosure for SL- Series Detectors

SAMPLING TUBES (RW- AND SM- SERIES)

STS-1.0	For duct widths of 6" TO 1.0'
STS-2.5	For duct widths of 1.0' TO 2.5'
STS-5.0	For duct widths of 2.5' TO 5.0'
STS-10.0	For duct widths of 5.0' TO 10.0'

POWER SUPPLIES

T-PB 202-1	24VAC @ 4.0A Class II Power Supply
T-PB 202-0	24VAC @ 4.0A Class II Power Supply
T-PB 303-1	24VAC @ 3.0A Class II Power Supply
T-PB 303-0	24VAC @ 3.0A Class II Power Supply

NOTICE: The information contained in this document is the most current available at the time of shipment of accompanying product, and is subject to change without notice. Future references should always be made to the most current revision of this document. The information contained in all this document should be considered before installing or using the product. Any example applications shown are subject to the most current enforced local/national codes, standards, approvals, certifications, and/or the authority having jurisdiction. All of these resources, as well as the specific manufacturer of any shown or mentioned related equipment, should be consulted prior to any implementation. For further information or assistance concerning this product, contact Air Products and Controls Inc. Air Products and Controls Inc. reserves the right to change any and all documentation without notice.

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