

AVANI

Analogue Addressable Fire Alarm Control Panel



Product Overview

AVANI, is a cost effective, intelligent addressable fire alarm control panel having an extensive list of powerful features. The power supply with separate metal cabinet and all other master control and indicating boards housed in a other metal cabinet, provide a complete fire control system for most applications. The panel has maximum capability for four loop cards, which are plugged into the main circuit board. Higher loop requirements can be catered to using the networking feature of the panel. There is an option for remote and local programming of the control panel using configuration software / Avani soft , upload/download utility.

Special Features:

- Indian Manufacturer - International standard.
- UL Listed (9th Edition)
- Switched Mode Power Supply.
- Modular Construction, Serviceability.
- Networkable.
- Auto Resettable Fuse.
- Surge Protection.
- Battery polarity and deep discharge protection.
- 32 Bit processor.
- Unique protocol feature for fast alarm response.
- Inbuilt conventional circuit.
- Touch Keypad for user friendly operation.
- Auto learning facility.
- Multi protocol.
- Peer to Peer Networking.
- Redundancy : If the main CPU fails, it will raise an alarm like conventional panel.

Features:

- User friendly circuit.
- Device / Detector wise configuration facility.
- 2000 Event Storage with Real Time Clock.
- Upto 192 grouping facility.
- Pre Alarm Action.
- All field wiring are power limited and supervised.
- Programmable detector sensitivity.
- Device type verification.
- Earth fault annunciation facility at 0 ohms.
- Double Address Sensing.
- Walk test
- Loop wise test
- Lamp (LED) test.
- 40 X 4 Characters LCD display
- Maximum 4 numbers of loop card with Class A, Style 5,6 or 7 and Class B Style 4 wiring
- Maximum 254 devices (any combination) per loop.
- Day / Night Mode facility.
- USB 2.0 Interface for PC connectivity.
- RS 485 Communication facility for Network / Repeater.
- Programmable Auto Silence Facility.
- Programmable AC Loos Delay.
- Programmable Silence Inhibit.
- Two no's of programmable inputs.
- Battery low audio, visual warning.
- Three programmable Form C relay for Fire, Fault and Supervisory.
- Two no's of Supervise Notification Appliance Circuits.

Avani



Electrical Specification:

Primary Power

120 / 220VAC + 10% -15%, 60 / 50 Hz.

Standby Power

24V D.C (2 No's of 12V, 40 Ah (Max), Built in for 12Ah) Sealed Lead acid battery

Operating Condition

Operating Temperature 0 - 49° C / 32-120° F.
Relative Humidity 93 ± 2% RH (non-condensing)
at 32 ± 2° C / 90 ± 3° F.

Charging Circuit

Charging Voltage 28 V, ±0.2V Nominal
Charging Current 1.2A (Max.).

Notification Appliance Circuits

No of circuits : 2
Class B, Style - Y wiring
Operating Nominal Voltage : 24 VDC Nominal
Current for NACs :
NAC - 1 : 1A
NAC - 2 : 0.8 A
Line Drop : 2.4V
End-Of-Line Resistor : 4K7, ½ watt

D.C. Output

Supervised 24VDC, 300mA Max.

Programmable Relays

Type : Form C
No of Relays : 3
Relay Contact Rating : 2A @ 30 VDC,
0.5A @ 125VAC.

Signaling Line Circuits

Loop card : 4 Nos. Maximum.
No Devices per loop : 254
Loop resistance : 40 Ω (Max.).
Loop capacitance : 0.6 µf (Max.).
Loop Current : 300mA (Max.).

Initiating Device Circuits

Class B Style B/C Operation.
No of Conventional Zone : 1
Normal Operating Voltage : 14 - 21 VDC.
Alarm Current : 15 - 30mA.
Short Circuit Current : 45mA Maximum.
Loop resistance : 100Ω Maximum.
End-Of-Line Resistor : 4K7, 1/2watt
Standby Current : 7mA (2mA for Detectors)

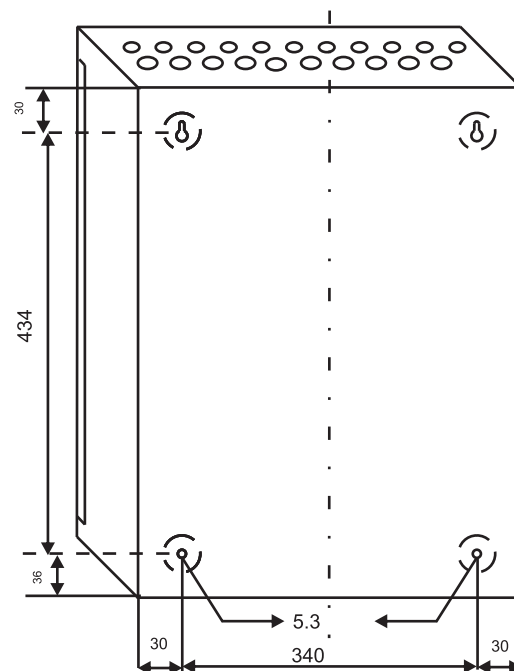
Programmable Input Circuit

Normal Operating Voltage : 4 - 8 VDC.
Short Circuit Current : 3mA Maximum.
Loop resistance : 100Ω Maximum.
End-Of-Line Resistor : 4K7, 1/2watt
Standby Current : 1.25mA

Mechanical Specification:

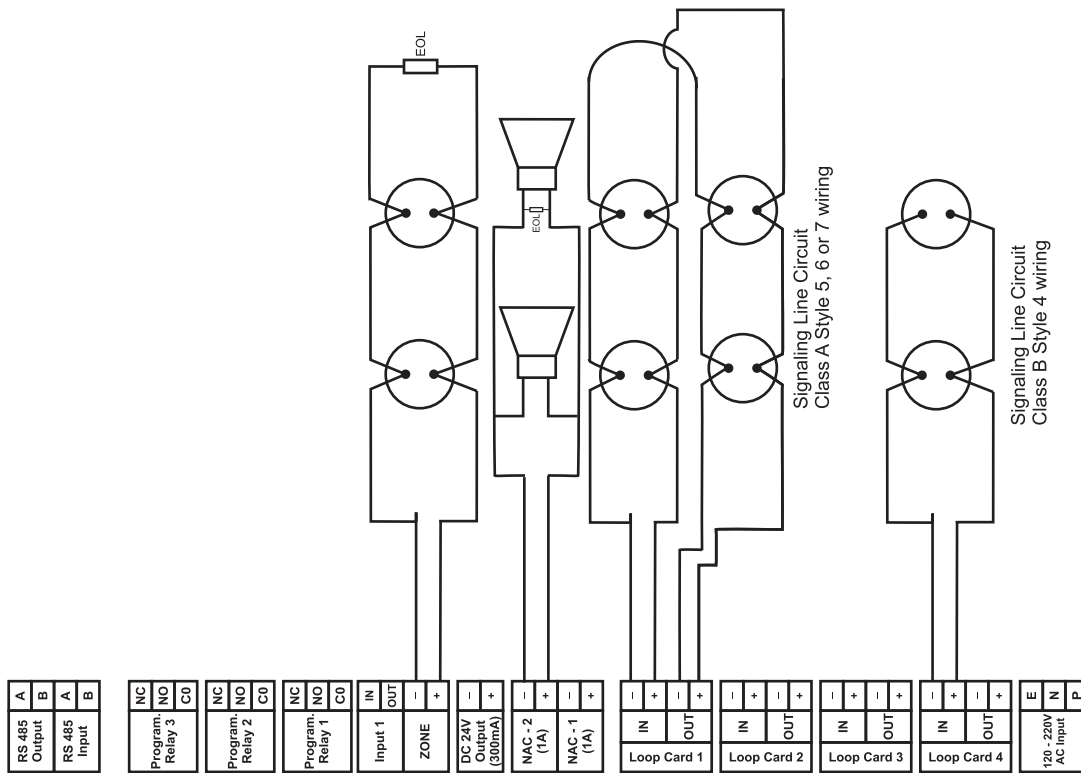
Dimensions : (400W X 500H X 120D)mm
Color : White / Red / Black
Construction : 16 Gauge (1.6 mm) CRCA sheet with powder-coated Finish
IP Rating : IP50
Cable Entry : 9x∅19mm Knockout in top of the cabinet
9x∅22.25mm Knockout in top of the cabinet
Weight : 13 Kg

Mounting Detail:



Note:- All Dimensions are in MM

Wiring Diagram:

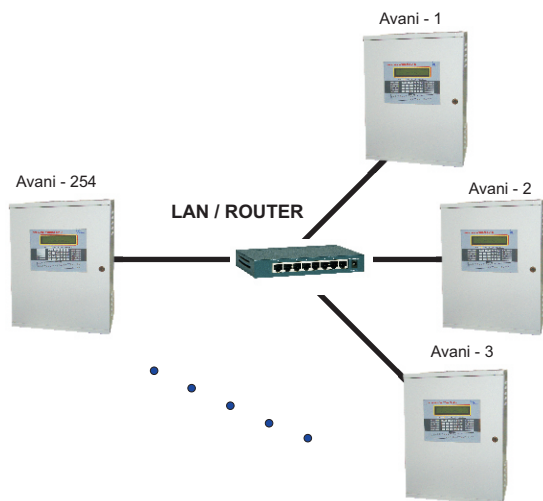


Note:

- ⊙ All the field wiring circuits are supervised
- ⊙ All the field wiring circuits are Power limited except 110-220v A.C and Battery.

Initiating Device Circuit
 Class B StyleB/C
 End of Line - 4K7 1/2W
 PN: RE4K7

IP Based Network



Peer To Peer Network



Compatible Devices:

MODELS	DESCRIPTION
RE-317D-SHL	Photoelectric & Heat detector
RE-317D-SL	Photoelectric smoke detector
RE-317D-HL	Heat detector
RE-717MC	Control Module
RE-717MM	Monitor Module
RE-717MR	Relay Module
RE-717MI	Isolator Module
RE-717M	Manual Call Point
RE-517MT	8 Way Programmable Relay Card
RE-517MB	Modbus Converter
RE-517ME	Ethernet Module
RE-517MP	Printer Module
Avani - RP	Fire Alarm Repeater Panel
RE-314BI	Isolator Base
RE-515MP-A4	Mimic Display System - 32 LED Panel (Max)
RE-515MP-A3	Mimic Display System - 64 LED Panel (Max)
RE-515MP-A2	Mimic Display System - 128 LED Panel (Max)
RE-515MP-AX	Mimic Display System - 512 LED Panel (Max)
RE-4K7	End Of Line Resistor

Approval:



Ordering Information:

MODEL	Loop
Avani - W / R / B	1,2,3 & 4 Loop

Note:

W - White Color

R - Red Color

B - Black Color

*In the interest of improving quality and design, Ravel reserve the right to change the specification without prior notice.

RAVEL ELECTRONICS LTD.

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RE-517RP

Analogue Addressable Fire Alarm Active Repeater Panel



Product Overview:

The RE-517RP repeater panel is a compact remote unit for Ravel-Avani Intelligent Analogue Addressable fire Alarm panel. This repeater is an active repeater with full indication and controls of main FACP. This repeater is connected to Avani FACP using RS 485 communication network. Any communication fault or any loss in communication due to cable fault is indicated in this repeater panel. The display parameters can be selected individually to suit the requirement of each remote area.

Special Features:

- Modular Construction, Serviceability.
- Repeats all indication / controls of main FACP.
- Networkable.
- User selectable display parameters.

Features:

- 32 bit processor.
- 160 (40 X 4) Characters LCD display.
- Touch Keypad for user friendly operation.
- Remote silence and evacuate can be done from Repeater Panel.
- Remote Programming and control of any main panel in the network / system .
- RS 485 Communication for Standalone / Network Repeater.
- 1000 Event storage with Real Time Clock.
- Battery low audio visual warning.
- One supervised Notification Appliance Circuits.
- One Form C relay for Common fire.
- USB 2.0 for PC Interface.



Electrical Specification:

Primary Power

120 / 220VAC + 10% -15%, 60 / 50 Hz, 2 Amps.

Standby Power

24V D.C (2 Nos of 12v, 7Ah (Max.) Sealed Lead acid battery)

Operating Condition

Operating Temperature 0 - 49° C/32-120° F.

Relative Humidity $93 \pm 2\%$ RH (non-condensing) at $32 \pm 2^\circ$ C/ $90 \pm 3^\circ$ F.

Charging Circuit

Charging Voltage $28V \pm 0.2V$ Nominal

Charging Current 0.8A (Max.).

Notification Appliance Circuits

No of circuits : 1

Class B, Style - Y wiring

Operating Nominal Voltage : 24 VDC Nominal

Current for NACs : 1 Amps

Line Drop : 2.4V

End-Of-Line Resistor : 4K7, $\frac{1}{2}$ watt

Relays

Type : Form C

No of Relays : 1

Relay Contact Rating : 2A @ 30 VDC,
2A @ 30VAC.

Mechanical Specification:

Dimensions : (350W X 400H X 90D) mm

Color : White / Red / Black

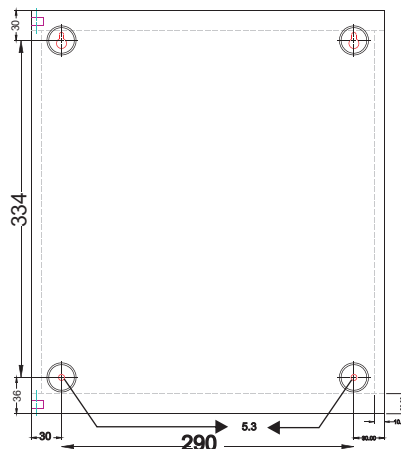
Construction : 16 gauge (1.6mm) CRCA sheet
with powder-coated finish

IP Rating : IP50

Cable Entry : $8 \times \phi 19$ mm Knockout at the top of the cabinet

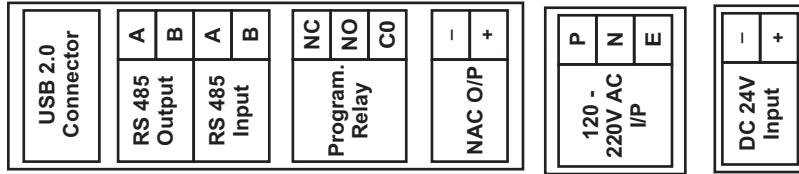
Weight : 6 Kg

Mounting Detail:



Note:- All Dimensions are in MM

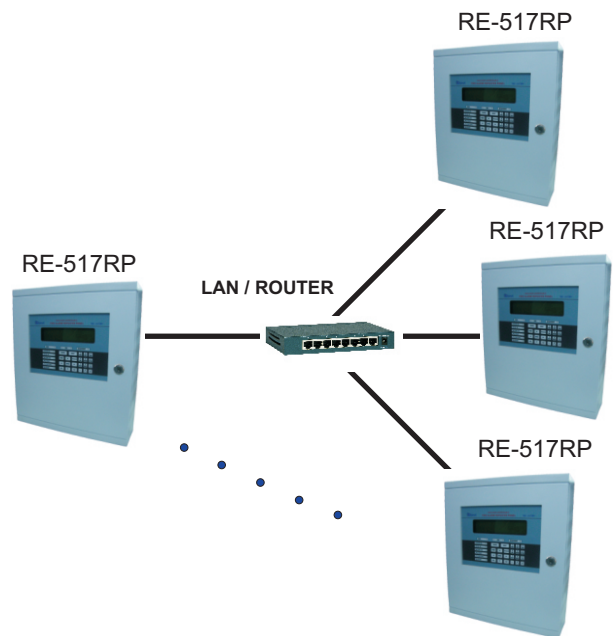
Terminal Detail:



Peer to Peer Topology



IP Based Network



Compatible Devices:

MODELS	DESCRIPTION
Avani	Analogue Addressable Fire Alarm Panel

Ordering Information:

MODELS	Description
RE-517RP-W/R/B	Analogue Addressable Repeater Panel

Note:

- *By default Repeater panel is designed for Wall mounting only.
- *If Specified Repeater panel will be designed for Flush Mounting.
- * W - White Color ; R - Red Color ; B - Black Color

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AVANI-RP

Analogue Addressable Fire Alarm Repeater Panel



Product Overview

The Avani-RP repeater panel is a compact remote unit for Ravel-Avani Intelligent Analogue Addressable fire Alarm panel. It repeats all the indications of FACP in standalone or in network Panel. It has (40X4) 160 character LCD Display. This repeater is connected to Avani FACP using RS 485 communication network. Any communication fault or any loss in communication due to cable fault is indicated in this repeater panel. The display parameters can be selected individually to suit the requirement of each remote area.

Electrical Specification:

Operating Voltage : 24VDC
Quiescent Current : 80 mA
Alarm Current : 130mA

Operating Condition

Operating Temperature 0 - 49° C/32-120° F.

Relative Humidity 93 ± 2% RH (non-condensing) at 32 ±2° C/ 90 ±3° F.

Programmable Relay

Type : Form C
No of Relays : 1
Relay Contact Rating : 2A @ 30 VDC,
0.5A @ 125VAC.

Mechanical Specification:

Dimensions : (350W X 300H X 90D)mm
Color : White / Red / Black
Construction : 18 Gauge (1.22 mm) CRCA sheet with powder-coated Finish
IP Rating : IP50
Cable Entry : 9xø19mm Knockout in top of the cabinet
9xø22.25mm Knockout in top of the cabinet
Weight : 5Kg

Special Features:

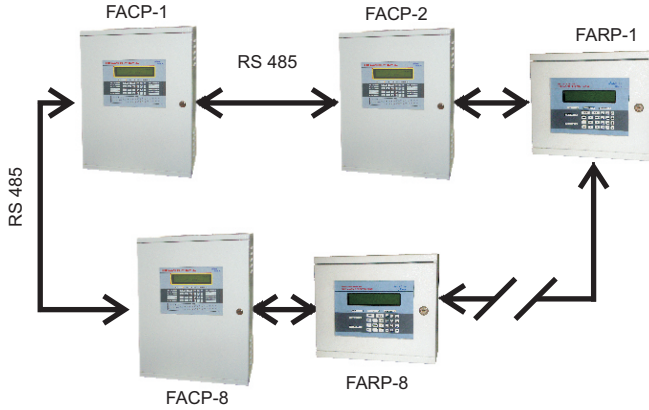
- Indian Manufacturer - International standard.
- Modular Construction, Serviceability.
- Networkable.
- User selectable display parameters.

Features:

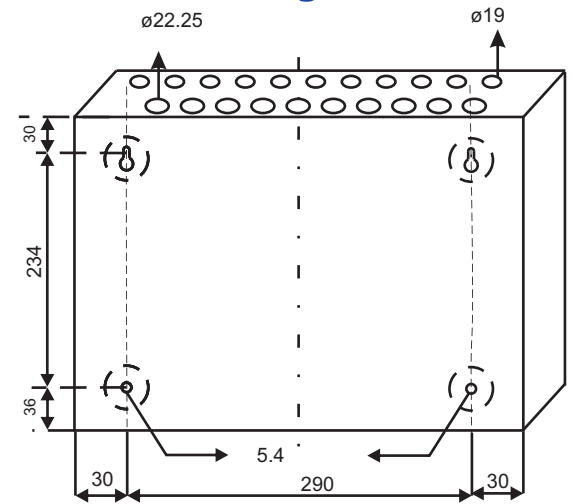
- UL listed (9th Edition).
- 32 bit processor.
- 160 (40X4) character LCD Display.
- Event Storage with Real Time Clock.
- RS 485 communication for Network / Repeater.
- One Programmable form C relay for fire.
- Extensive built in transient protection.
- Lamp test facility.
- Common fire, supervisory, fault LED indication.



Peer To Peer Network

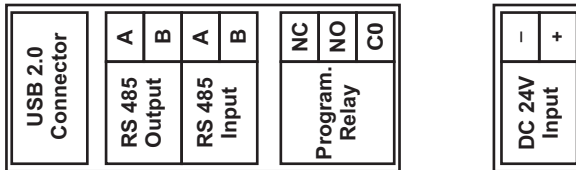


Mounting Detail:



Note:- All Dimensions are in MM

Terminal Details:



Approval:



Compatible Devices:

MODELS	DESCRIPTION
Avani	Analogue Addressable Fire Alarm Control Panel

Ordering Information:

MODELS	Description
AVANI-RP-W/B/R	Analogue Addressable Fire Alarm Repeater Panel

Note:

W - White Color ; R - Red Color ; B - Black Color

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RE-24CS Mini Horn

Product Overview

Mini horn sounders are designed to simplify installations to provide primary and secondary for fire and security applications. These are ideal where smaller notifications devices is desired. The horns can be flush / ceiling mounted with / without back box.

Features:

- Ravel Indian Manufacturer, International standard.
- Slim and Sleek
- Wall or Ceiling mountable
- Mini Horn with BackBox
- 24VDC Operation
- They are used in Fire, Burglar & Emergency Alarm System.



Electrical Specification

1. Operating Voltage	:	24V DC
2. Operating Current	:	40mA
3. Sound Level	:	85dB@1m
4. Operating Temperature	:	0 - 49° C / 32-120° F.
4. Sounder Type	:	Piezo Electric Type
5. Tone Type	:	Fire Engine Siren
6. Material	:	ABS Plastic
7. Colour	:	Red
8. Dimensions	:	96 H mm X 76 L mm X 28 D mm
Back Box	:	95 H mm X 75 L mm X 58 D mm
9. Mounting Type	:	Surface / Flush Mount

Ordering Information:

Model	Description
RE-24CS	Mini Horn

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RE-24SS

Conventional Sounder cum Strobe

Product Overview

RE-24SS sounder cum strobe are designed to simplify installations to provide primary and secondary for fire and security applications. These are ideal where smaller notifications devices is desired. The horns can be flush / ceiling mounted with / without back box. Strobe shall be wired as primary (or) secondary signaling notification appliance flashing at 1Hz over entire voltage operating range. Strobe light consists of Xenon flash tube.

Features:

- Easy to install.
- Operates on 24VDC
- 100db at 30cm.
- Low Current.
- Ceiling / Flush Wall Mount.

Electrical Specification

- Material : FR ABS Plastic
- Input Voltage : 24V DC (15-30V)
- Current : 100 mA @24V
- Relative Humidity : $93 \pm 2 @ 32^{\circ}\text{C}$
- Operating Temperature : $-10 \text{ to } 50^{\circ}\text{C}$
- Sound Level : 112 db +/- 5dB @ 30cm
- Tone Type : Sweep Siren
- Size : 126(W)*126(H)*55(D)mm



Ordering Information:

Model	Description
RE-24SS	Sounder cum Strobe

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RE 316H - 2L

Heat Detector



Product Overview

The RE 316H-2L Conventional detectors are designed to work with all conventional Panel. These detectors are low profile and have dual LED's for 360° visual indication. The LED's are blinking in normal operating condition whereas the steady state indicates fire status.

RE 316H-2L is a fixed cum rate of rise heat detector using a thermistor. These detectors will raise an alarm when the detector reaches 59°C (Fixed) or when the change in temperature exceeds the rate of rise of 11°C / min.



Features:

- UL listed.
- Dual LED's for 360° visibility.
- Advanced detection and communication protocol.
- Easy installation and maintenance.
- Sleek low-profile housing design.
- Regular 100mm base.
- Address setting by 8 digit DIP switch.

Electrical Specification

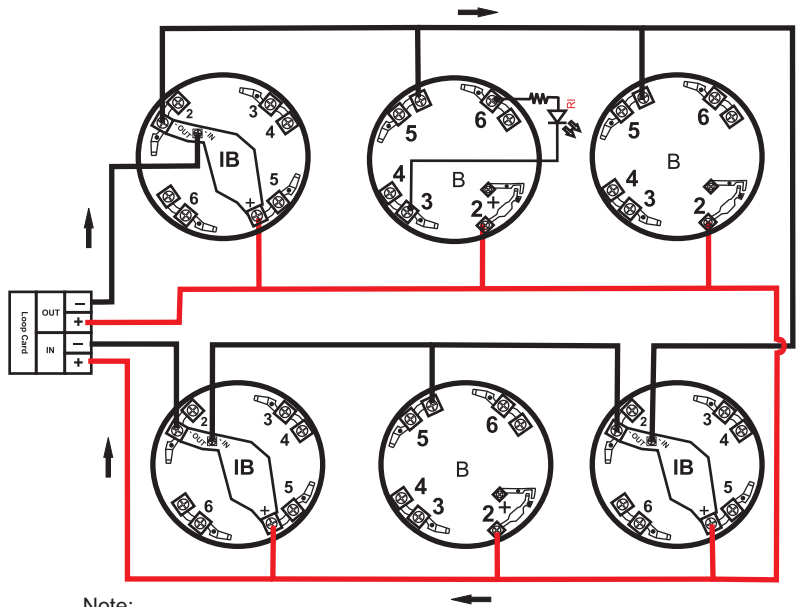
Operating Voltage	:	9 ~ 33V DC
Reset Voltage	:	less than 1V
Start-Up Current	:	120 μ A.
Alarm Current	:	40 mA (Max)
Remote Output	:	15mA maximum open collector
Thermal Rating	:	59 °C (138 °F)
Rate of Raise of Temp	:	11.1°C / min (20°F/min)
Operating Temperature	:	-10 °C to 37.8 °C
Humidity	:	0 - 95% RH, non-condensing



Mechanical Specification:

- Height : 46 mm with base
- Diameter : 100 mm dia
- Weight : 130g with base
- IP Rating : IP - 42

Wiring Diagram:



Note:

RI - Response Indicator
B - Standard Base
IB - Isolator Base

Compatible Device:

- RE-314B - Normal Base
- RE-314BI - Isolator Base

Ordering Information:

Model	Description
RE 316H - 2L	Heat Detector

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RE 316S - SL

Photoelectric Smoke Detector



Product Overview

The RE 316S-2L conventional detectors are designed to work with all conventional Panel. These detectors are low profile and have dual LED's for 360° visual indication. The LED's are blinking in normal operating condition whereas the steady state indicates fire status. It has an unique protocol chamber designed to sense smoke produced by wide range of sources of combustion. The detectors sensitivity can be programmed via FACP. It has a unique drift compensation feature where in detector adjusts its normal reference based on environment conditions.



Features:

- UL listed.
- Dual LED's for 360° visibility.
- Advanced detection and communication protocol.
- Easy installation and maintenance.
- Sleek low-profile housing design.
- Regular 100mm base.
- Address setting by 8 digit DIP switch.

Electrical Specification

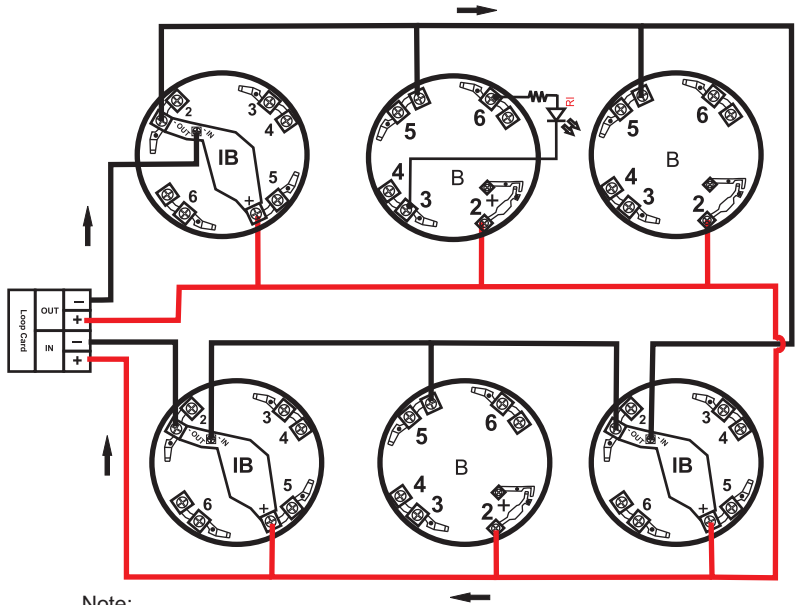
• Operating Voltage	:	9 ~ 33V DC
• Operating Temperature	:	-10 °C to 37.8 °C
• Humidity	:	0 - 95% RH, non-condensing
• Reset Voltage	:	less than 1V
• Start-Up Current	:	120 μ A.
• Alarm Current	:	40 mA.(Max).
• Remote Output	:	15mA maximum open collector
• Smoke Sensitivity	:	(1.96 \pm 0.76) % / ft
• Air Velocity	:	0 - 4000 fpm.



Mechanical Specification:

- Height : 46 mm with base
- Diameter : 100 mm dia
- Weight : 130g with base
- IP Rating : IP - 42

Wiring Diagram:



Note:

RI - Response Indicator
B - Standard Base
IB - Isolator Base

Compatible Device:

- RE-314B - Normal Base
- RE-314BI - Isolator Base

Ordering Information:

Model	Description
RE 316S - 2L	Photo electric smoke detector with base

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RE 316SH - 2L

Multi Detector



Product Overview

The RE 316SH-2L conventional detectors are designed to work with all conventional Panel. These detectors are low profile and have dual LED's for 360° visual indication. The LED's are blinking in normal operating condition whereas the steady state indicates fire status.

RE 316SH-2L is a fixed cum rate of rise heat detector using a thermistor. These detectors will raise an alarm when the detector reaches 59° C(Fixed) or when the change in temperature exceeds the rate of rise of 11°C / min.

Features:

- UL Approved.
- Dual LED's for 360° visibility.
- Advanced detection and communication protocol.
- Easy installation and maintenance.
- Sleek low-profile housing design.
- Regular 100mm base.
- Max. 254 Address setting through 8 way DIP switch.



Electrical Specification

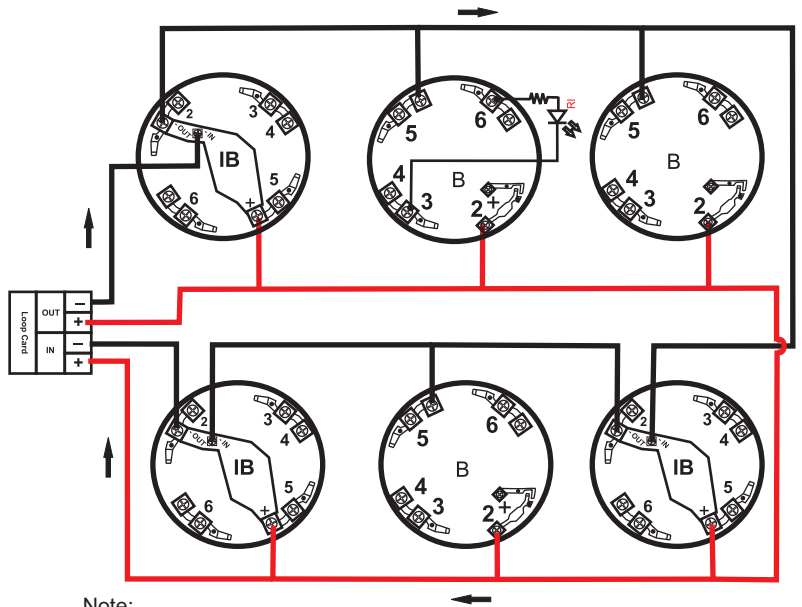
Operating Voltage	:	9 ~ 33V DC
Reset Voltage	:	less than 1V
Start-Up Current	:	120 μ A.
Alarm Current	:	40 mA (Max)
Remote Output	:	15 mA maximum open collector
Thermal Rating	:	59 °C (138 °F)
Rate of Raise of Temp	:	11.1°C / min (20°F/min)
Smoke Sensitivity	:	(1.9 \pm 0.76) % / ft
Air Velocity	:	0 - 4000 fpm.
Operating Temperature	:	-10 °C to 37.8 °C
Humidity	:	0 - 95% RH, non-condensing



Mechanical Specification:

- Height : 46 mm with base
- Diameter : 100 mm dia
- Weight : 130g with base
- IP Rating : IP - 42

Wiring Diagram:



Note:

RI - Response Indicator
B - Standard Base
IB - Isolator Base

Compatible Device:

- RE-314B - Normal Base
- RE-314BI - Isolator Base

Ordering Information:

Model	Description
RE 316SH-2L	Photoelectric & Heat Detector

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RE-716M Series

Manual Call Points for Gas Release

Product Overview

RE-716M series are conventional call points to bypass gas release by pressing the front glass.



Features:

- Alarm status is indicated By Red colour LED.
- Operates on 24 VDC.
- Green Colored for Gas Release.
- Yellow Colored for Gas Abort.
- 1 No's of CO & NC Output.

Electrical Specification

- Operating Voltage : 24VDC
- Operating Current : 30mA
- Colour : Green / Yellow
- Material : Plastic
- IP Rating : IP-50
- Size : 86 X 86 X 50 mm

Ordering Information:

MODELS	COLOR
RE-716MG	MCP Green (Gas Release)
RE-716MY	MCP Yellow (Gas Abort)

RAVEL ELECTRONICS LTD.

RE-716P Series Manual Pull Station



Product Overview

RE-716P Manual Pull Station is a high quality non-toxic die-cast manual pull station. Low profile design and smooth edges offer an attractive yet functional design. All components are prepainted or have plated surfaces to inhibit corrosion. Electrically the RE-716P Manual pull station is unbeatable with 10 Amp snap action switch offered in all possible contact arrangements (including gold contacts). The RE-716P pull station can be used with or without a break glass rod with replacement requiring no special tools.

Features

- Lift and pull
- Break glass cover
- Weather and Explosion proof versions
- All stations offer hex screw or key lock access.

Construction Material

- Painted Die Cast Housing.
- 14 Ga plated steel black plate.
- Corrosion Inhibited surfaces.
- Terminal block (4 Position)
- Single Gang Mounting
- 10 A , 120VAC snap Action Switch (S.P.S.T.)

Specification

Electrical

Switch : 10A@120VAC

Dimensions

Station Weight : 3.200 in
Length : 4.750 in
Depth : 0.875 in
Weight 15.5 oz / 420 grams
Mount Single gang



Ordering Information

MODELS	DESCRIPTION	COLOR
RE716P1T	Manual Pull station Single Action	RED
RE716P1TLP(R)	Manual Pull station Dual Action	RED
RE716P1TLP(Y)	Manual Pull station Dual Action	YELLOW
RE716P1TLP(G)	Manual Pull station Dual Action	GREEN



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RE-RI

Response Indicator

Product Overview

RE-RI is a Alarm Response Indicator to duplicate detector Alarm latching LED's if the detectors are placed above the false ceiling / inside closed rooms.



Features:

- Alarm status is indicated By Red colour LED.
- Operates on 12 VDC.
- Dual LED's for 360° visibility
- Flush / Ceiling wall mount

Electrical Specification

- Operating Voltage : 12 VD.C
- Operating Current : 10mA
- Alarm Indication : RED LED.
- Colour : Ivory.
- Material : Metal.

Ordering Information:

Model	Description
RE - RI	Response Indicator-Plate

RAVEL ELECTRONICS LTD.