Schneider Electric/Legacy Electric Time Delay and Sensor Relays

831 Series

SPDT, 15 A



831 Relay

Description

The 831 voltage sensor is a single-phase AC voltage sensing device that is capable of monitoring and reacting to over and under voltage conditions. This product is designed to be wired across terminals A1 and A2 with the voltage that is being monitored. The two LED lamps indicate both when the input voltage is present (Green LED) and also when the output is energized (Red LED). The Umax dial is used to set the upper trip-point for the voltage sensor. The Umin dial is a percentage of the Umax dial and is used to set the lower trip-point for the voltage sensor. The timing dial is used to delay the transfer of the contacts, from 0 to 10 seconds, when a set point has been violated.

Feature	Benefit
3-state indication LEDs	Indicates normal state and 2 types of faulted states
Timing dial	Adjustable delay 0-10 sec
DIN mountable	Mounts directly on 35 mm DIN rail
Current rating is 15A @ 240 Vac, 24 Vdc	High switching capacity
Only 17.5 mm (0.69 in) wide	Ideal for tight spaces

Nominal Input Voltage	Sensing Voltage Range	Timing Range	Contact Configuration	Rated Current (A)	Standard Part Number
120 Vac	Upper: 85 to 150 Vac Lower: 30 to 99% of upper	0 sec - 10 sec	SPDT	15	831VS-120A
240 Vac	Upper: 160 to 276 Vac Lower: 30 to 99% of upper	0 sec - 10 sec	SPDT	15	831VS-240A
24 Vdc	Upper: 18 to 30 V Lower: 30 to 99% of upper	0 sec - 10 sec	SPDT	15	831VS-24D

Part Number Explanation

831 VS - 120A

Series:
831 = SPDT

Relay Style:
VS = Voltage Sensor

Nominal Input Voltage:
120A = 120 Vac
240A = 240 Vac
24D = 24 Vdc

Specifications

Schneider Electric/Legacy Electric Time Delay and Sensor Relays

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Specifications

Part Number	831VS-120A	831VS-240A	831VS-24D
Input Characteristics			
Nominal Input Voltage	120 Vac	240 Vac	24 Vdc
Absolute Input Voltage Maximum	200 Vac	280 Vac	35 Vdc
Upper Supply Voltage Range	85 to 150 Vac	160 to 276 Vac	18 to 30 Vdc
Lower Supply Voltage Range	30 to 99% of upper preset	30 to 99% of upper preset	30 to 99% of upper preset
Maximum Power Consumption	1.2 VA	1.2 VA	1.2 W
Time Delay	adjustable 0 to 10 sec	adjustable 0 to 10 sec	adjustable 0 to 10 sec
Accuracy			
Mechanical Setting	5%	5%	5%
Repeat Accuracy	<1%	<1%	<1%
Temperature Variation	<1% / ºC	<1% / ºC	<1% / ºC
Hysteresis (from fault to normal)	2 to 6% of adjusted value	2 to 6% of adjusted value	2 to 6% of adjusted value
Output Characteristics			
Contact Configuration	1C / SPDT	1C / SPDT	1C / SPDT
Output Current Rating	15 A @ 120, 240 Vac, 24 Vdc	15 A @ 120, 240 Vac, 24 Vdc	15 A @ 120, 240 Vac, 24 Vdc
Breaking Capacity	4000 VA/AC1, 384 W/DC	4000 VA/AC1, 384 W/DC	4000 VA/AC1, 384 W/DC
Inrush Current	30 A / <3 sec	30 A / <3 sec	30 A / <3 sec
Maximum Switching Voltage	250 Vac / 24 Vdc	250 Vac / 24 Vdc	250 Vac / 24 Vdc
Minimum Breaking Capacity DC	500 mW	500 mW	500 mW
Mechanical Life	3.00E+07	3.00E+07	3.00E+07
Electrical Life	7.00E+04	7.00E+04	7.00E+04
Contact Material	Silver Alloy	Silver Alloy	Silver Alloy
Switching Capability	15 A @ 240 Vac, 50/60 Hz, 24 Vdc 1/2 HP @ 120 Vac 1 HP @ 240 Vac Pilot Duty B300	15 A @ 240 Vac, 50/60 Hz, 24 Vdc 1/2 HP @ 120 Vac 1 HP @ 240 Vac Pilot Duty B300	15 A @ 240 Vac, 50/60 Hz, 24 Vdc 1/2 HP @ 120 Vac 1 HP @ 240 Vac Pilot Duty B300
Minimum Switching Requirement	100 mA at 5 Vac or Vdc	100 mA at 5 Vac or Vdc	100 mA at 5 Vac or Vdc
Timing/Sensing Characteristics			
Time Scales	1	1	1
Time Ranges	0 sec to 10 sec	0 sec to 10 sec	0 sec to 10 sec
Tolerance	5% of Mechanical setting	5% of Mechanical setting	5% of Mechanical setting
Repeatability @ constant voltage and temperature	1%	1%	1%
Upper Sensing Voltage Range	85 to 150 Vac	160 to 276 Vac	18 to 30 Vdc
Lower Sensing Voltage Range	30 to 99% of upper preset	30 to 99% of upper preset	30 to 99% of upper preset
General Characteristics			
Dielectric Strength (Input to Contacts)	2.5 kV (I/O)	2.5 kV (I/O)	2.5 kV (I/O)
Dielectric Strength (Between Open Contacts)	1600 Vac	1600 Vac	1600 Vac
Mounting Position	Any, 35 mm DIN rail EN 50022	Any, 35 mm DIN rail EN 50022	Any, 35 mm DIN rail EN 50022
Overvoltage Category	III	III	III
Pollution Degree	2	2	2
Storage Temperature Range	-30°C (-22°F) to +70°C (+158°F)	-30°C (-22°F) to +70°C (+158°F)	-30°C (-22°F) to +55°C (+131°F)
Operating Temperature Range	-20°C (-4°F) to +55°C (+131°F)	-20°C (-4°F) to +55°C (+131°F)	-20°C (-4°F) to +55°C (+131°F)
Terminal Wire Capacity (Input and Output)	14 AWG (2.5 mm²) maximum	14 AWG (2.5 mm²) maximum	14 AWG (2.5 mm²) maximum
Terminal Screw Torque	7.1 Lb-in (0.8 N•m) maximum	7.1 Lb-in (0.8 N•m) maximum	7.1 Lb-in (0.8 N•m) maximum
Weight	62 g (2.19 oz)	62 g (2.19 oz)	88 g (3.10 oz)
Input Indication	Green LED	Green LED	Green LED
Output Indication (Blinks = Timing or On = Energized)	Red LED	Red LED	Red LED
Enclosure Rating (according to IEC 60529 IP rating)	IP40	IP40	IP40
Approvals	UL (E234203), CE (IEC 60947-1, 61000-4), RoHS	UL (E234203), CE (IEC 60947-1, 61000-4), RoHS	UL (E234203), CE (IEC 60947-1, 61000-4), RoHS

(1) Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.

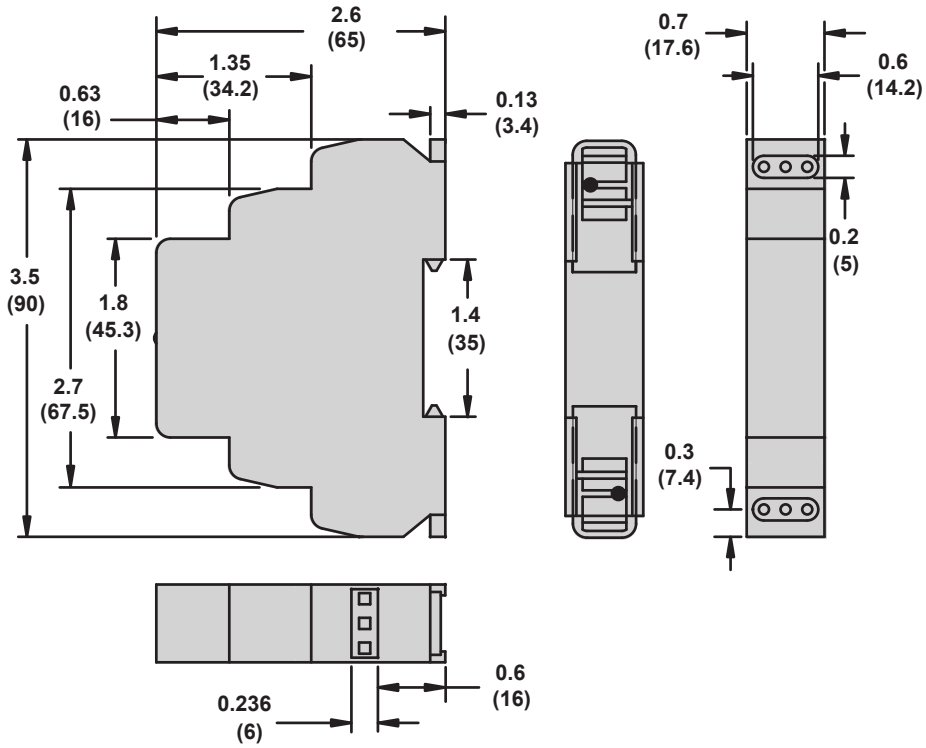
Dimensions,
Wiring Diagram

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Dimensions — inches (millimeters)



Wiring Diagram

