

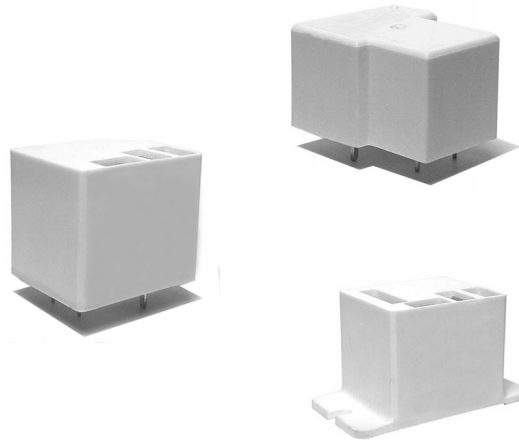


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HD1 Series

- High quality and reliability, low cost
- Standard PCB, panel mount, quick connect
- AC and DC coils
- Meets UL508 spacing
- 40A contact available
- Approvals:  us (E197071)
 R50028193
- Applications: timers, heaters, industrial controls and equipment, appliances, general purpose



COIL DATA

Nominal Voltage (DC)	Nominal Coil Current (mA) (± 10% at 20°C)	Coil Resistance (Ω) (± 10% at 20°C)	Nominal Voltage (AC)	Nominal Coil Current (mA) (± 10% at 20°C)	Coil Resistance (Ω) (± 10% at 20°C)
5	179	28	12	444	27
6	150	40	24	200	120
9	100	90	110	47	2360
12	75	160	120	39	3040
18	50	360	220/240	17	13490
24	38	640			
48	19	2560			
110	8	13400			

Pick-up Voltage

DC: ≤75% nominal **AC:** ≤85% nominal

Drop-out Voltage

DC: ≥10% nominal **AC:** ≤20% nominal

Max. Coil Voltage

DC/AC: 120% nominal

Coil Consumption

DC: Approx. 0.9W **AC:** Approx 2.0VA

Contact

Configuration

A: 1 form A (SPST-NO), **B:** 1 form B (SPST-NC),
C: 1 form C (SPDT)

Material

AgSnO₂ / AgCdO

Rated Load

30: NO - 30A@14VDC / 240VAC, inrush - 80A
NC - 30A@14VDC, 10A@240VAC

40: NO - 40A@240VAC, inrush - 100A
(TUV - 40A@240VAC/14VDC)

NC - 30A@240VAC

(TUV - 30A@240VAC/14VDC)

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Max. Carry Current	30: 30A, 40: 40A
Max. Switching Voltage	125VDC / 250VAC
Max. Switching Current	30: 30A, 40: 40A
Max. Switching Power	30: 900W, 7200VA, 40: 1200W, 9600VA

CHARACTERISTICS

Contact Resistance	Max. 30mΩ
Operate Time	≤10ms
Release Time	≤8ms
Insulation Resistance	1000MΩ (@500VDC)
Dielectric Strength:	
• Between coil and contacts	1500VAC / 50Hz, one minute (40 type - 2500VAC)
• Between open contacts	1500VAC / 50Hz, one minute
Vibration Resistance	10-55Hz, 1.5mm, double amplitude
Shock Resistance	20g Approx.
Ambient Temperature	
• Storage	nil: -55 ⁰ C to 130 ⁰ C, F: -55 ⁰ C to 155 ⁰ C
• Operate	nil: -55 ⁰ C to 100 ⁰ C, F: -55 ⁰ C to 125 ⁰ C
Relative Humidity	20% - 85%
Life Expectancy:	
• Mechanical	1 x 10 ⁷
• Electrical	1 x 10 ⁵ (at rated load)
Weight	22g to 35g (package dependent)

ORDERING INFORMATION

	<u>HD1</u>	-	<u>012A</u>	-	<u>A</u>	<u>30</u>	<u>PC</u>	<u>S</u>	<u>N</u>	<u>F</u>
	I		II		III	IV	V	VI	VII	VIII
I.	Series				HD1					
II.	Coil Voltage (VDC)				DC: 005, 006, 009, 012, 018, 024, 048, 110					
					AC: 012, 024, 110, 120, 220/240					
					D - DC, A - AC					
III.	Contact Configuration				A - 1 form A (SPST-NO), B - 1 form B (SPST-NC),					
					C - 1 form C (SPDT)					
IV.	Contact Rating				30 - 30A, 40 - 40A					
V.	Mounting Style				PC - PCB, PQ - PCB with quick connect terminals,					
					PM - Panel mount					
VI.	Package Type				D - Dust cover, S - Sealed (washable), O - Open frame					
					E - Epoxy sealed (not washable)					
VII.	Mid-pin Configuration				nil - Mid-pin present, N - No mid-pin					
VIII.	Temperature Class				nil - Class B coil, F - Class F coil					

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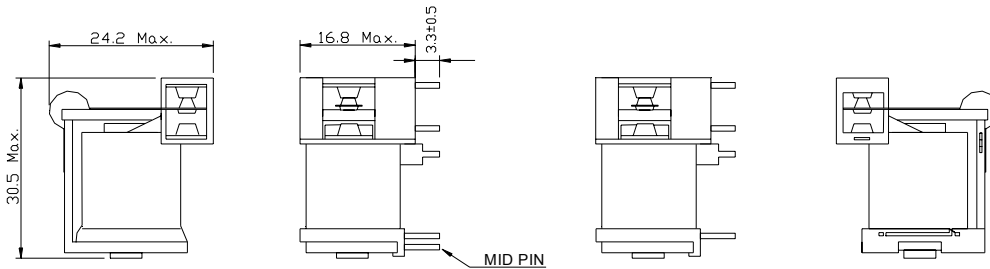
HD1 Series Dimensions and Schematics (in mm)

HD1 - PC style

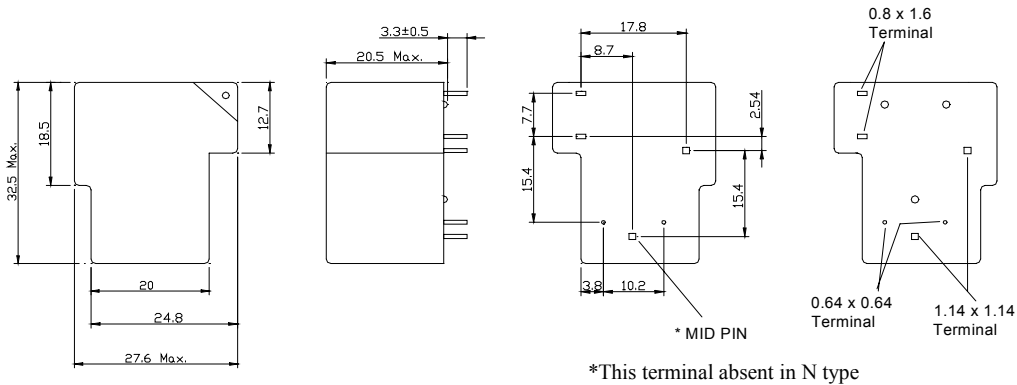
Open frame

Std type – with mid-pin

N type – without mid-pin

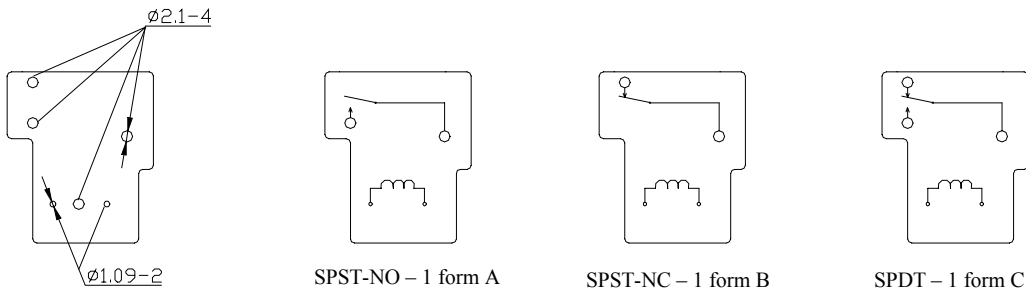


PC style sealed, epoxy base, or dust cover



Mounting holes

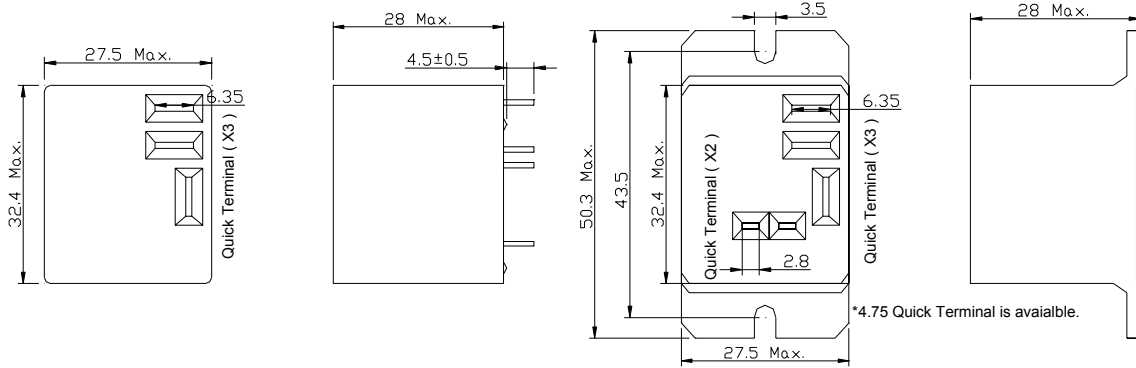
Terminal arrangement and wiring diagram



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HD1 - PQ style

HD1 - PM style



Side and top views and dimensions of quick connect terminals

Terminal arrangement and wiring diagram

