



199 Series Relay

199 Power Relays

199—SPST-NO-DM, 40 A; SPDT, 40 A; DPST-NO, 40 A; DPDT, 40 A

Table 23.40: Standard Part Numbers

Rated Contact Current	Contact Configuration	Coil Voltage	Coil Resistance (Ω)	Special Features	Standard Part Number
40 A <sup>[24]</sup>	SPST-NO-DM	120 Vac	290		199ADX4
		12 Vdc	70		199DX2
		24 Vdc	290	Blowout Magnet	199DBX3
		48 Vdc	1200	Blowout Magnet	199DX3
	SPDT	120 Vac	290		199AX4
		12 Vdc	70		199X2
		24 Vdc	290		199X3
	DPST-NO	120 Vac	290		199AX9
		240 Vac	1200		199AX10
		12 Vdc	70		199X7
		24 Vdc	290		199X8
	DPDT	24 Vac	12		199AX13
		120 Vac	290	Blowout Magnet	199ABX14
					199AX14
		240 Vac	1200		199AX15
		12 Vdc	70	Blowout Magnet	199BX12
				199X12	
24 Vdc		290	Blowout Magnet	199BX13	
				199X13	
			199BX14		
			199X14		

199 Specifications (UL 508)

Part Numbers	199AX, 199X, 199ABX <sup>[25]</sup> Additional DC Ratings with Blowout Magnet No title at target; link text should be authored, page . 199BX <sup>[25]</sup> Additional DC Ratings with Blowout Magnet No title at target; link text should be authored, page	199ADX, 199DX, 199DYX, 199DBX <sup>[25]</sup> Additional DC Ratings with Blowout Magnet No title at target; link text should be authored, page
<b>Contact Characteristics</b>		
Contact Configuration	SPST, SPDT, DPST, DPDT	SPST-DM, SPST-DB
Contact Material	Silver alloy	
Thermal (Carrying) Current	40 A	
Maximum Switching Voltage	600 V(rms)	
Rated Switching Current at Voltage	Resistive: 40 A at 300 Vac 50/60 Hz; 5 A at 480 Vac 50/60 Hz; 5 A at 600 Vac 50/60 Hz; 40 A at 28 Vdc	Resistive: 40 A at 300 Vac 50/60 Hz; 12 A at 480 Vac 50/60 Hz; 10 A at 600 Vac 50/60 Hz; 40 A at 28 Vdc
	Motor: 2 hp at 120–600 Vac 50/60 Hz	
	Tungsten: 15 A at 120 Vac 50/60 Hz	
	Pilot Duty: A600	
Minimum Switching Requirement	1 A at 5 Vac/Vdc	
<b>Coil Characteristics</b>		
Coil Voltage Range <sup>[26]</sup> Standard Part Numbers, page 23-48	6–600 Vac 50/60 Hz; 6–250 Vdc2	
Operating Range (% of Nominal)	85%–110% (AC); 80%–110% (DC)	
Average Consumption (Maximum)	10 VA (AC); 4 W (DC)	
Drop-Out Voltage Threshold	10% (AC/DC)	

Table 23.41: Additional DC Ratings with Blowout Magnet

Load Voltage	Contact Rating
110 Vdc	20 A
220 Vdc	8 A
325 Vdc	4 A
500 Vdc	2 A

Table 23.42: Auxiliary Switch Ratings (Non-Standard Option)

Load Type	Contact Rating
Resistive Load 120/250 Vac (50/60 Hz)	10 A
Motor Load 125/250 Vac (50/60 Hz)	0.25 hp
Tungsten Load 125 Vac (50/60 Hz)	3 A

[24] 50 A versions and additional options available. Call Customer Service for more information (847-441-2540).

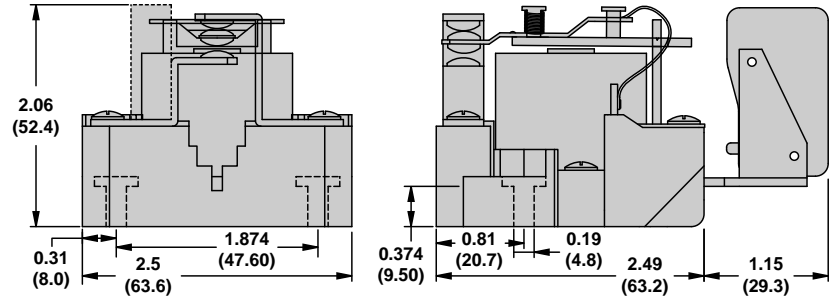
[25] For ratings with blowout magnet, refer to

[26] For available standard coil voltages, refer to

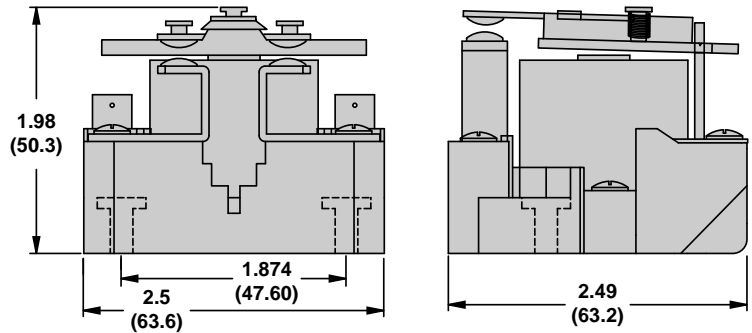
**Table 23.43: Contact Ratings and Electrical Endurance (per IEC 60947-1, 60947-4)**

Contact Ratings	Load Voltage	Frequency	Load Type	Estimated Electrical Endurance	See Note(s)
<b>AC Load</b>					
40 A	300 V	50/60 Hz	Resistive	50,000 cycles	[27][28]
2 hp	120–600 V		Motor	50,000 cycles	[29][28]
15 A	120 V		Tungsten	20,000 cycles	[28][30]
A600	—		Pilot Duty	100,000 cycles	[28]
<b>DC Load</b>					
40 A	28 V	DC	Resistive	100,000 cycles	[28]
20 A	110 V				
8 A	220 V				
4 A	325 V				
2 A	500 V				

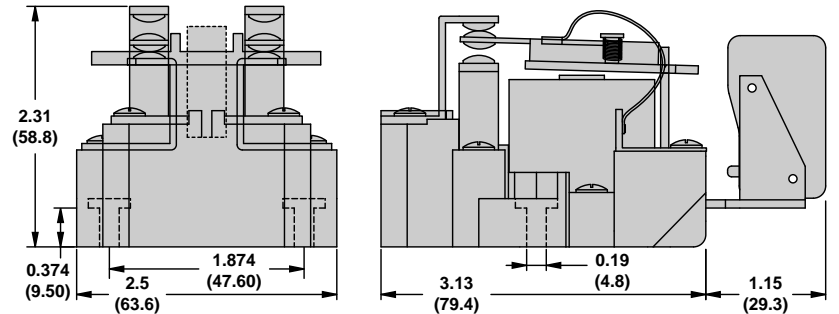
**Dimensions, in. (mm)**



SPDT—Short Base (shown with optional Auxiliary Switch)



SPST-NO-DM



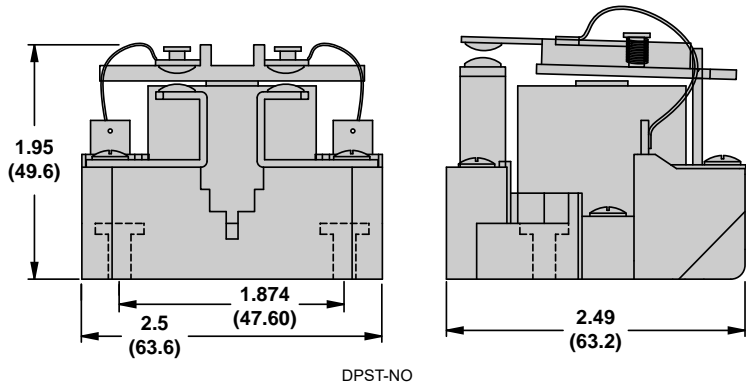
DPDT—Long Base (shown with optional Auxiliary Switch)

[27] Resistive AC load ratings are based on a power factor of 0.85–1.0.

[28] All ratings are based on applying the rated nominal power to the relay coil so as to provide a “clean” make and break that does not result in any contact chatter or multiple actuation of the contacts.

[29] Motor horsepower ratings are based on a power factor of 0.4–0.5, and an initial inrush current not exceeding

[30] The tungsten rating is based on cold-filament inrush current not exceeding 15 times the rated steady-state lamp current.



Wiring Diagrams

