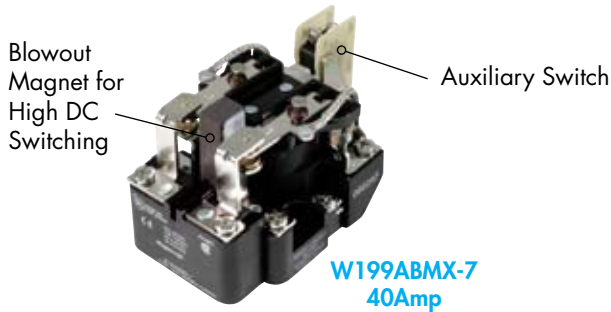


Advantages of the W199 Power Relay

The Magnecraft 199 relay is the powerhouse open relay. Standard parts can handle up to 40A and there are options to handle up to 50A. The device is available in a variety of configurations and coil voltages. Available with up to two poles, double and single throws, insulated and non-insulated double make and/or break, and several switching forms. Options include auxiliary 10A switches with quick connects or screw terminals, quick connects on the coils and/or contacts, tungsten stationary contacts, fine silver contacts, pressure wire connectors on the output terminals and blowout magnets near the contacts for high voltage DC switching.

Optional Cover
(50-1289-1)
See Section 3 p.22



- Available Blowout Magnets for High DC Switching.
- Available Auxiliary Switches.
- Can be configured with 0.25 inch Q.C. Connections.
- Up to 50A Switching.
- Available Metal Enclosure.



Pressure Wire Connectors for Heavy Gauge Wires



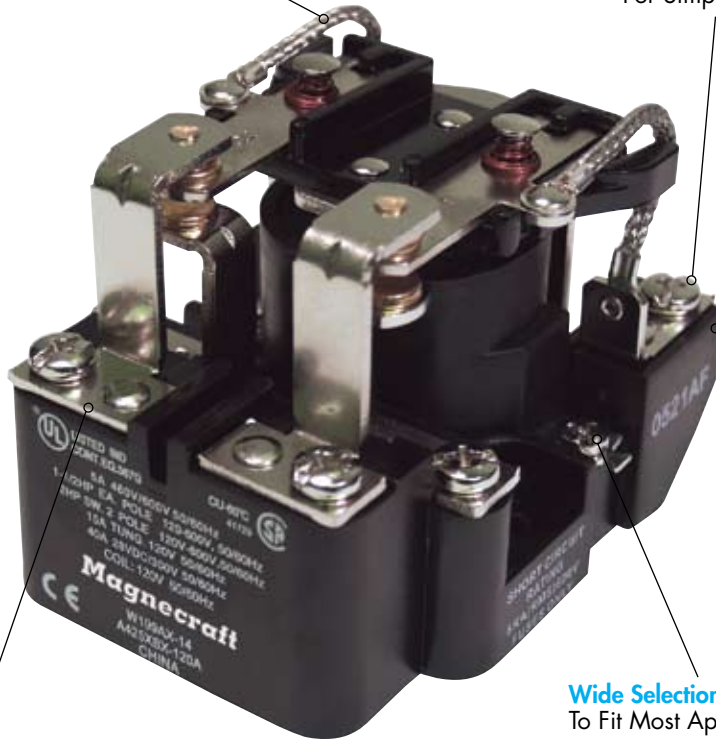
Shoulder Rivet and Spring Optimize Contact Wipe



14 AWG for 40A, 11 AWG for 50A Configurations
For Superior Load Handling.

Combo-Head Screws
For Simpler Hook-Up.

Wide Array of Options & Configurations
For Specific Control Needs.



Riveted Construction
To Sustain Years of Use.

Wide Selection of Coil Voltages
To Fit Most Applications.

Auxiliary Switch



W199AX-14
40Amp

W199MX-27
40Amp

1/4 Inch Q.C. on
Auxiliary Switch for
Speedier Hook-Up

11 AWG Pigtails
for 50A Load
Switching

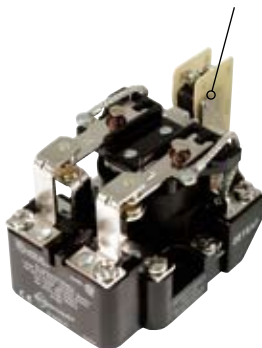


W199X-11
40Amp

Auxiliary Switch

199PQMKKX-1
50Amp

1/4 Q.C. on
Coil for Simpler
Installation

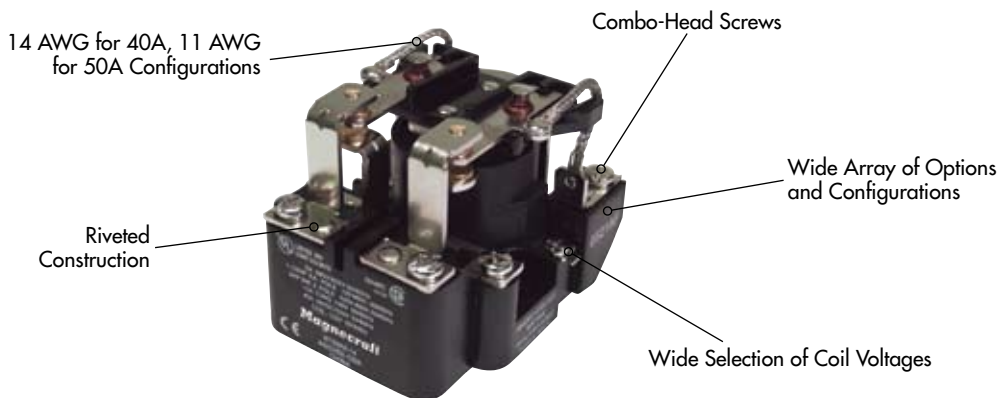
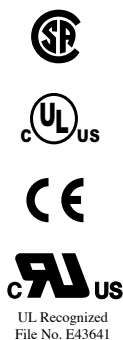


W199MX-51
40Amp



W199X-3
40Amp

W199 Open Style Power Relay/Single and Two Pole 40 and 50 Amp Rating (DC and AC)



General Specifications (UL 508)

Contact Characteristics		Units	199, 199A
Number and type of Contacts			SPST, SPDT, DPST, DPDT
Contact materials			Silver Alloy
Thermal (Carrying) Current rating		A	40
Maximum Switching Voltage		V	600V
Switching Current @ Voltage	~	Resistive	40A @ 277V 50/60Hz, 5A @ 600VAC 50/60Hz
	⋮	Resistive	40A @ 28VDC
Blowout magnet	⋮	Resistive	See table A below
		HP	1 1/2 @ 120-600 VAC
		Tungsten	15A @ 120VAC
		Pilot Duty	A600
Minimum Switching Requirement	Minimum	mA	100 @ 12 VAC/VDC
Coil Characteristics			
Voltage Range	~	V	6...600
	% of Nominal	⋮	6...600
Operating Range	~		85% to 110%
	⋮		80% to 110%
Average consumption	~	VA	10
	⋮	W	4
Drop-out voltage threshold	~		10%
	⋮		10%
Performance Characteristics			
Electrical Life (UL 508)	Operations @ Rated Current	(Resistive)	6,000
Operating time (response time)		ms	30
Dielectric	Between coil and contact	~	2200
	Between poles	~	2200
	Between contacts	~	1500
Environment			
Product certifications	Standard version		UL, CSA, CE
Ambient air temperature around the device	Storage	°C	-40...+85
	Operation	°C	-40...+55
Connection		AWG (mm ²)	8 (10)
Terminal Tightening Torque		in-lb (Nm)	7...9 (0.8...1.0)
Weight		grams	227 to 312

Table A:

Additional DC Rating with Magnetic Blowout	Single Make/Break	Double Make/Break
110 VDC	10 A	20 A
144 VDC	—	15 A
220 VDC	4 A	8 A
325 VDC	2 A	4 A
500 VDC	—	2 A



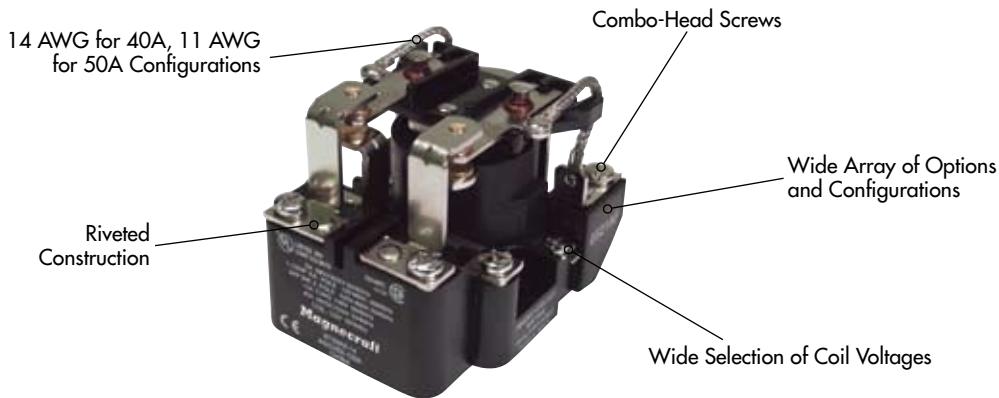
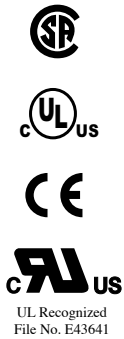
**Optional Cover
(50-1289-1)**
See Section 3 p.22

199D, 199DY, 199AD, 199ADY	199P, 199AP	199DE, 199DYE, 199ADE, 199ADYE
SPST-DM, SPST-DB	SPST, SPDT, DPST, DPDT	SPST-DM, SPST-DB
Silver Alloy	Silver Alloy	Silver Alloy
40	50	50
600V	600V	600V
40A @ 277V 50/60Hz, 10A @ 600VAC 50/60Hz	50A @ 277V 50/60Hz, 5A @ 600VAC 50/60Hz	50A @ 277V 50/60Hz, 10A @ 600VAC 50/60Hz
40A @ 28VDC	50A @ 28VDC	50A @ 28VDC
See table A below	See table A below	See table A below
2 @ 120-600 VAC	1 1/2 @ 120-600 VAC	2 @ 120-600 VAC
15A @ 120VAC	15A @ 120VAC	15A @ 120VAC
A600	A600	A600
100 @ 12 VAC/VDC	100 @ 12 VAC/VDC	100 @ 12 VAC/VDC
6...600	6...600	6...600
6...600	6...600	6...600
85% to 110%	85% to 110%	85% to 110%
80% to 110%	80% to 110%	80% to 110%
10	10	10
4	4	4
10%	10%	10%
10%	10%	10%
6,000	6,000	6,000
30	30	30
2200	2200	2200
2200	2200	2200
1500	1500	1500
UL, CSA, CE	UL, CSA, CE	UL, CSA, CE
-40...+85	-40...+85	-40...+85
-40...+55	-40...+55	-40...+55
8 (10)	8 (10)	8 (10)
7...9 (0.8...1.0)	7...9 (0.8...1.0)	7...9 (0.8...1.0)
227 to 312	227 to 312	227 to 312

Table B:

Auxiliary Switch Ratings	SPDT	DPDT
Up to 240 VAC 50/60Hz	10 A (AC1)	10 A (AC1)
Motor Load, 120-240 VAC 50/60Hz	1/4 HP	1/4 HP
Pilot Duty, 120-240 VAC 50/60Hz	278 VA	278 VA
125 VDC	0.4 A (DC1)	0.4 A (DC1)
250 VDC	0.2 A (DC1)	0.2 A (DC1)
Tungsten, 120 VAC 50/60Hz	3 A	3 A

W199 Open Style Power Relay/Single and Two Pole 40 and 50 Amp Rating (DC and AC) *continued*



Standard Part Numbers

BOLD-FACED PART NUMBERS ARE NORMALLY STOCKED

Nominal Input Voltage 40A Rated Relays, AC Operated	Coil Resistance (OHMS)	Part Number	Contact Configuration	Equipped Optional Features
24 VAC 50/60 Hz	12 Ω	W199AX-3	SPDT	
120 VAC 50/60 Hz	290 Ω	W199AX-4	SPDT	
24 VAC 50/60 Hz	12 Ω	W199AX-13	DPDT	
120 VAC 50/60 Hz	290 Ω	W199AX-14	DPDT	
240 VAC 50/60 Hz	1200 Ω	W199AX-15	DPDT	
24 VAC 50/60 Hz	12 Ω	W199AX-8	DPST-NO	
120 VAC 50/60 Hz	290 Ω	W199AX-9	DPST-NO	
240 VAC 50/60 Hz	1200 Ω	W199AX-10	DPST-NO	
120 VAC 50/60 Hz	290 Ω	W199ADX-4	SPST-NO-DM	
240 VAC 50/60 Hz	1200 Ω	W199ADX-5	SPST-NO-DM	
120 VAC 50/60 Hz	290 Ω	W199ADBX-4	SPST-NO-DM	Magnetic Blowout
120 VAC 50/60 Hz	290 Ω	W199ABX-14	DPDT	Magnetic Blowout
120 VAC 50/60 Hz	290 Ω	W199ABMX-7	DPDT	Auxiliary Switch, Magnetic Blowout
120 VAC 50/60 Hz	290 Ω	W199AMX-64	DPDT	Auxiliary Switch
40A Rated Relays, DC Operated				
12 VDC	70 Ω	W199X-2	SPDT	
24 VDC	290 Ω	W199X-3	SPDT	
6 VDC	18 Ω	W199X-11	DPDT	
12 VDC	70 Ω	W199X-12	DPDT	
24 VDC	290 Ω	W199X-13	DPDT	
110 VDC	6000 Ω	W199X-14	DPDT	
12 VDC	70 Ω	W199X-7	DPST-NO	
24 VDC	290 Ω	W199X-8	DPST-NO	
12 VDC	70 Ω	W199DYX-2	SPST-NC-DB	
12 VDC	70 Ω	W199DX-2	SPST-NO-DM	
24 VDC	290 Ω	W199DX-3	SPST-NO-DM	
24 VDC	290 Ω	W199DBX-3	SPST-NO-DM	Magnetic Blowout
48 VDC	1200 Ω	W199DBX-6	SPST-NO-DM	Magnetic Blowout
24 VDC	290 Ω	W199BX-13	DPDT	Magnetic Blowout
110 VDC	6000 Ω	W199BX-14	DPDT	Magnetic Blowout
24 VDC	290 Ω	W199BMX-13	DPDT	Auxiliary Switch, Magnetic Blowout
24 VDC	290 Ω	W199MX-51	DPDT	Auxiliary Switch
50A Rated Relays				
24 VAC 50/60 Hz	8 Ω	W199APX-13	DPDT	
120 VAC 50/60 Hz	260 Ω	W199APX-14	DPDT	
240 VAC 50/60 Hz	1040 Ω	W199APX-15	DPDT	
120 VAC 50/60 Hz	290 Ω	W199ADEX-4	SPST-NO-DM	Pressure Wire Connectors
6 VDC	18 Ω	199PX-11	DPDT	
12 VDC	70 Ω	W199PX-12	DPDT	
24 VDC	260 Ω	W199PX-13	DPDT	
110 VDC	6000 Ω	199PX-14	DPDT	
24 VDC	290 Ω	W199DEX-3	SPST-NO-DM	Pressure Wire Connectors
110 VDC	6000 Ω	199PQMKKX-1	DPDT	1/4" QC Term. On Coil, Auxiliary Switch

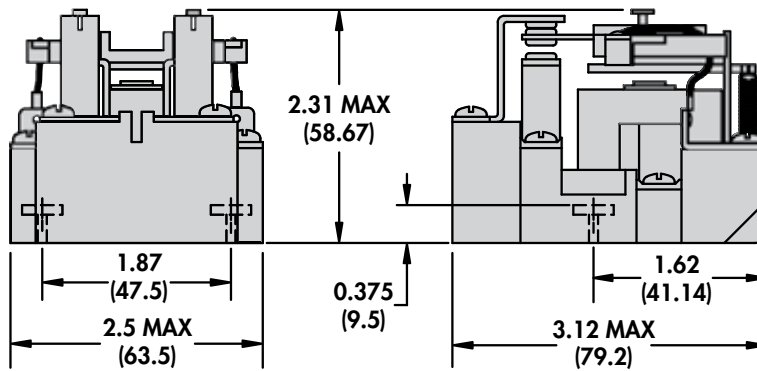
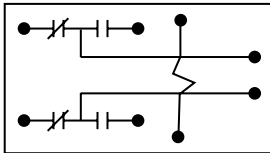
*Contact Magnecraft for more configurations to fit your applications.



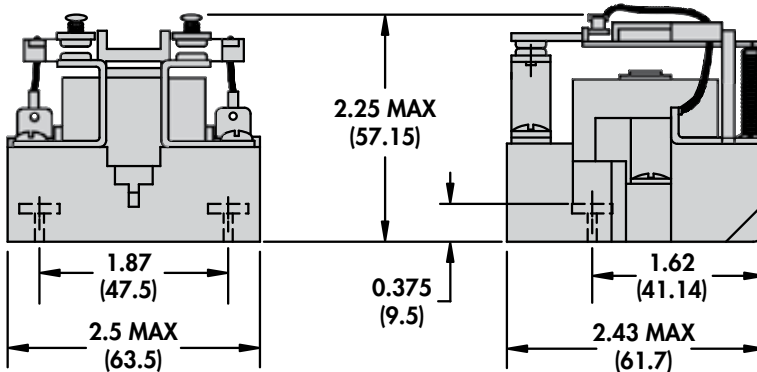
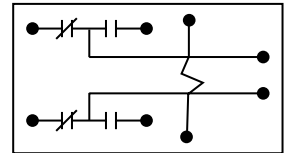
Optional Cover
(50-1289-1)
See Section 3 p.22



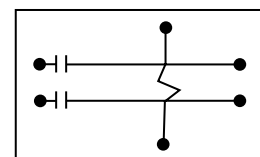
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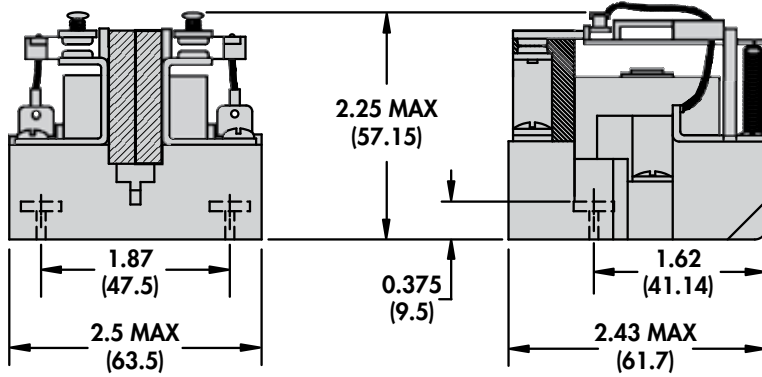
DPDT



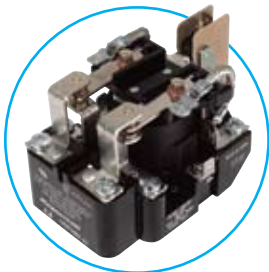
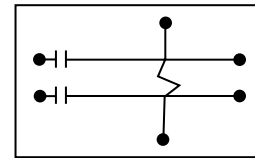
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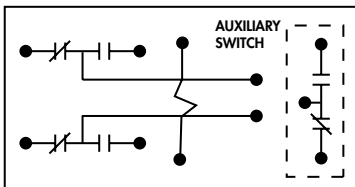
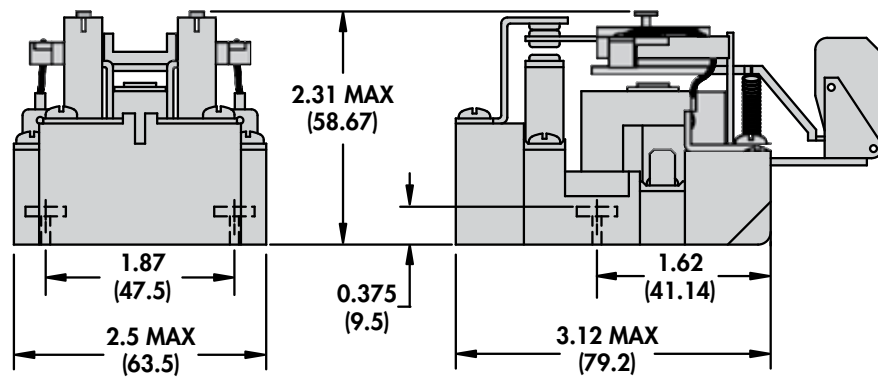
W199 Open Style Power Relay/Single and Two Pole 40 and 50 Amp Rating (DC and AC) *continued*



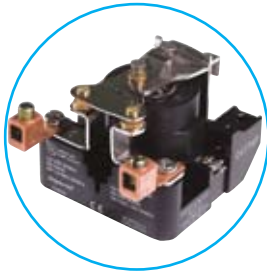
DPST-NO w/Blowout Magnet



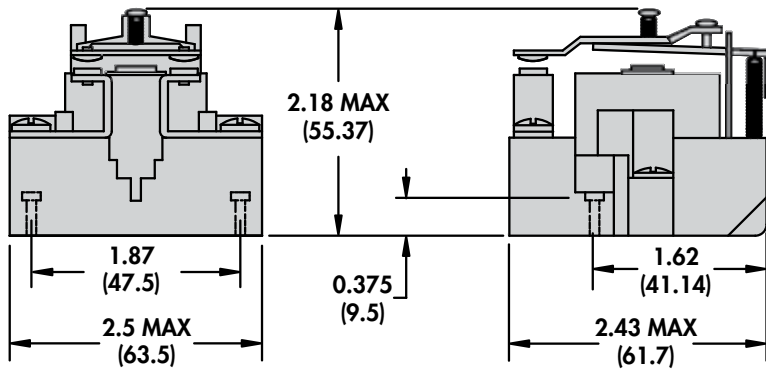
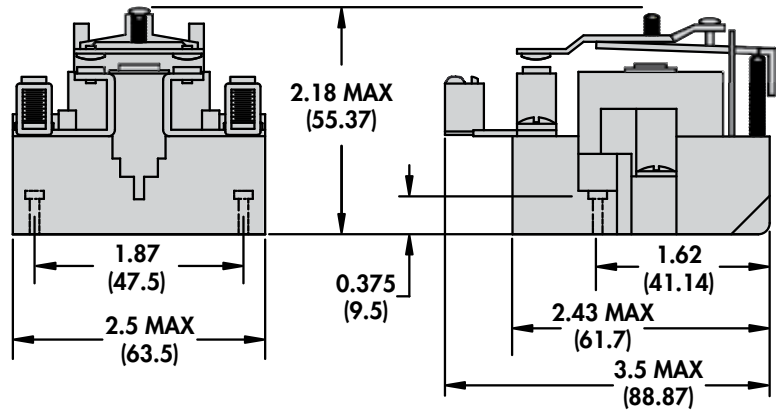
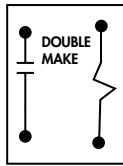
DPDT w/Auxiliary Switch and QC Connectors on Coil



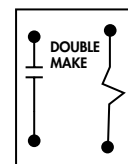
SECTION 6



SPST-NO-DM w/Pressure Wire Connectors



SPST-NO-DM

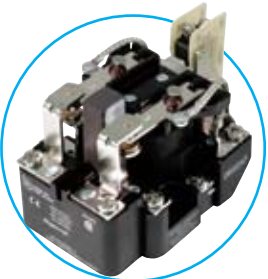
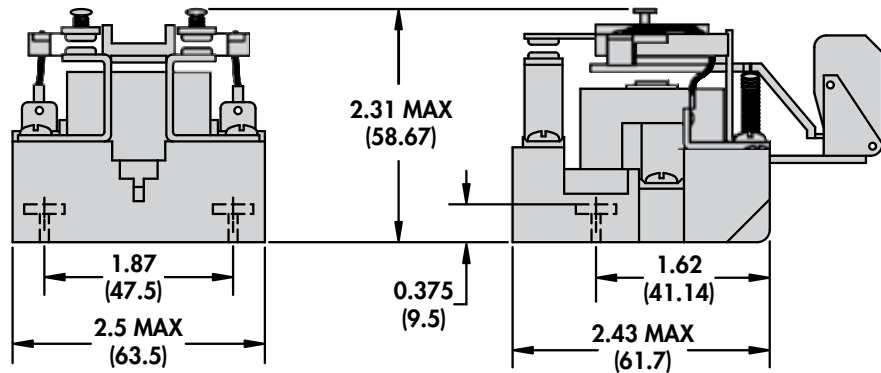
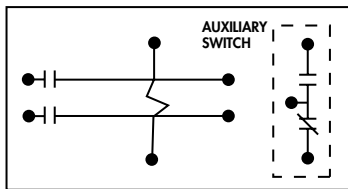


*More configurations available.

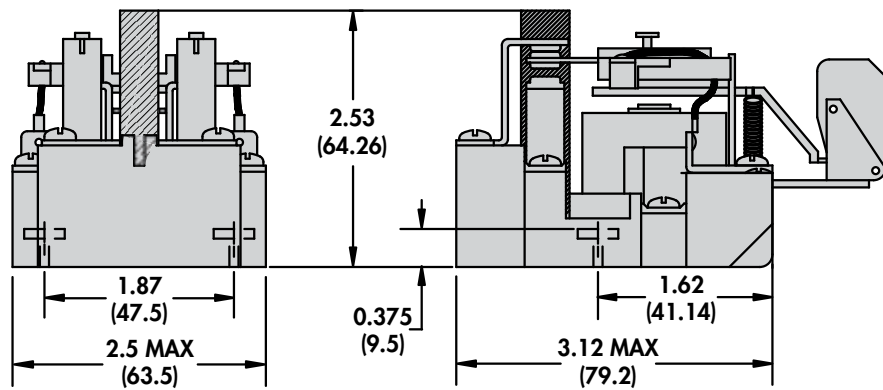
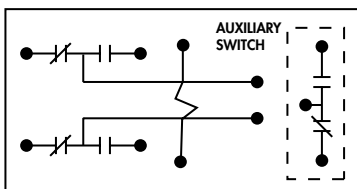
W199 Open Style Power Relay/Single and Two Pole 40 and 50 Amp Rating (DC and AC) continued



DPST-NO w/Auxiliary Switch



DPDT w/Blowout Magnet and Auxiliary Switch

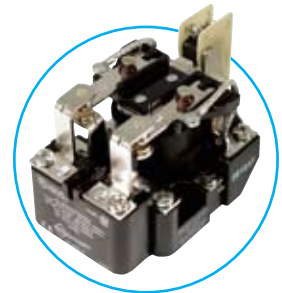
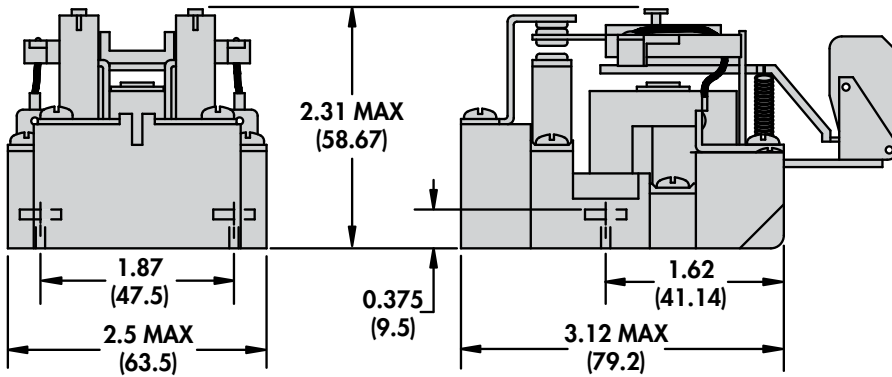
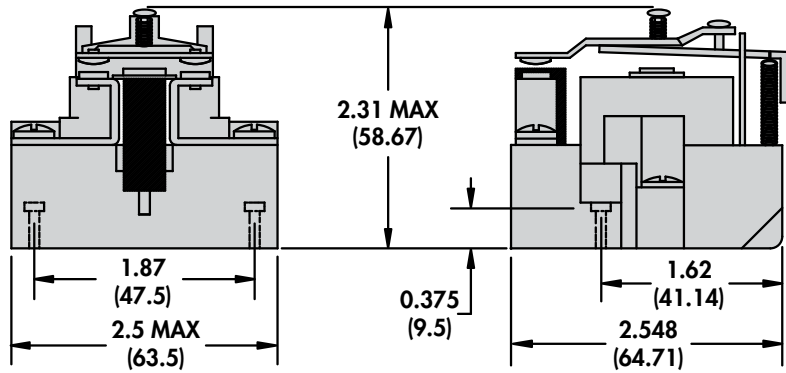
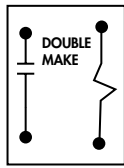


SECTION 6

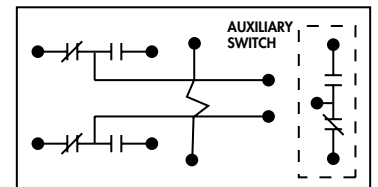
*More configurations available.



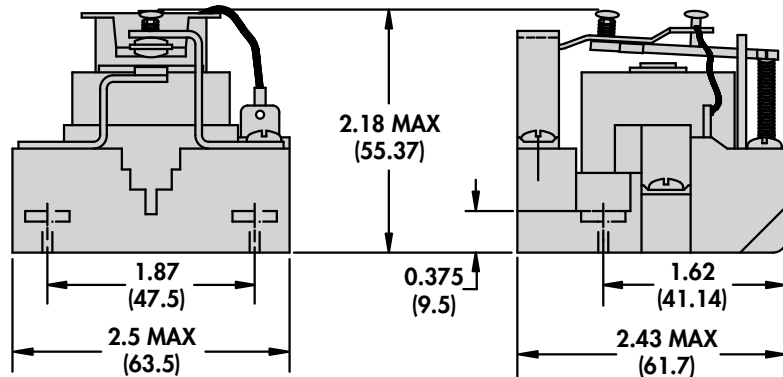
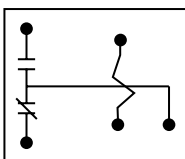
SPST-NO-DM w/Blowout Magnet



DPDT w/Auxiliary Switch



SPDT



*More configurations available.