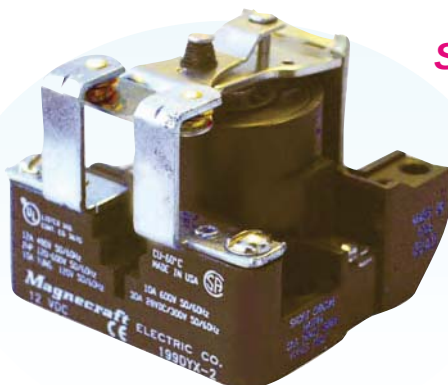
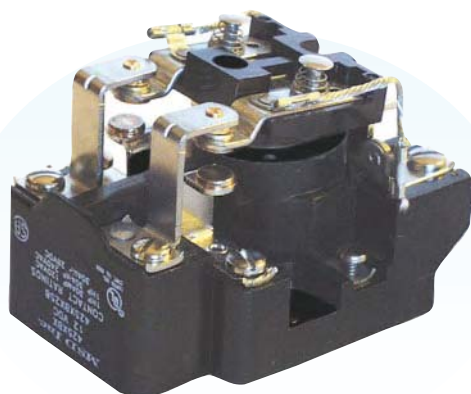




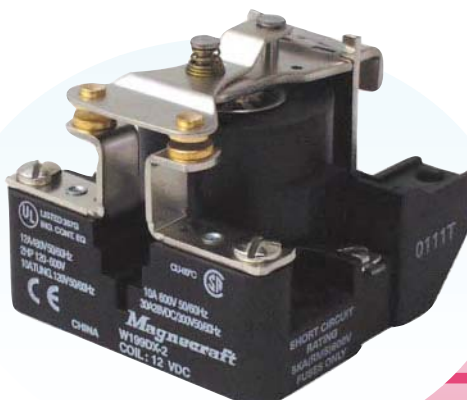
199 SPDT
30 AMP, 1-1/2 Hp



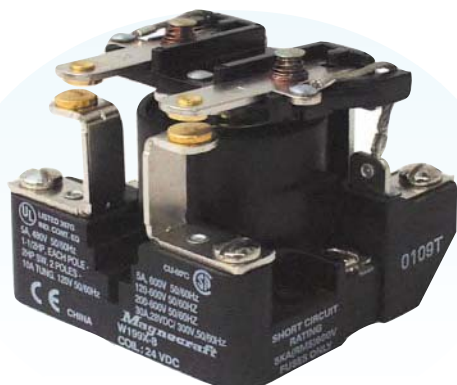
199 SPST-NC-DB
30 AMPS, 2 Hp



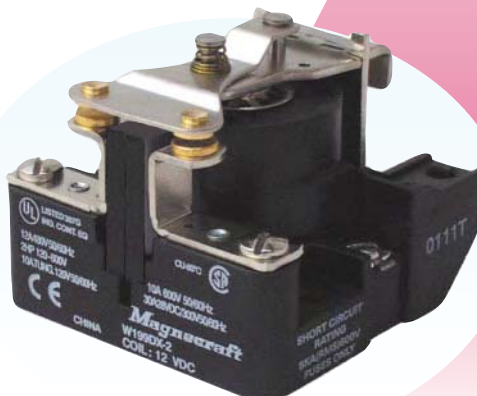
199 DPDT
30 AMP, 1-1/2 Hp PER POLE
2 Hp-2 POLE SWITCHING



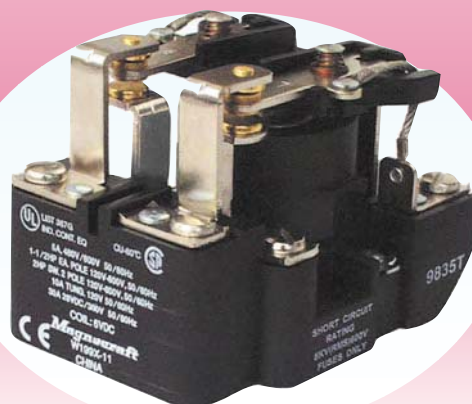
199 SPST-NO-DM
30 AMPS, 2 Hp



199 DPST-NO
30 AMPS, 1-1/2 Hp PER POLE
2 Hp - 2 POLE SWITCHING



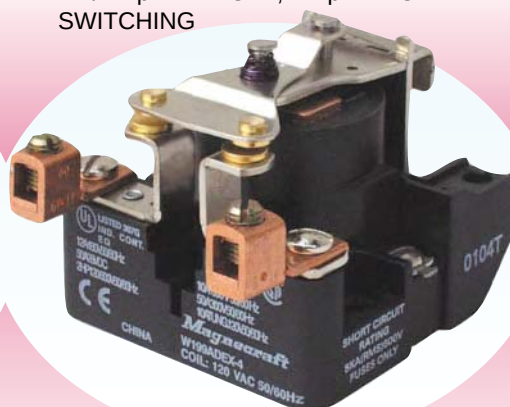
199DB SPST-NO-DM
WITH MAGNETIC BLOWOUT FOR DC ARC
QUENCHING 20 AMPS, 110 VDC



199H DPDT
40 AMPS GENERAL PURPOSE,
1-1/2 Hp PER POLE; 2 Hp - 2 POLE
SWITCHING



199B DPDT
WITH MAGNETIC BLOWOUT FOR DC ARC
QUENCHING 10 AMPS, 110 VDC



199DE SPST-NO-DM
WITH BOX TERMINALS.
50 AMPS, 2 Hp

**SPDT, DPDT, DPST-N.O.,
SPST-N.C.-D.B. & SPST-N.O.-D.M.,
10 TO 50 AMPS**



LISTED
367G



UL Listed
File No. E43641



COMPLIES WITH REQUIREMENTS OF

- * IEC STANDARDS 947-4-1 AND 947-5-1 LOW VOLTAGE DIRECTIVE
- * IEC = INTERNATIONAL ELECTROTECHNICAL COMMISSION
- * CE TESTING AND EVALUATION PERFORMED BY THE UNDERWRITERS LABORATORIES AS A THIRD PARTY PARTICIPANT

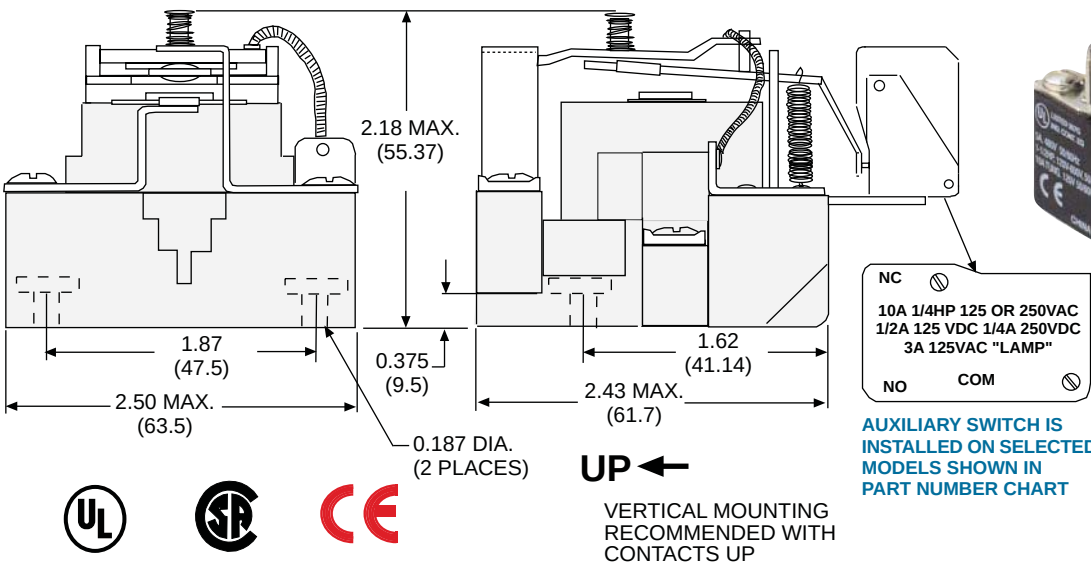
**MANUFACTURED UNDER
ISO 9002**

Optional metal enclosure
available, see page 12

**CLASS "B" COIL
INSULATION SYSTEM**

SPDT, 30 AMPS

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



Optional metal enclosure available, see page 12



GENERAL SPECIFICATIONS

COIL

- Pull-in Voltage: 85% of nominal voltage or less for AC coils
80% of nominal voltage or less for DC coils
- Dropout Voltage: 10% of nominal voltage or more @ 25°C
- Coil Resistance: ± 10% @ 25°C
- Coil Power: 2.0 Watts DC., 10 VA (60Hz) AC @ 25°C
- Max. Coil Dissipation: DC Coils-4 watts max.
- Duty: Continuous

CONTACTS

- Contact Material: Silver cadmium oxide, gold flashed
5/16" diameter standard
- Contact Rating: 30 amps up to 300 VAC, 50/60Hz
5 amps @ 480/600 VAC, 50/60HZ 0.75 pf
Inductive load. 1-1/2 Hp motor load @ 120 thru
600 VAC, 50/60 Hz. 30 Amps @ 28 VDC
resistive load. 15 Amps tungsten @ 120 VAC
NEMA A 600 pilot duty 50/60Hz
- Auxiliary Switch: 10 amps 1/4 Hp 125 or 250VAC
1/2 amp 125 VDC 1/4 amp 250 VDC
3 amps 125 VAC "Lamp"

TIMING

- Operate Time: 40 milliseconds max. @ nominal voltage
- Release Time: 30 milliseconds max. @ nominal voltage

DIELECTRIC STRENGTH

- Between Open Contacts: 1500 V rms
- Mutually Insulated
- Conductive elements: 2200 V rms

TEMPERATURE

- Operating Range: (AC) -30°C to +50°C,
(DC) -30°C +60°C
- Non-Operating Storage Range: -55°C to +100°C

LIFE EXPECTANCY

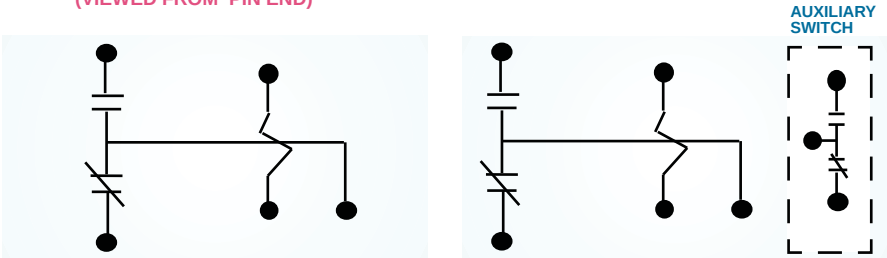
- Electrical: 100,000 operations
- Mechanical: @ rated resistive load
1,000,000 operations @ no load

MISCELLANEOUS

- Coil Terminals: 6-32 combination head screws
- Load Terminals: 8-32 combination head screws
- Base Material: Molded phenolic,
UL recognized (QMFZ2)
- Weight: 227 grams approx.

WIRING DIAGRAM

(VIEWED FROM PIN END)

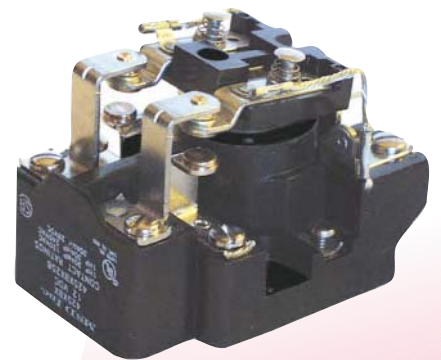
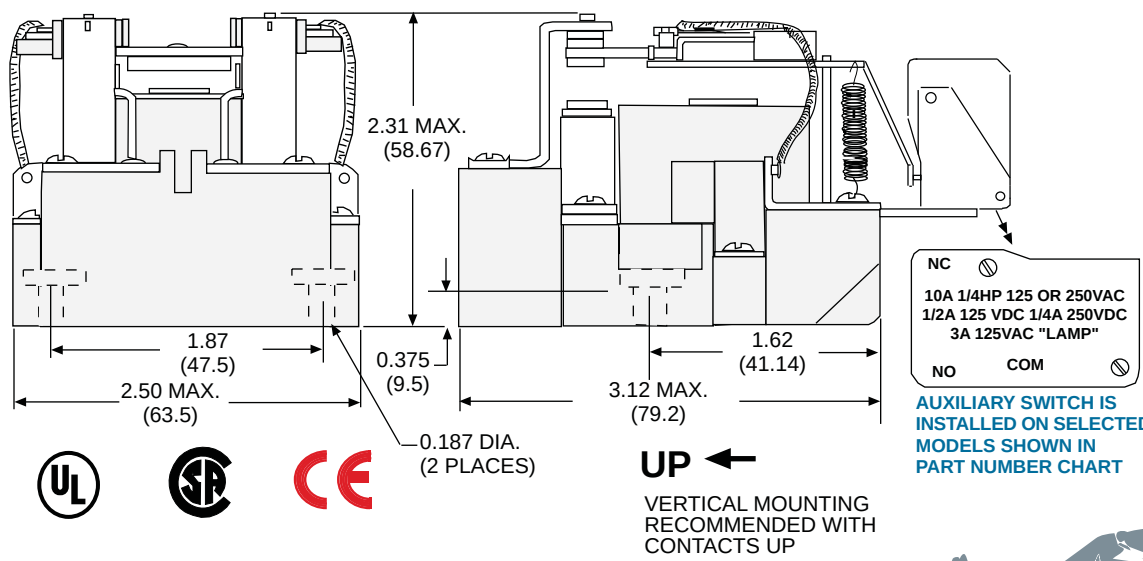


OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER. CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

STANDARD PART NUMBERS	COIL MEASURED @ 25°C	
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199AX-4	120 VAC	290 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH		
W199AMX-4	120 VAC	290 Ω
DC OPERATED		
W199X-2	12 VDC	70 Ω
W199X-3	24 VDC	290 Ω
DC OPERATED WITH SPDT AUXILIARY SWITCH		
W199MX-2	12 VDC	70 Ω
W199MX-3	24 VDC	290 Ω

DPDT, 30 AMPS

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



Optional metal enclosure available, see page 12



GENERAL SPECIFICATIONS

COIL

- Pull-in Voltage: 85% of nominal voltage or less for AC coils
80% of nominal voltage or less for DC coils
- Dropout Voltage: 10% of nominal voltage or more @ 25°C
- Coil Resistance: ± 10% @ 25°C
- Coil Power: 2.0 watts DC., 10 VA (60Hz) AC @ 25°C
- Max. Coil Dissipation: DC coils-4 matts max.
- Duty: Continuous.

CONTACTS

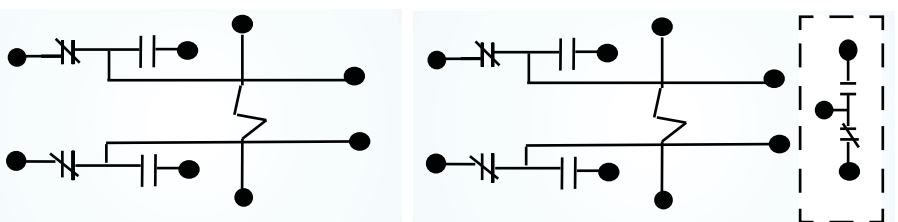
- Contact Material: Silver cadmium oxide, gold flashed 5/16" diameter standard.
- Contact Rating: 30 amps up to 300 VAC, 50/60Hz
5 amps @ 480/600 VAC, 50/60Hz 0.75 pf inductive load. 1-1/2 Hp motor load each pole @ 120 thru 600 VAC, 50/60 Hz. 2 Hp motor load @ 200 to 600 VAC. when using two poles to switch both sides of load.
30 amps @ 28 VDC resistive load
15 amps tungsten @ 120 VAC
NEMA A 600 pilot duty 50/60Hz
- Auxiliary Switch: 10 amps 1/4 Hp 125 or 250VAC
1/2 amp 125 VDC 1/4 amp 250 VDC
3 amps 125 VAC "Lamp"

TIMING

- Operate Time: 40 milliseconds max. @ nominal voltage
- Release Time: 30 milliseconds max. @ nominal voltage

WIRING DIAGRAM

(VIEWED FROM PIN END)



OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER.
CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

DIELECTRIC STRENGTH

- Between Open Contacts: 1500 V rms
- Mutually Insulated
- Conductive elements: 2200 V rms

TEMPERATURE

- Operating Range: (AC) -30°C to +50°C, (DC) -30°C +60°C
- Non-Operating Storage Range: -55°C to +100°C

LIFE EXPECTANCY

- Electrical: 100,000 operations @ rated resistive load
- Mechanical: 1,000,000 operations @ no load

MISCELLANEOUS

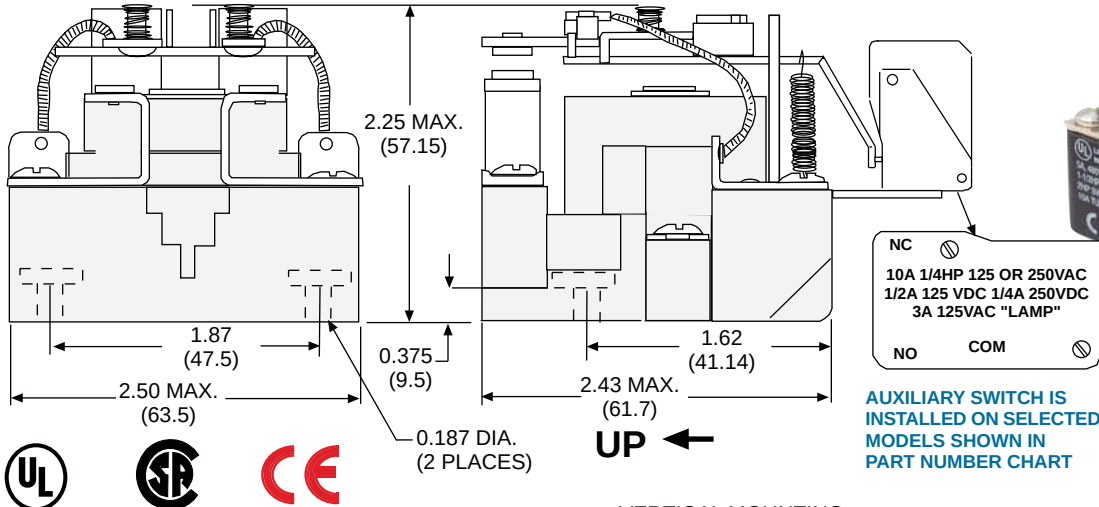
- Coil Terminals: 6-32 combination head screws
- Load Terminals: 8-32 combination head screws
- Base Material: Molded phenolic, UL recognized (QMFZ2)
- Weight: 311 grams approx.

STANDARD PART NUMBERS	COIL MEASURED @ 25°C	
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199AX-13	24 VAC	12 Ω
W199AX-14	120 VAC	290 Ω
W199AX-15	240 VAC	1200 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH		
W199AMX-63	24 VAC	12 Ω
W199AMX-64	120 VAC	290 Ω
W199AMX-65	240 VAC	1200 Ω
DC OPERATED		
W199X-11	6 VDC	18 Ω
W199X-12	12 VDC	70 Ω
W199X-13	24 VDC	290 Ω
W199X-14	110 VDC	6000 Ω
DC OPERATED WITH SPDT AUXILIARY SWITCH		
W199MX-49	6 VDC	18 Ω
W199MX-50	12 VDC	70 Ω
W199MX-51	24 VDC	290 Ω
W199MX-52	110 VDC	6000 Ω

DPST-N.O., 30 AMPS

OUTLINE DIMENSIONS

DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



Optional metal enclosure available, see page 12



GENERAL SPECIFICATIONS

COIL

Pull-in Voltage:	85% of nominal voltage or less for AC coils, 80% of nominal voltage or less for DC coils
Dropout Voltage:	10% of nominal voltage or more @ 25°C
Coil Resistance:	± 10% @ 25°C
Coil Power:	2.0 Watts DC., 10 VA (60Hz) AC @ 25°C
Max. Coil Dissipation:	DC coils 4 watts max
Duty:	Continuous.

CONTACTS

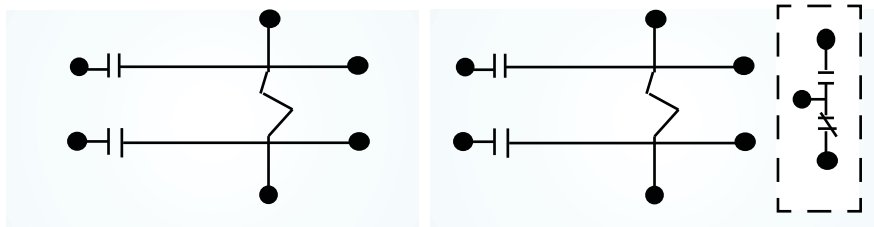
Contact Material:	Silver cadmium oxide, gold flashed. 5/16" diameter standard
Contact Rating:	30 amps up to 300 VAC, 50/60Hz, 5 amps @ 480/600VAC, 0.75 pf Inductive load. 1-1/2 Hp motor load (each pole) @120 thru 600 VAC, 50/60 Hz. 2 Hp motor load @ 200 thru 600 VAC, 50/60 Hz only when using two poles to switch both sides of load. 30 amps @ 28 VDC resistive load each poles. 15 amps tungsten @ 120 VAC. NEMA A600 pilot duty 50/60Hz.
Auxiliary Switch:	10 amps 1/4 Hp 125 or 250VAC 1/2 amp 125 VDC 1/4 amp 250 VDC 3 amps 125 VAC "Lamp"

TIMING

Operate Time:	40 milliseconds max. @ nominal voltage
Release Time:	30 milliseconds max. @ nominal voltage

WIRING DIAGRAM

(VIEWED FROM PIN END)



DIELECTRIC STRENGTH

Between Open Contacts:	1500 V rms
Mutually Insulated	
Conductive elements:	2200 V rms

TEMPERATURE

Operating Range:	(AC) -30°C to +50°C, (DC) -30°C to +60°C
Non-Operating Storage Range:	-55°C to +100°C

LIFE EXPECTANCY

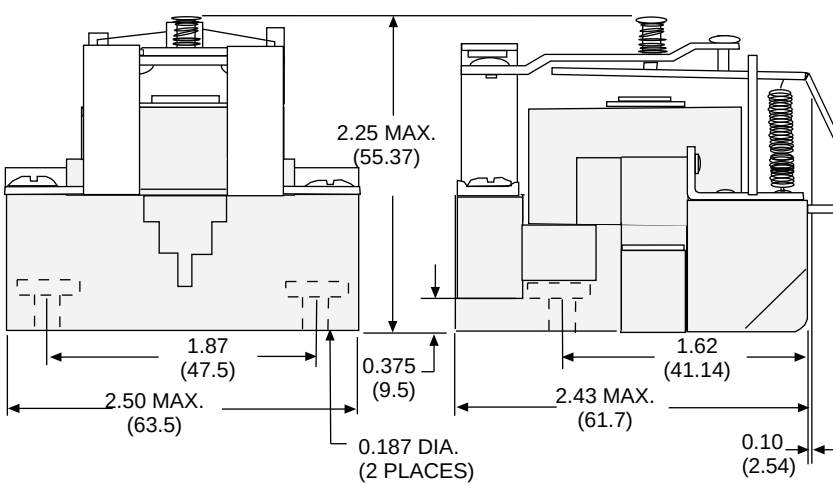
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

MISCELLANEOUS

Coil Terminals:	6-32 combination head screws
Load Terminals:	8-32 combination head screws
Base Material:	Molded phenolic, UL recognized (QMFZ2)
Weight:	255 grams approx

STANDARD PART NUMBERS	COIL MEASURED @ 25°C	
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199AX-8	24 VAC	12 Ω
W199AX-9	120 VAC	290 Ω
W199AX-10	240 VAC	1200 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH		
W199AMX-33	24 VAC	12 Ω
W199AMX-34	120 VAC	290 Ω
W199AMX-35	240 VAC	1200 Ω
DC OPERATED		
W199X-7	12 VDC	70 Ω
W199X-8	24 VDC	290 Ω
DC OPERATED WITH SPDT AUXILIARY SWITCH		
W199MX-26	12 VDC	70 Ω
W199MX-27	24 VDC	290 Ω

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



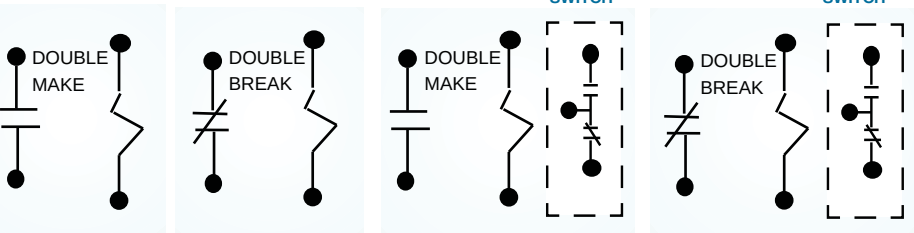
GENERAL SPECIFICATIONS

COIL
Pull-in Voltage: 85% of nominal voltage or less for AC coils
80% of nominal voltage or less for DC coils
Dropout Voltage: 10% of nominal voltage or more @ 25°C
Coil Resistance: ± 10% @ 25°C
Coil Power: 2.0 watts DC., 10 VA (60Hz) AC @ 25°C
Max. Coil Dissipation: DC coils - 4 watts max
Duty: Continuous

CONTACTS
Contact Material: Silver cadmium oxide, gold flashed.
5/16" diameter standard.
Contact Rating: 30 amps up to 300 VAC, 50/60Hz
5 amps @ 480/600 VAC, 50/60Hz
12 amps @ 480 VAC, 10 amps @ 600 VAC, 50/60Hz 0.75 pf inductive load.
2 Hp motor load @ 120 thru 600 VAC, 50/60 Hz. 30 amps @ 28 VDC resistive load.
15 amps tungsten @ 120 VAC
NEMA A600 pilot duty 50/60Hz
10 amps @ 120/240 VAC, 50/60 Hz
1/4Hp. 120/240 VAC, 50/60 Hz
1/2 amps @ 125 VDC, 1/4 amp @ 250 VDC
Auxiliary Switch: 10 amps 1/4 Hp 125 or 250VAC
1/2 amp 125 VDC 1/4 amp 250 VDC

TIMING
Operate Time: 40 milliseconds max. @ nominal voltage
Release Time: 30 milliseconds max. @ nominal voltage

WIRING DIAGRAM
(VIEWED FROM PIN END)

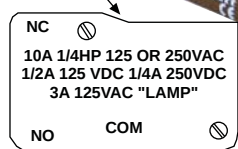


OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER.
CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

SPST
N.C.- D.B.

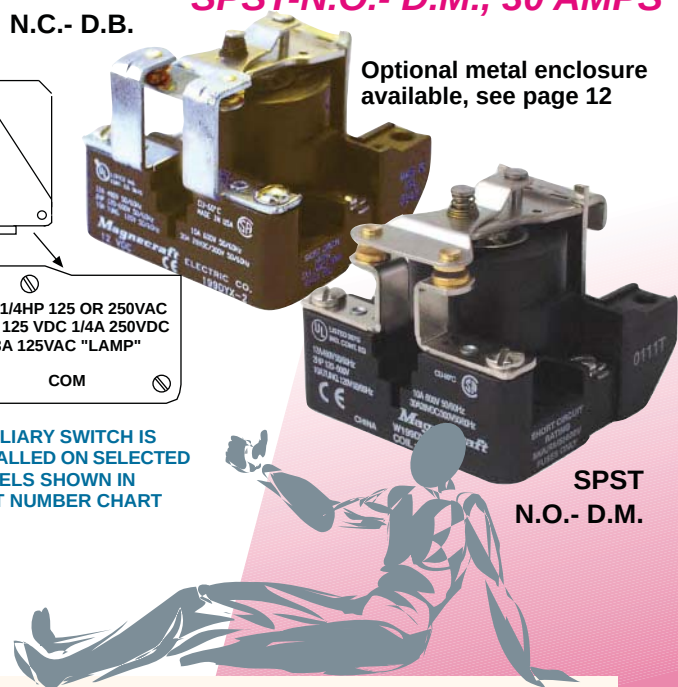
SPST-N.C.- D. B. OR
SPST-N.O.- D.M., 30 AMPS

Optional metal enclosure
available, see page 12



AUXILIARY SWITCH IS
INSTALLED ON SELECTED
MODELS SHOWN IN
PART NUMBER CHART

UP
VERTICAL MOUNTING
RECOMMENDED WITH
CONTACTS UP



SPST
N.O.- D.M.

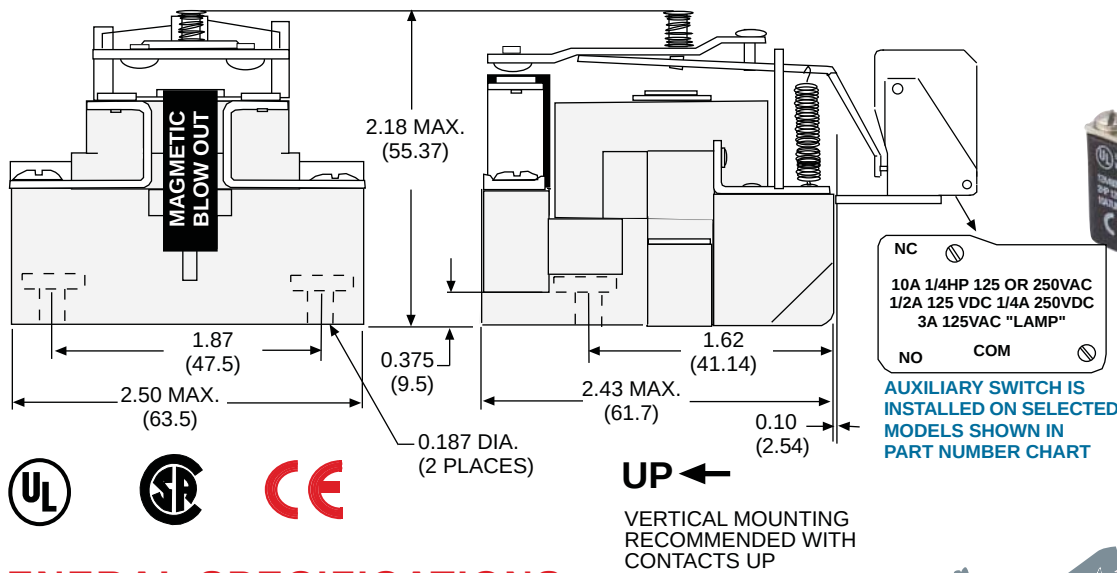
DIELECTRIC STRENGTH
Between Open Contacts: 1500 V rms
Mutually Insulated
Conductive elements: 2200 V rms

TEMPERATURE
Operating Range: (AC) -30°C to +50°C,
(DC) -30°C +60°C
Non-Operating Storage
Range: -55°C to +100°C

LIFE EXPECTANCY
Electrical: 100,000 operations
@ rated resistive load
Mechanical: 1,000,000 operations @ no load

MISCELLANEOUS
Coil Terminals: 6-32 combination head screws
Load Terminals: 8-32 Ccombination head screws
Base Material: Molded phenolic, UL recognized (QMFZ2)
Weight: 227 grams approx.

STANDARD PART NUMBERS	CONTACT CONFIGU- RATION	COIL MEASURED @ 25°C	
		NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED			
W199ADX-4	SPST-NO-DM	120 VAC	290 Ω
W199ADX-5	SPST-NO-DM	240 VAC	1200 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH			
W199ADMX-4	SPST-NO-DM	120 VAC	290 Ω
W199ADMX-5	SPST-NO-DM	240 VAC	1200 Ω
DC OPERATED			
W199DYX-2	SPST-NC-DB	12 VDC	70 Ω
W199DX-2	SPST-NO-DM	12 VDC	70 Ω
W199DX-3	SPST-NO-DM	24 VDC	290 Ω
DC OPERATED WITH SPDT AUXILIARY SWITCH			
W199DYM-2	SPST-NC-DB	12 VDC	70 Ω
W199DMX-2	SPST-NO-DM	12 VDC	70 Ω
W199DMX-3	SPST-NO-DM	24 VDC	290 Ω

**SPST-N. O., 30 AMPS
20 AMPS @ 110 VDC****OUTLINE DIMENSIONS**
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).Optional metal enclosure
available, see page 12**GENERAL SPECIFICATIONS****COIL**

- Pull-in Voltage: 85% of nominal voltage or less for AC coils
80% of nominal voltage or less for DC coils
- Dropout Voltage: 10% of nominal voltage or more @ 25°C
- Coil Resistance: ± 10% @ 25°C
- Coil Power: 10 VA (60Hz) AC @ 25°C
- Max. Coil Dissipation: DC coils-4 watts max.
- Duty: Continuous.

CONTACTS

- Contact Material: Silver cadmium oxide, gold flashed.
5/16" diameter standard.
- Contact Rating: 30 amps up to 300 VAC, 50/60Hz
12 amps @ 480 VAC, 10 Amps @ 600 VAC,
50/60Hz 0.75 pf Inductive load. 1-1/2 Hp motor
load @ 120 thru 600 VAC, 50/60 Hz. 30 amps
@ 28 VDC resistive load
15 amps tungsten @ 120 VAC
NEMA A600 pilot duty 50/60Hz
- DC Rating: 20 Amps @ 110 VDC, resistive; 8 amps
@ 220 VDC resistive, 4 Amps @ 325VDC
resistive. 2 amps @ 500 VDC resistive.
For inductive loads, contacts must be
derated accordingly. Capacitive loads must
have current limiting to insure that inrush
current will not exceed 100 amps.
- Auxiliary Switch: 10 amps 1/4 Hp 125 or 250VAC
1/2 amp 125 VDC 1/4 amp 250 VDC
3 amps 125 VAC "Lamp"

TIMING

- Operate Time: 40 milliseconds max. @ nominal voltage
- Release Time: 30 milliseconds max. @ nominal voltage

DIELECTRIC STRENGTH

- Between Open Contacts: 1500 V rms
- Mutually Insulated
- Conductive elements: 2200 V rms

TEMPERATURE

- Operating Range: (AC) -30°C to +50°C, (DC) -30°C to +60°C
- Non-Operating Storage Range: -55°C to +100°C

LIFE EXPECTANCY

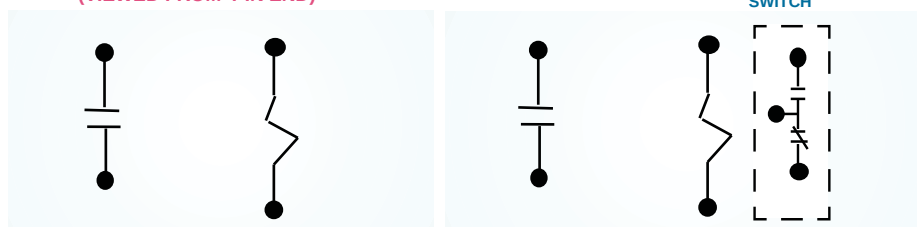
- Electrical: 100,000 operations
@ rated resistive load
- Mechanical: 1,000,000 operations @ no load

MISCELLANEOUS

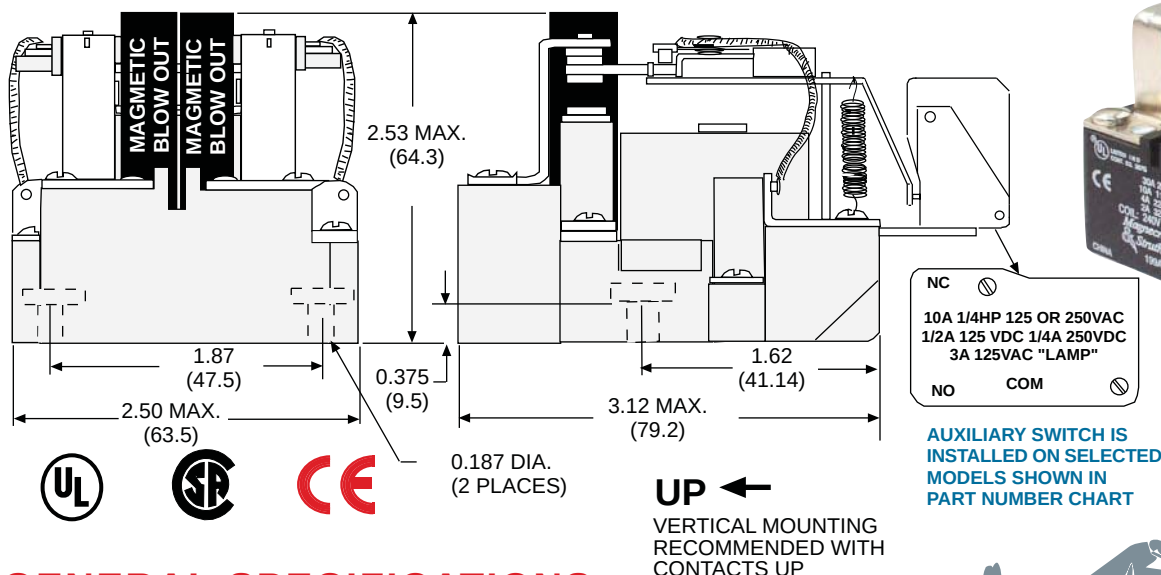
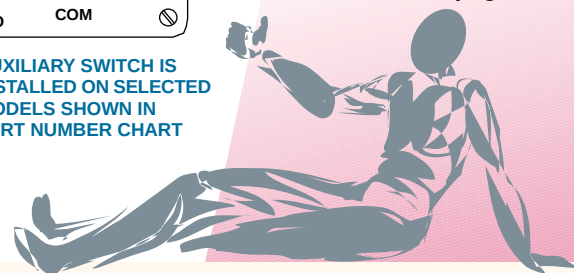
- Coil Terminals: 6-32 combination head screws
- Load Terminals: 8-32 combination head screws
- Base Material: Molded phenolic, UL recognized (QMFZ2)
- Weight: 227 grams approx.

WIRING DIAGRAM

(VIEWED FROM PIN END)



STANDARD PART NUMBERS	COIL MEASURED @ 25°C	
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199ADB-X-4	120 VAC	290 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH		
W199ADB-MX-4	120 VAC	290 Ω
DC OPERATED		
W199DBX-3	24 VDC	290 Ω
W199DBX-6	48 VDC	1200 Ω
DC OPERATED WITH SPDT AUXILIARY SWITCH		
W199DBM-X-3	24 VDC	290 Ω
W199DBM-X-2	48 VDC	1200 Ω

**DPDT, 30 AMPS 10 AMPS
@ 110 VDC****OUTLINE DIMENSIONS**
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).Optional metal enclosure
available, see page 12**GENERAL SPECIFICATIONS****COIL**

Pull-in Voltage: 85% of nominal voltage or less for AC coils
80% of nominal voltage or less for DC coils

Dropout Voltage: 10% of nominal voltage or more @ 25°C

Coil Resistance: ± 10% @ 25°C

Coil Power: 2.0 watts DC., 10 VA (60Hz) AC @ 25°C

Max. Coil Dissipation: DC coils - 4 watts max.

Duty: Continuous.

CONTACTS

Contact Material: Silver cadmium oxide, gold flashed.
5/16" diameter standard.

Contact Rating: 30 amps up to 300VAC, 50/60Hz
5 amps @ 480/600 VAC, 50/60Hz 0.75 pf
Inductive load. 1-1/2 Hp motor load (each pole)
@ 120 thru 600 VAC, 50/60 Hz. 2 Hp motor load
@ 120 thru 600 VAC, 50/60 Hz only when using
two poles to switch both sides of load. 30 amps
@ 28 VDC resistive load.
15 amps tungsten @ 120 VAC
NEMA A 600 pilot duty 50/60Hz

DC Rating: 10 amps @110VDC, resistive; 4 Amps @220VDC,
resistive, 2 amps @ 325VDC resistive. For inductive
loads, contacts must be derated accordingly.
Capacitive loads must have current limiting to
insure that inrush current will not exceed 50 amps

Auxiliary Switch: 10 amps 1/4 Hp 125 or 250VAC
1/2 amp 125 VDC 1/4 amp 250 VDC
3 amps 125 VAC "Lamp"

DIETIMING

Operate Time: 40 milliseconds max. @ nominal voltage

Release Time: 30 milliseconds max. @ nominal voltage.

ELECTRIC STRENGTH

Between Open Contacts: 1500 V rms

Mutually Insulated

Conductive elements: 2200 V rms

TEMPERATURE

Operating Range: (AC) -30°C to +50°C,
(DC) -30°C to +60°C

Non-Operating Storage
Range: -55°C to +100°C

LIFE EXPECTANCY

Electrical: 100,000 operations
@ rated resistive load

Mechanical: 1,000,000 operations @ no load

MISCELLANEOUS

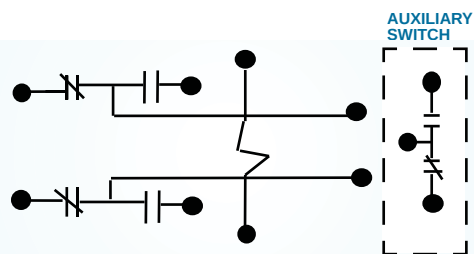
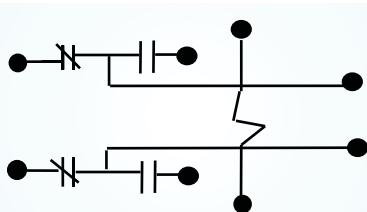
Coil Terminals: 6-32 combination head screws

Load Terminals: 8-32 combination head screws

Base Material: Molded phenolic, UL recognized (QMF
312 grams approx.

WIRING DIAGRAM

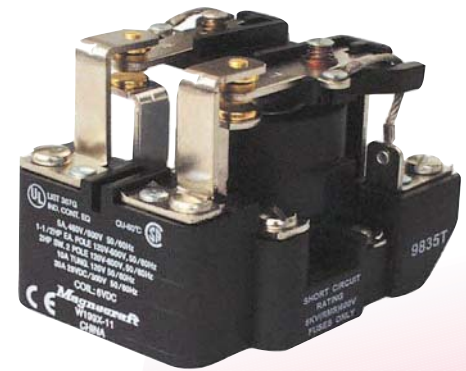
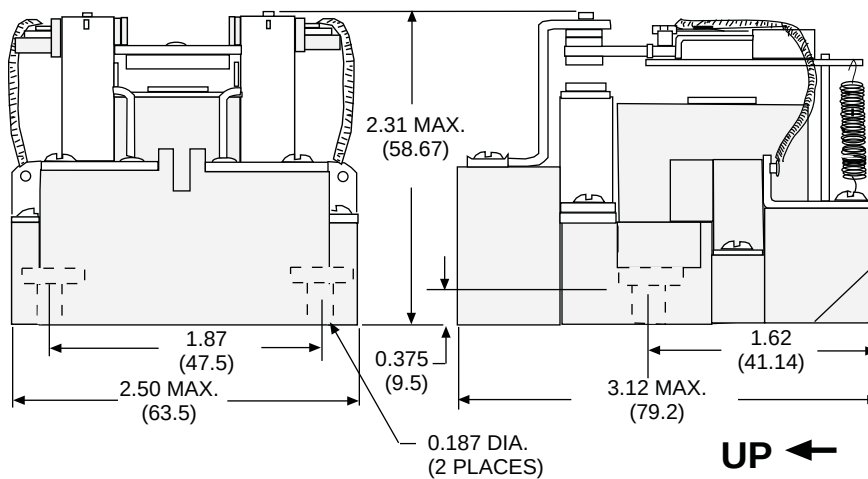
(VIEWED FROM PIN END)

OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER.
CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

STANDARD PART NUMBERS	COIL MEASURED @ 25°C	
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199ABX-14	120 VAC	290 Ω
AC OPERATED WITH SPDT AUXILIARY		
W199ABMX-7	120 VAC	290 Ω
DC OPERATED		
W199BX-13	24 VDC	290 Ω
W199BX-14	110 VDC	6000 Ω
DC OPERATED WITH SPDT AUXILIARY		
W199BMX-13	24 VDC	290 Ω
W199BMX-14	110 VDC	6000 Ω

DPDT, 40 AMPS

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



Optional metal enclosure available, see page 12



UP ←

VERTICAL MOUNTING
RECOMMENDED WITH
CONTACTS UP

GENERAL SPECIFICATIONS

COIL

- Pull-in Voltage: 85% of nominal voltage or less for AC coils
80% of nominal voltage or less for DC coils
- Dropout Voltage: 10% of Nominal voltage or more @ 25°C
- Coil Resistance: ± 10% @ 25°C
- Coil Power: 2.0 watts DC., 10 VA (60Hz) AC @ 25°C
- Max. Coil Dissipation: DC coils-4 watts max
- Duty: Continuous

CONTACTS

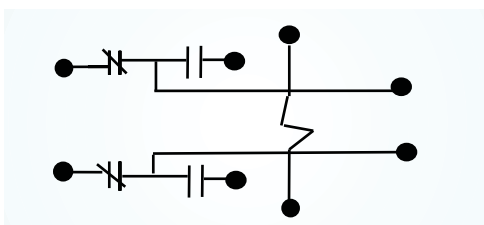
- Contact Material: Silver cadmium oxide, gold flashed.
5/16" diameter standard
- Contact Rating: 40 amps up to 300 VAC, 50/60Hz
5 amps @ 480/600 VAC, 50/60Hz 0.75 pf inductive load. 1-1/2 Hp motor load esch pole @ 120 thru 600 VAC, 50/60 Hz.
2 Hp motor load @ 200 to 600 VAC when using two poles to switch both sides of load.
40 amps @ 28 VDC resistive load
15 amps tungsten @ 120 VAC
NEMA A600 pilot duty 50/60Hz
- Operate Time: 40 milliseconds max. @ nominal voltage
- Release Time: 30 milliseconds max. @ nominal voltage

TIMING

- Operate Time: 40 milliseconds max. @ nominal voltage
- Release Time: 30 milliseconds max. @ nominal voltage

WIRING DIAGRAM

(VIEWED FROM PIN END)



DIELECTRIC STRENGTH

- Between Open Contacts: 1500 V rms
- Mutually Insulated
- Conductive elements: 2200 V rms

TEMPERATURE

- Operating Range: (AC) -30°C to +50°C,
(DC) -30°C +60°C
- Non-Operating Storage Range: -55°C to +100°C

LIFE EXPECTANCY

- Electrical: 100,000 operations @ rated resistive load
- Mechanical: 1,000,000 operations @ no load

MISCELLANEOUS

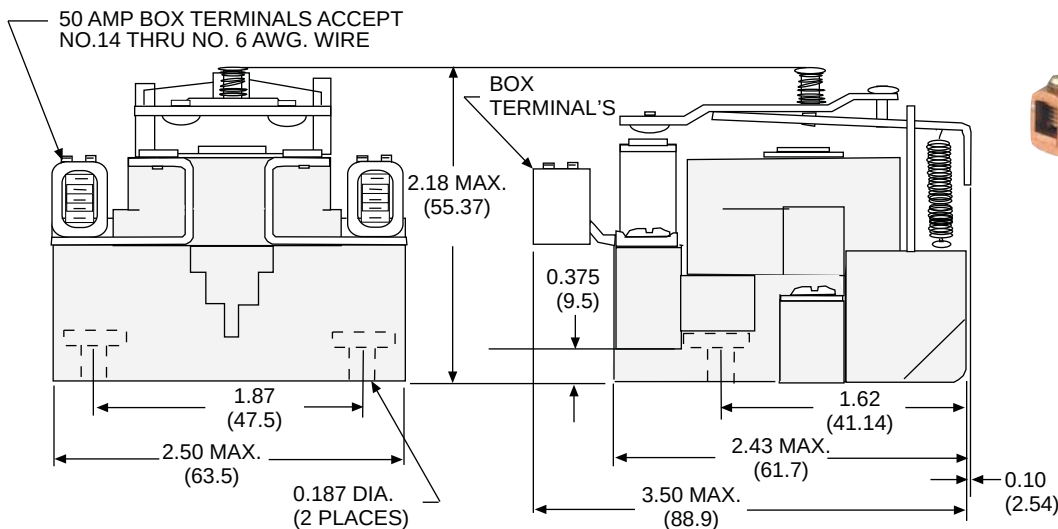
- Coil Terminals: 6-32 combination head screws
- Load Terminals: 8-32 combination head screws
- Base Material: Molded phenolic, UL recognized (QMFZ2)
- Weight: 311 grams approx.

AUXILIARY CONTACTS AND OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER.
CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

STANDARD PART NUMBERS	COIL MEASURED @ 25°C	
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199AHX-13	24 VAC	12 Ω
W199AHX-14	120 VAC	290 Ω
W199AHX-15	240 VAC, 60 Hz	1200 Ω
DC OPERATED		
W199HX-13	24 VDC	290 Ω
W199HX-14	110 VDC	6000 Ω

SPST-N.O.- D.M., 50 AMPS

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



Optional metal enclosure available, see page 12



UP ←
VERTICAL MOUNTING
RECOMMENDED WITH
CONTACTS UP

GENERAL SPECIFICATIONS

COIL

- Pull-in Voltage: 85% of nominal voltage or less for AC coils
80% of nominal voltage or less for DC coils
- Dropout Voltage: 10% of nominal voltage or more @ 25°C
- Coil Resistance: ± 10% @ 25°C
- Coil Power: 2.0 watts DC., 10 VA (60Hz) AC @ 25°C
- Max. Coil Dissipation: DC coils-4 watts max.
- Duty: Continuous.

CONTACTS

- Contact Material: Silver cadmium oxide, gold flashed.
5/16" diameter standard.
- Contact Rating: 50 amps up to 300VAC, 50/60Hz
50 amps @ 28 VDC resistive load,
loads must have current limiting to insure
that inrush current will not exceed 100 amps
NEMA A600 pilot duty 50/60Hz

TIMING

- Operate Time: 40 milliseconds max. @ nominal voltage
- Release Time: 30 milliseconds max. @ nominal voltage.

DIELECTRIC STRENGTH

- Between Open Contacts: 1500 V rms
- Mutually Insulated
- Conductive elements: 2200 V rms

TEMPERATURE

- Operating Range: (AC) -30°C to +50°C,
(DC) -30°C to +60°C
- Non-Operating Storage Range: -55°C to +100°C

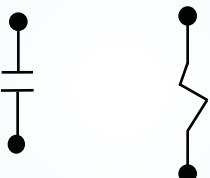
LIFE EXPECTANCY

- Electrical: 100,000 operations
@ rated resistive load
- Mechanical: 1,000,000 operations @ no load

MISCELLANEOUS

- Coil Terminals: 6-32 Combination head screws
- Load Terminals: AMG 2-12 Pressure wire connector
- Base Material: Molded phenolic, UL recognized (QMFZ2)
- Weight: 227 grams approx.

WIRING DIAGRAM (VIEWED FROM PIN END)

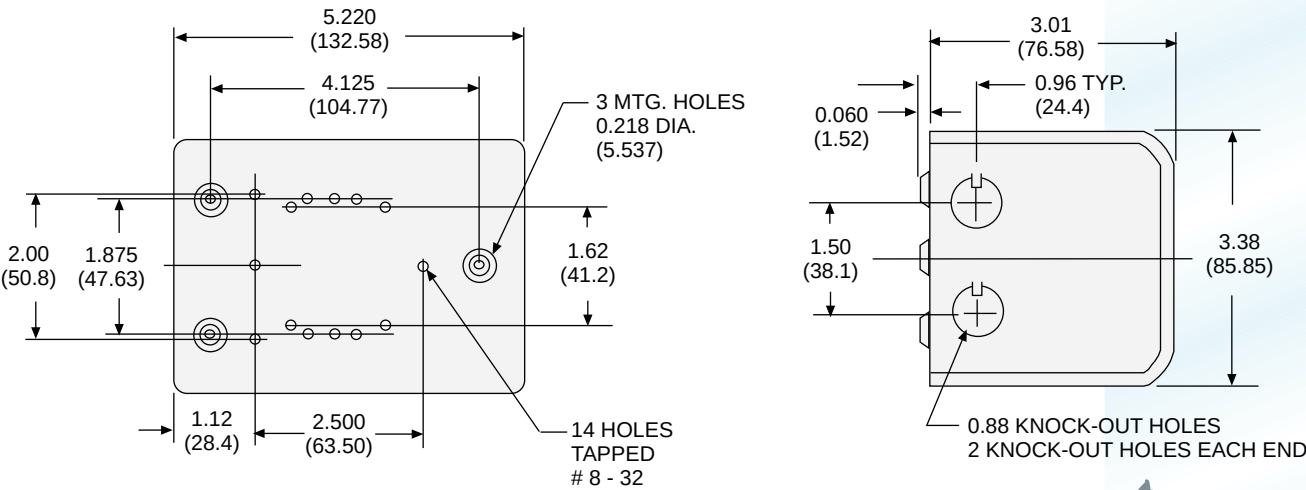


3...11 AUXILIARY CONTACTS AND OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER.
CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

STANDARD PART NUMBERS	COIL MEASURED @ 25°C	
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED WITH SCREW TERMINALS		
W199ADEX-4	120 VAC	290 Ω
DC OPERATED WITH SCREW TERMINALS		
W199DEX-3	24 VDC	290 Ω

OUTLINE DIMENSIONS

DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



STANDARD PART NUMBER	DESCRIPTION
50-1289-1	UNIVERSAL MOUNT METAL ENCLOSURE

COVER & RELAY MOUNTING SCREWS INCLUDED