OPEN STYLE POWER RELAYS

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

UL LISTED 367G

UL Listed
File No. E43641

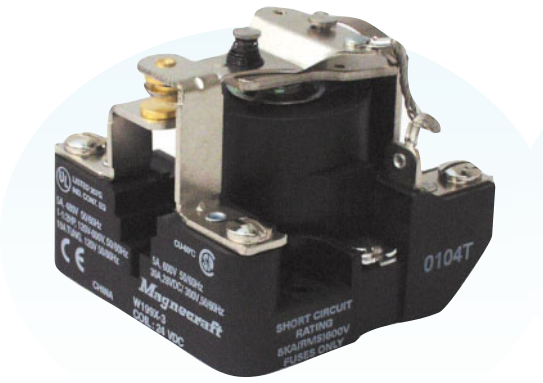
COMPLIES WITH REQUIREMENTS OF

* 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

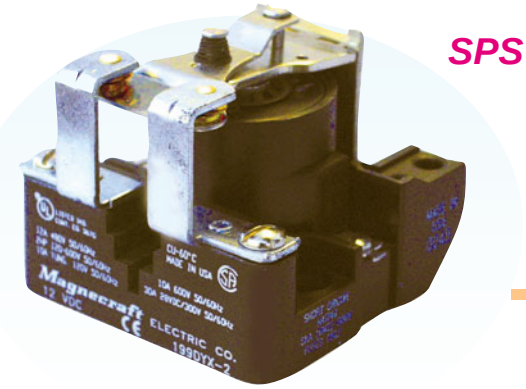
MANUFACTURED UNDER ISO 9002

Optional metal enclosure available, see page 12

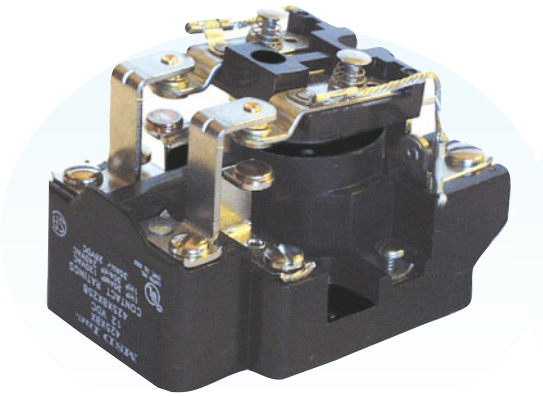
CLASS "B" COIL INSULATION SYSTEM



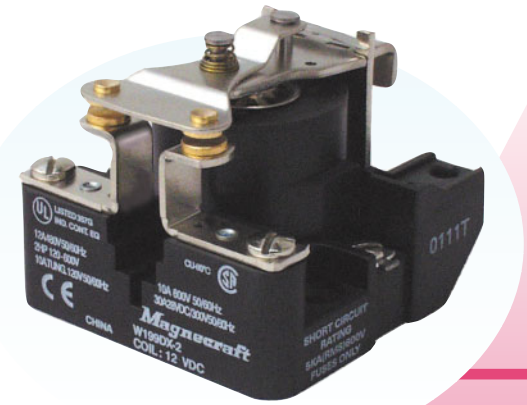
199 SPDT
30 AMP, 1-1/2 Hp



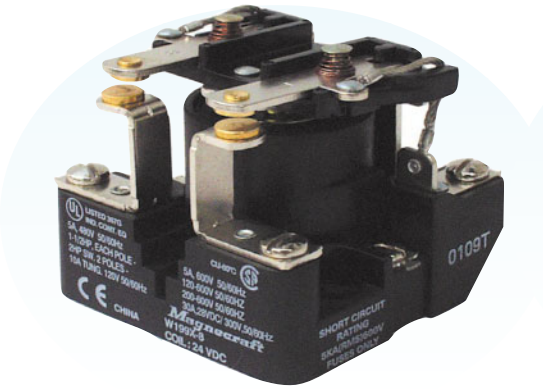
199 SPST-NC-DB
30 AMPS, 2 Hp



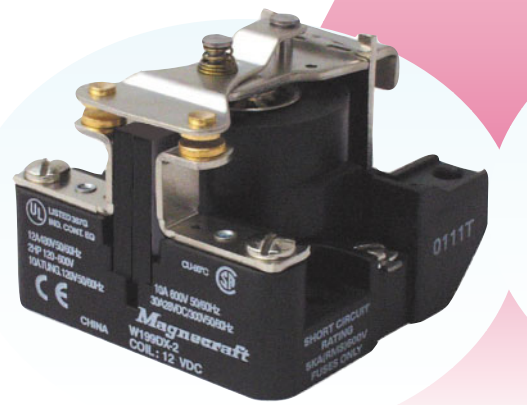
199 DPDT
30 AMP, 1-1/2 Hp PER POLE
2 Hp-2 POLE SWITCHING



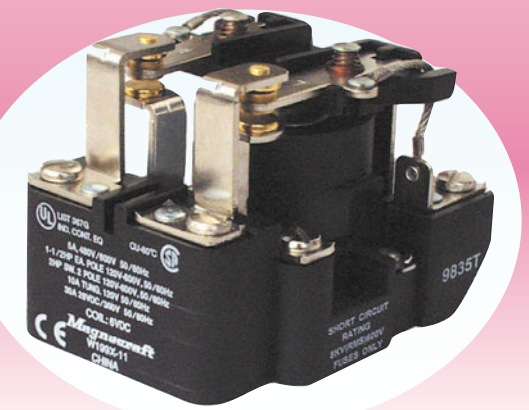
199 SPST-NO-DM
30 AMPS, 2 Hp



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

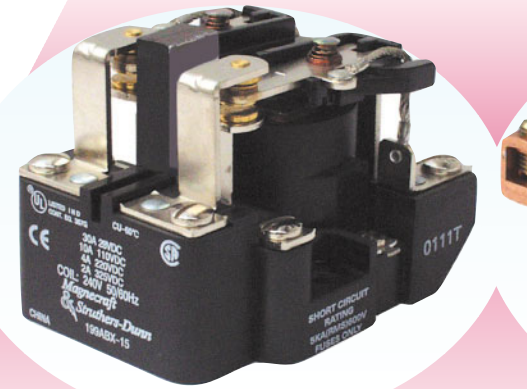


199DB SPST-NO-DM
WITH MAGNETIC BLOWOUT FOR DC ARC QUENCHING 20 AMPS, 110 VDC

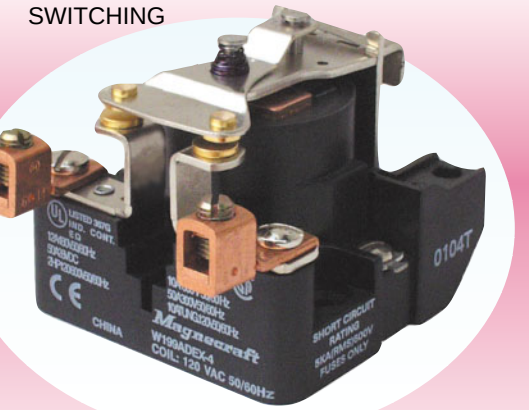


199H DPDT
40 AMPS GENERAL PURPOSE,
1-1/2 Hp PER POLE; 2 Hp - 2 POLE SWITCHING





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



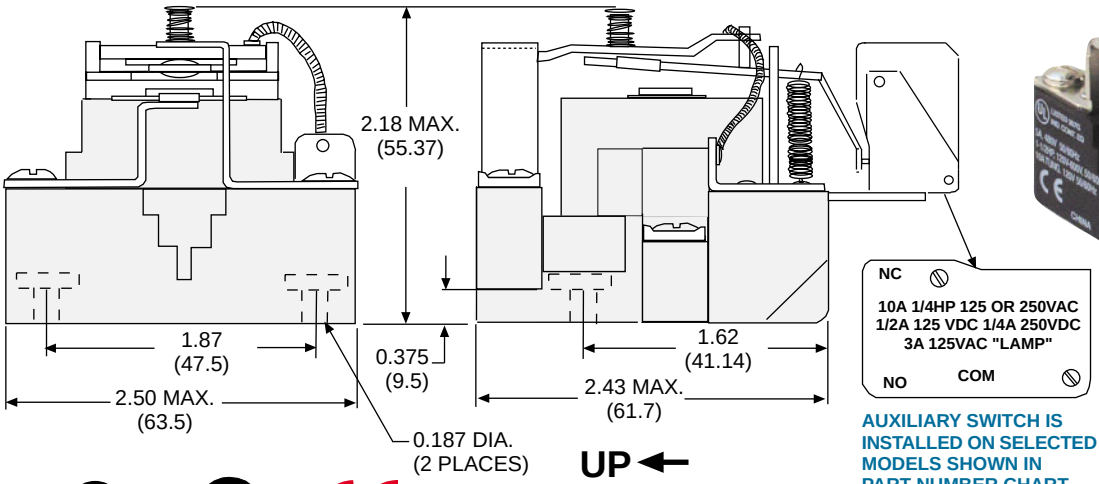
199DE SPST-NO-DM
WITH BOX TERMINALS.
50 AMPS, 2 Hp

OPEN STYLE POWER RELAY

SPDT, 30 AMPS

OUTLINE DIMENSIONS

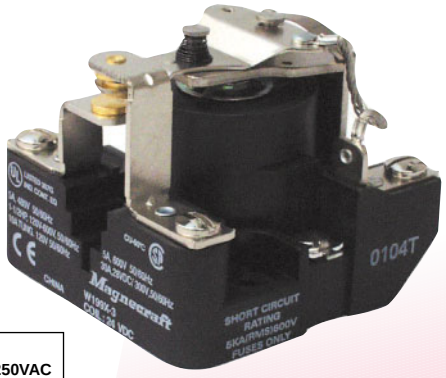
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



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

UP

VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP



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

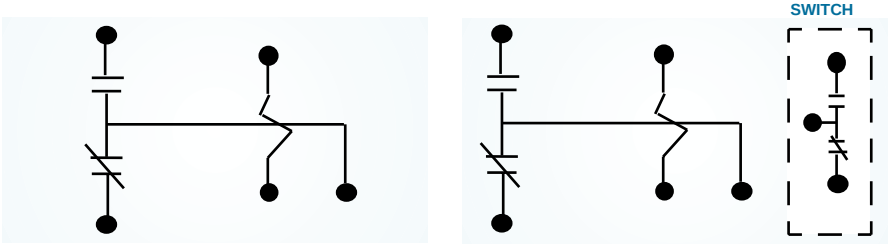
Electrical:	100,000 operations
Mechanical:	@ rated resistive load 1,000,000 operations @ no load

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)



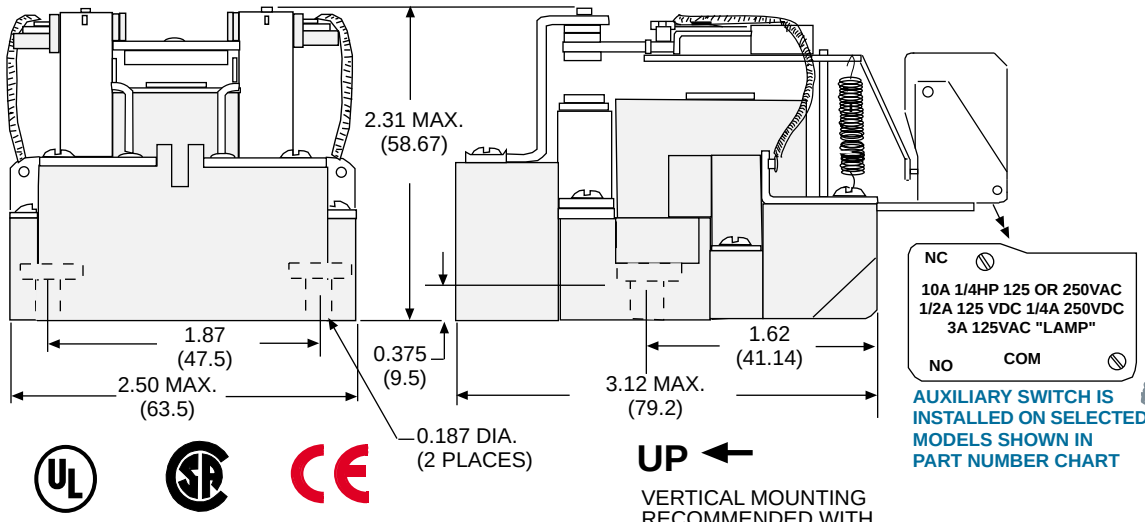
STANDARD PART NUMBERS	COIL MEASURED @ 25˚C NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199AX-4	120 VAC	290 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH		
W199AMX-4	120 VAC	290 Ω
DC OPERATED		
W199X-2	12 VDC	70 Ω
W199X-3	24 VDC	290 Ω
DC OPERATED WITH SPDT AUXILIARY SWITCH		
W199MX-2	12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

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

OPEN STYLE POWER RELAY

DPDT, 30 AMPS

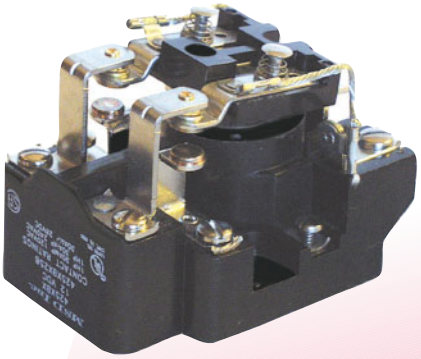
OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



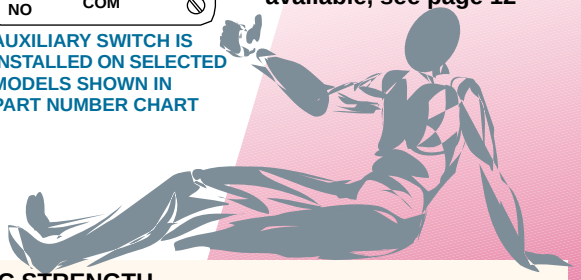
AUXILIARY SWITCH IS INSTALLED ON SELECTED MODELS SHOWN IN PART NUMBER CHART

UP

VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP



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

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

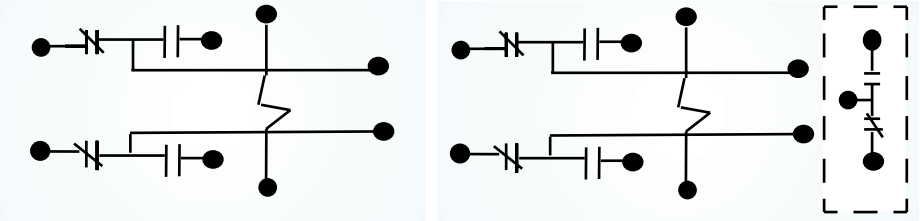
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

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.

WIRING DIAGRAM

(VIEWED FROM PIN END)



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

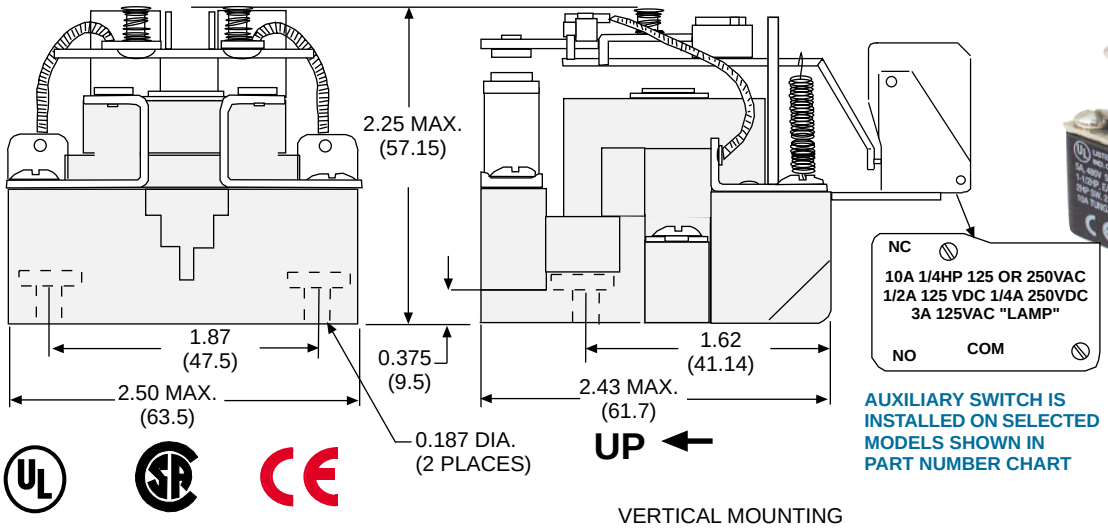
OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER. CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

OPEN STYLE POWER RELAY

DPST-N.O., 30 AMPS

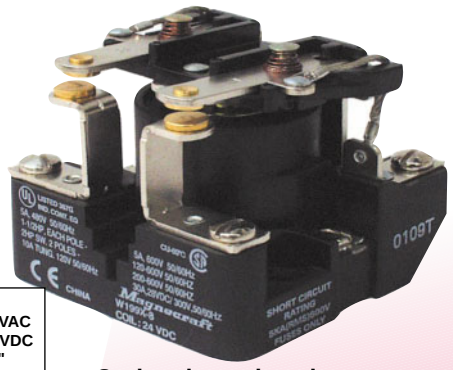
OUTLINE DIMENSIONS

DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).

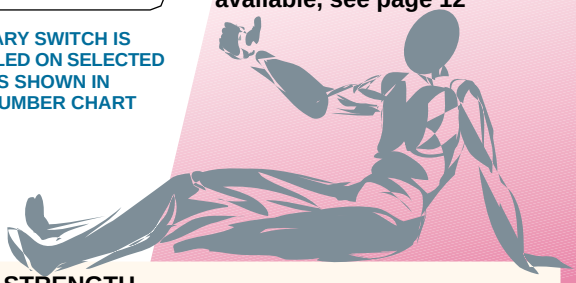


AUXILIARY SWITCH IS INSTALLED ON SELECTED MODELS SHOWN IN PART NUMBER CHART

VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP



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

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

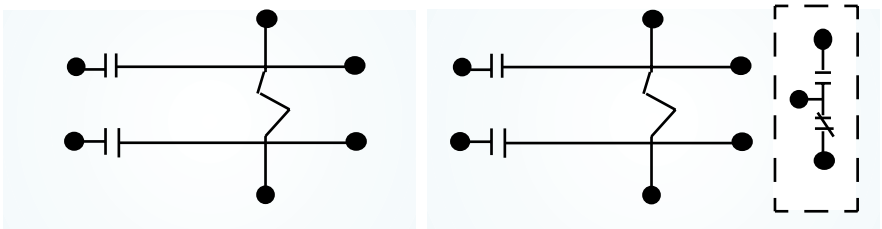
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

MISCELLANEOUS

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

WIRING DIAGRAM

(VIEWED FROM PIN END)



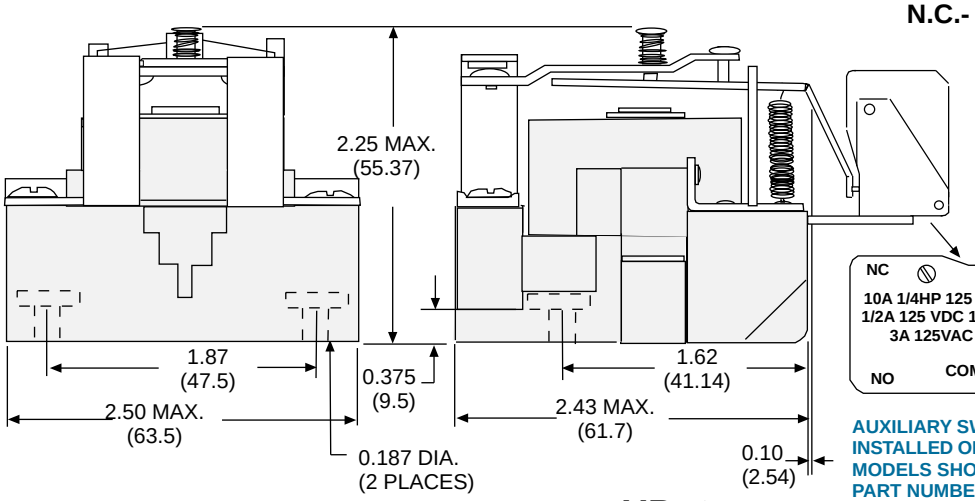
STANDARD PART NUMBERS	COIL MEASURED @ 25˚C NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199AX-8	24 VAC	12 Ω
W199AX-9	120 VAC	290 Ω
W199AX-10	240 VAC	1200 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH		
W199AMX-33	24 VAC	12 Ω
W199AMX-34	120 VAC	290 Ω
W199AMX-35	240 VAC	1200 Ω
DC OPERATED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

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

DOUBLE MAKE OR BREAK POWER RELAYS

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

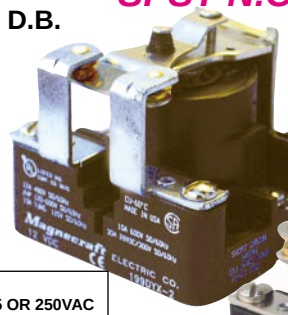
OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



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

UP ←
VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP

SPST
N.C.- D.B.



Optional metal enclosure available, see page 12



SPST
N.O.- D.M.



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 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

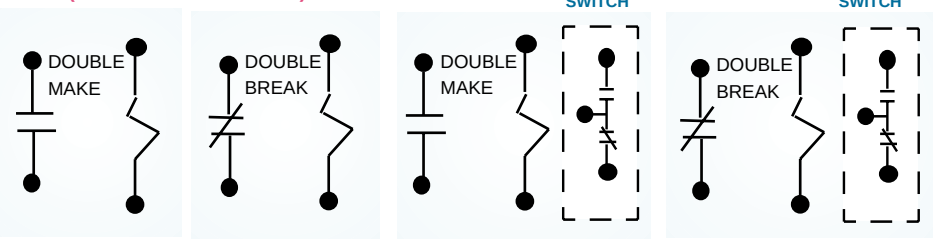
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

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.

WIRING DIAGRAM

(VIEWED FROM PIN END)



STANDARD PART NUMBERS	CONTACT CONFIGU-RATION	COIL MEASURED @ 25˚C NOMINAL INPUT VOLTAGE	COIL MEASURED @ 25˚C 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			
W199DYMX-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

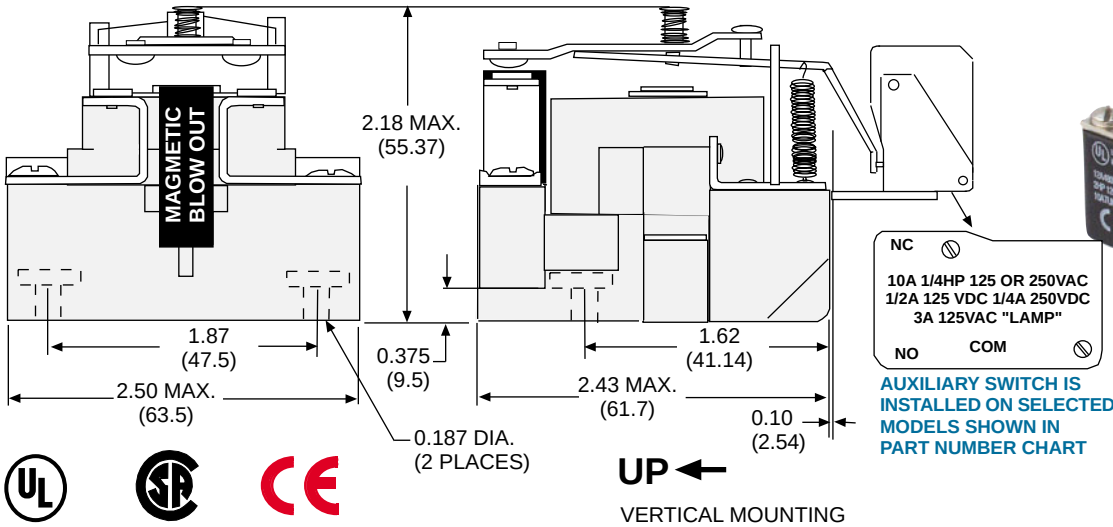
OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER. CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

CLASS **199DB**

DC SWITCHING POWER RELAY

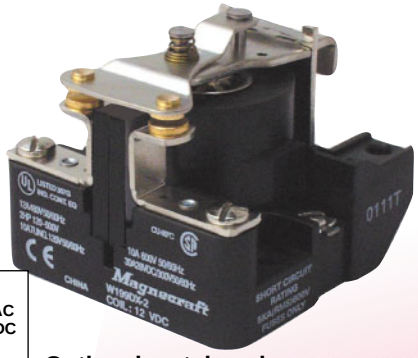
SPST-N. O., 30 AMPS
20 AMPS @ 110 VDC

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



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

UP ←
VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP



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 +60˚C
Non-Operating Storage Range:	-55˚C to +100˚C

LIFE EXPECTANCY

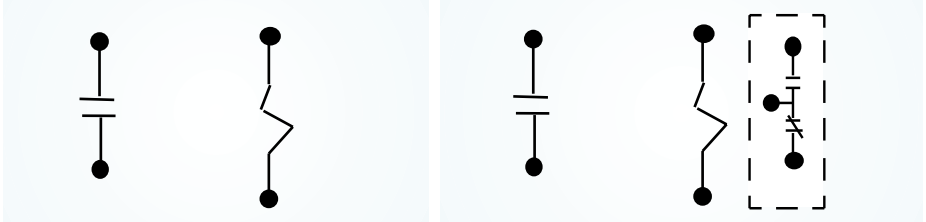
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

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)

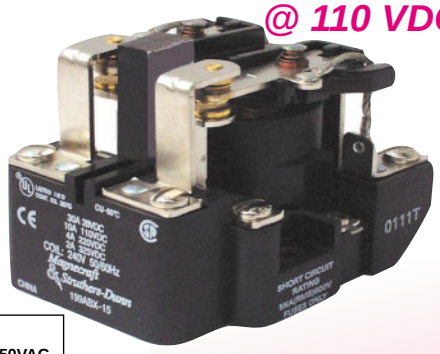


STANDARD PART NUMBERS	COIL MEASURED @ 25˚C NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199ADBX-4	120 VAC	290 Ω
AC OPERATED WITH SPDT AUXILIARY SWITCH		
W199ADBMX-4	120 VAC	290 Ω
DC OPERATED		
W199DBX-3	24 VDC	290 Ω
W199DBX-6	48 VDC	1200 Ω
DC OPERATED WITH SPDT AUXILIARY SWITCH		
W199DBMX-3	24 VDC	290 Ω
W199DBMX-2	48 VDC	1200 Ω

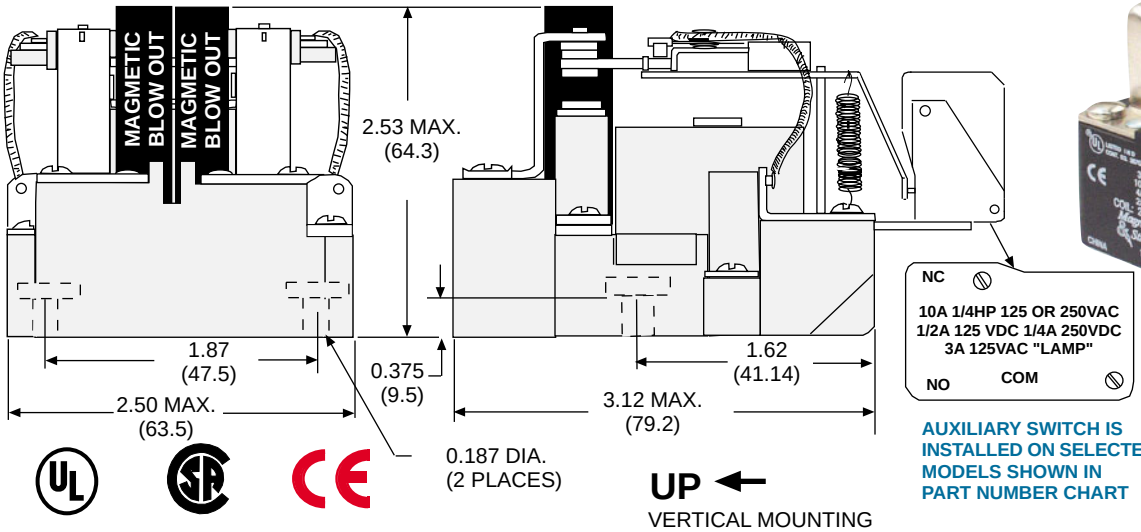
OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER. CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

DC SWITCHING POWER RELAY

DPDT, 30 AMPS 10 AMPS @ 110 VDC



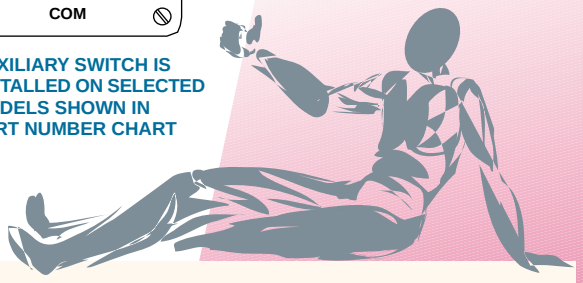
OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



UP ←
VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP

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

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”

DIELTIMING

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

ECTRIC 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

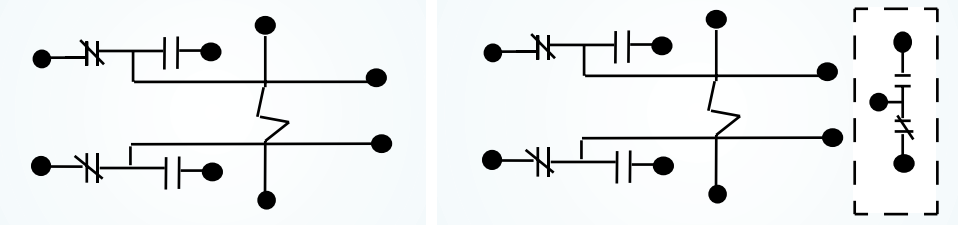
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

MISCELLANEOUS

Coil Terminals:	6-32 combination head screws
Load Terminals:	8-32 combination head screws
Base Material:	Molded phenolic, UL recognized (QMF
Weight:	312 grams approx.

WIRING DIAGRAM

(VIEWED FROM PIN END)



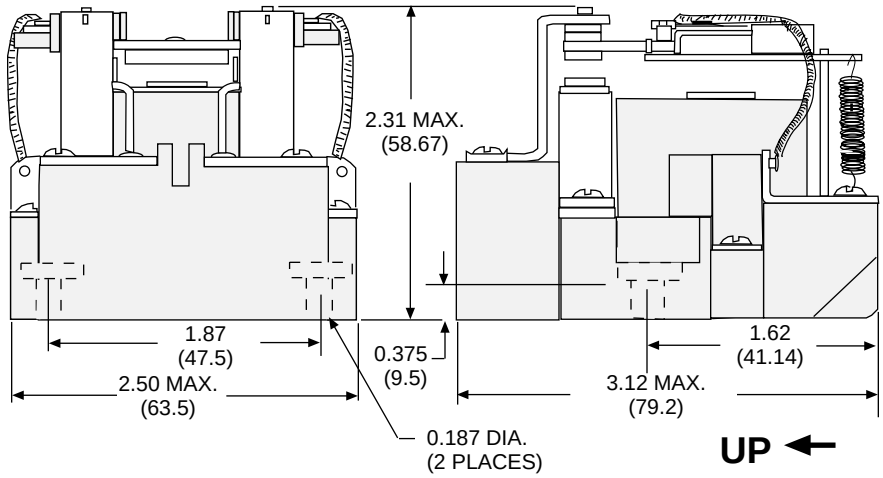
STANDARD PART NUMBERS	COIL MEASURED @ 25˚C NOMINAL INPUT VOLTAGE	COIL MEASURED @ 25˚C NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199ABX-14	120 VAC	290 Ω
AC OPERATED WITH SPDT AUXILIARY		
W199ABMX-7	120 VAC	290 Ω
DC OPERATED		
W199BX-13	24 VDC	290 Ω
W199BX-14	110 VDC	6000 Ω
DC OPERATED WITH SPDT AUXILIARY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

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

HIGH POWER RELAY

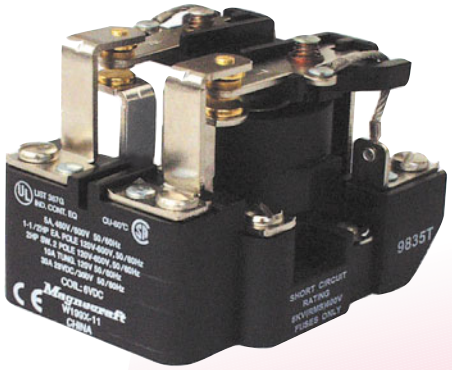
DPDT, 40 AMPS

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).



UP

VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP



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
Ci\oil 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

TIMING

	NEMA A600 pilot duty 50/60Hz
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

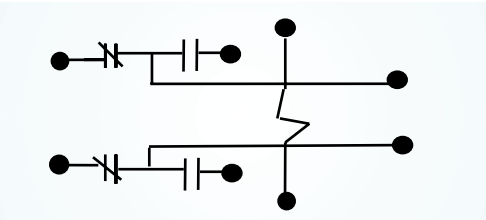
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

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.

WIRING DIAGRAM

(VIEWED FROM PIN END)



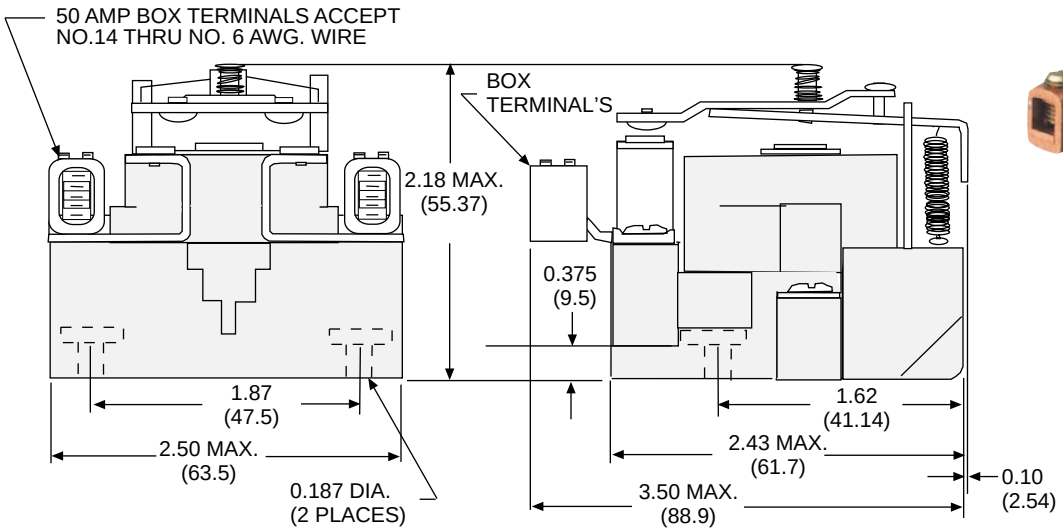
STANDARD PART NUMBERS	COIL MEASURED @ 25˚C NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)
AC OPERATED		
W199AHX-13	24 VAC	12 Ω
W199AHX-14	120 VAC	290 Ω
W199AHX-15	240 VAC,60 Hz	1200 Ω
DC OPERATED		
W199HX-13	24 VDC	290 Ω
W199HX-14	110 VDC	6000 Ω

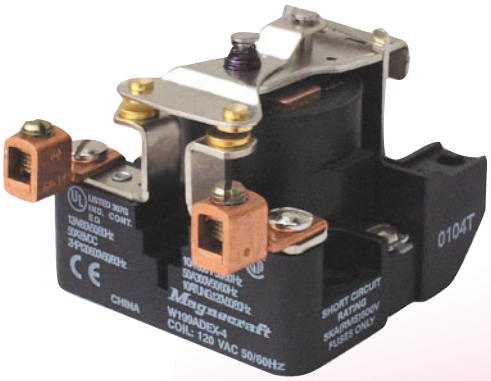
AUXILIARY CONTACTS AND OTHER COIL VOLTAGES ARE AVAILABLE ON SPECIAL ORDER. CONTACT FACTORY FOR SPECIAL REQUIREMENTS.

HIGH POWER RELAY

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

OUTLINE DIMENSIONS
DIMENSIONS SHOWN IN INCHES & (MILLIMETERS).

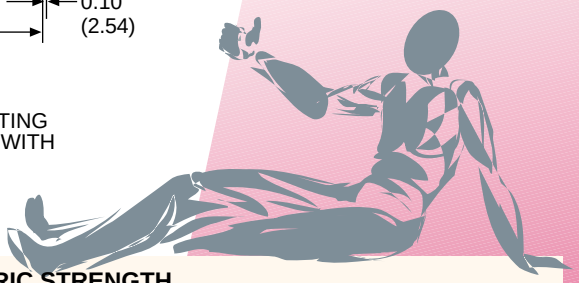




Optional metal enclosure available, see page 12

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 +60˚C
Non-Operating Storage Range:	-55˚C to +100˚C

LIFE EXPECTANCY

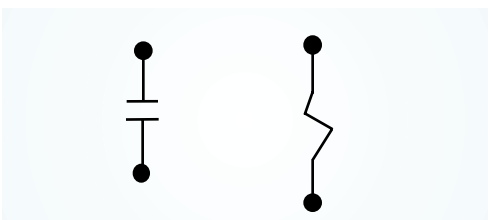
Electrical:	100,000 operations @ rated resistive load
Mechanical:	1,000,000 operations @ no load

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)



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

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