

KILOVAC MAP101 Series Contactor with 1 Form A (SPST-NO) Contacts Rated up to 100 Amps, 12-900 Vdc Dual Contact Material (Cu/Mo)

Product Facts

- Dual contact material (copper/moly) designed for high current make and interrupt military aerospace, ground vehicle and naval applications
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts, during long periods of non-operation
- Comes standard with 1 SPST-NO Aux. contact
- Not position sensitive, can be mounted in any orientation
- RoHS versions available



Physical Data

Contact Arrangement —
Main Contacts —
SPST-Latching (form X)
1X Auxiliary Contact —
SPST-NO (form A)

Dimensions — See drawing

Weight, Nominal —
0.35 Kg (12.35 oz)

Environmental Data

Shock, 11ms 1/2 Sine (Operating) — 20 G_{peak}

Sine Vibration, 20 G_{peak} —
55-2000 Hz

Random Vibration, 14.06 Grms —
15 Hz (.002 G²/Hz), 100 Hz (.002 G²/Hz),
450 Hz (.12 G²/Hz), 900 Hz (.12 G²/Hz),
2000 Hz (.083 G²/Hz)

Operating Temperature Range —
-55°C to +85°C

Electrical Data

Voltage Rating —
Main Contacts (max) — 400 Vdc
Auxiliary Contacts — 30 Vdc

Current Rating, Continuous —
Main Contacts 1 — 100 A
Auxiliary Contacts — 3 A

Contact Resistance —
Main Contacts —
100 mΩ max @ 1 amp
0.75 mΩ max @ rated current
Auxiliary Contacts —
200 mΩ max

Electric Life at Rated Current 270 Vdc, Resistive Load —
25,000 cycles

Mechanical Life — 1 million cycles

Dielectric Withstand Voltage —
Terminal to Terminal/ Terminals to Coil —
1mA max @ 1,300Vrms

Coil Data

Coil Voltage, Nominal/ Max —
28/ 32 Vdc

Coil Resistance @ 25°C —
Contacts Close Coil — 18 Ω
Contacts Open Coil — 13 Ω

Pick Up/ Drop Out (Max) —
16 Vdc (-55°C to +25°C)
18 Vdc (+25°C to +85°C)

Coil Current (Max) @ 32Vdc/ -40°C — 4.0 A

Coil Current On Time (Minimum Required to Latch) — 40 ms

Main Contacts —
Operate Time (Max) — 40 ms
Operate Bounce (Max) — 5 ms
Release Time — 25 ms

Auxiliary Contacts Operate/ Release — Within ± 5 ms of main

Insulation Resistance —
Terminal to Terminal/ Terminals to Coil —
100MΩ min @ 500Vdc new
50MΩ min @ 500Vdc end of life

Note:

1 Continuous current rating is affected by conductors attached. Keep terminals below 150°C max continuous.

Ordering Information

Typical Part Number ►

MAP101 R B A F E

Series: _____
MAP101 = 100 Amp, 12-900VDC Contactor

Dual Contact Material

Contact Form: _____
R - Latch with 1 SPST NO Aux.

Coil Voltage: _____
B = 28 Vdc Coil

Lead Length: _____
A = 15.3 in. (300 mm)

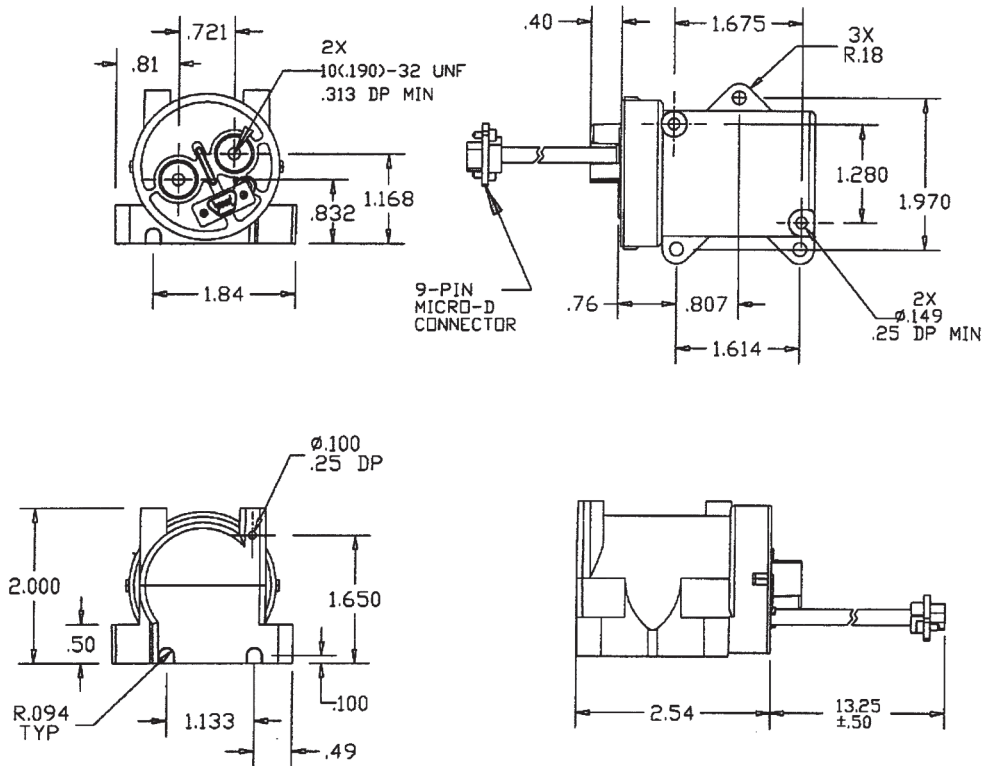
Coil Terminal Connector: _____
N = None
F = Plug on Flying Lead, 9 Pin Micro-D

Mounting & Power Terminals _____
E = side mount with 2x#8
10-32 Female Power Terminals

For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.

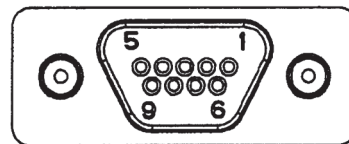
KILOVAC MAP101 Series Contactor (Continued)

Outline Dimensions



Connector Pin-Out

1	Not Connected
2	Aux. NO
3	Close Return
4	Close Return
5	+28Vdc
6	Aux. Com.
7	Open Return
8	Open Return
9	+28V

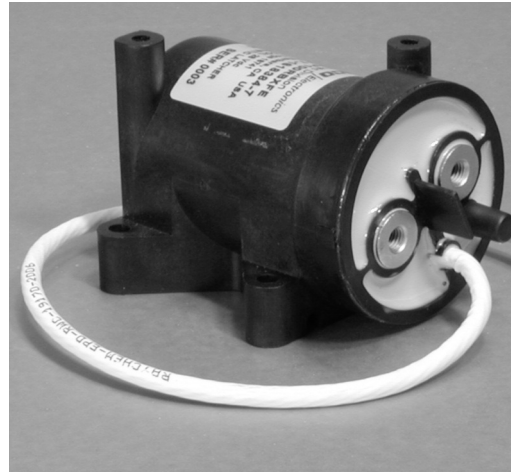


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KILOVAC MAP100 Series Contactor with 1 Form A (SPST-NO) Contacts Rated up to 100 Amps, 12-900 Vdc

Product Facts

- Solid copper contacts designed for high current carry military aerospace, ground vehicle and naval applications
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no contact oxidation or contamination of coil or contacts, during long periods of non-operation
- Comes standard with 1 SPST-NO Aux. contact
- Not position sensitive, can be mounted in any orientation
- RoHS versions available



Physical Data

Contact Arrangement —
Main Contacts —
SPST-Latching (or NO Form X)
1X Auxiliary Contact —
SPST-NO (form A)

Dimensions — See drawing

Weight, Nominal —
0.35 Kg (12.35 oz)

Environmental Data

Shock, 11ms 1/2 Sine (Operating) — 20 G_{peak}

Sine Vibration, 20 G_{peak} —
55-2000 Hz

Random Vibration, 14.06 Grms —
15 Hz (.002 G²/Hz), 100 Hz (.002 G²/Hz),
450 Hz (.12 G²/Hz), 900 Hz (.12 G²/Hz),
2000 Hz (.083 G²/Hz)

Operating Temperature Range —
-55°C to +85°C

Electrical Data

Voltage Rating —
Main Contacts (max) — 400 Vdc
Auxiliary Contacts — 30 Vdc

Current Rating, Continuous —
Main Contacts 1 — 100 A
Auxiliary Contacts — 3 A

Contact Resistance —
Main Contacts —
100 mΩ max @ 1 amp
0.75 mΩ max @ rated current
Auxiliary Contacts —
200 mΩ max

Electrical Life at Rated Current, 270 Vdc, Resistive Load —
15,000 cycles

Mechanical Life — 1 million cycles

Dielectric Withstand Voltage —
Terminal to Terminal/ Terminals to Coil —
1mA max @ 1,300Vrms

Insulation Resistance —
Terminal to Terminal/ Terminals to Coil —
100MΩ min @ 500Vdc new
50MΩ min @ 500Vdc end of life

Note:

1 Continuous current rating is affected by conductors attached. Keep terminals below 150°C max continuous.

Coil Data

Coil Voltage, Nominal/ Max —
28/ 32 Vdc

Coil Resistance @ 25°C —
Contacts Close Coil — 18 Ω
Contacts Open Coil — 13 Ω

Pick Up/ Drop Out (Max) —
16 Vdc (-55°C to +25°C)
18 Vdc (+25°C to +85°C)

Coil Current (Max) @ 32Vdc/ -40°C — 4.0 A

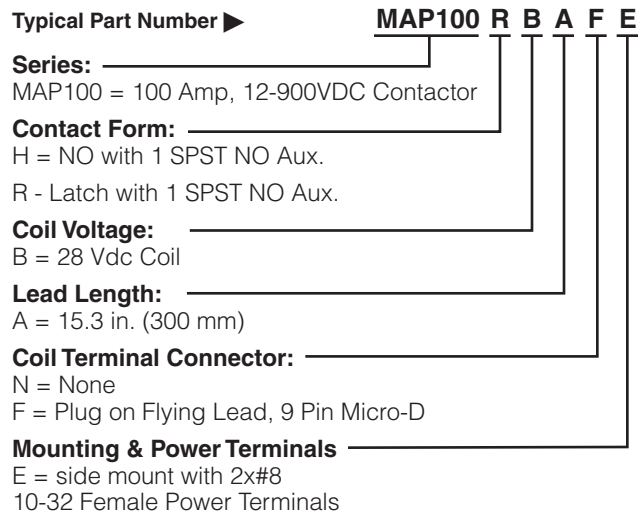
Coil Current On Time (Minimum Required to Latch) — 40 ms

Main Contacts —
Operate Time (Max) — 40 ms
Operate Bounce (Max) — 5 ms
Release Time — 25 ms

Auxiliary Contacts Operate/ Release — Within ± 5 ms of main

Ordering Information

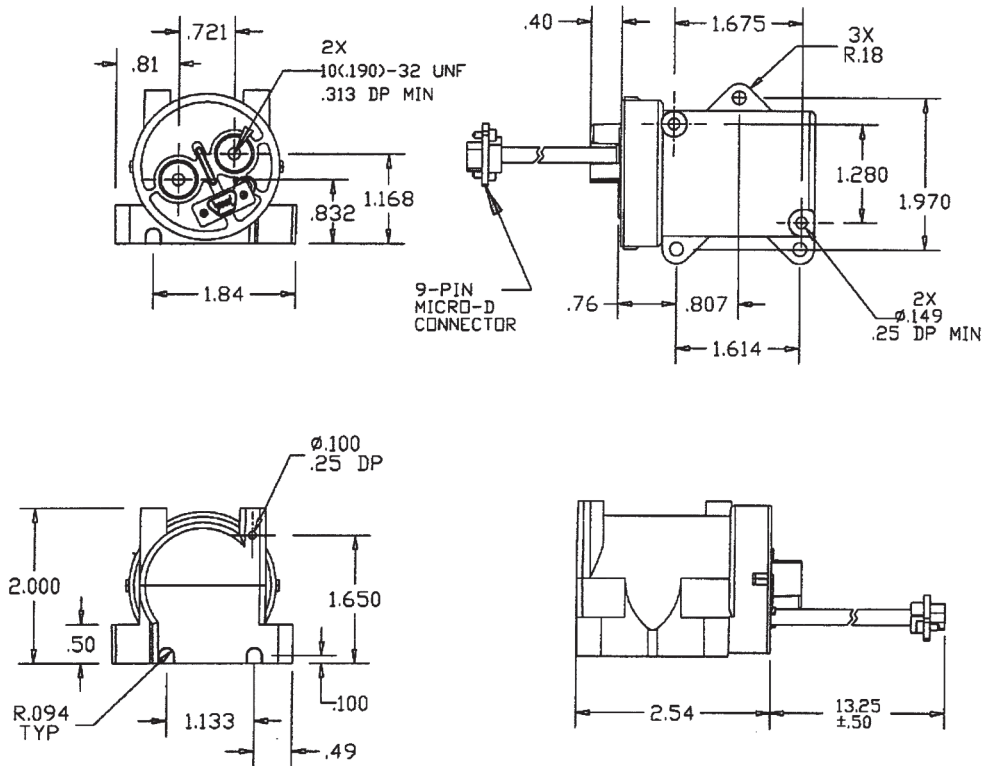
Typical Part Number ►



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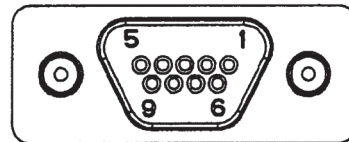
KILOVAC MAP100 Series Contactor (Continued)

Outline Dimensions



Connector Pin-Out

1	Not Connected
2	Aux. NO
3	Close Return
4	Close Return
5	+28Vdc
6	Aux. Com.
7	Open Return
8	Open Return
9	+28V



For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.

KILOVAC MAP200 Series Contactor with 1 Form A (SPST-NO) Contacts Rated up to 500 Amps, 12-900 Vdc

Product Facts

- Designed to be the smallest, lightest weight, lowest cost sealed contactor in the industry with its current rating for military aerospace, ground vehicle and naval, high current applications
- Built-in coil economizer (models requiring external economizer also available)
- Optional auxiliary contact for easy monitoring of power contact position
- Hermetically sealed — intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coil or contacts, including long periods of non-operation
- Versatile coil and power connections
- RoHS versions available



Performance Data

Contact Arrangement, Power Contacts — 1 Form A (SPST-NO)

Rated Operating Voltage — 12 - 900 VDC

Continuous (Carry) Current, Typical — 500 A @ 85°C, 400 mcm conductors

Consult Factory for required conductors for higher currents

Make/Break Current at Various Voltages ¹ — See graph next page

Break Current at 320VDC ¹ — 2,000 A, 1 cycle

Contact Resistance, Typ. (@200A) — 0.2 mohms

Load Life — See graph next page

Mechanical Life — 1 million cycles

Contact Arrangement, Auxiliary Contacts — 1 Form A (SPST-NO)

Aux. Contact Current, Max. — 2A @ 30VDC / 3A @ 125VAC

Aux. Contact Current, Min. — 100mA @ 8V

Aux. Contact Resistance, Max. — 0.417 ohms @ 30VDC / .150 ohms @ 125VAC

Dielectric Withstanding Voltage — 2,200 Vrms @ sea level

Insulation Resistance @ 500VDC — 100 megohms ²

Shock, 11ms 1/2 Sine, Peak, Operating — 20 G

Vibration, Sine, 50-2000Hz., Peak — 20 G

Operating Temperature — -55°C to +85°C

Weight, Nominal — .95 lb. (.43 kg)

Notes:

- ¹ Main power contacts
- ² 50 at end of life

Coil Operating Voltage (Valid Over Temperature Range)	
Voltage (Will Operate)	18-32VDC
Voltage (Max.)	32VDC
Pickup (Close) Voltage Max.	18VDC
Hold Voltage (Min.)	10VDC
Dropout (Open) Voltage (Min.)	2VDC
Inrush Current (Max.)	4.5A
Holding Current (Avg.)	0.5A
Inrush Time (Max.)	100ms

Ordering Information

Typical Part Number ►

MAP200 A R D E A

Series: _____
MAP200 = 500 Amp, 12-900VDC Contactor

Contact Form: _____
A = Normally Open
H = Normally Open with Aux. Contacts

Coil Voltage: _____
R = 28 Vdc, Mechanical Economizer
S = 28 Vdc, Electrical Cut-throat Economizer

Coil Wire Length: _____
A = 15.3 in (390 mm)
D = Coil connector on relay (requires option "E" or "X" in next step).

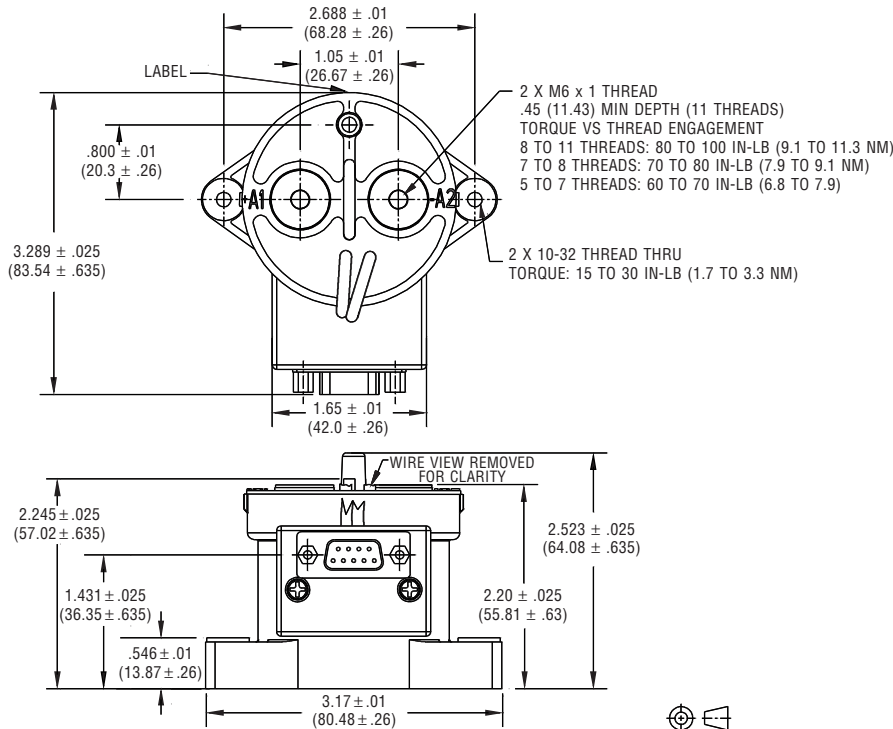
Coil Terminal Connector: _____
N = No connector
E = 9-pin subminiature "D" plug mounted on contactor housing
X = Special configuration (consult factory)

Mounting & Power Terminals: _____
A = Bottom Mount & Male M8 x 1.25 Thread Terminals
B = Bottom Mount & Female 1/4-20 Thread Terminals
D = Bottom Mount & Female M6 x 1 Thread Terminals

For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.

KILOVAC MAP200 Series (Continued)

Outline Dimensions



MAP200HR D-Sub

Pin Out

Coil+ = Pin 2

Coil - = Pin 6

Aux. COM = Pin 8

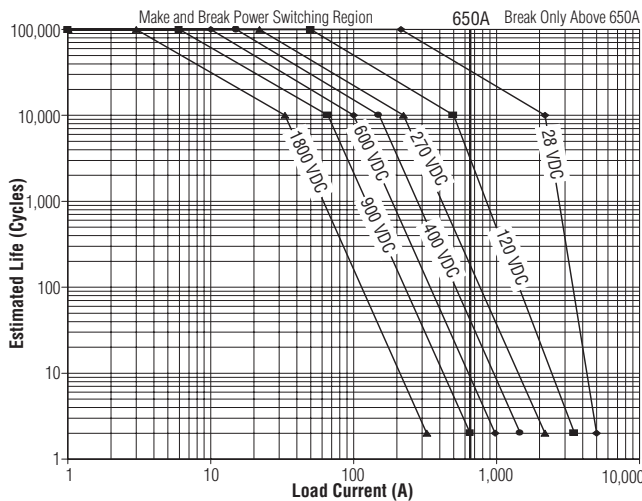
Aux. NO = Pin 4

MAP200AR

Coil+ = Pin 2

Coil - = Pin 6

Estimated Make & Break Power Switching Ratings



NOTES:

- 1) For resistive loads with 300µH maximum inductance. Consult factory for inductive loads.
- 2) Estimates based on extrapolated data. User is encouraged to confirm performance in application.
- 3) End of life when dielectric strength between terminals falls below 50 megohms @ 500VDC.
- 4) The maximum make current is 650A to avoid contact welding.

For factory-direct application assistance,
dial 800-253-4560, ext. 2055, or
805-220-2055.

KILOVAC MAP201 Series Contactor with 2 Form A (SPST-NO) Contacts Rated up to 350 Amps, 12-900 Vdc Dual Contact Material (Cu/Mo)

Product Facts

- Designed to be the smallest, lightest weight, lowest cost sealed contactor in the industry with its current rating for military aerospace
- Built-in coil economizer (models requiring external economizer also available)
- Optional auxiliary contact for easy monitoring of power contact position
- Hermetically sealed — intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coil or contacts, including long periods of non-operation
- Versatile coil and power connections
- RoHS versions available



Physical Data

Contact Arrangement —
Power Contacts —
SPST-NO (form X)
2X Auxiliary Contacts 1 —
SPST-NO (form A)
Dimensions — See drawing
Weight, Nominal — 0.45 Kg (0.99 lb)

Environmental Data

Shock, 11ms 1/2 Sine (Operating) — 20 G_{peak}
Sine Vibration, 20 G_{peak} —
55-2000 Hz
Random Vibration, 14.06 Grms —
15 Hz (.002 G²/Hz), 100 Hz (.002 G²/Hz),
450 Hz (.12 G²/Hz), 900 Hz (.12 G²/Hz),
2000 Hz (.083 G²/Hz)
Operating Temperature Range —
-55°C to +85°C

Electrical Data

Voltage Rating —
Main Contacts (max) — 400 Vdc
Auxiliary Contacts — 30 Vdc
Current Rating, Continuous —
Main Contacts 2 — 300 A
Auxiliary Contacts — 3 A
Contact Resistance —
Main Contacts 3 —
100 mΩ max @ 1 amp
0.3 mΩ max @ rated current
Auxiliary Contacts —
200 mΩ max
Hot Switching Performance (Polarity Sensitive) —
600A make/ 265A break @ ± 270Vdc —
11,000 cycles
550A make/ break @ ± 360Vdc —
100 cycles
2000A capacitive make — 100 cycles
2000A make/ break @ +360Vdc —
5 cycles
1000A make/ break @ -360Vdc —
2 cycles
Mechanical Life — 1 million cycles
Dielectric Withstand Voltage —
Terminal to Terminal/ Terminals to Coil —
1mA max @ 2,200Vrms

Coil Data

Coil Voltage, Nominal/ Max —
28/ 32 Vdc
Pick Up (Max) — 16 Vdc
Inrush Current @ 28Vdc (Max) —
3.5 A
Inrush Time (Max) — 100 ms
Hold Current (Max) — 0.32 A
Drop Out — 4 to 10 Vdc
Main Contacts —
Operate Time (Max) — 18 ms
Operate Bounce (Max) — 5 ms
Release Time — 18 ms
Auxiliary Contacts Operate/ Release — Within ± 5 ms of main

Insulation Resistance —
Terminal to Terminal/ Terminals to Coil —
100MΩ min @ 500Vdc

Notes:

- 1 Two form A available with electronic coil economizer, 1 form A available with mechanical coil economizer
- 2 Continuous current rating is affected by conductors attached. Keep terminals below 150°C max continuous, 175C for 1 hour max, and 200C for 1 minute max.
- 3 Initial contact resistance may be higher than 0.3mΩ, but will drop below within 30 minutes maximum

Ordering Information

Typical Part Number ► **MAP201 A R D E A**

Series: _____
MAP201 = 350 Amp, 12-900VDC Contactor

Contact Form: _____
A = Normally Open
H = Normally Open with Aux. Contacts

Coil Voltage: _____
R = 28 Vdc, Mechanical Economizer
S = 28 Vdc, Electrical Cut-throat Economizer

Coil Wire Length: _____
A = 15.3 in (390 mm)
D = Coil connector on relay (requires option "E" or "X" in next step).

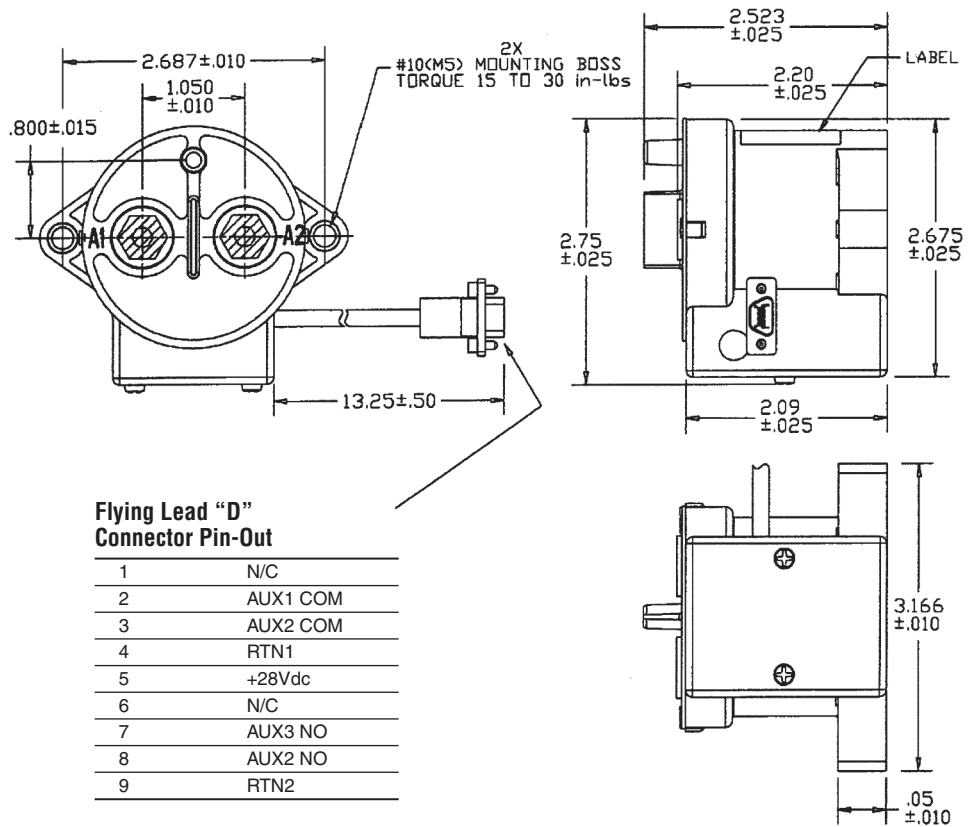
Coil Terminal Connector: _____
N = No connector
E = 9-pin subminiature "D" plug mounted on contactor housing
X = Special configuration (consult factory)

Mounting & Power Terminals: _____
A = Bottom Mount & Male M8 x 1.25 Thread Terminals
B = Bottom Mount & Female 1/4-20 Thread Terminals
D = Bottom Mount & Female M6 x 1 Thread Terminals

For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.

KILOVAC MAP201 Series Contactor (Continued)

Outline Dimensions*



MAP200HR D-Sub

Pin Out

- Coil+ = Pin 2
- Coil - = Pin 6
- Aux. COM = Pin 8
- Aux. NO = Pin 4

MAP200AR

- Coil+ = Pin 2
- Coil - = Pin 6

***Alternate coil and main terminal connections available, consult factory.**

For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.