

## **EV202 SERIES**

DPST-NO CONTACTOR (2 form X)

With option of 2 SPDT (form C)  
 Auxiliary Switch Outputs.

- **2 Pole Single-Throw Contactor – 400Vdc/ 350A per Pole**
- **12 or 24 VDC Coil**
- **Optional 2-SPDT auxiliary switch outputs:**
  - 30Vdc/ 2A max switching, or
  - 6V/ 5mA min signal
- **Hermetically Sealed**
- **Integrated Coil Economizer with Coil Suppression**
- **EMC Compliant – No radiated coil emission**
- **-55C to + 85C Operating Range**
- **Bidirectional Switching – Main contacts not polarity sensitive**
- **Mount in any orientation – not position sensitive**
- **RoHS Compliant**



**EV202MSAND Shown (2 Aux Switches)**



550 Linden Ave.  
 Carpinteria, CA US 93013  
 Internet: [www.te.com](http://www.te.com)

TITLE

**EV202 CONTACTOR SERIES**

**SD-**

**EV202**

**CD**

**CUSTOMER DRAWING**

CAGE CODE  
18741

SCALE  
NONE

SHEET  
1 of 6

**General Specifications****Physical Data****Units**

|                                                           |    |                    |
|-----------------------------------------------------------|----|--------------------|
| Contact Arrangement: Power Contacts                       | -  | DPST-NO (2 form X) |
| Auxiliary Switches                                        |    | SPDT (form C)      |
| Number of Switches per Contactor Type: EV202AS<br>EV202MS |    | None<br>Two        |
| Dimensions                                                | -  | See drawing        |
| Weight, Nominal (not including hardware)                  | Kg | 0.77               |

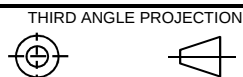
**Environmental Data**

|                                      |                    |                     |
|--------------------------------------|--------------------|---------------------|
| Shock, 11ms ½ sine (operating)       | G <sub>peak</sub>  | 20                  |
| Sine Vibration, 10 G <sub>peak</sub> | Hz                 | 10-2000             |
| Random Vibration, 14 Grms            | Hz                 | 15 100 300 900 2000 |
|                                      | G <sup>2</sup> /Hz | .01 .01 .2 .2 .01   |
| Operating Temperature Range          | °C                 | -55 to +85          |

**Electrical Data**

|                                                                                                                     |        |                                                   |
|---------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------|
| Voltage Rating: Main Contacts (max)                                                                                 | Vdc    | 600                                               |
| Auxiliary contacts                                                                                                  | Vdc    | 30                                                |
| Current Rating: Continuous: Main Contacts (1)                                                                       | A/Pole | 350                                               |
| Auxiliary contacts                                                                                                  | A      | 3                                                 |
| Contact Resistance: Main Contacts (2)                                                                               | mΩ     | 100 max @ 1 amp<br>0.3 max @ 200A after 3 minutes |
| Auxiliary Contacts                                                                                                  | mΩ     | 200 max                                           |
| Hot Switching performance @ ± 400Vdc (3)<br>100A make/ break<br>250A make/ break<br>700A break only                 | cycles | 10,000<br>2,500<br>10                             |
| Hot Switching performance @ ± 270Vdc (4)<br>100A make/ break<br>250A make/ break<br>2000A break only @ ± 370Vdc (5) | cycles | 40,000<br>7,500<br>2                              |
| Maximum Closing Into (Make) Current                                                                                 | A      | 700                                               |
| Mechanical Life                                                                                                     | cycles | 100,000                                           |
| Dielectric Withstand Voltage over life:                                                                             |        |                                                   |
| Terminal to Terminal/ Terminals to Coil                                                                             |        | 1mA max @ 2,200Vrms                               |
| Insulation Resistance over life:                                                                                    |        |                                                   |
| Terminal to Terminal/ Terminals to Coil                                                                             |        | 50MΩ min @ 500Vdc                                 |

- (1) Using 4/0 conductor. Current rating is affected by attached conductor size and design. Keep terminals below 150C max continuous, 175C for 2 hours max, and 200C for 1 minute max. For mounting large conductors, request terminal adapter PN 3-1618396-7.
- (2) Operational contact resistance is measured by millivolt drop across contacts a >100A current. Initial contact resistance may be higher than 0.3mΩ, but will drop below within 30 minutes maximum.
- (3) Voltage applied to each contact set separately.
- (4) Voltage applied across both contact sets in series
- (5) Dielectric Withstand Voltage may be degraded following 2000A interrupts at 370Vdc.

**CUSTOMER DRAWING****SD-****EV202**

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CAGE CODE  
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SCALE  
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SHEET  
2 of 6

**Coil Data** (over -40 to +85C temperature range  
unless otherwise specified)

| <b>Coil Voltage, nominal/ maximum</b>            | Vdc | <b>12/16</b> | <b>24/32</b> |
|--------------------------------------------------|-----|--------------|--------------|
| Pick Up, maximum (applied as step voltage only)  | Vdc | 8            | 16           |
| Drop Out                                         | Vdc | 2.5 - 4      | 3 - 8        |
| Inrush Current @ V-nominal, max                  | A   | 5            | 4.5          |
| Inrush Time, nominal/ maximum                    | mS  | 75/ 150      | 75/ 150      |
| Hold Current @V-nominal, max.                    | A   | 0.6          | 0.2          |
| Internal Coil Suppression (max)                  | Vdc | 40           | 60           |
| Main Contacts:                                   |     |              |              |
| Operate Time, nominal/ maximum                   | mS  | 13/ 20       | 13/ 20       |
| Operate Bounce, nominal/ maximum                 | mS  | 3/ 10        | 3/ 10        |
| Release Time, nominal/ maximum                   | mS  | 7/ 12        | 7/ 12        |
| Release time, maximum including maximum arc time | mS  | 25           | 25           |

### Wire Color Code

| <b>Function</b> | <b>Color</b> |
|-----------------|--------------|
| Coil +          | Red          |
| Coil Return     | Black        |
| Aux A1 COM      | Brown        |
| NO              | Yellow       |
| NC              | Purple       |
| Aux B1 COM      | Orange       |
| NO              | Green        |
| NC              | White        |

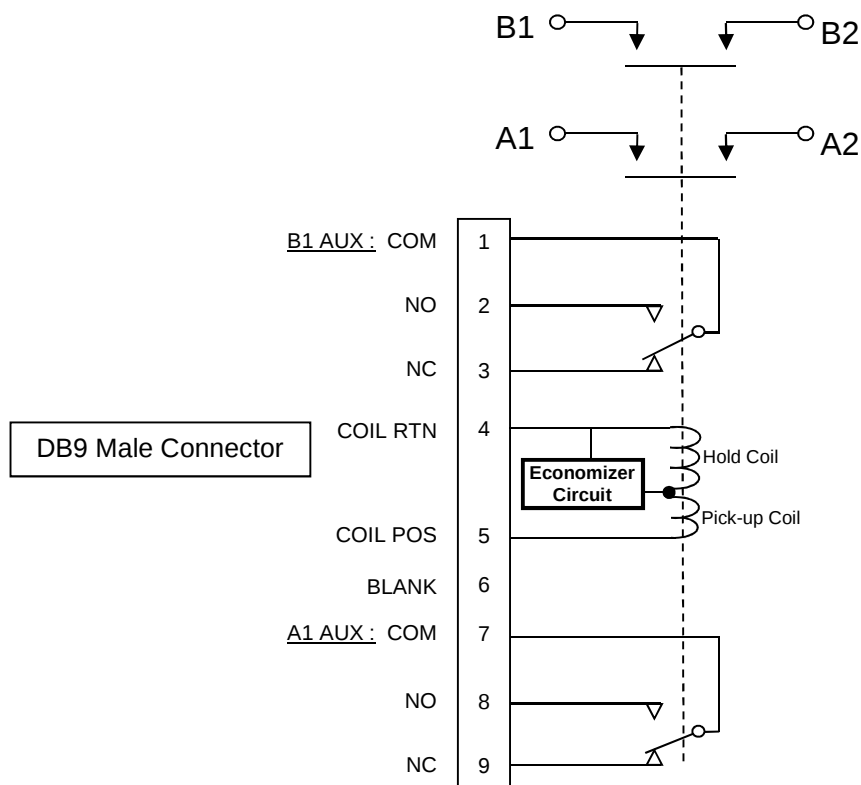
Note: EV202ASxxx type has 2 coil wires, with no auxiliary switches  
EV202MSxxx type has 8 wires, with 2 auxiliary switches: A1 and B1

|                                                                                                               |                                                                         |                         |               |                 |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------|---------------|-----------------|
|                             |                                                                         | <b>CUSTOMER DRAWING</b> |               |                 |
|                                                                                                               |                                                                         | <b>SD-</b>              | <b>EV202</b>  |                 |
| THIRD ANGLE PROJECTION<br> | THIS DRAWING<br>PREPARED IN<br>ACCORDANCE WITH<br>ANSI/ASME Y14.5M-1982 | CAGE CODE<br>18741      | SCALE<br>NONE | SHEET<br>3 of 6 |

## Schematic

EV202MSBFD shown for example.

Other versions may have different connectors and/ or different numbers of auxiliary switches



## Part Numbering Reference

TYPICAL PART NUMBER

EV202

M

S

B

F

D

### Series:

EV202 = 2 form X, DPST-NO-DM Contactor

### Auxiliary Contact Outputs (SPDT form C):

A = None, M = Two

### Coil Voltage:

S = 24V; V = 12V (with built in electronically switched dual coil economizer)

### Coil and Aux Wire Length (inches):

A = 15.3, B = 6, X = Customer specified configuration

### Coil and Aux Connector:

N = none, F = "D" Plug on flying leads (may affect wire length)

### Mounting and Power Terminals

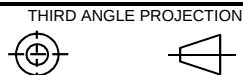
D = 2X M5 Bottom Mount with 4X, M6 X 1 Female thread terminals



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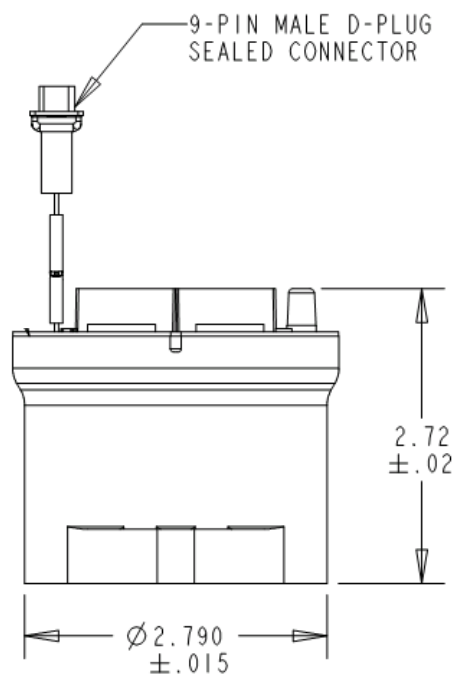
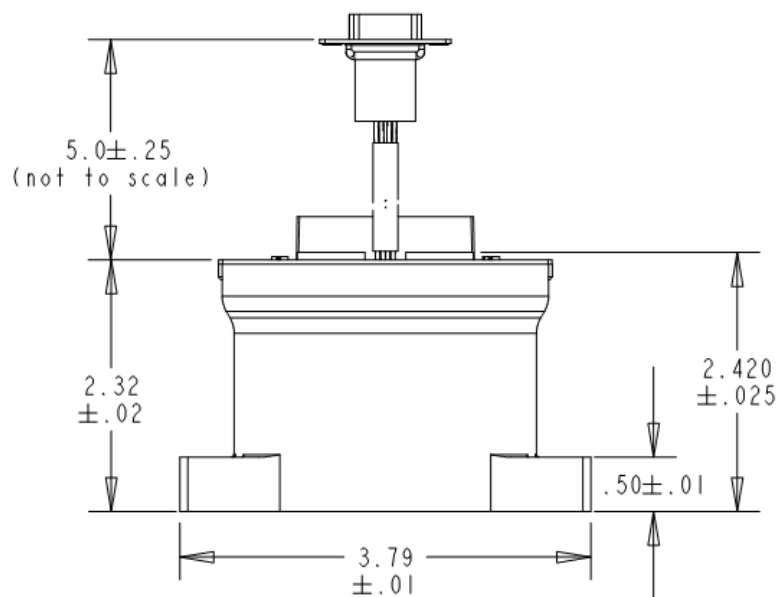
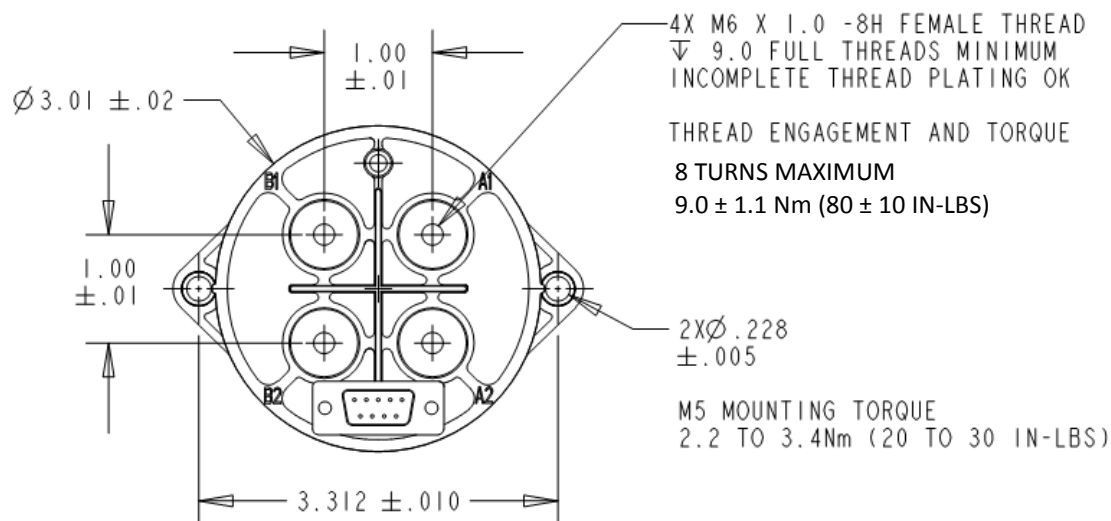
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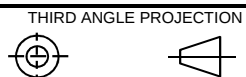
SHEET  
4 of 6

**Part Drawing**

EV202MSBFD shown for example.  
Other versions may have different connectors or flying leads.

**Dimensions in Inches**

Tolerances (except as noted)

.xx =  $\pm .03$ .xxx =  $\pm .010$  $\angle X^\circ = \pm 5^\circ$ **CUSTOMER DRAWING****SD-****EV202**

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18741

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SHEET  
5 of 6

Rev.  
**B**

## Revisions

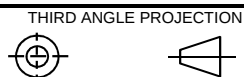
| REV. | DESCRIPTION                       | DCO#  | DATE     | APP.     |
|------|-----------------------------------|-------|----------|----------|
| 1    | Preliminary Release               | 16255 | 01/05/15 | D. Lewis |
| A    | Release to Production             | 16334 | 11/12/15 | D. Lewis |
| B    | Add RoHS compliance, edit note 5. | 16370 | 9/12/16  | J.Reyes  |
|      |                                   |       |          |          |



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6 of 6

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