## **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:
  - o 30Vdc/2A max switching, or
  - o 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)

| Connectivity Kilovac   | EV202 CONTACTOR SERIES |  |               |                 |
|--|------------------------|--|---------------|-----------------|
| 550 Linden Ave.<br>Carpinteria, CA US 93013<br>Internet: <u>www.te.com</u> | SD- EV202              |  | EV202         |                 |
| CD CUSTOMER DRAWING  | CAGE CODE<br>18741     |  | SCALE<br>NONE | SHEET<br>1 of 6 |

## **General Specifications**

| <b>Physical Data</b> | a | 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) | Gpeak | 20      |     |        |     |      |
|--------------------------------|-------|---------|-----|--------|-----|------|
| Sine Vibration, 10 Gpeak       | Hz    | 10-2000 |     |        |     |      |
| Random Vibration, 14 Grms      | Hz    | 15      | 100 | 300    | 900 | 2000 |
|                                | G²/Hz | .01     | .01 | .2     | .2  | .01  |
| Operating Temperature Range    | °C    |         |     | -55 tc | +85 |      |

#### **Electrical Data**

| Liecti icai Data                              |        |                                |
|---|--------|--------------------------------|
| Voltage Rating: Main Contacts (max)           | Vdc    | 600                            |
| Auxiliary contacts                            | Vdc    | 30                             |
| Current Rating: Continuous: Main Contacts (1) | A/Pole | 350                            |
| Auxiliary contacts                            | Α      | 3                              |
| Contact Resistance: Main Contacts (2)         | mΩ     | 100 max @ 1 amp                |
|   |        | 0.3 max @ 200A after 3 minutes |
| Auxiliary Contacts                            | mΩ     | 200 max                        |
| Hot Switching performance @ ± 400Vdc (3)      | cycles |                                |
| 100A make/ break                              |        | 10,000                         |
| 250A make/ break                              |        | 2,500                          |
| 700A break only                               |        | 10                             |
| Hot Switching performance @ ± 270Vdc (4)      | cycles |                                |
| 100A make/ break                              |        | 40,000                         |
| 250A make/ break                              |        | 7,500                          |
| 2000A break only @ ± 370Vdc (5)               |        | 2                              |
| Maximum Closing Into (Make) Current           | Α      | 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  $0.3m\Omega$ , 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.

|                        | lovac  |                    |   | CUSTOMER D    | RAWING          |
|------------------------|--|--------------------|---|---------------|-----------------|
| connectivity           | SD-  |                    | E | V202          |                 |
| THIRD ANGLE PROJECTION | THIS DRAWING PREPARED IN ACCORDANCE WITH ANSI/ASME Y14.5M-1982 | CAGE CODE<br>18741 |   | SCALE<br>NONE | SHEET<br>2 of 6 |

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

| Coil Voltage, nominal/ maximum                   | Vdc | 12/16   | 24/32   |
|--|-----|---------|---------|
| Pick Up, maximum (applied as step voltage only)  | Vdc | 8       | 16      |
| Drop Out   | Vdc | 2.5 - 4 | 3 - 8   |
| Inrush Current @ V-nominal, max                  | Α   | 5       | 4.5     |
| Inrush Time, nominal/ maximum                    | mS  | 75/ 150 | 75/ 150 |
| Hold Current @V-nominal, max.                    | Α   | 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**

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

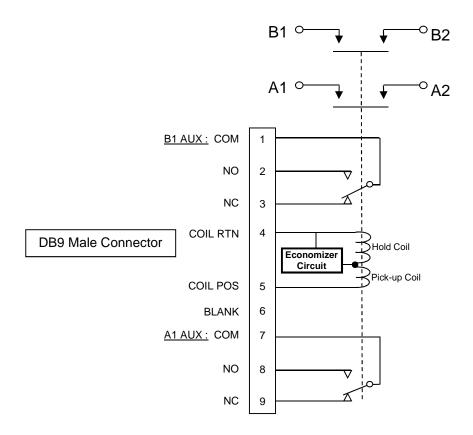
Note: EV202ASxxx type has 2 coil wires, with no auxiliary switches EV202MSxxx type has 8 wires, with 2 auxiliary switches: A1 and B1

|                        | lovac   | CUSTOMER DRAWING   |  |               |                 |  |
|------------------------|---|--------------------|--|---------------|-----------------|--|
| connectivity           |   | SD- EV202          |  |               |                 |  |
| THIRD ANGLE PROJECTION | 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**

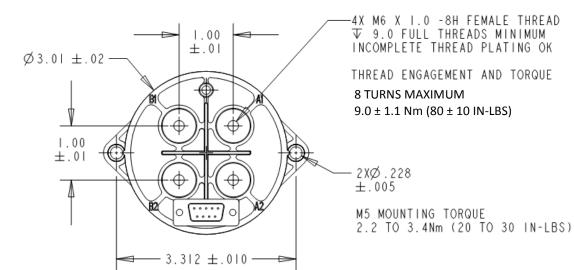
| TYPICAL PART NUMBER   EV202   | М | S | В | F | D |
|---|---|---|---|---|---|
| Series:<br>EV202 = 2 form X, DPST-NO-DM Contactor   |   |   |   |   |   |
| Auxiliary Contact Outputs (SPDT form C): A = None, M = Two                                  |   |   |   |   |   |
| Coil Voltage: S = 24V; V = 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 |   |   |   |   | • |

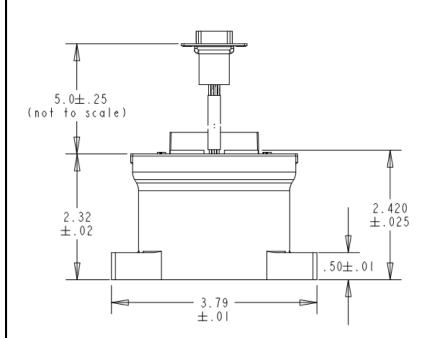
| <b>** TE</b> Ki        | CUSTOMER DRAWING  |                    |  |               |                 |  |  |
|------------------------|---|--------------------|--|---------------|-----------------|--|--|
| connectivity           |   | SD- EV202          |  |               |                 |  |  |
| THIRD ANGLE PROJECTION | THIS DRAWING<br>PREPARED IN<br>ACCORDANCE WITH<br>ANSI/ASME Y14.5M-1982 | CAGE CODE<br>18741 |  | SCALE<br>NONE | SHEET<br>4 of 6 |  |  |

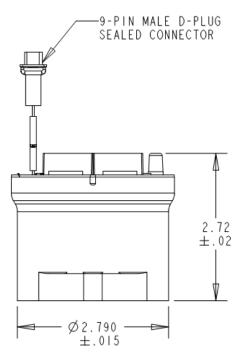
### **Part Drawing**

EV202MSBFD shown for example.

Other versions may have different connectors or flying leads.







#### **Dimensions in Inches**

Tolerances (except as noted)

 $.xx = \pm .03$ 

 $.xxx = \pm .010$ 

 $\angle x^{\circ} = \pm 5^{\circ}$ 

|                        | lovac   | CUSTOMER DRAWING   |  |               |                 |  |
|------------------------|---|--------------------|--|---------------|-----------------|--|
| connectivity           |   | SD-                |  | E'            | V202            |  |
| THIRD ANGLE PROJECTION | THIS DRAWING<br>PREPARED IN<br>ACCORDANCE WITH<br>ANSI/ASME Y14.5M-1982 | CAGE CODE<br>18741 |  | SCALE<br>NONE | SHEET<br>5 of 6 |  |

Rev.

# **Revisions**

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

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

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H-8/S11 H-8/S68 ACC530U20 ACC730U30 RF303ZM4-12 DH18DA 1423675-8 AR4-15F13-C01 AR7-41F11 AVR907 15732A200
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