# EV202 SERIES <br> DPST-NO CONTACTOR (2 form X) <br> With option of 2 SPDT (form C) <br> 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


EV202MSAND Shown (2 Aux Switches)

- Mount in any orientation not position sensitive
- RoHS Compliant

| 550 Linden Ave. Carpinteria, CA US 93013 Internet: www.te.com |  | TITLE EV202 CONTACTOR SERIES |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | SD- | EV202 |  |
| CD | CUSTOMER DRAWING | $\begin{gathered} \hline \text { CAGE CODE } \\ 18741 \end{gathered}$ | $\begin{aligned} & \text { SCALE } \\ & \text { NONF } \end{aligned}$ | $\begin{gathered} \hline \text { SHEET } \\ 1 \text { of } 6 \end{gathered}$ |

General Specifications
Physical Data

| Contact Arrangement: Power Contacts | - | DPST-NO (2 form X) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Auxiliary Switches |  | SPDT (form C) |  |  |  |  |
| $\begin{array}{ll}\text { Number of Switches per Contactor Type: } & \text { EV202AS } \\ & \text { EV202MS }\end{array}$ |  | None Two |  |  |  |  |
| Dimensions | - | See drawing |  |  |  |  |
| Weight, Nominal (not including hardware) | Kg | 0.77 |  |  |  |  |
| Environmental Data |  |  |  |  |  |  |
| Shock, $11 \mathrm{~ms} 1 / 2$ sine (operating) | Gpeak | 20 |  |  |  |  |
| Sine Vibration, 10 Gpeak | Hz | 10-2000 |  |  |  |  |
| Random Vibration, 14 Grms | Hz | 15 | 100 | 300 | 900 | 2000 |
|  | $\mathrm{G}^{2} / \mathrm{Hz}$ | . 01 | . 01 | . 2 | . 2 | . 01 |
| Operating Temperature Range | ${ }^{\circ} \mathrm{C}$ | -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) | $\mathrm{m} \Omega$ | $\begin{gathered} 100 \text { max @ } 1 \mathrm{amp} \\ 0.3 \text { max @ 200A after } 3 \text { minutes } \end{gathered}$ |
| Auxiliary Contacts | $\mathrm{m} \Omega$ | 200 max |
| Hot Switching performance @ $\pm 400 \mathrm{Vdc}$ (3) 100A make/ break 250A make/ break 700A break only | cycles | $\begin{gathered} 10,000 \\ 2,500 \\ 10 \end{gathered}$ |
| Hot Switching performance @ $\pm 270 \mathrm{Vdc}$ (4) 100A make/ break 250A make/ break 2000A break only @ $\pm 370 \mathrm{Vdc}$ (5) | cycles | $\begin{gathered} 40,000 \\ 7,500 \\ 2 \end{gathered}$ |
| Maximum Closing Into (Make) Current | A | 700 |
| Mechanical Life | cycles | 100,000 |
| Dielectric Withstand Voltage over life: |  |  |
| Terminal to Terminal/ Terminals to Coil |  | 1 mA max @ 2,200Vrms |
| Insulation Resistance over life: |  |  |
| Terminal to Terminal/ Terminals to Coil |  | 50M 2 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 $>100 \mathrm{~A}$ current. Initial contact resistance may be higher than $0.3 \mathrm{~m} \Omega$, 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 370 Vdc .

|  |  | CUSTOMER DRAWING |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | SD- | EV202 |  |
| $\overbrace{-(4)}^{\text {THIRD ANGLE PROUECTON }}$ |  | $\begin{gathered} \text { CAGE CODE } \\ 18741 \end{gathered}$ | $\begin{aligned} & \hline \text { SCALE } \\ & \text { NONE } \end{aligned}$ | $\begin{aligned} & \hline \text { SHEET } \\ & 2 \text { of } 6 \end{aligned}$ |

Coil Data (over -40 to +85 C 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 | 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

| 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

|  |  | CUSTOMER DRAWING |  |  |
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## Schematic

EV202MSBFD shown for example.
Other versions may have different connectors and/ or different numbers of auxiliary switches


## Part Numbering Reference

## TYPICAL PART NUMBER <br> EV202

## Series: <br> EV202 = 2 form X, DPST-NO-DM Contactor <br> Auxiliary Contact Outputs (SPDT form C): <br> $A=$ None, $M=$ Two <br> Coil Voltage: <br> Coil and Aux Wire Length (inches): <br> Coil and Aux Connector: <br> Mounting and Power Terminals

$\mathrm{S}=24 \mathrm{~V} ; \mathrm{V}=12 \mathrm{~V}$ (with built in electronically switched dual coil economizer)
$A=15.3, B=6, X=$ Customer specified configuration
$\mathrm{N}=$ none, $\mathrm{F}=$ " D " Plug on flying leads (may affect wire length)

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

| En Kilovac |  | CUSTOMER DRAWING |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | SD- | EV202 |  |
| $\underbrace{\text { THIRD ANGLE PROUECTON }}_{-}$ |  | $\frac{\text { CAGE CODE }}{18741}$ | $\begin{aligned} & \hline \text { SCALE } \\ & \text { NONE } \end{aligned}$ | $\begin{aligned} & \text { SHEET } \\ & 4 \text { of } 6 \end{aligned}$ |

## Part Drawing

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


Dimensions in Inches
Tolerances (except as noted)

$$
\begin{aligned}
. x x & = \pm .03 \\
. x x x & = \pm .010 \\
\angle x^{\circ} & = \pm 5^{\circ}
\end{aligned}
$$

| Kilovac |  | CUSTOMER DRAWING |  |  |
| :---: | :---: | :---: | :---: | :---: |
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## 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 |
|  |  |  |  |  |


| Emancer |  | CUSTOMER DRAWING |  |  |
| :---: | :---: | :---: | :---: | :---: |
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