

DEVR10

Electric Vehicle Contactor

DURAKOOL



- High current and high voltage capability
- Compact structure - Low noise
- Magnetic arc blowout
- Max 900VDC @ 100A
- Reliable contacts in inert gas
- No special installation required
- RoHS Compliant

Contacts

| | |
|------------------------------|-----------------------------------------------------------|
| Contact number & arrangement | SPST-NO (1NO) |
| Contact material | AgSnO ₂ |
| Max. switching voltage | 900VDC |
| Min. switching voltage | 12VDC |
| Min. switching current | 100mA |
| Rated continuous current | 100A * ¹ (voltage dependant) |
| Max. switching current | 200A (3 mins) #8 AWG (8.4mm ²) wire, at +40°C |
| Max. short circuit current | 1250A (1/2 sine, 50/60Hz) |
| Voltage drop | ≤80mV@100A) |

Coil

| | |
|-----------------------------------|-------------------------|
| Rated voltage | 12 ~ 72VDC |
| Operating range of supply voltage | See coil data 'Table 1' |
| Rated coil power consumption | 5.5 ~ 6.0W |

Insulation

| | |
|-----------------------------------------------|------------------------|
| Insulation resistance (Initial / End of Life) | 100MΩ / 50MΩ at 500VDC |
| Dielectric strength | |
| coil - contact | 2,000Vrms / 4000VDC |
| contact - contact | 5,600Vrms / 8000VDC |

General Data

| | | |
|----------------------|---------------------|------------------------------------------------|
| Operating time | mS | ≤ 25ms. (includes bounce time - 5ms max) |
| Release time | mS | ≤ 20ms. |
| Electrical Life | ops | 50,000 @ 50A/400VDC : 6000 @ 100A/400VDC |
| Mechanical life | ops | 1 x 10 ⁶ |
| Dimensions | L x W x H | 53.85 x 40 x 52.41mm (see drawings for detail) |
| Weight | | 190g ±2g |
| Ambient Temperature | operating / storage | -40 to +85°C |
| Shock resistance | | 20G, 11ms ½ sine, peak |
| Vibration resistance | | 20G, sine, peak (55~2,000 Hz) |
| Noise (at 100mm) | | 70dB(a) |

* Consult factory for higher current capabilities

¹ Recommended wire - #8AWG (8.4mm²)

² Failure to observe correct polarity for load terminal connections will result in degraded life.

DEVR10

Electric Vehicle Contactor

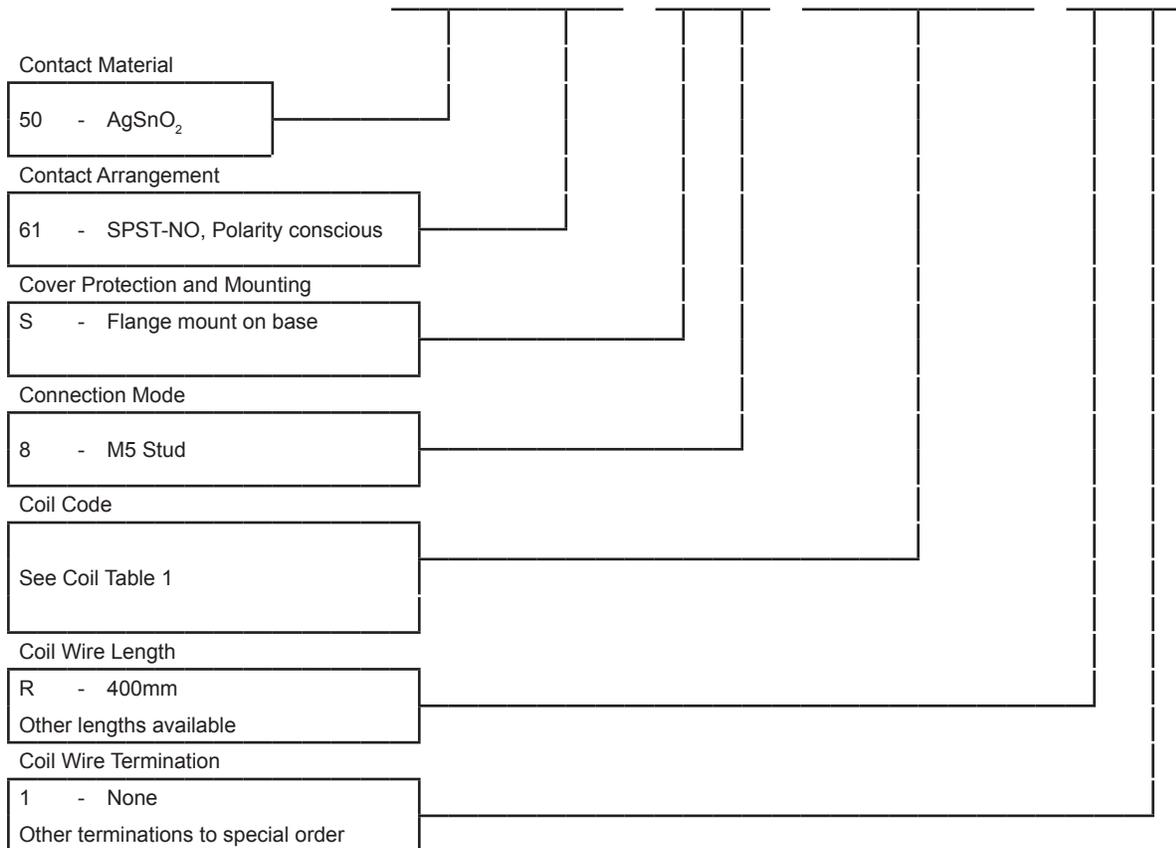


Coil Data - DEVR10

Table 1

| Coil Voltage Code | Nominal Voltage (VDC) | Must Operate Voltage Max. (VDC) | | Maximum Allowable Voltage (VDC) | Must Release Voltage Min. (VDC) | Coil-Resistance ($\Omega \pm 5\%$ @ 20°C) | Coil Current (mA) | Coil Power (W @ 20°C) |
|-------------------|-----------------------|---------------------------------|------|---------------------------------|---------------------------------|--------------------------------------------|-------------------|-----------------------|
| | | 20°C | 85°C | | | | | |
| 1012 | 12 | 8 | 9.6 | 16 | 1.2 | 26 | 461 | 5.5 |
| 1024 | 24 | 18 | 19.2 | 28 | 2.4 | 96 | 250 | 6.0 |
| 1028 | 28 | 21 | 22.4 | 31 | 2.24 | 136 | 206 | 5.7 |
| 1048 | 48 | 33 | 38.4 | 52 | 4.8 | 392 | 122 | 6.0 |
| 1072 | 72 | 21 | 55.2 | 79 | 5.76 | 868 | 83 | 6.0 |

Ordering Codes



Notes:

- 1) Spring Washers are an essential requirement for installation - see Page 3.
- 2) Torque setting for the M5 Power Terminals is 3.4 to 4.5Nm.
- 3) Loose terminals will generate excessive heat leading to premature failure and risk of fire.
- 4) The maximum torque setting for the M4 mounting bolts (not supplied) is 2.3Nm. to avoid damage to the contactor body.
- 6) Please ensure the correct polarity of the wiring to the power terminals. Contact life is greatly reduced if incorrectly connected.
- 7) Contact ratings are with #8 AWG wire.
- 8) Ensure adequate circuit protection in case of contact malfunction.
- 9) The contact chamber contains an inert gas. For maximum life, do not exceed the ambient temperature range of -40 to +85°C.
- 10) Contact ratings are based upon a resistive load. For inductive loads an inrush protection device is recommended.

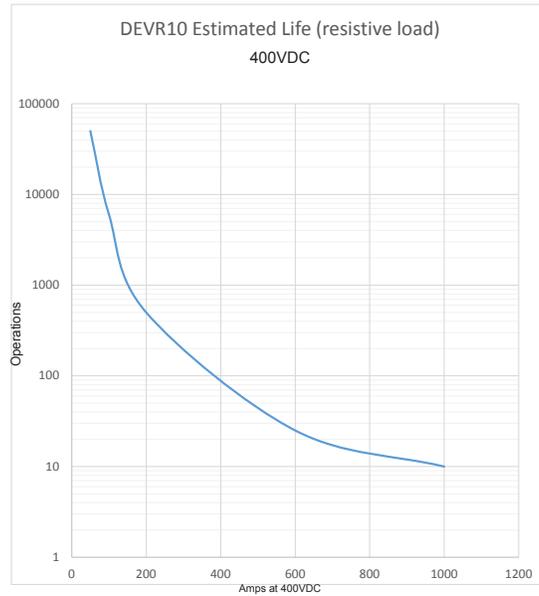
DEVR10

Electric Vehicle Contactor



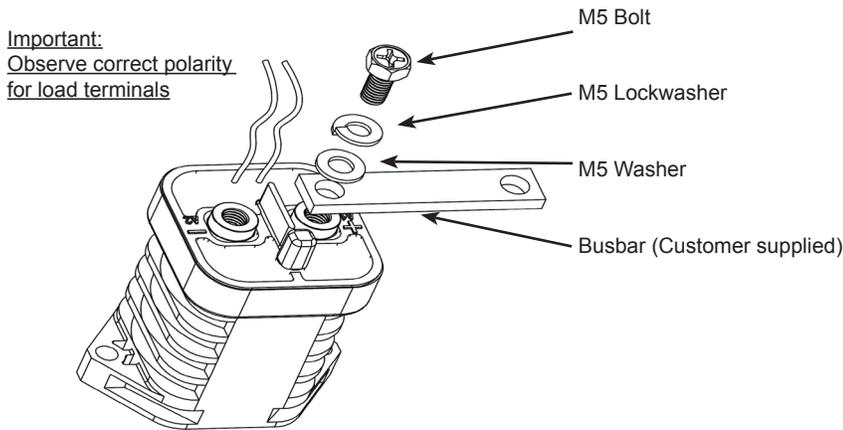
Estimated life

Fig. 1



Overall Dimensions

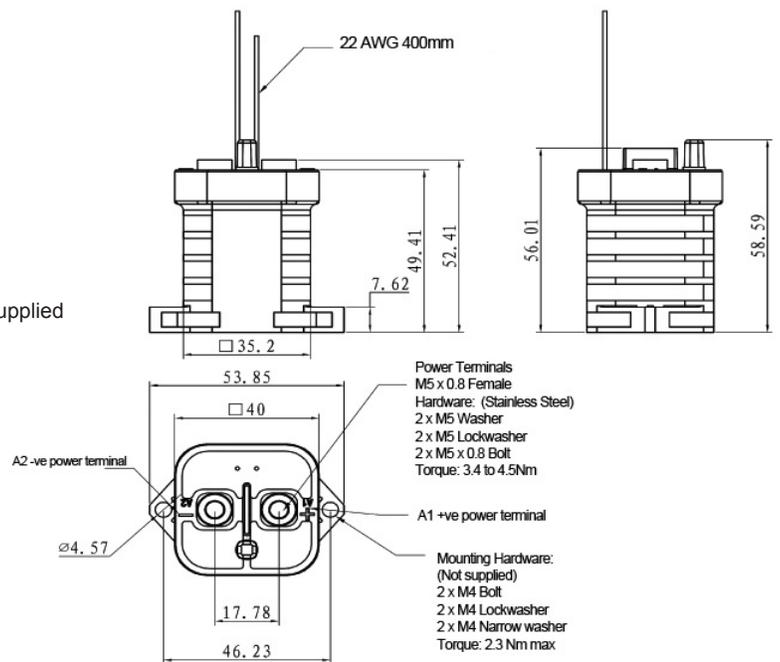
Fig. 2



Correct sequence for power terminal hardware assembly

NB: Hardware is NOT supplied with the contactor.

NB: Hardware is NOT supplied with the contactor.



All dimensions in millimeters