

DEVR05

Electric Vehicle Contactor

DURAKOOL



- High current and high voltage capability
- Compact structure - Low noise
- Magnetic arc blowout
- Max 900VDC @ 50A
- 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	50A * 1 (voltage dependant)
Short term overcurrent	100A (3 mins) #8 AWG wire, at +40°C
Max. short circuit current (contacts close only)	900A (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	5.5W ~ 6W

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 Max. (includes bounce time - 5ms max)
Release time	mS	≤ 10ms Max.
Electrical Life	ops	52,000 @ 25A/400VDC (polarity sensitive ²). See Fig 1
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. See Fig. 3.

DEV R05

Electric Vehicle Contactor

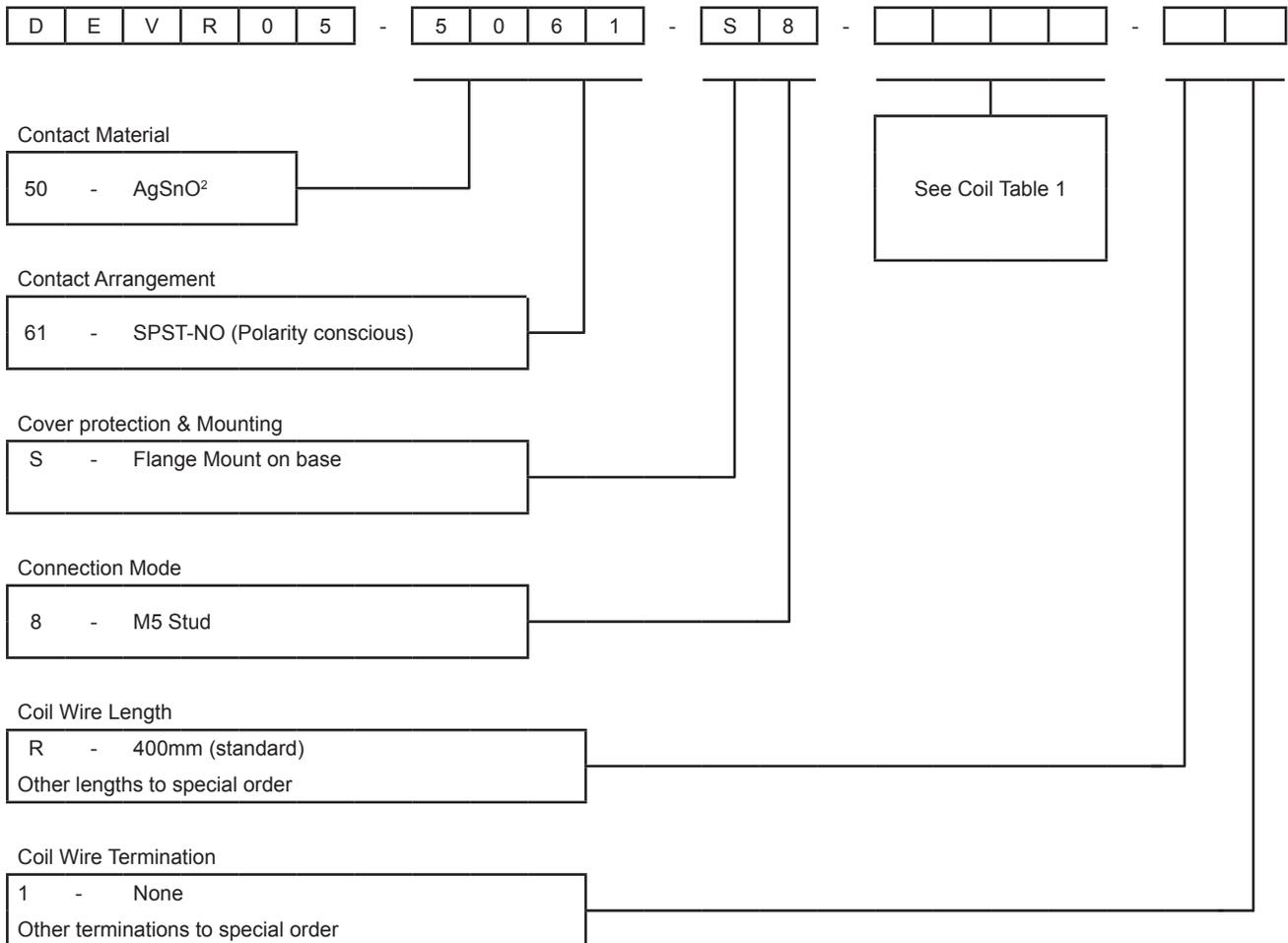


Coil Data - DEV R05

Table 1

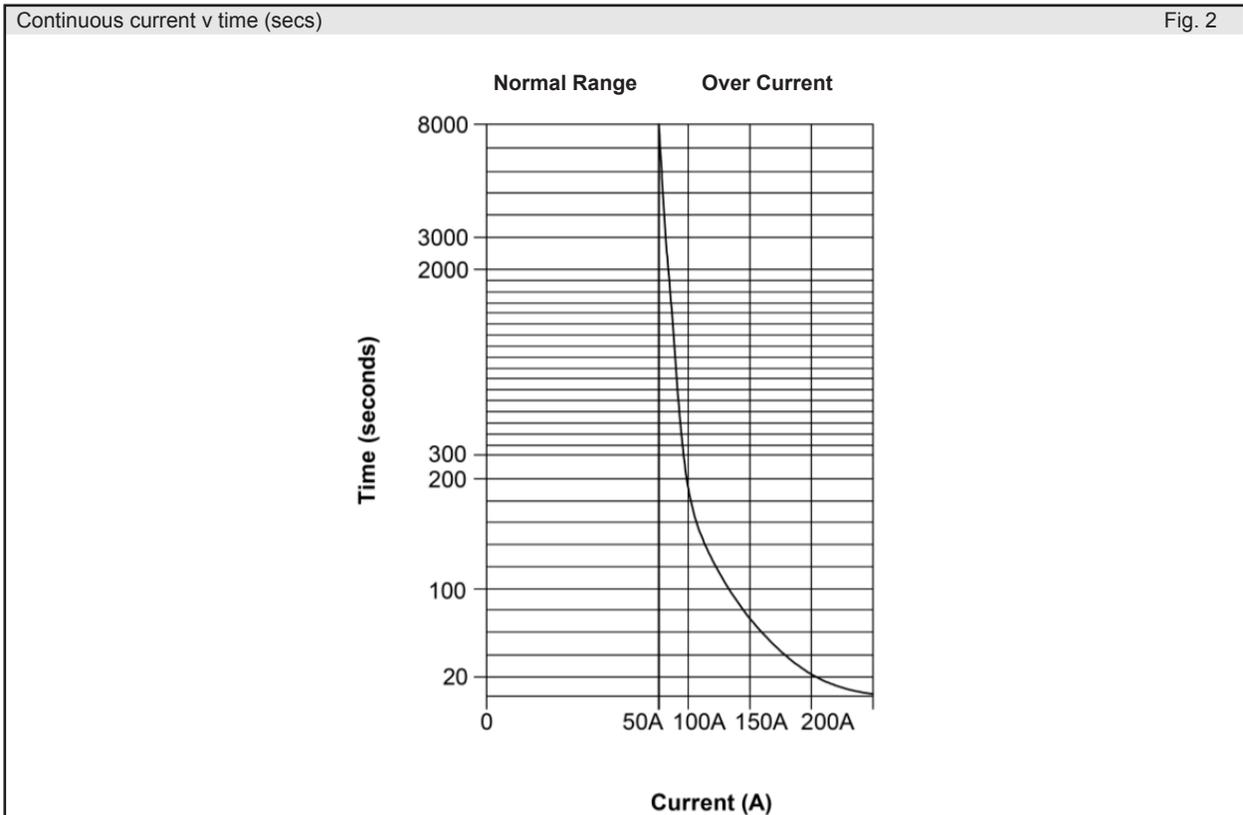
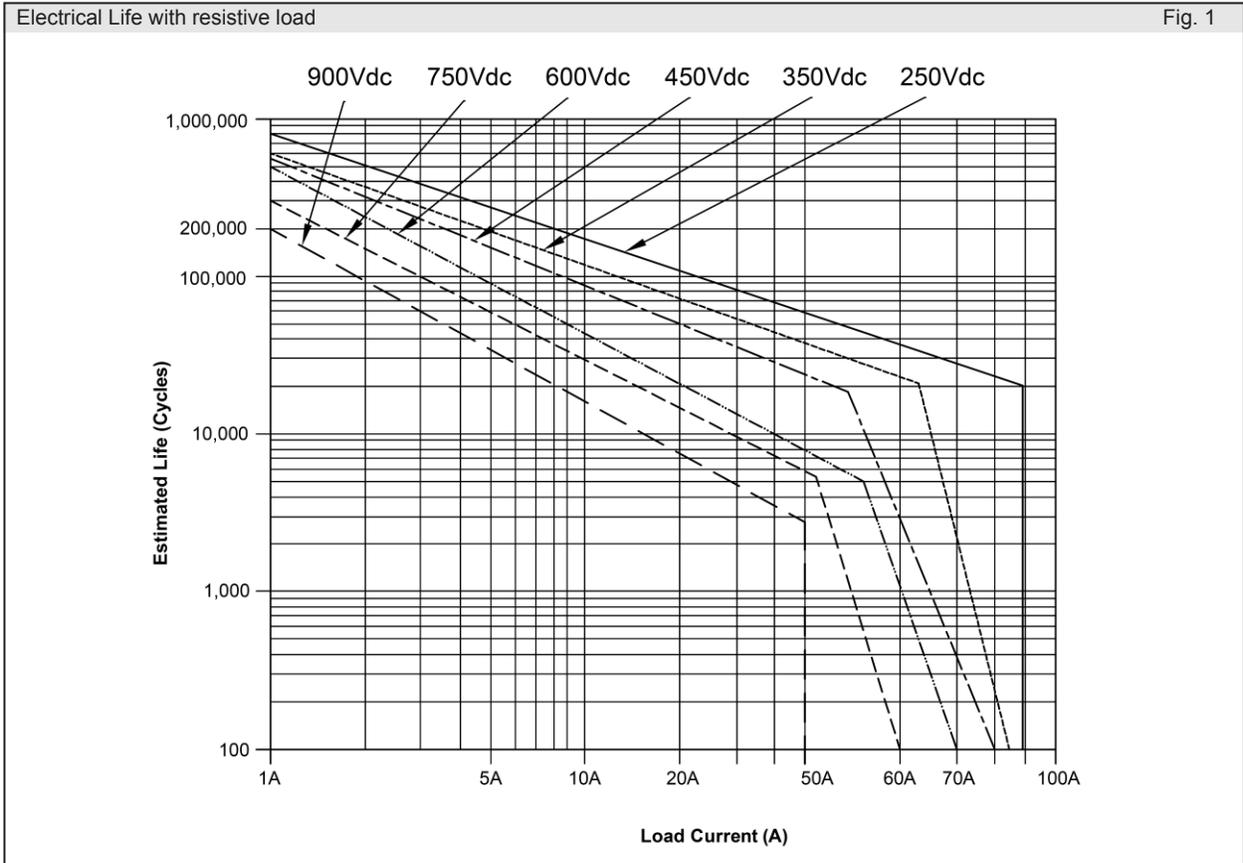
Coil Voltage Code	Nominal Voltage (VDC)	Must Operate Voltage Max. (VDC)		Maximum Allowable Voltage (VDC)	Must Release Voltage Min. (VDC)	Coil Resistance (Ω @ 20°C)	Coil Current (mA)	Coil Power (W @ 20°C)
		20°C	85°C					
1012	12	9	9.6	16	0.96	26	461	5.5
1024	24	18	19.2	28	1.92	96.4	259	6.0
1028	28	21	22.4	31	2.24	136	206	5.7
1048	48	36	38.4	52	3.84	392	122	6.0
1072	72	54	55.2	79	5.76	868	83	6.0

Ordering Code



Notes:

- 1) Spring Washers are an essential requirement for installation - see Page 4.
- 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.



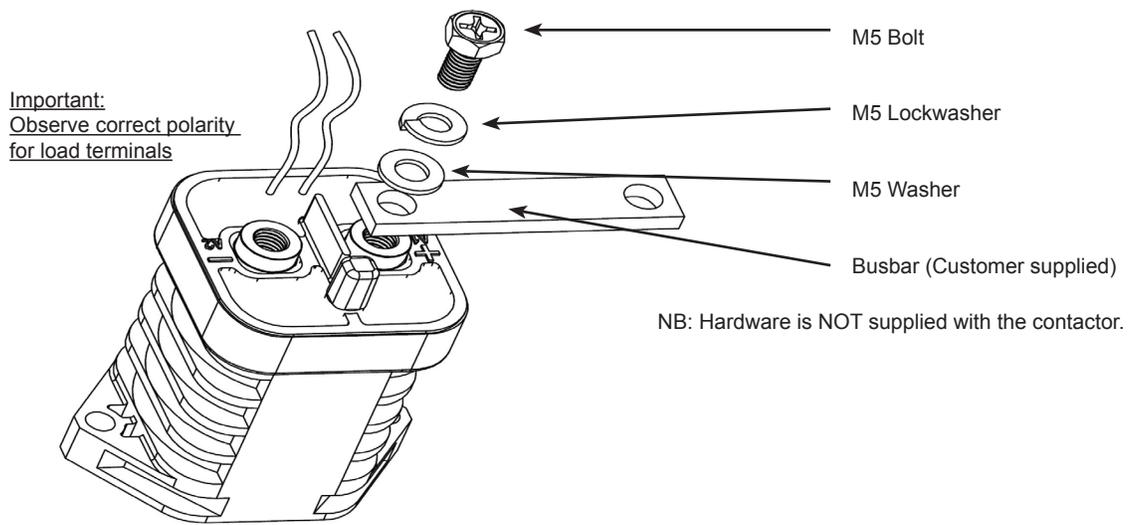
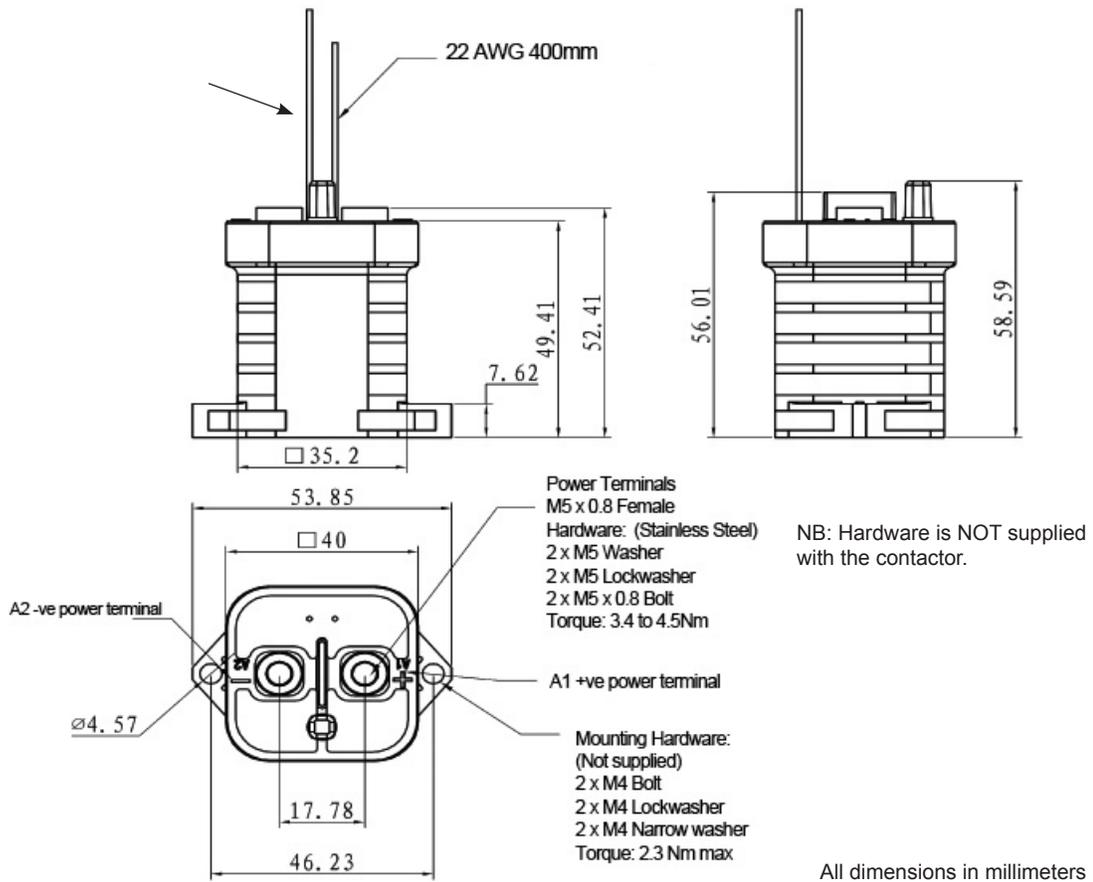
DEVRO5

Electric Vehicle Contactor



Overall Dimensions

Fig. 3



Correct sequence for power terminal hardware assembly