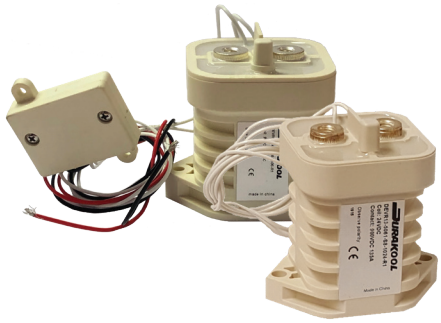
DEVR13 Series
HVDC Contactor 150A / 900VDC



- HVDC 150A continuous
- Max. switching current = 650A
- Contacts sealed in inert gas
- Magnet arc blowout
- Auxiliary contact option
- Female M5 or M6 power terminals
- Optional external PWM economiser

UK CA CE RoHS Compliant

Contacts

Contact arrangement		SPST-NO-DM
Contact material		T2+Ag
Max. switching voltage	AC/DC	900VDC
Rated load	DC1	150A 450VDC (break only above 135A)
Max. continuous thermal current	600s	200A (with 100mm² conductors)
	60s	300A (with 100mm² conductors)
Max switching current	1 time only	650A 450VDC
Initial contact resistance	max.	1mΩ (at 1A)
Auxiliary contact (when fitted)	arrangement	SPST-NO (1 Form A)
	max. current	2A @ 30VDC / 3A @ 125VAC
	min. current	100mA @ 5VDC

Coil

Nominal voltage (see page 2)	DC	6 ... 72VDC / 12 to 36VDC with PWM economiser
Rated power consumption		5.54W @ 12VDC (without PWM coil economiser)

Insulation

Insulation resistance	initial	100MΩ (min.)
	life end	50MΩ (min.)
Dielectric strength	coil to contact	2500Vrms / 1mA / 1 min (at sea level)
	contact to contact	2500Vrms / 1mA / 1 min (at sea level)

General Data

Operate / bounce time at 20°C	max.	25ms / 7ms
Release time	max.	12ms
Electrical life	ops.	Voltage and current dependent - see fig. 1
Mechanical life	ops.	1 x 10^6

Environmental

Environmental sealing	IP rating	IP67 (Contactor only), IP50 (PWM module)
Ambient temperature	operating	-40 to +85°C
Relative humidity		5 to 85%RH
Shock resistance		20G peak, 11ms 1/2 sine
Vibration resistance		20G sine peak (80 to 2000Hz)
Dimensions (std. coil)	L x W x H	40 x 54 (over flanges) x 59 mm (max.)
Dimensions (with ext. PWM)	L x W x H	47.3 x 69.5 (over flanges) x 66.7mm (max)*
Weight	approx.	190g ± 5g (with std.coil) / 355g ± 5g (with PWM)

Ordering Code

D E V R 1 3 - 5 0 8 1 - S 8 - 1 0 1 2 - R 1

Series

Contact material
50: T2+Ag

Contact arrangement
61: SPST-NO
71: SPST-NO + Auxilary
81: SPST-NO*
91: SPST-NO* + Auxilary
* Not polarised see page 2

Coil code:
See tables 1 & 2

Mounting & terminations
Bottom flange mounting base
S8: M5 Female power terminals (std. coil version only)
S8: M6 Female power terminals (ext. PWM version only)
Coil & auxiliary contacts by flying leads

Coil wire length
R: 15.75 (400 ±10mm) (standard)
T: 5.9" (150 ±10mm)

Coil wire & auxiliary contact termination
1: None (standard)
2: Yazaki 7282-5558-10 Male
Other terminations to special order

* excludes external PWM module - See Page 3

Coil Data — Table 1

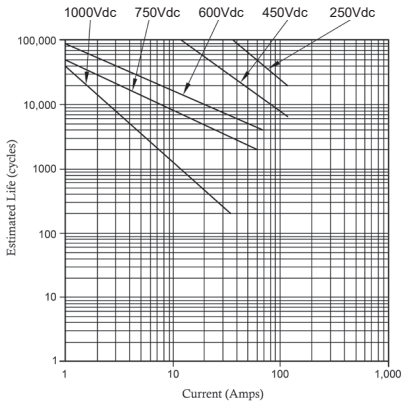
Coil code	Nominal voltage (VDC)	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)	Coil resistance Ω ±5% (at 20°C)	Coil Current (mA)	Coil Power (W at 20°C)
1006	6	4.8	7.2	0.6	6.3	952.4	5.71
1012	12	9.6	14.4	1.2	26.0	461.5	5.54
1024	24	19.2	28.8	2.4	96.4	249.0	5.98
1028	28	22.4	33.6	2.8	136.0	205.9	5.76
1036	36	28.8	43.2	3.6	227.0	158.6	5.71
1048	48	38.4	57.6	4.8	392.0	122.5	5.88
1072	72	57.6	86.4	7.2	868.0	83.0	5.97

Coil Data - with external PWM economiser — Table 2

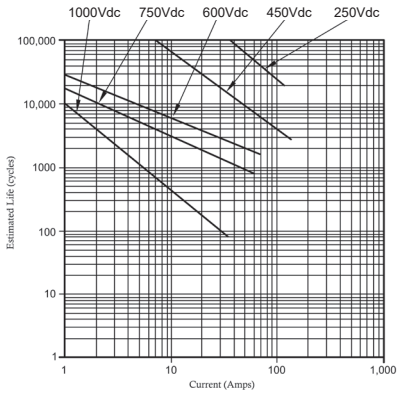
Coil code	Nominal voltage (VDC)	Must operate voltage max. (VDC)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)	Inrush current at 20°C (A)	Hold Current at 20°C (A)	Polarity sensitive coil
1236	12 - 36VDC	9	36	6	3.33	0.15 (12VDC) 0.08 (24VDC)	✓

Electrical Performance — Fig. 1

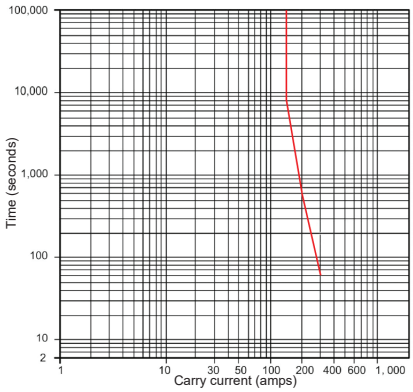
Estimated Life - polarised contacts



Estimated Life - non-polarised contacts



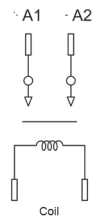
Carry current (A) vs. Time (seconds)

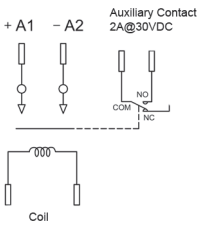


Estimates are based on tests and extrapolated data.
The user is advised to confirm the performance in their application.

with 70mm² conductors and terminal temperature rise maximum in accordance with ISO (EN) 60947.1 70 °C

Circuit Diagram - standard coils — Fig. 2

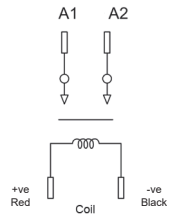


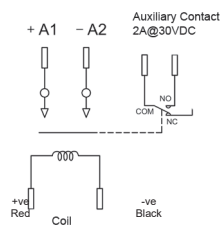


Contact terminals may be polarised (depending on option).

Coil terminals are not polarised.

Circuit Diagram - external PWM economiser — Fig. 3





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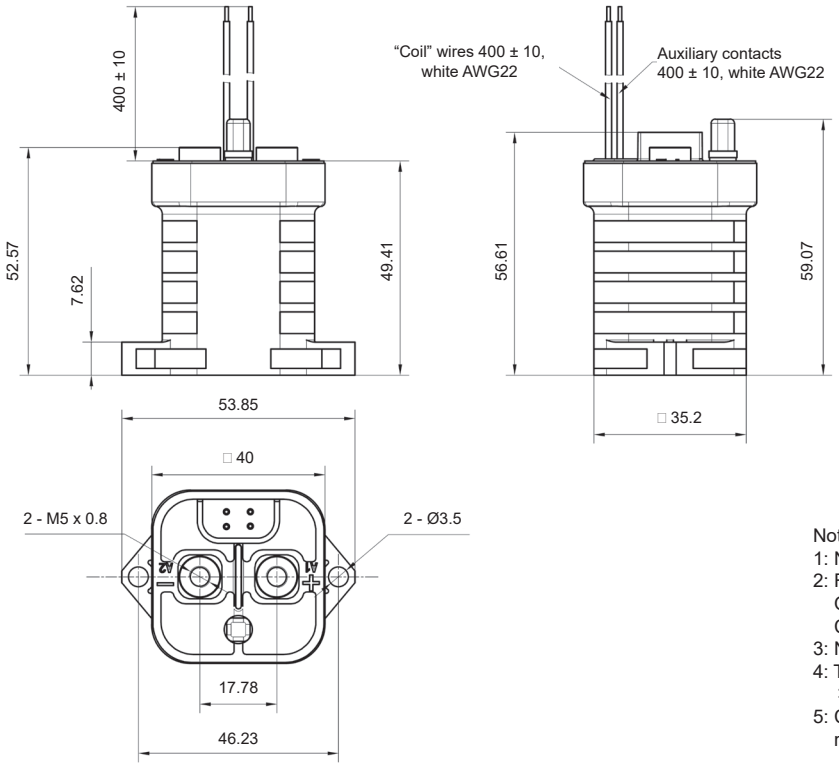
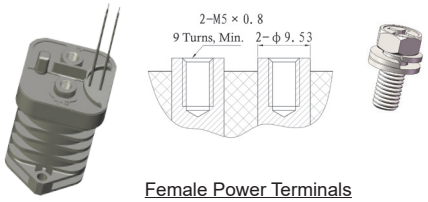
Coil terminals are polarised.

Dimensions (mm) - standard coil type

Fig. 4





Female Power Terminals
Recommended Terminal Screws (not supplied):
M5 x0.8 x 10mm
M5 spring washer
M5 flat washer

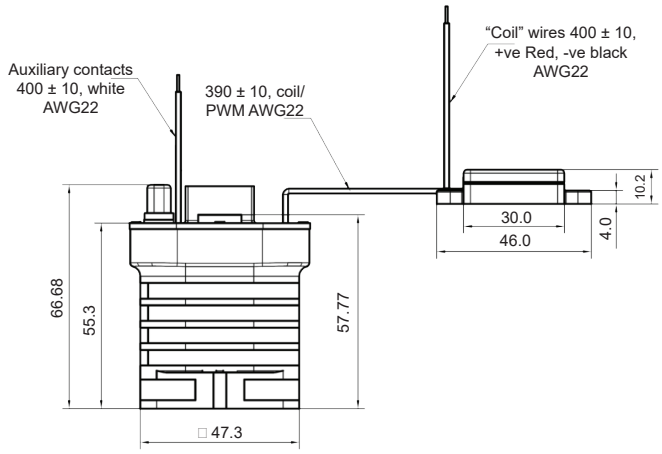
Recommended Conductor
70mm^2.
Preferred conductor: 100mm^2

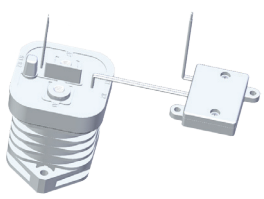
Torque settings
Terminals: 3.5 - 4.4Nm
Base Mounting: 1.8 to 2.5Nm

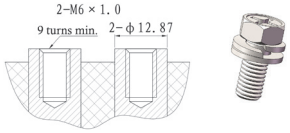
Notes:
1: Note coil is not polarised
2: For contact polarity sensitive type (code = 61):
Observe contact polarity as indicated.
Contactor life will be severely reduced if incorrectly connected.
3: Nominal dimensions in mm.
4: Tolerances (nominal), <10mm: ± 0.3mm, 10 ~ 50mm: ± 0.6mm, >50mm ± 1.0mm.
5: Coil wire length and terminations can be customised upon request.

Dimensions (mm) - external PWM economiser

Fig. 5





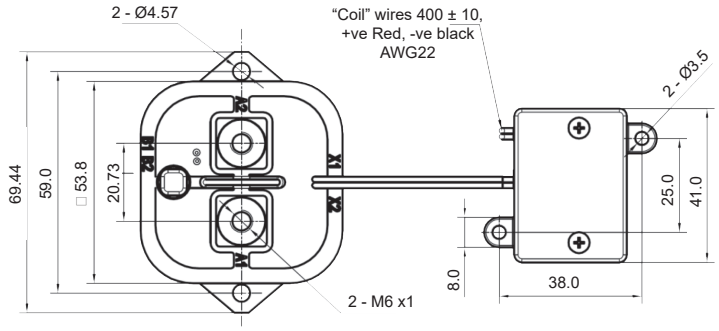


Female Power Terminals
Recommended Terminal Screws (not supplied):
M6 x1 x 12mm
M6 spring washer
M6 flat washer

Recommended Conductor
70mm^2.
Preferred conductor: 100mm^2

Torque settings
Terminals: 4.5 - 6.5Nm
Base Mounting: 1.8 to 2.5Nm

NB: DEVR13 with external PWM economiser is physically larger than DEVR13 with standard coil.



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