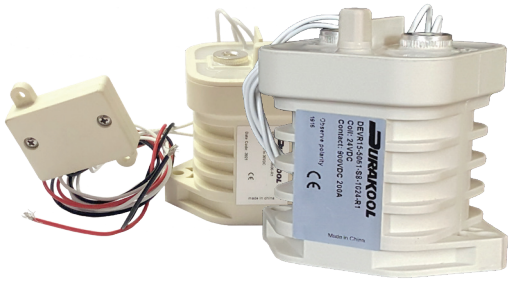
DEVR15 Series
HVDC Contactor 200A / 900VDC



- SPST-NO & SPST-NC versions
- Max. switching current = 1000A
- Contacts sealed in inert gas
- Magnet arc blowout
- Auxiliary contact option
- Female M6 power terminals
- Optional external PWM economiser

UK CA CE RoHS Compliant

Contacts

Contact arrangement		SPST-NO-DM, SPST-NC-DB
Contact material		T2+Ag
Max. switching voltage	AC/DC	900VDC
Rated load (SPST-NO-DM)	DC1	150A 450VDC (break only above 150A)
Rated load (SPST-NC-DB)	DC1	150A 750VDC
Max. continuous thermal current	600s	250A (with 100mm^2 conductors)
	60s	400A (with 100mm^2 conductors)
Max switching current	1 time only	1000A 450VDC, 1500A 100VDC (SPST-NC)
Initial contact resistance	max.	1mΩ (at 1A)
Auxiliary contact (when fitted)	arrangement	SPST-NO (1 Form A), (SPST-NC upon request)
	max. current	2A @ 30VDC / 3A @ 125VAC
	min. current	100mA @ 5VDC

Coil

Nominal voltage (see page 2)	DC	6 ... 72VDC (SPST-NC-DB: 12VDC, 24VDC only)
Rated power consumption		5.76W @ 12VDC (SPST-NO-DM)

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.	30ms / 7ms
Release time	max.	20ms
Electrical life	ops.	Voltage and current dependent - see fig. 1
Mechanical life (SPST-NO-DM)	ops.	1 x 10^6
Mechanical life (SPST-NC-DB)	ops	2 x 10^5

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	L x W x H	53.8 x 69.4 (over flanges) x 66.7 mm (max.)
Weight	approx.	355g±10g

Ordering Code

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

Series

Contact material
50: T2+Ag

Contact arrangement
81: SPST-NO-DM*
82: SPST-NC-DB*
91: SPST-NO-DM* + NO Auxiliary
92: SPST-NC-DB* + NO Auxiliary
* Not polarised see page 2

Mounting & terminations
Bottom flange mounting base
S8: M6 Female power terminals
Coil & auxiliary contacts by flying leads

Coil codes:
See tables 1, 2 & 3

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

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

Coil Data: SPST-NO-DM — 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	25.0	480.0	5.76
1024	24	19.2	28.8	2.4	120.0	200.0	4.80
1028	28	22.4	33.6	2.8	134.0	209.0	5.86
1036	36	28.8	43.2	3.6	230.0	156.5	5.63
1048	48	38.4	57.6	4.8	410.0	117.1	5.97
1072	72	57.6	86.4	7.2	870.0	82.8	5.96

Coil Data - with external PWM economiser: SPST-NO-DM — 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)	✓

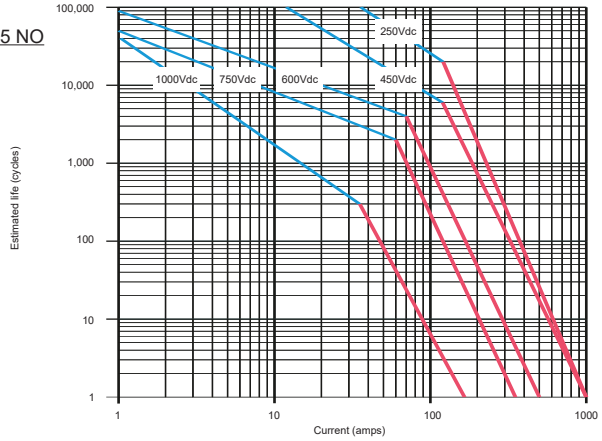
Coil Data: SPST-NC-DB — Table 3

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)
1012	12	9.0	13.2	1.2	23.0	522.0	6.26
1024	24	18.0	26.4	2.4	95.0	250.0	6.0

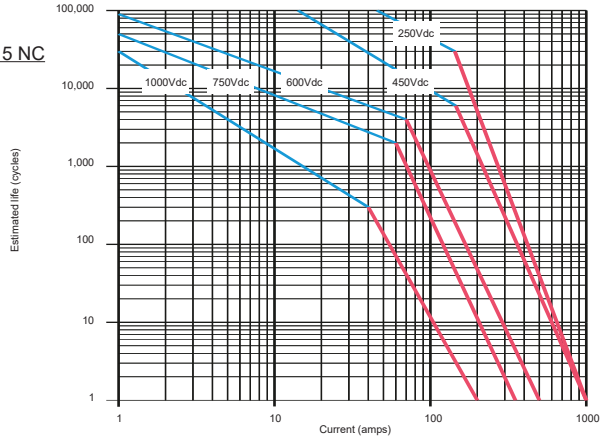
Electrical Performance — Fig. 1

Estimated Life - non-polarized contacts

DEVR15 NO

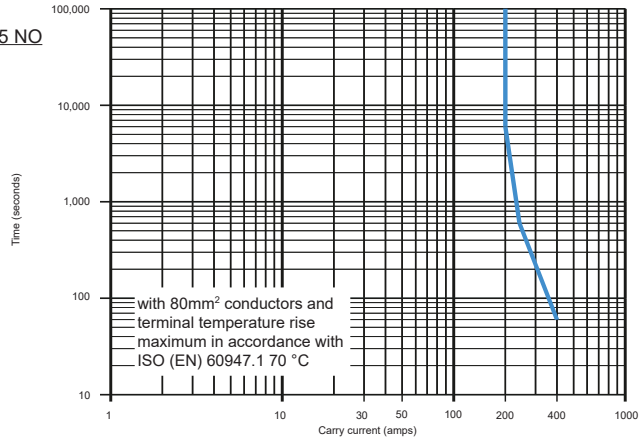


DEVR15 NC

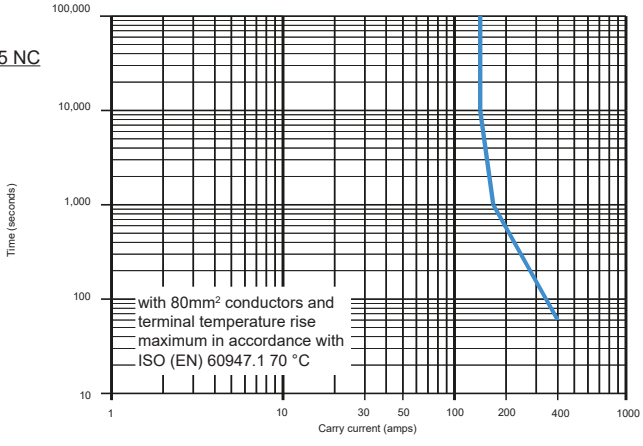


Carry current (A) vs, Time (seconds)

DEVR15 NO



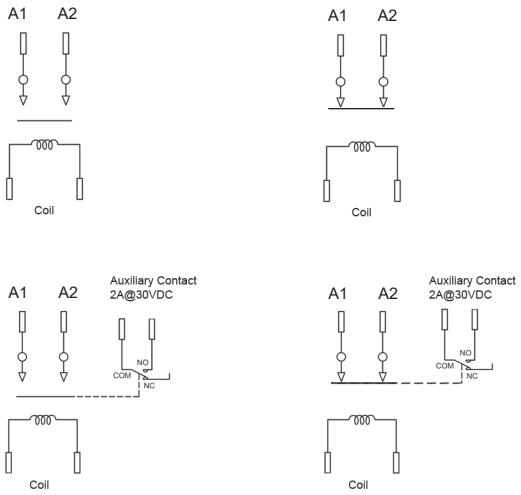
DEVR15 NC



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

Specifications are subject to change without notice. E&OE.

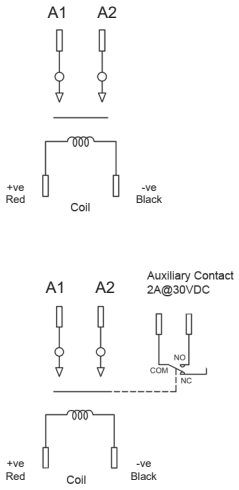
Circuit Diagram - standard coils (SPST-NO & SPST-NC) Fig. 2



Contact terminals are not polarized.

Coil terminals are not polarised.

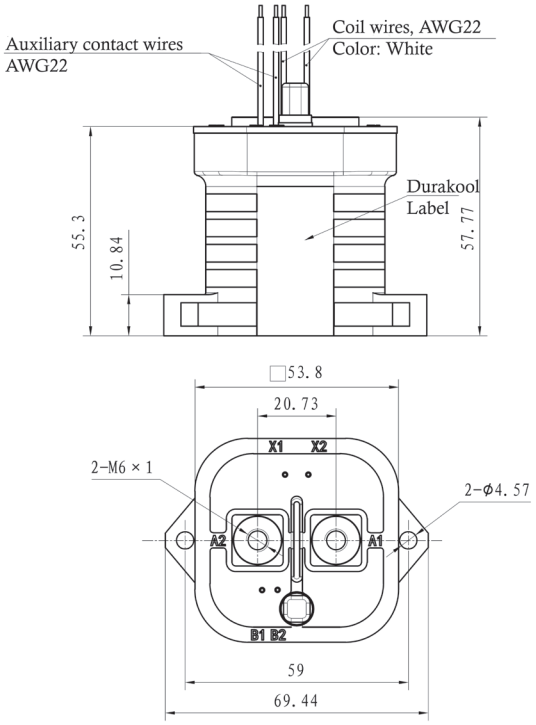
Circuit Diagram - external PWM economiser (SPST-NO) Fig. 3

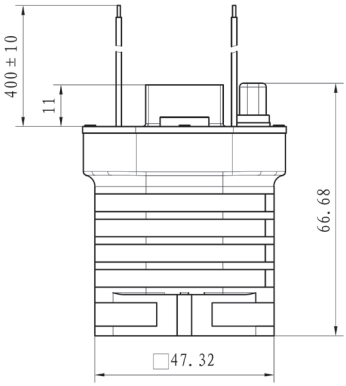


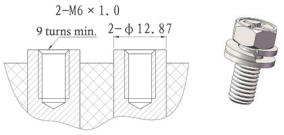
Contact terminals are not polarized.

Coil terminals are polarised.

Dimensions (mm) - standard coil types (SPST-NO & SPST-NC) Fig. 4







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

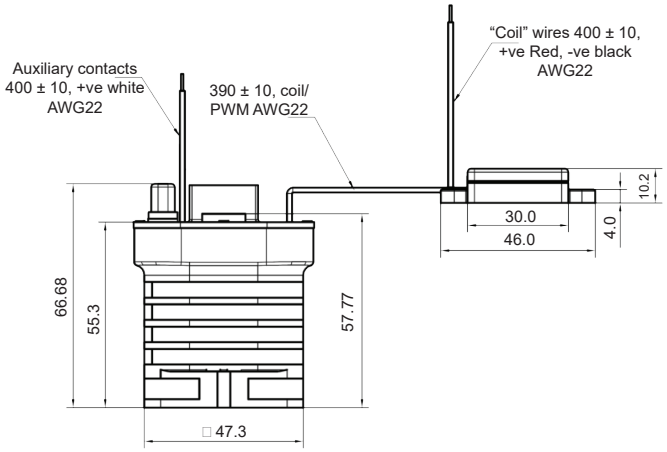
Recommended Conductor
80mm².
Preferred conductor: 100mm²

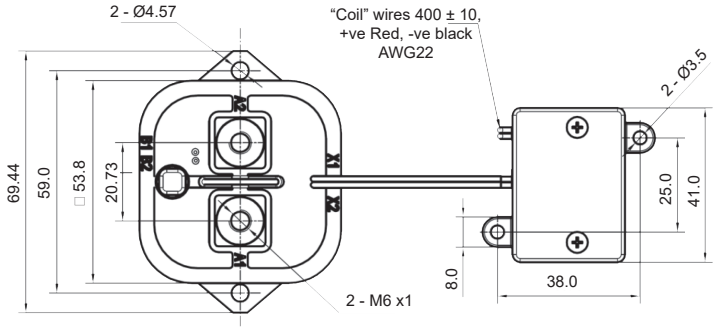
Torque settings
Terminals: 4.5 - 6.5Nm
Base Mounting: 1.8 to 2.5Nm

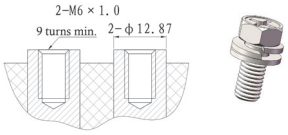
Notes:
1: Note coil is not polarized
2: Contacts are not polarized
3: Nominal dimensions in mm
4: Tolerances (nominal),
<10mm: ± 0.3mm, 10 ~ 50mm: ± 0.6mm >50mm: ± 1.0mm
5: Coil wire length and terminations can be customized upon request.

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
80mm^2.
Preferred conductor: 100mm^2

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

Notes:
1: Note coil is polarized
2: Contacts are not polarized
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 customized upon request.