



- Rated load: 500A at 60VDC
- Auxiliary contact option
- Bi-stable (Latching) option
- Busbar power terminations
- For battery storage applications



### Contacts

Contact arrangement	SPST-NO-DM
Contact material	AgCu Alloy
Max. switching voltage	DC 60VDC
Rated load (resistive, $\cos \varphi=1$ )	DC1 500A 60VDC
Max. continuous thermal current	500A
Fault current breaking capacity (resistive)	3000A @ 60VDC (UL508)
Terminal temperature rise above ambient	<70°C. IEC EN60947, GB14/14048.4
Contact voltage drop	max. $\leq 80\text{mV @ } 500\text{A}$
Auxiliary contact (when fitted)	arrangement SPST-NO + SPST-NC
	max. current 5A @ 24VDC / 2A @ 48VDC
	min. current 100mA @ 5V

### Coil

Nominal Voltage (see table 1)	DC 12, 24, 48, 60VDC
Rated power consumption	10~20W hold (non-Latch), 15~35W pulse (Latch)
Working duty	Continuous (not magnetic latch type)

### Insulation

Insulation resistance	initial	100M $\Omega$ (Min.) @500VDC
	life end	50M $\Omega$ (Min.)
Dielectric strength	coil to contact	1000V <sub>rms</sub> (50/60Hz) / <1mA / 1 min (at sea level)
	contact to contact	1000V <sub>rms</sub> (50/60Hz) / <1mA / 1 min (at sea level)

### General Data

Operate / bounce time at 20°C	max.	60ms / 5ms
Release time		60ms
Electrical life	at rated load	20,000 operations
Mechanical life	operations	1 x 10 <sup>5</sup>

### Environmental

Ambient temperature	operating	-25°C to +65°C (Latching), +85°C (non-Latching)
Shock resistance		$\leq 4\text{g}$ , (60 ~ 100 ops/min)
Vibration resistance		$\leq 3.0\text{g}$ sine peak (1 to 50Hz)
Relative humidity	RH	up to 98% at 20°C
Dimensions	L x W x H	128 x 50.8 x 103mm (over busbar terminations)
Weight	approx.	970g

### Ordering Code

D S C 5 0 - 4 0 2 1 - 2 8 - 1 0 2 4 - S 2 L

#### DSC Series

50: Standard

#### Coil codes

See tables 1 & 2

#### Contact arrangement

4021: SPST-NO-DM

#### Body style

28: Open frame and busbar connections

#### Accessory options

Blank: No option

S: Auxiliary switch

D: Parallel back emf diode suppression (standard coils)

T: Parallel TVS back emf suppression diode (bi-stable coils)

#### Mounting & terminations

Blank: No bracket

1L: One 'L' shaped mounting bracket

2L: Two 'L' shaped mounting brackets

2P: Two 'P' shaped mounting brackets

#### NB: Mounting orientation:

The DSC50 may be mounted horizontally, but if mounted vertically, the coil should be positioned downwards.

#### Magnetic latching types:

For latching types, ensure >200ms pulse length to allow contacts to settle and magnetic circuit to be fully established. Long term continuous coil energizing is not permitted.

DC Coil Data - DSC50 Standard (Mono-stable, non latching)

Table 1

Coil code	Nominal voltage (VDC) $U_s$	Coil working voltage range (V)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Coil power dissipation (W)	Holding current (A)
1012	12	0.85 $U_s$ ~ 1.1 $U_s$	8.4	1.2	10 ~ 20	≤1.2
1024	24		16.8	2.4	10 ~ 20	≤0.6
1048	48		33.6	4.8	10 ~ 20	≤0.3
1060	60		42.0	6.0	10 ~ 20	≤0.25

DC Coil Data - DSC50 Bi-stable, magnetic latching

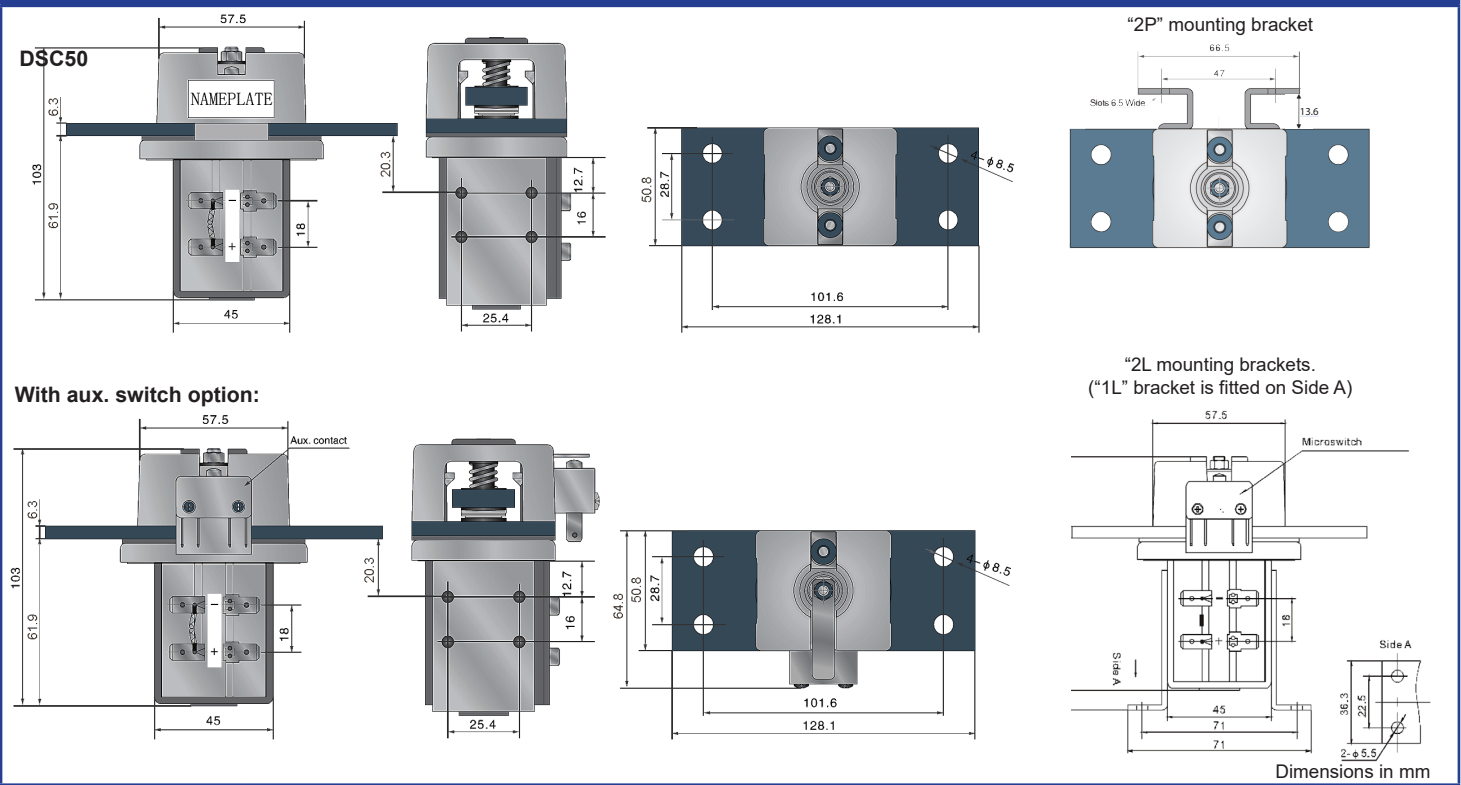
Table 2

Coil code	Nominal voltage (VDC) $U_s$	Coil working voltage range (V)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Coil power dissipation (W)	Coil power (W)
SL12	12	0.85 $U_s$ ~ 1.1 $U_s$	2.4 ~ 9.6	2.4 ~ 9.6	15 ~ 30	Initial 15~35W
SL24	24		4.8 ~ 19.2	4.8 ~ 19.2	15 ~ 30	
SL48	48		9.6 ~ 38.4	9.6 ~ 38.4	15 ~ 30	Pulse length ~1 sec
SL60	60		12.0 ~ 48.0	12.0 ~ 48.0	15 ~ 30	

Other coils available upon special request. MOQ's will apply.

Dimensions (mm)

Fig. 1



Connections

Fig. 2

