



- Rated load: 300A at 120VDC
- Auxiliary contact option
- Bi-stable (Latching) option
- Magnet arc “blowout” standard
- For battery storage applications



RoHS
Compliant

Contacts

Contact arrangement	SPST-NO-DM
Contact material	AgCu Alloy
Max. switching voltage	DC 120VDC
Rated load (resistive, $\cos \phi=1$)	DC1 300A 120VDC
Max. continuous thermal current	300A
Fault current breaking capacity (resistive)	3000A @ 120VDC (UL508)
Terminal temperature rise above ambient	<70°C. IEC EN60947, GB14/14048.4
Contact voltage drop	max. $\leq 80\text{mV}$ @ 500A
Auxiliary contact (when fitted)	arrangement SPST-NO + SPST-NC
	max. current 5A @ 24VDC / 2A @ 48VDC
	min. current 100mA @ 5V

Coil

Rated Voltage (see table 1)	DC 12, 24, 48, 60, 72, 80, 96, 120VDC
Rated power consumption	15~25W hold (non-Latch), 15~35W pulse (Latch)
Working duty	Continuous (not magnetic latch type)

Insulation

Insulation resistance	initial 100M Ω (Min.) @500VDC
	life end 50M Ω (Min.)
Dielectric strength	coil to contact 1000V _{rms} (50/60Hz) / <1mA / 1 min (at sea level)
	contact to contact 1000V _{rms} (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 ⁵

Environmental

Ambient temperature	operating -25°C to +65°C (Latching), +85°C (non-Latching)
Shock resistance	$\leq 4g$, (60 ~ 100ops/min)
Vibration resistance	$\leq 3.0g$ sine peak (1 to 50Hz)
Relative humidity	RH up to 98% at 20°C
Dimensions	L x W x H 60.7 x 48 x 123.3 mm (see Figs. 1 & 2)
Weight	approx. 800g (depends on options)

Ordering Code

D S C 3 0 M - 4 0 2 1 - 2 8 - 1 0 2 4 - S 2 L

DSC Series

30M: Magnet arc blowout

Coil codes

See tables 1 & 2

Contact arrangement

4021: SPST-NO-DM

Body style

28: Open frame and M8 male stud power terminals

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 (see Fig. 2)

Blank: No bracket

1L: One 'L' shaped mounting bracket

2L: Two 'L' shaped mounting brackets

2P: Two 'P' shaped mounting brackets

W: "W" shaped bracket

NB: Mounting orientation:

The DSC30M 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 - DSC30M 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	$0.85U_s \sim 1.1U_s$	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 - DSC30M Bi-stable, magnetic latching

Table 2

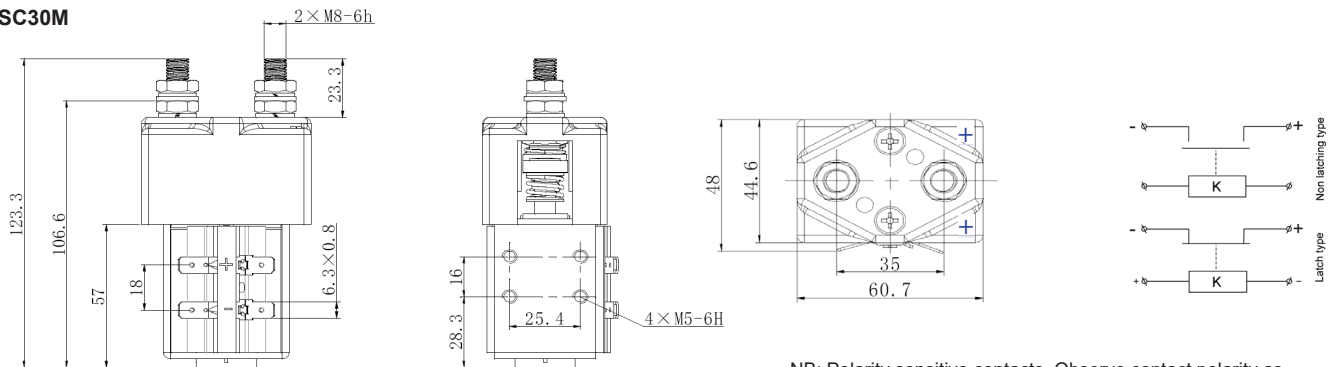
Coil code	Nominal voltage (VDC) U_s	Coil working voltage range (V)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Coil power dissipation (W)	Coil power (W)
SL12	12	$0.85U_s \sim 1.1U_s$	2.4 ~ 9.6	2.4 ~ 9.6	15 ~ 30	Initial 15~35W Pulse length ~1 sec
SL24	24		4.8 ~ 19.2	4.8 ~ 19.2	15 ~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

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

Dimensions (mm)

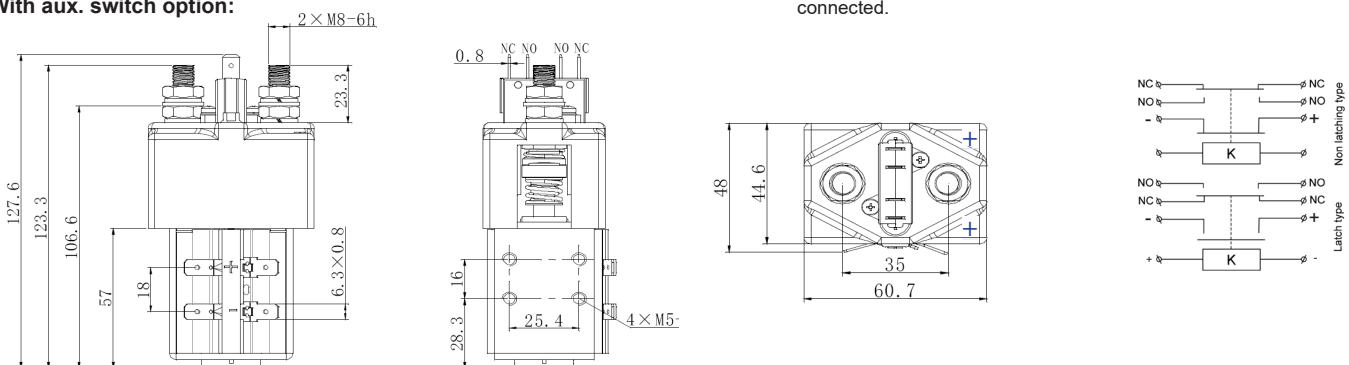
Fig. 1

DSC30M



NB: Polarity sensitive contacts. Observe contact polarity as indicated. Contactor life will be severely reduced if incorrectly connected.

With aux. switch option:



Dimensions in mm

Mounting brackets

Fig. 2

