DSC40 series
LVDC Contactor 400A / 60VDC / 120VDC

- Rated load: 400A at 60VDC
- 120VDC with Magnet arc blow-out option
- Auxiliary contact option
- SPST, SPDT, DPST-NO, DPDT versions
- Motor reverser
- Bi-stable (Latching) option - SPST only

UK CA CE c UL us E305753 RoHS Compliant

Contacts

Contact arrangement		SPST-NO-DM, SPDT, DPST-NO-DM, DPDT
Contact material		AgCu Alloy
Max. switching voltage	DC	60V, 120VDC with magnet arc blow-out
Rated load (resistive, cos φ=1)	DC1	400A 60VDC
Terminal temperature rise above ambient		<70°C. IEC EN60947, GB14/14048.4
Contact voltage drop	max.	≤ 80mV @ 400A
Auxiliary Contact (when fitted)	arrangement	SPST-NO (1 Form A) + SPST-NC
(not available for DPDT)	max. current	5A @ 24VDC / 2A @ 48VDC
	min. current	100mA @ 5V

Coil

Nominal Voltage (see page 2)	DC	12 ~ 120VDC (Tables 1 & 2)
Rated power consumption	hold	15 ~ 25W (non-latching type)
	initial	30 ~ 40W (latching)
Working duty	non-latch	continuous
Minimum pulse length	latch	200ms
Maximum operating frequency	latch coil	6 ops./min. square wave pulse

Insulation

Insulation resistance	Initial	100MΩ (min.) @500VDC
Dielectric strength	coil to contact	1000V_{rms} (50/60Hz) / <1mA / 1 min (at sea level)
	contact to contact	1000V_{rms} (50/60Hz, 1min, <1mA leakage)

General Data

Operate / bounce time at 20°C	max.	30ms / 3ms
Release time	max.	30ms
Electrical life	at rated load	20,000 ops
Mechanical life	no load	100,000 ops

Environmental

Ambient temperature	operating	-25°C to +65°C (Latching), +85°C (non-Latching)
Shock resistance		20g peak, 11ms 1/2 sine
Vibration resistance		3g sine peak (1-50Hz 0.5mm amplitude)
Relative humidity	RH	20% ~ 90%
Dimensions	L x W x H	Various - see dimensional drawings
Weight	approx.	Various according to option and style

Ordering Code

D S C 4 0 M - 4 0 2 1 - 2 8 - 1 0 2 4 - S D W

DSC Series
40: Standard
40M: Magnet arc blow-out

Coil codes
See tables 1 & 2

Contact arrangement
4011: SPDT (C/O) (1 Form C (1Z) non latching)
4012: Motor reverser (2 Form C (2Z) non latching)
4021: SPST-NO (1 Form A (H) and latching SPST)

Body style
28: Open frame, male stud terminals

Accessory options
Blank: No option
C: Dust cover
S: Auxiliary switch (not available for 4012 contacts)
D: Parallel back EMFdiode suppression (standard coils)
T: Parallel TVS back EMFsuppression diode (bi-stable coils)

Mounting & terminations
Blank: No bracket
W: 'W' shaped mounting bracket
1L: 'L' shaped mounting bracket
2L: 2 x 'L' shaped mounting brackets

Coil Data - Standard (monostable) coil — Table 1

Coil code	Nominal voltage U_s (VDC)	Recommended coil operating range (V)	Must operate max. voltage (VDC)	Must release voltage min. (VDC)	Starting current (A)	Coil power (W)
1012	12	$0.85U_s$ ~ $1.2U_s$	≤ 8.4	≥ 1.2	≤ 1.5	15 ~ 25W
1024	24		≤ 16.8	≥ 2.4	≤ 0.7	
1030	30		≤ 21.0	≥ 3.0	≤ 0.6	
1036	36		≤ 25.2	≥ 3.6	≤ 0.5	
1048	48		≤ 33.6	≥ 4.8	≤ 0.35	
1060	60		≤ 42.0	≥ 6.0	≤ 0.30	
1072	72		≤ 50.4	≥ 7.2	≤ 0.25	
1080	80		≤ 56.0	≥ 8.0	≤ 0.20	
1096	96		≤ 67.2	≥ 9.6	≤ 0.2	
1120	120		≤ 84.0	≥ 12.0	≤ 0.15	

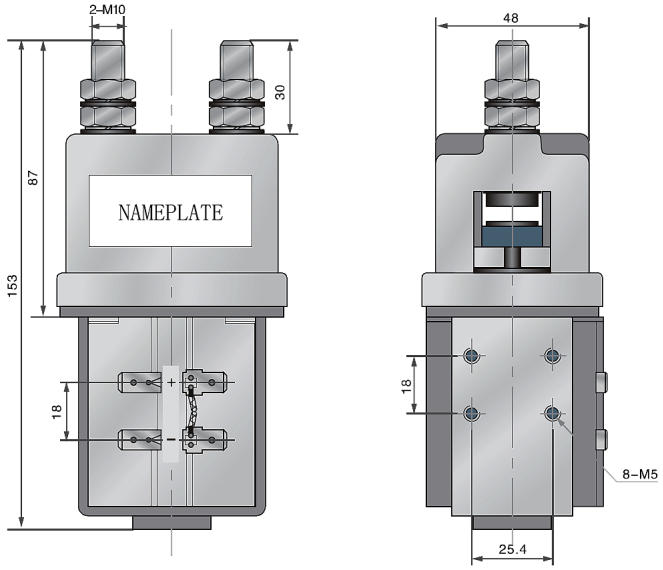
Coil Data - Single coil latch (bi-stable). Reverse polarity through coil to unlatch. SPST-NO-DM only — Table 2

Coil code	Nominal voltage U_s (VDC)	Recommended coil operating range (V)	Must operate max. voltage (VDC)	Must release voltage min. (VDC)	Starting current (A)	Coil power (W)
SL12	12	$0.85U_s$ ~ $1.2U_s$	≤ 9.6	≤ 9.6	≤ 2.50	Initial 30 ~ 45W Pulse length 0.5 ~ 1 sec.
SL24	24		≤ 19.2	≤ 19.2	≤ 1.50	
SL30	30		≤ 24.0	≤ 24.0	≤ 1.00	
SL36	36		≤ 28.8	≤ 28.8	≤ 1.00	
SL48	48		≤ 38.4	≤ 38.4	≤ 0.80	
SL60	60		≤ 48.0	≤ 48.0	≤ 0.60	
SL72	72		≤ 57.6	≤ 57.6	≤ 0.50	
SL80	80		≤ 64.0	≤ 64.0	≤ 0.40	
SL96	96		≤ 76.8	≤ 76.8	≤ 0.35	
SL120	120		≤ 96.0	≤ 96.0	≤ 0.30	

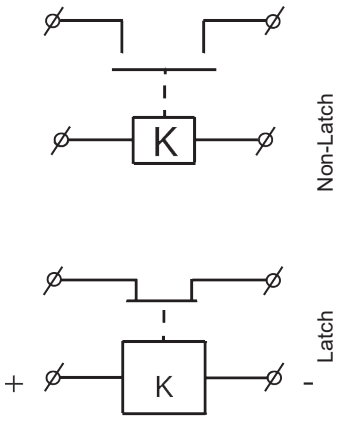
Other coils available upon special request. MOQ's will apply.

Dimensions (mm) — Fig. 1

DSC40-4021-28-****



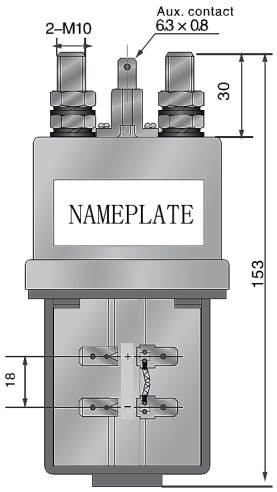
Circuit Diagram

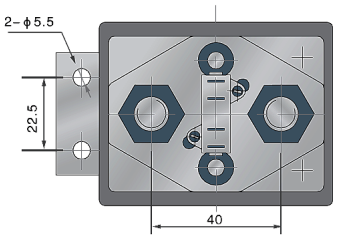


Specifications are subject to change without notice. E&OE.

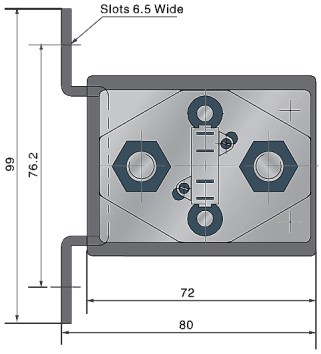
Dimensions (mm) — Fig. 2

DSC40-4021-28-****-S-**





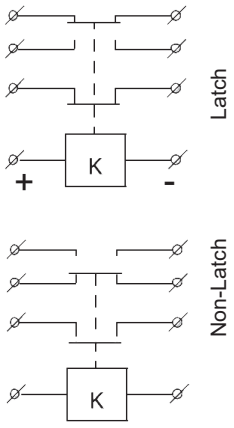
"1L" mounting bracket shown ("2L" is additional bracket on opposite side)



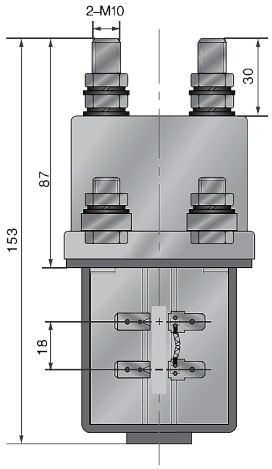
"W" mounting bracket

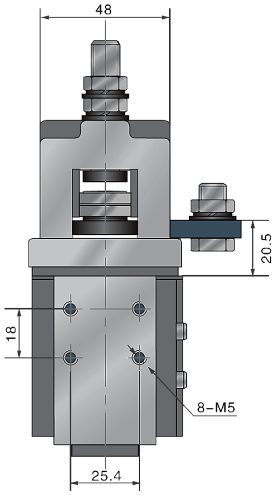
See Page 3 for 4012 contact option "W" mounting brackets

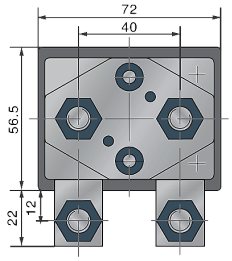
Circuit Diagram



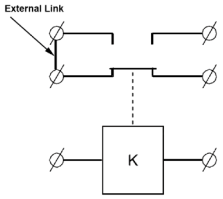
DSC40-4011-28-****-**







Circuit Diagram



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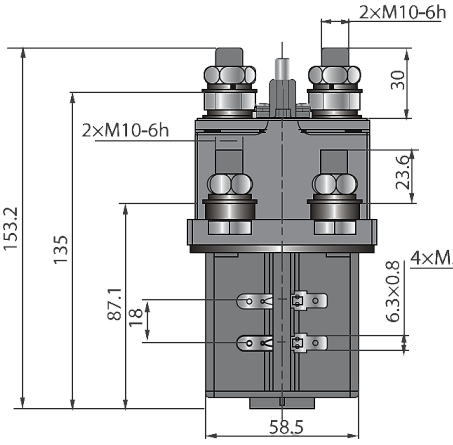
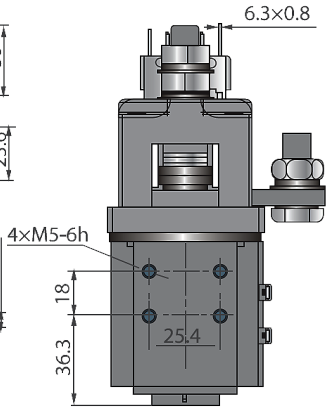
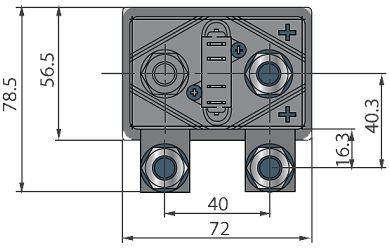
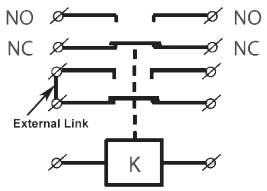




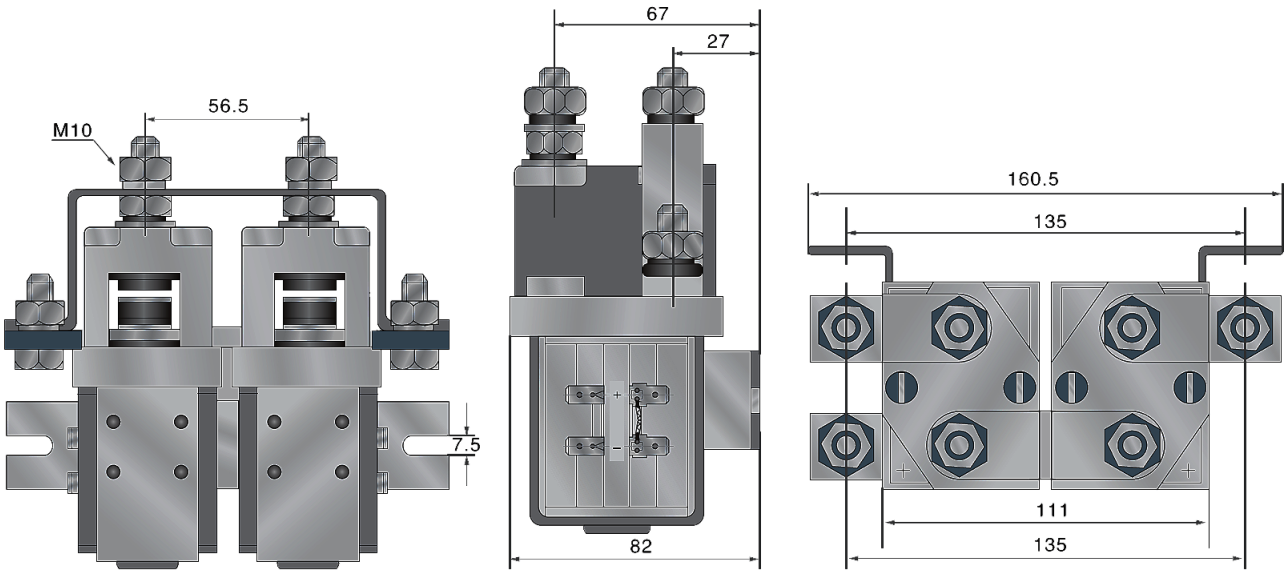


Circuit Diagram



Dimensions (mm) **Fig. 3**

DSC40-4012-28-****



Circuit Diagram