



- Rated load: 125A at 60VDC
- 120VDC with magnet arc blow-out option
- Auxiliary contact option
- SPST, SPDT, DPST-NO versions
- Motor reverser
- Bi-stable (Latching) option - SPST only



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 option |
| Rated load (resistive, cos φ=1) | DC1 | 125A 60VDC |
| Working duty | non latch | Continuous |
| Terminal temperature rise above ambient | <70°C. IEC EN60947, GB14/14048.4 | |
| Contact voltage drop | max. | ≤ 80mV @ 125A |
| Auxiliary Contact (when fitted) | arrangement | SPST-NO (1 Form A) |
| | 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 | 5 ~ 9W (non-latching type) |
| | initial | 20 ~ 35W (latching) |
| Working duty | latch coil | continuous |
| Minimum pulse length | latch coil | 200ms |
| Maximum operating frequency | non-latch | 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 (c.380g) |

Ordering Code

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

DSC Series

12: Standard

12M: 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)

4022: DPST-NO-DM (2 Form A (2H) non latching)

Body style

28: Open frame, male stud terminals

Accessory options

Blank: No option

C: Dust cover IP40 (4021 contact option only)

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

W: 'W' shaped mounting bracket

1L: 'L' shape mounting bracket (4021 & 4022 contacts only)

2L: 2 x 'L' shape mounting brackets (4021 & 4022 contacts only)

2P: 2 x 'P' shaped mounting brackets (not 4012 contacts)

* DSC12M not available for 4012 or 4022 contact options

Coil Data - Standard (monostable) coil Table 1

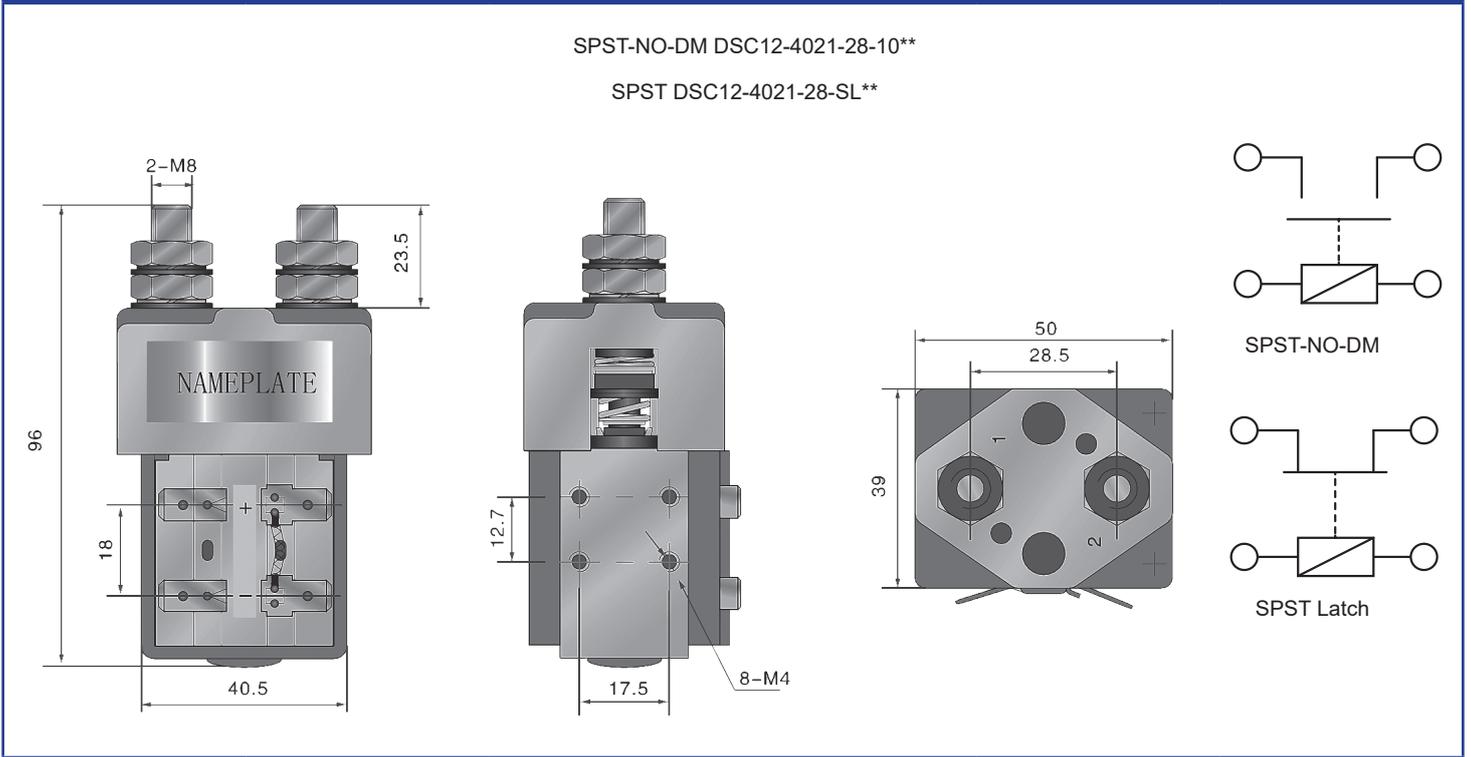
| Coil code | Nominal voltage U_s (VDC) | Recommended coil operating range (V) | Must operate max. voltage (VDC) | Must release voltage min. (VDC) | Starting current (A) | Coil power (W) |
|-----------|-----------------------------|--------------------------------------|---------------------------------|---------------------------------|----------------------|----------------|
| 1012 | 12 | 0.85 U_s ~ 1.2 U_s | ≤ 8.4 | ≥ 1.2 | ≤ 1.0 | 5 ~ 9W |
| 1024 | 24 | | ≤ 16.8 | ≥ 2.4 | ≤ 0.6 | |
| 1030 | 30 | | ≤ 21.0 | ≥ 3.0 | ≤ 0.6 | |
| 1036 | 36 | | ≤ 25.2 | ≥ 3.6 | ≤ 0.5 | |
| 1048 | 48 | | ≤ 33.6 | ≥ 4.8 | ≤ 0.3 | |
| 1060 | 60 | | ≤ 42.0 | ≥ 6.0 | ≤ 0.25 | |
| 1072 | 72 | | ≤ 50.4 | ≥ 7.2 | ≤ 0.2 | |
| 1080 | 80 | | ≤ 56.0 | ≥ 8.0 | ≤ 0.15 | |
| 1096 | 96 | | ≤ 67.2 | ≥ 9.6 | ≤ 0.15 | |
| 1120 | 120 | | ≤ 84.0 | ≥ 12.0 | ≤ 0.15 | |

Coil Data - Single coil latch (bi-stable). Reverse polarity through coil to unlatch. SPST 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 | 0.85 U_s ~ 1.2 U_s | ≤ 9.6 | ≤ 9.6 | ≤ 2.0 | Initial 20 ~ 35W Pulse length 0.5 ~ 1 sec. |
| SL24 | 24 | | ≤ 19.2 | ≤ 19.2 | ≤ 1.0 | |
| SL30 | 30 | | ≤ 24.0 | ≤ 24.0 | ≤ 0.70 | |
| SL36 | 36 | | ≤ 28.8 | ≤ 28.8 | ≤ 0.50 | |
| SL48 | 48 | | ≤ 38.4 | ≤ 38.4 | ≤ 0.40 | |
| SL60 | 60 | | ≤ 48.0 | ≤ 48.0 | ≤ 0.40 | |
| SL72 | 72 | | ≤ 57.6 | ≤ 57.6 | ≤ 0.35 | |
| SL80 | 80 | | ≤ 64.0 | ≤ 64.0 | ≤ 0.35 | |
| SL96 | 96 | | ≤ 76.8 | ≤ 76.8 | ≤ 0.30 | |
| SL120 | 120 | | ≤ 96.0 | ≤ 96.0 | ≤ 0.25 | |

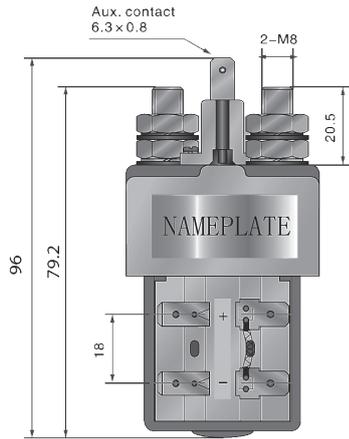
Other coils available upon special request. MOQ's will apply.

Dimensions (mm) Fig. 1

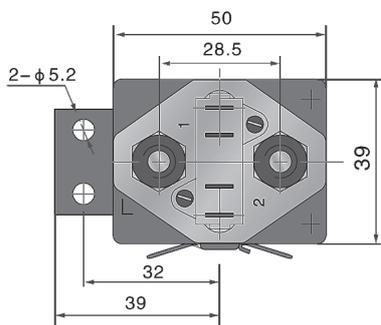
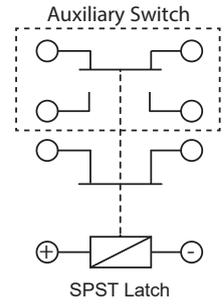
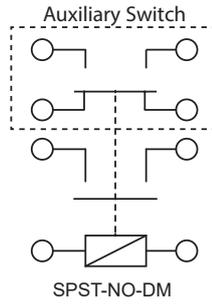


Dimensions (mm)

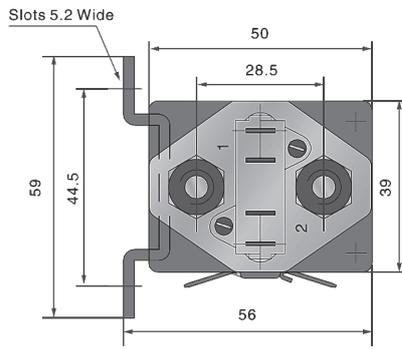
Fig. 2



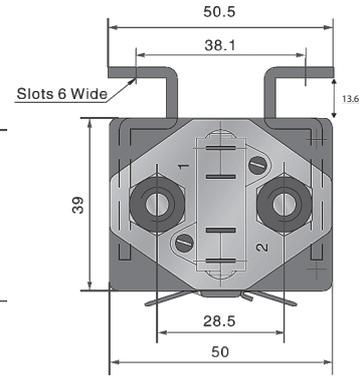
SPST DSC12-4021-28-****-S



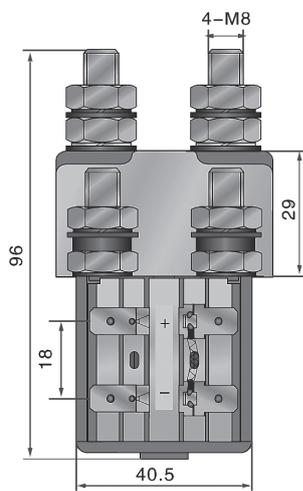
with optional "L" shaped bracket



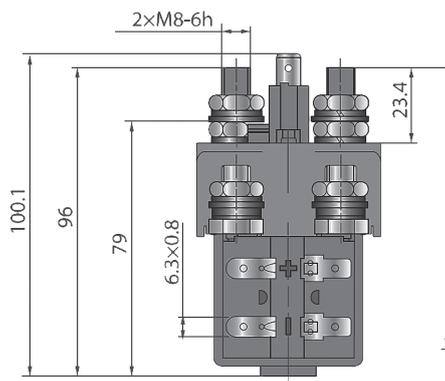
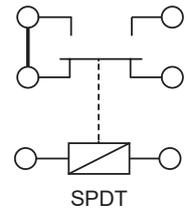
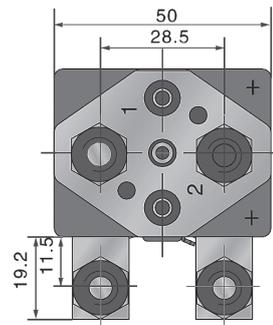
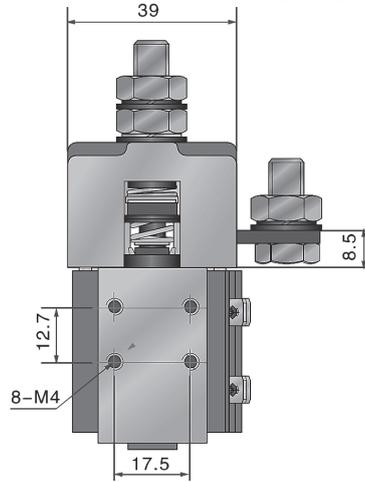
with optional "W" shaped bracket



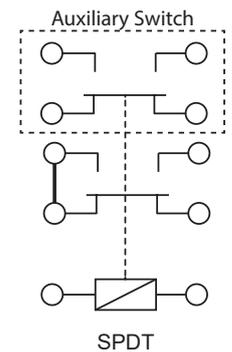
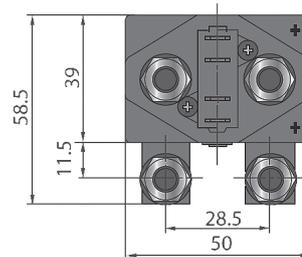
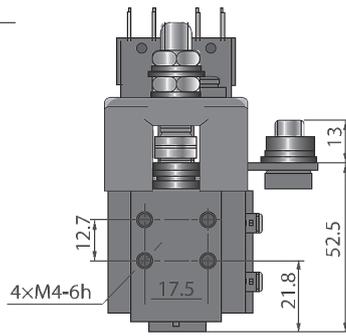
with optional 2 x "P" shaped brackets



SPDT DSC12-4011-28-****



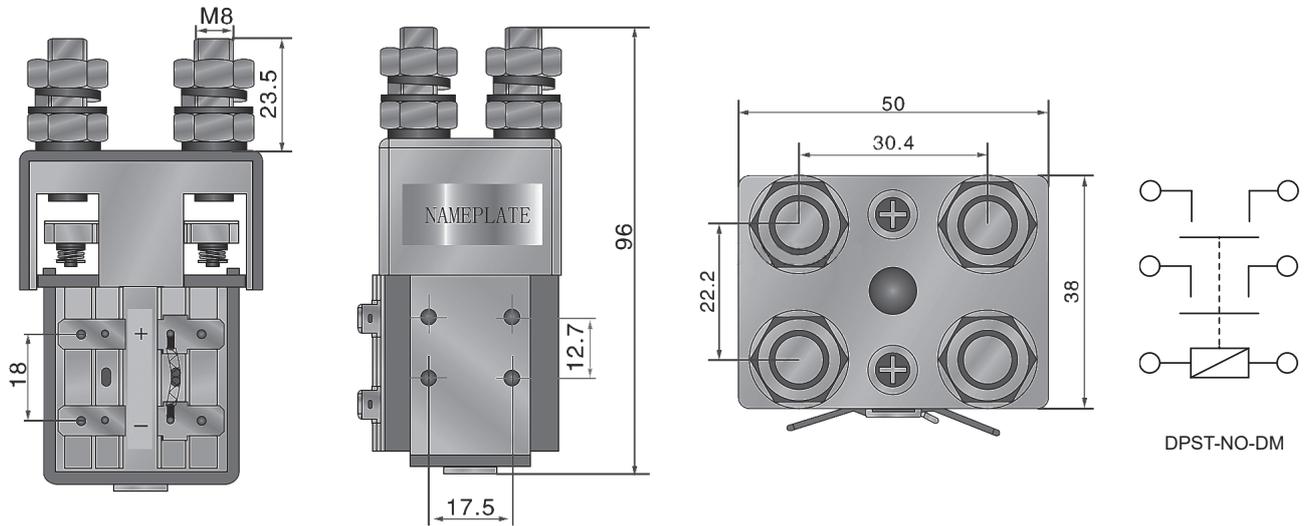
SPST DSC12-4011-28-****-S



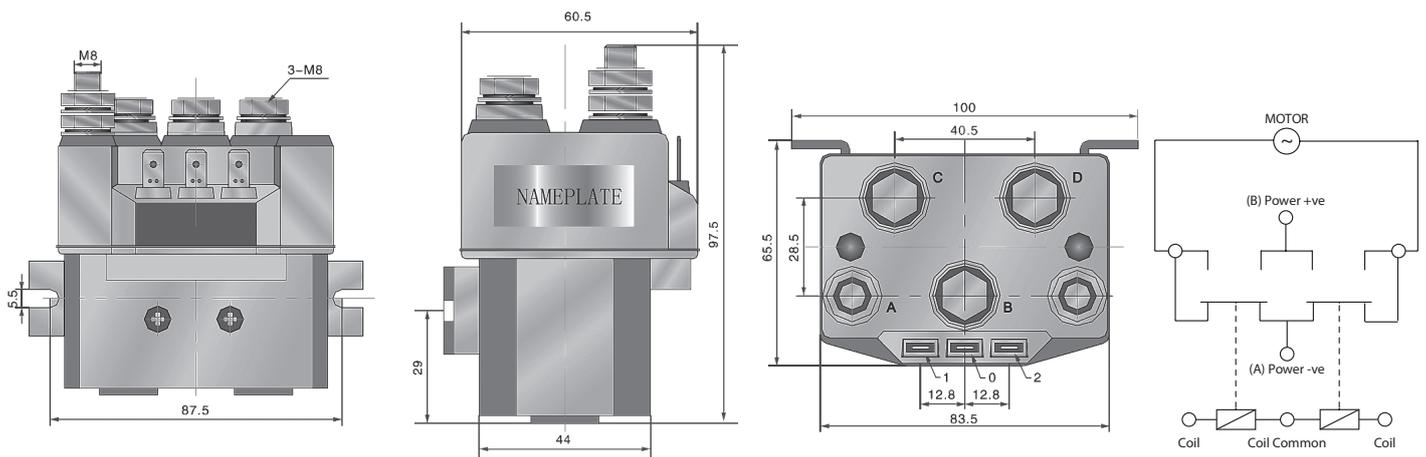
Dimensions (mm)

Fig. 3

DPST DSC12-4022-28-****



DPDT DSC12-4012-28-****-W



Motor Reverser with optional "W" bracket