



- DPST-NO rated 2 x 40A / 277VAC
- Designed for EV charging & PV systems
- PCB mounting miniature case size
- 3.2mm contact gap
- Complies with IEC62955
- Optional auxiliary NC contact



Contacts

Contact arrangement	DPST-NO-DM (+ SPST-NC optional aux.)	
Contact material	AgSnO ₂	
Rated current @ 277VAC	AC1	2 x 40A (main contacts)*, 1A (aux.)
		*80A continuous using both sets of contacts, at 25°C ambient and temperature rise in accordance with IEC(EN) 60947
Max. switching voltage / current	277VAC (50/60Hz) / 40A	
Max. breaking capacity	11080VA (main contacts), 277VA (aux.)	
Breaking capacity	IEC 62955	500A 277VAC
Initial contact resistance	main contacts	10mΩ at 6VDC / 20A : 100mΩ at 6VDC / 1A
Inrush current	IEC 61851	230A for 100μs
Surge current	IEC 62955	3kA fo 8/20μs
Short circuit tests	IEC 62955	I _p ≥ 1.85KA, I _t ≥ 4.5kA ² s
	IEC 62752	I _p ≥ 1.5KA, I _t ≥ 6kA ² s
	IEC 62052	I _t ≥ 9kA ² s
Electrical life (1s ON / 9s OFF 85°C)	cycles	> 10,000 at 40A : > 30,000 at 35A / 277VAC
		≥ 50,000 at 16A / 277VAC
Mechanical life	cycles	> 1 x 10 ⁶ (no load)

Coil

Nominal operating range	DC	6, 9, 12, 24, 48V See Table 1
Rated power consumption		1.88W See Table 1
Operate / Release time	typical	≤ 30ms / ≤ 10ms

Insulation

Coil insulation system	RTII, IEC 31, CLASS F 155°C	
Insulation resistance	> 1000 MΩ at 500VDC, 50%RH	
Insulation distance	between main contacts and coil	> 10.9mm / 12.6mm (clearance / creepage)
	between main contacts	5.5mm / 8.0mm (clearance / creepage)
Surge voltage	between main contacts and coil	10,000V (1.2/50μs)
	between coil and auxiliary contacts	2500V (1.2/50μs)
Dielectric strength	coil to main contacts	5,000V _{rms} (50/60Hz, 1min, <1mA leakage)
	between main contact sets	5,000V _{rms} (50/60Hz, 1min, <10mA leakage)
	open main contacts	2,000V _{rms} (50/60Hz, 1min, <1mA leakage)
	between main contacts and auxiliary contacts	2,000V _{rms} (50/60Hz, 1min, <1mA leakage)
	between auxiliary contacts and coil	2,000V _{rms} (50/60Hz, 1min, <1mA leakage)
	between open auxiliary contacts	1,000V _{rms} (50/60Hz, 1min, <10mA leakage)

Ordering Code

D E 4 0 - 5 0 A 2 - 2 5 - 1 0 1 2

Series

Coil code:

See table 1

Contact material

50: AgSnO₂

Contact arrangement

22: DPST-NO-DM (2 Form X)

A2: DPST-NO-DM (2 Form X)

+ SPST-NC auxiliary contact

Mounting & terminations

25: PCB mount, Plain cover - Flux tight to RTII

Auxiliary Contact Details

Contact form: SPST-NC (1 Form B)

Contact material: AgNi

Contact rating: 1A 277VAC, 1A 30VDC (resistive)

Max switching power: 277VA / 30W

Initial contact resistance: ≤ 100mΩ (6VDC 1A)

Contact gap: ≥ 0.8mm

Environmental		
Ambient temperature	operating	-40 to +85°C (without icing or condensation)
Ambient humidity		5% RH to 85% RH
Shock resistance	Destruction	980 m/s ² (100G)
	Malfunction	98 m/s ² (10G)
Vibration resistance	Destruction	10Hz to 55Hz, 1.5mm (DA)
	Malfunction	10Hz to 55Hz, 1.0mm (DA)
Enclosure	UL 94V-0	V. (Vented), Flux-tight RTII
Dimensions	L x W x H	36 x 30 x 40mm approx.(excluding terminals)
Weight	approx.	66g

DC Coil Data : (@ 23°C)							Table 1
Coil code	Nominal voltage U _n (VDC)	Must operate voltage max. (VDC)	Must release voltage min. (VDC)	Coil resistance Ω ±10%	Coil Current (mA) (at nominal voltage)	Coil power (W)	Holding Voltage. (at max ambient temperature 85°C)
1006	6	4.5	0.3	19.1	314	1.88	We recommend using a reduced coil holding voltage of 50 - 60% of U _n at +85°C. Please note the relay requires 100ms after reduced operating voltage is applied to achieve maximum stability.
1009	9	6.75	0.45	43.1	209		
1012	12	9.0	0.6	76.6	157		
1024	24	18.0	1.2	306.4	78		
1048	48	36.0	2.4	1225.5	39		

