



- DPST-NO Rated 2 x 40A / 277VAC
- Designed for EV charging systems
- Sealed cover
- PCB mounting miniature case size
- >2mm Contact gap, 3mm contact gap optional
- Optional auxiliary NC contact is mechanically linked to main contacts (IEC61810-3)



RoHS  
Compliant ✓

## Contacts

Contact arrangement	DPST-NO-DM (2 Form X)
Contact material	AgSnO <sub>2</sub>
Rated current	AC1 2 x 40A
Max. switching voltage	277VAC
Max. breaking capacity	11000VA
Initial contact resistance	main contacts 10mΩ at 6VDC/20A
Min. switched load	1A / 12VDC
Max. operating frequency	rated load 360 cycles/hour

## Coil

Operating range	DC 12VDC, 24VDC See tables 1 & 2
Rated power consumption	DE35 1.8W @ 23°C: DE35G 3W @ 23°C

## Insulation

Coil insulation system	IEC 31, CLASS F 155°C
Insulation resistance	>100 MΩ at 500VDC, 50%RH
Dielectric strength	
coil to contact	4000V <sub>rms</sub> (50/60Hz, 1min, <1mA leakage)
DE35: open contacts	3000V <sub>rms</sub> (50/60Hz, 1min, <1mA leakage)
DE35G: open contacts	4000V <sub>rms</sub> (50/60Hz, 1min, <1mA leakage)

## General Data

Operate time	typical	30ms
Release time	typical	10ms
Electrical life (standard version)	cycles	6 x 10 <sup>3</sup> at 40A 253VAC, 85°C 1s ON 9s OFF
Mechanical life	cycles	>1 x 10 <sup>5</sup>

## Environmental

Environmental protection	IP67	
Ambient temperature	operating	-40 to +85°C
	storage	-40 to +125°C
Mechanical shock		20g, 11ms
Vibration resistance		10-40Hz: DA1.27mm, 40-70Hz 5g
		70-100Hz: DA0.5mm, 100-500Hz: 5g
Dimensions	L x W x H	49 x 26.5 x 30mm approx.(excluding pins)
Weight	approx.	70g

## Ordering Code

D E 3 5 G - 5 0 A 2 - 3 5 - 1 0 1 2

### Series

NIL: standard contact gap  
G: 3mm contact gap

### Contact material

50: AgSnO<sub>2</sub>

### Contact arrangement

22: DPST-NO-DM (2 Form X)  
A2: DPST-NO-DM (2 Form X)  
+ SPST-NC auxiliary contact  
available with DE35G type only

### Mounting & terminations

35: Plain cover - PCB mounting IP67 sealed

### 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: 0.5mm in accordance with IEC61810-3

DE35G with aux. switch not UL approved.

DC Coil Data : DE35-5022

Table 1

Coil code	Nominal voltage $U_n$ (VDC)	Must operate voltage max. (VDC at 23°C)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)	Coil resistance $\Omega \pm 10\%$ (at 30°C)	Coil Current (mA) at nominal voltage
1012	12	9.00	18.0	1.0	80	160
1024	24	18.0	35.0	2.0	320	75

DC Coil Data : DE35G-5022\* (with 3mm contact gap)

Table 2

Coil code	Nominal voltage $U_n$ (VDC)	Must operate voltage max. (VDC at 23°C)	Max. allowable voltage (VDC)	Must release voltage min. (VDC)	Coil resistance $\Omega \pm 10\%$ (at 30°C)	Coil Current (mA) at nominal voltage
1012	12	9.00	18.0	1.0	48	250
1024	24	18.0	35.0	2.0	192	125

DC Coil Data : DE35G-50A2\* (with 3mm contact gap & auxiliary contact)

Table 3

Coil code	Nominal voltage $U_n$ (VDC)	Must operate voltage max. (VDC at 23°C)	Max. allowable voltage (VDC at 23°C)	Must release voltage min. (VDC)	Coil resistance $\Omega \pm 10\%$ (at 30°C)	Coil Current (mA) at nominal voltage
1012	12	9.00	13.2	0.8	48	250
1024	24	18.0	26.4	1.2	192	125

**\*Note:**

The DE35G version's coil temperature rise can exceed 55°C if used on continuous duty or at high currents. We strongly recommend using a reduced coil holding voltage of 30-60%  $U_n$ , or current limiter after 0.1sec, to avoid overheating the relay coil. At ambient temperature of 85°C, Maximum allowable voltage should be reduced to 72%.

**Circuit Diagram**

Fig 1



**Dimensions**

Fig 2

