- 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
- Complies with IEC62955
- Optional auxiliary NC contact is mechanically linked to main contacts (IEC61810-3)

cRUus E305753 RoHS Compliant ✓

Contacts

Contact arrangement		DPST-NO-DM (2 Form X)
Contact material		AgSnO$_2$
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 insulaton system		IEC 31, CLASS F 155°C
Insulation resistance		>100 MΩ at 500VDC, 50%RH
Dielectric strength		
	coil to contact	4000V$_{rms}$ (50/60Hz, 1min, <1mA leakage)
	DE35: open contacts	3000V$_{rms}$ (50/60Hz, 1min, <1mA leakage)
	DE35G: open contacts	4000V$_{rms}$ (50/60Hz, 1min, <1mA leakage)

General Data

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

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: AgSnO₂

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
34: Plain cover - PCB mounting IP67 sealed, Complies with IEC62955 (DE35G only) e.g. DE35G-50A2-34-1012
35: Plain cover - PCB mounting IP67 sealed

Coil code:
See Tables 1, 2 & 3

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.

DE35 102523JHM

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

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 Ω ±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 Ω ±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 Ω ±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 55ºC if used on continuous duty.
We strongly recommend using a reduced coil holding voltage of 30-60% of U_n, after 0.25sec, to avoid overheating the relay coil.
Please note that coil requires 100ms minimum after reduced operating voltage is applied to achieve maximum stability.
At ambient temperature of 85ºC, Maximum allowable voltage should be reduced to 72% of U_n.

Circuit Diagram — Fig 1

Without optional auxiliary switch

With optional auxiliary switch

Dimensions — Fig 2

Without optional auxiliary switch

With optional auxiliary switch

With auxiliary switch & IEC62955 compliant

Standard DE35 & DE35G

DE35G IEC62955 compliant

Only fitted to version with optional auxiliary switch

Only fitted to version with optional auxiliary switch

Dimensions in mm

DE35 102523JHM

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