



- Industry Standard micro-ISO plug-in relay
- Up to 120A 12VDC inrush capability
- PCB Mounting option
- 40A Continuous current rating
- Cost effective

RoHS
Compliant ✓

Contacts

Contact arrangement	SPST-NO (1 Form A); SPDT (1 Form C)
Contact material	AgNi0.15; AgNi90/10; AgSnOInO
Max. switching voltage	DC 16VDC (current dependent - see Fig 3)
Rated load (max. continuous current)	DC1 40A/12VDC (NO); 30A/12VDC (NC)
Max. switching current ³	make 90A (120A:AgSnOInO) (NO); 45A (NC)
	break 40A (NO); 30A (NC)
Minimum load	AgNi0.15: 0.1A/12VDC, AgSnOInO: 0.5A/12VDC
Initial resistance	50mΩ, max. at 0.1A/6VDC

Coil

Nominal voltage	DC 6...24V
Must release voltage	≥0.1Un
Operating range of supply voltage	See table 1
Power consumption (approx.)	DC 1.2W (SPST-NO) / 1.5W (SPDT) ; 1.8W with resistor

Insulation

Insulation resistance	100MΩ at 500VDC, 50%RH
Dielectric strength	coil to contact 500Vrms, 1min
	open contacts 500Vrms, 1min

General Data

Operating time	typ. 9ms
Release time	typ. 7ms
Electrical life ²	ops. 2 x 10 ⁶
Mechanical life	ops. 1 x 10 ⁷

Environmental

Environmental protection	IP54, IP67 optional
Ambient temperature	operating -40 to 125°C (Derate above 85°C - consult factory)
	storage -40 to +155°C
Shock resistance	functional 20g, 11ms
	destructive 100g
Vibration resistance	DA 1.27mm 10-40Hz / 40-70Hz:5g
	DA 0.5mm 100-500Hz: 10g
Dimensions	L x W x H 23.5 x 15.7 x 26.0 mm (excluding terminals)
Weight	approx. Plug-in: 21g / PCB: 19g

Ordering Code

D G 8 2 - 2 0 1 1 - 7 6 - 1 0 1 2 - H B D

Series

Contact material

20: AgNi 90/10

70: AgSnOInO

80: AgNi 0.15

Contact arrangement

11: SPDT (1 C/O, 1 Form C)

21: SPST-NO (1 N/O, 1 Form A)

Environmental protection

3: In cover, sealed IP67

7: In cover, dust cover IP54

Mounting & terminations

5: For PCB

6: Flat blades

Coil options

Blank: UL Class F coil insulation

H: UL Class H insulation for higher ambient temperatures consult factory

Parallel component options

Blank: No option

R: Resistor (see table 1 for values)

D: Diode (+85/-86)

DR: Diode reversed (-85/+86) - standard

BD: Bidirectional diode

Coil Data

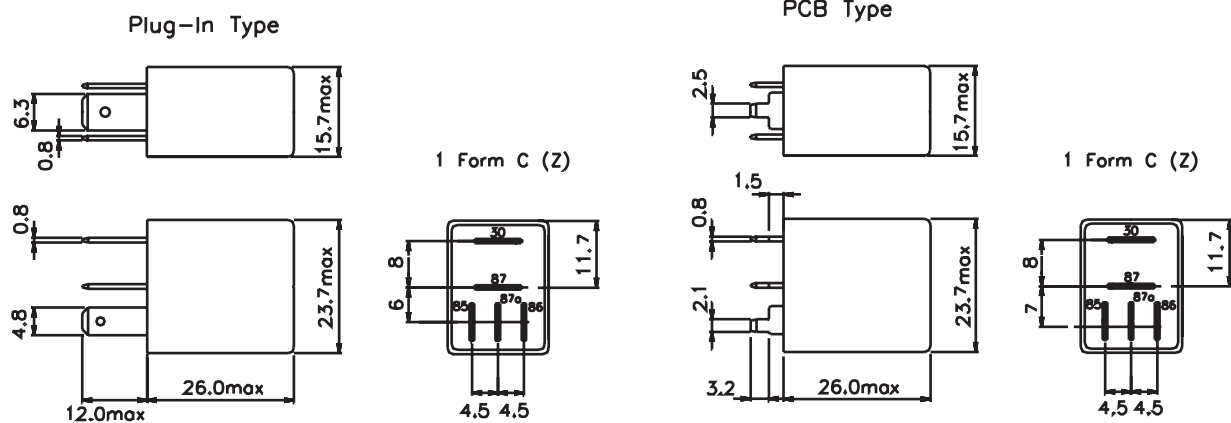
Table 1

Coil code	Nominal voltage (VDC)	Coil resistance (Ω) $\pm 10\%$		Must operate voltage max. (VDC)	Allowable voltage (VDC)*		Must release voltage min. (VDC)	Parallel resistor (optional) (Ω)
		1 Form A	1 Form C		1 Form A	1 Form C		
1006	6	32	25	3.6	10.4	9.2	0.6	170
1012	12	123	97	7.2	20.4	18.1	1.2	680
1024	24	483	384	14.4	40.4	36.0	2.4	2720

* At ambient temperature of 85°C, maximum allowable voltage should be reduced by 28%

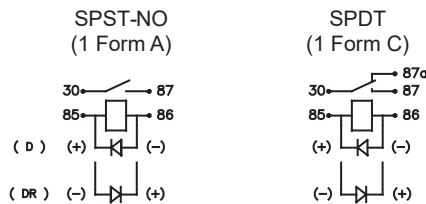
Dimensions mm

Fig. 1



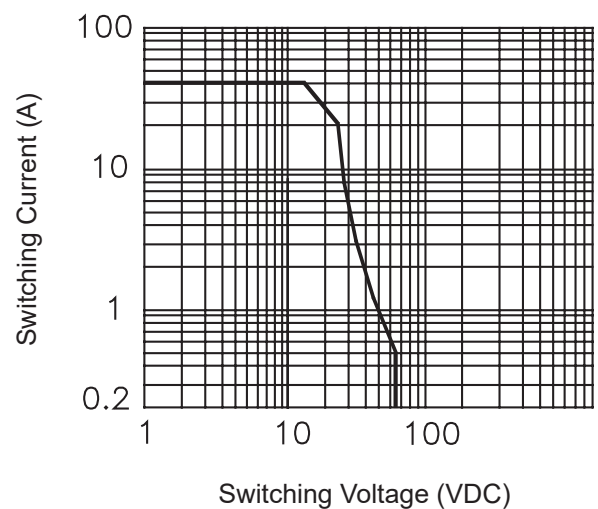
Wiring Diagrams

Fig. 2



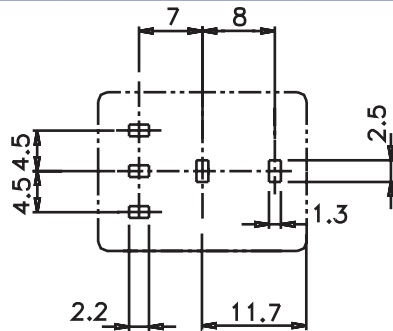
Reference Curve

Fig. 4



PCB Mounting Dimensions mm

Fig. 3



Notes:

- 1: All parameters, unless otherwise specified, are measured at ambient temperature of 23°C.
- 2: Electrical life obtained at resistive or inductive load at 40A, 15VDC with suitable arc suppression circuit attached and with operating frequency of 1 op/sec.
- 3: Maximum make current refers to lamp load inrush current.