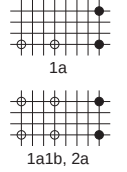
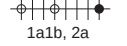
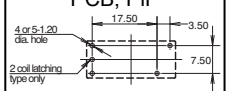
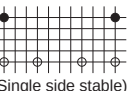
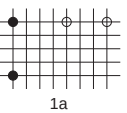
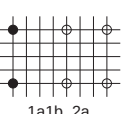
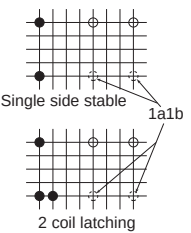
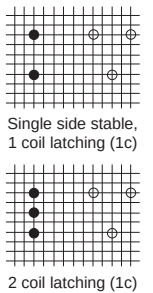
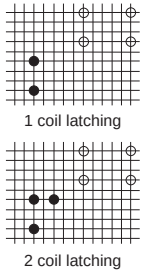
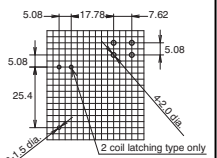


Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
★ DSP 1:2  20.2 x 11 x 10.5mm	• High switching capacity • High sensitivity • High breakdown voltage • Miniature high-power relay • Creepage and clearance distance min. 3.5mm • RTIII (IP67)	Max.: 8A (1a)  5A (1a1b, 2a) 	• 220V DC • 400V AC	1a, 1a1b, 2a	(DC) 3, 5, 6, 9, 12, 24V
★ DW 1:2  24 x 10 x 18.8mm	• Pin-in-Paste version available • Surge withstand voltage between coil and contact: 12,000V • Breakdown voltage between coil and contact: 5,000V rms • Conforms to EN 60335 • Creepage and clearance distance min. 6mm • RTII (IP54)	Max.: 8A (1a) 	• 250V AC	1a	(DC) 3, 5, 6, 9, 12, 24V
★ DE 1:2  25 x 12.5 x 12.5mm	• Conforms to VDE0631 • Low coil power • Compact body saves space • High switching capacity: 16A = 25,000 10A = 100,000 switching cycles • Creepage and clearance distance min. 8mm • RTIII (IP67)	Max.: 10/16A (1a)   8A (1a1b, 2a) 	• 230V DC • 440V AC	1a, 1a1b, 2a	(DC) 1.5, 3, 4.5, 5, 6, 9, 12, 24, 48V
ST 1:2  31 x 14 x 11.3mm	• High capacity in small size • High inrush capability • Latching type available • Frictionless pivoted rotating armature • High breakdown voltage • Socket available • Not for new applications • Creepage and clearance distance more than 3mm, approx. 4mm • RTIII (IP67)	Max.: 8A Min.: 1mA 	• 250V DC • 400V AC	1a1b, 2a	(DC) 3, 5, 6, 9, 12, 24, 48V
DK 1:2  20 x 12.5 x 9.7mm	• Dimensions for 1a = 12.5mm, for 2a, 1a1b = 15mm • Low coil power • Creepage and clearance distance min. 8mm: DK2A-L2 min. 6.8mm DK1A1B-L2 min. 6.8mm • RTIII (IP67)	Max.: 10A (1a)  8A (1a1b, 2a) 	• 125V DC • 400V AC	1a, 1a1b, 2a	(DC) 3, 5, 6, 9, 12, 24V

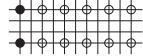
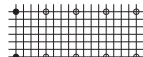
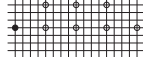
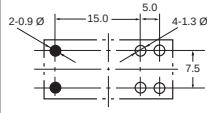
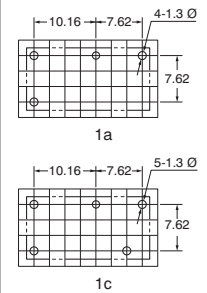
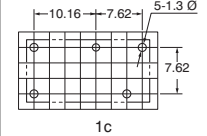
Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
Single side stable: 300mW 1 coil latching: 150mW 2 coil latching: 300mW	1000Vrms	2000Vrms	3000Vrms	5,000V	PCB Grid 2.54mm  1a  1a1b, 2a	CSA, SEV, TÜV, UL
1 coil latching: 200mW 2 coil latching: 400mW	1000Vrms	—	5000Vrms	12,000V	PCB, PiP  4 or 5-1.20 dia. hole 2 coil latching type only	CSA, TÜV, UL
Single side stable: 200mW 1 coil latching: 100mW 2 coil latching: 200mW	1000Vrms	4000Vrms (1a1b, 2a)	5000Vrms	12,000V	PCB Grid 2.54mm 	CSA, TÜV, UL, VDE
Single side stable: 240mW 1 coil latching: 130mW 2 coil latching: 240mW	1200Vrms	2000Vrms	3750Vrms	6,000V	PCB Grid 2.54mm  (Single side stable)	CSA, TV rating, UL, VDE
Single side stable: 200mW 2 coil latching: 200mW	1000Vrms	4000Vrms	4000Vrms	10,000V	PCB Grid 2.54mm  1a  1a1b, 2a	CSA, SEV, TÜV, UL, VDE

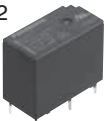
Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
DY 1:2  20 x 15 x 9.7mm	- Low cost, polarized power relay 1a1b-contact arrangement is pin-compatible to DK1a1b - Latching type available - Creepage and clearance distance min. 6mm - RTIII (IP67)	Max.: 10A (1a)  8A (1a1b) 	125V DC 380V AC	1a, 1a1b	(DC) 3, 5, 6, 12, 24V
DJ 1:2  29 x 13 x 16/16.5mm	- Latching type available - Compact with high capacity - Low coil power - Optional available with manual test button - Creepage and clearance distance min. 8mm - RTII (IP54), RTIII (IP67)	Max.: 16A 	125V DC 400V AC	1a, 1b, 1c, 1a1b, 2a, 2b, 2c	(DC) 5, 6, 12, 24, 48V
DQ 1:2  38 x 29 x 17.3mm	- Latching type available - Compact with high capacity - High insulation - Creepage and clearance distance min. 8mm - RTIII (IP67)	Max.: 30A 	250V DC 250V AC	1a	(DC) 4.5, 6, 9, 12, 24V
DQM 1:2  44 x 40.4 x 17.3mm	- Miniature 60A polarized power relay - Latching type available - High insulation - Creepage and clearance distance min. 8mm - RTIII (IP67)	Max.: 60A 	250V AC	1a	(DC) 4.5, 6, 9, 12, 24V

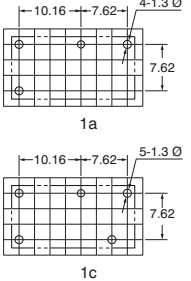
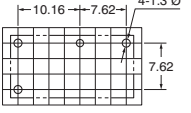
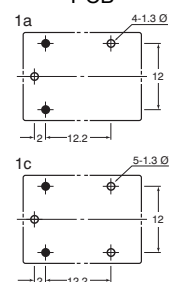
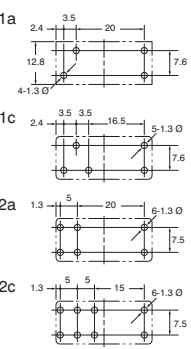
Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
Single side stable: 200mW 2 coil latching: 200mW	1000Vrms	4000Vrms	4000Vrms	10,000V	PCB Grid 2.54mm 	CSA, TÜV, UL 
Single side stable: 250mW 1 coil latching: 150mW 2 coil latching: 250mW	1000Vrms	—	4000Vrms	10,000V	PCB Grid 2.54mm 	CSA, SEV, TÜV, UL, VDE 
1 coil latching: 500mW 2 coil latching: 1000mW	1500Vrms	—	4000Vrms	10,000V	PCB Grid 2.54mm 	CSA, UL 
1 coil latching: 500mW 2 coil latching: 1000mW	1500Vrms	—	4000Vrms	10,000V	PCB 	— 

Power

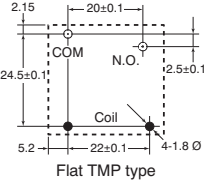
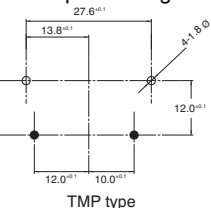
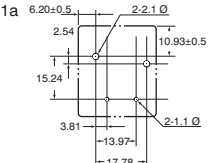
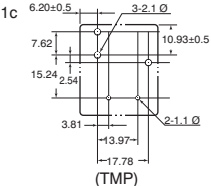
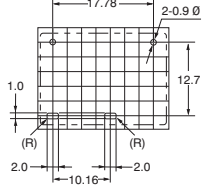
Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
S 1:2  28 x 12 x 10.4mm	- High switching capacity range due to 5-layer contact - High sensitivity - High vibration and shock resistance - Low thermal electromotive force (approx. 3μV) - Latching type available - Sockets available - RTIII (IP67)	Max.: 4A Min.: 100μA 	200V DC 250V AC	2a2b, 3a1b, 4a	(DC) 3, 5, 6, 12, 24, 48V
SP 1:2  2c: 50 x 25.6 x 22mm 4c: 50 x 36.8 x 22mm	- Polarized power relay with rotating armature - High sensitivity - High vibration and shock resistance - Wide switching range - Latching type available - Socket available - RTI	Max.: 15A 	110V DC 250V AC	2c, 4c	(DC) 3, 5, 6, 12, 24, 48V
Non polarized power relays					
LA 1:2  24 x 12 x 25mm	- Low cost slim power relay: 2 Form A - High insulation resistance between contact and coil 3A-version with gold clad contacts available (ideal speaker switch) - Surge withstand voltage: 10kV - Creepage and clearance distance min. 6mm - RTIII (IP67)	Standard: Max.: 3A (3A rated)  Power type: Max.: 5A (5A, TV-4 rated) 	30V DC 277V AC	2a	(DC) 12, 24V
JQ 1:2  20 x 10 x 15.6mm	- High switching capacity in small size - High surge withstand voltage: 8,000V - Low power consumption - Extremely low cost - Not for new applications - LQ substitute type available - Creepage and clearance distance min. 4mm - RTIII (IP67)	Standard: Max.: 5A  Power type: Max.: 10A 	277V AC	1a, 1c	(DC) 3, 5, 6, 9, 12, 18, 24, 48V

Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
Single side stable: ~200mW (3V - 24V DC) 271mW (48V DC) 1 coil latching: ~100mW (3V - 24V DC) 144mW (48V DC) 2 coil latching: ~200mW (3V - 24V DC) 355mW (48V DC)	750Vrms	1000Vrms	1500Vrms	—	PCB Grid 2.54mm 	CSA, UL 
Single side stable: 300mW 2 coil latching: 300mW	1500Vrms	3000Vrms	3000Vrms	—	PCB, Plug-in Grid 2.54mm  2c  4c	CSA, TÜV, UL 
530mW	1000Vrms	1000Vrms	4000Vrms	10,000V	PCB 	CSA, SEV, SEMKO, TÜV, UL 
200mW (1a) 400mW (1c)	1000Vrms (1a) 750Vrms (1c)	—	4000Vrms	8,000V	PCB  1a  1c	CSA, SEMKO, TÜV, UL, VDE 

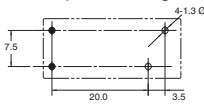
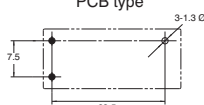
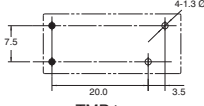
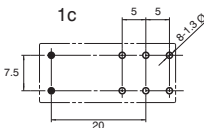
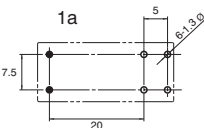
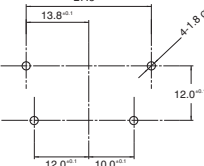
Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
★ LQ 1:2  20 x 10 x 16mm	• High switching capacity in small size • High surge withstand voltage: 8,000V • Low power consumption • Extremely low cost • Creepage and clearance distance: 1a: min. 4.55mm 1c: min. 3.53mm • RTIII (IP67)	Max.: 10A (1a, 1c)  10A	• 277V AC	1a, 1c	(DC) 5, 6, 9, 12, 18, 24V
PQ 1:2  20 x 10 x 15.6mm	• High electrical noise immunity • High sensitivity: 200mW • High surge voltage: 8,000V • Pin-compatible to JQ1a • Gold-clad twin (bifurcated) contacts	Max.: 5A  5A	• 110V DC • 250V AC	1a	(DC) 3, 5, 6, 9, 12, 18, 24V
JS 1:2  22 x 16 x 16mm	• Ultra-miniature power relay with universal terminal foot-print • Special type for high ambient temperature (105°C) available • Extremely low cost • High switching capacity: 10A • RTIII (IP67)	Max.: 10A  10A	• 100V DC • 277V AC	1a, 1c	(DC) 5, 6, 9, 12, 18, 24, 48V
JW 1:2  28.6 x 12.8 x 20mm	• Compact power relay • High surge withstand voltage: 10,000V • Class B coil insulation types available • Creepage and clearance distance min. 8mm between contacts and coil (for 2 changeover contacts min. 7.5mm) • RTIII (IP67)	Standard: Max.: 5A (2a, 2c)  5A High capacity: Max.: 10A (1a, 1c)  10A	• 100V DC • 440V AC	1a, 1c, 2a, 2c	(DC) 5, 6, 9, 12, 18, 24, 48V

Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
200mW (1a) 400mW (1c)	1000Vrms (1a) 750Vrms (1c)	—	4000Vrms	8,000V	PCB 	C-UL, UL, VDE 
200mW	1000Vrms	—	4000Vrms	8,000V	PCB 	CSA, SEMKO, TÜV, UL, VDE 
360mW	750Vrms	—	1500Vrms	—	PCB 	CSA, TÜV, complies with TV-5, UL, VDE 
530mW	1000Vrms	3000Vrms (2a, 2c)	5000Vrms	10,000V	PCB 	CSA, SEMKO, SEV, TÜV, complies with TV-5, UL, VDE 

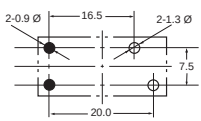
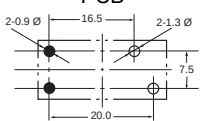
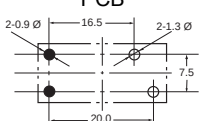
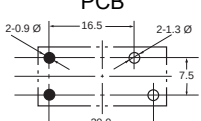
Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
JM 1:2  Slim: 30.4 x 16 x 26.5mm Flat: 31 x 28.5 x 17.2mm	• Superior welding resistance • High surge resistance • Compact high capacity relay for inductive load • Relay for high motor loads • Ideal for high inrush currents • Pin-compatible with the LF relays • More than 6.4 mm maintained for the insulation distance between contacts and coil	Max.: 20A 	• 250V AC	1a	(DC) 5, 6, 9, 12, 24, 48V
LF 1:2  30.1 x 15.7 x 23.3mm	• Ideal for compressor and inverter loads • High insulation resistance • Inrush current: 102A/200V AC 224A/100V AC • High surge withstand voltage • Creepage and clearance distance min. 8mm • RTI	Max.: 25A 	• 250V AC	1a	(DC) 5, 6, 9, 12, 18, 24V
JT-V 1:2  PCB: 31.9 x 26.9 x 20.2mm TMP: 32.2 x 27.4 x 27.9mm	• High breakdown voltage • High surge withstand voltage: min. 6kV • High switching capacity with small dimensions and low height • TMP types available • Class F type as standard • Increased insulation construction than JT-N • Clearance, contact to coil: min. 6.4mm • Creepage, contact to coil: min. 9.5mm • RTI, RTIII (IP67)	Max.: 30A 	• 30V DC • 277V AC	1a, 1c	(DC) 12, 18, 24, 48V
JV-N 1:2  22 x 16 x 10.9mm	• Compact, flat type with low 10.9mm profile • Sensitive coil • RTIII (IP67)	Max.: 16A 	• 110V DC • 277V AC	1a	(DC) 4.5, 6, 9, 12, 24, 48, 100V

Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
900mW	1000Vrms	—	5000Vrms	10,000V	PCB, Top mount contact, coil to PCB 	CSA, TÜV, UL, VDE 
900mW	1000Vrms	—	5000Vrms	10,000V	PCB, Top-mounting 	CSA, SEMKO, TÜV, UL, VDE 
1000mW	—	1200Vrms	3500Vrms	6,000V	PCB Top-mounting 1a  1c 	C-UL, UL 
(DC) 200mW (4.5V - 48V) (DC) 600mW (100V)	1000Vrms	—	2500Vrms	4,500V	PCB 	CSA, TÜV, UL 

Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
LE 1:2  28.6 x 12.4 x 24.9mm	• Ideal for magnetron and heater loads • Excellent heat resistance • 4.8mm faston terminals • High sensitivity: 200mW • Creepage and clearance distance min. 8mm • RTI	Max.: 16A 	• 277/400V AC	1a	(DC) 5, 6, 9, 12, 18, 24, 48V
★ LZ 1:2  28.8 x 12.5 x 15.7mm	• Low profile relay (15.7mm) • Low operating power of 400mW • Ambient temperature up to 105°C • Creepage and clearance distance min. 10mm • RTIII (IP67)	Max.: 16A 	• 250V DC • 440V AC	1a, 1c	(DC) 5, 9, 12, 18, 24, 48V
★ LF-G1/LF-G2 1:2  30.1 x 15.7 x 23.3mm	• Ideal for solar inverters • High insulation resistance • Inrush current: 102A/200V AC 224A/100V AC • High switching capacity 31A/277V AC • High surge withstand voltage - Creepage distance between contact and coil terminal: Min. 9.5 mm - Clearance distance between contact and coil terminal: Min. 6.5 mm • RTI	Max.: 22A  Max.: 31A 	• 250V AC	1a	(DC) 9, 12, 18, 24V

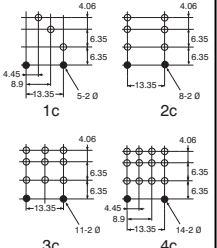
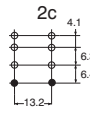
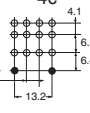
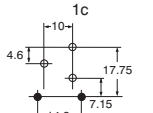
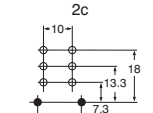
Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
Standard: 400mW High sensitivity: 200mW	1000Vrms	—	4000Vrms	10,000V	PCB, Top-mounting  PCB type  TMP type 	CSA, TÜV, UL, VDE 
400mW	1000Vrms	—	5000Vrms	10,000V	PCB 1c  1a 	CSA, UL, VDE 
1400mW	2500Vrms	—	4000Vrms	6,000V	PCB 	C-UL, UL, VDE 

Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
LK-G 1:2  24 x 11 x 25mm	• Contact gap: 1mm • 3 different types available • High insulation resistance • Slim profile • High noise immunity • Creepage and clearance distance between contact and coil min. 6mm (IEC65 compliant) • RTI	Max.: 10A  Max.: 16A 	• 277V AC	1a	(DC) 5, 9, 12, 24V
LK-P 1:2  24 x 11 x 25mm	• High switching capacity 10A 277V AC • High inrush current capability: 111A • UL/CSA TV-5 rated type available • High insulation: Creepage and clearance distance between contact and coil min. 6mm • RTI	Max.: 10A 	• 30V DC • 277V AC	1a	(DC) 12, 24V
LK-Q 1:2  24 x 11 x 25mm	• Reduced noise • High sensitivity: nominal coil power 250mW • TV-5/TV-8 rated type available • Slim shape • Creepage and clearance distance min. 6mm • RTI	Max.: TV5: 5A (AC)  TV8: 8A (AC) 	• 30V DC • 277V AC	1a	(DC) 5, 9, 12, 24V
LK-T 1:2  24 x 11 x 25mm	• High inrush current capability: 118A • UL/CSA TV-8 rated type available • High noise immunity realized by the card separation structure between contact and coil • High insulation resistance: 1) Creepage and clearance distance between contact and coil min. 6mm 2) Surge withstand voltage between contact and coil > 10kV • RTI	Max.: 8A 	• 277V AC	1a	(DC) 5, 9, 12, 24V

Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
530mW	1000Vrms	—	4000Vrms	10,000V	PCB 	CSA, TÜV, UL 
530mW	1000Vrms	—	4000Vrms	10,000V	PCB 	CSA, SEMKO, SEV, TÜV, TV-5 rating, UL, VDE 
250mW	1000Vrms	—	4000Vrms	10,000V	PCB 	CSA, SEMKO, SEV, TÜV, complies with TV-5, TV-8, UL, VDE 
250mW	1000Vrms	—	4000Vrms	10,000V	PCB 	CSA, SEMKO, SEV, TÜV, TV rating UL, VDE 

Power

Type ★ = Popular type (Picture scale: DIN A4)	Features	Switching current (Min.: see data sheet)	Max. switching voltage	Contact arrangement	Coil voltage
HC 1:2  27.2 x 20.8 x 35.2mm	• Wide applications • Versatile range • Footprint compatible with competitive types • Compact power relay • AC and DC coil available • Socket available • Pin-compatible with the HJ relays • RTI, RTIII (IP67)	Max.: 10A Min.: 1mA 	• 30V DC • 250V AC	1c, 2c, 3c, 4c	(DC) 6, 12, 24, 48, 110V (AC) 6, 12, 24, 48, 120, 240V
HJ 1:2  28 x 21.5 x 35/38mm	• 2 contact arrangements, same footprint as our popular HC relay • Coil breakdown detection function (AC type with LED only) • Convenient screw terminal sockets with finger protection also available • Test button type available • Compact power relay for AC and DC voltage • Socket available • RTI, RTIII (IP67)	Max.: 7A 	• 30V DC • 250V AC	2c, 4c	(DC) 12, 24, 48, 110V (AC) 12, 24, 48, 100, 120, 200, 220/240V
HN 1:2  29 x 13 x 28mm	• Slim (13mm) and compact size relay: The size has been reduced 20% compared with the existing HC/HJ relays. • Plug-in solder type available • Slim screw terminal socket (17.5mm) • Also available with LED indication • High reliability • AC and DC coil available • RTIII (IP67)	Max.: 5A  Max.: 10A  Max.: 16A 	• 30V DC • 250V AC	1c, 2c	(DC) 5, 6, 12, 24, 48V (AC) 100, 120, 240V
HL 1:2  27.2 x 20.8 x 35.4mm	• Large capacity • Compact size • Designed for long lifetime • Footprint compatible with competitive types • High load switching range • Socket available • RTIII (IP67)	Max.: 15A Min.: 1mA 	• 30V DC • 250V AC	1c, 2c	(DC) 6, 12, 24, 48, 110V (AC) 6, 12, 24, 48, 120, 240V

Coil power	Breakdown voltage			Surge withstand voltage	Mounting method (bottom view)	Approvals Data sheet
	Between open contacts	Between contact sets	Contacts to coil			
(DC) 900mW (AC) 1.2VA	700Vrms	700Vrms	2000Vrms	—	PCB, Plug-in, Top-mounting 	CSA, SEV, TV rating, UL, VDE 
(DC) 900 mW (AC) 1.2 - 1.5VA	1000Vrms	2000Vrms	2000Vrms	—	Plug-in 2c  4c 	CSA, SEV, TV rating, UL, VDE 
(DC) 530mW (AC) 0.9VA	1000Vrms	3000Vrms	5000Vrms	—	Plug-in, Screw terminal —	UL, C-UL, (VDE) 
(DC) 900 - 1000mW (AC) 1.2 - 1.3VA	1000Vrms	1500Vrms	2000Vrms	—	PCB, Plug-in, Top-mounting 1c  2c 	CSA, complies with TV-5, UL 

Power