

DS-P

2. Specifications

| Characteristics | Item | Specifications | | | |
|--|---|--|--|---|-----------|
| | | 1 Form A | 1 Form A 1 Form B | 2 Form A | |
| Contact | Arrangement | 1 Form A 1 Form A 1 Form B 2 Form A | | | |
| | Initial contact resistance, max. | Max. 30 mΩ (By voltage drop 6 V DC 1A) | | | |
| Rating | Contact material | Au-flashed AgSnO ₂ type | | | |
| | Nominal switching capacity (resistive load) | 8 A 250 V AC, 5 A 30V DC | 5 A 250 V AC, 5 A 30 V DC | | |
| | Max. switching power (resistive load) | 2,000 VA, 150 W | 1,250 VA, 150 W | | |
| | Max. switching voltage | 380 V AC, 125 V DC | | | |
| | Max. switching current | 8 A AC, 5 A DC | 5 A AC, DC | | |
| | Nominal operating power | 300 mW | | | |
| | Min. switching capacity (Reference value)*1 | 10m A 5 V DC | | | |
| Electrical characteristics | Insulation resistance (Initial) | Min. 1,000MΩ (at 500V DC) Measurement at same location as "Initial breakdown voltage" section. | | | |
| | Breakdown voltage (Initial) | Between open contacts | 1,000 Vrms for 1min. (Detection current: 10mA.) | | |
| | | Between contact sets | 2,000 Vrms (1 Form A 1 Form B, 2 Form A) (Detection current: 10mA.) | | |
| | | Between contact and coil | 3,000 Vrms for 1min. (Detection current: 10mA.) | | |
| | Surge breakdown voltage*2 | between contacts and coil | 5,000 V | | |
| | Temperature rise (at 65°C 149°F) | | Max. 55°C | Max. 40°C | Max. 55°C |
| | Operate time [Set time] (at 20°C 68°F) | | Max. 10 ms [10 ms] (Nominal voltage applied to the coil, excluding contact bounce time.) | | |
| Release time [Reset time] (at 20°C 68°F) | | Max. 5 ms [10 ms] (Nominal voltage applied to the coil, excluding contact bounce time.) (without diode) | | | |
| Mechanical characteristics | Shock resistance | Functional | Min. 196 m/s ² (Half-wave pulse of sine wave: 11 ms; detection time: 10μs.) | | |
| | | Destructive | Min. 980 m/s ² (Half-wave pulse of sine wave: 6 ms.) | | |
| | Vibration resistance | Functional | 10 to 55 Hz at double amplitude of 2 mm (Detection time: 10μs.) | | |
| | | Destructive | 10 to 55 Hz at double amplitude of 3.5 mm | | |
| Expected life | Mechanical | Min. 5×10 ⁷ (at 180 cpm) | | | |
| | Electrical | Min. 10 ⁵ (resistive load) | | | |
| Conditions | Conditions for operation, transport and storage*3 (Not freezing and condensing at low temperature) | Ambient temperature: -40°C to +60°C -40°F to +140°F | Ambient temperature: -40°C to +65°C -40°F to +149°F | Ambient temperature: -40°C to +60°C -40°F to +140°F | |
| | Solder heating | 250°C 482°F (10s), 300°C 572°F (5s), 350°C 662°F (3s) (Soldering depth: 2/3 terminal pitch) | | | |
| | Max. operating speed (at rated load) | 30 cps | | | |
| Unit weight | | Approx. 4.5 g .16 oz | | | |

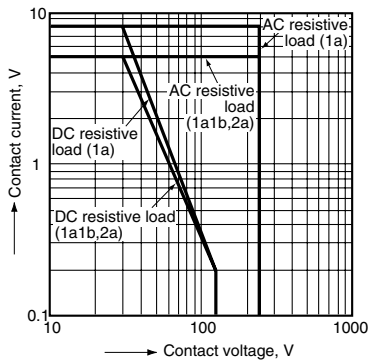
Notes: *1 This value can change due to the switching frequency, environmental conditions, and desired reliability level, therefore it is recommended to check this with the actual load.

*2 Wave is standard shock voltage of ±1.2×50μs according to JEC-212-1981

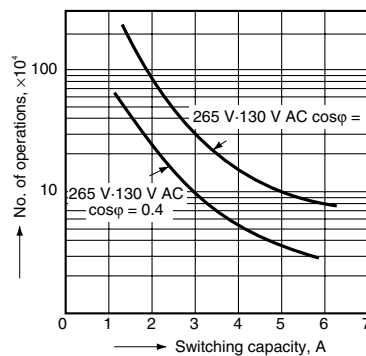
*3 Refer to 6. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT.

REFERENCE DATA

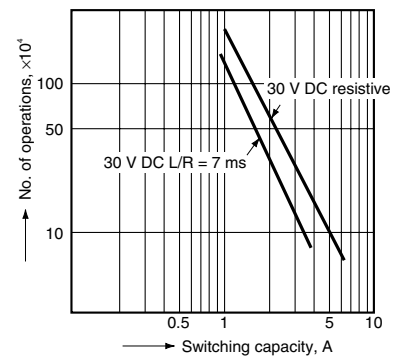
1. Max. switching capacity



2.-(1) Life curve (1 Form A 1 Form B)

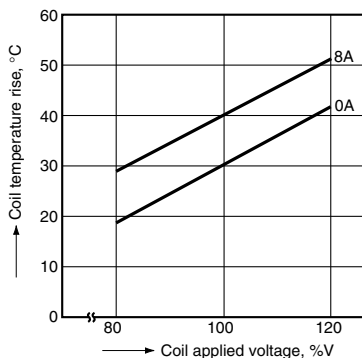


2.-(2) Life curve (1 Form A 1 Form B)



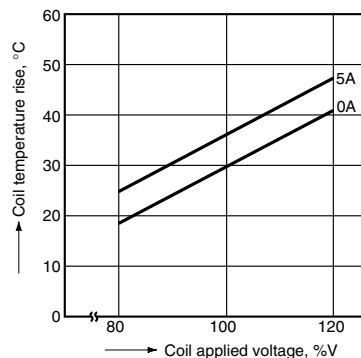
3.-(1) Coil temperature rise (1 Form A)

Tested sample: DSP1a-DC12V, 5 pcs.



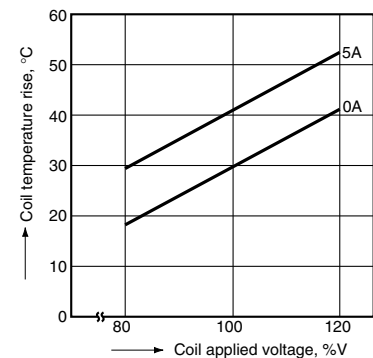
3.-(2) Coil temperature rise (1 Form A 1 Form B)

Tested sample: DSP1-DC12V, 5 pcs.



3.-(3) Coil temperature rise (2 Form A)

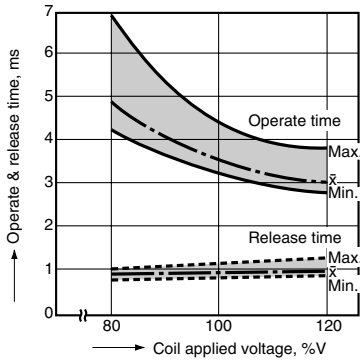
Tested sample: DSP2a-DC12V, 5 pcs.



4.-(1) Operate & release time

(without diode, 1 Form A)

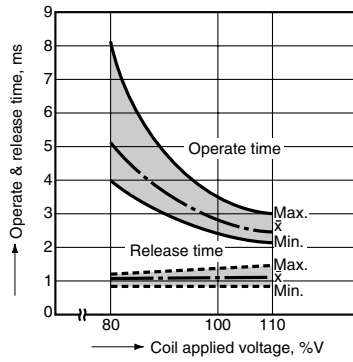
Tested sample: DSP1a-DC12V, 5 pcs.



4.-(2) Operate & release time

(without diode, 1 Form A 1 Form B)

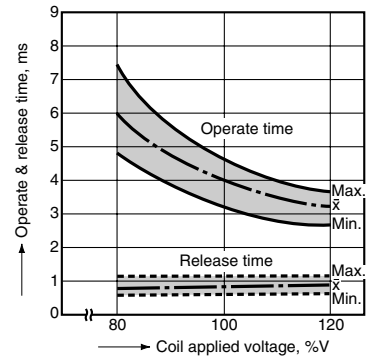
Tested sample: DSP1-DC12V, 5 pcs.



4.-(3) Operate & release time

(without diode, 2 Form A)

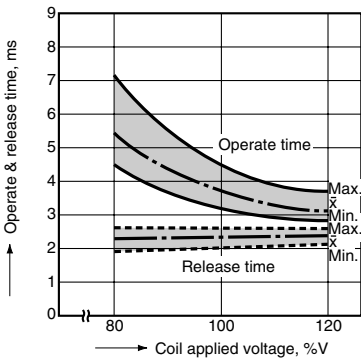
Tested sample: DSP2a-DC12V, 5 pcs.)



4.-(4) Operate & release time

(with diode, 1 Form A)

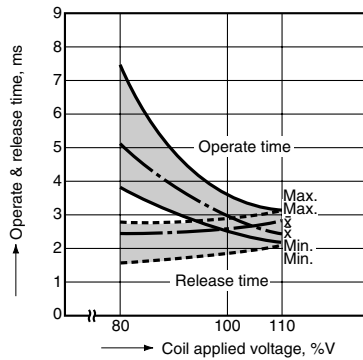
Tested sample: DSP1a-DC12V, 5 pcs.



4.-(5) Operate & release time

(with diode, 1 Form A 1 Form B)

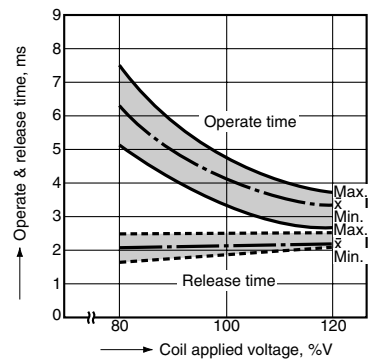
Tested sample: DSP1-DC12V, 5 pcs.



4.-(6) Operate & release time

(with diode, 2 Form A)

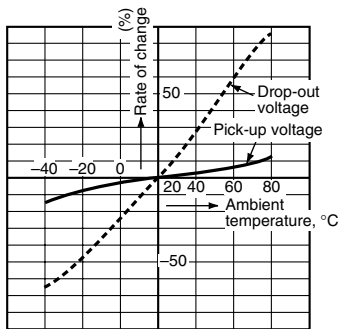
Tested sample: DSP2a-DC12V, 5 pcs.



5.-(1) Change of pick-up and drop-out voltage

(1 Form A)

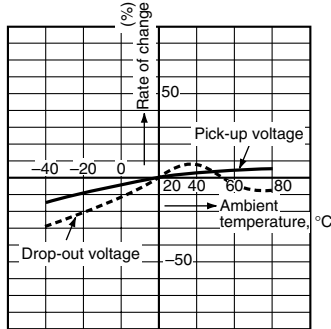
Tested sample: DSP1a-DC12V, 5 pcs.



5.-(2) Change of pick-up and drop-out voltage

(1 Form A 1 Form B)

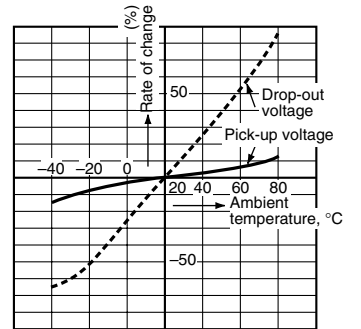
Tested sample: DSP1-DC12V, 5 pcs.



5.-(3) Change of pick-up and drop-out voltage

(2 Form A)

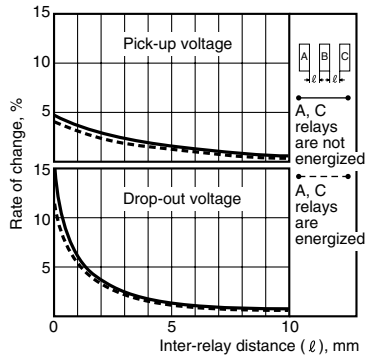
Tested sample: DSP2a-DC12V, 5 pcs.



6.-(1) Influence of adjacent mounting

(1 Form A)

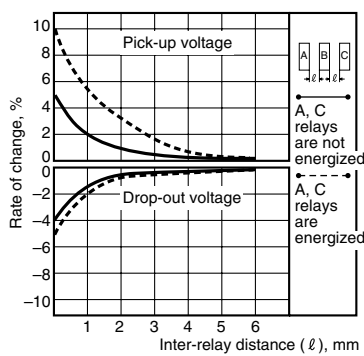
Tested sample: DSP1a-DC12V, 5 pcs.



6.-(2) Influence of adjacent mounting

(1 Form A 1 Form B)

Tested sample: DSP1-DC12V, 5 pcs.



6.-(3) Influence of adjacent mounting

(2 Form A)

Tested sample: DSP2a-DC12V, 5 pcs.

