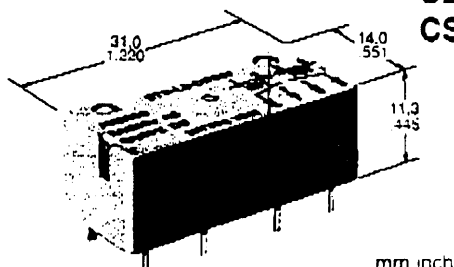


NAIS

IC DRIVABLE PC BOARD RELAY FOR FIELD LOAD SWITCHING

ST-RELAYS



UL File No.: E43028 VDE File No.: VDE-Reg.-Nr. 4811, 2
CSA File No.: LR26550, SEV

- Sealed to meet the combination process of automatic wave soldering and cleaning needs
- Latching types available
- High switching capacity and high sensitivity in subminiature size
150 mW pick-up, 8 A, inrush capacity: 51 A for 1a1b
35 A for 2a
- High shock and vibration resistance
Shock: 20 G
Vibration: 10 to 55 Hz at double amplitude of 2 mm

SPECIFICATIONS

Contacts

Arrangement	1 Form A 1 Form B 2 Form A
Contact material	Gold flash over silver alloy
Initial contact resistance, max.	30 mΩ
Rating (resistive)	2,000 VA, 150 W
Max. switching power	380 V AC
Max. switching voltage	8 A
Max. switching current	
HP rating	1/4 HP 125, 250 V AC
Expected life (min. operations)	
Mechanical (at 180 cpm)	10 ⁷
Electrical	
8 A 250 V AC (resistive)	10 ⁵
5 A 30 V DC (resistive)	2 × 10 ⁵
3 A 100 V AC (lamp)	3 × 10 ⁴
1 A 100 V AC (lamp)	—

Coil (polarized) (at 25°C 77°F)

Single side stable	Minimum operating power	Approx. 150 mW
	Nominal operating power	Approx. 240 mW
Latching	Minimum set and reset power	Approx. 150 mW
	Nominal set and reset power	Approx. 240 mW

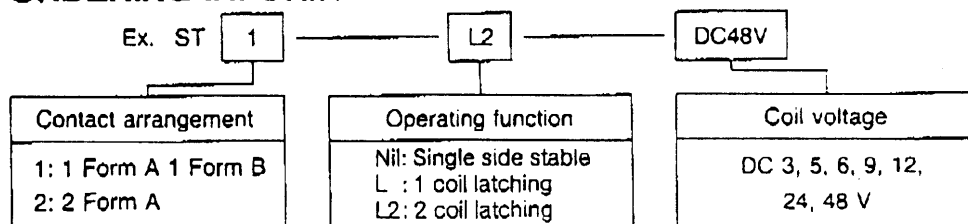
Characteristics (at 25°C 77°F, 50% Relative humidity)

Max. operating speed	30 cps.
Operate time	Approx. 10 msec.
Release time	Approx. 8 msec.
Set time (latching)	Approx. 8 msec.
Reset time (latching)	Approx. 8 msec.
Initial breakdown voltage	
Between contact sets	2,000 Vrms
Between open contacts	1,200 Vrms
Between contacts and coil	3,750 Vrms
Initial insulation resistance	1,000 MΩ at 500 V DC
Inrush current capability	51 A (TV-3 equivalence) for 1a1b 35 A (TV-1 equivalence) for 2a
*Surge voltage between coil and contact	6,000 V
Temperature rise	Max. 55 deg.
Ambient temperature at max. load and nominal coil voltage	-40°C to +60°C -40°F to +140°F
Shock resistance	Functional: 20 G Destructive: 100 G
Vibration resistance	Functional: 12 G, 10 to 55 Hz at double amplitude of 2 mm Destructive: 18 G, 10 to 55 Hz at double amplitude of 3 mm
Unit weight	Approx. 8 g .28 oz

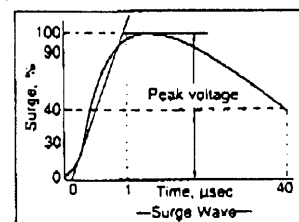
TYPICAL APPLICATIONS

Sequence controllers, facsimiles, telephone controls, remote control security devices and security equipment.

ORDERING INFORMATION



- (Notes) 1. For UL/CSA recognized types, add suffix UL/CSA.
2. For VDE recognized types, add suffix VDE.
3. Standard packing: Carton; 50 pcs., Case; 500 pcs.



Note: * Applied surge wave.

TYPES AND COIL DATA at 20°C 68°F

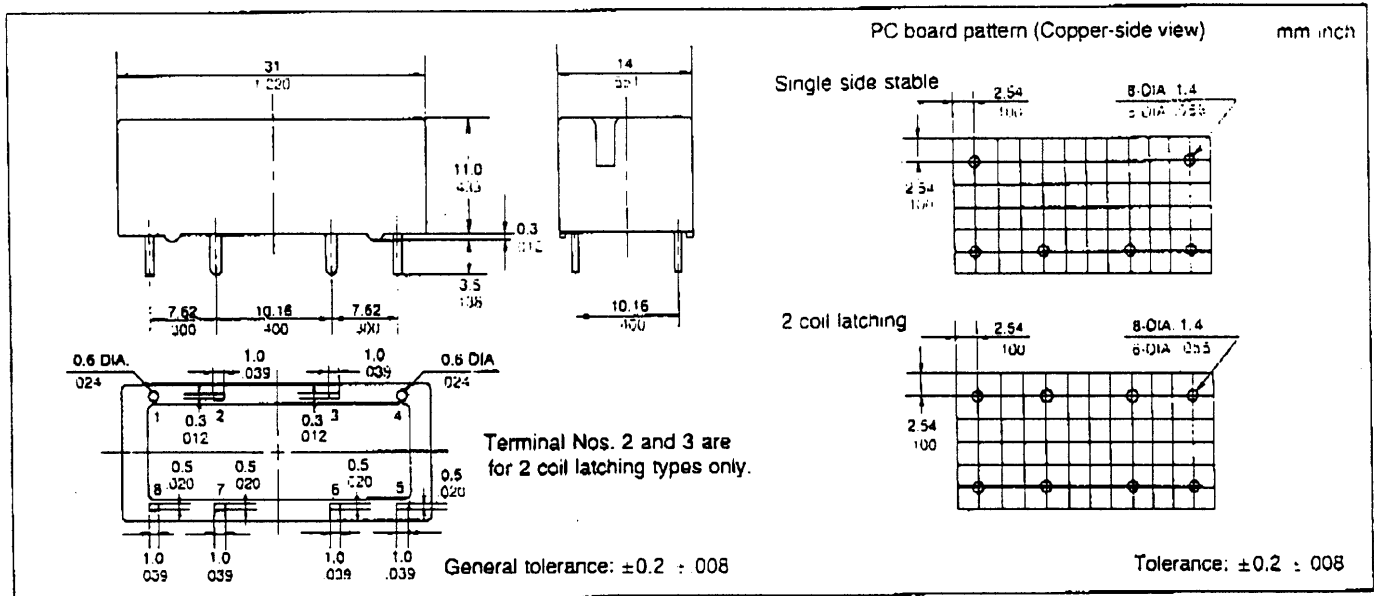
Single side stable

Part No.		Nominal voltage, V DC	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Maximum allowable voltage, V DC (60°C)	Coil resistance, Ω (±10%)	Nominal operating current, mA
ST1-DC3V	ST2-DC3V	3	2.4	0.3	4.5	38	75
ST1-DC5V	ST2-DC5V	5	4.0	0.5	7.5	105	47.6
ST1-DC6V	ST2-DC6V	6	4.8	0.6	9.0	150	40
ST1-DC9V	ST2-DC9V	9	7.2	0.9	13.5	360	25
ST1-DC12V	ST2-DC12V	12	9.6	1.2	18.0	600	18.8
ST1-DC24V	ST2-DC24V	24	19.2	2.4	36.0	2,400	10
ST1-DC48V	ST2-DC48V	48	38.4	4.8	72.0	9,000	5.3

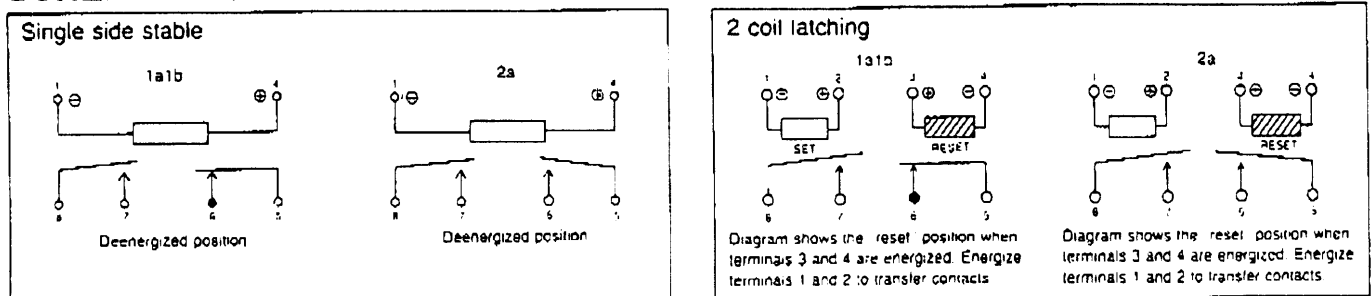
2 coil latching (1 coil latching also available)

Part No.		Nominal voltage V DC	Set and reset voltage, V DC (max.)	Maximum allowable voltage, V DC (60°C)	Coil resistance, Ω (±10%)	Nominal operating current, mA
ST1-L2-DC3V	ST2-L2-DC3V	3	2.4	4.5	40	75
ST1-L2-DC5V	ST2-L2-DC5V	5	4.0	7.5	110	45
ST1-L2-DC6V	ST2-L2-DC6V	6	4.8	9.0	155	37.5
ST1-L2-DC9V	ST2-L2-DC9V	9	7.2	13.5	360	25
ST1-L2-DC12V	ST2-L2-DC12V	12	9.6	18.0	640	18.8
ST1-L2-DC24V	ST2-L2-DC24V	24	19.2	36.0	2,400	9.8
ST1-L2-DC48V	ST2-L2-DC48V	48	38.4	72.0	10,200	4.7

DIMENSIONS

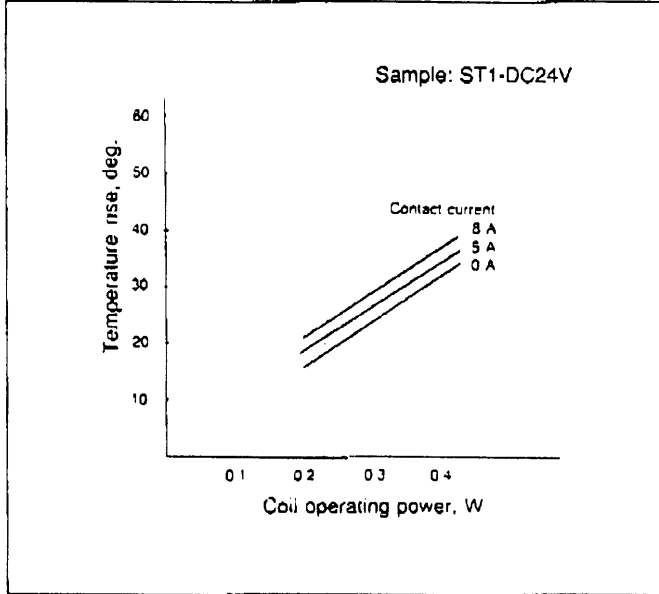


SCHEMATIC (Bottom view)

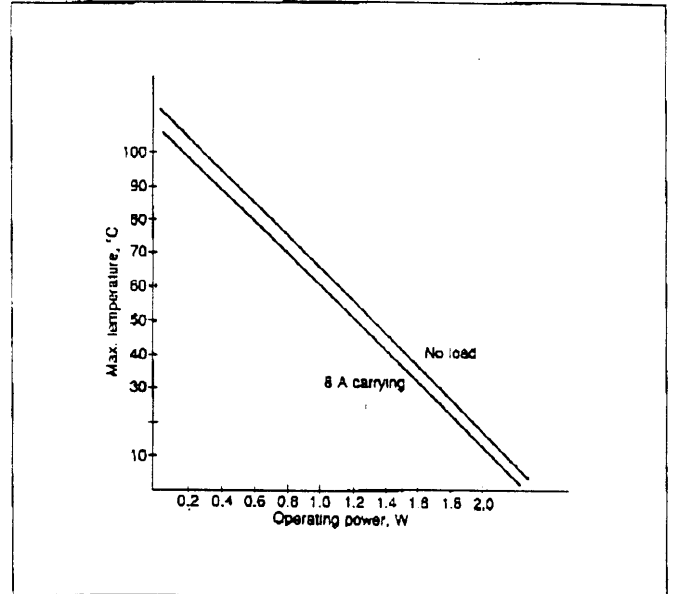


DATA

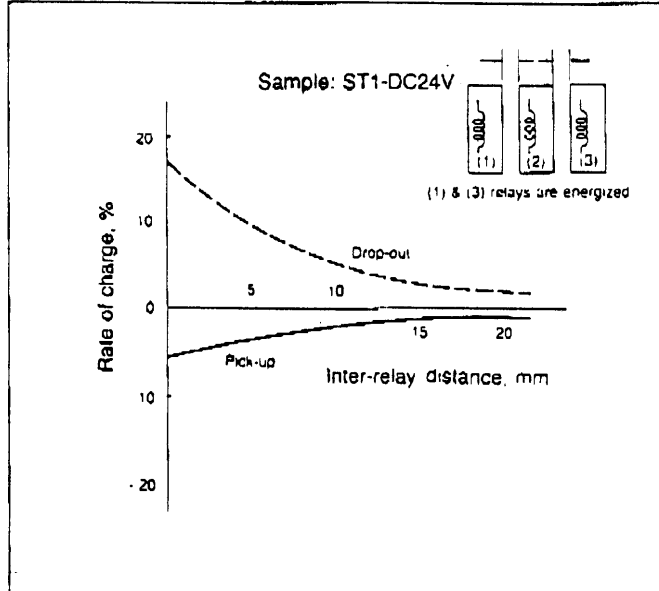
Coil temperature rise



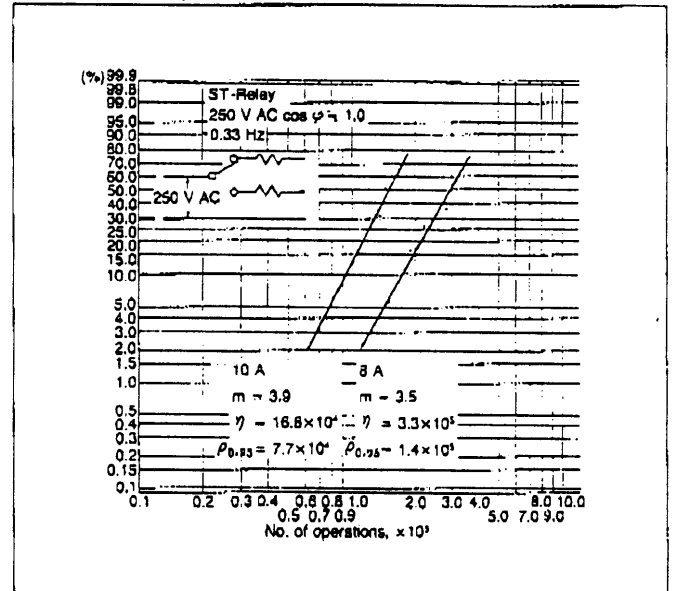
Max. ambient temperature by operating power



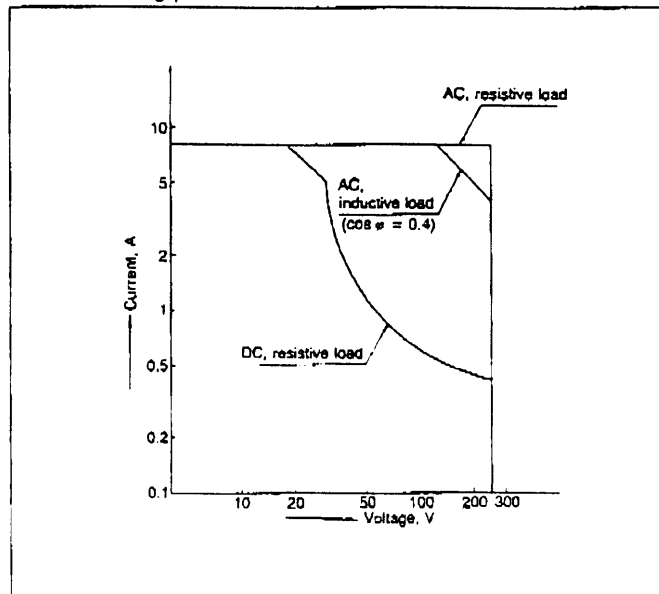
Influence of adjacent mounting



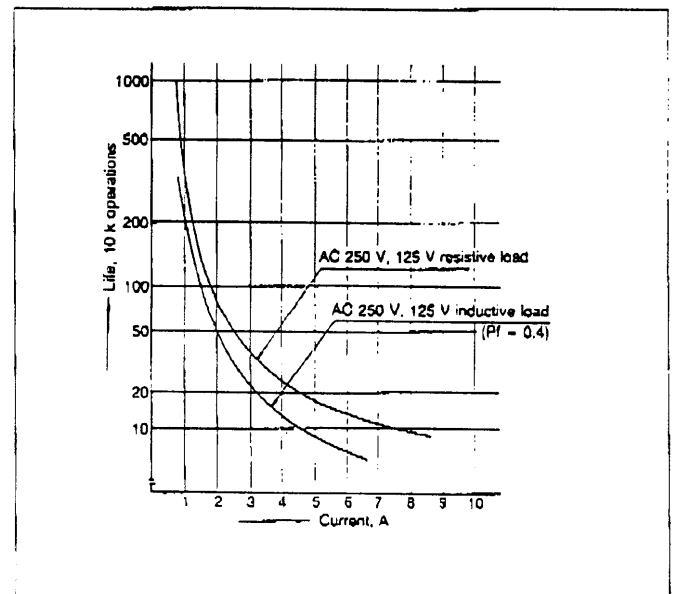
Contact reliability



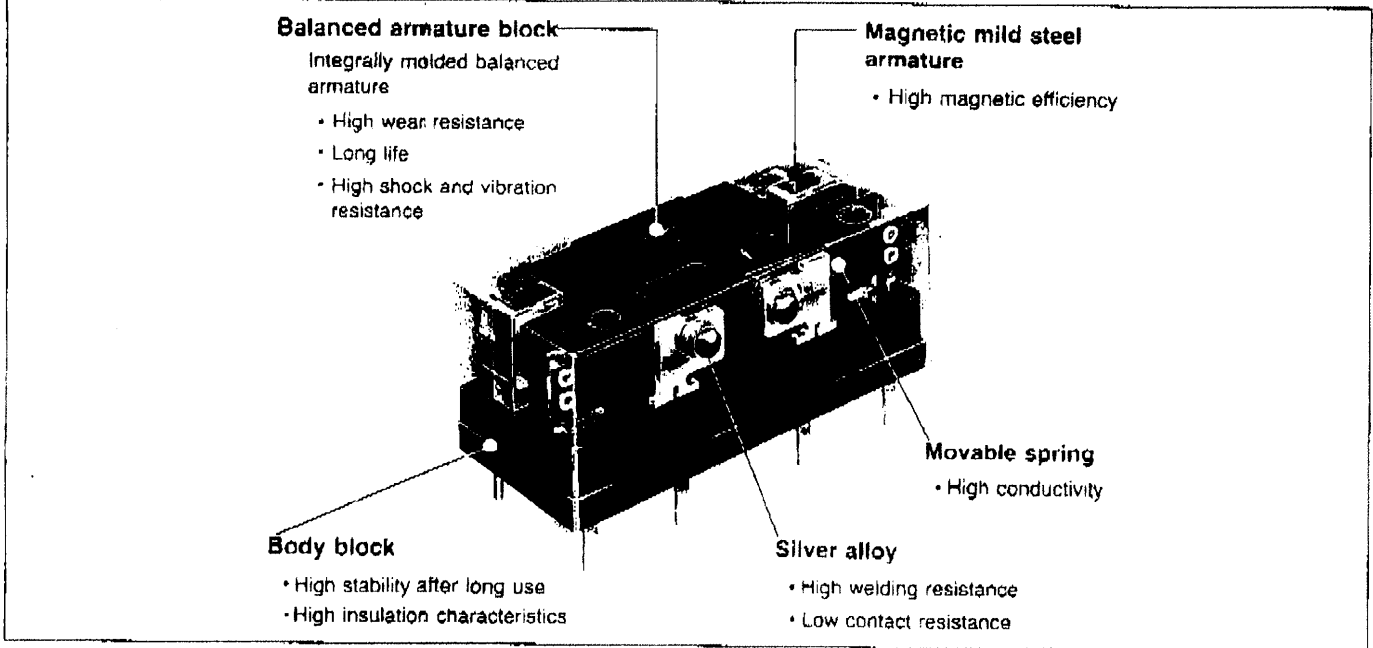
Max. switching power



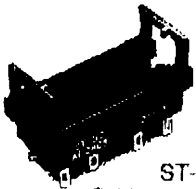
Life curve



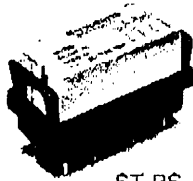
ST CONSTRUCTION



ACCESSORIES



ST-SS
Solder terminal socket



ST-PS
PC board terminal socket

Specifications

Breakdown voltage	4,000 Vrms Coil/Contacts 2,000 Vrms Contacts/Contacts
Insulation resistance	More than 1,000 MΩ between terminals
Heat resistance	150°C (302°F) for 1 hr
Max. continuous current	10 A
Relay insertion life	15 times

DIMENSIONS

