

BT/BTS Series Reed Relays

- **Features:** Low Thermal Voltage Relay <1μV (BTS), High Insulation Resistance, High Voltage
- **Applications:** High Precision Measuring Devices, Changeover Switch for Resistance Thermometers & Others
- **Markets:** Test and Measurement & Others



Part Description: BT(S)00-2A00

*Low Thermal Option	Nominal Voltage	Contact Quantity & Contact Form	Switch Model
⌒ (45 Switch Model)	05, 12, 24	2A	66, 75, 85, 45 (⌒ = Low Thermal)

Customer Options	Switch Model				Unit
Contact Data	66	75	45	85	
Rated Power (max.) Any DC combination of V&A not to exceed their individual max.'s	10	10	10	100	W
Switching Voltage (max.) DC or peak AC	200	500	200	1000	V
Switching Current (max.) DC or peak AC	0.5	0.5	0.5	1.0	A
Carry Current (max.) DC or peak AC	1.0	1.0	1.5	2.5	A
Contact Resistance (max.) @ 0.5V & 10mA	150	200	100	150	mOhm
Breakdown Voltage (min.) According to EN60255-5	0.225	0.6	0.35	1.5	kVDC
Operating Time (max.) Including Bounce, Measured w/40% Pull-In Overdrive	0.5	0.5	0.75	1.1	ms
Release Time (max.) Measured without Coil Suppression	0.1	0.1	0.1	0.05	ms
Insulation Resistance (typ.) Rh<45%, 100V Test Voltage	10 ¹⁰	10 ¹¹	10 ¹⁰	10 ¹⁰	Ohm
Capacitance (typ.) @ 10kHz across open Switch	0.2	0.4	0.2	0.5	pF

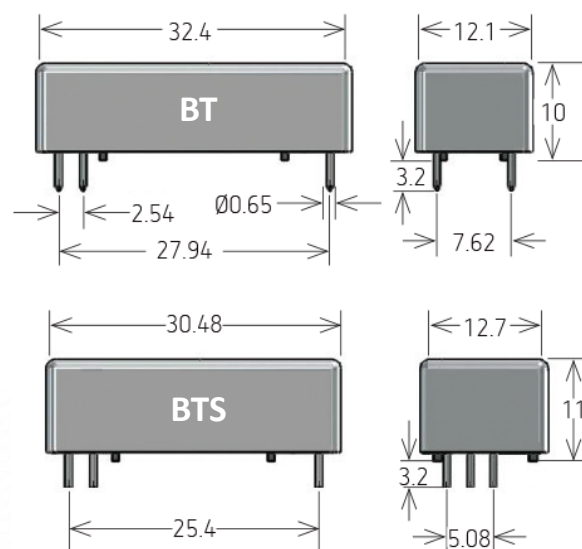
BT/BTS Series Reed Relays

Coil Data (at 20°C)		Coil Voltage (VDC)	Coil Resistance (Ohm)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Coil Power (mW)
Contact Form	Switch Model	Nominal	Typical (± 10 %)	Max.	Min.	Nominal
2A	45	5	900	3.8	1.0	27
	66	5	900	3.8	1.0	27
		12	5,100	9.0	2.0	28
		24	20,500	18.0	3.5	28
	75	5	900	3.8	1.0	27
	85	5	350	3.8	0.4	
		12	1,100	8.0	1.0	131
		24				

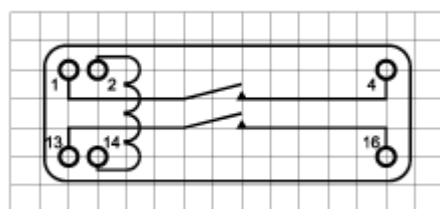
The Pull-In, Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °K

Relay Data (@ 20°C)		Unit
Dielectric Strength Coil/Contact (min.) According to EN60255-27	7	kVDC
Insulation Resistance Coil/Contact (min./typ.) 1/2 sine wave, 6mmd, 3-axis	10 ¹² /10 ¹³	Ohm
Capacitance Coil/Contact (typ.) @ 10 kHz	1.2	pF
Shock Resistance (max.) 1/2 sine wave, 6mmd, 3-axis	100	g
Vibration Resistance (max.) 10 – 2,000 Hz	20	g
Operating Temperature (max.) Surrounding of the relay's housing	-40 to 100	°C
Storage Temperature (max.) Surrounding of the relay's housing	-40 to 125	°C
Soldering Temperature (max.) 5 sec. max.	260	°C
Washability Aqueous rinse suitable. Proper drying necessary.	Fully Sealed	
For the list of AEC-Q200 Tests, see page 3		

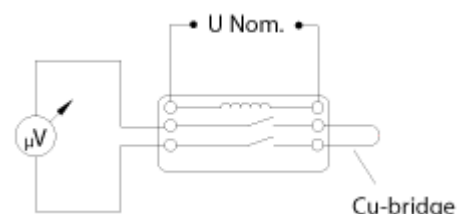
BT/BTS Reed Relay



BT Pin Out



BTS Pin Out & Test Circuit



*View from top of component 2.54mm [0.10"] pitch grid

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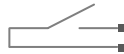
Handling & Assembly Instructions

- Switching inductive and/or capacitive loads create voltage and/or current peaks, which may damage the relay. Protective circuits need to be used.
- External magnetic fields needs to be taken into consideration, including a too high packing density. This may influence the relays' electrical characteristics.
- Mechanical shock impacts e.g. dropping the relays may cause immediate or post-installation failure.
- Wave soldering: maximum 260°/5 seconds.
- Reflow soldering: Recommendations given by the soldering paste manufacturer need to be considered as well as the temperature limits of other components/processes.

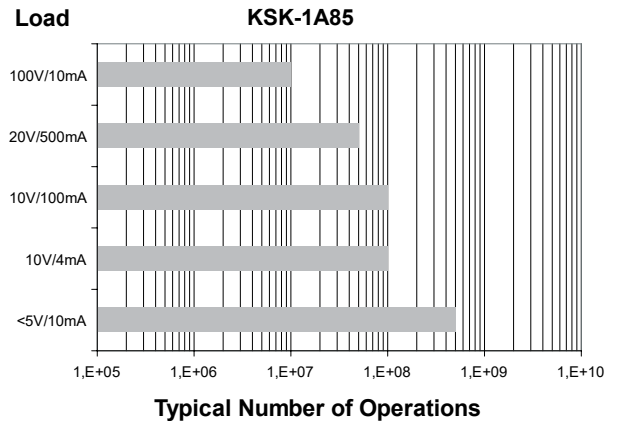
Glossary Contact Form

Form A

NO = Normally Open Contacts
SPST = Single Pole Single Throw



Life Test Data (*Load increase reduces life expectancy of Reed Switches)



Please note: All technical specifications on this series datasheet refer to the standard product range. Modifications in the sense of technical progress are reserved. For general information only. For more specific information, please consult the product datasheet, available upon request.

This series datasheet could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These change will be incorporated in future revisions.

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