

Low Thermal Reed Relays

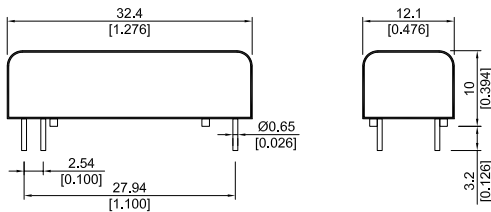


APPLICATIONS

- Test, measurement and control technology
- High precision measuring devices
- Change-over switch for measuring points of thermoelectric elements and resistance thermometers
- Recorder inputs
- Scanners
- Data Acquisition systems

DIMENSIONS

All dimensions in mm [inches]



DESCRIPTION

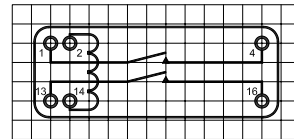
The BT series are low thermal relays with 2 Form A switches having a thermal offset voltage of 1μV max. with a 100% duty cycle. This extremely low thermal voltage is achieved through an optimized temperature balance between the Reed Switches and minimum coil power. This enables the relays of the BT series to switch signals in the low μV level.

FEATURES

- Form B available
- Very low offset voltages

PIN OUT

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



ORDER INFORMATION

SERIES	NOMINAL VOLTAGE	CONTACT FORM	SWITCH MODEL
BT	XX -	2A	66
OPTIONS	05, 12, 24		

Part Number Example

BT05 - 2A66

05 is the nominal voltage

RELAY DATA

All data at 20 °C	Switch Model --> Contact Form -->	Switch 66 2 Form A			
Contact Ratings	Conditions	Min.	Typ.	Max.	Units
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			10	W
Switching Voltage	DC or peak AC			200	V
Switching Current	DC or peak AC			0.5	A
Carry Current	DC or peak AC			1.25	A
Static Contact Resistance	w/ 0.5V & 50mA			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200	mΩ
Insulation Resistance (100 Volts applied)	Across contacts Contact to coil	10 ¹⁰ 10 ¹²	10 ¹² 10 ¹⁴		Ω
Breakdown Voltage	Across contacts Contact to coil	225 1500			VDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			0.5	ms
Release Time	Measured w/ no coil suppression			0.1	ms
Capacitance	Across contacts Contact to coil		0.2 4.0		pF
Thermal Offset	See schematic on following page			1	μV
Life Expectancies					
Switching 0.5 Volts @ 10mA	DC only & <10 pF stray cap.		1000		10 ⁶ Cycles
For other load requirements please see our life test section located on page 151.					
Environmental Data					
Shock Resistance	1/2 sine wave duration 11ms			50	g
Vibration Resistance	From 10 - 2000 Hz			20	g
Ambient Temperature	10 °C/ minute max. allowable	-20		70	°C
Storage Temperature	10 °C/ minute max. allowable	-40		105	°C
Soldering Temperature	5 sec. dwell			260	°C

**Low Thermal
Reed Relays**

COIL DATA

CONTACT FORM	SWITCH MODEL	COIL VOLTAGE		COIL RESISTANCE			PULL-IN VOLTAGE		DROP-OUT VOLTAGE		NOMINAL COIL POWER
		VDC		Ω			VDC		VDC		mW
All data at 20 °C *		Nom.	Max.	Min.	Typ.	Max.	Min.	Max.	Min.	Max.	Typ.
		2A	66	5	7.5	810	900	990	0.85	3.5	0.75
12	16			4590	5100	5610	1.9	8.4	1.8	8.3	30
24	30			18450	20500	22550	3.7	16.8	3.6	16.7	30

* The pull-in / drop-out voltage and coil resistance will change at the rate of 0.4 % per °C.

MEASURING SCHEMATIC

View on component side

