Low Thermal Reed Relays

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.

APPLICATIONS

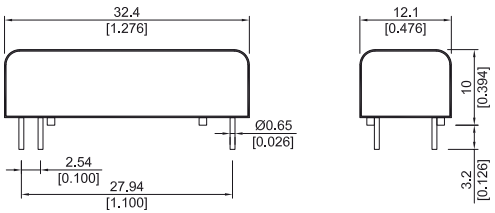
- Test, measurement and control technology
- High precision measuring devices
- Change-over switch for measuring points of thermoelectric elements and resistance thermometers
- Recorder inputs
- Scanners
- Data Acquisition systems

FEATURES

- Form B available
- Very low offset voltages

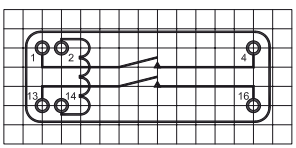
DIMENSIONS

All dimensions in mm [inches]



PIN OUT

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



ORDER INFORMATION

Series	Nominal Voltage	Contacttt Form	Switch model
BT	XX -	2A	66
Options	05, 12, 24		

Part Number Example -

BT05 - 2A66

05 is the nominal voltage

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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			180	V
Switching Current	DC or peak AC			0.5	A
Carry Current	DC or peak AC			1.25	A
Static Contact Resistance	Measured w/ 0.5 V & 50 mA			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5 V & 50 mA ,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	200 1500			VDC
Switch Time incl. Bounce	Nominal voltage			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 the following page			1	µV
Life Expectancies					
Switching 5V & 10 mA	DC only & < 10 pF stray cap.		1000		10^6 Cycles
For other load requirements, see the life test section on P. 121.					
Environmental Data					
Shock Resistance	1/2 sine wave duration for 11 ms			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

COIL DATA

Contact Form	Switch Model	Coil Voltage		Coil Resistance			Pull-In Voltage	Drop-Out Voltage	Nominal Coil Power
All Data at 20 °C *		VDC		Ω			VDC	VDC	mW
		Nom.	Max.	Min.	Typ.	Max.	Max.	Min.	Typ.
2A	66	5	7.5	810	900	990	3.5	0.75	30
		12	16	4590	5100	5610	8.4	1.8	30
		24	30	18450	20500	22550	16.8	3.6	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