阅读申明

1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描叙上的差异，建议读者做出适当判断。
4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.

2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader’ s learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.

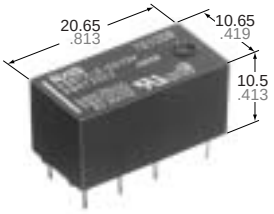
3. All product information provided on the website refer to solutions from manufacturers’ technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.

4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with “Datasheets”.

NAiS

4,000 V BREAKDOWN VOLTAGE DS RELAYS

DS-BT RELAYS



mm inch

FEATURES

- **4,000 V breakdown voltage**
- **Reinforced insulation between coil and contacts**
- **Surge voltage withstand: 1500 V FCC Parts 68**

SPECIFICATIONS

Contact

Arrangement		2 Form C	2 Form D
Initial contact resistance, max. (By voltage drop 6 V DC 1 A)		50 mΩ	
Contact material		Gold-clad silver	
Rating (resistive load)	Nominal switching capacity	2 A 30 V DC	1 A 30 V DC
	Max. switching power	60 W, 125 VA	30 W, 62.5 VA
	Max. switching voltage	220 V DC, 250 V AC	
	Max. switching current	2 A	1 A
	Min. switching capacity**[1]	10 μA 10 mV DC	
Electrical life (min. ope.)	Mechanical (at 180 cpm)	2×10^7	10^6
	Electrical (at 20 cpm)	2×10^5	

**[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.

Coil

Arrangement	2 Form C	2 Form D
Nominal operating power	360 mW	540 mW

Remarks

* Specifications will vary with foreign standards certification ratings.
*[1] Measurement at same location as "Initial breakdown voltage" section
*[2] Detection current: 10mA
*[3] Excluding contact bounce time
*[4] Half-wave pulse of sine wave: 11ms, detection time: 10μs
*[5] Half-wave pulse of sine wave: 6ms
*[6] Detection time: 10μs
*[7] Refer to 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT in catalog

Characteristics

Arrangement		2 Form C	2 Form D
Max. operating speed		60 cpm at rated load	
Initial insulation resistance*[1]		Min. 100 MΩ (at 500 V DC)	
Initial break-down voltage*[2]	Between open contacts	750 Vrms for 1 min.	500 Vrms for 1 min.
	Between contacts and coil	4,000 Vrms for 1 min.	
	Between contacts sets	750 V	500 V
FCC surge voltage between open contacts		1,500 V	
Operate time*[3] (at nominal voltage)		Approx. 3 ms	
Release time (without diode)*[3] (at nominal voltage)		Approx. 2 ms	
Temperature rise		Max. 65°C	
Vibration resistance	Functional*[4]	10 to 55 Hz at double amplitude of 3.3 mm	
	Destruction*[5]	10 to 55 Hz at double amplitude of 5 mm	
Shock resistance	Functional*[6]	Min. 294 m/s² (30 G)	
	Destruction	Min. 980 m/s² (100 G)	
Conditions for operation, transport and storage*[7] (Not freezing and condensing at low temperature)	Ambient temp.	–40°C to +70°C –40°F to +158°F	–40°C to +60°C –40°F to +140°F
	Humidity	5 to 85%R.H.	
Unit weight		Approx. 4.0 g 0.14 oz	

TYPICAL APPLICATIONS

Modem
Facsimile
Telecommunication equipment

ORDERING INFORMATION

DSBT | 2 | M | 2D | DC3V

Contact arrangement	Sensitivity	MBB function	Coil voltage
2: 2 Form C or 2 Form D	S: 360 mW (2 Form C only) M: 540 mW (2 Form D only)	Nil: BBM (Form C) 2D: 2MBB (2 Form D)	DC 1.5, 3, 5, 6, 9, 12, 24 V

Note: Standard packing; Carton: 25 pcs. Case 1,000 pcs.

TYPES AND COIL DATA (at 20°C 68°F)

1) 2 Form C type

Operating function	Part No.	Coil voltage, V DC	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Nominal operating current, mA (±10%)	Coil resistance, Ω (±10%)	Nominal operating power, mW	Max. allowable voltage, V DC (at 50°C 122°F)
Single side stable	DSBT2-S-DC1.5V	1.5	1.125	0.15	240	6.25	360	1.95
	DSBT2-S-DC3V	3	2.25	0.3	120	25		3.9
	DSBT2-S-DC5V	5	3.75	0.5	72	69.4		6.5
	DSBT2-S-DC6V	6	4.5	0.6	60	100		7.8
	DSBT2-S-DC9V	9	6.75	0.9	40	225		11.7
	DSBT2-S-DC12V	12	9	1.2	30	400		15.6
	DSBT2-S-DC24V	24	18	2.4	15	1,600		31.2

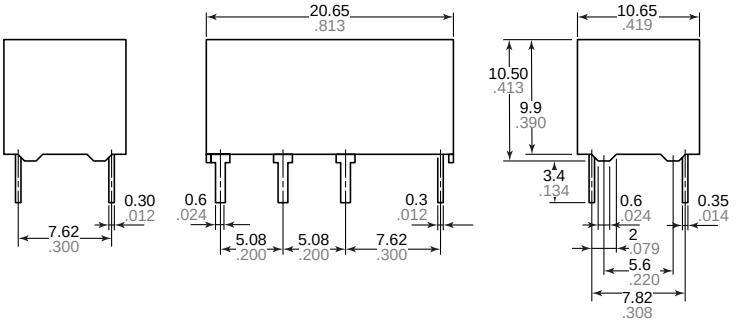
2) 2 Form D type

Operating function	Part No.	Coil voltage, V DC	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Nominal operating current, mA (±10%)	Coil resistance, Ω (±10%)	Nominal operating power, mW	Max. allowable voltage, V DC (at 50°C 122°F)
Single side stable	DSBT2-M-2D-DC1.5V	1.5	1.125	0.15	360	4.2	540	1.8
	DSBT2-M-2D-DC3V	3	2.25	0.3	180	16.7		3.6
	DSBT2-M-2D-DC5V	5	3.75	0.5	108	46.3		6
	DSBT2-M-2D-DC6V	6	4.5	0.6	90	66.7		7.2
	DSBT2-M-2D-DC9V	9	6.75	0.9	60	150		10.8
	DSBT2-M-2D-DC12V	12	9	1.2	45	266.7		14.4
	DSBT2-M-2D-DC24V	24	18	2.4	22.5	1,066.7		28.8

Note: Standard packing Tube: 25 pcs. Case: 1,000 pcs.

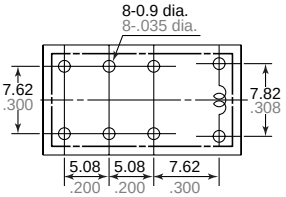
DIMENSIONS

mm inch



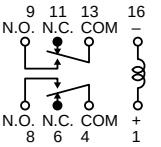
General tolerance: ±0.3 ± .012

PC board pattern (Bottom view)



Tolerance: ±0.1 ± .004

Schematic (Bottom view)

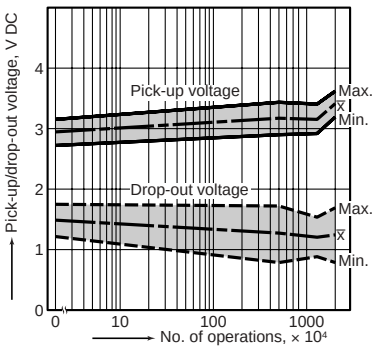


REFERENCE DATA

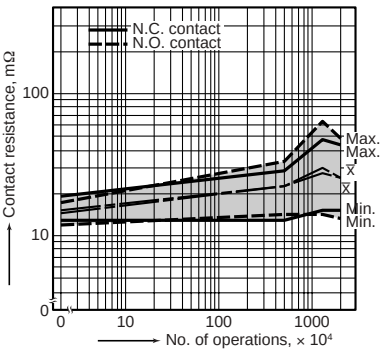
1. Mechanical life test

Tested sample: DSBT2-S-DC5V, 10 pcs.
Coil applied voltage: 5 V DC
Operating frequency: 30 cpm

Change of pick-up and drop-out voltage

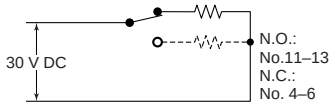


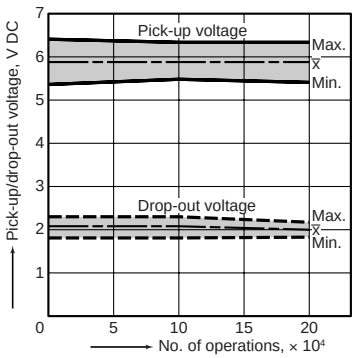
Change of contact resistance

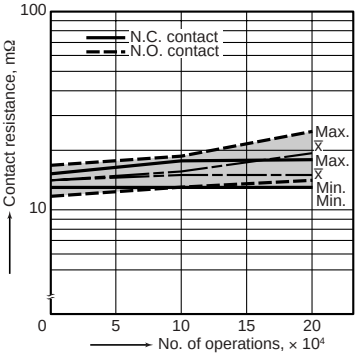


2. Electrical life test (resistive)

Tested sample: DSBT2-S-DC12V, 6 pcs.
Condition: 2 A 30 V DC resistive load, 30 cpm
Circuit

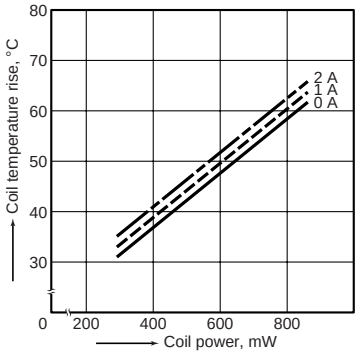






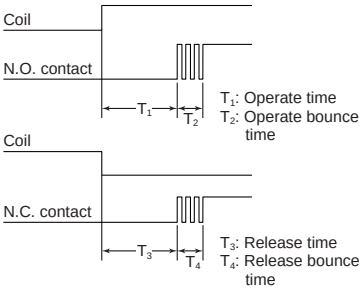
3. Coil temperature rise

Tested sample: DSBT2-S-DC12V, 5 pcs.
Measured portion: Inside the coil

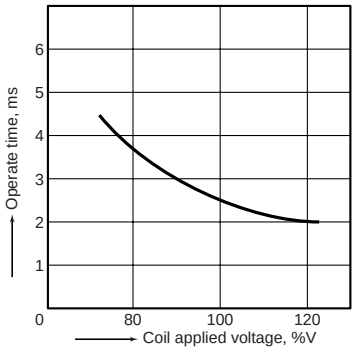


4. Operate and release time characteristics

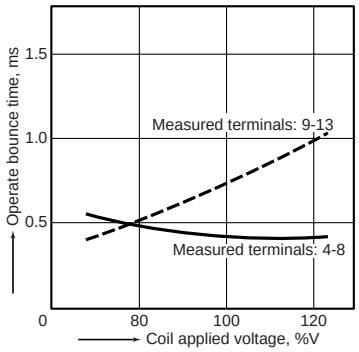
Tested sample: DSBT2-S-DC5V, 10 pcs.
Ambient temperature: 23°C 73°F



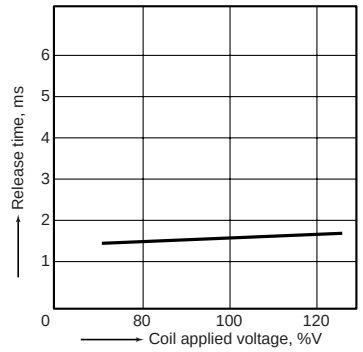
Without diode (T_1)



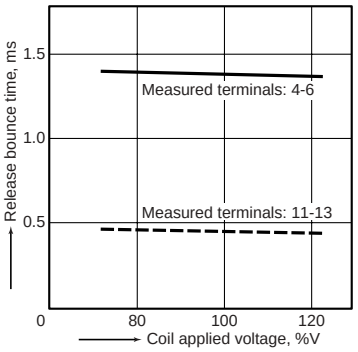
Without diode (T_2)



Without diode (T_3)

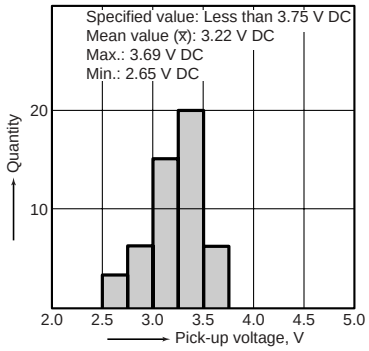


Without diode (T_4)

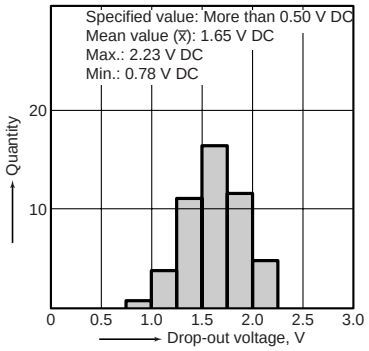


5. Distribution of pick-up and drop-out voltage

Tested sample: DSBT2-S-DC5V, 50 pcs.
Pick-up voltage

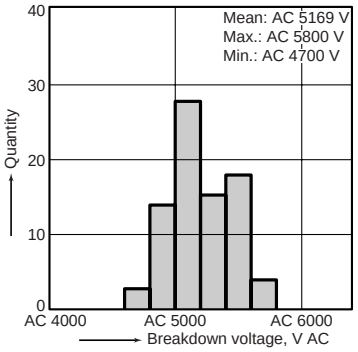


Drop-out voltage



6. Distribution of breakdown voltage

(between contacts and coil)
Tested sample: DSBT2-S-DC5V, 100 pcs.



For Cautions for Use, see Relay Technical Information in catalog.