

# Basic Switches

## B Type Switches Performance Information

### ELECTRICAL DATA CHART

Catalog Listing (contact gap)	Voltage	Amperes									
		Current Carrying Capacity Max. <sup>1</sup>	Resistive	Inrush		Motor		Lamp		Inductive <sup>2</sup>	
				N.C. Ckt.	N.O. Ckt.	N.C. Ckt.	N.O. Ckt.	N.C. Ckt.	N.O. Ckt.	Sea Level	50,000 Feet
BZ-3YT* .036 in. 0,91 mm	VDC										
	8	5	10	30	15	5	2.5	3	1.5	10	10
	14	5	10	30	15	5	2.5	3	1.5	10	10
	30	5	10	30	15	5	2.5	3	1.5	10	5
	125	5	1	10	10	2	2	1	1	0.6	0.4
250	5	0.6	6	6	1.2	1.2	0.6	0.6	0.4	0.3	
BZ-3YT* .036 in. 0,91 mm	VAC										
	120	5	5	30	15	5	2.5	3	1.5	5	5
	240	5	5	30	15	5	2.5	3	1.5	5	5
277	5	5	30	15	5	2.5	3	1.5	5	5	
BM-2R .020 in. 0,50 mm	VDC										
	8	22	15	30	15	5	2.5	3	1.5	8	7
	14	22	15	30	15	5	2.5	3	1.5	5	5
	30	22	2	30	15	5	2.5	3	1.5	1	1
	125	22	0.4	4	4	0.8	0.4	0.4	0.4	.03	.02
230	22	0.2	2	2	0.4	0.2	0.2	0.2	.02	.01	
BM-2R .020 in. 0,50 mm	VAC										
	125	22	22	35	20	5.8	3.4	3.5	2.0	22	22
	250	22	22	35	20	5.8	3.4	3.5	2.0	22	22
	277	22	22	35	20	5.8	3.4	3.5	2.0	22	22
460	22	22	35	20	5.8	3.4	3.5	2.0	22	22	
BA-2R .020 in. 0,50 mm	VDC										
	8	20	20	30	15	5	2.5	3	1.5	15	15
	14	20	20	30	15	5	2.5	3	1.5	10	8
	30	20	5	30	15	5	2.5	3	1.5	5	2
	125	20	0.5	4	4	0.8	0.4	0.4	0.4	.05	.03
230	20	0.25	2	2	0.4	0.2	0.2	0.2	.03	.02	
BA-2R .020 in. 0,50 mm	VAC										
	120	20	20	75	75	12.5	12.5	7.5	7.5	20	20
	240	20	20	75	75	12.5	12.5	7.5	7.5	20	20
	277	20	20	75	75	12.5	12.5	7.5	7.5	20	20
460	20	20	75	75	12.5	12.5	7.5	7.5	20	20	
BE-2R .020 in. 0,50 mm	VDC										
	8	25	25	30	15	5	2.5	3	1.5	15	15
	14	25	25	30	15	5	2.5	3	1.5	10	8
	30	25	5	30	15	5	2.5	3	1.5	5	2
	125	25	0.5	4	4	0.8	0.8	0.4	0.4	.05	.03
250	25	0.25	2	2	0.4	0.4	0.2	0.2	.03	.02	
BE-2R .020 in. 0,50 mm	VAC										
	120	25	25	96	96	16	16	10	10	25	
	240	25	25	96	96	16	16	10	10	25	
	277	25	25	96	96	16	16	10	10	25	
460	25	25	96	96	16	16	10	10	25		
BZ-R .006 in. 0,15 mm	VAC										
	125	15	15	30	15	5	2.5	3	1.5	15	15
	250	15	15	30	15	5	2.5	3	1.5	15	15
277	15	15	30	15	5	2.5	3	1.5	15	15	
BZ-1R .010 in. 0,25 mm	VDC										
	8	15	15	30	15	5	2.5	3	1.5	8	7
	14	15	15	30	15	5	2.5	3	1.5	5	5
	30	15	2	30	15	5	2.5	3	1.5	1	1
	125	15	0.4	4	4	0.8	0.8	0.4	0.4	0.03	0.01
230	15	0.2	2	2	0.4	0.4	0.2	0.2	0.02	0.01	
BZ-1R .010 in. 0,25 mm	VAC										
	125	15	15	30	15	5	2.5	3	1.5	15	15
	250	15	15	30	15	5	2.5	3	1.5	15	15
	277	15	15	30	15	5	2.5	3	1.5	15	15
460	15	15	30	15	5	2.5	3	1.5	15	15	

\* Ampere levels for BZ-3YT applicable **only** if common terminal is not used and switch is used as a shorting bar switch.

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## B Type Switches Performance Information

ELECTRICAL DATA CHART, cont.

Catalog Listing (contact gap)	Voltage	Amperes									
		Current Carrying Capacity Max. <sup>1</sup>	Resistive	Inrush		Motor		Lamp		Inductive <sup>2</sup>	
				N.C. Ckt.	N.O. Ckt.	N.C. Ckt.	N.O. Ckt.	N.C. Ckt.	N.O. Ckt.	Sea Level	50,000 Feet
BZ-2R .020 in. 0.50 mm	VDC										
	8	15	15	30	15	5	2.5	3	1.5	15	15
	14	15	15	30	15	5	2.5	3	1.5	10	8
	30	15	6	30	15	5	2.5	3	1.5	5	2
	125	15	0.4	4	4	0.8	0.8	0.4	0.4	0.05	0.03
230	15	0.2	2	2	0.4	0.4	0.2	0.2	0.03	0.02	
BZ-2R .020 in. 0.50 mm	VAC										
	125	15	15	30	15	5	2.5	3	1.5	15	15
	250	15	15	30	15	5	2.5	3	1.5	15	15
	277	15	15	30	15	5	2.5	3	1.5	15	15
	460	15	15	30	15	5	2.5	3	1.5	15	15
BZ-3R .036 in. 0.91 mm	VDC										
	8	15	15	30	15	5	2.5	3	1.5	15	15
	14	15	15	30	15	5	2.5	3	1.5	15	15
	30	15	10	30	15	5	2.5	3	1.5	10	5
	125	15	0.6	6	6	1.2	1.2	0.6	0.6	0.1	0.05
250	15	0.3	3	3	0.6	0.6	0.3	0.3	0.05	0.03	
BZ-3R .036 in. 0.91 mm	VAC										
	125	15	15	30	15	5	2.5	3	1.5	15	15
	250	15	15	30	15	5	2.5	3	1.5	15	15
	277	15	15	30	15	5	2.5	3	1.5	15	15
	460	15	15	30	15	4	2.5	3	1.5	15	15
BZ-7R .070 in. 1.78 mm	VDC										
	8	30	15	15	5	2.5	3	1.5	15	15	—
	14	15	15	30	15	5	2.5	3	1.5	15	15
	30	15	15	30	15	5	2.5	3	1.5	10	7.5
	125	15	0.75	7.5	7.5	1.5	1.5	0.75	0.75	0.4	0.2
250	15	0.3	3	3	0.6	0.6	0.3	0.3	0.2	0.1	
BZ-7R .070 in. 1.78 mm	VAC										
	120	15	15	30	15	5	2.5	3	1.5	15	15
	240	15	15	30	15	5	2.5	3	1.5	15	15
	277	15	15	30	15	5	2.5	3	1.5	15	15
	460	15	15	30	15	5	2.5	3	1.5	15	15

1 For a 86 – F (30 – C) max. temperature rise at terminals, not opening or closing the load (at sea level).

2 Data established with a 75% power factor on AC loads.

### TEST CONDITIONS

Switch contact life is affected by electrical conditions and other factors, such as: temperature, humidity, airborne contamination, vibration, amount and rate of plunger travel, and cycling

rate. Our Evaluation Laboratory tests are conducted using procedures and practices common to UL and Military Specifications. The following conditions generally apply.

- Temperature: Room Ambient (70 – F, 21 – C).
- Humidity: Room Ambient (50%).
- AC Cycle Rate: 60 operations/minute.
- DC Cycle Rate: 20 operations/minute.
- On-off Time: Equal and compatible with above cycling rates.
- Power Factor (AC): Approximately 75%.
- Inductance (DC): MIL-I-81023 Inductor.
- Circuit Loading: One throw only on a SPDT switch during any test procedure. Both throws are evaluated separately.
- Travel Plunger: Full switch travel is used.
- Actuation: Linear motion.
- Overtravel Force: 1 to 3 lbs. from spring-loaded actuators.

MICRO SWITCH believes that with the following voltage and current values and under the test conditions set forth below switch life of 100,000 closures, 95% survival can be expected. It is a starting point for user evaluation and provides guidelines on the switches identified. Because of the numerous electrical conditions listed, not every current and voltage level has actually been tested on every switch and certain figures have

been extrapolated. For specific switch selection, customers should evaluate switches under actual application conditions or by simulating all application conditions and requirements. The information set forth cannot substitute for the customer's own product evaluation. It should never be published by a customer as a rating on their product.

