

Basic Switches

Standard

BZ/BA Series

Characteristics: O.F. — Operating Force; R.F. — Release Force; P.T. — Pretravel; O.T. — Overtravel; D.T. — Differential Travel; O.P. — Operating Position.

STRAIGHT LEVER

ORDER GUIDE

BZ/BM TYPE



Dim. Dwg. Fig. 21

BA TYPE



Dim. Dwg. Fig. 23

ADJUSTABLE



Dim. Dwg. Fig. 22



Dim. Dwg. Fig. 24

Catalog Listing	Recommended For	Electrical Data and UL Codes Page 46	O.F. max. newtons ounces	R.F. min. newtons ounces	P.T. max. mm inches	O.T. min. mm inches	D.T. mm inches	O.P.** mm inches
BZ-2RW8072-A2	Applications requiring gold alloy contacts	1 Amp P	0,7 2.5	0,14 0.5	—	5,56 .219	0,18-1,27 .007-.050	19,1 .750
BZ-2RW80722555105-A2	Best stability under varying humidity. Gold alloy contacts with seal	1 Amp P	0,7 2.5	0,14 0.5	—	5,56 .219	0,18-1,27 .007-.050	19,1 .750
BZ-2RW8244-A2	Operating in temp. to +400°F (204°C) for 100 hours	5 Amps B	0,7 2.5	0,14 0.5	—	5,56 .219	0,18-1,27 .007-.050	19,1 .750
BZ-RW8435-A2	Lowest operating force (without external return spring)	10 Amps I	0,07 .25	—	6,76 .266	5,56 .219	0,08-0,38 .003-.015	19,1 .750
BZ-2RW876T	1.25 inch lever requirements	15 Amps A	1,67 6	0,42 1.5	—	0,42 .141	0,10-0,63 .004-.025	19,1 .750
BZ-2RW80-A2	2.5 inch lever requirements	15 Amps A	0,7 2.5	0,14 0.5	—	5,56 .219	0,18-1,27 .007-.050	19,1 .750
BZ-2RW84-A2	Lower force (without external return spring)	15 Amps A	0,28 1	0,03 0.125	8,33 .328	5,56 .219	0,18-1,27 .007-.050	19,1 .750
BZ-2RW805551-A2	Dustproof and splash resistant seal	15 Amps A	0,7 2.5	0,14 0.5	—	5,56 .219	0,18-1,27 .007-.050	19,1 .750
BZ-2RWT04 M8805/1-044)	MIL-S-8805 application requirements	15 Amps A	0,28-0,90 1-3.25	0,21 0.75	7,52 .296	4,37 .172	2,36 .093	19,1 .750
BZ-2RW824-A2	Operating in temperature to +250°F (121°C)	15 Amps A	0,7 2.5	0,14 0.5	—	5,56 .219	0,18-1,27 .007-.050	19,1 .750
BZ-RW80X	Manual reset solder terminals	15 Amps E	0,63 2.25	—	—	5,56 .219	— —	19,05 .750
BZ-2RW863-A2	6 inch lever requirements	15 Amps A	0,28 1	—	—	12,7 .500	0,46-3,68 .018-.145	19,1±1,52 .750±.060
BA-2RV-A2	Up to 20 ampere load handling	20 Amps G	0,7 2.5	0,14 0.5	15,88 .625	1,98 .078	2,77 .109	19,1 .750
BM-1RW84-A2	Up to 22 ampere load handling	22 Amps F	0,28 1	0,03 0.125	7,54 .297	5,56 .219	0,13-0,84 .005-.033	19,1 .750
BE-2RV-A4	Up to 25 ampere load handling	25 Amps H	0,7 2.5	0,14 0.5	15,88 .625	1,98 .078	2,77 .109 max.	19,1 .750

* Reset characteristics.

BZ-2RW899-A2	Adjustable operating point (17 mm to 22 mm) .670" to .880"	15 Amps A	0,7 2.5	0,14 0.5	—	3,54† .125	0,18-1,27 .007-.050	17,02-22,35 .670-.880
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BZ-2RM-A2	Reverse acting actuator (switch plunger depressed in free position)	15 Amps A	1,67 6	0,28 1	5,56 .219	5,56 .219	0,10-0,89 .004-.035	19,1 .750
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† From ^{17 mm}.670 in. O.P.

Except where stated ** ±0.76 mm ±.030 in.

Basic Switches

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ELECTRICAL DATA AND UL CODES STANDARD BASIC SWITCHES

Most of the switches in this section are UL recognized and CSA certified. The current and voltage values shown are based on test conditions specified by these agencies. Electrical life of the switch is influenced by each application condition as well as by voltage and current. For application assistance contact the 800 number.

Circuitry	Electrical Data and UL Codes
Single-pole double-throw unless otherwise noted in order guide	A 15 amps, 125, 250 or 480 vac; ⅛ hp, 125 vac; ¼ hp, 250 vac; ½ amp, 125 vdc; ¼ amp, 250 vdc. UL Code L96
Single-pole double-throw unless otherwise noted in order guide	B 5 amps, 125, 250 or 480 vac; ½ amp, 125 vdc; ¼ amp, 250 vdc. UL Code L35
Single-pole double-throw unless otherwise noted in order guide	C 10 amps, 125, 250 or 480 vac; UL Code L8
Single-pole double-throw unless otherwise noted in order guide	D 15 amps, 125, 250 or 480 vac; ⅛ hp, 125 vac; ¼ hp, 250 vac. UL Code L103
Single-pole double-throw unless otherwise noted in order guide	E 15 amps, 125, 250 or 480 vac; ¼ hp, 125 vac, ½ hp, 250 vac; ½ amp, 125 vdc; ¼ amp, 250 vdc. UL Code L67
Single-pole double-throw unless otherwise noted in order guide	F 22 amps, 125, 250 or 480 vac; ½ hp, 125 vac, 1 hp, 250 vac. UL Code L161
Single-pole double-throw unless otherwise noted in order guide	G 20 amps, 125, 250 or 480 vac; 10 amps, 125 vac "L" (tungsten lamp load); 1 hp, 125 vac; 2 hp, 250 vac; ½ amp, 125 vdc; ¼ amp, 250 vdc. UL Code L23
Single-pole double-throw unless otherwise noted in order guide	H Motor Control 25 amps, 125, 250 or 480 vac; 1 hp, 125 vac; 2 hp, 250 vac; Pilot Duty—750 VA, 125, 250, or 277 vac.
Single-pole double-throw unless otherwise noted in order guide	I 10 amps, 125, 250 or 480 vac; ⅛ hp, 125 vac; ¼ hp, 250 vac; UL Code L95

Circuitry	Electrical Data and UL Codes
Double-pole double-throw	J 10 amps, 125 or 250 vac; 0.3 amp, 125 vdc; 0.15 amp, 250 vdc. UL Code L59
Single-pole double-throw unless otherwise noted in order guide	K Rating established with switch non-polarized 10 amps, 125 vac or vdc; ¼ hp, 125 vac or vdc. UL Code L 168 Non-polarized: 10 amps res. or ¼ hp, 125 vdc; 3 amps max. res. 250 vdc. Polarized*: 10 amps res. or ½ hp, 125 vdc; 3 amps max. res., 250 vdc. *To polarize, connect negative side of line to common terminal. To achieve the same effect, mount switch with brass screws, using a non-magnetic barrier (at least ¼" thick) between the switch and mounting surface.
Two-circuit double-break	M 25 amps, 125, 250 or 480 vac; ⅜ hp, 125 vac; 1¼ hp, 250 vac. 1 amp, 125 vdc; ½ amp, 250 vdc. UL Code L58
Single-pole double-throw	P 1 amp, 125 VAC UL Code L22
Single-pole double-throw	R 10 amps, 125 or 250 vac; ⅓ hp, 125 vac; ¾ hp, 250 vac; ½ amp, 125 vdc; ¼ amp, 250 vdc. UL Code L115
Single-pole double-throw	S 10 amps, 125 or 250 vac; ⅓ hp, 125 or 250 vac. UL Code L93
Two-circuit double-break	T 15 amps, 125, 250 or 480 vac; 1 amp, 125 vdc; ½ amp, 250 vdc; ¼ hp, 125 vac; ½ hp, 250 vac UL Code L73
Single-pole double-throw	U 5 amps, 250 vac. UL Code L4
Two-circuit double-break	V Motor Control 15 amps, 120, 240, 480 or 600 vac; ½ hp, 120 vac; 1 hp, 240 vac; 0.8 amp, 115 vdc; 0.4 amp, 230 vdc.
Single-pole single-throw (N.C.)	W 20 amps, 125, 250 or 277 vac; ¾ hp, 125 vac; ½ hp, 250 vac UL Code L178B
Single-pole double-throw	X 15 amps, 125, 250 or 480 vac; 2 amps, 600 vac; ⅛ hp, 125 vac; ¼ hp, 250 vac; ½ amp, 125 vdc; ¼ amp, 250 vdc. UL Code L74
Single-pole double-throw	Y 20 amps, 125, 250 or 480 vac; ¾ hp, 125 vac; 1½ hp, 250 vac; UL Code L17

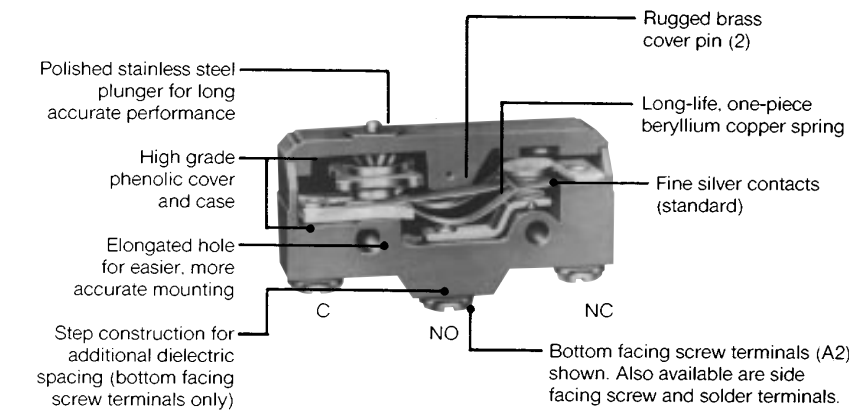
Basic Switches

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BZ/BA Series

STANDARD BASIC SWITCH CUT-A-WAY

The cut-a-way shown is representative of the standard basic switches described in this catalog.



GENERAL INFORMATION

MICRO SWITCH standard basic switches are precision snap-action mechanisms enclosed in accurately molded plastic cases. These switches are carefully manufactured and thoroughly inspected. They are industry known for their compactness, light weight, accurate repeatability and long life.

MOUNTING DIMENSIONS

Mounting dimensions are included at the end of each product section. They are shown in English and metric equivalents. These dimensions are for reference only. For exacting layout work, request an engineering layout work, request an engineering drawing from the 800 number.

Mounting holes for Types BZ, BM, BA, BE, DT, MT, and 6AS switches accept pins or screws of .139 inch (3,53 mm) diameter.

RECOMMENDED TORQUE (max.)

Mounting screws 3 in./lbs.*
Terminal screws 4 in./lbs.
Panel mount bushing 4-6 in./lbs.

*Note: Tightening mounting screws above 3 in./lbs. changes operating characteristics and increases the possibility of cracking the case.

UL/CSA

Our basic switches are Component Recognized by Underwriters' Laboratories, Inc. and certified by Canadian Standards Association. The BA, BZ, and BM line is covered as Special Use Switches to UL Standard 1054; the BE line is covered as an Industrial Motor Controller to UL Standard 508.

Agency File References are:

BA	UL File E12252, issued 12-09-88
BM	UL File E12252, issued 12-08-88
BZ	UL File E12252, issued 6-29-89
BE-1,2,5	UL File E22779, Vol. 4, Sec. 1
BE-R	UL File E22779, Vol. 4, Sec. 2

FEATURES

- Operating force as low as 4 oz. (113 grams) maximum
- Sensitive differential travel as low as .0002 to .0003 inches (0,005 to 0,008 mm)
- Power load switching capability to 25 amperes
- Motor handling capacity to 2 horsepower at 250 VAC
- Long mechanical life
- High temperature constructions for up to +400°F (204°C)
- Momentary or maintained contact action
- Alloy contacts available for special application needs
- Variety of integral actuators
- Variety of auxiliary actuators
- Variety of terminal designs
- Optional sealed plunger and cover
- Stainless steel snap spring available
- Military standard construction available with over 50 listings on the MIL-S-8805 Qualified products list
- UL recognized, CSA certified

Characteristics as stated are taken at normal room temperature and humidity. These may vary as temperature and humidity conditions differ.

The type BZ switch design meets most applications needs. Modifications of the standard silver contact design and material, spring configuration, and plunger locations give the type BM, BA and BE switches greater electrical load handling capacity. Other changes in materials and switch design provide operating characteristics, temperature tolerances, and sealing to cover a wide range of special requirements.

GENERAL SWITCH IDENTIFICATION

First letter in catalog listing designates:

- B = Single-pole double-throw
- W = Single-pole single-throw (normally closed)
- Y = Single-pole single-throw (normally open)

Second letter in catalog listing designates:

- Z = Standard 15-amp version
- M = 22-amp version
- A = Standard 20-amp version
- E = 25-amp version

This section covers only **over 100** of our most popular BZ/BA type Series catalog listings. If you don't find what you're looking for, it's likely one of the approximately **1800** other active listings will meet your needs. Contact the 800 number.

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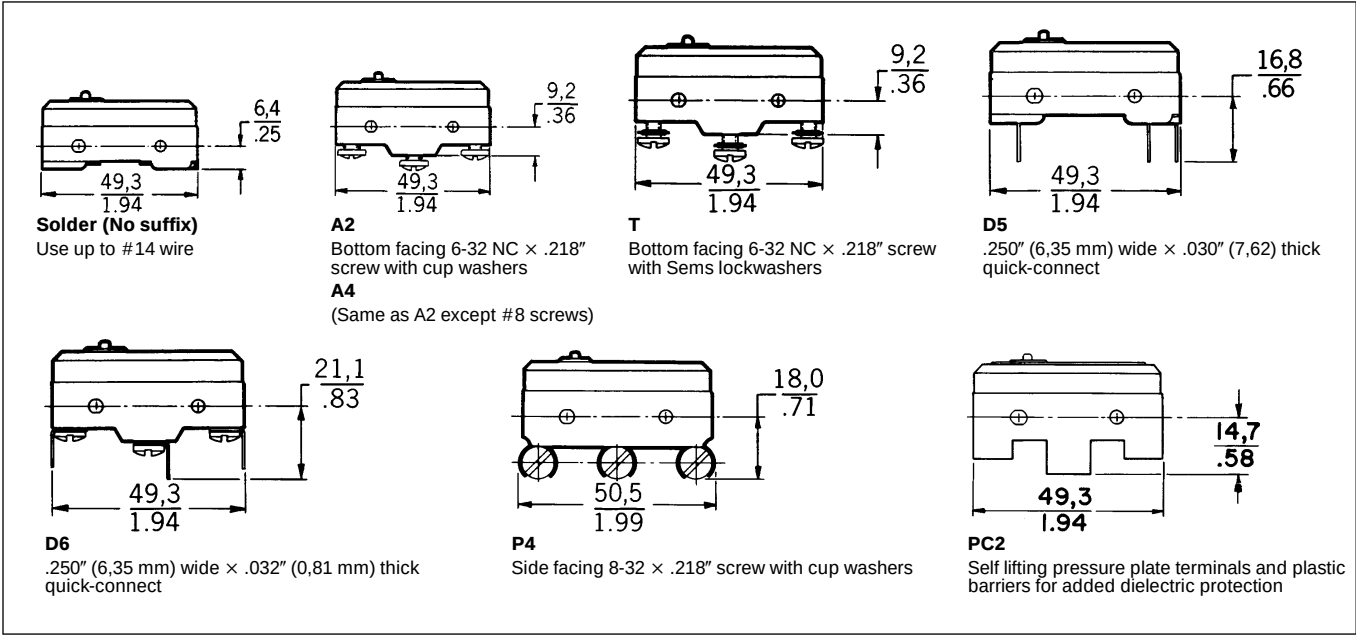
Basic Switches

Standard

BZ/BA Series

AVAILABLE TERMINALS

Most of the BZ/BA catalog listings have A2 type terminals. Several other terminal styles are shown and others are available. Specific information should be requested from the 800 number or local Authorized Distributor.



ACTUATORS

BA, BE, BM and BZ standard basic switches use the actuators described.

