Honeywell

Interactive Catalog Replaces Catalog Pages

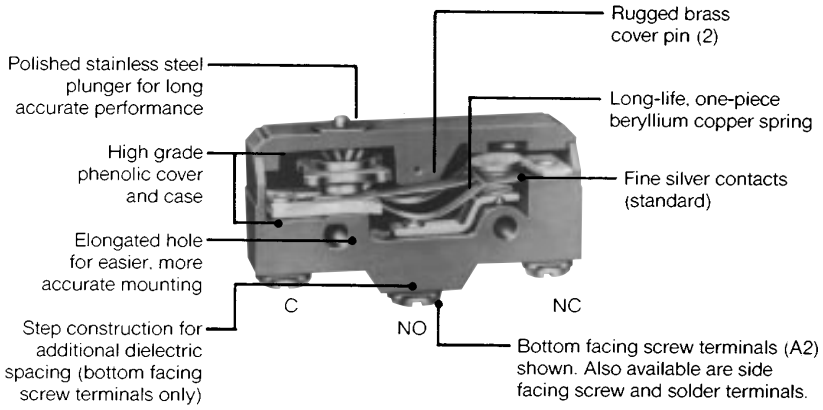
Honeywell Sensing and Control has replaced the PDF product catalog with the new Interactive Catalog. The Interactive Catalog is a power search tool that makes it easier to find product information. It includes more installation, application, and technical information than ever before.

Click this icon to try the new Interactive Catalog.

Sensing and Control
Honeywell Inc.
11 West Spring Street
Freeport, Illinois 61032

Basic Switches
Standard

STANDARD BASIC SWITCH CUT-A-WAY
The cut-a-way shown is representative of the standard basic switches described in this catalog.



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.

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.

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.

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.

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.

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.

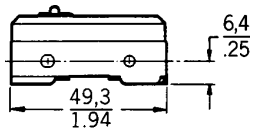
Agency File References are:

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

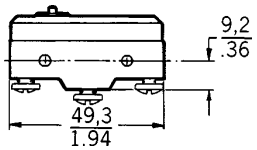
Standard

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.

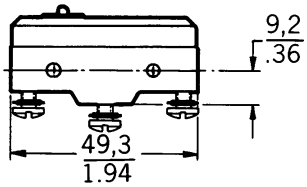


Solder (No suffix)
Use up to #14 wire

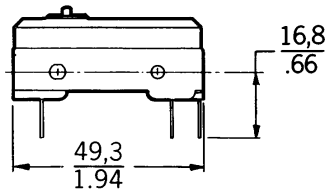


A2
Bottom facing 6-32 NC × .218″ screw with cup washers

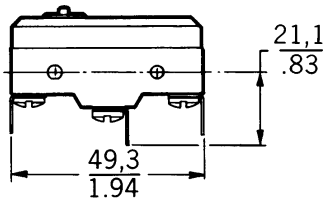
A4
(Same as A2 except #8 screws)



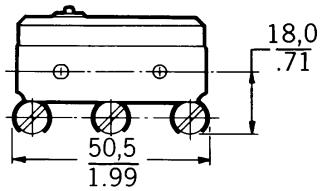
T
Bottom facing 6-32 NC × .218″ screw with Sems lockwashers



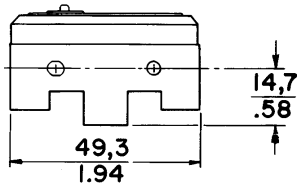
D5
.250″ (6,35 mm) wide × .030″ (7,62) thick quick-connect



D6
.250″ (6,35 mm) wide × .032″ (0,81 mm) thick quick-connect



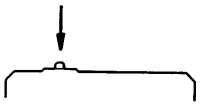
P4
Side facing 8-32 × .218″ screw with cup washers



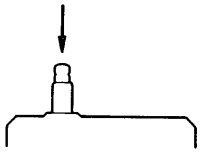
PC2
Self lifting pressure plate terminals and plastic barriers for added dielectric protection

ACTUATORS

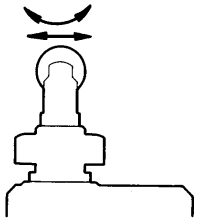
BA, BE, BM and BZ standard basic switches use the actuators described.



Pin plunger; in-line motion

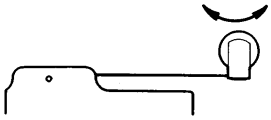


Overtravel plunger; in-line applications requiring additional overtravel

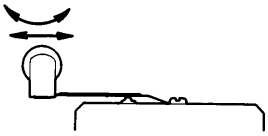


Added overtravel in a panel mount roller plunger; Actuation by cams

Leaf; Low-force, slow moving cams or slides

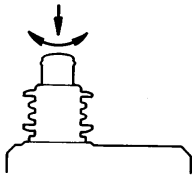


Roller lever; Very low force, fast moving cams



Roller leaf; Low-force, large movement actuation

Lever; Very low force, slow cams and slides



Added overtravel in a panel-mount plunger; Heavy-duty in-line applications or slow cams. Cam rise should not exceed 30°

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

ORDER GUIDE by ascending electrical capability

PIN PLUNGER

BZ/BA TYPE

Dim. Dwg. Fig. 1

SEALED TYPE

Dim. Dwg. Fig. 2

BA/BE TYPE

Dim. Dwg. Fig. 3

Dim. Dwg. Fig. 4

Catalog Listing	Recommended For	Electrical Data And UL Codes Page 46	O.F. 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-2R72-A2	Applications requiring gold alloy contacts	1 Amp **P**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
BZ-2R725551-A2	Gold alloy contacts Dustproof and splash resistant seal	1 Amp **P**	2,22-4,17 **8-15**	1,11 **4**	— **—**	0,13 **.005**	0,01-0,06 **.0004-.0025**	15,88 **.625**
BZ-2R244-A2	Operating in temp. to +400°F (204°C) for 100 hours	5 Amps **B**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
BZ-R21-A2	Lower force	10 Amps **C**	1,11 **4**	0,7 **2.5**	0,30 **.012**	0,13 **.005**	0,005-0,013 **.0002-.0005**	15,88 **.625**
BZ-2R-A2	Most applications SPDT	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
WZ-2R-A2	SPST (normally closed)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
YZ-2R-A2	SPST (normally open)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
BZ-R-A2	Less differential travel	15 Amps **D**	1,95-2,5 **7-9**	1,11 **4**	0,30 **.012**	0,13 **.005**	0,005-0,008 **.0002-.0003**	15,88 **.625**
BZ-R19-A2	Best repeatability	15 Amps **D**	1,95-3,34 **7-12**	1,11 **4**	0,30 **.012**	0,13-0,2 **.005-.008**	0,005-0,02 **.0002-.0008**	16,26 **.640**
BZ-2R24-A2	Operating in temp. to +250°F (121°C)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
BZ-2RT04 (8805/1-004)	MIL-S-8805 application requirements	15 Amps **A**	2,5-3,61 **9-13**	1,67 **6**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
BZ-2R05-A2	Best stability under varying humidity	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,01-0,05 **.0004-.0020**	15,88 **.625**
BZ-2R5551-A2	Dustproof and splash resistant seal	15 Amp **A**	2,5-4,17 **9-15**	1,11 **4**	— **—**	0,13 **.005**	0,01-0,06 **.0004-.0025**	15,88 **.625**
BZ-2R55-A2-S	Best service for sealed construction. Stainless steel internal snap spring.	15 Amps **A**	2,5-4,17 **9-15**	1,11 **4**	— **—**	0,13 **.005**	0,01-0,06 **.0004-.0025**	15,88 **.625**
BA-2R-A2	Up to 20 ampere load handling	20 Amps **G**	3,89-6,12 **14-22**	2,78 **10**	1,27 **.050**	0,25 **.010**	0,05-0,19 **.0020-.0075**	16,26 **.640**
BA-2R24-A2	Operating in temperature to +250°F (121°C)	20 Amps **G**	3,89-6,12 **14-22**	2,78 **10**	1,27 **.050**	0,25 **.010**	0,05-0,19 **.0020-.0075**	16,26 **.640**
BM-1R-A2	Up to 22 ampere load handling	22 Amps **F**	1,95-2,78 **7-10**	1,11 **4**	0,38 **.015**	0,13 **.005**	0,013-0,025 **.0005-.0010**	15,88 **.625**
BE-2R-A4	Up to 25 ampere load handling	25 Amps **H**	3,89-6,12 **14-22**	2,78 **10**	1,27 **.050**	0,25 **.010**	0,05-0,19 **.0020-.0075**	16,26 **.640**
BZ-RX	Manual reset (maintained contact) applications, solder terminals	15 Amps **E**	1,95-2,5 **7-9** 0,56-2,78* **2-10**	— **—** — **—**	0,30 **.012** — —	0,13 **.005** 0,38* **.015**	— **—**	15,88 **.625**
WA-1RX-A4	Manual reset SPST-NC, A4 terminals	20 Amps **W**	5,56 **20** 6,95* **25**	— **—** — **—**	— **—** — **—**	0,25 **.010** — —	0,20 **.008** — —	16,26 **.64** 27,9* **1.10**

* Reset characteristics.

Except where stated ** ±0,38mm ±.015 in.

All catalog listings shown are not necessarily stock items. Stocking depends on sales experience.

Auxiliary actuators see p. 62-63.

Basic Switches
Standard

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

OVERTRAVEL PLUNGER

ORDER GUIDE

Dim. Dwg. Fig. 11

Catalog Listing	Recommended For	Electrical Data and UL Codes Page 46	O.F. 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-2RD72-A2	Applications requiring gold alloy contacts	1 Amp **P**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,01-0,05 **.0004-.0020**	21,21 **.835**
BZ-2RD-A2	Added overtravel. For manual operation and slow 20° (max) cam rise	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,01-0,05 **.0004-.0020**	21,21 **.835**
BZ-2RD24-A2	Operating in temperature to +250°F (121°C)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,01-0,05 **.0004-.0020**	21,21 **.835**
BM-1RD-A2	Up to 22 ampere load handling	22 Amps **F**	1,95-2,78 **7-10**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,013-0,025 **.0005-.0010**	21,21 **.835**

Dim. Dwg. Fig. 12

BZ-2RDS725551-A2	Applications requiring gold alloy contacts plus dustproof and splash resistant seal	1 Amp **P**	3,61-5,28 **13-19**	1,11 **4**	**—**	1,52 **.060**	0,01-0,063 **.0004-.0025**	28,20 **1.110**
BZ-2RDS5551-A2	Dustproof and splash resistant seal	15 Amps **A**	3,61-5,28 **13-19**	1,11 **4**	**—**	1,52 **.060**	0,01-0,063 **.0004-.0025**	28,20 **1.110**

Dim. Dwg. Fig. 13

BA-2RB-A2	Up to 20 ampere load handling	20 Amps **G**	3,89-6,12 **14-22**	2,78 **10**	1,27 **.050**	2,39 **.094**	0,05-0,19 **.0020-.0075**	26,20 **1.03**
BE-2RB-A4	Up to 25 ampere load handling	25 Amps **H**	3,89-6,12 **14-22**	2,78 **10**	1,27 **.050**	2,39 **.094**	0,05-0,19 **.0020-.0075**	26,20 **1.03**

Dim. Dwg. Fig. 14

BZ-2RS72-A2	Applications requiring gold alloy contacts	1 Amp **P**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,01-0,05 **.0004-.0020**	28,20 **1.110**
BZ-2RS-A2	Added overtravel. For in-line operation and with JR auxiliary actuators	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,01-0,063 **.0004-.0025**	28,20 **1.110**
BZ-2RS24-A2	Operating in temperature to +250°F (121°C)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,01-0,05 **.0004-.0020**	28,20 **1.110**
BZ-2RST04 (M8805/1-012)	MIL-S-8805 application requirements	15 Amps **A**	2,5-3,61 **9-13**	1,67 **6**	0,38 **.015**	1,52 **.060**	0,01-0,05 **.0004-.0020**	28,20 **1.110**
BZ-RSX	Manual reset solder terminals	15 Amps **E**	1,95-2,64 **7-9**	— **—**	0,30 **.012**	0,64 **.025**	— **—**	2,79 **1.11**
BM-1RS-A2	Up to 22 ampere load handling	22 Amps **F**	1,95-2,78 **7-10**	1,11 **4**	0,38 **.015**	1,52 **.060**	0,013-0,025 **.0005-.0010**	28,20 **1.110**

Dim. Dwg. Fig. 15

BZ-2RS7225551-A2	Applications requiring gold alloy contacts plus dustproof and splash resistant seal	1 Amp **P**	2,5-4,17 **9-15**	1,11 **4**	**—**	1,52 **.060**	0,01-0,063 **.0004-.0025**	28,20 **1.110**
BZ-2RS5551-A2	Dustproof and splash resistant seal	15 Amps **A**	2,5-4,17 **9-15**	1,11 **4**	**—**	1,52 **.060**	0,01-0,063 **.0004-.0025**	28,20 **1.110**

*±0,51 mm
±.020 in.

OVERTRAVEL PLUNGER

Dim. Dwg. Fig. 16

BZ/BM TYPE

Dim. Dwg. Fig. 17

BA TYPE

Dim. Dwg. Fig. 18

Dim. Dwg. Fig. 19

Dim. Dwg. Fig. 20

ORDER GUIDE

Catalog Listing	Recommended For	Electrical Data and UL Codes Page 46	O.F. 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-2RQ-A2	Added overtravel. For manual in-line operation and for slow 30° (max) rise cams	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	5,56 **.219**	0,01-0,05 **.0004-.0020**	38,10±0,51 **1.500±.020**
BZ-2RQ24-A2	Operating in temperature to ±250°F (121°C)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	5,56 **.219**	0,01-0,05 **.0004-.0020**	38,10±0,51 **1.500±.020**
BZ-2RQ172-A2	Applications requiring gold alloy contacts	1 Amp **P**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	5,56 **.219**	0,01-0,05 **.0004-.0020**	21,82 **.859**
BZ-2RQ1-A2	BZ-2RQ-A2 type applications with panel mount	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	5,56 **.219**	0,01-0,05 **.0004-.0020**	21,82 **.859**
BZ-2RQ1T04 M8805/1-020)	MIL-S-8805 application requirements	15 Amps **A**	2,5-3,61 **9-13**	1,67 **6**	0,38 **.015**	5,56 **.219**	0,01-0,05 **.0004-.0020**	21,82 **.859**
BZ-2RQ124-A2	Operating in temperature to ±250°F (121°C)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	5,56 **.219**	0,01-0,05 **.0004-.0020**	21,82 **.859**
BZ-2RN702	Furnished with unassembled seal boot.	15 Amps **X**	2,5-3,61 **9-13**	1,11 **4**	0,38 **0.15**	3,18 **.125**	0,01-0,05 **.0004-.0020**	48,4±0,50 **1.906±.020**
BZ-RQ1X	Manual reset. Solder terminals	15 Amps **E**	1,67-2,64 **6-9.5**	– **–**	0,30 **0.12**	5,56 **.219**	– **–**	23,42±1,14 **.922±.045** 7,14* .281*
BA-2RQ1-A2	Up to 20 ampere load handling	20 Amps **G**	3,89-6,12 **14-22**	2,78 **10**	1,27 **.050**	5,56 **.219**	0,05-0,19 **.0020-.0075**	21,82 **.859**
BM-1RQ1-A2	Up to 22 ampere load handling	22 Amps **F**	1,95-2,78 **7-10**	1,11 **4**	0,38 **.015**	5,56 **.219**	0,013-0,025 **.0005-.0010**	21,82 **.859**
BZ-2RQ1872-A2	Applications requiring gold alloy contacts	1 Amp **P**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	3,56 **.140**	0,01-0,05 **.0004-.0020**	33,32±1,14 **1.312±.045**
BZ-2RQ18-A2	Added overtravel. Roller plunger for rapid cam (30° max) rise and slide operation. Panel mount	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	3,56 **.140**	0,01-0,05 **.0004-.0020**	33,32±1,14 **1.312±.045**
BZ-2RQ1824-A2	Operating in temperature to ±250°F) (121°C)	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	3,56 **.140**	0,01-0,05 **.0004-.0020**	33,32±1,14 **1.312±.045**
BZ-2AQ18T1	Double-break circuitry	15 Amps **T**	3,89-6,68 **14-24**	1,11 **4**	0,51 **.020**	3,58 **.141**	0,03-0,10 **.001-.004**	33,35±1,19 **1.313±.047**
BM-1RQ18-A2	Up to 22 ampere load handling	22 Amps **F**	1,95-2,78 **7-10**	1,11 **4**	0,38 **.015**	3,56 **.140**	0,013-0,025 **.0005-.0010**	33,32±1,14 **1.312±.045**
BZ-2RQ181-A2	Applications requiring roller plunger 90° to major axis of switch	15 Amps **A**	2,5-3,61 **9-13**	1,11 **4**	0,38 **.015**	3,56 **.140**	0,01-0,05 **.0004-.0020**	33,32±1,14 **1.312±.045**

* Reset characteristics.

Except where stated ** ±0,76 mm ±.030 in.

Basic Switches
Standard

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

BZ/BM TYPE

Dim. Dwg. Fig. 21

BA TYPE

Dim. Dwg. Fg. 23

ADJUSTABLE

Dim. Dwg. Fg. 22

Dim. Dwg. Fig. 24

ORDER GUIDE

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** 0,38* **.015**	— **—** – **–**	19,05 **.750** 7,14* **.281**
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**

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**

† From $\frac{17\text{ mm}}{.670\text{ in.}}$ O.P.

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

SIMULATED ROLLER

Dim. Dwg. Fig. 27

ROLLER LEVER

BZ/BM TYPE

Dim. Dwg. Fig. 25

Dim. Dwg. Fig. 28

BA/BE TYPE

Dim. Dwg. Fig. 26

ORDER GUIDE

Catalog Listing	Recommended For	Electrical Data And UL Code 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-2RW80147-A2	1.05 inch (26,7 mm) (simulated roller) lever applications	15 Amps **A**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	30,17 **1.188**
BZ-2RW80196-A2	1.90 inch (48,3 mm) (simulated roller) lever applications	15 Amps **A**	0,97 **3.5**	0,21 **0.75**	**—**	3,96 **.156**	0,10-1,0 **.004-.040**	30,17±0,76 **1.188±.030**
BZ-2RW82272-A2	Applications requiring gold alloy contacts	1 Amp **P**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	30,17 **1.188**
BZ-2RW822725551-A2	Applications requiring gold alloy contacts plus dustproof and splash resistant seal	1 Amp **P**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	30,17 **1.188**
BZ-2RW822-A2	1.05 inch (26,7 mm) (steel roller) lever applications	15 Amps **A**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	30,17 **1.188**
BZ-2RW8222-A2	Roller turned 90°	15 Amps **A**	0,7-1,81 **2.5-6.5**	0,35 **1.25**	**—**	3,58 **.141 max.**	0,08-0,51 **.003-.020**	30,75 **1.25**
BZ-2RW82224-A2	Operating in temperature to +250°F (121°C)	15 Amps **A**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	30,17 **1.188**
BZ-2RW8225551-A2	Dustproof and splash resistant seal	15 Amps **A**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	30,17 **1.188**
BZ-2RW82255-A2-S	Best service for sealed construction. Stainless steel internal snap spring.	15 Amps **A**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	30,17 **1.188**
BA-2RV22-A2	Up to 20 ampere load handling	20 Amps **G**	1,67 **6**	0,42 **1.5**	6,35 **.250**	0,76 **.030**	1,14 **.045 max.**	29,77 **1.172**
BM-1RW822-A2	Up to 22 ampere load handling	22 Amps **F**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,025-0,33 **.001-.013**	30,17 **1.188**
BE-2RV22-A4	Up to 25 ampere load handling	25 Amps **H**	1,67 **6**	0,42 **1.5**	6,35 **.250**	0,76 **.030**	1,14 **.045 max.**	29,77 **1.172**
BZ-2RW82299-A2	Adjustable operating point. Roller lever 1.05 inch (26,7 mm)	15 Amps **A**	1,67 **6**	0,42 **1.5**	**—**	1,02 **.040**	0,08-0,51 **.003-.020**	29,77-30,56 **1.172-1.203**
BZ-2RW8299-A2	Adjustable operating point. Roller lever 1.90 inch (48,3 mm)	15 Amps **A**	0,97 **3.5**	0,21 **0.75**	**—**	2,16 **.085**	0,10-1,0 **.004-.040**	29,2-31,5 **1.150-1.24**

Except where stated * ±0,38 mm
±.015 in.

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

ROLLER LEVER

ORDER GUIDE

BZ/BM TYPE

Dim. Dwg. Fig. 29

BA/BE TYPE

Dim. Dwg. Fig. 30

Catalog Listing	Recommended For	Electrical Data And UL Code 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-2RW82725551-A2	Applications requiring gold alloy contacts, plus dustproof, and splash resistant seal	1 Amp **P**	0,97 **3.5**	0,21 **0.75**	**—**	3,96 **.156**	0,10-1,0 **.004-.040**	30,17±0,76 **1.188±.030**
BZ-2RW82-A2	1.90 inch (48,3 mm) (steel roller) lever applications	15 Amps **A**	0,97 **3.5**	0,21 **0.75**	**—**	3,96 **.156**	0,10-1,0 **.004-.040**	30,17±0,76 **1.188±.030**
BZ-2RW825551-A2	Dustproof and splash resistant seal	15 Amps **A**	0,97 **3.5**	0,21 **0.75**	**—**	3,96 **.156**	0,10-1,0 **.004-.040**	30,17±0,76 **1.188±.030**
BZ-2RW8224-A2	Operating in temperature to +250°F (121°C)	15 Amps **A**	0,97 **3.5**	0,21 **0.75**	**—**	3,96 **.156**	0,10-1,0 **.004-.040**	30,17±0,76 **1.188±.030**
BA-2RV2-A2	Up to 20 ampere load handling	20 Amps **G**	0,97 **3.5**	0,14 **0.5**	11,89 **.468**	1,52 **.060**	2,16 **.085**	30,17±0,76 **1.188±.030**
BM-1RW82-A2	Up to 22 ampere load handling	22 Amps **F**	0,97 **3.5**	0,21 **0.75**	**—**	3,96 **.156**	0,08-0,56 **.003-.022**	30,17±0,76 **1.188±.030**
BE-2RV2-A4	Up to 25 ampere load handling	25 Amps **H**	0,97 **3.5**	0,14 **0.5**	11,89 **.468**	1,52 **.060**	2,16 **.085 max.**	30,17±0,76 **1.188±.030**

NOTE: For adjustable operate point and simulated roller lever switches, refer to previous page.

Dim. Dwg. Fig. 31

BZ-RW922-A2	Best repeatability and O.P. stability	10 Amps **I**	3,34 **12**	1,11 **4**	0,38 **.015**	2,54 **.100**	0,013-0,025 **.0005-.0010**	31,37 **1.235**

Dim. Dwg. Fig. 32

BZ-2RW826-A2	One-way roller (9,4 mm × 3,8 mm) .37″ dia. × .15″ wide roller	15 Amps **A**	1,67 **6**	0,42 **1.5**	**—**	2,39 **.094**	0,08-0,51 **.003-.020**	41,34 **1.625**
BZ-2RW825-A2	One-way roller (4,83 mm × 4,83 mm) .19″ dia. × .19″ wide roller	15 Amps **A**	2,22 **8**	0,42 **1.5**	**—**	1,52 **.060**	0,38 **.015**	28,96 **1.14**

Except where stated * ±0,38 mm
±.015 in.

FLEXIBLE LEAF

BZ TYPE

Dim. Dwg. Fig. 33

BA/BE TYPE

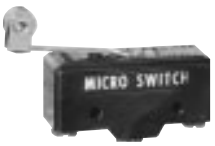
Dim. Dwg. Fig. 34

ORDER GUIDE

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. max. mm inches	O.P.** mm inches
BZ-2RL-A2	Force and stability of the flexible leaf actuator	15 Amps **A**	1,39 **5**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	17,48 **.688**
BZ-2RL5551-A2	Dustproof and splash resistant seal	15 Amps **A**	1,95 **7**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	17,48 **.688**
BZ-2RLT04 (M8805/1-001)	MIL-S-8805 application requirements	15 Amps **A**	1,39 **5**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	17,48 **.688**
BZ-2RL24-A2	Operating in temperature to +250°F (121°C)	15 Amps **A**	1,39 **5**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	17,48 **.688**
BZ-RLX	Manual reset. Solder terminals	15 Amps **E**	0,83 **3**	– **–**	– **–**	1,57 **.062** 0,38* **.015**	– **–**	17,48 **.688** 7,14* **.281**
BA-2RL-A2	Up to 20 ampere load handling	20 Amps **G**	2,5 **9**	0,28 **1**	**–**	1,57 **.062**	1,57 **.062**	17,48 **.688**
BE-2RL-A4	Up to 25 ampere load handling	25 Amps **H**	2,5 **9**	0,28 **1**	**–**	1,57 **.062**	1,57 **.062**	17,48 **.688**

FLEXIBLE ROLLER LEAF

BZ TYPE



Dim. Dwg. Fig. 35

BA/BE TYPE

Dim. Dwg. Fig. 36

ORDER GUIDE

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. max. mm inches	O.P.* mm inches
BZ-RL24-A2	Operating in temp. to +250°F (121°C) for 100 hours	5 Amps **B**	1,39 **5**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	28,6 **1.125**
BZ-2RL2-A2	Force and stability of the flexible leaf with roller	15 Amps **A**	1,39 **5**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	28,6 **1.125**
BZ-2RL25551-A2	Dustproof and splash resistant seal	15 Amps **A**	1,95 **7**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	28,6 **1.125**
BZ-2RL2T04 M8805/1-036)	MIL-S-8805 application requirements	15 Amps **A**	1,04-1,39 **3.75-5**	0,14 **0.5**	**–**	1,52 **.060**	1,27 **.050**	28,6 **1.125**
BA-2RL2-A2	Up to 20 ampere load handling	20 Amps **G**	2,5 **9**	0,28 **1**	**–**	1,52 **.060**	1,65 **.065**	28,6 **1.125**
BE-2RL2-A4	Up to 25 ampere load handling	25 Amps **H**	2,5 **9**	0,28 **1**	**–**	1,52 **.060**	1,65 **.065**	28,6 **1.125**

* Reset characteristics

** ±0.76 mm
±.030 in.

GENERAL INFORMATION
SPECIAL CIRCUITRY SWITCHES

''Special sequence'' switches provide unusual circuit control. A make-before-break switch provides circuit continuity while switching from N.C. to N.O. In another make-before-make switch, upon actuation, one circuit is made an interval before the second circuit. Another switch provides a single pulse or momentary closure of the contacts with each cycle of operation.

Double break versions can interrupt greater inductive loads and feature shorting bar construction. A split contact version allows control of the two isolated circuits.

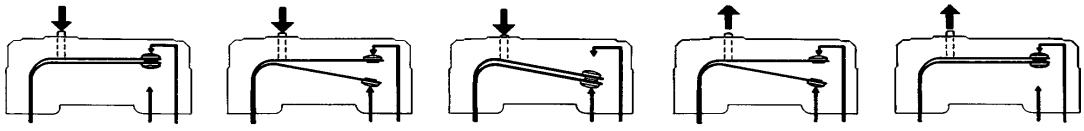
Characteristics: O.F. – Operating Force; R.F. – Release Force; P.T. – Pretravel; O.T. – Overtravel; D.T. – Differential Travel; O.P. – Operating Position.

PIN PLUNGER

ORDER GUIDE

Dim. Dwg. Fig 5

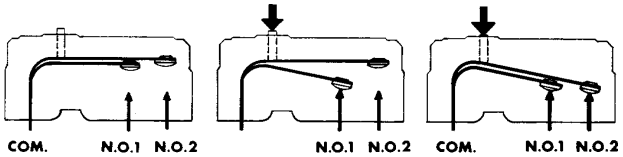
Catalog Listing	Recommended For	Electrical Data and UL Codes Page 46	O.F. newtons ounces	R.F. min. newtons ounces	P.T. max. mm inches	O.T. min. mm inches	D.T. mm inches	O.P.* mm inches
BZ-2G-A2	Make-before-break contact action	10 Amps **C**	5,56 **20 max.**	2,22 **8**	0,76 **.030**	0,13 **.005**	0,38 **.015**	15,9 **.625**



Dim. Dwg. Fig. 6

6BS1-B	Make-before-make contact action	10 Amps **R**	9,73 **35 max.**	2,78 **10**	–	–	–	–

*±0,38 mm
± .015 in.

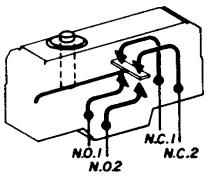



Dim. Dwg. Fig. 4-A

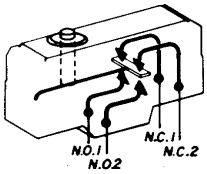
10BS210	Adjustable differential travel	20 Amps **Y**	3,10-5,56 **11-20**	2,78 **10**	–	0,25 **.010 at max. setting**	0,04-0,06 **.0015-.0025** 0,18 **.007 at max. setting**	16,3 **.64**

PIN PLUNGER — SPECIAL CIRCUITRY

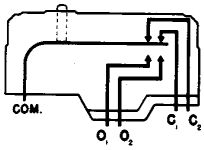
Dim. Dwg. Fig. 8



Dim. Dwg. Fig. 9



Dim. Dwg. Fig. 10



ORDER GUIDE

Catalog Listing	Recommended For	Electrical Data and UL Codes Page 46	O.F. 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-3AT	Double-break, low voltage DC applications	15 Amps **T**	4,45-7,23 **16-26**	1,11 **4**	0,76 **.030**	0,13 **.005**	0,051-0,13 **.002-.005**	15,9 **.625**
BZ-2AW80T	As above, with 2.5 inch lever	15 Amps **T**	0,90 **3.25**	0,14 **.25**	– **–**	5,56 **.219**	0,51 **2.54**	19,05±0,76 **.750±.030**
BZ-2AW82T	As above, with 1.9 inch roller lever	15 Amps **T**	1,25 **4.5**	0,21 **.75**	– **–**	3.96 **.156**	0,38-1,91 **.015-.075**	30,18±0,76 **1.188±.030**
BZ-2AW822T	As above, with 1.05 inch roller lever	15 Amps **T**	2,36 **8.5**	0,42 **1.5**	– **–**	2,39 **.094**	0,20-2,39 **.008-.030**	30,18±0,76 **1.188±.030**
BA-3ST	Double-break, low voltage DC applications	25 Amps **M**	7,23-10,6 **26-38**	2,78 **10**	1,65 **.065**	0,25 **.010**	0,18-0,38 **.007-.015**	16,3 **.640**
BZ-3YT (MS25383-1)	MIL-S-8805 application requirements. (split contact)	5 Amps **U**	4,45-7,23 **16-26**	1,11 **4**	0,76 **.030**	0,13 **.005**	0,025-0,1 **.001-.004**	15,9 **.625**
BZ-3YWT80	As above, with 2.50 inch lever	5 Amps **U**	0,97 **3.5**	0,14 **.5**	– **–**	5,56 **.219**	0,51-2,54 **.020-.100**	19,05±0,76 **.750±.030**
BZ-3YWT82	As above, with 1.9 inch roller lever	5 Amps **U**	1,25 **4.5**	0,21 **.75**	– **–**	3,96 **.156**	0,38-1,91 **.015-.075**	30,18±0,76 **1.188±.030**
BZ-3YWT822	As above, with 1.05 inch roller lever	5 Amps **U**	1,95 **7**	0,42 **1.5**	– **–**	2,39 **.094**	0,20-1,02 **.008-.040**	30,19 **.188**

Except where stated * ±0,38 mm ±.015 in.

Standard

MOUNTING DIMENSIONS (For reference only)

PIN PLUNGERS

BZ/BM

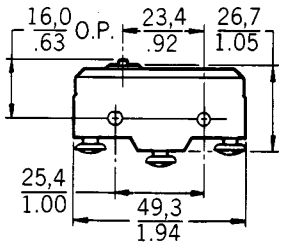


Fig. 1

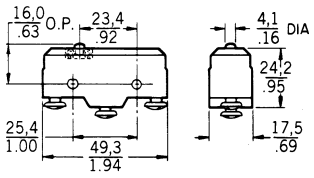


Fig. 2

BA/BE

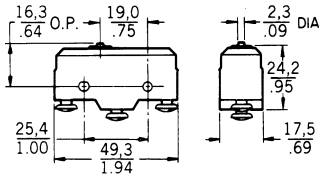


Fig. 3

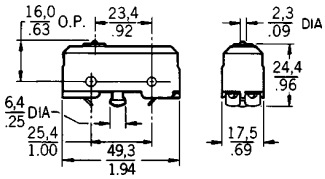


Fig. 4

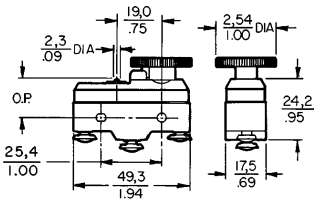


Fig. 4-A

PIN PLUNGERS — SPECIAL CIRCUITRY

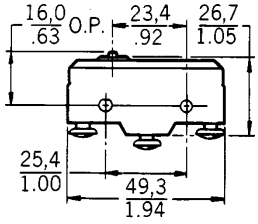


Fig. 5

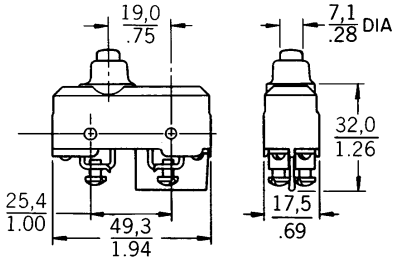


Fig. 6

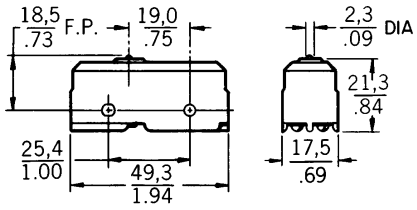


Fig. 7

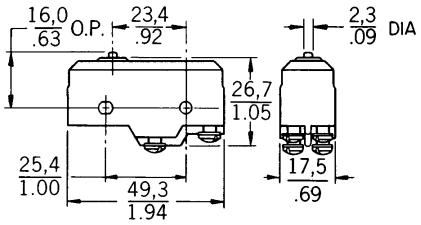


Fig. 8

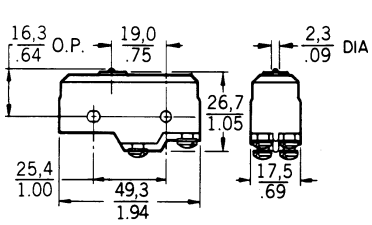


Fig. 9

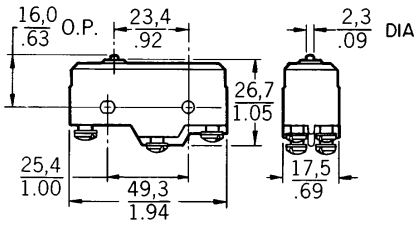


Fig. 10

Mounting holes accept pins or screws of .139″ (3,53 mm) diameter.

Key: 0,0 = mm / 0.00 = inches

MOUNTING DIMENSIONS (For reference only)

OVERTRAVEL PLUNGERS

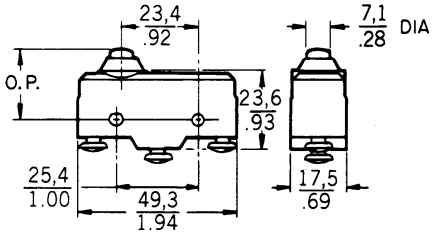


Fig. 11

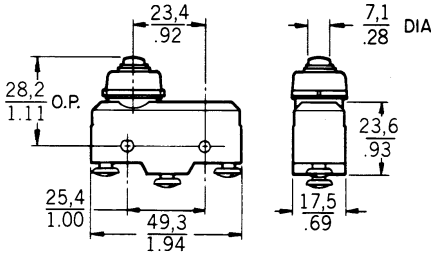


Fig. 12

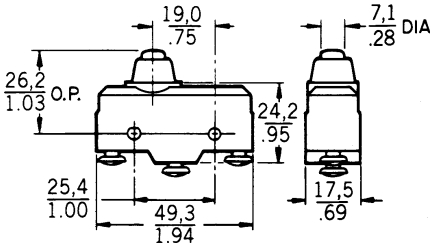


Fig. 13

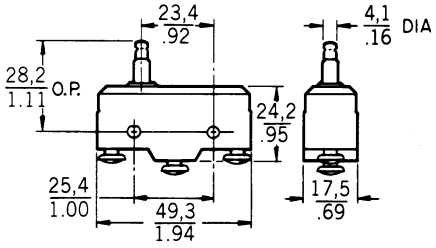


Fig. 14

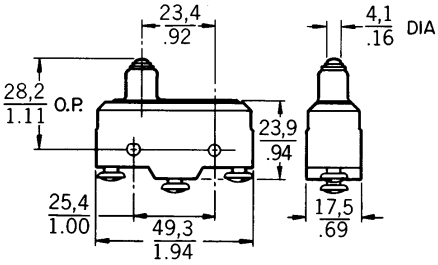


Fig. 15

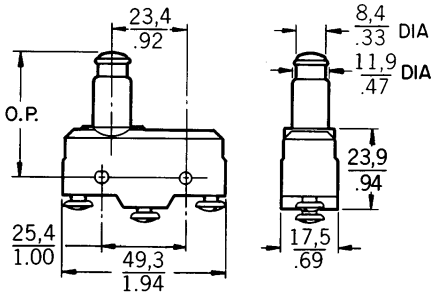


Fig. 16

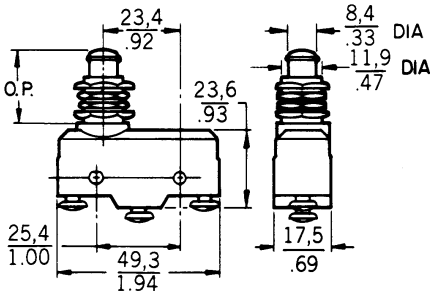


***Fig. 17**

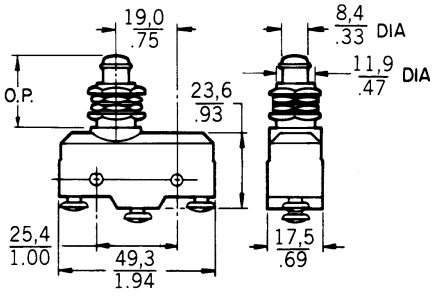


***Fig. 18**

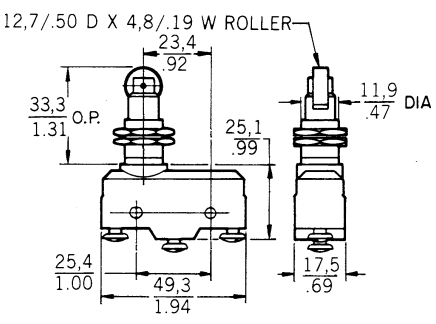


***Fig. 19**

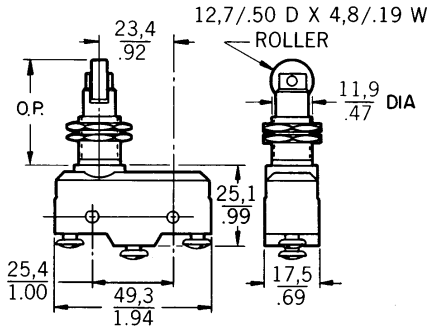


***Fig. 20**

*** Threaded bushings are 15/32-32ns.**

MOUNTING DIMENSIONS (For reference only)

STRAIGHT LEVERS

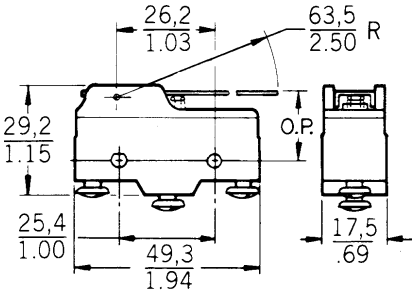


Fig. 21

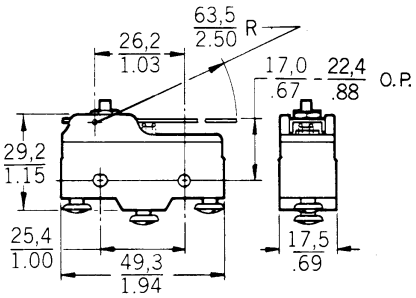


Fig. 22

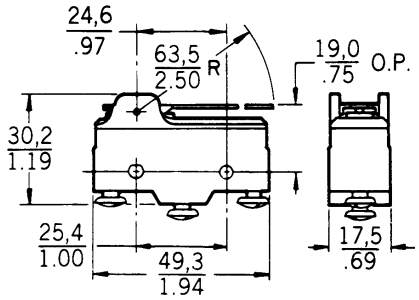


Fig. 23

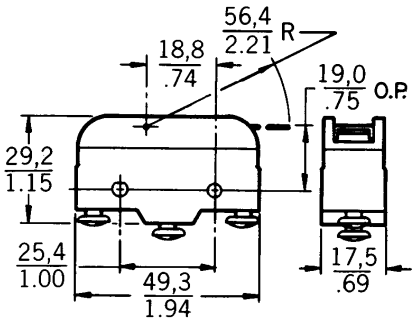


Fig. 24

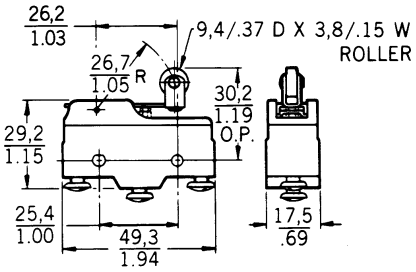


Fig. 25

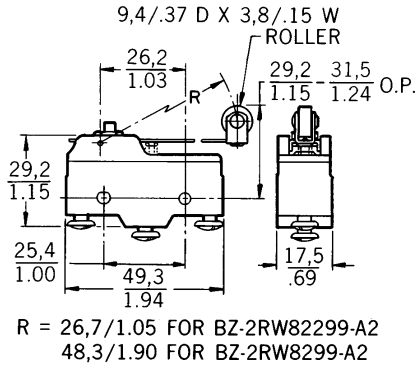


Fig. 26

FLEXIBLE LEAF ACTUATOR

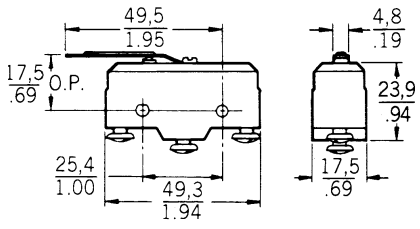


Fig. 33

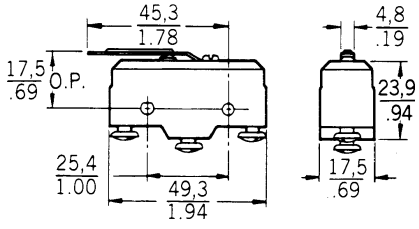
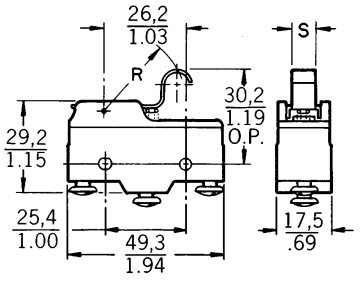


Fig. 34

MOUNTING DIMENSIONS

ROLLER LEVERS



R = 26,7/1.05 FOR BZ-2RW80147-A2
48,3/1.90 FOR BZ-2RW80196-A2

S = 7,9/.31 FOR BZ-2RW80147-A2
4,8/.19 FOR BZ-2RW80196-A2

Fig. 27

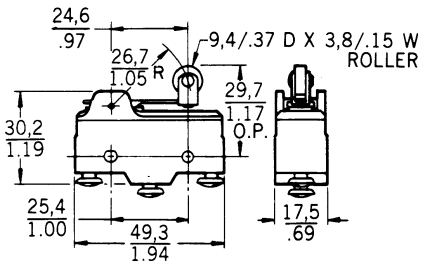


Fig. 28

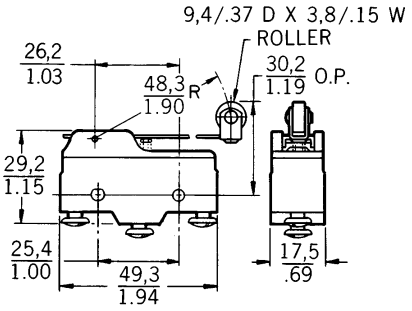


Fig. 29

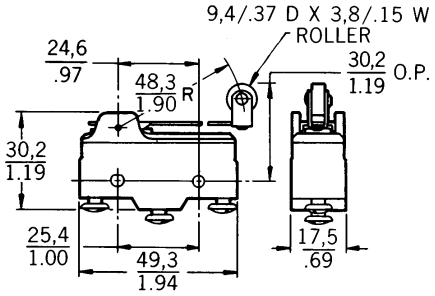


Fig. 30

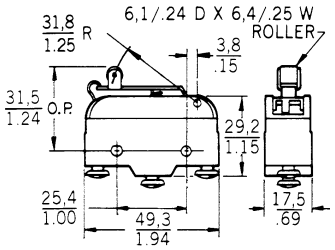
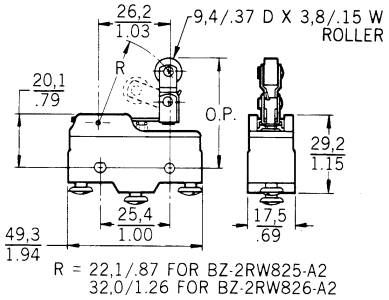


Fig. 31



R = 22,1/.87 FOR BZ-2RW825-A2
32,0/1.26 FOR BZ-2RW826-A2

Fig. 32

FLEXIBLE ROLLER LEAF

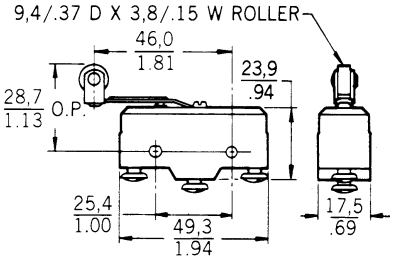


Fig. 35

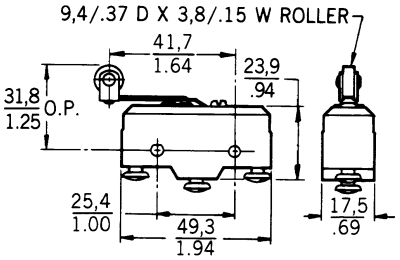


Fig. 36

Mounting holes accept pins or screws of .139″ (3,53 mm) diameter.

Key: 0,0 = mm / 0.00 = inches