

Compact Enclosed Switches



FEATURES

- Side or flange mount
- Momentary or maintained contact
- Grounding screw
- High capacity (22 amp) available
- Temperature range -25°F to +160°F (-32° to +71°C)
- Cast zinc housing NEMA 1
- UL Recognized, file #E12252
- CSA Certified, file #LR41372
- E6 NEMA 1
- V6 NEMA 1, 3
- Epoxy filled NEMA 1, 3, 4, 12, 13
- Preleaded or connector termination options

STRAIGHT PLUNGER ACTUATED SWITCHES



Side mount with seal boot



Side mount without seal boot

ROLLER PLUNGER ACTUATED SWITCHES



Side mount with seal boot

E6 (side mount) and V6 (flange mount) switches are offered with or without actuator seal boots. Both have a combination insulator/seal cemented inside the bottom enclosure. Lead washers are used to seal the

mounting holes on side mount switches. All side mount switches are installed with #6 screws, except the BZE6-2RN7 (#8 screws). Removal of the bottom enclosure exposes the terminals for easy wiring.

ELECTRICAL RATING

| Circuitry | Electrical Rating | |
|---------------------------------|-------------------|---|
| <p>Single-pole Double-throw</p> | A | UL/CSA Rating: 15 amps, 125, 250 or 480 VAC: 2 amps, 600 VAC: 1/8 Hp, 125 VAC: 1/4 Hp, 250 VAC: 1/2 amp, 125 VDC: 1/4 amp, 250 VDC. |
| <p>Double-pole Double-throw</p> | B | UL/CSA Rating: 10 amps, 125 or 250 VAC: 0.3 amp, 125 VDC: 0.15 amp, 250 VDC. |

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.P. mm in. | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | D.T. max. mm in. |
|---|--------------|--------|------------------|------------------------------|------------------------|------------------|------------------|------------------|
| With seal boot SPDT. | A | Side | BZE6-2RN | 43,66 ± 0,76 1.719 ± .030 | 2,50- 6,67 9-24 | 1,98 .078 | 5,56 .219 | 0,05 .002 |
| | | Flange | BZV6-2RN | 69,09 ± 1,52 2.720 ± .060 | | | | |
| Same as BZE6-2RN except #8 Mounting screws. | A | Side | BZE6-2RN7 | 43,66 ± 0,76 1.719 ± .030 | 2,50- 6,67 9-24 | 1,98 .078 | 5,56 .219 | 0,05 .002 |
| With seal boot. DPDT. | B | Side | DTE6-2RN | 46 ± 0,76 1.812 ± .030 | 7,23- 16,4 26-59 | 2,80 .110 | 3,17 .125 | 1,53 .060 |
| | | Flange | DTV6-2RN | 71,4 ± 0,76 2.812 ± .030 | | | | |
| Without seal boot. SPDT. | A | Side | BZE6-2RQ | 38,1 ± 0,76 1.500 ± .030 | 2,50- 3,62 9-13 | 0,38 .015 | 5,56 .219 | 0,05 .002 |
| | | Flange | BZV6-2RQ | 63,5 ± 1,14 2.500 ± .045 | | | | |

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.P. mm in. | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | D.T. max. mm in. |
|--|--------------|--------|-------------------|-----------------------------|------------------------|------------------|------------------|------------------|
| With seal boot. Roller parallel to long axis of switch. SPDT | A | Side | BZE6-2RN80 | 56,7 ± 1,14 2.232 ± .045 | 2,50- 6,68 9-24 | 1,98 .078 | 5,55 .219 | 0,05 .002 |
| | | Flange | BZV6-2RN80 | 82,1 ± 1,14 3.232 ± .045 | | | | |
| With seal boot. Roller parallel to long axis of switch. DPDT. | B | Side | DTE6-2RN80 | 59,6 ± 1,0 2,345 ± .040 | 5,56- 13,3 20-48 | 2,80 .110 | 3,17 .125 | 1,53 .060 |
| Without seal boot. Roller parallel to long axis of switch. SPDT. | A | Side | BZE6-2RQ8 | 49,6 ± 1,14 1.953 ± .045 | 2,50- 3,62 9-13 | 0,38 .015 | 3,55 .140 | 0,05 .002 |
| | | Flange | BZV6-2RQ8 | 75 ± 1,52 2.953 ± .060 | | | | |

N = Newtons

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

For rapid response – off the shelf service, all **bold face** listings are normally stocked items.

Compact Enclosed Switches

CROSS ROLLER PLUNGER ACTUATED SWITCHES



Flange mount without seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.P. mm in. | O.F. N oz. | P.T. mm in. | O.T. mm in. | D.T. max. mm in. |
|---|--------------|--------|-------------------|-----------------------------|-------------------|--------------|--------------|------------------|
| Without seal boot. Roller perpendicular to long axis of switch. SPDT. | A | Side | BZE6-2RQ81 | 49,6 ± 1,14 1.953 ± .045 | 2,50-3,62 9-13 | 0,38 .015 | 3,55 .140 | 0,05 .002 |
| | | Flange | BZV6-2RQ81 | 75 ± 1,52 2.953 ± .060 | | | | |
| As above with seal boot. | A | Side | BZE6-2RN81 | 56,7 ± 1,14 2.232 ± .045 | 2,5-6,67 9-24 | 1,98 .078 | 5,56 .219 | 0,05 .002 |
| | | Flange | BZV6-2RN81 | 82,1 ± 1,14 3.232 ± 0.45 | | | | |

ROLLER LEVER ACTUATED SWITCHES



Flange mount with seal boot



Side mount without seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | D.T. max. mm in. |
|---|--------------|--------|------------------|--------------------|------------------|------------------|------------------|
| With seal boot. Field adjustable 360° horizontally and 225° vertically. | SPDT | A Side | BZE6-2RN2 | 2,78-5,57 10-20 | 4,78 .188 | 5,56 .219 | 0,15 .006 |
| | | Flange | BZV6-2RN2 | | | | |
| | DPDT | B Side | DTE6-2RN2 | 2,78-8,35 10-30 | 6,76 .266 | 5,56 .219 | 4,19 .165 |
| | | Flange | DTV6-2RN2 | | | | |
| Without seal boot. Adjustable as above, except horizontal adjustment in 45° increments. | SPDT | A Side | BZE6-2RQ2 | 2,78-5,01 10-18 | 4,78 .188 | 5,56 .219 | 0,15 .006 |
| | | Flange | BZV6-2RQ2 | | | | |
| | DPDT | B Side | DTE6-2RQ2 | 2,78-5,57 10-20 | 6,76 .266 | 5,56 .219 | 4,19 .165 |
| | | | | | | | |

Limit/Enclosed

ONE-WAY ROLLER LEVER ACTUATED SWITCHES



Side mount with seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | D.T. max. mm in. |
|---|--------------|--------|-------------------|-------------------|------------------|------------------|------------------|
| With seal boot. Field adjustable 360° horizontally and 180° vertically. SPDT. | A | Side | BZE6-2RN28 | 2,22-5,57 8-20 | 5,95 .234 | 5,56 .219 | 0,15 .006 |
| | | Flange | BZV6-2RN28 | | | | |

LOW FORCE ROD LEVER

Rod can be formed in-line with the switch once, or cut, for application.



Flange mount without seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | D.T. max. mm in. |
|--|--------------|--------|-------------------|------------------|------------------|------------------|------------------|
| Without seal boot. Field adjustable 360° horizontally in 45° increments and 250° vertically. SPDT. | A | Side | BZE6-2RQ62 | 0,55-1,39 2-5 | 18,24 .718 | 21,2 .838 | 5,82 .229 |
| | | Flange | BZV6-2RQ62 | | | | |
| As above, but with seal boot. | A | Side | BZE6-2RN62 | 0,83-1,95 3-7 | | | |
| | | Flange | BZV6-2RN62 | | | | |

N = Newtons

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

Compact Enclosed Switches

MANUALLY ACTUATED SWITCHES

With 1.5 inch (38,1 mm) button.



Side mount with seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | D.T. max. mm in. |
|---|--------------|--------|-----------------|--------------------|------------------|------------------|------------------|
| With seal boot. Field adjustable 360° horizontally and 180° vertically. SPDT. | A | Side | BZE6-2RN4 | 2,78-5,57 10-20 | 4,78 .188 | 5,56 .219 | 0,15 .006 |
| | | Flange | BZV6-2RN4 | | | | |
| As above, but without seal boot. | A | Side | BZE6-2RQ4 | 2,78-5,00 10-18 | | | |
| | | Flange | BZV6-2RQ4 | | | | |

COIL SPRING

WOBBLE LEVER ACTUATED SWITCHES



Side mount with seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.F. max. N oz. | P.T. max. |
|---|--------------|--------|-----------------|-----------------|-----------|
| With seal boot. Operates from any direction, except pull. SPDT. | A | Side | BZE6-2RN18 | 1,95 7 | 15° |
| | | Flange | BZV6-2RN18 | | |

MAINTAINED CONTACT (RESET) SWITCHES

The switches shown below provide maintained contact after the operating force on either top or bottom plunger is released. Note: The top plungers on these switches provide more accurate and uniform operation than the "reset" plungers and should be used when closely held operating characteristics are required.

ELECTRICAL RATING

| Circuitry | Electrical Rating |
|---------------------------------|---|
| <p>Single-pole Double-throw</p> | <p>C UL/CSA Rating: L67 15 amps, 125, 250 or 480 VAC; ¼ Hp, 125 VAC; ½ Hp, 250 VAC; ½ amp, 125 VDC; ¼ amp, 250 VDC.</p> |

STRAIGHT PLUNGER ACTUATED (RESET) SWITCHES



Side mount with seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.P. mm in. | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | Reset O.F. min. N* oz. |
|--------------------------|--------------|--------|-----------------|--------------------------|--------------------|------------------|------------------|------------------------|
| Without seal boot. SPDT. | C | Side | BZE6-RQX2 | 38,1±0,76 1.500±.030 | 1,66-2,65 6-9.5 | 0,31 .012 | 4,75 .187 | 2,22 8 |
| | | Flange | BZV6-RQX2 | | | | | |
| With seal boot. SPDT. | C | Side | BZE6-RNX1 | 43,66±0,76 1.718±.030 | 1,66-5,57 6-20 | 1,98 .078 | 4,75 .187 | 1,66 6 |
| | | Flange | BZV6-RNX1 | | | | | |

ROLLER PLUNGER ACTUATED (RESET) SWITCHES



Side mount without seal boot

ORDER GUIDE

| Description | Elec. Rating | Mtg. | Catalog Listing | O.P. mm in. | O.F. N oz. | P.T. max. mm in. | O.T. min. mm in. | Reset O.F. min. N* oz. |
|--|--------------|------|-----------------|-------------------------|--------------------|------------------|------------------|------------------------|
| Without seal boot. Roller parallel to long axis to switch. SPDT. | C | Side | BZE6-RQ8X2 | 51,2±1,15 2.015±.045 | 1,67-2,64 6-9.5 | 0,31 .012 | 3,56 .140 | 2,22 8 |

N = Newtons

Characteristics: O.F. — Operating Force; P.T. — Pretravel; O.T. — Overtravel; O.P. — Operating Position

Compact Enclosed Switches

ROLLER LEVER ACTUATED (RESET) SWITCHES

ORDER GUIDE



Side mount without seal boot

| Description | Elec. Rating | Mtg. | Catalog Listing | O.F. max. N oz. | P.T. max. mm in. | O.T. min. mm in. | Reset O.F. min. N oz. |
|--|--------------|--------|-------------------|--------------------|------------------|------------------|-----------------------|
| Without seal boot. Field adjustable 360° horizontally in 45° increments and 180° vertically. SPDT. | C | Side | BZE6-RQ2X2 | 2,78-5,01 10-18 | 4,78 .188 | 5,56 .219 | 2,22 8 |
| | | Flange | BZV6-RQ2X2 | | | | |
| With seal boot. Adjustable as above. SPDT. | C | Side | BZE6-RN2X1 | 4,45 16 | 4,78 .188 | 5,56 .219 | 3,33-8,35 12-30 |
| | | Flange | BZV6-RN2X1 | | | | |

REPLACEMENT PARTS

Bottom enclosure includes bottom half of enclosure, insulator seal and two screws. Seal boot includes the elastomer plunger seal, and retaining hardware. Basic packet includes mounting hardware and seal boot, where applicable.

CONDUIT SEALING PACKETS

| Packet | Cable O.D. Inches |
|--------|-------------------|
| 2PA6 | .400" – .435" |
| 2PA16 | .435" – .470" |
| 2PA1 | .530" – .570" |

Limit/Enclosed

| Catalog Listing | Bottom Enclosure | Seal Boot | Basic Packet | Switching Unit | Actuator |
|--------------------------|----------------------|-----------|--------------|----------------|------------|
| BZE6-2RN BZV6-2RN | 3PA13-E6 3PA14-V6 | 10PA2 | 1PA2* | BZ-2RQ77** | — |
| BZE6-2RN7 | 3PA13-E6 | 10PA2 | 1PA46* | BZ-2RN730** | — |
| BZE6-2RQ BZV6-2RQ | 3PA13-E6 3PA14-V6 | — | 1PA1 | BZ-2RQ66** | — |
| BZE6-2RQ8 BZV6-2RQ8 | 3PA13-E6 3PA14-V6 | — | — | BZ-2RQ784** | — |
| BZE6-2RQ81 BZV6-2RQ81 | 3PA13-E6 3PA14-V6 | — | 1PA19 | BZ-2RQ785** | — |
| BZE6-2RN80 | 3PA13-E6 | 10PA2 | 1PA54-BZ* | BZ-2RN784 | — |
| BZE6-2RN2 BZV6-2RN2 | 3PA13-E6 3PA14-V6 | 10PA2 | 1PA13* | BZ-2RN702** | 6PA2* |
| BZE6-2RQ2 BZV6-2RQ2 | 3PA13-E6 3PA14-V6 | — | 1PA3 | BZ-2RQ68** | 6PA1 |
| BZE6-2RN28 BZV6-2RN28 | 3PA13-E6 3PA14-V6 | 10PA2 | 1PA13* | BZ-2RN702** | 6PA16* |
| BZE6-2RQ62 BZV6-2RQ62 | 3PA13-E6 3PA14-V6 | — | 1PA3 | BZ-2RQ68** | 6PA62 |
| BZE6-2RN62 BZV6-2RN62 | 3PA13-E6 3PA14-V6 | 10PA2 | 1PA13* | BZ-2RN702** | 6PA140-E6* |
| BZE6-2RQ4 BZV6-2RQ4 | 3PA13-E6 3PA14-V6 | — | 1PA3 | BZ-2RQ68** | 6PA7 |
| BZE6-RQX2 BZV6-RQX2 | 8PA54-E6 8PA53-V6 | — | 1PA1 | BZ-RQX66** | — |
| BZE6-RNX1 BZV6-RNX1 | 8PA56-E6 8PA55-V6 | 10PA2 | 1PA2* | BZ-RQX167** | — |
| BZE6-RQ8X2 | 8PA54-E6 | — | 1PA19 | BZ-RQX784** | — |
| BZE6-RQ2X2 BZV6-RQ2X2 | 8PA54-E6 8PA53-V6 | — | 1PA3 | BZ-RQX68** | 6PA1 |
| BZE6-RN2X1 BZV6-RN2X1 | 8PA56-E6 8PA55-V6 | 10PA2 | 1PA13* | BZ-RNX702** | 6PA2* |
| BZE6-2RN4 BZV6-2RN4 | 3PA13-E6 3PA14-V6 | 10PA2 | 1PA13* | BZ-2RN702** | 6PA9* |
| BZE6-2RN18 BZV6-2RN18 | 3PA13-E6 3PA14-V6 | 10PA2 | — | BZ-2R-A2 | 6PA195* |
| DTE6-2RN† DTV6-2RN† | 3PA13-E6 3PA14-V6 | 10PA2 | 1PA2* | DT-2R-A7 | 8PA14 |
| DTE6-2RN2† DTV6-2RN2† | 3PA13-E6 3PA14-V6 | 10PA2 | — | DT-2R-A7 | 6PA2* |

*Includes seal boot.

**Includes basic packet.

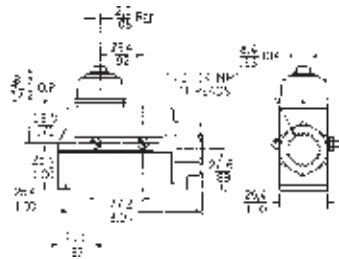
†To replace internal plunger, order 8PA14.

Limit and Enclosed Switches

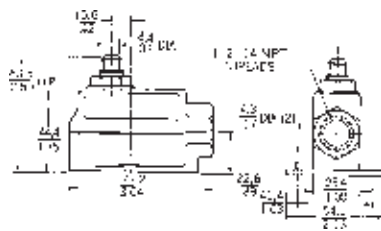
Mounting Dimensions (For reference only)

E6/V6 Series

STRAIGHT PLUNGER

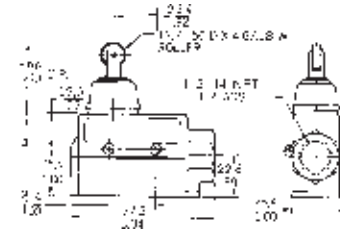


Side mount with seal boot



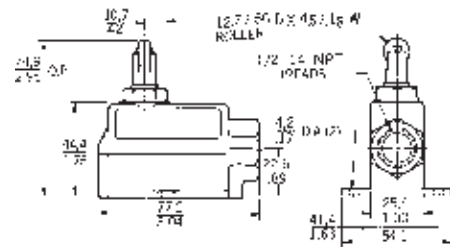
Flange mount without seal boot

ROLLER PLUNGER



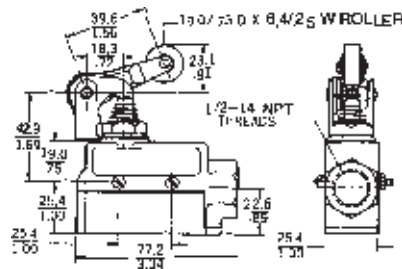
Side mount with seal boot

CROSS ROLLER PLUNGER

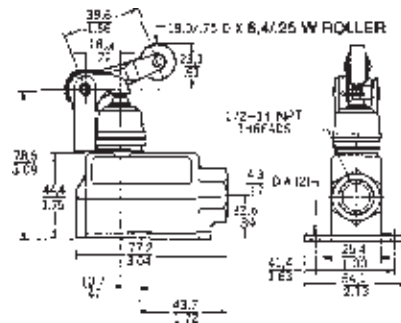


Flange mount without seal boot

ROLLER LEVER

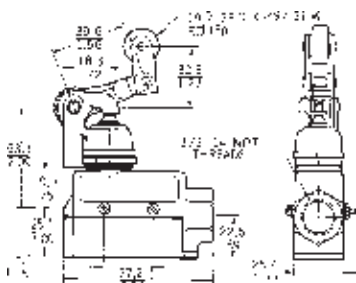


Side mount without seal boot



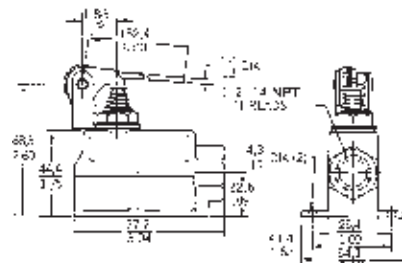
Flange mount with seal boot

ONE-WAY ROLLER LEVER



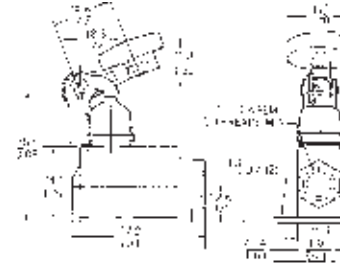
Side mount with seal boot

ROD LEVER



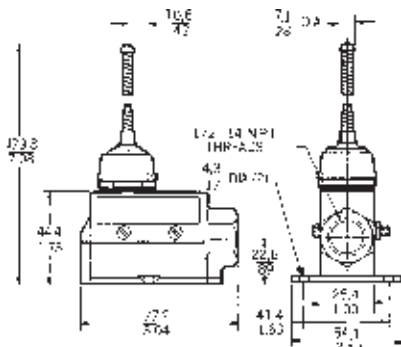
Flange mount without seal boot

MANUAL



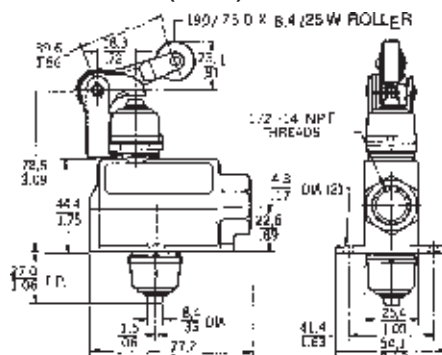
Side mount with seal boot

COIL SPRING

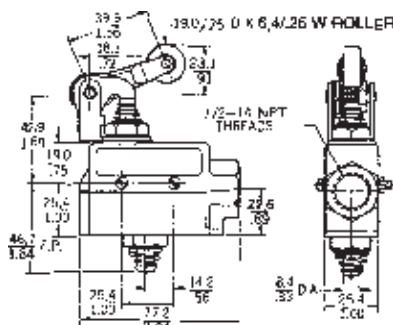


Flange mount with seal boot

ROLLER LEVER (Reset)



Flange mount with seal boot

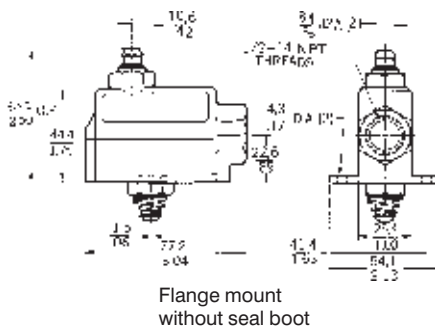
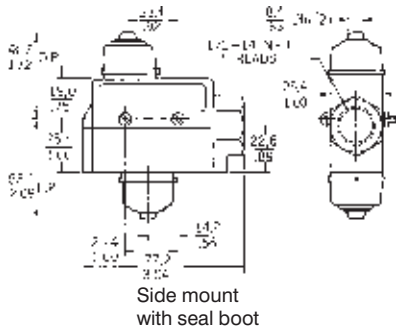


Side mount without seal boot

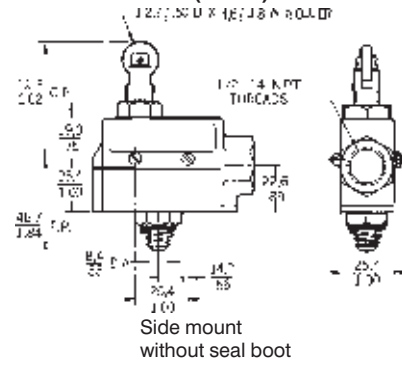
Epoxy Filled

MOUNTING DIMENSIONS (continued)

PLUNGER (Reset)



ROLLER PLUNGER (Reset)



Epoxy Filled Compact Enclosed Switches

The Epoxy Filled Compact Enclosed Switch is a very rugged, but economical solution for precision switching needs for a variety of applications in heavy equipment. **This may be the cost effective solution you've been looking for.**

TYPICAL APPLICATIONS

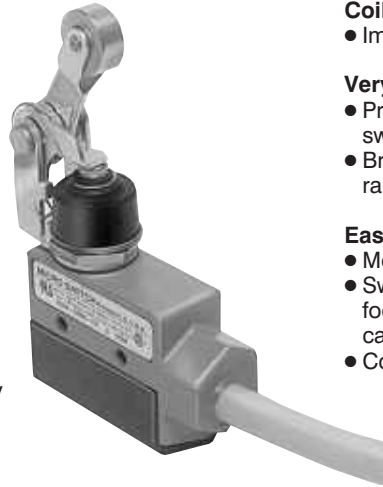
- Trash compactors – mobile or stationary
- Off-road construction equipment
- Machine tools where precision switching is needed
- Heavy machinery
- Bottling machinery

Designed for demanding environments

- Rugged zinc diecast housing with phosphate sealed epoxy finish

Resists harsh conditions

- Switch wiring cavity is epoxy filled
- Wire entry area completely factory sealed
- NEMA 1, 3, 4, 12, 13



Fits wide variety of applications

- Seven different actuator styles
- Coil spring boot band
- Improved sealing

Very reliable operation

- Precision snap-action basic switch within housing
- Broad electrical and temperature ranges

Easy and economical to install

- Mounts with just two screws
- Switch is preleaded with three (3) foot, four (4) conductor ST00W-A cable .41-.46 in. (10.4-11.7 mm)
- Connector versions available

ORDERING GUIDE FOR EPOXY FILLED E6/V6 TYPES

| Description | Catalog Listing |
|--|-----------------|
| Straight plunger. | BZE6-2RN-F3 |
| Straight plunger 4 pin connector. | BZE6-2RN-FR |
| Roller lever. Field adjustable 360° horizontally and 225° vertically | BZE6-2RN2-F3 |
| Coil spring wobble lever. Operates from any direction except pull. | BZE6-2RN18-C3* |
| Low force rod lever. Field adjustable 360° horizontally in 45° increments and 180° vertically. | BZE6-2RN62-F3 |

* Note: This switch has a pin plunger and the wiring cavity cannot be completely filled with epoxy. They are sealed at the conduit opening only.

Limit/Enclosed