Honeywell

# MICRO SWITCH™ Medium-Duty Limit Switches

**E7 and V7 Series**

Datasheet

# MICRO SWITCH™ E7 and V7 Series Medium-Duty Limit Switches

Honeywell MICRO SWITCH™ E7/V7 Series medium duty limit switches are designed for a wide variety of indoor and outdoor applications. Typical applications include equipment for commercial, industrial, and transportation industries. The electrostatic applied epoxy coating to the aluminum housings enhances the durability of the product in most applications. The E7/V7 family of switches incorporates the Honeywell MICRO SWITCH™ BZ switch element which has the reliable snap-spring mechanism with more than 60 years of proven service.

The sealed (plungers with boots) E7/V7 Series are preferred for applications where there could be exposure to liquid and/or particulate environments. The unsealed E7/V7 Series are ideal for applications where there will not be exposure to liquid or dust environments. The compact size of the limit switch permits installation where there is limited space available on equipment.

The SPDT (Single Pole Double Throw) E7/E7S/V7/E9 Series of catalog listings are certified to CE and CSA for worldwide applications. While the DPDT (Double Pole Double Throw) E7/E7S/V7/E9 Series of catalog listings are certified to CE for many applications.

## *What makes our switches better?*

- Designed with MICRO SWITCH™ BZ or DT basic switches to deliver precise switching of electrical and mechanical operating characteristics
- Rugged, epoxy-coated aluminum housing for indoor and outdoor applications
- Small footprint with easy access to wiring terminals
- Available in a configuration suited to the application with variety of actuators, circuitries, conduits, and mounting options

HIGH PERFORMANCE • DURABILITY
CUSTOMIZATION • EASY TO INSTALL

# Features and Benefits

## DESIGNED FOR DEMANDING ENVIRONMENTS AND APPLICATIONS

MICRO SWITCH™ E7/V7 Series switches include a wide variety of actuators and feature an electrostatic epoxy coated aluminum housing for durability in a wide range of applications. The products are engineered with MICRO SWITCH™ BZ or DT internal basic switches that have years of proven service.

## *Side and flange mounting options*

## RELIABLY HANDLES ELECTRICAL LOADS

The E7/V7 Series are available with SPDT contacts or DPDT contacts with momentary action to meet circuit requirements. The BZE/BZV Series with SPDT contacts is rated for AC15, A300 and DC13, Q300 for typical ac and dc applications. The DTE Series with DPDT contacts is rated for AC15, B300 and DC13, R300 for typical ac and dc applications. An internal ground screw is provided to meet electrical codes as required.

## DESIGN FLEXIBILITY

These limit switches are offered with multiple connectivity options: two different conduit offerings, with single or double conduits.

## GLOBAL APPROVALS

The BZE7, BZE7S, BZV7, and BZE9 Series with SPDT (single-pole double throw) contacts are certified to CE and CSA for worldwide applications. The DTE7 and DTE7S Series with DPDT (double-pole double throw) contacts are certified to CE for many uses.

## INDOOR AND OUTDOOR OPTIONS

The Series' temperature range of -30 °C to 70 °C [-22 °F to 158 °F] makes the switch well suited for a wide range of indoor and outdoor applications.

# Potential Applications

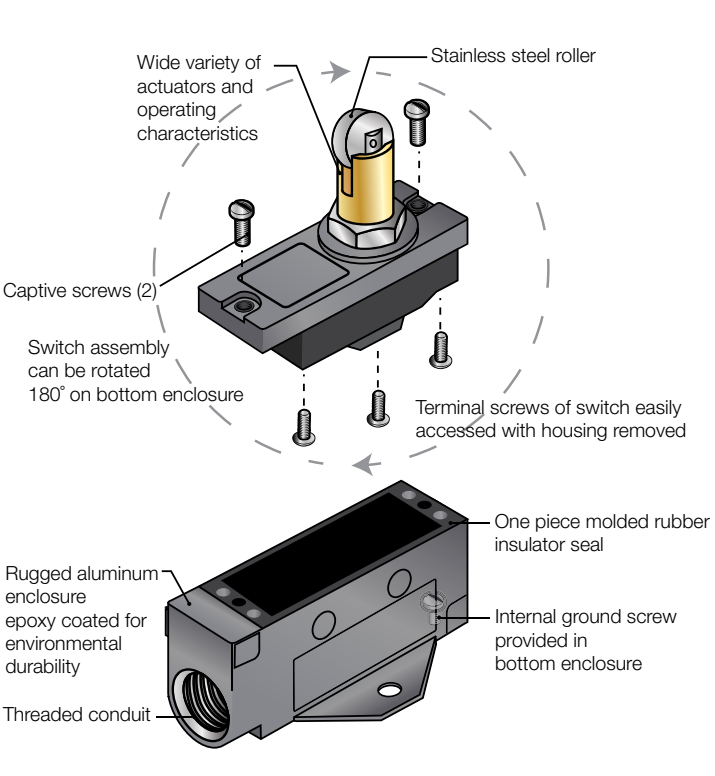
## INDUSTRIAL

- Escalator obstruction detection – Roller actuator mounted behind skirt on escalators, if activated, power to the escalator is cut to avoid injury
- Air curtain – A component in a circuit for control of air stream
- Door or gate position – Can provide a signal when a door or gate is opened or closed
- Commercial food processing – For large scale food preparation, to ensure all features are in the desired operating position

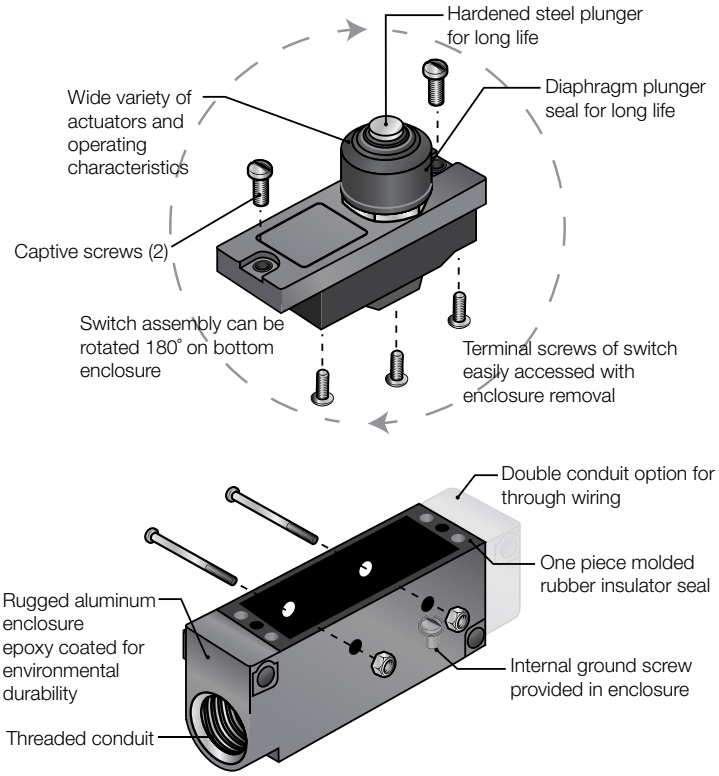
## TRANSPORTATION

- Traffic barrier signaling – If traffic barrier lowers, signal lights can be activated

**Figure 1. MICRO SWITCH™ E7/V7 Features and Options**




**Typical switch assembly, flange mount, without boot sealed actuator**




**Typical switch assembly, side mount, with boot sealed plunger**

**Four mounting options**

- Diagonal side mount (**E7 Series**)
- Side mount on 25,4 mm centers (**E7S Series**)
- Side mount on 76 mm centers with double conduit (**E9 Series**)
- Flange mount (**V7 Series**)

# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 1. Specifications**

| Characteristic | Parameter |
|---|---|
| Actuators | top pin plunger (boot sealed or standard type);<br>inline roller plunger (boot sealed or standard type);<br>cross roller plunger (boot sealed or standard type);<br>roller lever adjustable (boot sealed or standard type);<br>one-way roller lever adjustable (boot sealed);<br>coil spring wobble (boot sealed) |
| Enclosure type | diagonal side mount with single conduit (E7 type);<br>diagonal side mount or side mount with single conduit (E7S type),<br>side mount with double conduit (E9 type)<br>flange mount with single conduit (V7 type) |
| Housing material | electrostatic epoxy coated aluminum |
| Termination | threaded conduit, 20 mm or PG 13,5 |
| Sealing | actuator with boot seal: IP65<br>actuator (QN8 style) with internal plunger seal: IP65<br>actuator without boot seal or internal plunger seal: IP50 |
| Switching options | SPDT (snap-action contacts) 1NC/1NO, same polarity<br>DPDT (snap-action contacts) 2NC/2NO, each pole same polarity |
| Operating temperature | -30 °C to 70 °C [-22 °F to 158 °F] |
| Electrical rating | see tables 2 and 3 |
| Rated impulse voltage Ui | 1.5 kV |
| Pollution degree (with enclosure) | 1 (DTE Series); 2 (BZE and BZV Series) |
| Agency certifications | EN/IEC 60947-5-1 (all Series); CSA file 15775 (BZ prefix only) |

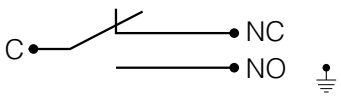
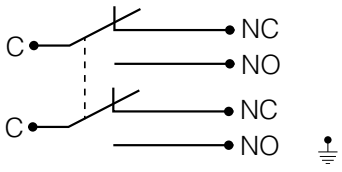
**Table 2. BZE and BZV Series Electrical Ratings: EN60947-5-1, IEC 60947-5-1**

| Designation & Category | Thermal Current, It (Amps) | Rated Operational Voltage, Ue | Rated Operational Amps, Ie | VA Rating Make | VA Rating Break |
|---|---|---|---|---|---|
| AC15, A300 | 10 | 120 | 6 | 7200 | 720 |
| AC15, A300 | 10 | 240 | 3 | 7200 | 720 |
| DC13, Q300 | 10 | 125 | 0.55 | 69 | 69 |
| DC13, Q300 | 10 | 250 | 0.27 | 69 | 69 |

**Table 3. DTE Electrical Ratings: EN60947-5-1, IEC 60947-5-1**

| Designation & Category | Thermal Current, It (Amps) | Rated Operational Voltage, Ue | Rated Operational Amps, Ie | VA Rating Make | VA Rating Break |
|---|---|---|---|---|---|
| AC15, B300 | 5 | 120 | 3 | 3600 | 360 |
| AC15, B300 | 5 | 240 | 1.5 | 3600 | 360 |
| DC13, R300 | 5 | 125 | 0.22 | 28 | 28 |
| DC13, R300 | 5 | 250 | 0.1 | 28 | 28 |

**Table 4. Switching**

| SPDT (BZE and BZV Series) | DPDT (DTE Series) |
|---|---|
|  |  |

# E7 and V7 Series

## PRODUCT NOMENCLATURE

**BZ** **E7** — **2** **R** **N** **2** — **C**

### Switch Type

**BZ** Series Basic Switch, SPDT

**DT** Series Basic Switch[2], DPDT

### Enclosure Type

| | |
|---|---|
| **E7** | Diagonal side mount w/ single conduit entry[2] |
| **V7** | Flange mount version of E7 |
| **E7S** | Side mount w/ single conduit entry*[2] |
| **E9** | Side mount w/ double conduit entry |

* mounting holes provide interchangeability with BZE6 products

### Internal Base Switch Construction

| | |
|---|---|
| **2** | Standard (single break) |

### Contact

| | |
|---|---|
| **R** | Standard |

### Plunger Type

| | |
|---|---|
| **N** | Seal boot |
| **Q** | No seal boot |
| **QN** | Inline roller plunger with internal plunger seal[3] |

### Actuator Code

| | |
|---|---|
| | Pin plunger (blank) |
| **2** | Adjustable roller lever |
| **8** **80** | Roller plunger |
| **9** | Inline roller plunger with removeable roller[3] |
| **18** | Coil spring wobble stick |
| **28** | One-way roller lever |
| **81** | Cross roller plunger |

### Conduit Thread

| | |
|---|---|
| **PG** | PG 13,5 mm conduit |
| **C** | 20 mm conduit |

[1] NOTE: not all combinations of model code are available. Please contact your Honeywell provider/representative for assistance.
[2] DT Series basic switch available with enclosure type E7 or E7S only.
[3] With “Q” style plunger only.

# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 5. Order Guide • E7 Diagonal Side Mount with Sealed Actuator**

*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 1)** | **BZE7-2RN-C** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 38,58 ±0,76 [1.519 ±0.030] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | 20 mm | |
| | **BZE7-2RN-PG** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 38,58 ±0,76 [1.519 ±0.030] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| | **DTE7-2RN-C** | DT, DPDT | B300, R300 | 454 to 1389 [16 to 49] | 40,95 ±1,14 [1.612 ±0.045] | 3,18 [0.125] | 3,18 [0.125] | 1,78 [0.070] | 20 mm | |
| | **DTE7-2RN-PG** | DT, DPDT | B300, R300 | 454 to 1389 [16 to 49] | 40,95 ±1,14 [1.612 ±0.045] | 3,18 [0.125] | 3,18 [0.125] | 1,78 [0.070] | PG 13,5 | |
| **Inline Roller Plunger (see Figure 2)** | **BZE7-2RQN8-C** | BZ, SPDT | A300, Q300 | 3628 [128] max. | 59,56 ±1,19 [2.345 ±0.047] | 3,81 [0.150] | 3,18 [0.125] | 0,05 [0.002] | 20 mm | Roller plunger assembly can be positioned at 90° increments |
| | **BZE7-2RQN8-PG** | BZ, SPDT | A300, Q300 | 3628 [128] max. | 59,56 ±1,19 [2.345 ±0.047] | 3,81 [0.150] | 3,18 [0.125] | 0,05 [0.002] | PG 13,5 | |
| | **DTE7-2RQN8-C** | DT, DPDT | B300, R300 | 3628 [128] max. | 59,31 ±1,19 [2.335 ±0.047] | 4,06 [0.160] | 3,18 [0.125] | 1,65 [0.065] | 20 mm | |
| | **DTE7-2RQN8-PG** | DT, DPDT | B300, R300 | 3628 [128] max. | 59,31 ±1,19 [2.335 ±0.047] | 4,06 [0.160] | 3,18 [0.125] | 1,65 [0.065] | PG 13,5 | |
| **Roller Lever (see Figure 3)** | **BZE7-2RN2-C** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 66,34 [2.612] Ref | 4,78 [0.188] | 5,56 [0.219] | 0,20 [0.008] | 20 mm | |
| | **BZE7-2RN2-PG** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 66,34 [2.612] Ref | 4,78 [0.188] | 5,56 [0.219] | 0,20 [0.008] | PG 13,5 | |
| | **DTE7-2RN2-C** | DT, DPDT | B300, R300 | 1134 [40] max. | 64,36 [2.534] Ref | 6,76 [0.266] | 5,56 [0.219] | 4,19 [0.165] | 20 mm | |
| | **DTE7-2RN2-PG** | DT, DPDT | B300, R300 | 1134 [40] max. | 64,36 [2.534] Ref | 6,76 [0.266] | 5,56 [0.219] | 4,19 [0.165] | PG 13,5 | |
| **One-way Roller Lever (see Figure 4)** | **BZE7-2RN28-C** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | - | 5,94 [0.234] | 5,56 [0.219] | 0,15 [0.006] | 20 mm | |
| | **BZE7-2RN28-PG** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | - | 5,94 [0.234] | 5,56 [0.219] | 0,15 [0.006] | PG 13,5 | |
| | **DTE7-2RN28-C** | DT, DPDT | B300, R300 | 1134 [40] max. | - | 6,76 [0.266] | 5,56 [0.219] | 4,19 [0.165] | 20 mm | |
| **Coil-Spring Wobble (see Figure 5)** | **BZE7-2RN18-C** | BZ, SPDT | A300, Q300 | - | - | 15° | 20° Ref | - | 20 mm | |
| | **BZE7-2RN18-PG** | BZ, SPDT | A300, Q300 | - | - | 15° | 20° Ref | - | PG 13,5 | |

## DIMENSIONS

**Figure 1. E7 Series, top pin plunger, diagonal mount with boot seal**

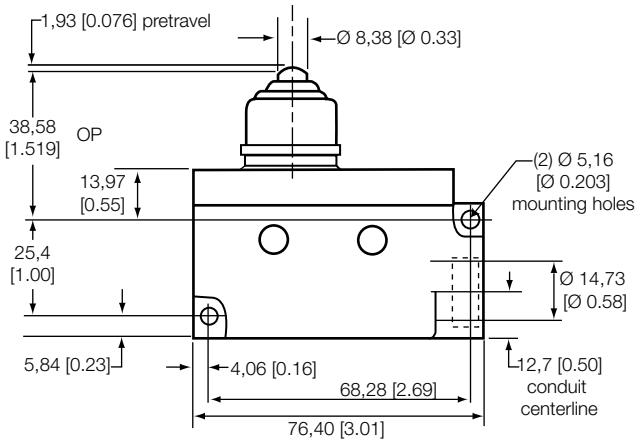



**Figure 2. E7 Series, inline roller plunger, diagonal mount, sealed**

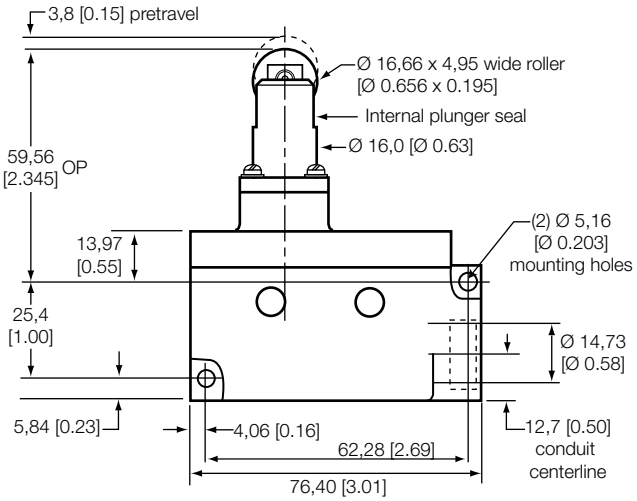



**Figure 3. E7 Series, roller lever, diagonal mount with boot seal**

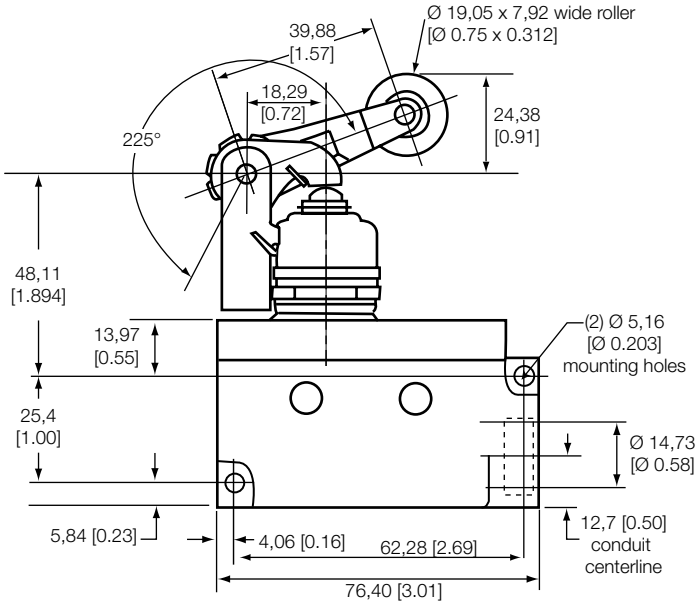



**Figure 4. E7 Series, one-way roller lever, diagonal mount with boot seal**

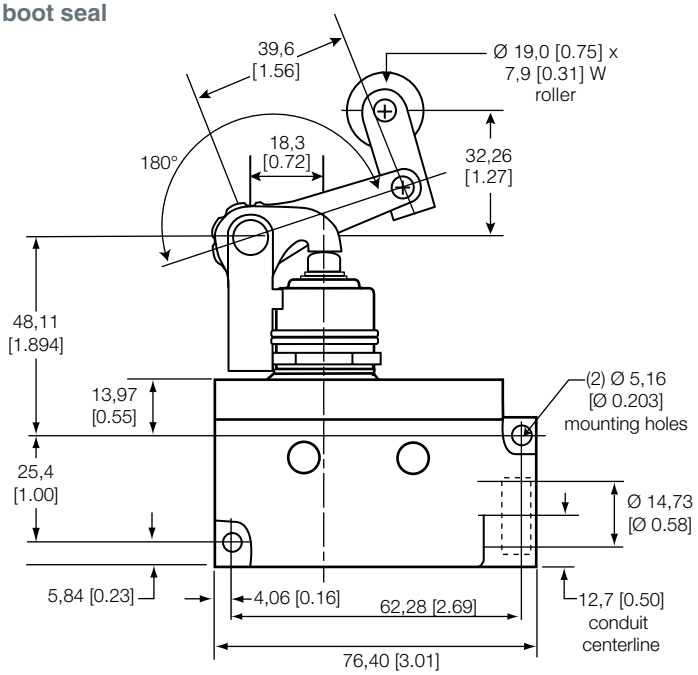
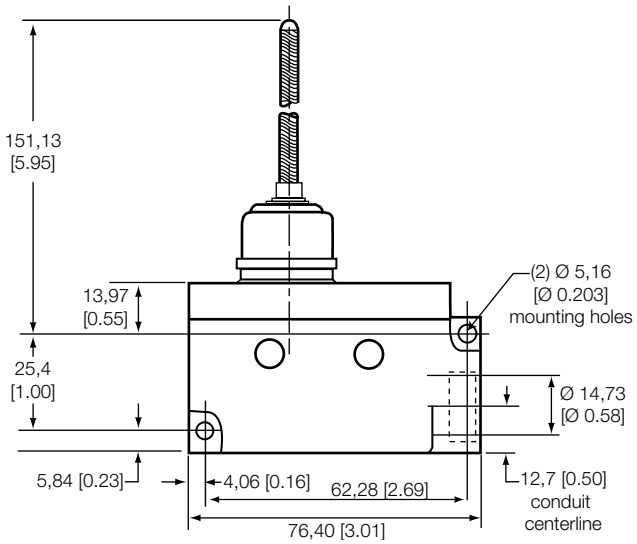



**Figure 5. E7 Series, coil wobble, diagonal mount with boot seal**



# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 6. Order Guide • E7 Series Switches, Diagonal Mount without Boot Sealed Actuator**

*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 6)** | **BZE7-2RQ-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 28,70 ±0,76 [1.30 ±0.030] | 0,38 [0.015] | 5,56 [0.219] | 0,05 [0.002] | 20 mm | |
| | **BZE7-2RQ-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 28,70 ±0,76 [1.30 ±0.030] | 0,38 [0.015] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| **Inline Roller Plunger (see Figure 7)** | **BZE7-2RQ8-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | 20 mm | |
| | **BZE7-2RQ8-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | PG 13,5 | |
| | **BZE7-2RQ9-C** [1] | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | 20 mm | Removable roller |
| | **BZE7-2RQ9-PG** [1] | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | PG 13,5 | Removable roller |
| **Cross Roller Plunger (see Figure 8)** | **BZE7-2RQ81-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | 20 mm | |
| | **BZE7-2RQ81-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | PG 13,5 | |
| **Roller Lever (see Figure 9)** | **BZE7-2RQ2-C** | BZ, SPDT | A300, Q300 | 284 to 510 [10 to 18] | 56,03 [2.206] Ref. | 4,78 [0.188] | 5,56 [0.219] | 0,15 [0.006] | 20 mm | |
| | **BZE7-2RQ2-PG** | BZ, SPDT | A300, Q300 | 284 to 510 [10 to 18] | 56,03 [2.206] Ref. | 4,78 [0.188] | 5,56 [0.219] | 0,15 [0.006] | PG 13,5 | |

[1] With roller removed, plunger can be rotated 90° and roller re-assembled for a cross roller plunger.

## DIMENSIONS

**Figure 6. E7 Series, top pin plunger, diagonal mount**

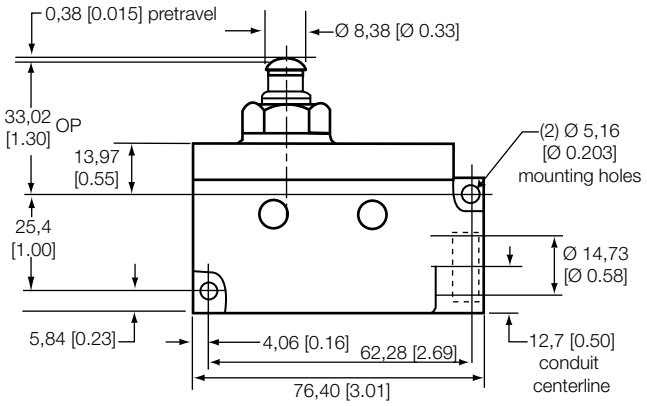



**Figure 7. E7 Series, inline roller plunger, diagonal mount**

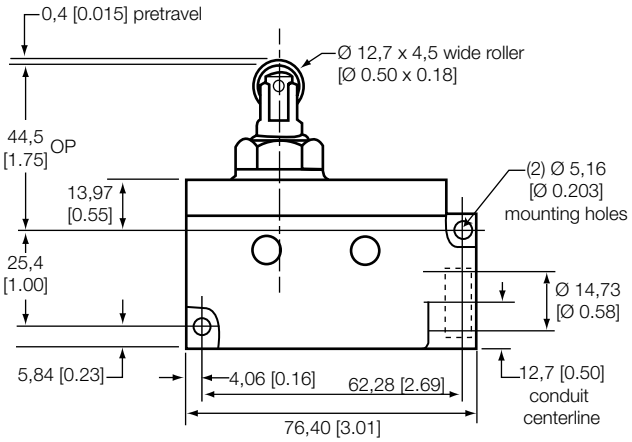



**Figure 8. E7 Series, cross roller plunger, diagonal mount**

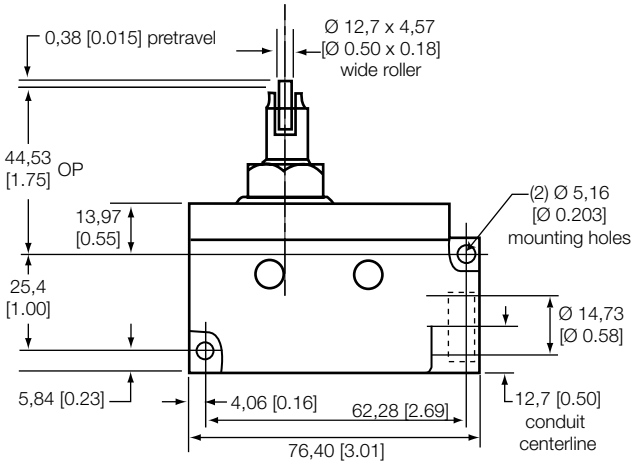
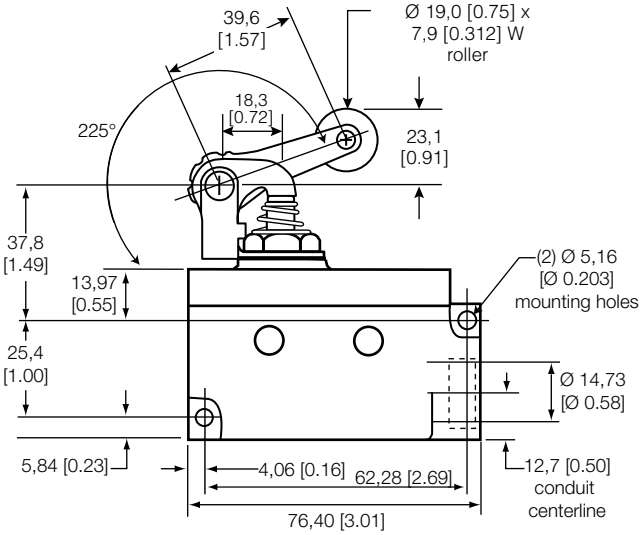



**Figure 9. E7 Series, roller lever, diagonal mount**



# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 7. Order Guide • E7S Series Switches, Side or Diagonal Mount with Sealed Actuator**

*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 10)** | **BZE7S-2RN** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 43,66 ±0,89 [1.719 ±0.035] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | 0.5-14 NPSM | |
| | **BZE7S-2RN-C** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 43,66 ±0,89 [1.719 ±0.035] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | 20 mm | |
| | **BZE7S-2RN-PG** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 43,66 ±0,89 [1.719 ±0.035] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| | **DTE7S-2RN-C** | DT, DPDT | B300, R300 | 454 to 1389 [16 to 49] | 46,02 ±1,27 [1.812 ±0.050] | 3,18 [0.125] | 3,18 [0.125] | 1,78 [0.070] | 20 mm | |
| **Inline Roller Plunger (see Figure 11)** | **BZE7S-2RQN8-C** | BZ, SPDT | A300, Q300 | 3628 [128] max. | 64,64 ±1,32 [2.545 ±0.052] | 3,81 [0.150] | 3,18 [0.125] | 0,05 [0.002] | 20 mm | Roller plunger assembly can be positioned at 90° increments |
| | **DTE7S-2RQN8-C** | DT, DPDT | B300, R300 | 3628 [128] max. | 64,39 ±1,32 [2.535 ±0.052] | 4,06 [0.160] | 3,18 [0.125] | 1,65 [0.065] | 20 mm | |
| **Roller Lever (see Figure 12)** | **BZE7S-2RN2-C** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 71,42 [2.812 ] Ref. | 4,76 [0.188] | 5,56 [0.219] | 0,15 [0.006] | 20 mm | |
| | **BZE7S-2RN2-PG** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 71,42 [2.812 ] Ref. | 4,76 [0.188] | 5,56 [0.219] | 0,15 [0.006] | PG 13,5 | |
| | **DTE7S-2RN2-C** | DT, DPDT | B300, R300 | 1134 [40] max. | 69,44 [2.734 ] Ref. | 6,76 [0.266] | 5,56 [0.219] | 4,19 [0.165] | 20 mm | |
| **One-Way Roller Lever (see Figure 13)** | **BZE7S-2RN28-C** | BZ, SPDT | A300, Q300 | 227 to 567 [8 to 20] | - | 5,94 [0.234] | 5,56 [0.219] | 0,15 [0.006] | 20 mm | |

## DIMENSIONS

**Figure 10. E7S Series, top pin plunger, side mount with boot seal**

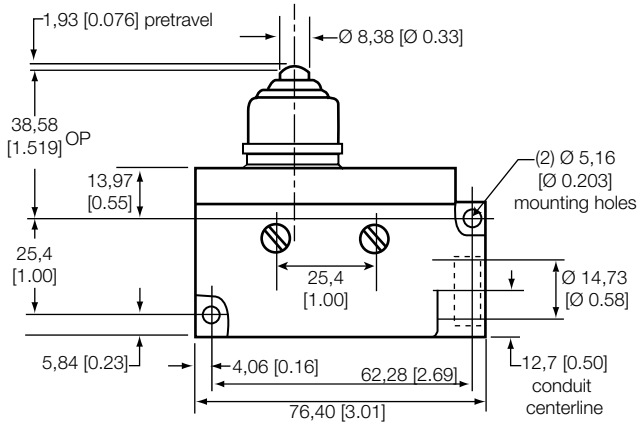



**Figure 11. E7S Series, inline roller plunger, side mount, sealed**

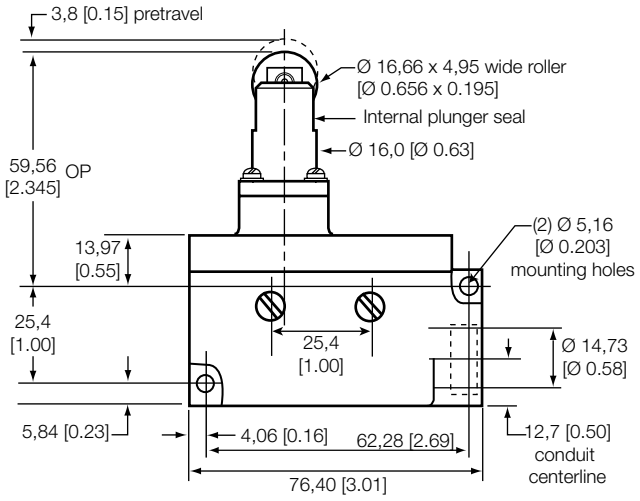



**Figure 12. E7S Series, roller lever, side mount with boot seal**

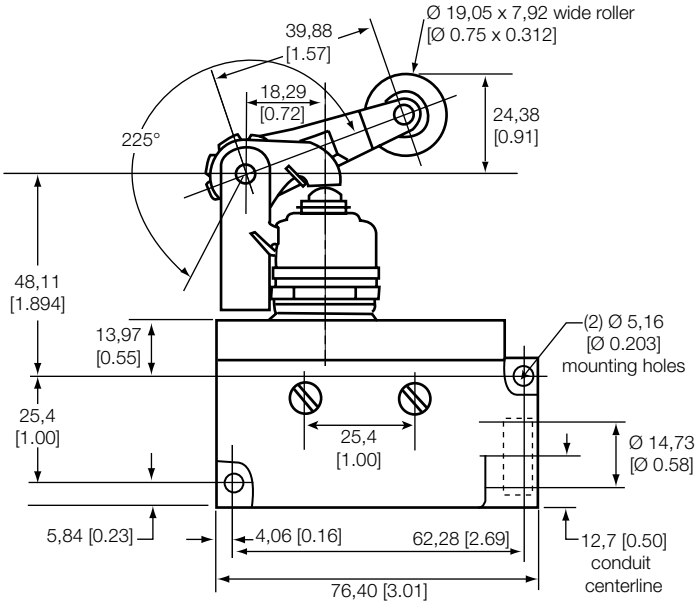
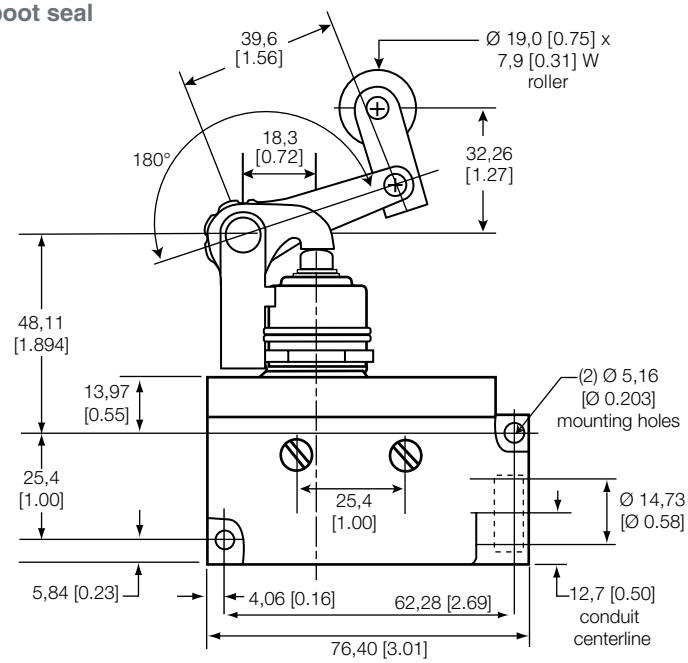



**Figure 13. E7S Series, one-way roller lever, side mount with boot seal**



# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 8. Order Guide • E7S Series Switches, Side or Diagonal Mount without Boot Sealed Actuator**

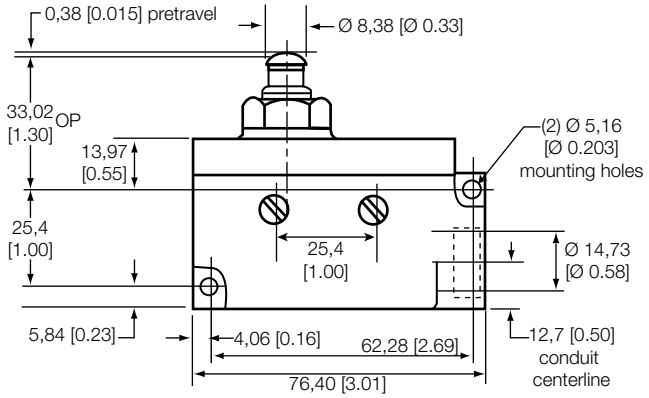
*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 14)** | **BZE7S-2RQ-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 38,1 ±0,89 [1.5 ±0.035] | 0,38 [0.015] | 5,56 [0.219] | 0,05 [0.002] | 20 mm | |
| | **BZE7S-2RQ-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 38,1 ±0,89 [1.5 ±0.035] | 0,38 [0.015] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| **Inline Roller Plunger (see Figure 15)** | **BZE7S-2RQ8-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 49,61 ±1,32 [1.953 ±0.052] | 0,38 [0.015] | 3,56 [0.14] | 0,05 [0.002] | 20 mm | |
| | **BZE7S-2RQ8-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 49,61 ±1,32 [1.953 ±0.052] | 0,38 [0.015] | 3,56 [0.14] | 0,05 [0.002] | PG 13,5 | |
| | **BZE7S-2RQ9-C**[1] | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 49,61 ±1,32 [1.953 ±0.052] | 0,38 [0.015] | 3,56 [0.14] | 0,05 [0.002] | 20 mm | Removable roller |
| | **DTE7S-2RQ9-C** | DT, DPDT | B300, R300 | 680 to 1361 [24 to 48] | 49,61 ±1,19 [1.953 ±0.047] | 3,56 [0.14] | 3,18 [0.125] | 1,65 [0.065] | 20 mm | Roller plunger may be rotated to any position around C/L of plunger |
| | **DTE7S-2RQ9-PG** | DT, DPDT | B300, R300 | 680 to 1361 [24 to 48] | 49,61 ±1,19 [1.953 ±0.047] | 3,56 [0.14] | 3,18 [0.125] | 1,65 [0.066] | PG 13,5 | |
| **Cross Roller Plunger (see Figure 16)** | **BZE7S-2RQ81-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 49,61 ±1,32 [1.953 ±0.052] | 0,38 [0.015] | 3,56 [0.14] | 0,05 [0.002] | 20 mm | |
| **Roller Lever (see Figure 17)** | **BZE7S-2RQ2-C** | BZ, SPDT | A300, Q300 | 284 to 510 [10 to 18] | 61,11 [2.406] Ref | 4,78 [0.188] | 5,56 [0.219] | 0,15 [0.006] | 20 mm | |

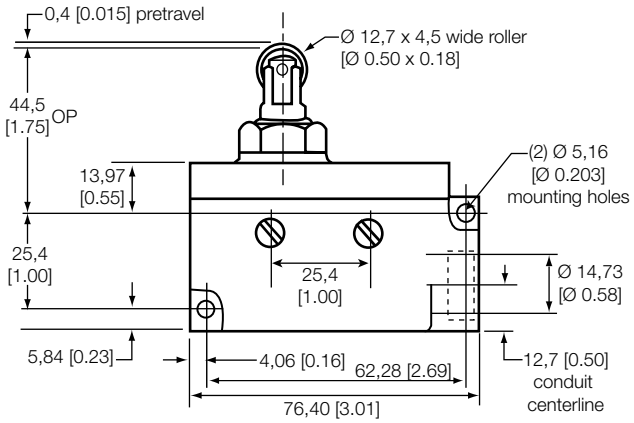
[1] With roller removed, plunger can be rotated 90° and roller re-assembled for a cross roller plunger.

## DIMENSIONS

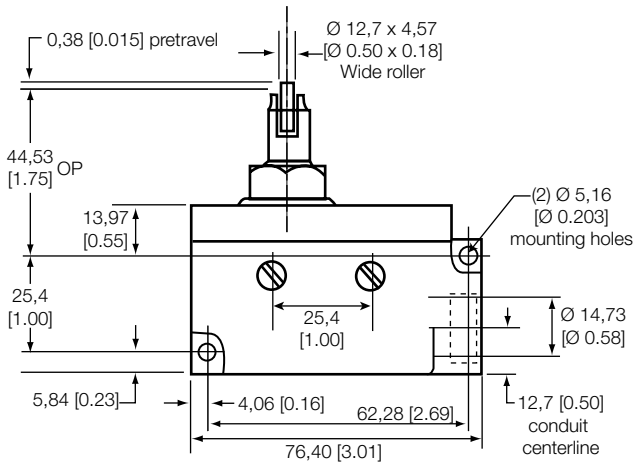
### Figure 14. E7S Series, top pin plunger, side mount



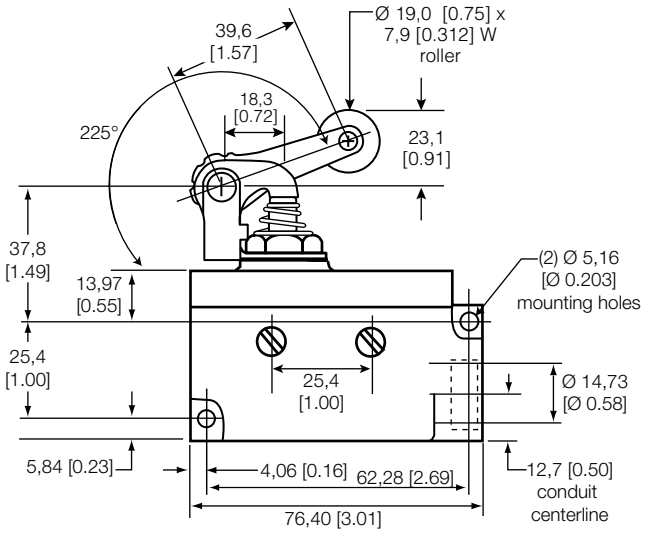

### Figure 15. E7S Series, inline roller plunger, side mount




### Figure 16. E7S Series, cross roller lever, side mount




### Figure 17. E7S Series, roller lever, side mount



# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 9. Order Guide • E9 Series Switches, Side Mount with Sealed Actuator and Two Conduits**

*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 18)** | **BZE9-2RN-C** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 38,58 ±0,76 [1.519 ±0.030] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | 20 mm | |
| | **BZE9-2RN-PG** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 38,58 ±0,76 [1.519 ±0.030] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| | **BZE9-2RN-PG11** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 38,58 ±0,76 [1.519 ±0.030] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | PG 11 | |
| **Inline Roller Plunger (see Figure 19)** | **BZE9-2RQN8-PG** | BZ, SPDT | A300, Q300 | 3628 [128] max. | 59,56 ±1,19 [2.345 ±0.047] | 3,81 [0.150] | 3,18 [0.125] | 0,05 [0.002] | PG 13,5 | Roller plunger assembly can be positioned at 90° increments |
| **Roller Lever (see Figure 20)** | **BZE9-2RN2-C** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 66,34 [2.612] Ref | 4,78 [0.188] | 5,56 [0.219] | 0,20 [0.008] | 20 mm | |
| | **BZE9-2RN2-PG** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 66,34 [2.612] Ref | 4,78 [0.188] | 5,56 [0.219] | 0,20 [0.008] | PG 13,5 | |
| **One-Way Roller Lever (see Figure 21)** | **BZE9-2RN28-PG** | BZ, SPDT | A300, Q300 | 227 to 256 [8 to 20] | - | 5,94 [0.234] | 5,56 [0.219] | 0,15 [0.006] | PG 13,5 | |

## DIMENSIONS

**Figure 18. E9 Series, top pin plunger, side mount with boot seal**

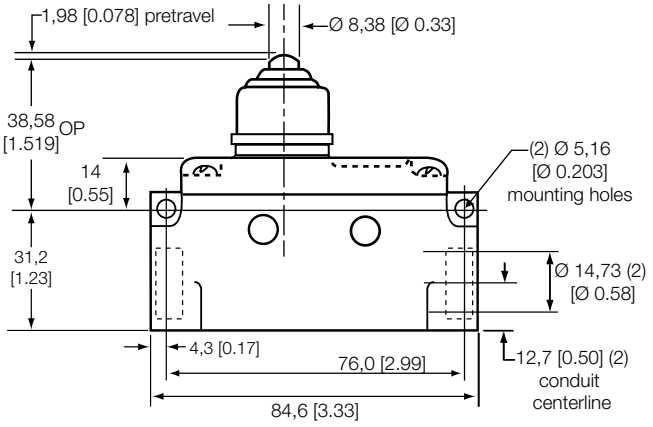



**Figure 19. E9 Series, inline roller plunger, side mount with seal**

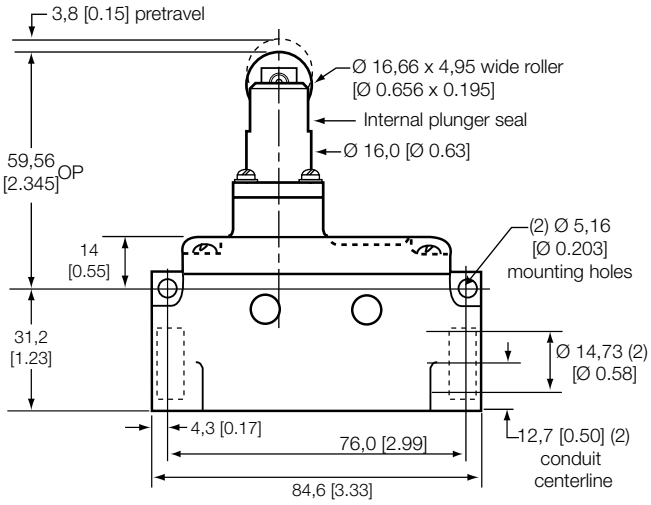



**Figure 20. E9 Series, roller lever, side mount with boot seal**

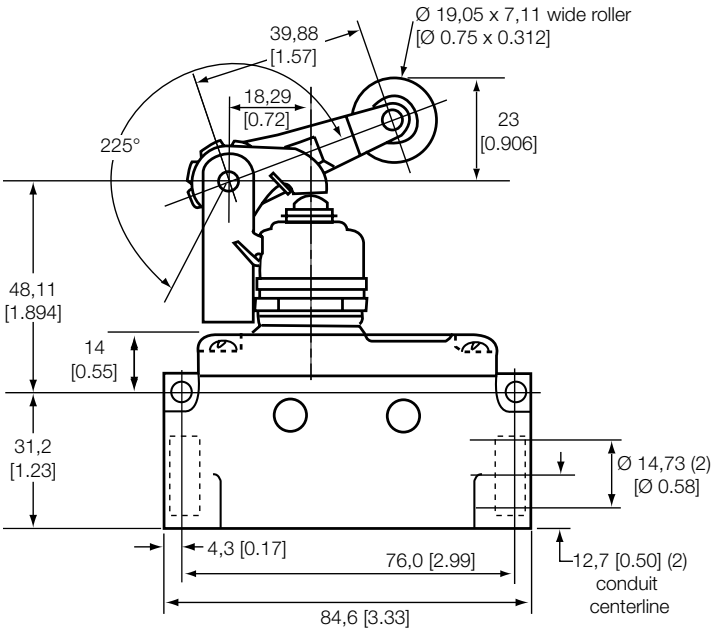
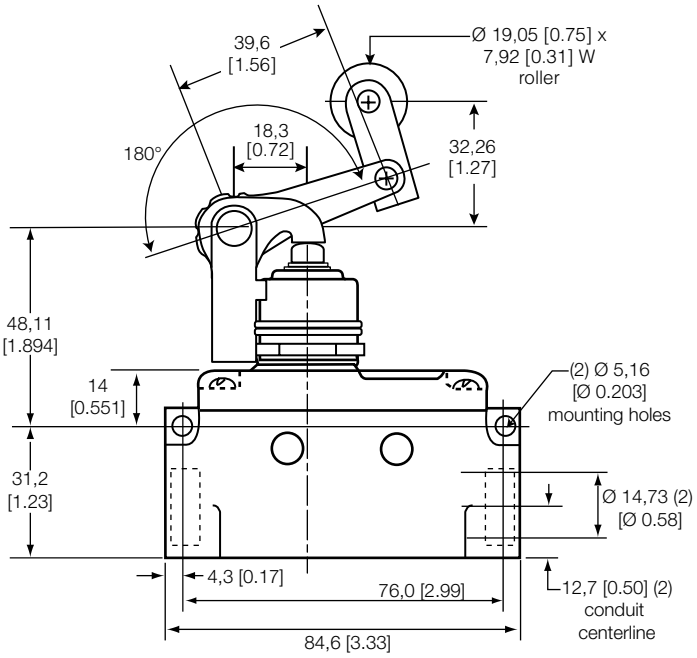



**Figure 21. E9 Series, one-way roller lever, side mount with boot seal**



# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 10. Order Guide • E9 Series Switches, Side Mount without Boot Sealed Actuator and Two Conduits**

*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 22)** | **BZE9-2RQ-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 28,70 ±0,76 [1.30 ±0.030] | 0,38 [0.015] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| **Inline Roller Plunger (see Figure 23)** | **BZE9-2RQ8-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | 20 mm | |
| | **BZE9-2RQ8-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | PG 13,5 | |
| **Cross Roller Plunger (see Figure 24)** | **BZE9-2RQ81-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 44,53 ±1,19 [1.753 ±0.047] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | PG 13,5 | |
| **Roller Lever (see Figure 25)** | **BZE9-2RQ2-PG** | BZ, SPDT | A300, Q300 | 284 to 510 [10 to 18] | 56,03 [2.206] Ref. | 4,78 [0.188] | 5,56 [0.219] | 0,15 [0.006] | PG 13,5 | |

## DIMENSIONS

**Figure 22. E9 Series, top pin plunger, side mount**

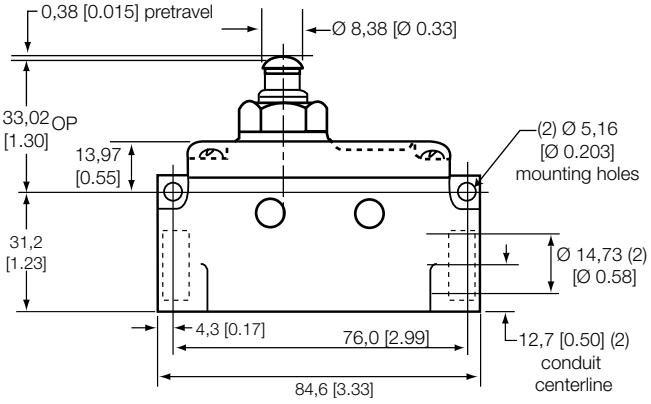



**Figure 23. E9 Series, inline roller plunger, side mount**

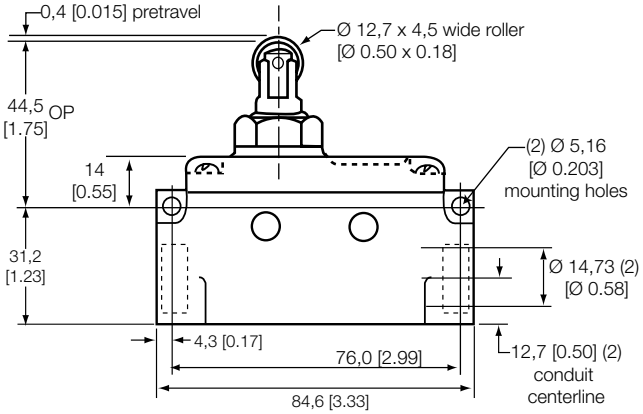



**Figure 24. E9 Series, cross roller lever, side mount**

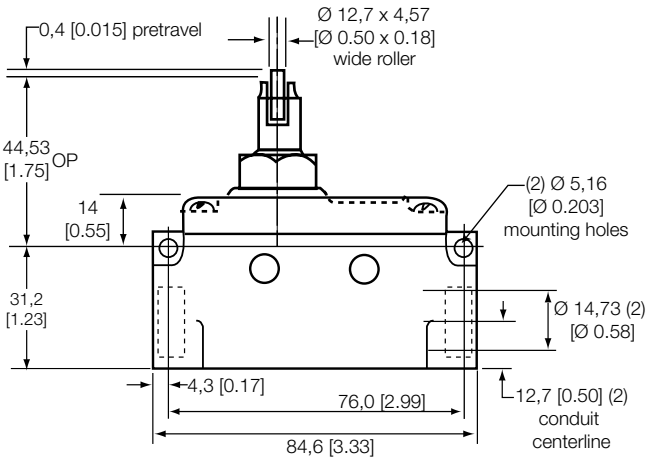
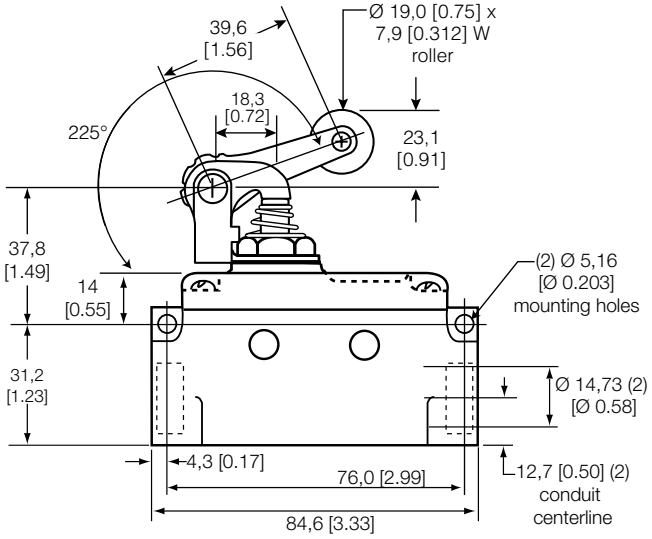



**Figure 25. E9 Series, roller lever, side mount**



# MICRO SWITCH™ Medium-Duty Limit Switches

**Table 11. Order Guide • V7 Series Switches, Flange Mount with Boot Sealed Actuator**

*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 26)** | **BZV7-2RN-C** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 69,85 ±1,57 [2.75 ±0.062] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | 20 mm | |
| | **BZV7-2RN-PG** | BZ, SPDT | A300, Q300 | 255 to 680 [9 to 24] | 69,85 ±1,57 [2.75 ±0.062] | 1,98 [0.078] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| **Roller Lever (see Figure 27)** | **BZV7-2RN2-C** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 97,59 [3.842] Ref. | 4,78 [0.188] | 5,56 [0.219] | 0,20 [0.008] | 20 mm | |
| | **BZV7-2RN2-PG** | BZ, SPDT | A300, Q300 | 284 to 567 [10 to 20] | 97,59 [3.842] Ref. | 4,78 [0.188] | 5,56 [0.219] | 0,20 [0.008] | PG 13,5 | |

## DIMENSIONS

**Figure 26. V7 Series, top pin plunger, flange mount with boot seal**

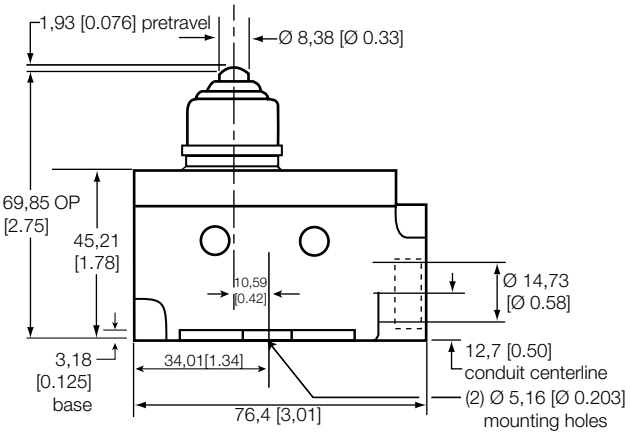
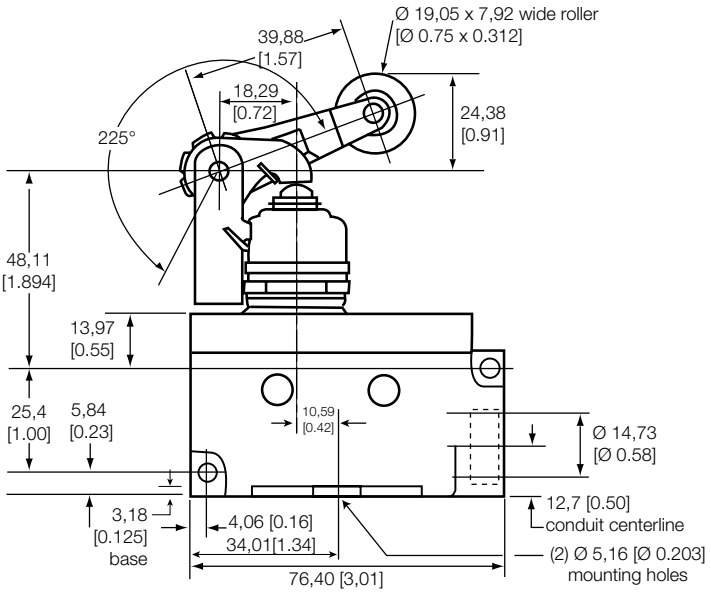



**Figure 27. V7 Series, roller lever, flange mount with booth seal**



# E7 and V7 Series

**Table 12. Order Guide • V7 Series Switches, Flange Mount without Boot Sealed Actuator**

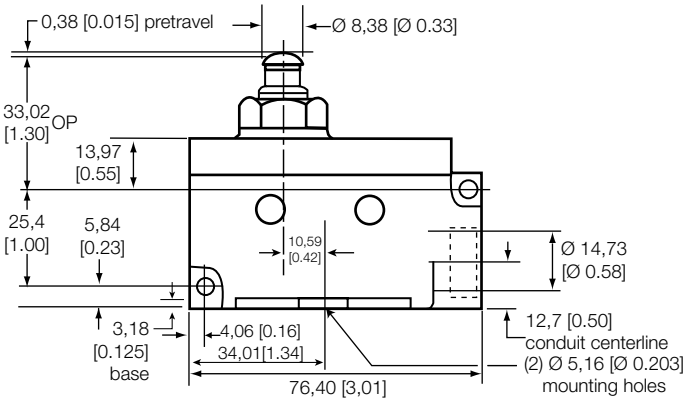
*For catalog listings not shown, please contact your Honeywell distributor or representative.*

| | Catalog Listing | Switch type, Circuitry | Electrical Rating [page 5] | Operate Force g [oz] | Operate Point mm [in] | Pretravel max. mm [in] | Over Travel min. mm [in] | Differential Travel max. mm [in] | Conduit Thread | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| **Pin Plunger (see Figure 28)** | **BZV7-2RQ-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 63,5 ±1,19 [2.50 ±0.047] | 0,38 [0.015] | 5,56 [0.219] | 0,05 [0.002] | PG 13,5 | |
| **Inline Roller Plunger (see Figure 29)** | **BZV7-2RQ8-C** | BZ, SDPT | A300, Q300 | 255 to 369 [9 to 13] | 75,01 ±1,52 [2.953 ±0.060] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | 20 mm | |
| | **BZV7-2RQ8-PG** | BZ, SDPT | A300, Q300 | 255 to 369 [9 to 13] | 75,01 ±1,52 [2.953 ±0.060] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | PG 13,5 | |
| **Cross Roller Plunger (see Figure 30)** | **BZV7-2RQ81-C** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 75,01 ±1,52 [2.953 ±0.060] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | 20 mm | |
| | **BZV7-2RQ81-PG** | BZ, SPDT | A300, Q300 | 255 to 369 [9 to 13] | 75,01 ±1,52 [2.953 ±0.060] | 0,38 [0.015] | 3,56 [0.140] | 0,05 [0.002] | PG 13,5 | |
| **Roller Lever (see Figure 31)** | **BZV7-2RQ2-C** | BZ, SPDT | A300, Q300 | 284 to 510 [10 to 18] | 87,27 [3.436] Ref. | 4,78 [0.188] | 5,56 [0.219] | 0,15 [0.006] | 20 mm | |
| | **BZV7-2RQ2-PG** | BZ, SPDT | A300, Q300 | 284 to 510 [10 to 18] | 87,27 [3.436] Ref. | 4,78 [0.188] | 5,56 [0.219] | 0,15 [0.006] | PG 13,5 | |

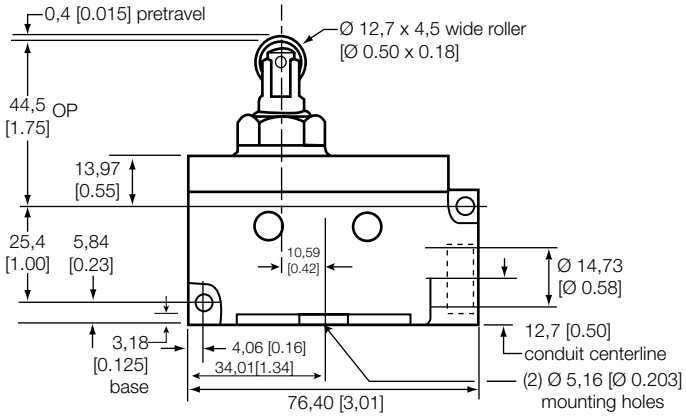
# MICRO SWITCH™ Medium-Duty Limit Switches

## DIMENSIONS

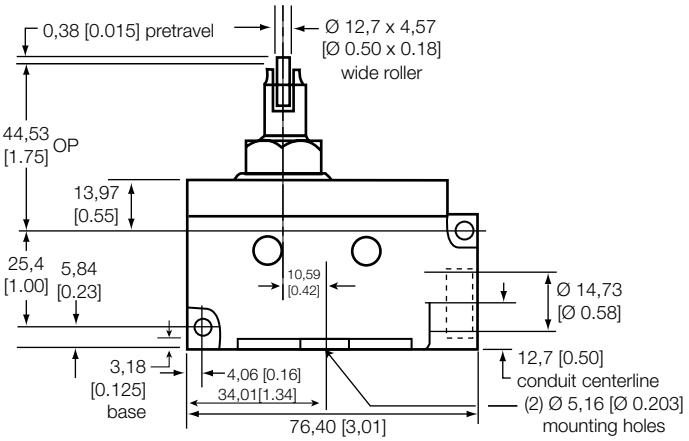
### Figure 28. V7 Series, top pin plunger, flange mount



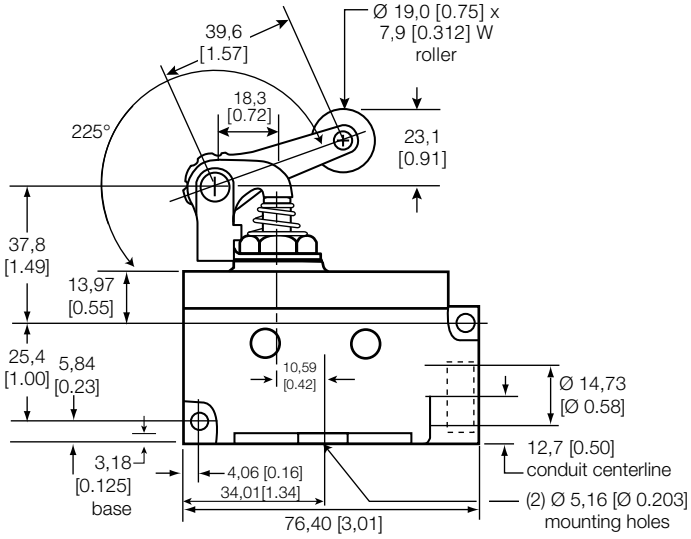

### Figure 29. V7 Series, inline roller plunger, flange mount




### Figure 30. V7 Series, cross roller plunger, flange mount




### Figure 31. V7 Series, roller lever, flange mount



# E7 and V7 Series

**This Honeywell datasheet supports the following MICRO SWITCH™ E7/V7 Series Limit Switch Listings**

BZE7-2RN2-PG
BZE7-2RN-PG
BZE7-2RQ8-PG
BZE7-2RQ81C
BZE7-2RN18-PG
BZE7-2RQN8-C
BZE7-2RQ-PG
BZE7S-2RN-PG
BZE9-2RQ-PG
BZE7-2RN18-C
BZE7-2RN18-CN14
BZE7-2RN2-6NC
BZE7-2RN28-C
BZE7-2RN28-PG
BZE7-2RN2-C
BZE7-2RN2-CN6
BZE72RNC
BZE7-2RN-C
BZE7-2RN-CN5
BZE7-2RN-D
BZE72RNPG
BZE7-2RQ2-C
BZE72RQ2PG
BZE7-2RQ2-PG
BZE7-2RQ81-C
BZE7-2RQ81-PG
BZE7-2RQ8-C
BZE7-2RQ9-C
BZE7-2RQ9-PG
BZE7-2RQ-C
BZE72RQN8C
BZE7-2RQN8-PG
BZE7S-2RN
BZE7S-2RN28-C
BZE7S-2RN2-C
BZE7S-2RN2-PG
BZE7S-2RN-C
BZE7S-2RQ2-C
BZE7S-2RQ81-C
BZE7S-2RQ8-C
BZE7S-2RQ8-PG
BZE7S-2RQ9-C
BZE7S-2RQ-C
BZE7S-2RQN8-C
BZE7S-2RQ-PG
BZE9-2RN28-PG
BZE9-2RN2-C
BZE9-2RN2-PG
BZE9-2RN-C
BZE9-2RN-PG
BZE9-2RN-PG11
BZE9-2RQ2-PG
BZE9-2RQ81-PG
BZE9-2RQ8-C
BZE9-2RQ8-PG
BZE9-2RQN8-PG
BZV7-2RN2-C
BZV7-2RN2-PG
BZV7-2RN-C
BZV7-2RN-PG
BZV7-2RQ2-C
BZV7-2RQ2-PG
BZV7-2RQ81-C
BZV7-2RQ81-PG
BZV7-2RQ8-C
BZV7-2RQ8-PG
BZV7-2RQ-PG
DTE7-2RN28-C
DTE7-2RN2-C
DTE72RN2PG
DTE7-2RN2-PG
DTE7-2RN-C
DTE72RNPG
DTE7-2RN-PG
DTE7-2RQN8-C
DTE7-2RQN8PC
DTE72RQN8PG
DTE7-2RQN8-PG
DTE7S-2RN2-C
DTE7S-2RN-C
DTE7S-2RQ9-C
DTE7S-2RQ9-PG
DTE7S-2RQN8-C

## ADDITIONAL INFORMATION

The following associated literature is available on the Honeywell web site at sensing.honeywell.com:

- Product installation instructions
- Product range guide
- Product nomenclature tree
- Product application-specific information
  - Limit and enclosed switch reference standards

**⚠WARNING**

**PERSONAL INJURY**

**DO NOT USE** these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

**⚠WARNING**

**MISUSE OF DOCUMENTATION**

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

## WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell website, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

**Find out more**

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office.

To learn more about Honeywell's sensing and control products, call **+1-815-235-6847 or 1-800-537-6945**, visit **sensing.honeywell.com,** or e-mail inquiries to **info.sc@honeywell.com**

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Стандарт Электрон Связь

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