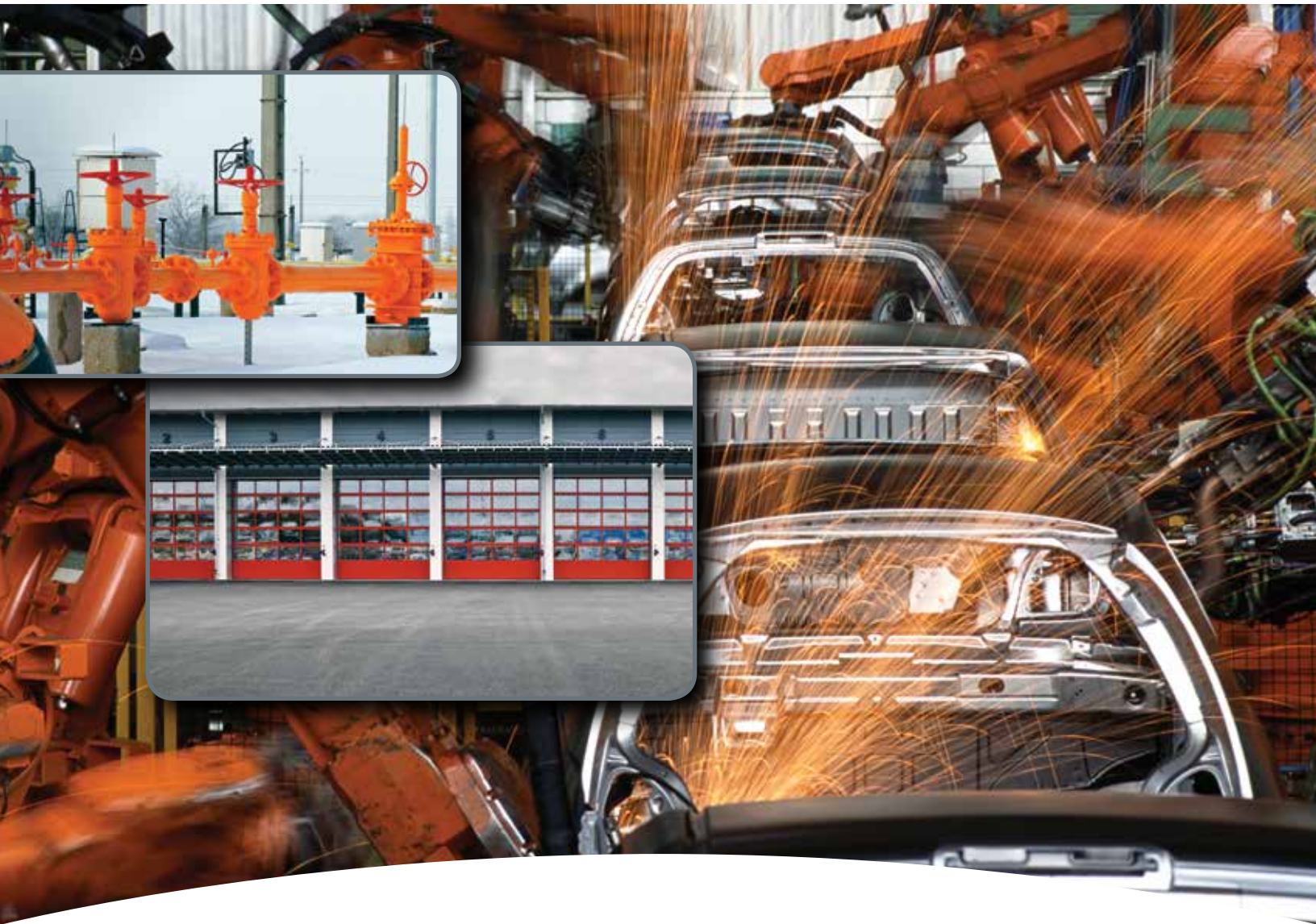


**Honeywell**



MICRO SWITCH™ LS  
General Purpose Limit Switches  
**LS Series**



Datasheet

# MICRO SWITCH™ LS

## General Purpose Limit Switches

The Honeywell MICRO SWITCH™ Compact LS Limit Switch Series offers products that have a long record of successful performance in a diverse range of industrial applications. Under severe conditions, its durable and dependable design provides longevity, precision, and consistent repeatability over millions of operations.

The compact size and adjustable features propel the LS Series to flourish in a variety of settings under space constraint without sacrificing reliability. Its construction is oil-tight, water-tight and dust tight, and includes die-cast housing, heads and actuators. An assortment of heads and actuators provides a solution for a variety of applications.

### *What makes our switches better?*

- Small size and universal mounting footprint may allow for use in constricted spaces
- IP67 and NEMA 1, 3, 4, 6 and 13 ratings available provide a dependable solution in most demanding environmental conditions
- Rugged die-cast metal construction with a wide variety of heads and actuators provides long life across numerous applications
- MICRO SWITCH™ legacy and expertise - over 55 years of engineering excellence and experience with industrial limit switches

***Rugged, metal housing  
packaged for industrial indoor  
and outdoor applications***



QUALITY, RELIABLE  
RUGGED, GLOBAL

## Features and Benefits

### ENHANCED PERFORMANCE COMPACT DESIGN

Along with industry standard mounting dimensions, the LS Series compact design allows installation in applications under space constraint while still providing reliable switching performance

### TWO CIRCUIT DOUBLE BREAK CONTACTS

With an AC15, A300 or 10 A electrical rating, the LS Series provides dependable and consistent switching, giving the end users control of two circuits in one switch

***One switch controls two circuits!***

### ACTUATORS FOR YOUR APPLICATION

With many actuators available such as side rotary, plunger, wobble stick and roller plunger, the LS Series is adaptable and has the ability to be applied in a variety of applications

### SEALED CONSTRUCTION

In demanding environmental conditions, IP67 or NEMA 1, 3, 4, 6, and 13 sealing protects against oil, dust and water making the LS Series a dependable solution in a variety of conditions for both indoor and outdoor applications

## Potential Applications



### MACHINE TOOL EQUIPMENT

Part presence, machine slide/table position, panel and door presence

### MATERIAL HANDLING

Sensing in overhead doors, door interlock, dock locks, conveyance, storage retrieval, carousels, conveyors, and assembly lines

### VALVE ACTUATION

Position sensing of electric valves for waste water treatment plants, power plants, refineries, and pipelines



### FOOD AND BEVERAGE

Sensing during bottling, canning, and packaging

### SPECIAL MACHINERY

Assembly, packaging and testing applications

# LS Series

## MICRO SWITCH™ LS SERIES PRODUCT NOMENCLATURE

| Switch body  |                        |                                                                               |                |               |                                                                                       |                                                                                                                                                                                               |
|--------------|------------------------|-------------------------------------------------------------------------------|----------------|---------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compact SPDT | SPDT Plug-in less base | Switch style                                                                  | Product family | Actuator code | Actuator description                                                                  | Modifications<br>(may be applied to most configurations)                                                                                                                                      |
| 1            | 201                    | side rotary (momentary) CW and CCW actuation. Field adjustable for CW and CCW | LS             | 1             | standard with 38,1 mm fixed length lever with steel roller                            | <b>(blank)</b><br>0.5-14 NPT conduit<br><br><b>-L</b><br>UL/CSA certified with 0.5-14 NPT conduit<br><br><b>-4C</b><br>CE with 20 mm conduit<br><br><b>-4PG</b><br>CE with PG 13,5 mm conduit |
|              |                        |                                                                               |                | 19            | low pretravel with 38,1 mm fixed length lever with steel roller                       |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 6             | low operating torque with 38,1 mm fixed length lever with steel roller                |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 131           | low pretravel, low operating torque with 38,1 mm fixed length lever with steel roller |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 3             | standard with adjustable length lever, 38 mm to 89 mm with nylon roller               |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 10            | standard with adjustable 127 mm aluminum rod                                          |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 2             | standard, no lever                                                                    |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 9             | low pretravel with no lever                                                           |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 23            | low operating torque with no lever                                                    |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 56            | low pretravel, low operating torque with no lever                                     |                                                                                                                                                                                               |
| 2            | 202                    | top pin plunger                                                               | LS             | 1             | standard                                                                              |                                                                                                                                                                                               |
|              | n/a                    | top pin plunger                                                               |                | 111           | plunger boot seal                                                                     |                                                                                                                                                                                               |
| 3            | 203                    | side roller plunger                                                           | LS             | 1             | standard                                                                              |                                                                                                                                                                                               |
| 4            | 204                    | side pin plunger                                                              | LS             | 1             | standard                                                                              |                                                                                                                                                                                               |
| 5            | 205                    | top roller plunger                                                            | LS             | 1             | standard                                                                              |                                                                                                                                                                                               |
|              | n/a                    | top roller plunger                                                            |                | 8             | plunger boot seal                                                                     |                                                                                                                                                                                               |
| 6            | 206                    | two position side rotary (maintained)                                         | LS             | 1             | standard with 38,1 mm fixed length fork lever with roller                             |                                                                                                                                                                                               |
|              |                        |                                                                               |                | 2             | no lever                                                                              |                                                                                                                                                                                               |
| 7            | n/a                    | side rotary enclosure mount                                                   | LS             | 1             | standard with 38,1 mm fixed length lever with steel roller                            |                                                                                                                                                                                               |
| 8            | 208                    | wobble actuator                                                               | LS             | 1             | steel coil spring, 141 mm                                                             |                                                                                                                                                                                               |
|              | 208                    | wobble actuator                                                               |                | 3             | aluminum rod, 141 mm                                                                  |                                                                                                                                                                                               |
|              | 208                    | wobble actuator                                                               |                | 125           | cat whisker, 191 mm                                                                   |                                                                                                                                                                                               |
|              | 208                    | wobble actuator                                                               |                | 152           | stainless steel coil spring, 141 mm                                                   |                                                                                                                                                                                               |

Not all combinations are available. Please contact your Honeywell provider/representative for assistance.

# MICRO SWITCH™ General Purpose Limit Switches

**Table 1. Specifications**

| Characteristic        | North America                                                                                                                                                  | EMEA (Europe)                                                                                   |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Product type          | Honeywell general purpose <b>LS</b> limit switch, compact and plug-in                                                                                          | Honeywell general purpose <b>LS-4</b> limit switch, compact and plug-in                         |
| Acutators             | side rotary, side rotary (maintained) top pin plunger, top roller plunger, wobble coil spring, wobble aluminum rod, wobble cat whisker, wobble sst coil spring |                                                                                                 |
| Circuitry             | single pole double throw (SPDT) double break,                                                                                                                  | single pole double throw (SPDT) double break                                                    |
| Electrical            | 10 A (see Table 2)                                                                                                                                             | AC 15, A300; DC 13, P300                                                                        |
| Housing material      | compact: epoxy coated zinc die cast<br>plug-in: epoxy coated aluminum die cast                                                                                 | epoxy coated aluminum die cast                                                                  |
| Conduit               | 0.5 – 14 NPT                                                                                                                                                   | 20 mm or PG13,5                                                                                 |
| Housing seal rating   | NEMA 1,3,4, 6 and 13                                                                                                                                           | IP67, NEMA 1,4 and 13                                                                           |
| Operating temperature | standard: -29 °C to 71 °C [-20 °F to 160 °F]<br>high temp.: -29 °C to 120 °C [-20 °F to 248 °F]                                                                | standard: -30 °C to 70 °C [-22 °F to 158 °F]<br>high temp.: -30 °C to 120 °C [-22 °F to 248 °F] |
| Agency certifications | Compact with -L suffix UL file 12252, CSA file 57325                                                                                                           | CE, EN60947-5-41, IEC60947-5-4                                                                  |

**Table 2. Electrical Ratings**

| Electrical Code | Electrical Ratings                                                                                                                        |                           |                               |                            |                |                 |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------|----------------------------|----------------|-----------------|
| <b>A</b>        | 10 A, 120, 240 or 480 Vac; 1/3 hp 120 Vac; 3/4 hp 240 Vac; 0.8 amp, 115 Vdc; 0.4 amp, 230 Vdc; 0.1 amp, 550 Vdc, Pilot Duty, 600 Vac max. |                           |                               |                            |                |                 |
| <b>B</b>        | 10 A, 120, 240 or 480 Vac; 1/4 hp 120 Vac; 1/2 hp 240 Vac; Pilot Duty, 600 Vac max.                                                       |                           |                               |                            |                |                 |
| <b>C</b>        | 10 A, 1/3 hp 120 Vac                                                                                                                      |                           |                               |                            |                |                 |
| <b>D</b>        | 10 A, 120, 240 or 480 Vac; 1/4 hp 120 Vac; 1/2 hp 240 Vac; 0.8 amp, 115 Vdc; 0.4 amp, 230 Vdc; 0.1 amp, 550 Vdc, Pilot Duty, 600 Vac max. |                           |                               |                            |                |                 |
| <b>E</b>        | 10 A, 120, 240 or 480 Vac; 1/3 hp 120 Vac; 3/4 hp 240 Vac; Pilot Duty, 600 Vac max.                                                       |                           |                               |                            |                |                 |
| <b>F</b>        | 5 A, 6 V; 1 A, 24 V; 0.4 A, 220 V                                                                                                         |                           |                               |                            |                |                 |
| <b>G</b>        | UL & CSA; 10 A, 125, 250 or 480 Vac; 1/3 hp 125 Vac; 3/4 hp 250 Vac; 0.8 amp, 115 Vdc; 0.4 amp, 230 Vdc                                   |                           |                               |                            |                |                 |
| <b>H</b>        | UL & CSA; 10 A, 125, 250 or 480 Vac; 1/4 hp 125 Vac; 1/2 hp 250 Vac; 0.8 amp, 115 Vdc; 0.4 amp, 230 Vdc                                   |                           |                               |                            |                |                 |
| <b>J</b>        | 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 |
|                 | ac                                                                                                                                        |                           |                               |                            |                |                 |
|                 | AC15, A300                                                                                                                                | 10                        | 120                           | 6                          | 7200           | 720             |
|                 | AC15, A300                                                                                                                                | 10                        | 240                           | 3                          | 7200           | 720             |
|                 | dc                                                                                                                                        |                           |                               |                            |                |                 |
|                 | DC13, P300                                                                                                                                | 5                         | 125                           | 1.1                        | 138            | 138             |
|                 | DC13, P300                                                                                                                                | 5                         | 250                           | 0.55                       | 138            | 138             |

# LS Series

## MICRO SWITCH™ LS SERIES ORDER GUIDE/RECOMMENDED LISTINGS (FOR NORTH AMERICA)

For listings not shown, contact your Honeywell representative.

**Table 3. Side Rotary (Momentary), Standard Roller Lever**

|                                                                                   | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less<br>base* | Description                                               | Electrical<br>Rating<br>(Table 2) |  |
|-----------------------------------------------------------------------------------|------------------------------------------|-----------------------|-----------------------------------------------------------|-----------------------------------|--|
|  | <b>1LS1</b>                              | <b>201LS1</b>         | side rotary w/ 38,1mm [1.5 in] fixed lever, steel roller  | A                                 |  |
|                                                                                   | <b>1LS1-L</b>                            | –                     | side rotary w/ 38,1mm [1.5 in] fixed lever, steel roller  | G                                 |  |
|                                                                                   | <b>1LS2</b>                              | –                     | side rotary, no lever                                     | A                                 |  |
|                                                                                   | <b>1LS2-L</b>                            | –                     | side rotary, no lever                                     | G                                 |  |
|                                                                                   | <b>1LS243</b>                            | <b>201LS242</b>       | side rotary w/ 38,1mm [1.5 in] fixed lever, steel roller  | A                                 |  |
|                                                                                   | <b>1LS6</b>                              | <b>201LS6</b>         | side rotary w/ 38,1 mm [1.5 in] fixed lever, steel roller | A                                 |  |
|                                                                                   | <b>1LS6-L</b>                            | –                     | side rotary w/ 38,1 mm [1.5 in] fixed lever, steel roller | G                                 |  |
|                                                                                   | <b>1LS23</b>                             | <b>201LS23</b>        | side rotary, no lever                                     | A                                 |  |
|                                                                                   | <b>1LS501</b>                            | <b>201LS501</b>       | side rotary w/ 38,1mm [1.5 in] fixed lever, steel roller  | C                                 |  |
|                                                                                   | <b>1LS19</b>                             | <b>201LS19</b>        | side rotary w/ 38,1mm [1.5 in] fixed lever, steel roller  | B                                 |  |
|                                                                                   | <b>1LS9</b>                              | <b>201SL9</b>         | side rotary, no lever                                     | B                                 |  |
|                                                                                   | <b>1LS131</b>                            | –                     | side rotary w/ 38,1 mm [1.5 in] fixed lever, steel roller | B                                 |  |
|                                                                                   | <b>1LS56</b>                             | <b>201LS56</b>        | side rotary, no lever                                     | B                                 |  |

\*Contact closed ■; Contact open □. \*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

**Table 4. Side Rotary (Maintained), Standard Fork Roller Lever**

|                                                                                     | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description                                                                           | Electrical<br>Rating<br>(Table 2) |  |
|-------------------------------------------------------------------------------------|------------------------------------------|--------------------|---------------------------------------------------------------------------------------|-----------------------------------|--|
|  | <b>6LS1</b>                              | <b>206LS1</b>      | side rotary maintained w/ 38,1mm [1.5 in] fork lever, steel rollers,<br>opposite side | A                                 |  |
|                                                                                     | <b>6LS2</b>                              | <b>206LS2</b>      | side rotary maintained, no lever                                                      | A                                 |  |
|                                                                                     | <b>6LS2-L</b>                            | –                  | side rotary maintained, no lever                                                      | G                                 |  |
|                                                                                     | <b>6LS3</b>                              | –                  | side rotary maintained w/ 38,1mm [1.5 in] fork lever, nylon rollers,<br>same side     | A                                 |  |

\*Contact closed ■; Contact open □. \*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

# MICRO SWITCH™ General Purpose Limit Switches

O.T. • Operating torque  
O.F. • Operating force  
R.P. • Release point  
P.T. • Pretravel  
O.T. • Overtravel  
D.T. • Differential travel

|  | Operating Torque or Force | Bar Chart <sup>1</sup> | Operate Point | Pretravel (max.) | Overtravel (min.) | Differential Travel (max.) | Notes                        |
|--|---------------------------|------------------------|---------------|------------------|-------------------|----------------------------|------------------------------|
|  | 0,51 Nm [4.5 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | –                            |
|  | 0,51 Nm [4.5 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | UL & CSA                     |
|  | 0,51 Nm [4.5 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | –                            |
|  | 0,51 Nm [4.5 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | UL & CSA                     |
|  | 0,51 Nm [4.5 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | high-temp. 120 °C [248 °F]   |
|  | 0,19 Nm [1.7 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | low torque                   |
|  | 0,19 Nm [1.7 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | low torque, UL & CSA         |
|  | 0,19 Nm [1.7 in-lb]       |                        | –             | 20°              | 30°               | 12°                        | low torque                   |
|  | 0,51 Nm [4.5 in-lb]       |                        | –             | 5°               | 30°               | 4°                         | low pretravel                |
|  | 0,51 Nm [4.5 in-lb]       |                        | –             | 5°               | 30°               | 4°                         | low pretravel                |
|  | 0,19 Nm [1.7 in-lb]       |                        | –             | 5°               | 30°               | 4°                         | low pretravel and low torque |
|  | 0,19 Nm [1.7 in-lb]       |                        | –             | 5°               | 30°               | 4°                         | low pretravel and low torque |

|  | Operating Torque or Force | Bar Chart <sup>1</sup> | Operate Point | Pretravel (max.) | Total travel (nom.) | Differential Travel (max.) | Notes    |
|--|---------------------------|------------------------|---------------|------------------|---------------------|----------------------------|----------|
|  | 0,34 Nm [3 in-lb]         |                        | –             | 55°              | 90°                 | 20°                        |          |
|  | 0,34 Nm [3 in-lb]         |                        | –             | 55°              | 90°                 | 20°                        |          |
|  | 0,34 Nm [3 in-lb]         |                        | –             | 55°              | 90°                 | 20°                        | UL & CSA |
|  | 0,34 Nm [3 in-lb]         |                        | –             | 55°              | 90°                 | 20°                        |          |

# LS Series

## MICRO SWITCH™ LS SERIES ORDER GUIDE/RECOMMENDED LISTINGS (FOR NORTH AMERICA)

For listings not shown, contact your Honeywell representative.

Table 5. Side Rotary, Adjustable Roller Lever

|                                                                                   | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description                                                                           | Electrical<br>Rating<br>(Table 2) |  |
|-----------------------------------------------------------------------------------|------------------------------------------|--------------------|---------------------------------------------------------------------------------------|-----------------------------------|--|
|  | <b>1LS3</b>                              | <b>201LS3</b>      | side rotary w/ 38,1 mm to 88,9mm [1.5 in to 3.5 in]<br>adjustable lever, nylon roller | A                                 |  |
|                                                                                   | <b>1LS3-L</b>                            | –                  | side rotary w/ 38,1 mm to 88,9mm [1.5 in to 3.5 in]<br>adjustable lever, nylon roller | G                                 |  |
|                                                                                   | <b>1LS58</b>                             | –                  | side rotary w/ 38,1 mm to 88,9mm [1.5 in to 3.5 in]<br>adjustable lever, nylon roller | B                                 |  |
|                                                                                   | <b>1LS59</b>                             | –                  | side rotary w/ 38,1 mm to 88,9mm [1.5 in to 3.5 in]<br>adjustable lever, nylon roller | B                                 |  |

\*Contact closed ■; Contact open □. \*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

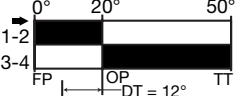
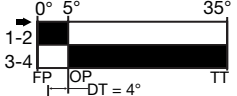
Table 6. Side Rotary, Adjustable Rod Lever

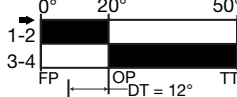
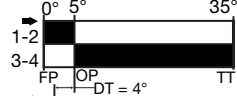
|                                                                                     | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description                                                 | Electrical<br>Rating<br>(Table 2) |  |
|-------------------------------------------------------------------------------------|------------------------------------------|--------------------|-------------------------------------------------------------|-----------------------------------|--|
|  | <b>1LS10</b>                             | <b>201LS10</b>     | side rotary w/ 140 mm [5.5 in] max. adjustable aluminum rod | A                                 |  |
|                                                                                     | <b>1LS10-L</b>                           | –                  | side rotary w/ 140 mm [5.5 in] max. adjustable aluminum rod | G                                 |  |
|                                                                                     | <b>1LS47</b>                             | <b>201LS47</b>     | side rotary w/ 140 mm [5.5 in] max. adjustable aluminum rod | B                                 |  |
|                                                                                     | <b>1LS53</b>                             | <b>201LS51</b>     | side rotary w/ 140 mm [5.5 in] max. adjustable aluminum rod | B                                 |  |

\*Contact closed ■; Contact open □. \*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

# MICRO SWITCH™ General Purpose Limit Switches

O.T. • Operating torque  
O.F. • Operating force  
R.P. • Release point  
P.T. • Pretravel  
O.T. • Overtravel  
D.T. • Differential travel

|  | Operating Torque or Force | Bar Chart <sup>1</sup>                                                            | Operate Point | Pretravel (max.) | Overtravel (min.) | Differential Travel (max.) | Notes                        |
|--|---------------------------|-----------------------------------------------------------------------------------|---------------|------------------|-------------------|----------------------------|------------------------------|
|  | 0,51 Nm<br>[4.5 in-lb]    |  | –             | 20°              | 30°               | 12°                        | –                            |
|  | 0,51 Nm<br>[4.5 in-lb]    |  | –             | 20°              | 30°               | 12°                        | UL & CSA                     |
|  | 0,51 Nm<br>[4.5 in-lb]    |  | –             | 5°               | 30°               | 4°                         | low pretravel                |
|  | 0,19 Nm<br>[1.7 in-lb]    |  | –             | 5°               | 30°               | 4°                         | low pretravel and low torque |

|  | Operating Torque or Force | Bar Chart <sup>1</sup>                                                              | Operate Point | Pretravel (max.) | Overtravel (min.) | Differential Travel (max.) | Notes                        |
|--|---------------------------|-------------------------------------------------------------------------------------|---------------|------------------|-------------------|----------------------------|------------------------------|
|  | 0,19 Nm<br>[1.7 in-lb]    |  | –             | 20°              | 30°               | 12°                        | –                            |
|  | 0,19 Nm<br>[1.7 in-lb]    |  | –             | 20°              | 30°               | 12°                        | UL & CSA                     |
|  | 0,19 Nm<br>[1.7 in-lb]    |  | –             | 5°               | 30°               | 4°                         | low pretravel                |
|  | 0,11 Nm<br>[1.0 in-lb]    |  | –             | 5°               | 30°               | 4°                         | low pretravel and low torque |

# LS Series

## MICRO SWITCH™ LS SERIES ORDER GUIDE/RECOMMENDED LISTINGS (FOR NORTH AMERICA)

For listings not shown, contact your Honeywell representative.

Table 7. Top Pin Plunger

|                                                                                   | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description                                      | Electrical<br>Rating<br>(Table 2) | Operating<br>Torque or<br>Force |  |
|-----------------------------------------------------------------------------------|------------------------------------------|--------------------|--------------------------------------------------|-----------------------------------|---------------------------------|--|
|  | <b>2LS1</b>                              | <b>202LS1</b>      | Top pin plunger (hardened SST)                   | A                                 | 31,1 N<br>[7.0 lb]              |  |
|                                                                                   | <b>2LS1-L</b>                            | –                  | Top pin plunger (hardened SST)                   | G                                 | 31,1 N<br>[7.0 lb]              |  |
|                                                                                   | <b>2LS111</b>                            | <b>202LS111</b>    | Top pin plunger (hardened SST)<br>with boot seal | E                                 | 10,0 N<br>[2.2 lb]              |  |

\*Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

Table 8. Top Roller Plunger

|                                                                                    | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description                                                  | Electrical<br>Rating<br>(Table 2) | Operating<br>Torque or<br>Force |  |
|------------------------------------------------------------------------------------|------------------------------------------|--------------------|--------------------------------------------------------------|-----------------------------------|---------------------------------|--|
|  | <b>5LS1</b>                              | <b>205LS1</b>      | Top roller plunger (hardened steel roller)                   | A                                 | 31,1 N<br>[7.0 lb]              |  |
|                                                                                    | <b>5LS1-L</b>                            | –                  | Top roller plunger (hardened steel roller)                   | G                                 | 31,1 N<br>[7.0 lb]              |  |
|                                                                                    | <b>5LS8</b>                              | –                  | Top roller plunger (hardened steel roller)<br>with boot seal |                                   | 15,57 N<br>[3.5 lb]             |  |

\*Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

Table 9. Side Pin Plunger

|                                                                                     | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description            | Electrical<br>Rating<br>(Table 2) | Operating<br>Torque or<br>Force |  |
|-------------------------------------------------------------------------------------|------------------------------------------|--------------------|------------------------|-----------------------------------|---------------------------------|--|
|  | <b>4LS1</b>                              | <b>204LS1</b>      | Side pin plunger (SST) | A                                 | 40,0 N<br>[9.0 lb]              |  |

\*Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

Table 10. Side Roller Plunger

|                                                                                     | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description                                 | Electrical<br>Rating<br>(Table 2) | Operating<br>Torque or<br>Force |  |
|-------------------------------------------------------------------------------------|------------------------------------------|--------------------|---------------------------------------------|-----------------------------------|---------------------------------|--|
|  | <b>3LS1</b>                              | <b>203LS1</b>      | Side roller plunger (hardened steel roller) | A                                 | 40,0 N<br>[9.0 lb]              |  |

# MICRO SWITCH™ General Purpose Limit Switches

O.T. • Operating torque  
O.F. • Operating force  
R.P. • Release point  
P.T. • Pretravel  
O.T. • Overtravel  
D.T. • Differential travel

|  | Bar Chart <sup>1</sup> | Free Position (nom.) | Operate Point                           | Pretravel (max.)      | Overtravel (min.)    | Differential Travel (max.) | Notes                 |
|--|------------------------|----------------------|-----------------------------------------|-----------------------|----------------------|----------------------------|-----------------------|
|  |                        | 35,5 mm<br>[1.40 in] | 33,78 mm ±0,78 mm<br>[1.33 in ±0.03 in] | 1,65 mm<br>[0.065 in] | 6,35 mm<br>[0.25 in] | 0,51 mm<br>[0.02 in]       | –                     |
|  |                        | 35,5 mm<br>[1.40 in] | 33,78 mm ±0,78 mm<br>[1.33 in ±0.03 in] | 1,65 mm<br>[0.065 in] | 6,35 mm<br>[0.25 in] | 0,51 mm<br>[0.02 in]       | UL & CSA              |
|  |                        | 35,5 mm<br>[1.40 in] | 33,78 mm ±0,78 mm<br>[1.33 in ±0.03 in] | 1,65 mm<br>[0.065 in] | 5,6 mm<br>[0.22 in]  | 0,23 mm<br>[0.009 in]      | lower operating force |

|  | Bar Chart <sup>1</sup> | Free Position (nom.) | Operate Point                           | Pretravel (max.)      | Overtravel (min.)   | Differential Travel (max.) | Notes                 |
|--|------------------------|----------------------|-----------------------------------------|-----------------------|---------------------|----------------------------|-----------------------|
|  |                        | 45,6 mm<br>[1.80 in] | 43,95 mm ±0,78 mm<br>[1.73 in ±0.03 in] | 1,65 mm<br>[0.065 in] | 5,6 mm<br>[0.22 in] | 0,51 mm<br>[0.02 in]       | –                     |
|  |                        | 45,6 mm<br>[1.80 in] | 43,95 mm ±0,78 mm<br>[1.73 in ±0.03 in] | 1,65 mm<br>[0.065 in] | 5,6 mm<br>[0.22 in] | 0,51 mm<br>[0.02 in]       | UL & CSA              |
|  |                        | 45,6 mm<br>[1.80 in] | 43,95 mm ±0,78 mm<br>[1.73 in ±0.03 in] | 1,65 mm<br>[0.065 in] | 5,6 mm<br>[0.22 in] | 0,51 mm<br>[0.02 in]       | lower operating force |

|  | Bar Chart <sup>1</sup> | Free Position (nom.) | Operate Point                           | Pretravel (max.)     | Overtravel (min.)    | Differential Travel (max.) | Notes |
|--|------------------------|----------------------|-----------------------------------------|----------------------|----------------------|----------------------------|-------|
|  |                        | 56,4 mm<br>[2.22 in] | 54,10 mm ±0,78 mm<br>[2.13 in ±0.03 in] | 2,77 mm<br>[0.11 in] | 6,35 mm<br>[0.25 in] | 1,02 mm<br>[0.04 in]       | –     |

|  | Bar Chart <sup>1</sup> | Free Position (nom.)  | Operate Point                           | Pretravel (max.)     | Overtravel (min.)    | Differential Travel (max.) | Notes                                                     |
|--|------------------------|-----------------------|-----------------------------------------|----------------------|----------------------|----------------------------|-----------------------------------------------------------|
|  |                        | 70,35 mm<br>[2.77 in] | 67,56 mm ±0,78 mm<br>[2.66 in ±0.03 in] | 2,79 mm<br>[0.11 in] | 6,35 mm<br>[0.25 in] | 1,02 mm<br>[0.04 in]       | Roller plunger may be locked in any position through 360° |

# LS Series

## MICRO SWITCH™ LS SERIES ORDER GUIDE/RECOMMENDED LISTINGS (FOR NORTH AMERICA)

For listings not shown, contact your Honeywell representative.

<sup>1</sup>Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

**Table 11. Side Rotary with Face Plate**

|                                                                                   | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base | Description                                                                                     | Electrical<br>Rating<br>(Table 2) |  |
|-----------------------------------------------------------------------------------|------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------|-----------------------------------|--|
|  | <b>7LS1</b>                              | —                 | Face plate with 1LS1 for enclosure installation with 38,1 mm [1.5 in] fixed lever, steel roller | A                                 |  |

<sup>1</sup>Contact closed ■; Contact open □.

**Table 12. Wobble, Coil Spring**

|                                                                                    | Compact, SPDT<br>w 0.5-14 NPT<br>conduit | Plug-in less base* | Description                                                                   | Electrical<br>Rating<br>(Table 2) |  |
|------------------------------------------------------------------------------------|------------------------------------------|--------------------|-------------------------------------------------------------------------------|-----------------------------------|--|
|  | <b>8LS1</b>                              | <b>208LS1</b>      | Wobble actuated, random motion 141 mm [5.55 in] tin plated, coil spring steel | D                                 |  |
|                                                                                    | <b>8LS1-L</b>                            | —                  | Wobble actuated, random motion 141 mm [5.55 in] tin plated, coil spring steel | H                                 |  |
|                                                                                    | <b>8LS3</b>                              | <b>208LS3</b>      | Wobble actuated, random motion 141 mm [5.55 in] aluminum rod                  | D                                 |  |
|                                                                                    | <b>8LS125</b>                            | <b>208LS125</b>    | Wobble actuated, random motion 191 mm [7.53 in] stainless steel cat whisker   | D                                 |  |
|                                                                                    | <b>8LS152</b>                            | <b>208LS152</b>    | Wobble actuated, random motion 141 mm [5.55 in] stainless steel coil spring   | D                                 |  |

<sup>1</sup>Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\*Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

<sup>2</sup> Operating position in any direction except pull.

# MICRO SWITCH™ General Purpose Limit Switches

O.T. • Operating torque  
O.F. • Operating force  
R.P. • Release point  
P.T. • Pretravel  
O.T. • Overtravel  
D.T. • Differential travel

| Operating Torque or Force | Bar Chart <sup>1</sup>                                             | Operate Point | Pretravel (max.) | Overtravel (min.) | Differential Travel (max.) | Notes |
|---------------------------|--------------------------------------------------------------------|---------------|------------------|-------------------|----------------------------|-------|
| 0,51 Nm [4.5 in-lb]       | <p>0° 20° 50°<br/>1-2<br/>3-4<br/>FP OP TT<br/>DT = 12°<br/>8°</p> | –             | 20°              | 30°               | 12°                        | –     |

| Operating Torque or Force | Bar Chart <sup>1</sup>                                         | Operate Point <sup>2</sup> (max.) | Pretravel (max.)   | Overtravel (nom.) | Differential Travel (max.) | Notes    |
|---------------------------|----------------------------------------------------------------|-----------------------------------|--------------------|-------------------|----------------------------|----------|
| 1,39 N [5.0 oz]           | <p>0 28,6 59,3 (nom.)<br/>1-2<br/>3-4<br/>FP IOP TT<br/>RP</p> | 28,6 mm [1.125 in]                | 28,6 mm [1.125 in] | 30,7 mm [1.21 in] | –                          | –        |
| 1,39 N [5.0 oz]           |                                                                | 28,6 mm [1.125 in]                | 28,6 mm [1.125 in] | 30,7 mm [1.21 in] | –                          | UL & CSA |
| 1,39 N [5.0 oz]           |                                                                | 28,6 mm [1.125 in]                | 28,6 mm [1.125 in] | 30,7 mm [1.21 in] | –                          | –        |
| 0,28 N [1.0 oz]           | <p>0 63,5 127 (nom.)<br/>1-2<br/>3-4<br/>FP IOP TT<br/>RP</p>  | 63,5 mm [2.5 in]                  | 63,5 mm [2.5 in]   | 63,5 mm [2.5 in]  | –                          | –        |
| 1,39 N [5.0 oz]           | <p>0 28,6 59,3 (nom.)<br/>1-2<br/>3-4<br/>FP IOP TT<br/>RP</p> | 28,6 mm [1.125 in]                | 28,6 mm [1.125 in] | 30,7 mm [1.21 in] | –                          | –        |

# LS Series

## MICRO SWITCH™ LS SERIES ORDER GUIDE/RECOMMENDED LISTINGS (FOR EMEA/EUROPE)

For listings not shown, contact your Honeywell representative.

**Table 13. Side Rotary (Momentary), Standard Roller Lever**

|                                                                                   | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description                                                  | Electrical<br>Rating<br>(Table 2) |  |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|--------------------------------------------------------------|-----------------------------------|--|
|  | <b>1LS1-4C</b>              | <b>1LS1-4PG</b>               | <b>201LS1-4</b>       | Side rotary, with 38,1 mm [1.5 in] fixed lever, steel roller | J                                 |  |
|                                                                                   | <b>1LS2-4C</b>              | <b>1LS2-4PG</b>               | <b>201LS2-4</b>       | Side rotary, no lever                                        | J                                 |  |
|                                                                                   | <b>1LS243-4C</b>            | <b>1LS243-4PG</b>             | –                     | Side rotary, with 38,1 mm [1.5 in] fixed lever, steel roller | J                                 |  |
|                                                                                   | <b>1LS244-4C</b>            | <b>1LS244-4PG</b>             | –                     | Side rotary, with 38,1 mm [1.5 in] fixed lever, steel roller | J                                 |  |
|                                                                                   | <b>1LS19-4C</b>             | <b>1LS19-4PG</b>              | <b>201LS1-4</b>       | Side rotary, with 38,1 mm [1.5 in] fixed lever, steel roller | J                                 |  |
|                                                                                   | <b>1LS56-4C</b>             | <b>1LS56-4PG</b>              | <b>201LS56-4</b>      | Side rotary, lever                                           | J                                 |  |

\*Contact closed ■; Contact open □. \* Requires an 18PA1-4C Terminal Block (20 mm conduit threads) or 18PA1-4PG Terminal Block (PG13,5 conduit threads) ordered separately. Terminal block is base receptacle.

**Table 14. Side Rotary (Maintained), Fork Roller Lever**

|                                                                                     | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description                                                                  | Electrical<br>Rating<br>(Table 2) |  |
|-------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|------------------------------------------------------------------------------|-----------------------------------|--|
|  | <b>6LS1-4C</b>              | <b>6LS1-4PG</b>               | <b>206LS1-4</b>       | Side rotary maintained with 38,1 mm fork lever with steel rollers, opp. side | J                                 |  |
|                                                                                     | <b>6LS3-4C</b>              | <b>6LS3-4PG</b>               | –                     | Side rotary maintained with 38,1 mm fork lever with nylon rollers, same side | J                                 |  |
|                                                                                     | <b>6LS2-4C</b>              | <b>6LS2-4PG</b>               | –                     | Side rotary maintained, no lever                                             | J                                 |  |

\*Contact closed ■; Contact open □. \* Requires an 18PA1-4C Terminal Block (20 mm conduit threads) or 18PA1-4PG Terminal Block (PG13,5 conduit threads) ordered separately. Terminal block is base receptacle.

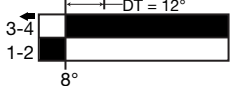
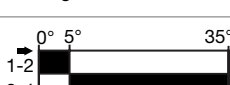
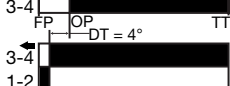
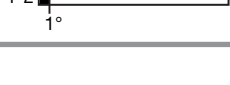
**Table 15. Side Rotary, Adjustable Roller Lever**

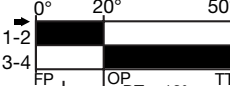
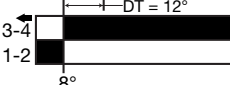
|                                                                                     | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description                                                                        | Electrical<br>Rating<br>(Table 2) |  |
|-------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|------------------------------------------------------------------------------------|-----------------------------------|--|
|  | <b>1LS3-4C</b>              | <b>1LS3-4PG</b>               | <b>201LS3-4</b>       | Side rotary, with 25 mm to 89 mm [1.0 in to 3.5 in] adjustable lever, nylon roller | J                                 |  |

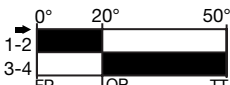
\*Contact closed ■; Contact open □. \* Requires an 18PA1-4C Terminal Block (20 mm conduit threads) or 18PA1-4PG Terminal Block (PG13,5 conduit threads) ordered separately. Terminal block is base receptacle.

# MICRO SWITCH™ General Purpose Limit Switches

O.T. • Operating torque  
O.F. • Operating force  
R.P. • Release point  
P.T. • Pretravel  
O.T. • Overtravel  
D.T. • Differential travel

| Operating Torque or Force | Bar Chart <sup>1</sup>                                                            | Operate Point | Pretravel (max.) | Overtravel (min.) | Differential Travel (max.) | Notes                                              |
|---------------------------|-----------------------------------------------------------------------------------|---------------|------------------|-------------------|----------------------------|----------------------------------------------------|
| 0,51 Nm [4.5 in-lb]       |  | –             | 20°              | 30°               | 12°                        | –                                                  |
| 0,51 Nm [4.5 in-lb]       |  | –             | 20°              | 30°               | 12°                        | –                                                  |
| 0,51 Nm [4.5 in-lb]       |  | –             | 20°              | 30°               | 12°                        | High temp. 120 °C [248 °F]                         |
| 0,51 Nm [4.5 in-lb]       |  | –             | 20°              | 30°               | 12°                        | High temp. 120 °C [248 °F],<br>fluorcarbon o-rings |
| 0,51 Nm [4.5 in-lb]       |  | –             | 5°               | 30°               | 4°                         | Low pretravel                                      |
| 0,19 Nm [1.7 in-lb]       |  | –             | 5°               | 30°               | 4°                         | Low pretravel & low torque                         |

| Operating Torque or Force | Bar Chart <sup>1</sup>                                                              | Operate Point | Pretravel (max.) | Total Travel (nom.) | Differential Travel (max.) | Notes |
|---------------------------|-------------------------------------------------------------------------------------|---------------|------------------|---------------------|----------------------------|-------|
| 0,33 Nm [3.01 in-lb]      |   | –             | 55°              | 90°                 | 20°                        | –     |
| 0,33 Nm [3.01 in-lb]      |  | –             | 55°              | 90°                 | 20°                        | –     |
| 0,33 Nm [3.01 in-lb]      |  | –             | 55°              | 90°                 | 20°                        | –     |

| Operating Torque or Force | Bar Chart <sup>1</sup>                                                              | Operate Point | Pretravel (max.) | Overtravel (min.) | Differential Travel (max.) | Notes |
|---------------------------|-------------------------------------------------------------------------------------|---------------|------------------|-------------------|----------------------------|-------|
| 0,51 Nm [4.5 in-lb]       |  | –             | 20°              | 30°               | 12°                        | –     |

# LS Series

## MICRO SWITCH™ LS SERIES ORDER GUIDE/RECOMMENDED LISTINGS (FOR EMEA/EUROPE)

For listings not shown, contact your Honeywell representative.

Table 16. Side Rotary, Adjustable Rod Lever

|                                                                                   | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description                                                   | Electrical<br>Rating<br>(Table 2) |  |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|---------------------------------------------------------------|-----------------------------------|--|
|  | <b>1LS10-4C</b>             | <b>1LS10-4PG</b>              | <b>201LS10-4</b>      | Side rotary with 140 mm [5.5 in] max. adjustable aluminum rod | J                                 |  |
|                                                                                   | <b>1LS47-4PG</b>            | –                             | –                     | Side rotary with 140 mm [5.5 in] max. adjustable aluminum rod | J                                 |  |

\*Contact closed ■; Contact open □. \* Requires an 18PA1-4C Terminal Block (20 mm conduit threads) or 18PA1-4PG Terminal Block (PG13,5 conduit threads) ordered separately. Terminal block is base receptacle.

Table 17. Top Pin Plunger

|                                                                                     | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description           | Electrical<br>Rating<br>(Table 2) | Operating<br>Torque or<br>Force |  |
|-------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|-----------------------|-----------------------------------|---------------------------------|--|
|  | <b>2LS1-4C</b>              | <b>2LS1-4PG</b>               | <b>202LS1-4</b>       | Top pin plunger (SST) | J                                 | 31,4 N<br>[7.06 lb]             |  |
|                                                                                     | –                           | <b>2LS1-4GPG</b>              | –                     | Top pin plunger (SST) | F                                 | 31,4 N<br>[7.06 lb]             |  |
|                                                                                     | <b>2LS1-4CN151</b>          | –                             | –                     | Top pin plunger (SST) | J                                 | 31,4 N<br>[7.06 lb]             |  |

\*Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\* Requires an 18PA1-4C Terminal Block (20 mm conduit threads) or 18PA1-4PG Terminal Block (PG13,5 conduit threads) ordered separately. Terminal block is base receptacle.

Table 18. Top Roller Plunger

|                                                                                     | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description              | Electrical<br>Rating<br>(Table 2) | Operating<br>Torque or<br>Force |  |
|-------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|--------------------------|-----------------------------------|---------------------------------|--|
|  | <b>5LS1-4C</b>              | <b>5LS1-4PG</b>               | <b>205LS1-4</b>       | Top roller plunger (SST) | J                                 | 31,4 N<br>[7.06 lb]             |  |
|                                                                                     | –                           | <b>5LS1-G-4PG</b>             | –                     | Top roller plunger (SST) | F                                 | 31,4 N<br>[7.06 lb]             |  |
|                                                                                     | <b>5LS1-4CN152</b>          | –                             | –                     | Top roller plunger (SST) | J                                 | 31,4 N<br>[7.06 lb]             |  |

\*Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\* Requires an 18PA1-4C Terminal Block (20 mm conduit threads) or 18PA1-4PG Terminal Block (PG13,5 conduit threads) ordered separately. Terminal block is base receptacle.

# MICRO SWITCH™ General Purpose Limit Switches

O.T. • Operating torque  
O.F. • Operating force  
R.P. • Release point  
P.T. • Pretravel  
O.T. • Overtravel  
D.T. • Differential travel

|  | Operating Torque or Force | Bar Chart <sup>1</sup> | Operate Point | Pretravel (max.) | Overtravel (min.) | Differential Travel (max.) | Notes         |
|--|---------------------------|------------------------|---------------|------------------|-------------------|----------------------------|---------------|
|  | 0,51 N m [4.5 in-lb]      |                        | —             | 20°              | 30°               | 12°                        |               |
|  | 0,51 N m [4.5 in-lb]      |                        | —             | 5°               | 30°               | 4°                         | Low pretravel |

|  | Bar Chart <sup>1</sup> | Free Position (nom.) | Operate Point                         | Pretravel (max.)      | Overtravel (min.)     | Differential Travel (max.) | Notes                                     |
|--|------------------------|----------------------|---------------------------------------|-----------------------|-----------------------|----------------------------|-------------------------------------------|
|  |                        | 35,5 mm<br>[1.40 in] | 33,8 mm ±0,7 mm<br>[1.33 in ±0.03 in] | 1,70 mm<br>[0.067 in] | 6,40 mm<br>[0.252 in] | 0,50 mm<br>[0.02 in]       |                                           |
|  |                        | 35,5 mm<br>[1.40 in] | 33,8 mm ±0,7 mm<br>[1.33 in ±0.03 in] | 1,70 mm<br>[0.067 in] | 6,40 mm<br>[0.252 in] | 0,50 mm<br>[0.02 in]       | Gold-plated contacts,<br>low-energy loads |
|  |                        | 35,5 mm<br>[1.40 in] | 33,8 mm ±0,7 mm<br>[1.33 in ±0.03 in] | 1,70 mm<br>[0.067 in] | 6,40 mm<br>[0.252 in] | 0,50 mm<br>[0.02 in]       | High temperature,<br>150 °C [302 °F]      |

|  | Bar Chart <sup>1</sup> | Free Position (nom.) | Operate Point                         | Pretravel (max.)      | Overtravel (min.)     | Differential Travel (max.) | Notes                                     |
|--|------------------------|----------------------|---------------------------------------|-----------------------|-----------------------|----------------------------|-------------------------------------------|
|  |                        | 45,7 mm<br>[1.80 in] | 44,0 mm ±0,7 mm<br>[1.73 in ±0.03 in] | 1,70 mm<br>[0.067 in] | 5,56 mm<br>[0.219 in] | 0,50 mm<br>[0.02 in]       |                                           |
|  |                        | 45,7 mm<br>[1.80 in] | 44,0 mm ±0,7 mm<br>[1.73 in ±0.03 in] | 1,70 mm<br>[0.067 in] | 5,56 mm<br>[0.219 in] | 0,50 mm<br>[0.02 in]       | Gold-plated contacts,<br>low-energy loads |
|  |                        | 45,7 mm<br>[1.80 in] | 44,0 mm ±0,7 mm<br>[1.73 in ±0.03 in] | 1,70 mm<br>[0.067 in] | 5,56 mm<br>[0.219 in] | 0,50 mm<br>[0.02 in]       | High temperature,<br>150 °C [302 °F]      |

# LS Series

## MICRO SWITCH™ LS SERIES ORDER GUIDE/RECOMMENDED LISTINGS (FOR EMEA/EUROPE)

For listings not shown, contact your Honeywell representative.

Table 19. Side Plunger

|                                                                                   | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description               | Electrical<br>Rating<br>(Table 2) | Operating<br>Torque or<br>Force |  |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|---------------------------|-----------------------------------|---------------------------------|--|
|  | <b>4LS1-4C</b>              | <b>4LS1-4PG</b>               | <b>204LS1-4</b>       | Side pin plunger (SST)    | J                                 | 40,1 N<br>[9.01 lb]             |  |
|                                                                                   | <b>3LS1-4C</b>              | <b>3LS1-4PG</b>               | <b>203LS1-4</b>       | Side roller plunger (SST) | J                                 | 40,1 N<br>[9.01 lb]             |  |

<sup>1</sup>Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\* Requires an 18PA1-4C Terminal Block (20 mm conduit threads) or 18PA1-4PG Terminal Block (PG13,5 conduit threads) ordered separately. Terminal block is base receptacle.

Table 20. Wobble, Coil Spring

|                                                                                     | Compact<br>20 mm<br>conduit | Compact<br>PG 13,5<br>conduit | Plug-in less<br>base* | Description                                                                    | Electrical<br>Rating<br>(Table 2) |  |
|-------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------|--------------------------------------------------------------------------------|-----------------------------------|--|
|  | <b>8LS1-4C</b>              | <b>8LS1-4PG</b>               | <b>208LS1-4</b>       | Wobble, random motion 141 mm [5.55 in]<br>stranded steel cable                 | J                                 |  |
|                                                                                     | <b>8LS3-4C</b>              | <b>8LS3-4PG</b>               | <b>208LS3-4</b>       | Wobble actuated, random motion 141 mm [5.55 in]<br>aluminum rod                | J                                 |  |
|                                                                                     | <b>8LS125-4C</b>            | <b>8LS125-4PG</b>             | <b>208LS125-4</b>     | Wobble actuated, random motion 191 mm [7.53 in]<br>stainless steel cat whisker | J                                 |  |
|                                                                                     | <b>8LS152-4C</b>            | <b>8LS152-4PG</b>             | <b>208LS152-4</b>     | Wobble actuated, random motion 141 mm [5.55 in]<br>stainless steel coil spring | J                                 |  |

<sup>1</sup>Contact closed ■; Contact open □. NOTE: Bar chart measurements are in millimeters.

\* Requires an 18PA1 Terminal Block (base receptacle) which must be ordered separately. 18PA1 terminal block has 0.5-14 NPT conduit threads.

<sup>2</sup> Operating position in any direction except pull.

# MICRO SWITCH™ General Purpose Limit Switches

O.T. • Operating torque  
O.F. • Operating force  
R.P. • Release point  
P.T. • Pretravel  
O.T. • Overtravel  
D.T. • Differential travel

| Bar Chart <sup>1</sup> | Free Position (nom.) | Operate Point                                    | Pretravel (max.)      | Overtravel (min.)     | Differential Travel (max.) | Notes                                                   |
|------------------------|----------------------|--------------------------------------------------|-----------------------|-----------------------|----------------------------|---------------------------------------------------------|
|                        | 57,27 mm             | 54,5 mm $\pm 1,2$ mm<br>[2.15 in $\pm 0.047$ in] | 2,77 mm<br>[0.109 in] | 5,56 mm<br>[0.219 in] | 1,0 mm<br>[0.039 in]       | –                                                       |
|                        | 70,37 mm             | 67,6 mm $\pm 1,2$ mm<br>[2.66 in $\pm 0.047$ in] | 2,77 mm<br>[0.109 in] | 5,56 mm<br>[0.219 in] | 1,0 mm<br>[0.039 in]       | Roller plunger may be locked in a position through 360° |

| Operating Torque or Force | Bar Chart <sup>1</sup> | Operate Point <sup>2</sup> | Pretravel (max.)      | Overtravel (min.)    | Differential Travel (max.) | Notes |
|---------------------------|------------------------|----------------------------|-----------------------|----------------------|----------------------------|-------|
| 1,39 N [5.0 oz]           |                        | 28,6 mm<br>[1.125 in]      | 28,6 mm<br>[1.125 in] | 30,7 mm<br>[1.21 in] | –                          | –     |
| 1,39 N [5.0 oz]           |                        | 28,6 mm<br>[1.125 in]      | 28,6 mm<br>[1.125 in] | 30,7 mm<br>[1.21 in] | –                          | –     |
| 0,28 N [1.0 oz]           |                        | 63,5 mm<br>[2.5 in]        | 63,5 mm<br>[2.5 in]   | 63,5 mm<br>[2.5 in]  | –                          | –     |
| 1,39 N [5.0 oz]           |                        | 28,6 mm<br>[1.125 in]      | 28,6 mm<br>[1.125 in] | 30,7 mm<br>[1.21 in] | –                          | –     |

# LS Series

Table 21. Terminal Block, Base Receptacle

|                                                                                   | Plug-in less base* | Description                                                                                |
|-----------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------|
|  | <b>18PA1</b>       | Terminal block (base receptacle) with 0.5-14 NPT conduit thread. For use with 200LS Series |
|  | <b>18PA1-4C</b>    | Terminal block (base receptacle) with 20 mm conduit threads. For use with 200LS-4 Series   |
|                                                                                   | <b>18PA1-4PG</b>   | Terminal block (base receptacle) with PG13,5 conduit threads. For use with 200LS-4 Series  |

Table 22. Replacement Levers for Side Rotary Switches

| Catalog Listing (North America) | Catalog Listing (EMEA/Europe) | Description                                                                                         |
|---------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>LSZ51D</b>                   | <b>6PA78-4</b>                | Replacement lever for most 1LS switches with fixed length 38,1 mm lever with Ø19 mm steel roller    |
| <b>LSZ52C</b>                   | <b>6PA44-4</b>                | Replacement lever for most 1LS switches w adj. length 38 mm to 90 mm lever with Ø19 mm nylon roller |
| <b>LSZ54M</b>                   | <b>6PA43-4</b>                | Replacement aluminum rod lever for most 1LS switches w adj. rod with max. length 140 mm             |
| <b>6PA80</b>                    | <b>6PA80-4</b>                | Replacement fork lever for 6LS switches w steel rollers on opposite side                            |
| <b>6PA102</b>                   | <b>6PA102-4</b>               | Replacement fork lever for 6LS switches w nylon rollers on same side                                |
| <b>6PA82</b>                    |                               | Fork lever for 6LS switches w steel rollers on same side                                            |
| <b>LSZ52D</b>                   |                               | Adjustable length lever 38 mm to 90 mm w Ø19 mm steel roller                                        |
| <b>LSZ52J</b>                   |                               | Adjustable length lever 38 mm to 90 mm w Ø25,4 mm nylon roller                                      |
| <b>LSZ52K</b>                   |                               | Adjustable length lever 38 mm to 90 mm w Ø38,1 mm nylon roller                                      |
| <b>LSZ52M</b>                   |                               | Adjustable length lever 38 mm to 90 mm w Ø50,8 mm rubber roller                                     |
| <b>LSZ52Y</b>                   |                               | Adjustable length lever 38 mm to 90 mm w Ø50,8 mm nylon roller                                      |
| <b>6PA71</b>                    |                               | Fixed length lever, 38,1 mm length w Ø19 mm nylon roller                                            |
| <b>6PA121</b>                   |                               | Fixed length lever, 38,1 mm length w Ø19 mm steel roller                                            |
| <b>LSZ51L</b>                   |                               | Fixed length lever, 38,1 mm length w Ø19 mm ball bearing steel roller                               |
| <b>6PA144</b>                   |                               | Fixed length lever, 38,1 mm length w Ø19 mm ball bearing steel roller                               |
| <b>6PA63</b>                    |                               | Adjustable stainless steel rod lever, 330 mm max. length                                            |
| <b>6PA69</b>                    |                               | Adjustable stainless steel spring rod lever, 127 mm to 190 mm                                       |
| <b>6PA57</b>                    |                               | Manually operated Ø38,1mm aluminum button on a 68,1 mm metal lever                                  |

# MICRO SWITCH™ General Purpose Limit Switches

Table 23. Replacement Parts (North America Products)

|                                  | Contact Block | Contact Block |                |                 |
|----------------------------------|---------------|---------------|----------------|-----------------|
| Catalog Listing                  | Compact       | Plug-in       | Operating Head | Actuator/ Lever |
| <b>1LS1-L</b>                    | 2MN1-L        | –             | 9PA15          | LSZ51D          |
| <b>1LS1</b><br><b>201LS1</b>     | 2MN1          | 2MN6          | 9PA15          | LSZ51D          |
| <b>1LS2-L</b>                    | 2MN1-L        | –             | 9PA16*         | Note 1          |
| <b>1LS2</b><br><b>201LS2</b>     | 2MN1          | 2MN6          | 9PA16*         | Note 1          |
| <b>1LS3-L</b>                    | 2MN1-L        | –             | –              | –               |
| <b>1LS3</b><br><b>201LS3</b>     | 2MN1          | 2MN6          | 9PA16*         | LSZ52C          |
| <b>1LS6</b><br><b>201LS6</b>     | 2MN1          | 2MN6          | –              | LSZ51D          |
| <b>1LS9</b><br><b>201LS9</b>     | 2MN8          | 2MN13         | 9PA16*         | Note 1          |
| <b>1LS10-L</b>                   | 2MN1-L        | –             | –              | LSZ54M          |
| <b>1LS10</b><br><b>201LS10</b>   | 2MN1          | 2MN6          | –              | LSZ54M          |
| <b>1LS19</b><br><b>201LS19</b>   | 2MN8          | 2MN13         | 9PA15          | LSZ51D          |
| <b>1LS23</b><br><b>201LS23</b>   | 2MN1          | 2MN6          | 9PA68*         | Note 2          |
| <b>1LS47</b><br><b>201LS47</b>   | 2MN8          | 2MN13         | –              | LSZ54M          |
| <b>1LS53</b><br><b>201LS51</b>   | 2MN8          | 2MN13         | –              | LSZ54M          |
| <b>1LS56</b><br><b>201LS56</b>   | 2MN8          | 2MN13         | 9PA74*         | Note 2          |
| <b>1LS58</b>                     | 2MN8          | –             | 9PA16*         | LSZ52C          |
| <b>1LS59</b>                     | 2MN8          | –             | 9PA74*         | LSZ52C          |
| <b>1LS131</b>                    | 2MN8          | –             | 9PA74*         | 6PA121          |
| <b>1LS501</b><br><b>201LS501</b> | 2MN1          | 2MN14         | 9PA15          | LSZ51D          |

\* Furnished without actuator

<sup>1</sup> Any auxiliary lever listed can be used<sup>2</sup> LSZ54M, 6PA63, 6PA71 or 6PA121 levers only recommended for these catalog listings

Table 24. Replacement Parts (North America Products)

|                                  | Contact Block | Contact Block |                |                           |
|----------------------------------|---------------|---------------|----------------|---------------------------|
| Catalog Listing                  | Compact       | Plug-in       | Operating Head | Actuator/ Lever           |
| <b>2LS1-L</b>                    | 2MN1-L        | –             | 9PA32          | Included w operating head |
| <b>2LS1</b><br><b>201LS1</b>     | 2MN1          | 2MN6          | 9PA32          |                           |
| <b>2LS111</b><br><b>201LS111</b> | 2MN3          | 2MN7          | –              | –                         |
| <b>3LS1</b><br><b>203LS1</b>     | 2MN11         | 2MN9          | 9PA45          | Included w operating head |
| <b>4LS1</b><br><b>204LS1</b>     | 2MN11         | 2MN9          | 9PA44          |                           |
| <b>5LS1-L</b>                    | 2MN1-L        | –             | 9PA33          |                           |
| <b>5LS1</b><br><b>205LS1</b>     | 2MN1          | 2MN6          | 9PA33          | 6PA80                     |
| <b>6LS1</b><br><b>206LS1</b>     | 2MN1          | 2MN6          | 9PA47*         |                           |
| <b>6LS2-L</b>                    | 2MN1-L        | –             | 9PA47*         | Note 3                    |
| <b>6LS2</b><br><b>206LS2</b>     | 2MN1          | 2MN6          | 9PA47*         | Note 3                    |
| <b>6LS3</b>                      | 2MN1          | –             | 9PA47*         | 6PA102                    |
| <b>7LS1</b>                      | 2MN1          | –             | 9PA15          | LSZ51D                    |
| <b>8LS1-L</b>                    | 2MN11-L       | –             | 9PA58          | Included w operating head |
| <b>8LS1</b><br><b>208LS1</b>     | 2MN11         | 2MN9          | 9PA58          |                           |
| <b>8LS3</b><br><b>208LS3</b>     | 2MN1          | 2MN6          | 9PA49          |                           |
| <b>8LS125</b><br><b>208LS125</b> | 2MN11         | 2MN9          | 9PA54          |                           |
| <b>8LS152</b><br><b>208LS152</b> | 2MN1          | 2MN6          | 9PA42          |                           |

\* Furnished without actuator

<sup>3</sup> Fork lever actuators recommended for two position side rotary maintained

# LS Series

Table 25. Replacement Parts (European Products)

|                    | Contact Block          |                             |                |                              |
|--------------------|------------------------|-----------------------------|----------------|------------------------------|
| Catalog Listing LS | Catalog Listing 200 LS | Basic Switch (compact only) | Operating Head | Actuator/ Lever              |
| <b>1LS1-4C</b>     | <b>201LS1-4</b>        | 2MN1-M                      | 9PA15-4        | 6PA78-4                      |
| <b>1LS2-4C</b>     | <b>201LS2-4</b>        | 2MN1-M                      | 9PA16-4        | –                            |
| <b>1LS3-4C</b>     | <b>201LS3-4</b>        | 2MN1-M                      | 9PA16-4        | 6PA44-4                      |
| <b>1LS10-4C</b>    | <b>201LS10-4</b>       | 2MN1-M                      | 9PA40-4        | 6PA43-4                      |
| <b>1LS19-4C</b>    | <b>201LS19-4</b>       | –                           | 9PA15-4        | 6PA78-4                      |
| <b>1LS23-4C</b>    | –                      | 2MN1-M                      | –              | –                            |
| <b>1LS47-4C</b>    | –                      | –                           | 9PA40-4        | 6PA43-4                      |
| <b>1LS56-4C</b>    | <b>201LS56-4</b>       | –                           | 9PA74-         | *                            |
| <b>1LS243-4C</b>   | –                      | –                           | 914PA15        | 6PA78-4                      |
| <b>1LS244-4C</b>   | –                      | –                           | 914PA15        | 6PA78-4                      |
| <b>2LS1-4C</b>     | <b>202LS1-4</b>        | 2MN1-M                      | 9PA32-4        | Included with operating head |
| <b>3LS1-4C</b>     | <b>203LS1-4</b>        | –                           | 9PA45-4        |                              |
| <b>4LS1-4C</b>     | <b>204LS1-4</b>        | –                           | 9PA44-4        |                              |
| <b>5LS1-4C</b>     | <b>205LS1-4</b>        | 2MN1-M                      | 9PA33-4        |                              |
| <b>6LS1-4C</b>     | <b>206LS1-4</b>        | 2MN1-M                      | 9PA46-4        | 6PA80-4                      |
| <b>6LS2-4C</b>     | <b>206LS2-4</b>        | 2MN1-M                      | 9PA47-4        | –                            |
| <b>6LS3-4C</b>     | –                      | 2MN1-M                      | 9PA47-4        | 6PA102-4                     |
| <b>8LS1-4C</b>     | <b>208LS1-4</b>        | 2MN1-M                      | 9PA58-4        | Included with operating head |
| <b>8LS3-4C</b>     | <b>208LS3-4</b>        | 2MN1-M                      | 9PA49-4        |                              |
| <b>8LS125-4C</b>   | <b>208LS125-4</b>      | 2MN1-M                      | 9PA54-4        |                              |
| <b>8LS152-4C</b>   | <b>208LS152-4</b>      | 2MN1-M                      | 9PA42-4        |                              |

Note: Operating head includes lever where appropriate and internal plunger.

\* Because of low operating force, 6PA43-4, 6PA71-4, or 6PA78-4 auxiliary actuators only are recommended for these listings.

# MICRO SWITCH™ General Purpose Limit Switches

## DIMENSIONAL DRAWINGS

Figure 1. 1LS1 Dimensions

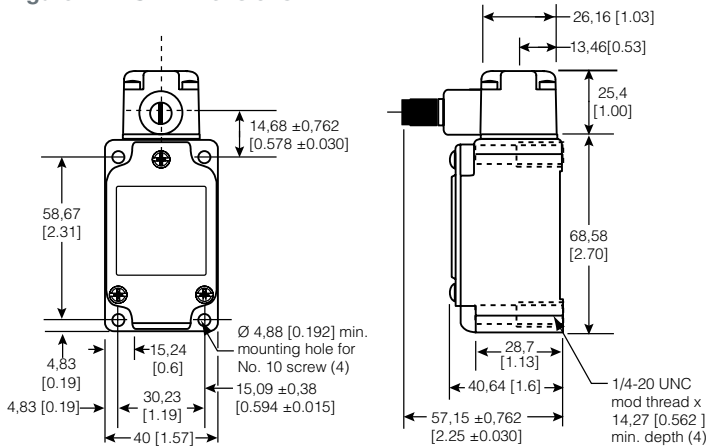


Figure 2. 1LS3 Dimensions

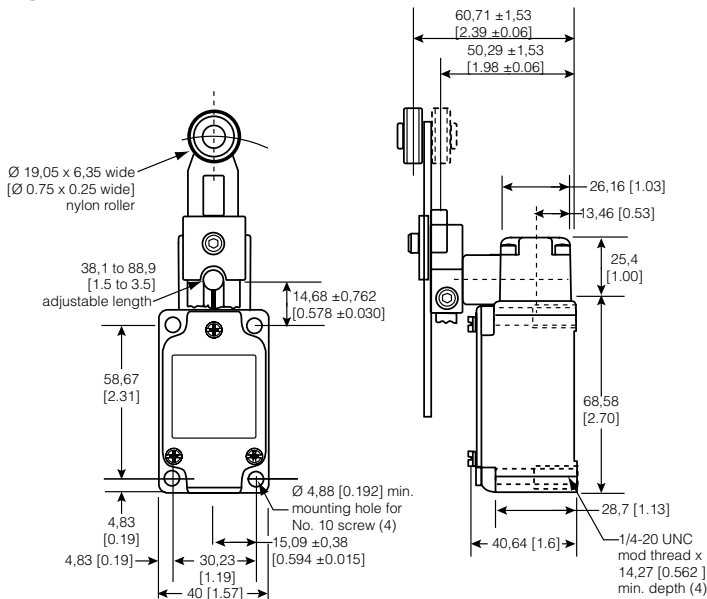


Figure 3. 1LS10 Dimensions

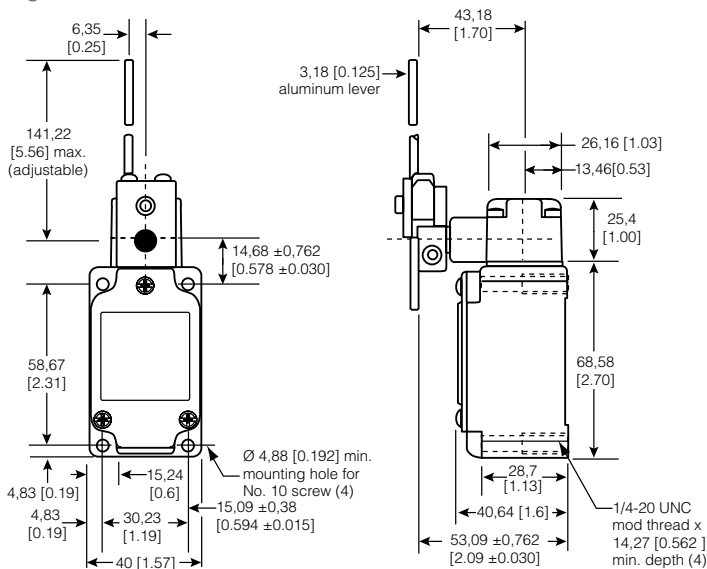


Figure 4. 2LS1 Dimensions

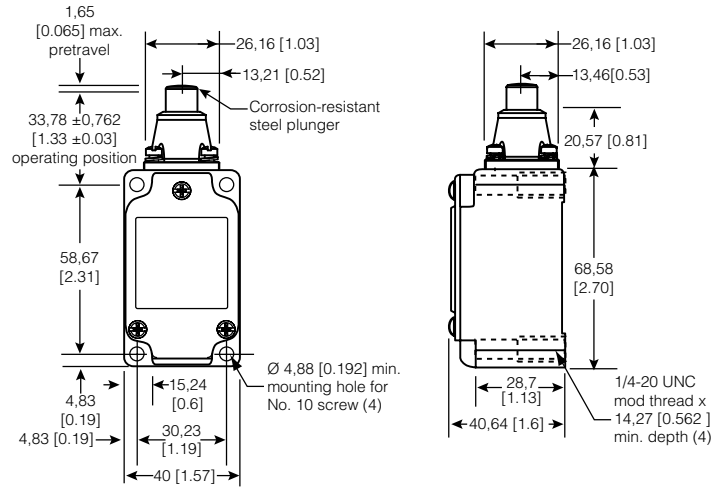


Figure 5. 3LS1 Dimensions

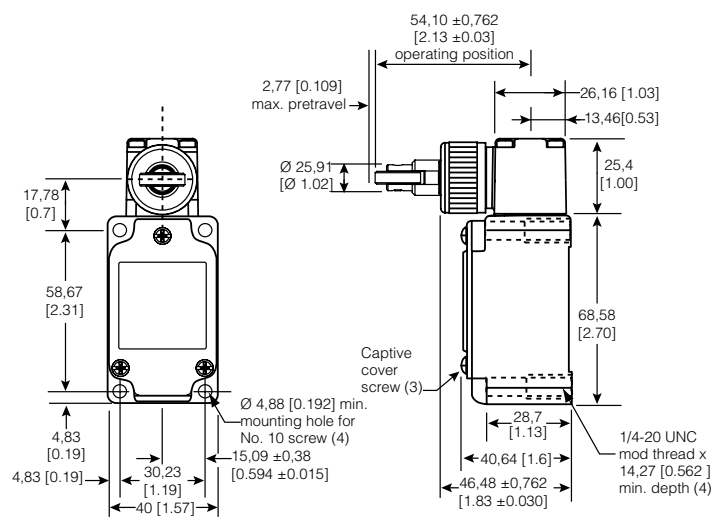
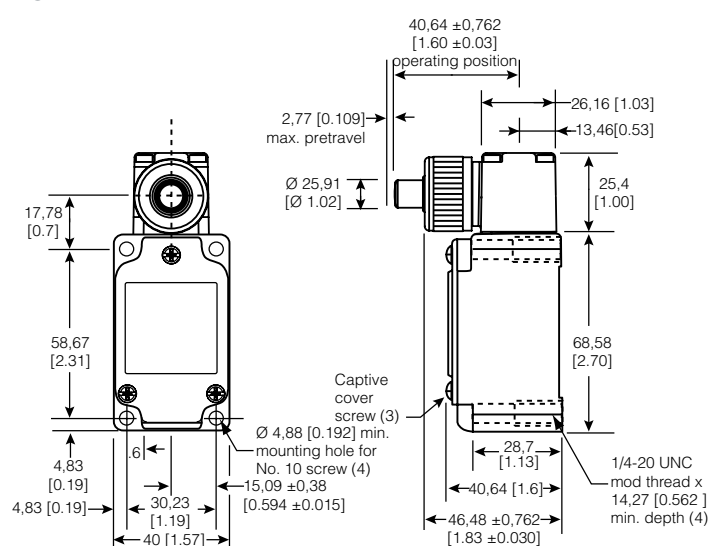
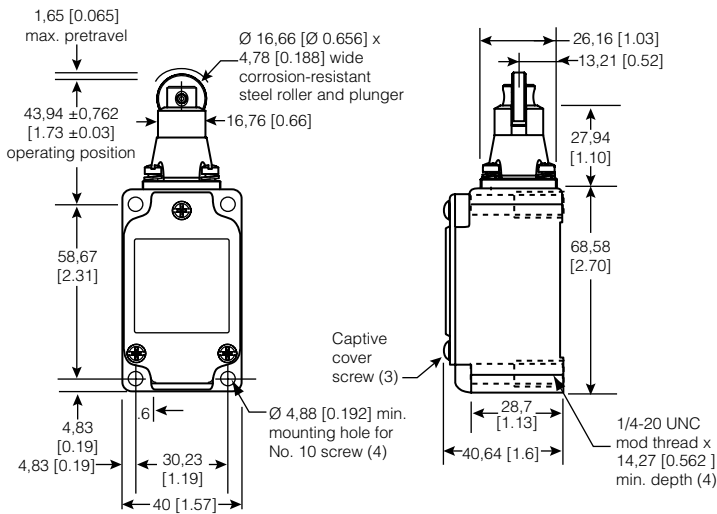


Figure 6. 4LS1 Dimensions

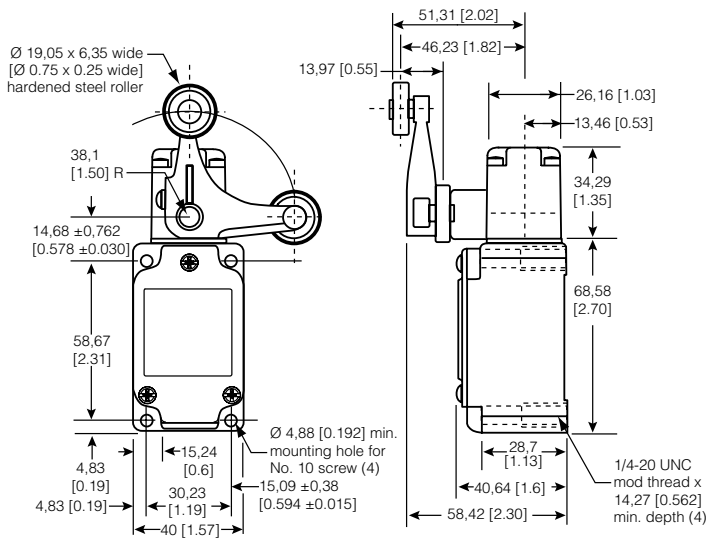


# LS Series

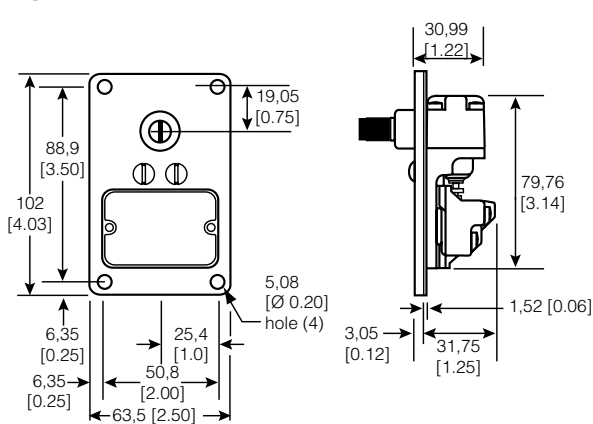
**Figure 7. 5LS1 Dimensions**



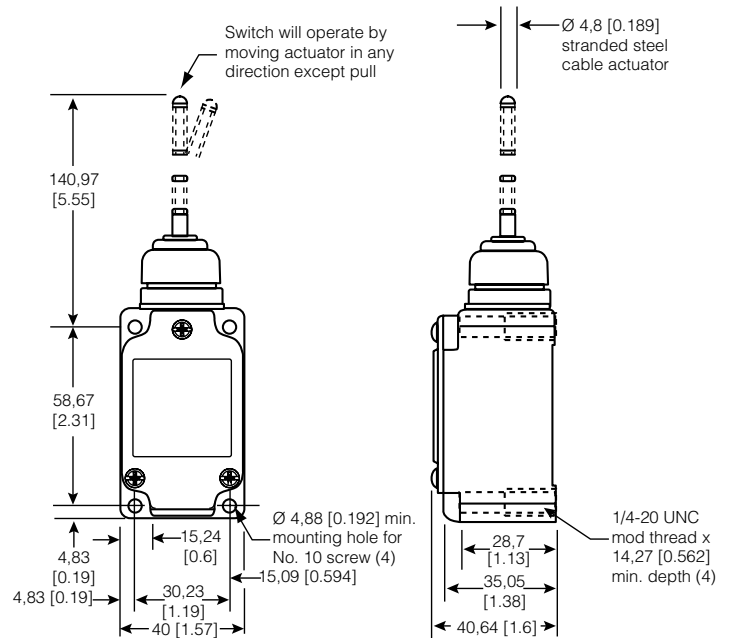
**Figure 6. 6LS1 Dimensions**



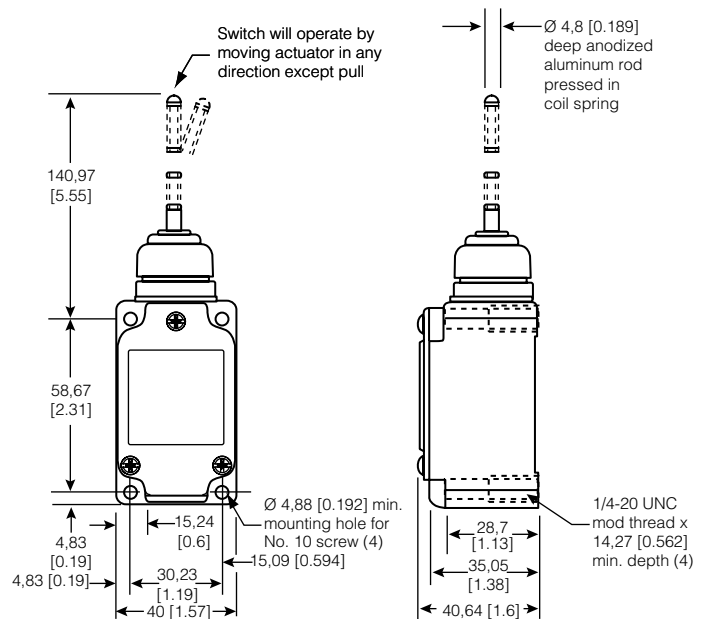
**Figure 7. 7LS1 Dimensions**



**Figure 8. 8LS1 Dimensions**



**Figure 9. 8LS3 Dimensions**



# MICRO SWITCH™ General Purpose Limit Switches

Figure 10. 8LS125 Dimensions

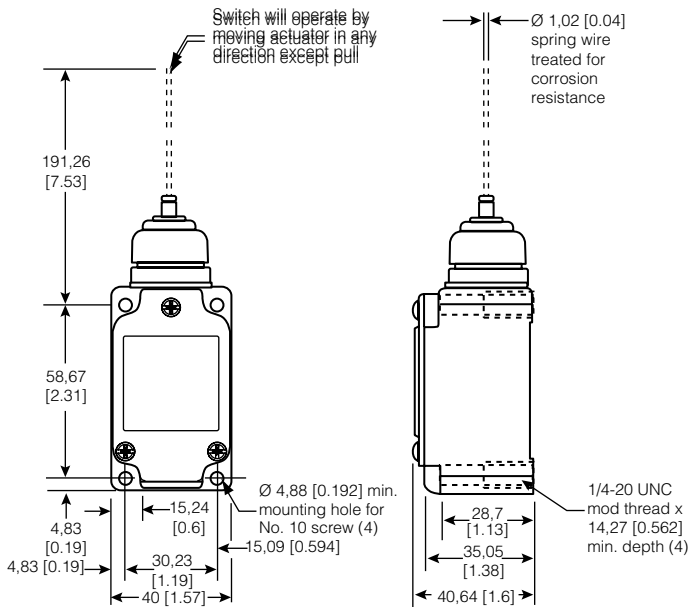


Figure 12. 201LS1 Dimensions

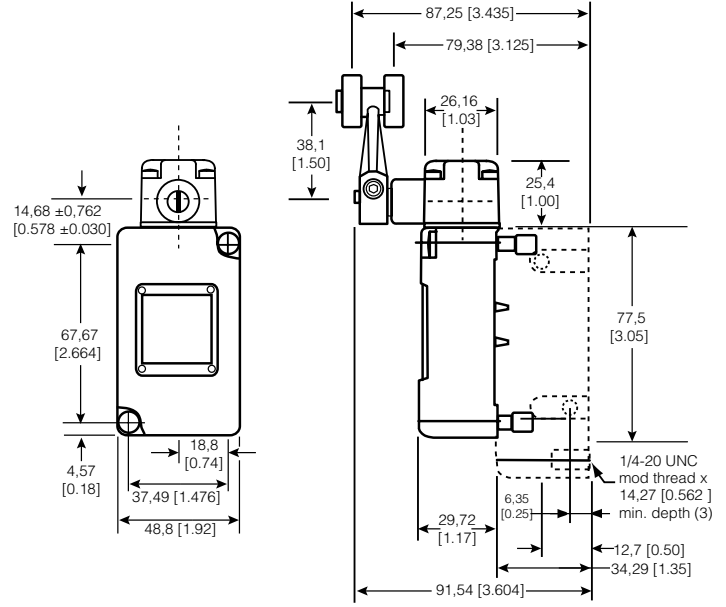


Figure 11. 8LS152 Dimensions

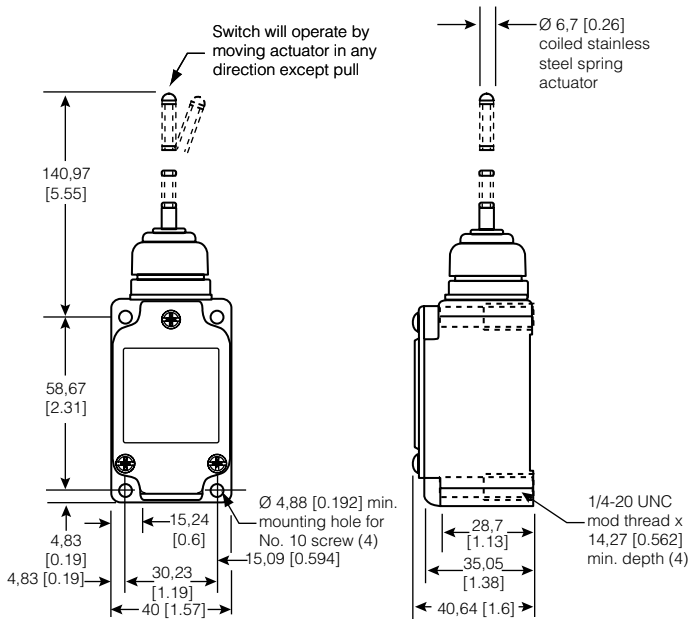
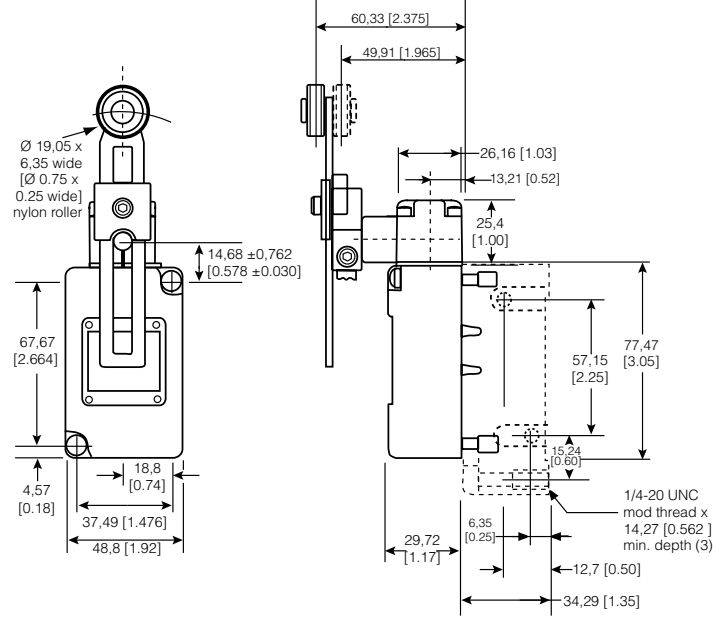


Figure 13. 201LS3 Dimensions



# LS Series

Figure 14. 201LS10 Dimensions

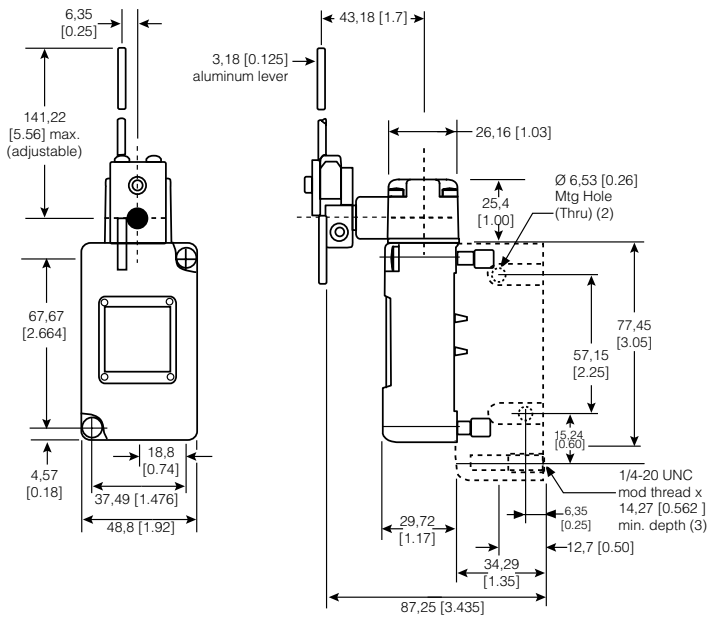


Figure 17. 204LS1 Dimensions

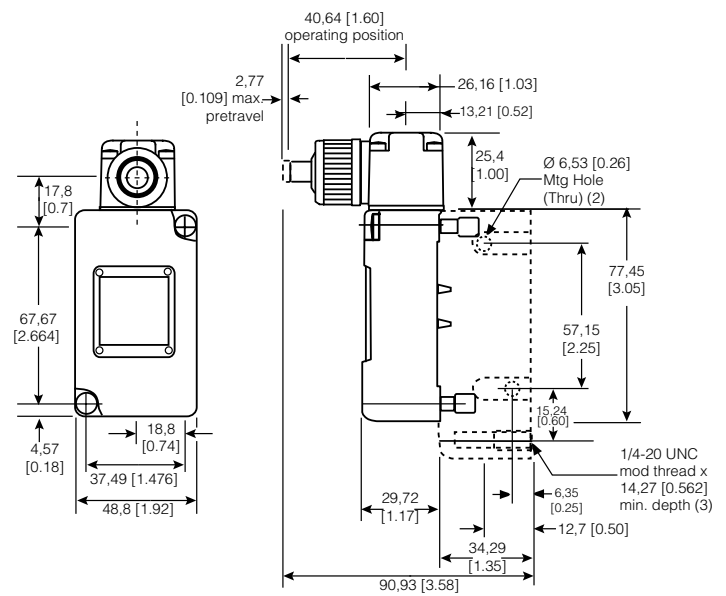


Figure 15. 202LS1 Dimensions

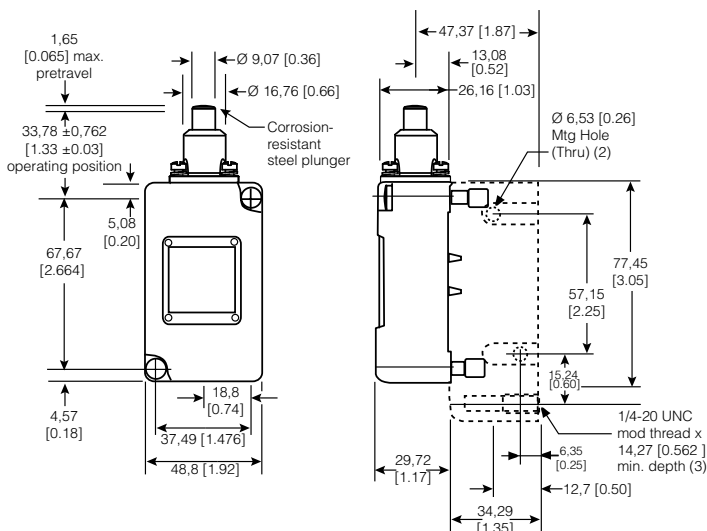


Figure 18. 205LS1 Dimensions

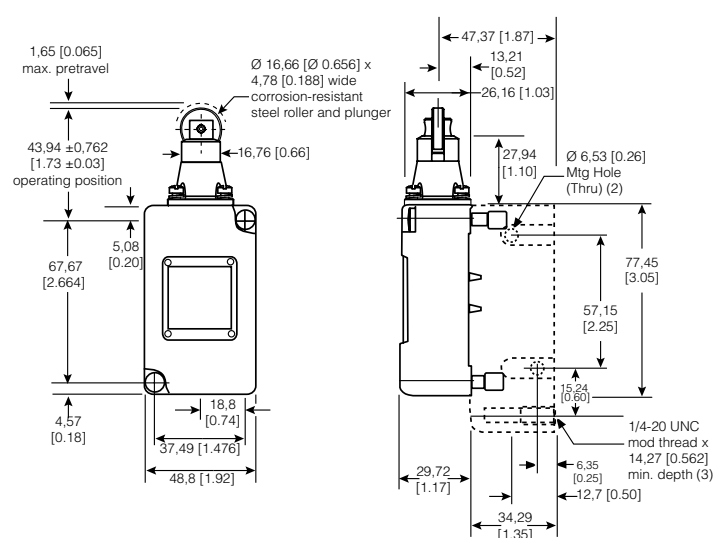


Figure 16. 203LS1 Dimensions

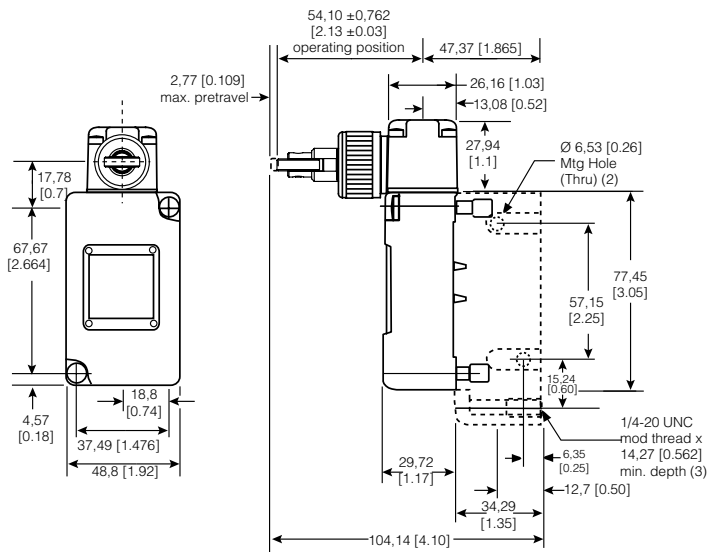
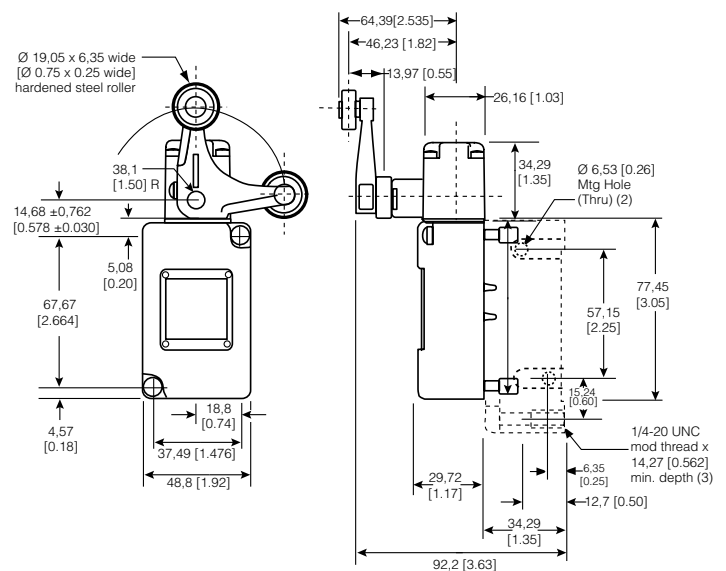


Figure 19. 206LS1 Dimensions



# MICRO SWITCH™ General Purpose Limit Switches

Figure 20. 208LS1 Dimensions

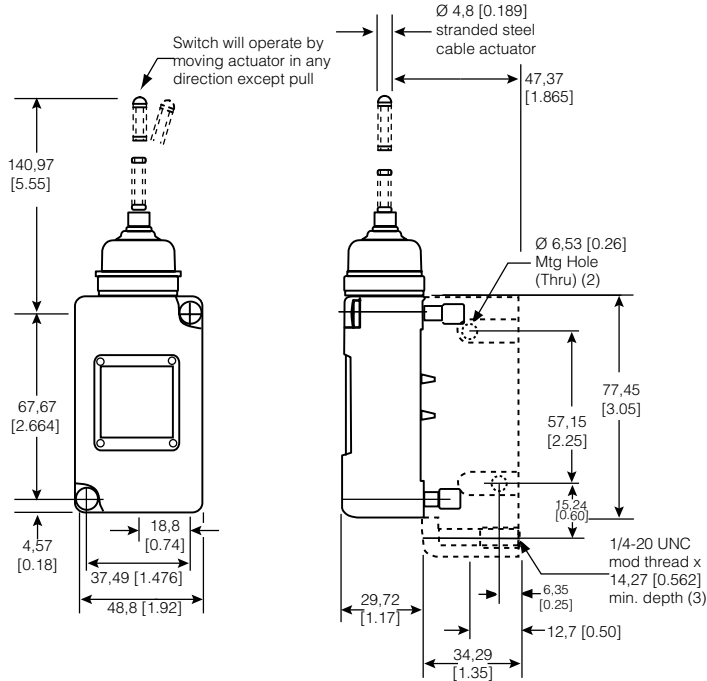


Figure 22. 208LS125 Dimensions

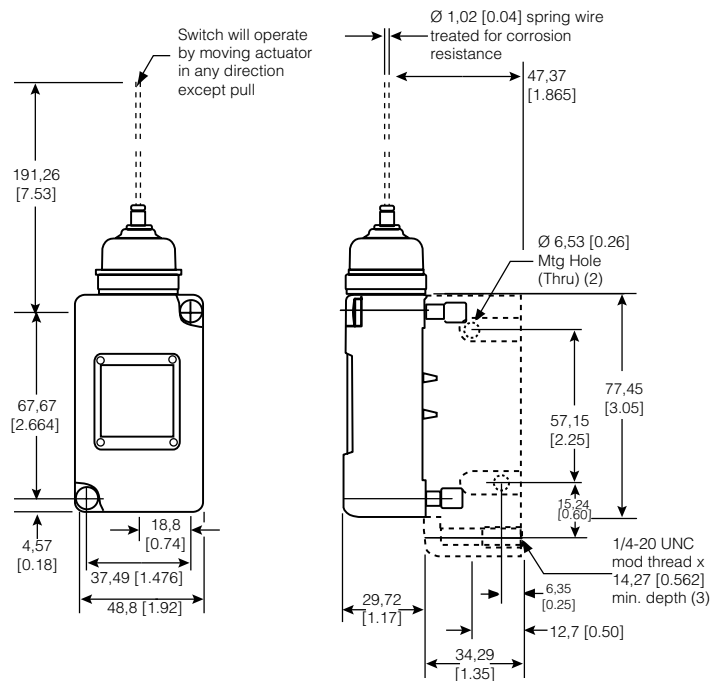


Figure 21. 208LS3 Dimensions

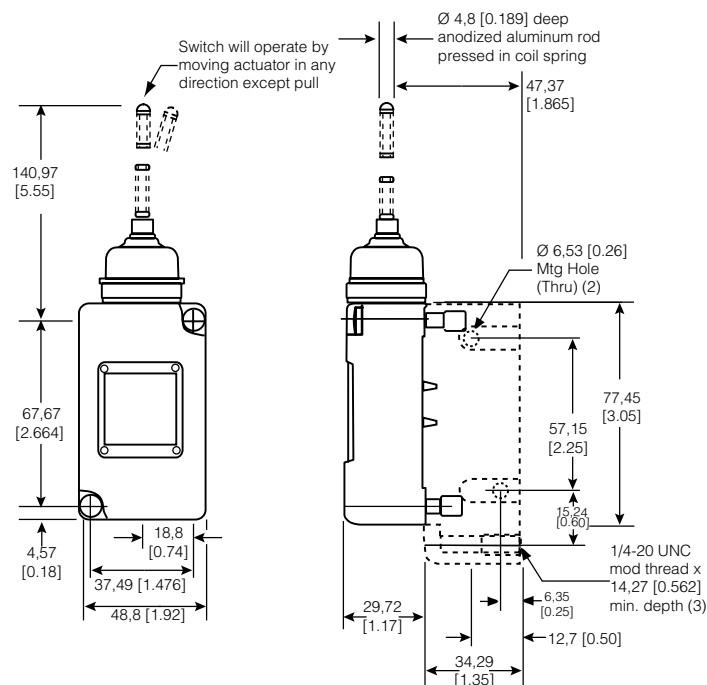
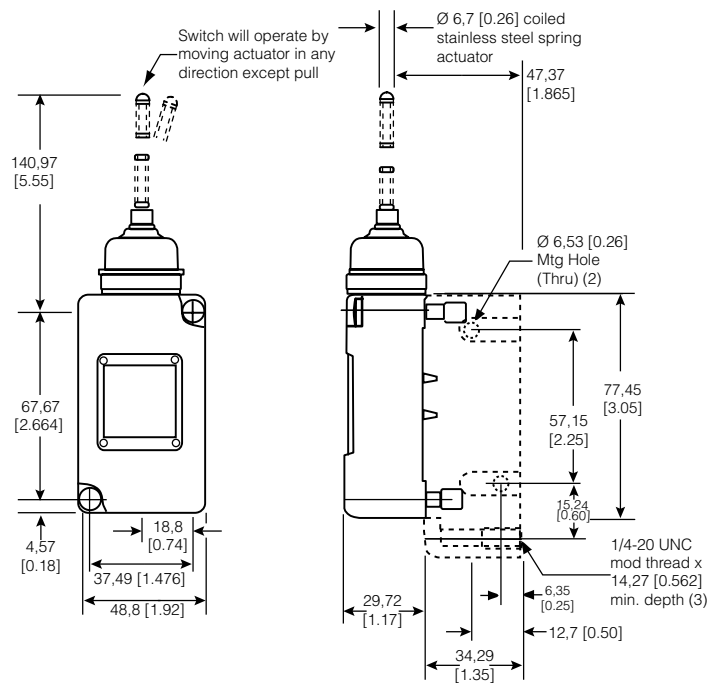


Figure 23. 208LS152 Dimensions



# LS Series

Figure 24. 1LS2-4 Dimensions

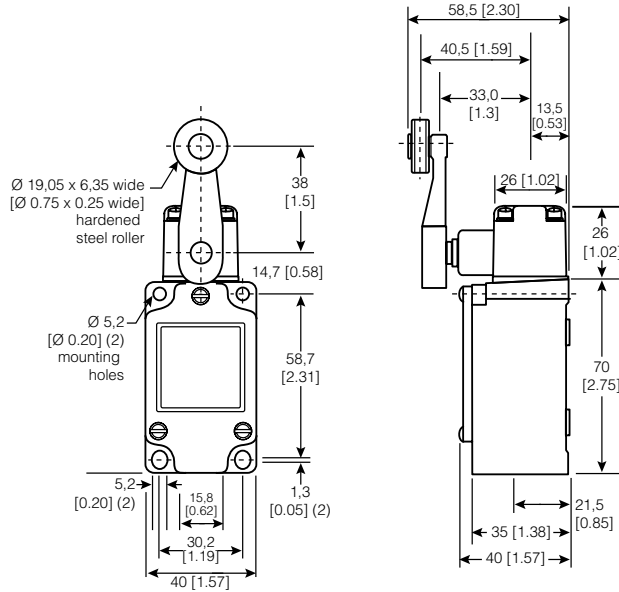


Figure 25. 1LS3-4 Dimensions

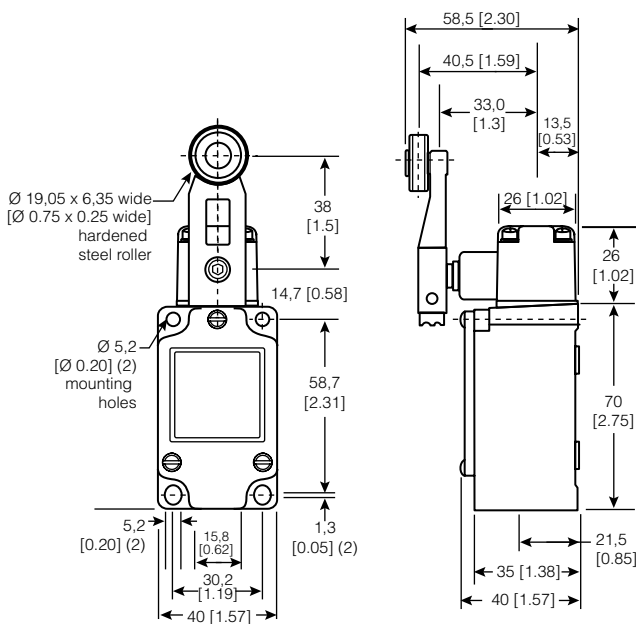


Figure 26. 1LS10-4 Dimensions

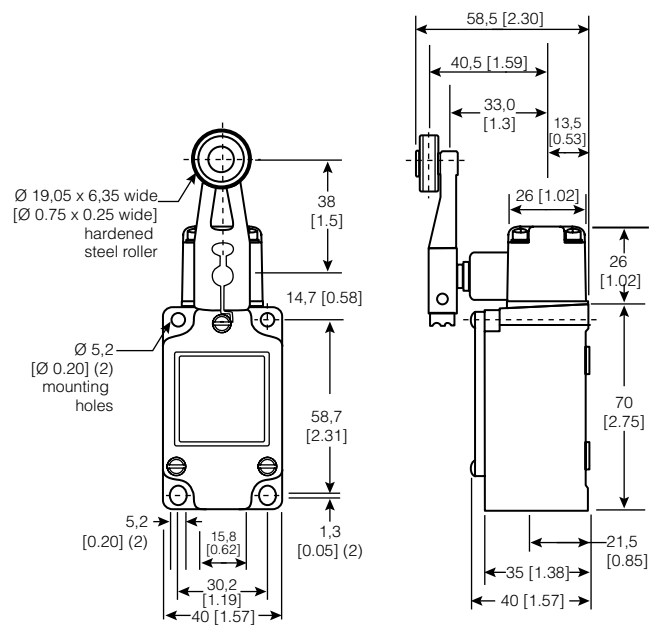


Figure 27. 2LS1-4 Dimensions

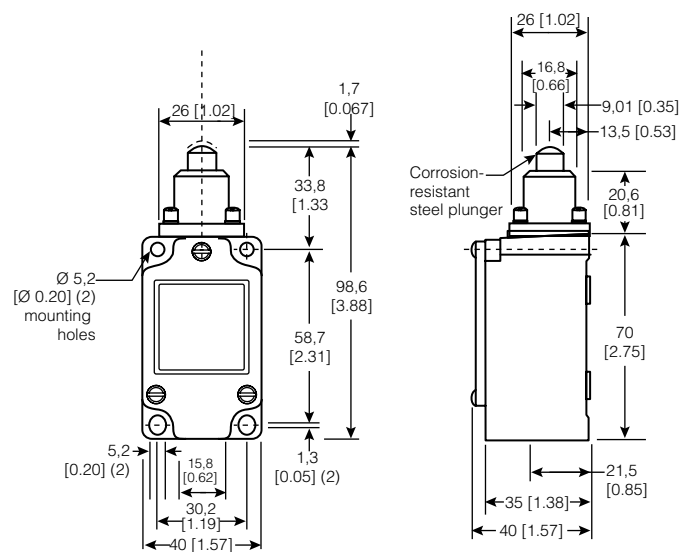
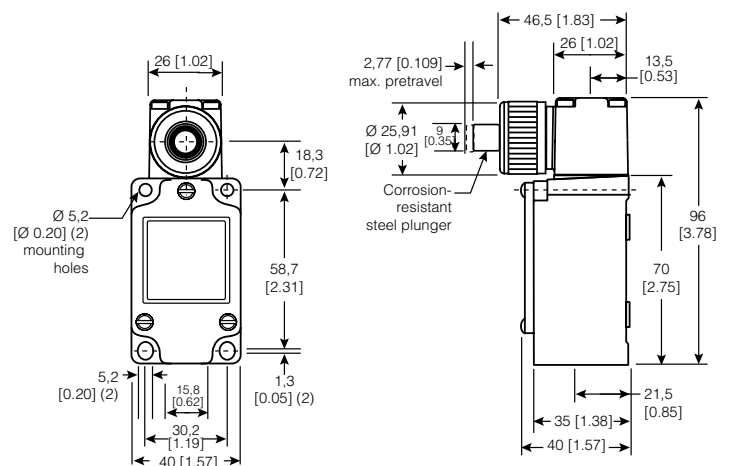


Figure 28. 4LS1-4 Dimensions



# MICRO SWITCH™ General Purpose Limit Switches

Figure 29. 5LS1-4 Dimensions

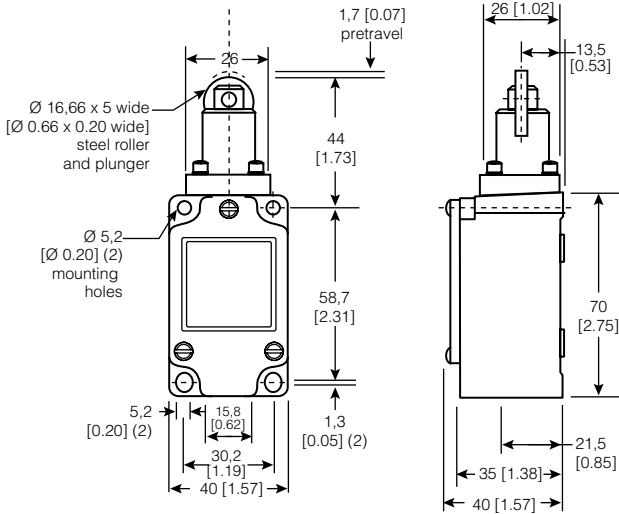


Figure 30. 6LS1-4 Dimensions

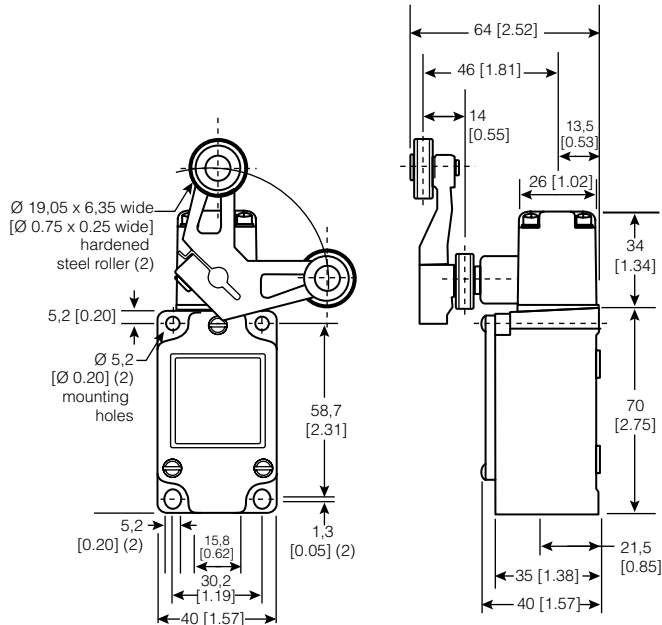


Figure 31. 8LS1-4 Dimensions

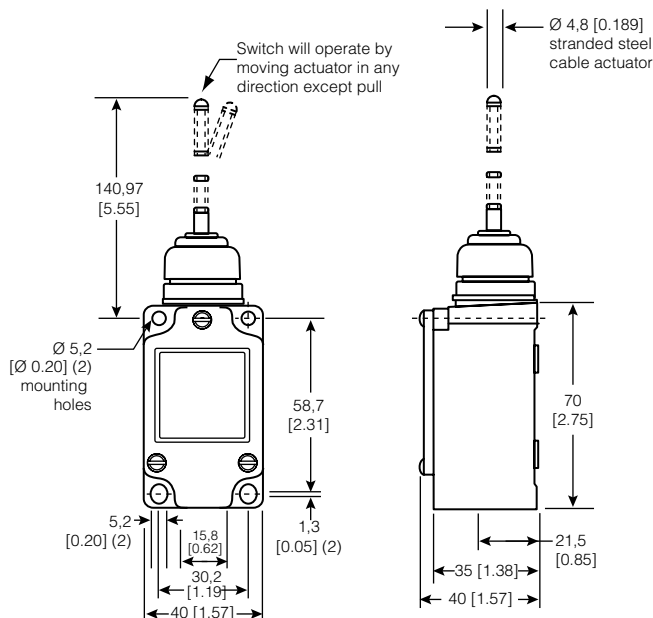


Figure 32. 201LS1-4 Dimensions

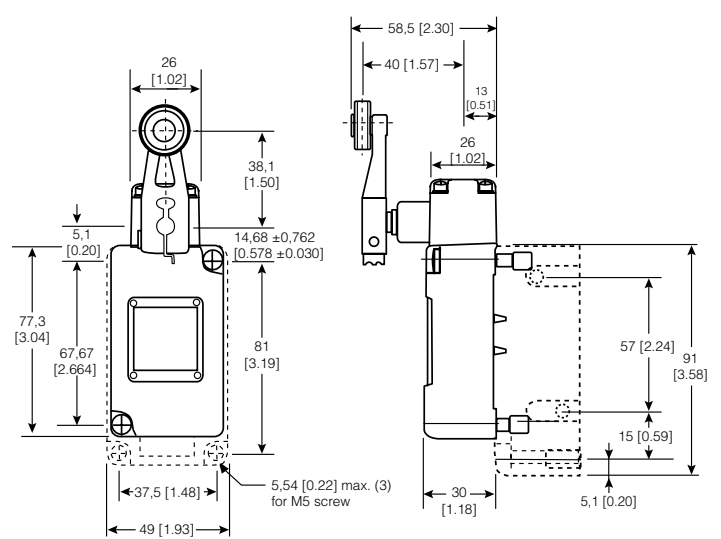


Figure 33. 206LS1-4 Dimensions

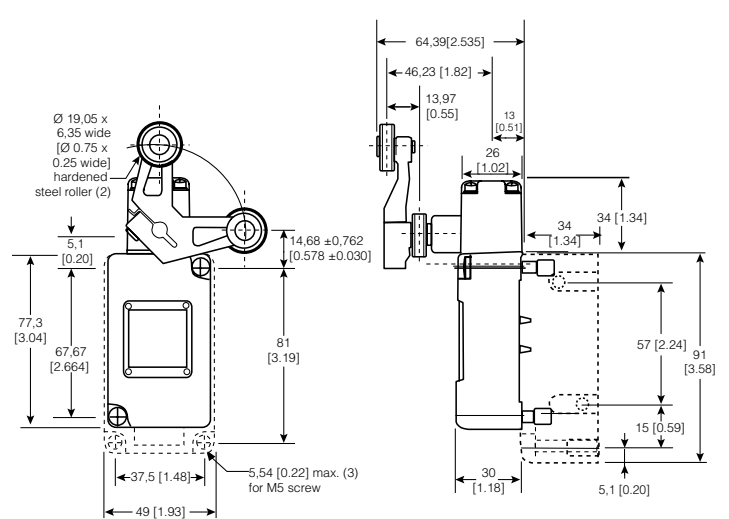
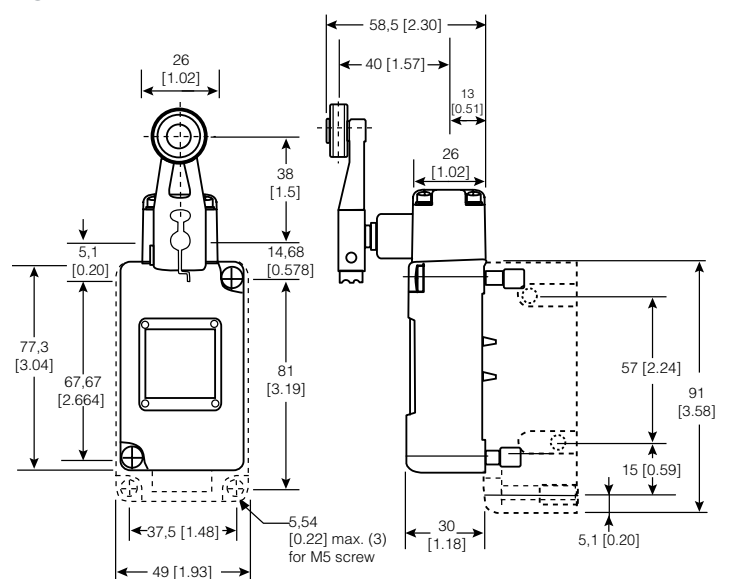
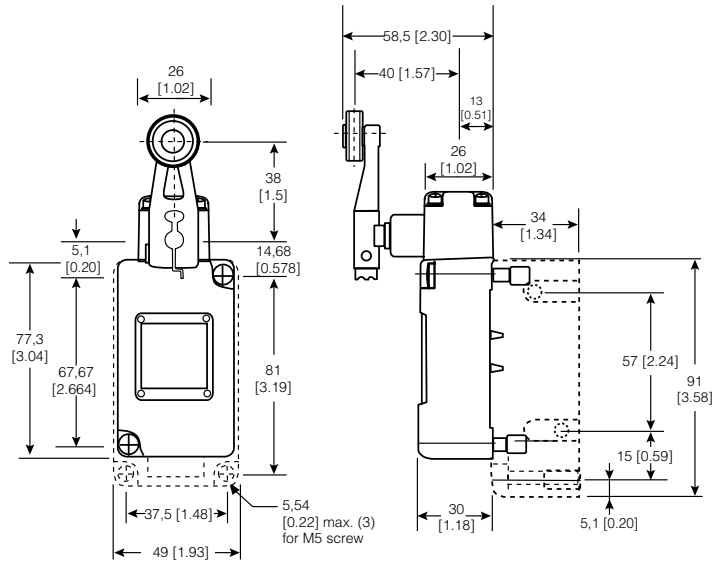


Figure 34. 201LS3-4 Dimensions

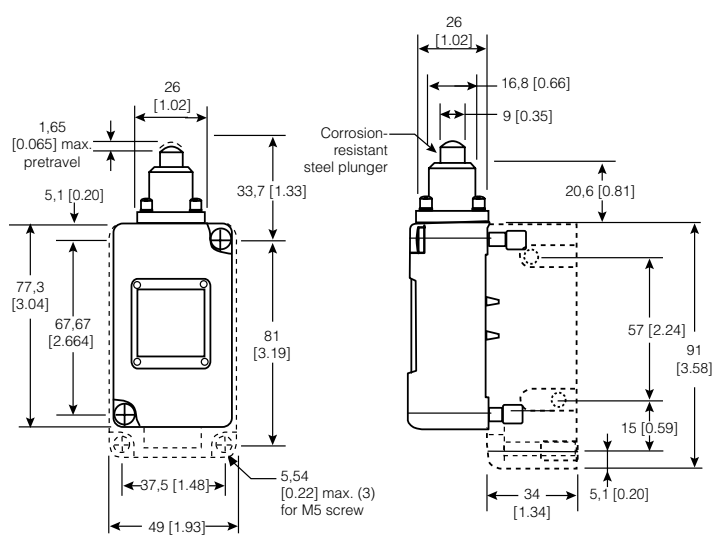


# LS Series

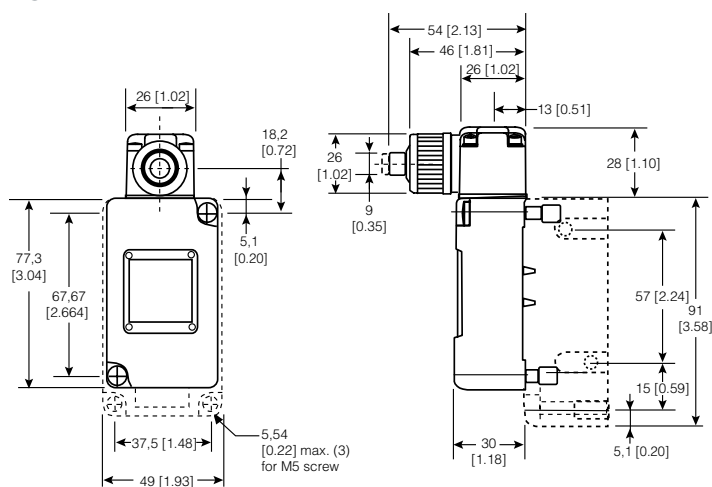
**Figure 35. 201LS10-4 Dimensions**



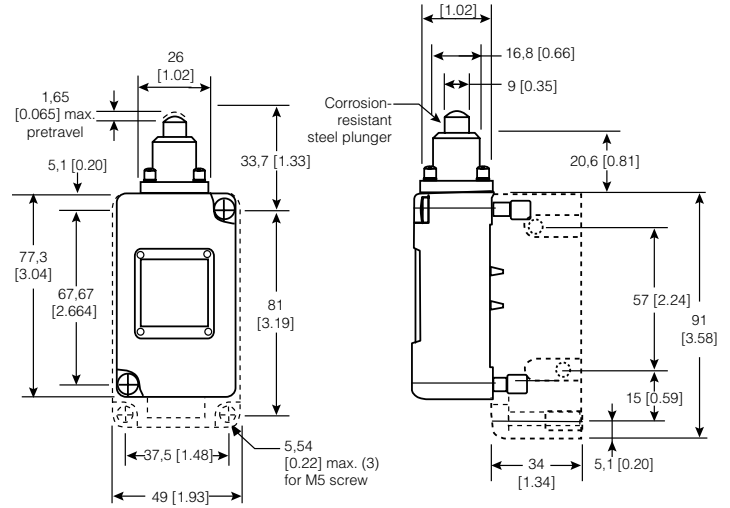
**Figure 36. 202LS1-4 Dimensions**



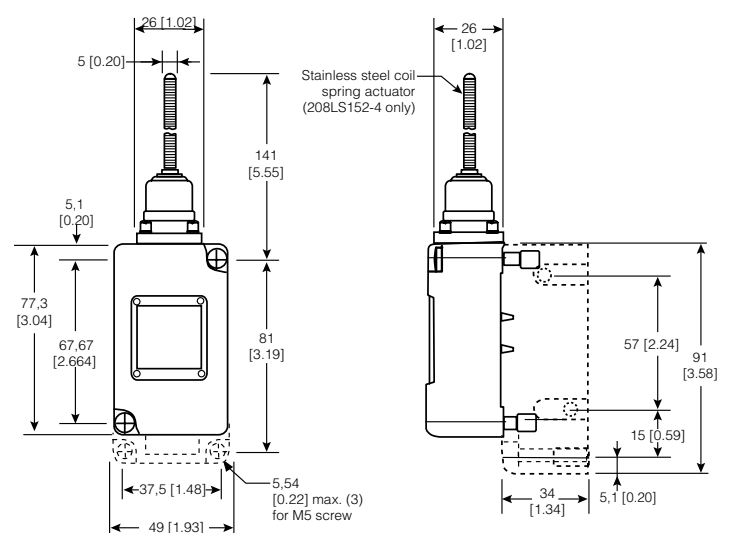
**Figure 37. 204LS1-4 Dimensions**



**Figure 38. 205LS1-4 Dimensions**



**Figure 39. 208LS1-4 Dimensions**



## ADDITIONAL INFORMATION

The following associated literature is available on the Honeywell web site at [sensing.honeywell.com](http://sensing.honeywell.com):

- Product installation instructions
- Aerospace range guide
- Transportation range guide
- Limits and Machine Safety range guide
- Product application-specific information
  - Application Note: Automated Storage and Retrieval System
  - Limit and Enclosed Switches Application Information
  - Limit and Enclosed Switches Operating Characteristics
  - Limit and Enclosed Switches Reference Standards
  - Limit and Enclosed Switches Typical Applications

### 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](http://sensing.honeywell.com)**, or e-mail inquiries to **[info.sc@honeywell.com](mailto:info.sc@honeywell.com)**

Sensing and Control  
Honeywell  
1985 Douglas Drive North  
Golden Valley, MN 55422  
**[honeywell.com](http://honeywell.com)**

### 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.

# Honeywell



# SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

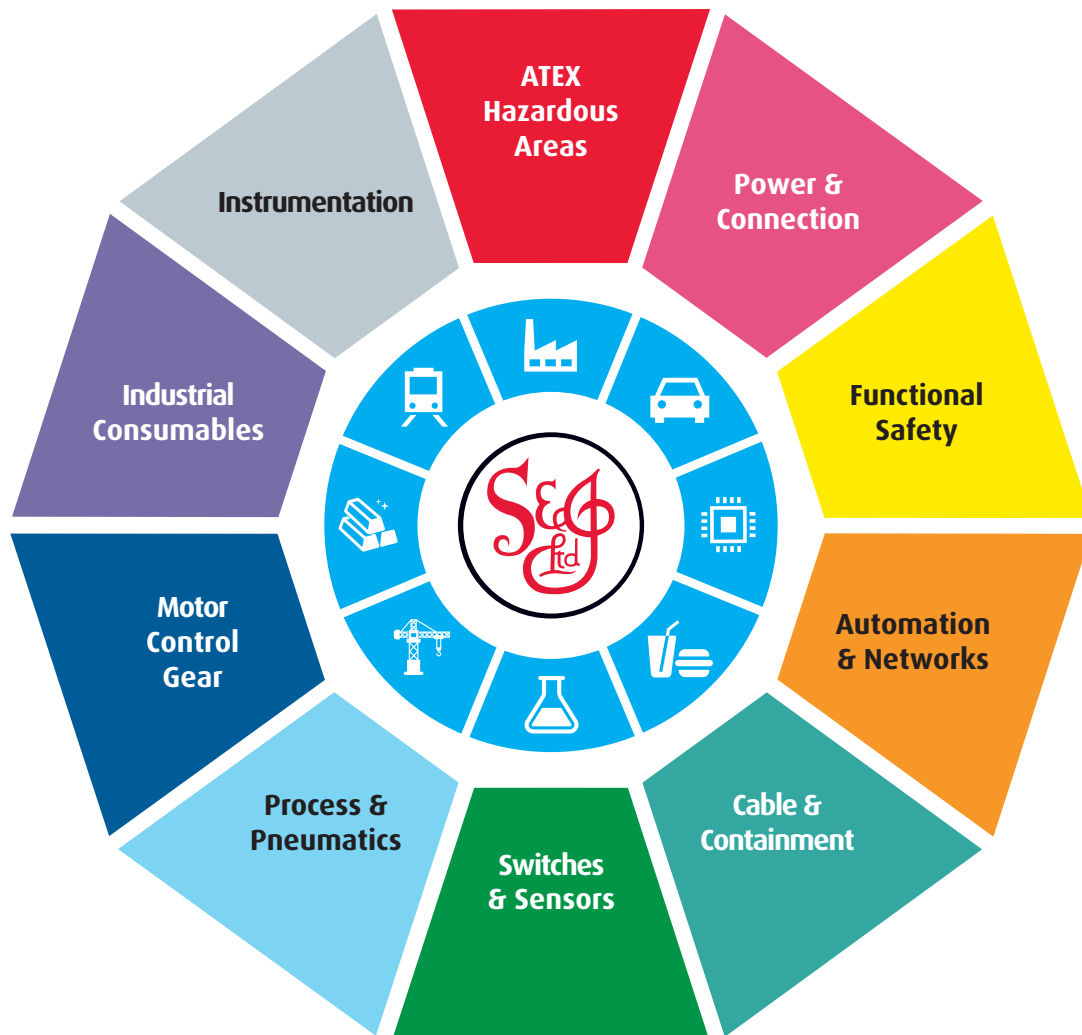
At Scattergood & Johnson Ltd, we pride ourselves on being a technical distributor to specialist industries.

Working with a range of quality product suppliers across a number of specialist markets, we are not your average 'box shifter' - we are your technical and supply chain partner.

We fully support every product we sell - for free! Our internal team and external sales engineers can answer any product or application question, no matter the complexity.

Backing up this technical ability is a range of 50,000+ products available from stock for nationwide next day delivery (same day if required!), or you can collect what you need from any of our trade counters around the UK.

Select your specialist interest below to learn more about how we can help.



Online, In Branch and On the Road - Scattergood & Johnson Ltd, there when you need us.

# [www.scatts.co.uk](http://www.scatts.co.uk)