# MICRO SWITCH Heavy-Duty Limit Switch (Stainless Steel) 



## DESCRIPTION

When the application requires an industrial grade limit switch where wet, dust, or corrosive environments may be present, Honeywell offers the LS2 Series of stainless steel limit switches. The limit switch body and actuating heads are cast from 316 stainless steel. These limit switches are available with a wide variety of actuating heads with a one-pole or two-pole snap-action double-break contact block. A threaded conduit is integral to the switch body with terminal screws for each wiring point on the contact block. Honeywell can provide the switches factory wired for reduced installation. The limit switches can also be factory wired with the limit switch body epoxy encapsulated, minimizing any dust or liquid migrating to the switch contacts. The limit switches can be front mounted with two through holes or rear mounted with two integral threaded holes from the back side.

As with the other HDLS Series of limit switches, the LS2 Series have UL, CSA, CE, and CCC certifications for global acceptance.

## DIFFERENTIATION

- Stainless steel housing designed for corrosive and adverse environments
- All-metal drive chain for consistent operating characteristics
- Three different electrical connectivity options; threaded conduit, factory wired, or factory wired with epoxy encapsulated body
- Side rotary head incorporates stainless steel shaft with bronze bearing for increased mechanical life of up to 50 million operations
- Wide selection of stainless steel levers to compliment the side rotary limit switch


## FEATURES

- 316 Series stainless steel actuating heads and body with stainless steel screws
- Designed to IP 65/66/67 and NEMA 1, 3, 3R, 4, 4X, 6, 6P, 12, and 13
- Diaphragm seal between head and body provides an extra degree of sealing
- Fluorocarbon seals standard for chemically harsh environments and/or higher temperature applications ( $121^{\circ} \mathrm{C} / 250^{\circ} \mathrm{F}$ )
- Optional fluorosilicone seals for low temperature $\left(-40^{\circ} \mathrm{C} /-40^{\circ} \mathrm{F}\right)$ applications
- Available with $1 \mathrm{NC} / 1 \mathrm{NO}$ or $2 \mathrm{NC} / 2 \mathrm{NO}$ double break contacts. Same polarity for each pole (Za)
- Side rotary head with center neutral or sequential switch design available
- Actuator heads can be field rotated to any of four positions $90^{\circ}$ apart
- Side rotary heads are factory adjusted for CW and CCW actuation of the switch. Heads can be field adjusted for CW only or CCW only to actuate the switch
- CCC, CE, CSA, and UL certifications for global acceptance


## POTENTIAL APPLICATIONS

- Food processing plants
- Petrochemical plants
- Power generating plants
- Pulp and paper mills
- Shipboard and dockside locations
- Transportation hubs and facilities
- Water treatment and wastewater treatment facilities


## VALUE TO CUSTOMERS

- Harsh-duty stainless steel switch withstands many tough environments including dust, dirt, grime, heat, and washdown areas
- Variety of actuator heads and switch options
- Threaded conduit or factory wired
- Silver contacts or optional gold-plated contacts
- Made in the USA


## PORTFOLIO

The heavy-duty LS2 Series stainless steel limit switches are a portion of Honeywell's heavy duty HDLS Series limit switches which also include the HDLS Series and the factory sealed HDLS Series. Honeywell has a comprehensive line of general purpose limit switches, compact precision limit switches, miniature limit switches, and specialty limit switches. To view the entire product portfolio, click here.

## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Table 1. Specifications

| Characteristic | Parameter |
| :---: | :---: |
| Product type | MICRO SWITCH heavy-duty limit switch, LS2 Stainless Steel Series |
| Certifications | UL, CSA, CE, CCC |
| Reference standards | UL508, CSA C22.2 \# 14, EN/IEC 60947-5-1, GB 14048.5 |
| Housing material | 316 Series stainless steel |
| Actuator heads | Side rotary Side rotary (low pretravel \& low torque) <br> Side rotary (maintained) Side rotary (center neutral) <br> Side rotary (sequential) Side pin plunger <br> Side roller plunger Top pin plunger <br> Top roller plunger  |
| Termination | 0.5-14 NPT, 0.75-14 NPT <br> Factory wired with or without epoxy encapsulated body; $1,5 \mathrm{~mm}^{2}$ (16 AWG) cable SPDT with 5 -conductor cable $\varnothing 12,7 \mathrm{~mm}$ [0.5 in] <br> DPDT with 9-conductor cable $\varnothing 15,7 \mathrm{~mm}$ [0.62 in] |
| Contact options | $1 \mathrm{NC} / 1 \mathrm{NO}, 2 \mathrm{NC} / 2 \mathrm{NO}, 2 \mathrm{NC} / 2 \mathrm{NO}$ center neutral, 2NC/2NO sequential |
| Contact type | Snap-action double break (form Za); Same polarity each pole |
| Contact material | Silver alloy (standard), gold-plated (low-energy applications) |
| Utilization category | AC15, A600; DC13, R300 |
| Rated operational voltage (Ue) | $600 \mathrm{Vac} ; 250 \mathrm{Vdc}$ |
| Rated operational current (le) | 1.2 A, 0.1 A |
| Rated thermal current (Ith) | $10 \mathrm{~A}, 2.5 \mathrm{~A}$ |
| Rated insulation voltage (Ui) | 600 V |
| Rated impulse withstand voltage (Uimp) | 2500 V |
| Short circuit protection device (SCPD) type and rating | Class J fuse, rated $10 \mathrm{~A}, 600 \mathrm{~V}$ |
| Pollution degree | 3 |
| Sealing | IP 65/66/67; NEMA 1, 3, 3R, 4, 4X, 6, 6P, 12, and 13 With cable; IP 65/66/67; NEMA 1, 3, 3R, 4, 6, 6P, and 12 |
| Operating temperature | Refer to page 6, Table 5, for temperature range of limit switch with different seals or actuator heads Cable temp. range: $-20^{\circ} \mathrm{C}$ to $105^{\circ} \mathrm{C}\left[-4^{\circ} \mathrm{F}\right.$ to $\left.221^{\circ} \mathrm{F}\right]$ |
| Vibration | 10 g , conforming to IEC 60068-2-6 |
| Shock (actuator not fitted) | 50 g , conforming to IEC 60068-2-27 |

## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Table 2. Electrical Ratings
10 A Thermal (Ith)
ac Volts; Pilot Duty; AC15, A600

| Electrical Rating | Circuitry | Vac | Amps at 0.35 PF (make) | Amps at 0.35 PF (carry and break) |
| :--- | :--- | :--- | :--- | :--- |
| AC15, A600 |  | 120 | 60 | 6 |
|  |  | 240 | 30 | 3 |
|  |  | 480 | 15 | 1.5 |
|  |  | 600 | 12 | 1.2 |

Table 3. Electrical Ratings
dc Volts; Pilot Duty; DC13, R300

| Electrical rating | Circuitry | Vdc | Make \& Break Amps Inductive | Make \& Break Amps Resistive |
| :--- | :--- | :--- | :--- | :--- |
| DC13, R300 | SPDT, DPDT | 125 | 0.25 | 0.8 |
|  |  | 250 | 0.15 | 0.4 |

Table 4. Electrical Ratings
MICRO SWITCH HDLS LS2 Series limit switches are capable of the following low voltage loads

| Circuitry | Vdc | Amps Inductive | Amps Resistive |
| :--- | :--- | :--- | :--- |
| SPDT | 24 | 10 | 10 |
| DPDT | 24 | 10 | 10 |

Figure 1. Product Nomenclature: Stainless Steel Version


## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Figure 2. Product Nomenclature: Low Temperature Versions

| LS2Y Series Limit Switch | A | Side rotary, momentary | D | Top roller plunger, momentary | B | Fluorosilicone seals for low temp. applications |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| with stainless steel housing, | E | Side pin plunger, momentary |  | Side rotary, maintained, CW (reset), CCW (trip) |  |  |
| with low temp. seals, with or | M | Side rotary, central neutral, momentary (requires $\mathbf{4 N}$ contact) |  |  |  |  |
| without | NOTE: Not all combinations of model codes are available. Please contact your local Honeywell provider for assistance. |  |  |  |  |  |
| factory |  |  |  |  |  |  |
| wiring |  |  |  |  |  |  |

Figure 3. Product Nomenclature: Factory Sealed Versions

|  | 4L |  | X-FP |
| :---: | :---: | :---: | :---: |
|  | Contact Block \& Termination |  | Factory Sealed |
| 4K | 1NC/1NO, 0.75-14 NPT conduit | P-FP | 5-conductor STOOW-A cable $3,6 \mathrm{~m}$ [12.0 ft] for $1 \mathrm{NC} / 1 \mathrm{NO}$ contact block with ground |
| 4L | 2NC/2NO, <br> 0.75-14 NPT conduit | X-FP | 9-conductor STOOW-A cable $3.6 \mathrm{~m}[12.0 \mathrm{ft}]$ for $2 \mathrm{NC} / 2 \mathrm{NO}$ contact block with ground |

NOTE: Not all combinations of model codes are available. Please contact your local Honeywell provider for assistance.

Figure 4. Product Nomenclature: Factory Sealed with Low Temperature Versions


## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

## MICRO SWITCH HDLS STAINLESS STEEL LS2 SERIES ACTUATOR HEADS

SIDE ROTARY: Available levers provide greater versatility.
Actuating heads can be indexed in any of four positions, $90^{\circ}$ increments. All are momentary action except maintained head (LS2N Series).

LS2A - Standard: $15^{\circ}$ maximum pretravel, $5^{\circ}$ (single-pole) and $7^{\circ}$ (double-pole) maximum differential travel, $60^{\circ}$ minimum overtravel.

LS2N - Maintained contact: Maintained on counterclockwise rotation and reset on clockwise rotation, and vice versa.

LS2H - Low torque, low differential travel: Features low operating torque and narrow differential travel. $68^{\circ}$ minimum overtravel.

LS2L - Sequence action: Delayed action between operation of two poles. $48^{\circ}$ minimum overtravel.
LS2M - Center neutral: One pole operates on the clockwise rotation, and the other pole on the counterclockwise rotation. $53^{\circ}$ minimum overtravel.

TOP PLUNGERS: Available with $4,83 \mathrm{~mm}$ [0.19 in] minimum overtravel. Top plungers are offered in pin plunger and a roller plunger.


SIDE PLUNGERS: Available with $4,83 \mathrm{~mm}$ [ 0.19 in ] minimum overtravel. Side plungers are offered in a pin plunger and a roller plunger.
LS2E - Side pin plunger: A stainless steel
plunger for actuating motion inline with
the plunger travel. Actuating head may
be indexed in any of four positions, $90^{\circ}$
apart. A boot seal on the plunger and a seal
between the head and housing. Momentary
action.

## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

| Table 5. Temperature Limits | LS2 Stainless Steel (Fluorocarbon Sealed) |  |  | Low Temperature LS2 Stainless Steel (Fluorosilicone Sealed): Y_B |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Low Limit |  | $\begin{array}{\|c\|} \hline \text { High Limit } \\ \hline 121^{\circ} \mathrm{C}\left[250^{\circ} \mathrm{F}\right] \\ \hline \end{array}$ | Low Limit |  | High Limit |  |
|  | $-12{ }^{\circ} \mathrm{C}\left[10^{\circ} \mathrm{F}\right]$ | $-1{ }^{\circ} \mathrm{C}\left[30{ }^{\circ} \mathrm{F}\right]$ |  | $-40^{\circ} \mathrm{C}$ [-40 $\left.{ }^{\circ} \mathrm{F}\right]$ | $-29^{\circ} \mathrm{C}\left[-20^{\circ} \mathrm{F}\right]$ | $93^{\circ} \mathrm{C}$ [200 $\left.{ }^{\circ} \mathrm{F}\right]$ | $121^{\circ} \mathrm{C}$ [ $250{ }^{\circ} \mathrm{F}$ ] |
| LSA - Side Rotary Momentary | X |  | X | X |  |  | X |
| LSC - Top Plain Plunger | $x$ |  | $x$ | $x$ |  | $x$ |  |
| LSD - Top Roller Plunger | $X$ |  | X | X |  | X |  |
| LSE - Side Plain Plunger | $x$ |  | $x$ | $x$ |  | $x$ |  |
| LSF - Side Roller Plunger | X |  | $x$ | X |  | X |  |
| LSH - Side Rotary, Low PT, Low Torque |  | X | $x$ |  | X |  | $x$ |
| LSL - Side Rotary, Sequence | X |  | $x$ | $x$ |  |  | $x$ |
| LSM - Side Rotary, Center Neutral |  | $x$ | $x$ | X |  |  | $x$ |
| LSN - Side Rotary, Maintained |  | X | X |  | X |  | X |

NOTE: The pre-wired cable has a temperature rating of $-20^{\circ} \mathrm{C}$ to $105^{\circ} \mathrm{C}\left[-4^{\circ} \mathrm{F}\right.$ to $\left.221^{\circ} \mathrm{F}\right]$. When temperature extremes are involved, the application should be reviewed to ensure cable suitability.

## WIRING DIAGRAMS

Figure 5. 3E, 3K, 4K
1NC/1NO


Green internal screw
= Ground

Figure 7.4L
2NC/2NO

## Pole 1

Pole 2


Green internal screw = Ground
Figure 9.4M
2NC/2NO sequential


Green internal screw = Ground

Figure 11.4N
2NC/2NO center neutral

Green internal screw $=$ Ground


Figure 6. 4KC, 4KPC, 4KP-FP
1NC/1NO with 5-conductor cable

Green = Ground

Figure 8.4LM, 4LX-FP
2NC/2NO with 9-conductor cable


Figure 10.4MM, 4MX-FP
2NC/2NO sequential with 9-conductor cable


> Same polarity each pole

Figure 12.4NM, 4NX-FP
2NC/2NO center neutral with 9-conductor cable

Note: Wiring diagrams for limit switches with maintained contacts are illustrated with lever/shaft in CW position.

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## ELECTROMECHANICAL SWITCHES

Definitions below explain the meaning of operating characteristics. Characteristics shown in tables were chosen as most significant. They are taken at normal room temperature and humidity. These may vary as temperature and humidity conditions differ. Sketches show how characteristics are measured for in-line plunger actuation, rotary actuation, and includes bar chart description.

Linear dimensions for in-line actuation are from top of plunger to a reference line, usually the center of the mounting holes. Rotary actuated HDLS limit switches have the characteristics in degrees of angular rotation.

Differential Travel (D.T.) - Plunger or actuator travel from point where contacts "snap-over" to point where they "snapback."

Free Position (F.P.) - Position of switch plunger or actuator when no external force is applied (other than gravity).

Full Overtravel Force - Force required to attain full overtravel of actuator.

Operating Position (O.P.) - Position of switch plunger or actuator at which point contacts snap from normal to operated position. Note that in the case of flexible or adjustable actuators, the operating position is measured from the end of the lever or its maximum length. Location of operating position measurement shown on mounting dimension drawings.

Operating Force (O.F.) - Amount
of force applied to switch plunger or actuator to cause contact "snap-over." Note in the case of adjustable actuators, the force is measured from the maximum length position of the lever.

Overtravel (O.T.) - Plunger or actuator travel safely available beyond operating position.

Pretravel (P.T.) - Distance or angle traveled in moving plunger or actuator from free position to operating position.

Release Force (R.F.) - Amount of force still applied to switch plunger or actuator at moment contacts snap from operated position to unoperated position.

Total Travel (T.T.) - Distance from actuator free position to overtravel limit position.


## IN-LINE PLUNGER ACTUATION



## Bar Chart Description (Inline and Rotary)

NC = Normally closed contact(s) NO = Normally open contact (s)

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## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Table 6. Order Guide: Side Rotary

| Side Rotary <br> Catalog <br> Listings | Actuator Head Type | Contact Ar- <br> rangement <br> (snap- <br> action) | Bar Chart (degrees) <br> $\square$ Contact closed <br> $\square$ Contact open | Electrical Termination | Wiring Diagram (page 7) | Note |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LS2A4K | Side rotary, standard pretravel | 1NC/1N0 |  | 0.75-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |
| LS2YAB4K | Side rotary, standard pretravel | 1NC/1NO |  | 0.75-14 NPT conduit with screw termination | Figure 5 | Low temp. switch construction |
| LS2A3E | Side rotary, standard pretravel | 1NC/1NOw/ <br> gold-plated contacts |  | 0.5-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |
| LS2A4KC | Side rotary, standard pretravel | 1NC/1NO |  | 5 conductor STOW-A cable, 1,8M [6.0 ft.] | Figure 6 | Standard switch construction, factory wired |
| LS2A4KPC | Side rotary, standard pretravel | 1NC/1NO |  | 5 conductor STOOW-A cable, 6,1 M [20.0 ft.] | Figure 6 | Standard switch construction, factory wired |
| LS2A4L | Side rotary, standard pretravel | 2NC/2NO |  | 0.75-14 NPT conduit with screw termination | Figure 7 | Standard switch construction |
| LS2YAB4L | Side rotary, standard pretravel | 2NC/2NO |  | 0.75-14 NPT conduit with screw termination | Figure 7 | Low temp. switch construction |
| LS2A4LX-FP | Side rotary, standard pretravel | 2NC/2NO |  | 9 conductor STOOW-A cable, 3,6M [12.0 ft.] | Figure 8 | Standard switch construction, factory wired and sealed |
| LS2H3K | Side rotary, low differential and low torque | 1NC/1NO | Pretravel $\cdot 9^{\circ}$ max. <br> Diff. travel (SPDT) • $3^{\circ}$ max. <br> Diff. travel (DPDT) • $4^{\circ}$ max. <br> Overtravel • $66^{\circ} \mathrm{min}$ <br> Oper. torque • 0,19 Nm [1.7 in-lb] max. | 0.5-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |
| LS2H4K | Side rotary, low differential and low torque | 1NC/1NO |  | 0.75-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |
| LS2H4L | Side rotary, low differential and low torque | 2NC/2NO |  | 0.75-14 NPT conduit with screw termination | Figure 7 | Standard switch construction |
| LS2M4N | Side rotary, center neutral | 2NC/2NO | Pretravel $\cdot 18^{\circ}$ max. <br> Diff. travel $\cdot 10^{\circ}$ max. <br> Overtravel $\cdot 57^{\circ} \mathrm{min}$. <br> Oper. torque $\bullet 0,45 \mathrm{Nm}$ [4 in-lb] max. | 0.75-14 NPT conduit with screw termination | Figure 11 | Standard switch construction |
| LS2YMB4N | Side rotary, center neutral | 2NC/2NO |  | 0.75-14 NPT conduit with screw termination | Figure 11 | Low temp. switch construction |
| LS2M4NM | Side rotary, center neutral | 2NC/2NO |  | 9 conductor STOW-A cable, 1,8M [6.0 ft.] | Figure 12 | Standard switch construction, factory wired |

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Table 6. Order Guide: Side Rotary, continued

| Side Rotary <br> Catalog <br> Listings | Actuator Head Type | Contact Arrangement (snapaction) | Bar Chart (degrees) <br> $\square$ Contact closed <br> $\square$ Contact open | Electrical Termination | Wiring Diagram (page 7) | Note |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LS2N3K | Side rotary, maintained | 1NC/1NO | Pretravel $\cdot 65^{\circ}$ max. <br> Diff. travel $\cdot 40^{\circ}$ max. <br> Overtravel $\cdot 20^{\circ} \mathrm{min}$. <br> Oper. torque $\bullet 0,45 \mathrm{Nm}[4 \mathrm{in}-\mathrm{lb}]$ max. | 0.5-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |

Table 7. Order Guide: Plunger

| Top and Side Plunger Catalog Listings | Actuator Head Type | Contact Arrangement (snapaction) | Bar Chart (mm [in]) <br> ■ Contact closed <br> $\square$ Contact open | Electrical Termination | Wiring Diagram (page 7) | Note |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LS2YCB4K | Top pin plunger | 1NC/1NO | Pretravel • $1,78 \mathrm{~mm}$ [0.07 in] max. <br> Diff. travel (SPDT) • 0,38 mm [0.015 in] max. <br> Diff travel (DPDT) • 0,51 mm [0.020 in] max. | 0.75-14 NPT conduit with screw termination | Figure 5 | Low temp. switch construction |
| LS2C4L | Top pin plunger | 2NC/2NO | Overtravel $\cdot 4,83 \mathrm{~mm}[0.190 \mathrm{in}] \mathrm{min}$. <br> Oper. point • $45,9 \mathrm{~mm}$ [1.81 in] <br> Oper. force $\cdot 17,8 \mathrm{~N}[4 \mathrm{lb}]$ max. | 0.75-14 NPT conduit with screw termination | Figure 7 | Standard switch construction |
| LS2D4K | Top roller plunger | 1NC/1NO | $1,78 \mathrm{~mm}$ <br> [0.07 in] | 0.75-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |
| LS2YDB4K | Top roller plunger | 1NC/1NO |  | 0.75-14 NPT conduit with screw termination | Figure 5 | Low temp. switch construction |
| LS2D4KC | Top roller plunger | 1NC/1N0 | Diff. travel (SPDT) • 0,38 mm [0.015 in] max. <br> Diff travel (DPDT) • 0,51 mm [0.020 in] max. <br> Overtravel $\cdot 4,83 \mathrm{~mm}[0.190 \mathrm{in}] \mathrm{min}$. <br> Oper. point • $55,9 \mathrm{~mm}$ [2.20 in] | 5 conductor STOW-A cable, 1,8M [6.0 ft.] | Figure 6 | Standard switch construction, factory wired |
| LS2D4L | Top roller plunger | 2NC/2NO |  | 0.75-14 NPT conduit with screw termination | Figure 7 | Standard switch construction |
| LS2D4LM | Top roller plunger | 2NC/2NO |  | 9 conductor STOW-A cable, 1,8M [6.0 ft.] | Figure 8 | Standard switch construction, factory wired |

## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Table 7. Order Guide: Plunger, continued

| Top and Side Plunger Catalog Listings | Actuator Head Type | Contact Arrangement (snapaction) | Bar Chart (mm [in]) Contact closed Contact open | Electrical Termination | Wiring Diagram (page 7) | Note |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LS2E4K | Side pin plunger | 1NC/1NO |  | 0.75-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |
| LS2YEB4K | Side pin plunger | 1NC/1NO | Pretravel • $2,54 \mathrm{~mm}$ [0.10 in] max. <br> Diff. travel • $1,14 \mathrm{~mm}$ [0.045 in] max. <br> Overtravel • $4,83 \mathrm{~mm}[0.190 \mathrm{in}]$ min. <br> Oper. point • $33,02 \pm 0,76 \mathrm{~mm}[1.30 \pm 0.030 \mathrm{in}]$ <br> Oper force • $26,79 \mathrm{~N}$ [6 lb] max. | 0.75-14 NPT conduit with screw termination | Figure 5 | Low temp. switch construction |
| LS2E4L | Side pin plunger | 2NC/2NO |  | 0.75-14 NPT conduit with screw termination | Figure 7 | Standard switch construction |
| LS2F4K | Side roller plunger | 1NC/1N0 | Pretravel • $2,54 \mathrm{~mm}$ [0.10 in] max. <br> Diff. travel • $1,14 \mathrm{~mm}$ [0.045 in] max. <br> Overtravel • $4,83 \mathrm{~mm}[0.190 \mathrm{in}]$ min. | 0.75-14 NPT conduit with screw termination | Figure 5 | Standard switch construction |
| LS2F4L | Side roller plunger | 2NC/2NO |  | 0.75-14 NPT conduit with screw termination | Figure 7 | Standard switch construction |

## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Table 8. LS2 Series Stainless Steel Levers

|  | Catalog Listing | Material | Rod/Roller Dia. mm [in] | Rod/Roller Width mm [in] | Roller Mounting |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fixed 38,1 mm [1.5 in] radius |  |  |  |  |  |
|  | LS2Z51A | Nylon | 19,0 [0.75] | 6,35 [0.25] | Front |
|  | LS2Z51B | Stainless steel | 19,0 [0.75] | 6,35 [0.25] | Front |
|  | LS2Z51C | Nylon | 19,0 [0.75] | 6,35 [0.25] | Back |
|  | LS2Z51D | Stainless steel | 19,0 [0.75] | 6,35 [0.25] | Back |
|  | LS2Z51E | Bronze | 19,0 [0.75] | 6,35 [0.25] | Front |
|  | LS2Z51F | Bronze | 19,0 [0.75] | 6,35 [0.25] | Back |
| LS2Z51A | LS2Z51R | Nylon | 40,4 [1.59] | 6,35 [0.25] | Front |
| Adjustable $38,1 \mathrm{~mm}$ to $89,0 \mathrm{~mm}$ [1.5 in to 3.5 in ] radius |  |  |  |  |  |
|  | LS2Z52A | Nylon | 19,0 [0.75] | 6,35 [0.25] | Back |
| $1$ | LS2Z52B | Stainless steel | 19,0 [0.75] | 6,35 [0.25] | Back |
|  | LS2Z52C | Nylon | 19,0 [0.75] | 6,35 [0.25] | Front |
|  | LS2Z52D | Stainless steel | 19,0 [0.75] | 6,35 [0.25] | Front |
| $1$ | LS2Z52E | Bronze | 19,0 [0.75] | 6,35 [0.25] | Front |
|  | LS2Z52F | Bronze | 19,0 [0.75] | 6,35 [0.25] | Back |
| LS2Z52A | LS2Z52K | Nylon | 38,1 [1.50] | 6,35 [0.25] | Front |
| Adjustable Rod |  |  |  |  |  |
|  | LS2Z54N | Stainless steel | 3,2 [0.125] | 330 [13.0] | n/a |
| LS2Z54N | LS2Z54U | Aluminum | 3,2 [0.125] | 203 [8.0] | $\mathrm{n} / \mathrm{a}$ |

## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

## MICRO SWITCH HDLS Side Rotary Levers' Cam Tracking

Levers for side and top rotary switches are normally ordered as separate catalog listings. They also may be ordered by including a suffix to the switch catalog listing (see nomenclature tree in this document) and adding the lever price.

Figure 13. LS2Z51 Type Levers Cam Tracking


Figure 14. LS2Z52 Type Levers Cam Tracking


Figure 15. LS2Z54 Type Levers Cam Tracking


## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Figure 16. LS2 Series Side Rotary (mm [in])


Figure 18. LS2 Series Top Pin Plunger (mm [in])


Figure 17. LS2 Series Side Rotary with Cable (mm [in])


Figure 19. LS2 Series Top Roller Plunger (mm [in])


## MICRO SWITCH Heavy-Duty Limit Switch, Stainless Steel (LS2 Series)

Figure 20. LS2 Series Side Plunger (mm [in])


Table 9. Replacement Actuating Heads for LS2 Limit Switches

| Catalog <br> Listing | Actuating Head Type | Description |
| :--- | :--- | :--- |
| LS2Z1A | Side rotary, standard <br> force and travel | Replacement head for the LS2A Series side rotary <br> limit switch with fluorocarbon seals |
| LS2Z1AB | Side rotary, standard <br> force and travel with <br> low temp. seals | Replacement head for the LS2YAB Series side <br> rotary limit switch with fluorosilicone seals |
| LS2Z1H | Side rotary, low pre- <br> travel and low torque | Replacement head for the LS2H Series side rotary <br> limit switch with fluorocarbon seals |
| LS2Z1N | Side rotary, <br> maintained | Replacement head for the LS2N Series side rotary <br> maintained limit switch with fluorocarbon seals |
| LS2Z1CB | Top pin plunger, with <br> low temp. seals | Replacement head for the LS2YCB Series top pin <br> plunger limit switch with fluorosilicone seals |
| LS2Z1D | Top roller plunger | Replacement head for the LS2D Series top roller <br> plunger limit switch with fluorocarbon seals |
| LS2Z1DB | Top roller plunger, <br> with low temp. seals | Replacement head for the LS2YDB Series top <br> roller plunger limit switch with fluorosilicone seals |
| LS2Z1E | Side pin plunger | Replacement head for the LS2E Series side pin <br> plunger limit switch with fluorocarbon seals |
| LS2Z1F | Side roller plunger | Replacement head for the LS2F Series side roller <br> plunger limit switch with fluorocarbon seals |


| Catalog <br> Listing | Contact Block Type | Description |
| :--- | :--- | :--- |
| LSZ3K | 1NC-1NO | Replacement contact block with 1NC/1NO <br> (single-pole) contact |
| LSZ3L | 2NC-2NO | Replacement contact block with 2NC/2NO <br> (double-pole) contact,not for use for center <br> neutral or sequential limit switches |
| LSZ3M | 2NC-2NO special | Replacement contact block with 2NC/2NO <br> (double-pole) contact for center neutral or <br> sequential limit switches |

## ADDITIONAL MATERIALS

The following associated literature is available at sensing.honeywell.com:

- Product range guide
- Product installation instructions
- Application notes
- CAD drawings
- Product images


## For more information

Honeywell Sensing and Internet of Things services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit sensing.honeywell.com or call:

| Asia Pacific | $+656355-2828$ |
| :--- | :--- |
| Europe | +441698481481 |
| USA/Canada | $+1-800-537-6945$ |

## Honeywell Sensing and Internet of Things

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## © 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.

## $\triangle$ 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.


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