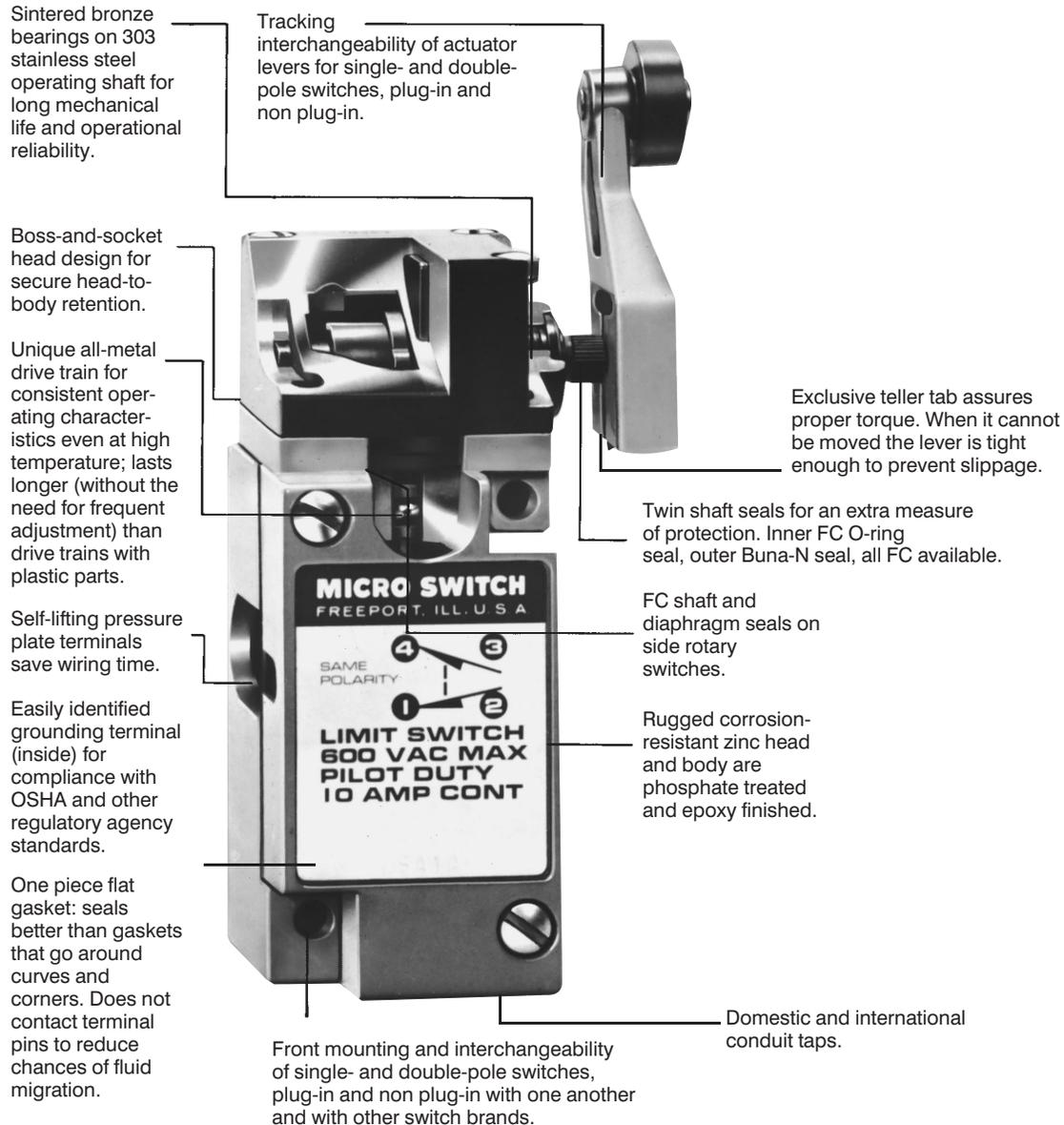


## Heavy Duty Limit Switches

### ADDITIONAL FEATURES AND OPTIONS

- Wide variety of operating heads
- Field adjustable operating modes, for reduced inventory
- Convenience of on-the-spot adjustment instructions
- Complete choice of circuitry and electrical rating options, including solid state switching
- Plug-in and non plug-in versions have identical operating characteristics and are dimensionally interchangeable
- Manifold (rear-wire) version
- NEMA 1, 3, 4, 4X, 6, 6P, and 13\*
- UL Listed, file #E37138
- CSA Certified, file #LR57326
- Explosion-proof version page A113
- Low temperature versions to  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ ) page A42
- Captive head and body screws
- Designed to withstand seismic shock
- Stainless steel (NEMA 4X) version page A47
- Preleaded cable or prewired connector types page A42
- Epoxy filled wash down (NEMA 6P) types page A44
- Completely fluorocarbon (FC) sealed versions page A42

\* Depending on operating head, prewired connector or cable, enclosure ratings may vary. For enclosure rating information on specific catalog listings, contact the 800 number.



## Heavy Duty Limit Switches

### ROTARY OPERATING HEADS

The head type is designated by the first three letters in the catalog listing, i.e., **LSA1A-1A** has an **LSA** standard side rotary head. See order guides for details. All are momentary action, except the maintained contact LSN head.



Side rotary

Top rotary

### SIDE ROTARY

#### LSA — Standard

Overtravel 60° minimum, pretravel 15° maximum, differential travel 5° (single-pole) and 7° (double-pole) maximum.

#### LSP — Low Differential Travel

Overtravel 68° minimum, pretravel 9° maximum, differential travel 3° (single-pole) and 4° (double-pole) maximum.

#### LSR — Low Operating Torque

Overtravel 60° minimum, pretravel 15° maximum, operating torque 1.7 in. lbs. (0,19 Nm) maximum.

#### LSH — Low Torque, Low Differential Travel

Overtravel 68° minimum, operating torque 1.7 in. lbs. (0,19 Nm) maximum, differential travel 3° (single-pole) and 4° (double-pole) maximum.

#### LSS — Gravity Return

Operating torque 5 in.-oz.

#### LST — Extra Low Torque

Operating torque 12 in.-oz.

#### LSL — Sequence Action

Delayed action between operation of two poles, in each direction. Overtravel 48° minimum.

#### LSM — Center Neutral

One set of contacts operates on clockwise rotation, another set on counterclockwise rotation. Overtravel 53° minimum.

#### LSN — Maintained Contact

Operation is maintained on counterclockwise rotation, reset on clockwise rotation, and vice versa. Overtravel 20° minimum.

### TOP ROTARY

#### LSB — High Overtravel

Top rotary actuation is ideal when increased overtravel is required (100° minimum.) Uses same levers as side rotary switches.

### ROTARY LEVERS

Shown below are typical lever series for side and top rotary switches. Additional versions are described in the lever order guides.

#### LSZ51 — Standard Roller Lever (1.5")

#### LSZ55 — Offset Roller Lever

#### LSZ53 — Yoke Roller Lever

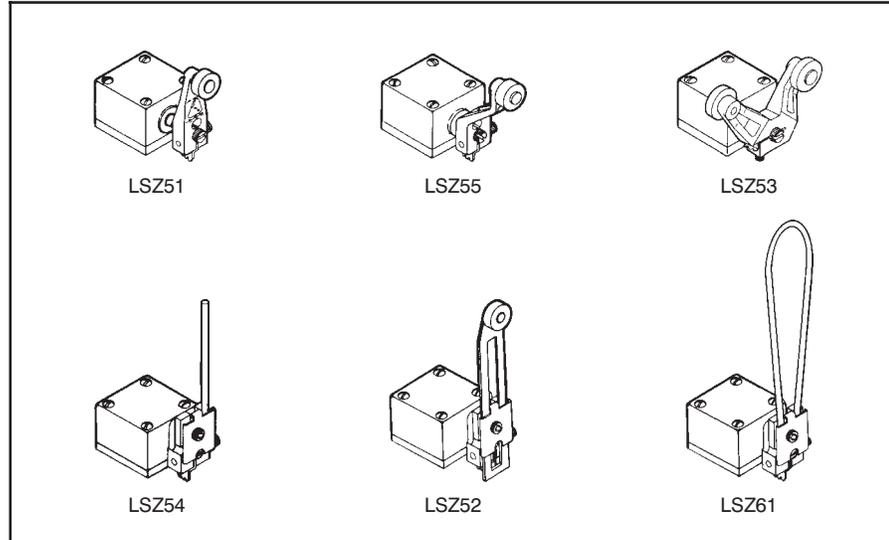
For use with LSN maintained contact switches.

#### LSZ52 — Adjustable Length Roller Lever

#### LSZ54 — Rod Lever

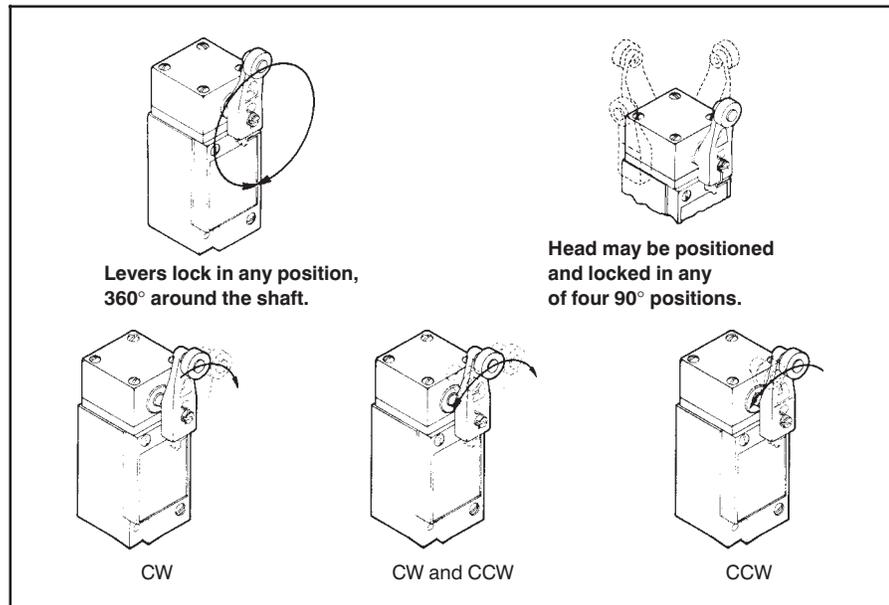
May be cut or formed by user. Available in flexible versions.

#### LSZ61 — Adjustable Loop Lever



### Field adjustable to match application needs

Actuation is adjustable for operation clockwise, counterclockwise, or in both directions. Adjusting instructions are cast into the internal lid of side rotatory heads for convenient reference.



Levers lock in any position, 360° around the shaft.

Head may be positioned and locked in any of four 90° positions.

CW

CW and CCW

CCW

Limit/Enclosed

## Heavy Duty Limit Switches

### PLUNGER OPERATING HEADS

All plungers are momentary action, except the LSG maintained contact version. Over-travel is .190 inch (4.83 mm) minimum. The plungers are sealed with an oiltight boot. A gasket seal is between the head and housing. Plungers are corrosion resistant steel.

### TOP PLUNGERS

#### LSC — Top Plain Plunger

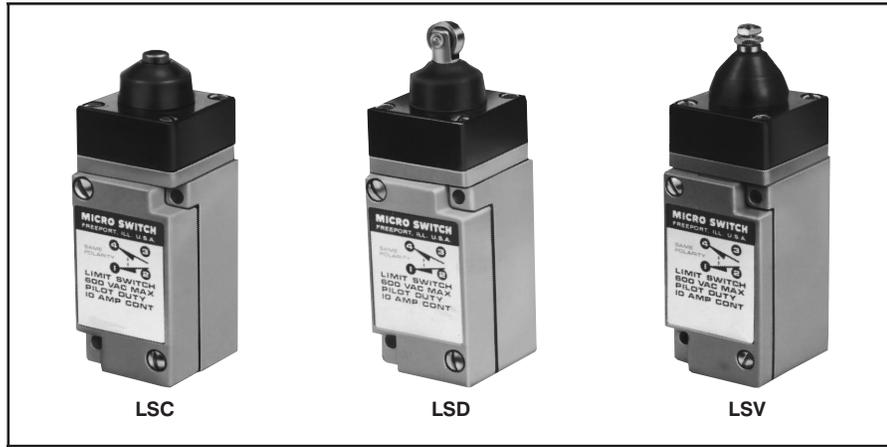
For in-line operating motion.

#### LSD — Top Roller Plunger

Can be set at 90° increments to accept cam or slide actuation.

#### LSV — Adjustable Top Plain Plunger

Simplifies installation, since switch operating point can be adjusted from 2.085 to 2.335 inch.



### SIDE PLUNGERS

Side plungers fit in close quarters. The heads may be positioned to accept actuation from any of four directions, 90° apart.

#### LSE — Side Plain Plunger

For in-line actuating motion

#### LSF — Side Roller Plunger

Roller may be set in vertical or horizontal position for cam or slide actuation.

#### LSW — Adjustable Side Plain Plunger

Adjustable operating point, 1.615 to 1.865 inch.

#### LSG — Maintained Contact Side Plain Plunger

Transfer of switch contacts is maintained after either of the two plungers is operated. Operation of other plunger resets switch for next cycle.



### WOBBLE LEVER OPERATING HEAD

Switches with wobble lever heads are operated by any movement, except direct pull.

#### LSJ1A-7M — Spring Wire Lever

May be formed by user to meet special needs.

#### LSJ1A-7A — Plastic Rod Lever

Use to avoid scratching or marring by actuator.

#### LSJ1A-7N — Flexible Cable Lever

#### LSK1A-8C — Stainless Steel Coil Spring Lever

#### LSK1A-8A — Cat Whisker

For low operating force applications

### CONDUIT OPENINGS

For conduit openings other than 1/2-NPT and 3/4-NPT, substitute the following for LS in the catalog listing:

PG13,5 — LS3

2mm — LS4

PF1/2 — LS5

