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If you need detailed product information, or help choosing the right product for your application, see our Interactive Catalog. Use the Interactive Catalog to access the most complete and up-to-date information available.

The Interactive Catalog provides an extensive collection of product specifications, application data, and technical literature that can be searched based on criteria you select.

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MICRO SWITCH explosion-proof switches contain and cool the escaping hot gases that otherwise could cause an explosion outside the switch. Most of them are UL-CSA listed. Appropriate file reference numbers and copies of the card file are available from your local Branch Office or MICRO SWITCH, Freeport, Illinois.

Switches described on the following pages, except as noted below, are UL listed as follows:

NEMA TYPE 7, CLASS I FLAMMABLE GASES OR VAPORS

Type 7 enclosures are for use indoors in locations classified as Class I, Groups B, C, or D by the National Electrical Code.

Group B — (only switches so noted in the order guides include this listing). Atmospheres containing hydrogen or manufactured gas.

Group C — atmospheres containing diethyl ether, ethylene, or cyclopropane.

Group D — Atmospheres containing gasoline, hexane, butane, naptha, propane, acetone, toluene, or isoprene.

DIVISION 1

Locations in which hazardous agents are present under normal operating conditions.

DIVISION 2

Locations in which hazardous agents may be present only in case of accidental rupture or breakdown.

All MICRO SWITCH listings covered in Division 1 are also covered in the same groups in Division 2.

NEMA TYPE 9, CLASS II COMBUSTIBLE DUSTS

Type 9 enclosures are for use in indoor locations classified as Class II, Groups E, F or G, as defined in the National Electrical Code.

Group E — Atmospheres containing metal dust.

Group F — Atmospheres containing carbon black, coal dust or coke dust.

Group G — Atmospheres containing flour, starch, or grain dust.
LSX switches are for use either indoors or outdoors in hazardous atmospheres as they are a completely sealed explosion-proof device. Mounting hole location and tracking is the same as the long established MICRO SWITCH ML-E1 explosion-proof switch. An optional mounting plate provides the same tracking and mounting as the standard HDLS. The majority of HDLS operating heads and circuitry options are available on the LSX.

Standard HDLS levers are used, but because of explosion-proof requirements, only nylon rollers or other non-sparking material can be selected. Plunger and cat whisker types listed in the LSX order guide are of non-sparking material.

**FEATURES**

- Sealing - applicable portions of NEMA 1, 3, 4, 6, 7, 9, and 13.
- Tracking interchangeability with MICRO SWITCH ML-E1 and HDLS.
- Variety of heads and non-sparking actuators.
- Field adjustability matches switch to application.
- Momentary, maintained, random sequence, or center neutral action.
- 10 amps continuous carry electrical rating.
- Choice of silver or gold contacts.
- 1⁄2 or 3⁄4 inch conduit opening.
- UL Listed, file #E61730
- CSA Certified, file #LR57327
- Internal grounding screw.
- NEMA standards: 1, 3, 4, 6, 7, 9 and 13. UL listed and CSA certified: Class I, Div. 1, Groups B, C and D. Class II, Div. 1, Groups E, F and G.
The order guide shows the option codes which are added to the LSX prefix to specify the operating head, body and circuitry, assembly modifications (if desired) and actuator type.

The example given below is LSXA3K-1A. This is an explosion-proof LSX switch with the standard side rotary momentary-action head (A), single-pole circuitry and 1⁄2 in. conduit opening (3K). Since no modification codes are listed, it is adjusted for both clockwise (CW) and counterclockwise (CCW) operation, with the actuator shaft facing the front (label side) of the switch. The actuator (-1A) is in a 1.5 in. lever with a .75 in. nylon roller on the open side.

There are list price adders for double-pole circuitry and the actuators. (Levers may also be ordered separately by specifying the LSX listings shown in the actuator code description.)

**ORDER GUIDE**

<table>
<thead>
<tr>
<th>Head Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>Side rotary. Momentary</td>
</tr>
<tr>
<td>R*</td>
<td>Side rotary. Low torque. Momentary.</td>
</tr>
<tr>
<td>E*</td>
<td>Side plunger. Momentary</td>
</tr>
<tr>
<td>K</td>
<td>Cat whisker. Momentary</td>
</tr>
<tr>
<td>V</td>
<td>Adjustable top plunger. Momentary.</td>
</tr>
<tr>
<td>W*</td>
<td>Adjustable side plunger. Momentary.</td>
</tr>
</tbody>
</table>

* Available with a Single Pole N.C. Direct Acting contact. Electrical Rating D. To order, use 3N for body and circuitry code.

**Body and Contacts**

<table>
<thead>
<tr>
<th>Circuitry Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3K</td>
<td>Silver</td>
</tr>
<tr>
<td>3E</td>
<td>Gold plated</td>
</tr>
<tr>
<td>4K</td>
<td>Single-pole, 1 N.O., 1 N.C., 1⁄2 in. conduit†</td>
</tr>
<tr>
<td>4L</td>
<td>Silver</td>
</tr>
<tr>
<td>4S</td>
<td>Gold plated</td>
</tr>
<tr>
<td>7L</td>
<td>Silver 1⁄2 in. conduit†</td>
</tr>
<tr>
<td>7S</td>
<td>Gold plated</td>
</tr>
<tr>
<td>3N</td>
<td>SPNC Direct Acting</td>
</tr>
<tr>
<td>4M</td>
<td>Silver</td>
</tr>
<tr>
<td>4T</td>
<td>Gold plated</td>
</tr>
<tr>
<td>4N</td>
<td>Silver</td>
</tr>
<tr>
<td>4U</td>
<td>Gold plated</td>
</tr>
<tr>
<td>7T</td>
<td>Gold plated 1⁄2 in. conduit.</td>
</tr>
</tbody>
</table>

**Electrical Rating**

- D

† Available with conduit size of 3⁄4 in. for corresponding pole configuration.
2
CCW operation. (Optional with head types A, B, H, L, P, R.)

4
Head assembled with actuator shaft to left side. (Optional with head types A, E, F, H, L, M, N, P, R.)

5
Head assembled with actuator shaft to back of switch. (Optional with head types A, E, F, H, L, M, N, P, R.)

6
Roller on top roller plungers assembled perpendicular to mounting surface. (Optional with head type D.)

8
Roller on side plunger is assembled in vertical position.

2J
LSZ52J adjustable lever (1.5-3.5 in.) with 1 in. nylon roller.

2K
LSZ52K adjustable lever (1.5-3.5 in.) with 1.5 in. nylon roller.

3S
LSZ53S yoke lever with .75 in. nylon rollers (same side).

3E
LSZ53E yoke lever with .75 in. nylon roller (one ea. side).

5C
LSZ55C offset lever with .75 in. nylon roller on front side.

7A
Wobble stick actuator. (Use with head type J only.)

8A
Cat whisker actuator. (Use with head type K only.)

1.5 in. long levers, except where noted.
Wobble Actuated Switches

<table>
<thead>
<tr>
<th>Momentary</th>
<th>LSXJ Delrin Rod</th>
<th>LSXK Cat Whisker (Wire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretravel max.</td>
<td>25.4 mm 1.0 in.</td>
<td>50.8 mm 2.0 in.</td>
</tr>
<tr>
<td>Operating Force max.</td>
<td>2.78 N 10 oz.</td>
<td>1.39 N 5.0 oz.</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>–12 to 93°C 10 to 200°F</td>
<td></td>
</tr>
</tbody>
</table>

N = Newtons

COMpletely Fluorocarbon-Sealed and Low Temperature Switches

Completely fluorocarbon-sealed and low temperature construction LSX switches are available. See page A42 for a full description of both of these options.

How to order

For fluorocarbon-sealed switches, insert the additional letters Y and C in the appropriate places in the standard catalog listing; for low temperature versions insert the additional letters Y and B. Examples follow:

LSXA3K—standard side rotary switch
LSXYAC3K—completely fluorocarbon-sealed version of the LSXA3K
LSXA3K—standard side rotary switch
LSXYAB3K—low temperature version of the LSXA3K
Conduit Openings
(LSXA3, LSXB3, LSXH3, LSXN3, LSXP3 and LSXR3 have ½-14 NPT. LSXA4, LSXB4, LSXH4, LSXLR, LSXM4, LSXN4, LSXP4, and LSXR4 have ¾-14 NPT.)
Conduit Openings
(LSXC3 and LSXD3 have \( \frac{1}{2} \)-14 NPT.
LSXC4 and LSXD4 have \( \frac{3}{4} \)-14 NPT).