

MICRO SWITCH Heavy-Duty Limit Switch

HDLS Series

002345

Issue 6

Datasheet



DESCRIPTION

Honeywell's MICRO SWITCH heavy-duty limit switches' modular construction allows for a wide variety of actuator styles, operating heads, and electrical circuitry options. The plug-in versions greatly reduce downtime on production lines with high actuation rates as replacement of the switch is accomplished in seconds. The base receptacle contains all the wiring and conduit connection while the switching component with operating head easily assembles to the base and is attached with two screws.

They are ideal for many applications with demanding indoor and/or outdoor environments, where they may be subjected to shock or vibration from equipment, temperature extremes, dust, splashing water, coolant, and/or hose-directed water.

DIFFERENTIATION

- Sintered bronze bearing on 303 stainless steel operating shaft for enhanced mechanical life (up to 50 million actuation cycles) and operational reliability
- All-metal drive train for consistent operating characteristics, even at high temperature. Lasts longer (without need for frequent adjustment) than drive trains with plastic parts
- Exclusive teller tab ensures proper torque. When it cannot be moved, the lever is tight enough to prevent slippage

VALUE TO CUSTOMERS

- NEMA 1, 3, 4, 4X, 6, 6P, 12, 13 and IP65/66/67 environmental sealing for demanding applications
- Industry-leading breadth-of-product offering: HDLS standard, HDLS harsh-duty epoxy sealed, or the HDLS stainless steel
- UL, CSA, CE, and CCC approvals for global use
- Rapid customization and design-in time
- Large, existing installation base and channel allows for quick delivery worldwide

FEATURES

- NEMA 1, 3, 4, 4X, 6, 6P, 12, 13 and IP65/66/67 environmental sealing
- NEMA/IP sealing features twin shaft seals for an extra measure of protection
- Rugged, corrosion-resistant zinc head and body are phosphate treated and epoxy coated
- Diaphragm seal between head and body provides an extra measure of protection
- Multiple connectivity options for international applications
- Fluorosilicone seals available for low temperature applications, and fluorocarbon seals available for chemically harsh environments and higher temperature applications
- Secure head-to-body retention with the head in any one of four positions 90° apart
- Self-lifting pressure plate terminals saves wiring time
- Wide variety of actuators, switch options, and head styles
- Rotary actuated heads are field adjustable for CW actuation, CCW actuation, or both
- Silver or gold-plated contacts
- Plug-in and non plug-in bodies have identical operating characteristics and are dimensionally interchangeable

POTENTIAL APPLICATIONS

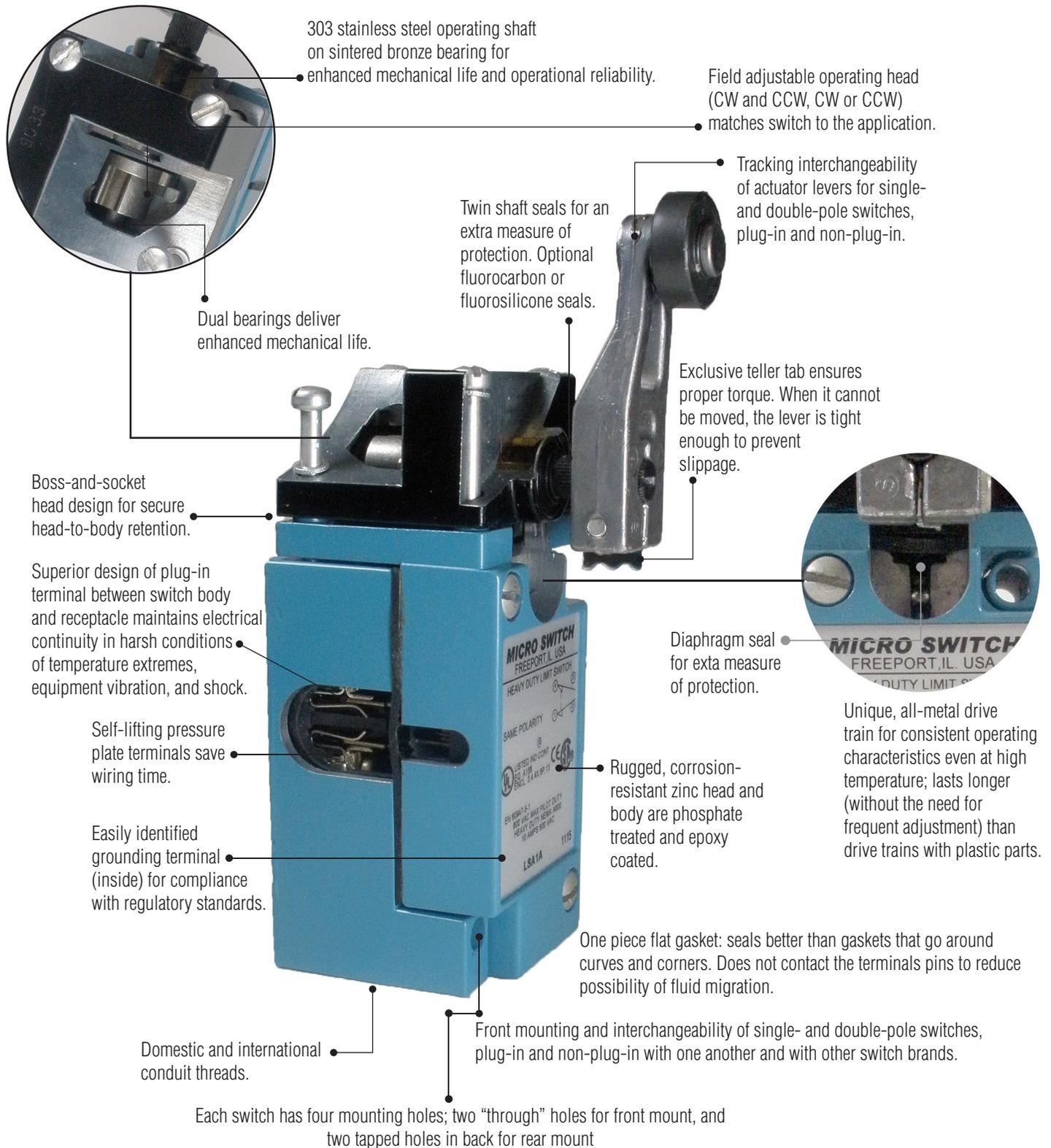
- Machine tools
- Automotive machine tools
- Material handling
- Outdoor electromechanical structures
- Balers/compactors
- Conveyors
- Food and beverage
- Power plants
- Off-road equipment
- Agricultural equipment
- Valves
- Transportation hubs

PORTFOLIO

The heavy-duty HDLS Series limit switch is part of Honeywell's comprehensive and broad limit switch portfolio that includes global, medium-duty, compact, hazardous area, and specialty limit switches. To view the entire product portfolio, click [here](#).

MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

Figure 1. MICRO SWITCH HDLS Series Features and Options



MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

Table 1. Specifications

Characteristic	Parameter															
Product type	MICRO SWITCH heavy-duty limit switches															
Actuators/heads	<table border="0"> <tr> <td>Side plunger - adjustable</td> <td>Side plunger - pin</td> <td>Side plunger maintained - pin</td> </tr> <tr> <td>Side roller plunger</td> <td>Side rotary</td> <td>Side rotary maintained</td> </tr> <tr> <td>Top plunger - adjustable</td> <td>Top plunger - pin</td> <td>Top roller plunger</td> </tr> <tr> <td>Top rotary</td> <td>Wobble - cable</td> <td>Wobble - cat whisker</td> </tr> <tr> <td>Wobble - coil spring</td> <td>Wobble - plastic rod</td> <td>Wobble - spring wire</td> </tr> </table>	Side plunger - adjustable	Side plunger - pin	Side plunger maintained - pin	Side roller plunger	Side rotary	Side rotary maintained	Top plunger - adjustable	Top plunger - pin	Top roller plunger	Top rotary	Wobble - cable	Wobble - cat whisker	Wobble - coil spring	Wobble - plastic rod	Wobble - spring wire
Side plunger - adjustable	Side plunger - pin	Side plunger maintained - pin														
Side roller plunger	Side rotary	Side rotary maintained														
Top plunger - adjustable	Top plunger - pin	Top roller plunger														
Top rotary	Wobble - cable	Wobble - cat whisker														
Wobble - coil spring	Wobble - plastic rod	Wobble - spring wire														
Circuitry	1NC 1NO SPDT snap action, double break 2NC 2NO DPDT center neutral, snap action, double break 2NC 2NO DPDT snap action, double break 2NC 2NO DPDT sequential, snap action, double break															
Electrical	10 A thermal Single and double pole: AC15 A600; DC13 R300 (see table on page 5)															
Housing material	Zinc die-cast with an electrostatic epoxy coating															
Termination types	<table border="0"> <tr> <td>0.5 in - 14NPT conduit</td> <td>0.75 in - 14NPT conduit</td> <td>12 ft cable, 6 ft cable</td> </tr> <tr> <td>PG 13,5 conduit</td> <td>20 mm conduit</td> <td>4-pin micro-style connector</td> </tr> <tr> <td>4-pin mini-style connector</td> <td>5-pin mini-style connector</td> <td>9-pin mini-style connector</td> </tr> <tr> <td>Manifold mounting</td> <td></td> <td></td> </tr> </table>	0.5 in - 14NPT conduit	0.75 in - 14NPT conduit	12 ft cable, 6 ft cable	PG 13,5 conduit	20 mm conduit	4-pin micro-style connector	4-pin mini-style connector	5-pin mini-style connector	9-pin mini-style connector	Manifold mounting					
0.5 in - 14NPT conduit	0.75 in - 14NPT conduit	12 ft cable, 6 ft cable														
PG 13,5 conduit	20 mm conduit	4-pin micro-style connector														
4-pin mini-style connector	5-pin mini-style connector	9-pin mini-style connector														
Manifold mounting																
Housing type	HDLS Plug-in, HDLS Non-Plug-in															
Sealing	IP65/66/67; NEMA 1, 3, 4, 4X, 6, 6P, 12, 13															
Operating temperature	-12°C to 121°C [10°F to 250°F]; optional: -40°C to 121°C [-40°F to 250 °F]															
Agency approvals and standards	UL, CE, CSA, CCC															
UNSPSC code	302119															
UNSPSC commodity	302119 Switches and controls and relays															

MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

Figure 2. Product Nomenclature

LS	A		1A			1	-	
Switch Type	Heads		Body/Basic Switch Codes			Modification Codes		Wobble Actuator
HDLS Series Heavy-Duty Limit Switch * 3 or 4 after the "LS" indicates special metric conduit threads: 3 = PG 13,5 4 = 20 mm	A Side rotary, momentary	L Side rotary, sequential	Plug-in Single Pole	Plug-in Double Pole	Non-plug-in Double Pole	A 4-pin mini-style	PA 5-conductor STOOW-A cable, 8 ft	7A Wobble, plastic
	B Top rotary, momentary	M Side rotary, center neutral	1A Standard switch	2B Standard switch	4L Standard switch	B 5-pin mini-style	XA 9-conductor STOOW-A cable, 8 ft	7M Wobble, wire
	C Top plunger, plain	N Side rotary, maintained	1E Gold contacts	2C Sequential	4M Sequential	C 5-conductor STOW-A cable, 6 ft	PB 5-conductor STOOW-A cable, 30 ft	7N Wobble, cable
	D Top roller plunger	P Side rotary, momentary, low pretravel	1G Gold contacts, manifold mount	2D Center neutral	4N Center neutral	E 4-conductor SJTOW-A cable, 6 ft	1 Clockwise head rotation	8A Cat whisker, 5.5 in steel
	E Side plunger plain, momentary	R Side rotary, momentary, low torque	1H Low force	2R 120 V neon indicator	4S Standard switch golf contacts	J 8-pin mini-style	2 Counterclockwise head rotation	8B Cat whisker, 7.5 in steel
	F Side plunger roller, momentary	S Side rotary, gravity return extr. low torque	5A 120 V neon indicator	2S Standard switch golf contacts	4T Sequential, gold contacts	M 9-conductor STOOW-A cable, 6 ft	3 Head assembled with actuator to right side	8C Coil spring, 5.5 in
	G Side plunger plain, maintained	T Side rotary, momentary, extr. low torque	8A 240 V neon indicator	2T Sequential, gold contacts	4U Center neutral, gold contacts	P 5-conductor STOOW-A cable, 12 ft	4 Head assembled with actuator to left side	8D Cat whisker, plastic
	H Side rotary, momentary, low pretravel & torque	U Side rotary, momentary, 5° max. pretravel	9A 24 V LED indicator	2U Center neutral, gold contacts	7L Standard switch, 1/2 in conduit	R 9-pin mini-style	5 Head assembled with actuator to mounting surface	
	J Wobble stick	V Top plunger, adjustable	Non-plug-in Single Pole	6B Standard switch, 1/2 in conduit	7M Sequential, 1/2 in conduit	S 5-pin micro-style	6 Roller perpendicular to mounting surface	
	K Cat whisker	W Side plunger, momentary, adjustable	3K Standard switch	6C Sequential, 1/2 in conduit	7N Center neutral, 1/2 in conduit	X 9-conductor STOOW-A cable, 12 ft	7 Indicator light wired to normally closed circuit	
				6D Center neutral, 1/2 in conduit	7S Stnd. switch, gold contacts, 1/2 in conduit	BB 3-foot mini-style pigtail, single pole	8 Roller on side plunger in vertical position	
			6R 120 V neon indicator, 1/2 in conduit	7T Sequential, gold contacts, 1/2 in conduit	DD 4-pin micro-style with jumper			
			6S Stnd. switch, gold contacts, 1/2 in conduit	7U Center neutral, gold contacts, 1/2 in conduit				
			6T Sequential, gold contacts, 1/2 in conduit					
			6U Center neutral, gold contacts, 1/2 in conduit					

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

MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

ASSEMBLY MODIFICATIONS • ROTARY

Momentary action rotary switches can be furnished in other than the normal assembled conditions. To specify modifications, add the numbers shown below to the catalog listings.

Modification number suffixes are:

- 1** Clockwise actuation only
- 2** Counterclockwise actuation only
- 3** Shaft to right of switch front
- 4** Shaft to left of switch front
- 5** Shaft to back of switch
- 7** Indicator light wired to NC circuit

For example,

Catalog listing LSA1A**23** is an LSA1A switch adjusted for counterclockwise actuation only. The operating shaft is to the right side of the switch when viewing it from the front (label side). No lever.

Catalog listing LSA8A**7** is an LSA8A switch with the 240 volt indicator light wired to the NC circuit. No lever.

PLUNGER ASSEMBLY MODIFICATIONS

Add the following modification numbers to the catalog listing in the plunger switch:

- 3** Side plunger to right of switch front
- 4** Side plunger to left of switch front
- 5** Side plunger to back of switch
- 6** Roller on top plungers perpendicular to mounting surface
- 7** Light on indicator versions wired to NC circuit
- 8** Roller on side plungers in vertical position

For example,

Catalog listing LSF1A**3** is an LSF1A switch with the side roller plunger to the right side.

PLUG-IN VS. NON-PLUG-IN MODELS

Honeywell HDLS limit switches are offered in two styles: non-plug-in design and plug-in design. With plug-in construction, the wiring and conduit connection is made to the base receptacle. This feature reduces downtime as the plug-in unit can be removed and replaced without disconnecting the wiring or conduit connections to the switch.

HDLS Series Electrical Ratings: 10 A Continuous Carry ac Volts; Pilot Duty: AC15, A600/B600

Electrical Rating	Circuitry	Vac	Amps at 0.35 Power Factor Make	Amps at 0.35 Power Factor Break
A* AC15, A600	SPDT DPDT	120	60	6
		240	30	3
		480	15	1.5
		600	12	1.2
B AC15, B600	Δ	120	30	3
		240	15	1.5
		480	7.5	0.75
		600	6	0.60

Δ Gravity return (Model LSS..) and extra-low torque (Model LST..)

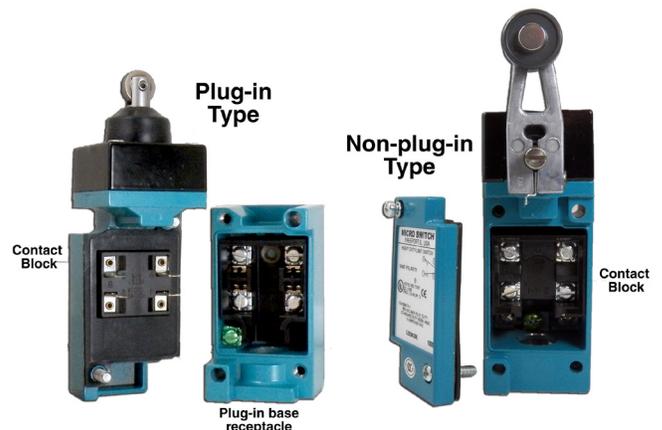
HDLS Series Electrical Ratings: dc Volts; Pilot Duty: DC13, R300

Electrical Rating	Circuitry	Vdc	Make & Break Amps Inductive	Make & Break Amps Resistive
A, B*	SPDT DPDT	120	0.25	0.8
		240	0.15	0.4

* For switches with an indicator light, use only at voltage stated for indicator light.

MICRO SWITCH HDLS limit switches are capable of the following low voltage dc loads

Circuitry	Vdc	Amps Inductive	Amps Resistive
SPDT	24	10	10
DPDT	24	10	10



MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

MICRO SWITCH HDLS SERIES ACTUATOR HEADS

SIDE ROTARY: Available levers provide greater versatility. Heads may be positioned with shaft on any side. All are momentary action except maintained head (LSN Series).



LSA - Standard: 15° maximum pretravel, 5° (single pole) and 7° (double pole) maximum differential travel, 60° minimum overtravel. Operating temperature range from -12°C to 121°C [10°F to 250°F].*

LSR - Low operating torque: 0.19 Nm [1.7 in lb] maximum operating torque. 60° minimum overtravel, 15° maximum pretravel. Operating temperature range from -1°C to 121°C [250°F to 250°F].*

LSN - Maintained contact: Maintained on counterclockwise rotation and reset on clockwise rotation, and vice versa. Operating temperature range from -1°C to 121°C [30°F to 250°F].

LSP - Low differential: 3° (single pole) and 4° (double pole) maximum differential travel. 68° minimum overtravel, 7° maximum pretravel. Operating temperature range from -12°C to 121°C [10°F to 250°F].*

LSH - Low torque, low differential travel: Features low operating torque and narrow differential travel. 68° minimum overtravel. Operating temperature range from -1°C to 121°C [30°F to 250°F].*

LSU - Low pretravel: 5° max. pretravel, 70° min. overtravel. Operating temperature range from -12°C to 121°C [10°F to 250°F].*

LSL - Sequence action: Delayed action between operation of two poles. 48° minimum overtravel. Operating temperature range from -12°C to 121°C [10°F to 250°F].*

LSM - Center neutral: One set of contacts operates on the clockwise rotation, and another set on the counterclockwise rotation. 53° minimum overtravel. Operating temperature range from -1°C to 121°C [30°F to 250°F].*

LST - Momentary action with extra low torque: 12 in oz of operating torque with momentary action. Operating temperature range from -12°C to 121°C [10°F to 250°F].*

LSS - Gravity return: Has no return spring mechanism in actuator head so weight of the lever must provide the return force. Extremely light operating torque (5 in oz max.) is useful in conveyor applications and can be operated by small or lightweight objects. Operating temperature range from -1°C to 121°C [30°F to 250°F].*

TOP ROTARY: Available levers provide greater versatility. Momentary action.



LSB: With 100° minimum overtravel. Various levers that fit side rotary shafts may be used on the top rotary shaft. Switch is ideal when increased overtravel is required. Momentary action. Standard operating temperature range from -1°C to 121°C [30°F to 250°F].*

TOP PLUNGERS: Available with 4,83 mm [0.19 in] minimum overtravel. Top pin plungers are offered in pin plunger, an adjustable plunger, and a roller plunger. Standard temperature range of -12°C to 93°C [10°F to 200°F].



LSC - Top pin plunger: A corrosion-resistant steel plunger for in-line actuating motion. A boot seal on the plunger and a seal between the actuator head and housing keep out coolant, dust, and chips. Momentary action.



LSD - Top roller plunger: A corrosion-resistant steel roller and plunger that is adjustable to 90° angles to accept cam or slide operation from any of two directions. Boot seal on the plunger and a seal between the actuator head and housing. Momentary action.



LSV - Adjustable top pin plunger: Provides easy application and saves on installation time. The operating points of the switch can be adjusted from 52,8 mm to 59,3 mm [2.085 in to 2.335 in]. Seals are the same as the pin plunger. Momentary action.

*(Fluorocarbon seals are preferred for temperatures above 93°C [200°F]).

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MICRO SWITCH HDLS SERIES ACTUATOR HEADS

SIDE PLUNGERS: Available with 4,83 mm [0.19 in] minimum overtravel. Side plungers are offered in plain plunger, an adjustable plain plunger, a roller plunger, and a maintained plunger. Standard temperature range of -12°C to 93°C [10°F to 200°F].

	<p>LSE - Side pin plunger: For actuating motion inline with the plunger travel. Actuating head may be faced in any of four positions, 90° apart. A boot seal on the plunger and a seal between the head and housing keep out coolant, dust, and chips. Momentary action.</p>		<p>LSW - Adjustable side pin plunger: Has the same features of the side plain plunger plus the means to adjust the operating points of the switch from 41 mm to 47,4 mm [1.615 in to 1.865 in]. Seals are same as side pin plunger. Momentary action.</p>
	<p>LSF - Side roller plunger: Fits close quarters under cams and slides. The head may be faced in any of four positions, 90° apart. <u>The roller can be turned vertical or horizontal to the switch.</u> Seals are same as side pin plunger. Momentary action.</p>		<p>LSG - Maintained contact side pin plunger: Offers a maintained contact on actuation of the switch. A reverse motion of the plunger resets the switch. Sealing is the same as other side plunger actuation heads. Operating temperature range is -1°C to 93°C [30°F to 200°F].</p>

WOBBLE LEVER ACTUATING HEADS: Heads come with either a spring wire, Delrin® plastic rod, or steel cat whisker. Any movement of the lever (except pull) will actuate the switch. Standard temperature range of -12°C to 93°C [10°F to 200°F].

				
<p>LSJ1A-7M - Spring wire: 300 Series SST wire may be formed for special applications.</p>	<p>LSJ1A-7N - Flexible actuator: Designed with a tin-plated cable.</p>	<p>LSK1A-8C - Coil spring: Designed with a 300 Series SST coil spring.</p>	<p>LSJ1A-7A - Plastic rod: Recommended where possible scratching or marring by the actuator is to be avoided.</p>	<p>LSK1A-8A - Cat whisker: 300 Series SST actuator designed for low operating force applications.</p>

MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

SPECIAL OPTIONS

High temperature/Chemical-resistant Switches

Completely fluorocarbon (FC)-sealed switches have a full FC body gasket coving the switch cavity. Rotary types have an extra FC seal on the operating shaft, while plunger versions have FC boot seals. They are for use in many applications where the environment includes fire-resistant synthetic fluids. In addition to most all fluids, the FC-sealed switches may be used with such industrial fluids such as Cellulube, Fyrquell, Houghto-Safe, Pydraul, and other special cutting and hydraulic fluids. The additional FC seals also promote longer operating life for rotary-actuated HDLS switches in applications where the temperatures are normally -12°C to 121°C [10°F to 250°F]. If pre-wired with cable, then temperature limits are 105°C [221°F] dry and 60°C [140°F] wet.

To order, insert the additional letters **Y** and **C** in the appropriate places in the standard catalog listing, as shown below:

LSA1A	standard, side-rotary plug-in switch
LSYAC1A	completely FC-sealed version of LSA1A

Low Temperature Switches

All forms of HDLS limit switches are also available in low-temperature construction. Design features include fluorosilicone diaphragm, shaft seals, and external booth seal (where applicable). If pre-wired with a cable, low temperature limits are -10°C [14°F] flex and -30°C [-22°F] non-flex.

To order, insert the additional letters **Y** and **B** in the appropriate places in the standard catalog listing, as shown below:

LSA1A	standard, side-rotary plug-in switch
LSYAB1A	low-temperature version of LSA1A

Conduit Openings

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

LS3 PG13,5

LS4 20 mm

LSA1A	side rotary with 1/2-14 NPT conduit
LS4A1A	side rotary with 20 mm conduit

Table 2. Temperature Limits

	Standard HDLS				Low Temperature HDLS (Fluorosilicone Sealed): Y_B				High Temperature HDLS (Fluorocarbon Sealed)*: Y_C		
	Low Limit		High Limit		Low Limit		High Limit		Low Limit		High Limit
	-12°C [10°F]	-1°C [30°F]	93°C [200°F]	121°C [250°F]	-40°C [-40°F]	-29°C [-20°F]	93°C [200°F]	121°C [250°F]	-12°C [10°F]	-1°C [30°F]	121°C [250°F]
LSA - Side Rotary Momentary	X			X	X			X	X		X
LSB - Top Rotary		X		X		X		X		X	X
LSC - Top Plain Plunger	X		X		X		X		X		X
LSD - Top Roller Plunger	X		X		X		X		X		X
LSE - Side Plain Plunger	X		X		X		X		X		X
LSF - Side Roller Plunger	X		X		X		X		X		X
LSG - Side Plunger, Maintained		X	X			X	X			X	X
LSH - Side Rotary, Low PT, Low Torque		X		X		X		X		X	X
LSJ - Wobble Stick	X		X		X			X	X		X
LSK - Cat Whisker	X		X			X		X	X		X
LSL - Side Rotary, Sequence	X			X	X			X	X		X
LSM - Side Rotary, Center Neutral		X		X	X			X		X	X
LSN - Side Rotary, Maintained		X		X		X		X		X	X
LSP - Side Rotary, Low Pretravel	X			X	X			X	X		X
LSR - Side Rotary, Low Torque		X		X		X		X		X	X
LSU - 5° Low Pretravel	X			X	X			X	X		X
LSV - Top Adjustable Plunger	X		X		X		X		X		X
LSW - Side Adjustable Plunger	X		X		X		X		X		X

* For HDLS application wherein the upper temperature limit is normally above 93°C [200°F], much longer switch life can be obtained by using completely fluorocarbon-sealed switches rather than standard HDLS.

MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

Factory-sealed Pre-wired Limit Switches

Features

- Pre-wired with 6 ft STOOW-A cable or other 4, 5, or 9-pin connectors (other lengths available)
- Wire entry area completely factory sealed
- (Cable version) NEMA 1, 6, 6P, 12; IP67
- (Connector version) NEMA 1, 6, 6P, 12, 13; IP67

How to order:

To order factory sealed switches, add the modification codes shown below to the standard HDLS listings (reference product nomenclature on page 4):

Circuitry	Cable	1/2 in connector style
SPDT	C	A (4-pin mini-style) B (5-pin mini-style) DD (4-pin micro-style)
DPDT	M	R (9-pin mini-style)

Examples:

LSA1A**C** = LSA1A with 6-feet of 5-conductor STOW-A cable

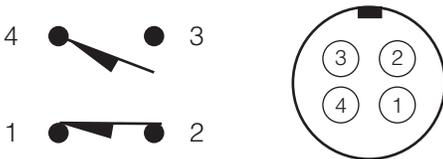
LSJ2B**M**-7N = LSJ2B-7N with 6 feet of 9-conductor STOOW-A cable

LSA1A**B** = LSA1A with a 5-pin mini-style connector

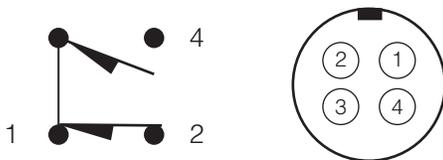
LSA1A**DD** = LSA1A with a 4-pin micro-style connector

NOTE: Connector versions available with 1/2 in conduit only.

Wiring Diagram (Style A)



Wiring Diagram (Style DD)

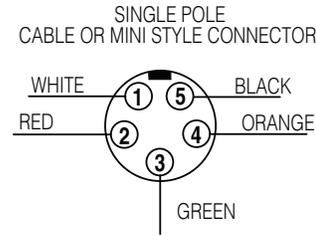


Pin 3 not connected

Wiring Diagrams (Styles B&G)

Connectors = Numbers (mini-style)

Cables = Colors



Single-Pole Circuitry

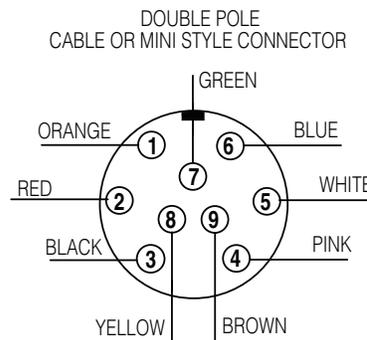


3 = Ground

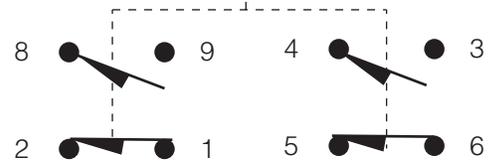
Electrical Ratings: Connector Versions

Mini	600 VAC, 7A
Micro	300 VAC, 3A

Wiring Diagrams (Styles M&R)



Double-Pole Circuitry



7 = Ground

MICRO SWITCH Heavy-Duty Limit Switch, HDLS Series

Table 3. Side Rotary • MICRO SWITCH HDLS Series Order Guide/Recommended Listings



Description	Standard (LSA)		Low Differential (LSP)		5° Pretravel (LSU)	
	Standard		Low pretravel & low differential travel		Low pretravel	
	SPDT	DPDT	SPDT	DPDT	SPDT	DPDT
Contact closed ■						
Contact open □						
Pretravel	15° max.	15° max.	9° max.	9° max.	5° max.	5° max.
Different. travel	5° max.	7° max.	3° max.	4° max.	3° max.	4° max.
Overtravel	60° min.	60° min.	66° min.	66° min.	70° min.	70° min.
Oper. torque	0,45 Nm [4 in-lb] max.		0,45 Nm [4 in-lb] max.		0,45 Nm [4 in-lb] max.	
Action	CW & CCW (Momentary)					
Op. temp range ³	-12°C to 121°C [10°F to 250°F] (for low temp, high temp, or preleaded versions, see pages 8-9)					

Circuitry	Contacts	Body Style ²	Conduit (NPT)	Options			
	Silver	Plug-in	0.5 in		LSA1A	LSP1A	LSU1A
	Gold ⁴	Plug-in	0.5 in		LSA1E	LSP1E	LSU1E
	Silver	Plug-in	0.5 in	120 V Ind. lite ¹	LSA5A	LSP5A	LSU5A
	Silver	Plug-in	0.5 in	240 V Ind. lite ¹	LSA8A	LSP8A	LSU8A
	Silver	Plug-in	0.5 in	24 V LED 1.5 mA max. auto polarity ¹	LSA9A	LSP9A	LSU9A
	Silver	Non-plug-in	0.5 in		LSA3K	LSP3K	LSU3K
	Silver	Plug-in	0.75 in		LSA2B	LSP2B	LSU2B
	Gold ⁴	Plug-in	0.75 in		LSA2S	-	-
	Silver	Plug-in	0.5 in		LSA6B	LSP6B	LSU6B
	Gold ⁴	Plug-in	0.5 in		LSA6S	-	-
	Silver	Plug-in	0.75 in	120 V Ind. lite ¹	LSA2R	LSP2R	LSU2R
	Silver	Non-plug-in	0.75 in		LSA4L	LSP4L	LSU4L
	Silver	Non-plug-in	0.5 in		LSA7L	LSP7L	LSU7L

¹ Use at voltage indicated for light. Wired to NO circuit. Upper temperature limit for lighted units is 93°C [200°F]

² Plug-in listings include base receptacle

³ Completely fluorocarbon sealed switches are preferred for use in temperatures above 93°C [200°F]

⁴ Gold-plated contacts

NOTE: Same polarity each pole.

To order a fluorocarbon sealed switch, insert the letters **Y** and **C** into the catalog listing as follows. The LSA1A limit switch is changed to a LSY**AC**1A limit switch.

To order a low temperature, fluorosilicone sealed switch, insert the letters **Y** and **B** into the catalog listing as follows. The LSA1A limit switch is changed to a LSY**AB**1A limit switch.