

## HMS/HLS/HNS Series Heavy Duty Limit Switches

### Features

- Heavy duty zinc die cast body or corrosion-resistant stainless steel body
- Conform to EN 60947-5-1, IEC 60947-5-1, UL508, NEMA250, CSA22.2 Standards
- Wide range of actuator available
- High repeatability (0.03mm for linear travel)
- Available in three body styles: compact, standard and Non-plug-in

### Specifications

Operating Speed	0.05mm-2m/sec
Rated Current/Voltage	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Service Life	Mechanically 10 millions (operations) Electrically 1 million (operations)
Operating Temperature	-28.9~+85°C (-20~185°F) -28.9~+121°C (-20~250°F) for High temp. -40~+121°C (-40~250°F) for Low temp.
Vibration Resistance	25gn (10..150 Hz, 11ms) per IEC60068-2-6
Shock Resistance	60gn (9ms) per IEC 60068-2-27
Dielectric Strength	2200VAC for 1 minute
Short Circuit Protection	10A fuse
Terminal Wire Size	12-22AWG (2.05-0.644mm <sup>2</sup> )
Degree of Protection	IP 67 conforming to IEC 60529, NEMA Types 2, 4, 6, 6P, 12, 13

### Electrical Ratings

IEC 60947-5-1 / EN 90947-5-1							
Designation & Utilization Category	Rated operational current Ie (A) at rated operational voltage Ue					VA rating	
	120V	240V	380V	480V	600V	Make	Break
AC15 A600	6A	3A	1.9A	1.5A	1.2A	7200	720
DC13 Q300	125VDC	250VDC	0.55	0.27		69	69

**HMS**  
Compact



**HLS**  
Standard



**HNS**  
Non-plug-in



**HNS**  
Stainless Steel



### Selection Guide:

<b>HLS</b>	-	<b>1</b>		<b>A</b>	-	<b>04</b>		<b>A</b>	-	<b>F</b>	-	<b>UR</b>	-	<b>AU</b>	-	<b>SS</b>	
Body Styles		Contact Block		Conduit		Head Style		Applied on to Lever Arms Style		Temperature Option		Indicator Light		Gold Contacts (Optional)		Full Stainless Steel Housing (Optional for HNS)	Rotary Head Shaft Diameter
<b>HMS:</b> Compact		1: SPDT (1NO/1NC) Snap action		A: 1/2" NPT		2 digit or 2 digit + 1 letter		B: Standard		Blank: Standard		Blank: None				Blank: 11.0mm	
<b>HLS:</b> Standard		2: DPDT (2NO/2NC) Snap action		F: 3/4" NPT				A: High precision		F: High temp.		UR: Red indicator light universal voltage(12V-270V)				(AB): 8.0mm	
<b>HNS:</b> Non-plug-in		3: DPDT (2NO/2NC) 2 stages						N: Low torque		FS: Low temp.						(CH): 7.0mm	
		4: DPDT (2NO/2NC) center neutral operation						D: High precision low torque								(HW): 7.3mm	
		5: 4NO Slow action (for HNS only)						C: Maintained									
		6: 3NO/1NC Slow action (for HNS only) ⊕						TB: Neutral position									
		7: 2NO/2NC Slow action (for HNS only) ⊕						TA: Neutral position (high precision)									
		8: 1NO/3NC Slow action (for HNS only) ⊕						E: 360° rotation									
		9: 4NC Slow action (for HNS only) ⊕															

## HMS/HLS Series Heavy Duty Limit Switches

### Plunger type

01 Styles



11 Styles



12 Styles



13 Styles



05 Styles



### Side Plunger type

11H Styles



12H Styles



13H Styles

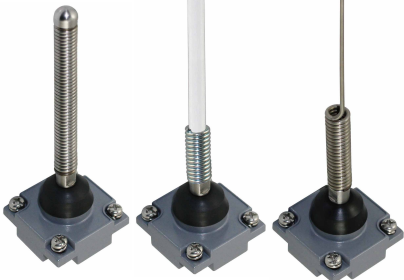


### Side Plunger (Maintained) type

10H Styles



### Spring coil type



00

66

69

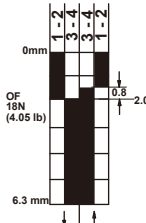
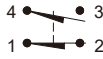
### Cat Whisker type

68 Styles



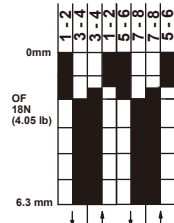
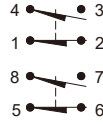
HMS-1A/  
HLS-1A/  
HNS-1A

1NO/1NC



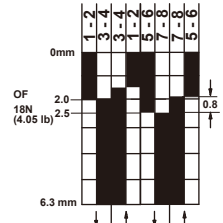
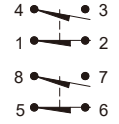
HLS-2A/  
HNS-2A

2NO/2NC

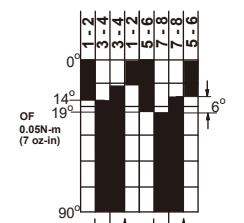
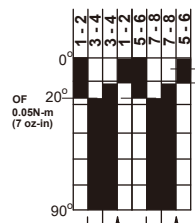
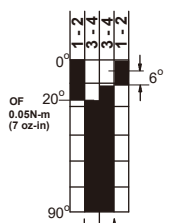
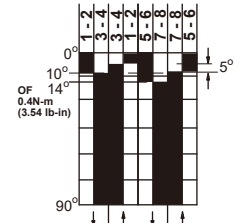
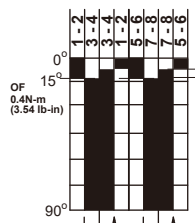
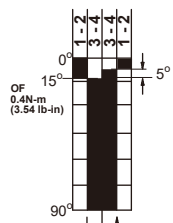
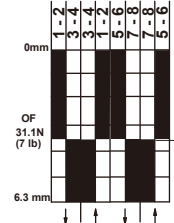
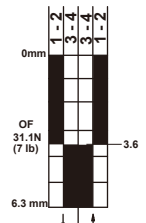
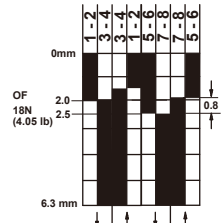
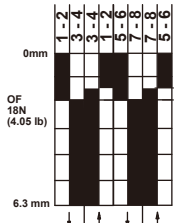
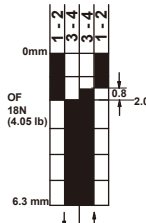


HLS-3A/  
HNS-3A

2NO/2NC(2-stages)

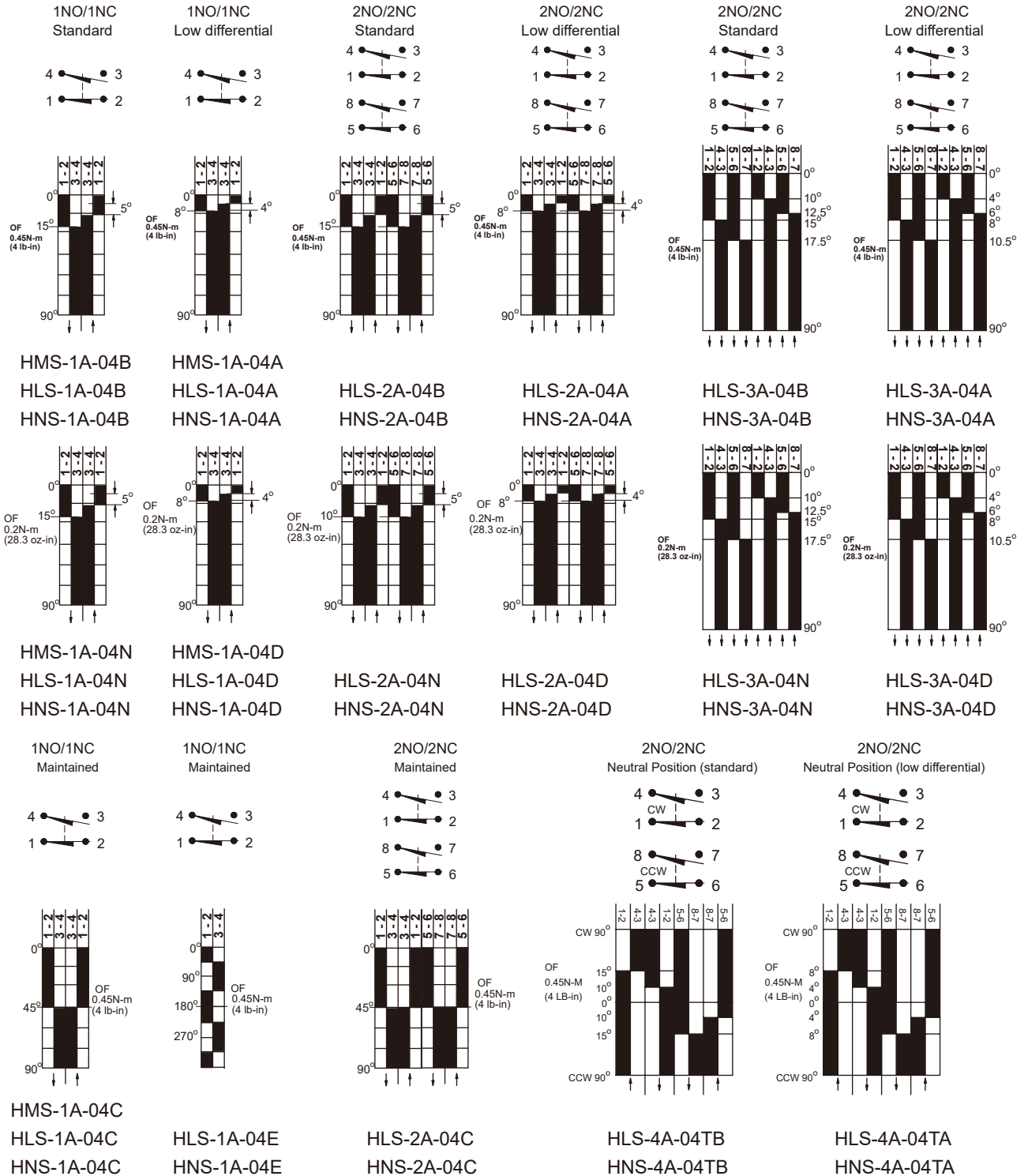


\* Note: Operating Force (OF) is 31.1N(7 lb)for Plunger type 01 style.



## HMS/HLS Series Heavy Duty Limit Switches

### Travel Diagram for Rotary Lever Styles



## HMS Series Heavy Duty Limit Switches

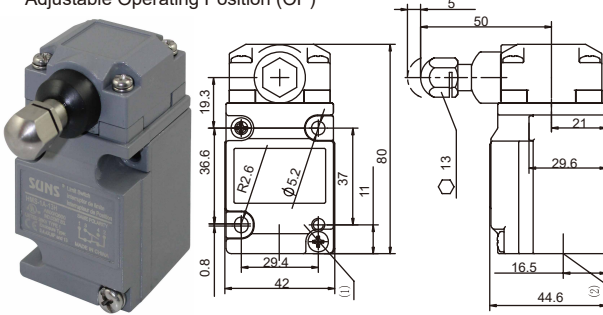
<p><b>Order Code</b> HMS-1A-11: 1NO/1NC</p>	<p><b>Order Code</b> HMS-1A-12: 1NO/1NC</p>
<p>Adjustable Operating Position (OP)</p>	
<p><b>Order Code</b> HMS-1A-13: 1NO/1NC</p>	<p><b>Order Code</b> HMS-1A-01: 1NO/1NC</p>
<p><b>Order Code</b> HMS-1A-11H: 1NO/1NC</p>	<p><b>Order Code</b> HMS-1A-12H: 1NO/1NC * Note: roller can be adjust to cross orientation</p>

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

## HMS Series Heavy Duty Limit Switches

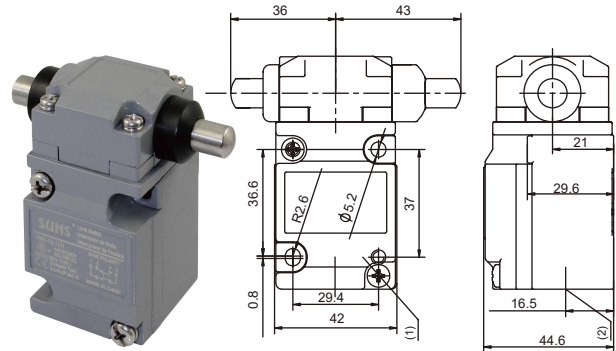
Adjustable Operating Position (OP)



Order Code

HMS-1A-13H: 1NO/1NC

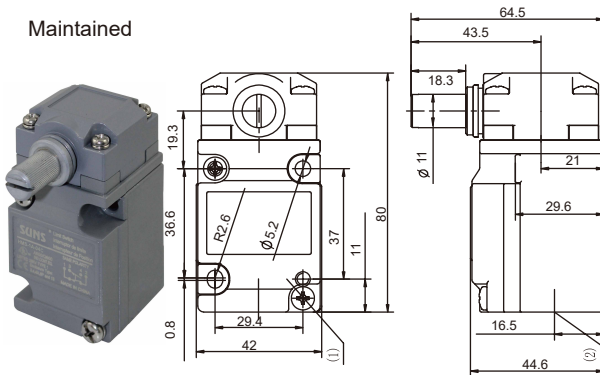
Maintained



Order Code

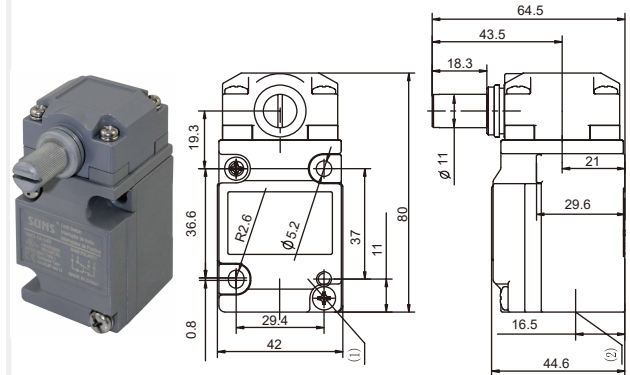
HMS-1A-10H: 1NO/1NC

Maintained



Order Code

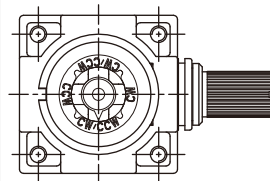
HMS-1A-04C: 1NO/1NC



Order Code

HMS-1A-04B: 1NO/1NC Standard Pretravel  
 HMS-1A-04A: 1NO/1NC Low Pretravel  
 HMS-1A-04N: 1NO/1NC Low Torque  
 HMS-1A-04D: 1NO/1NC Low Torque, Low Pretravel

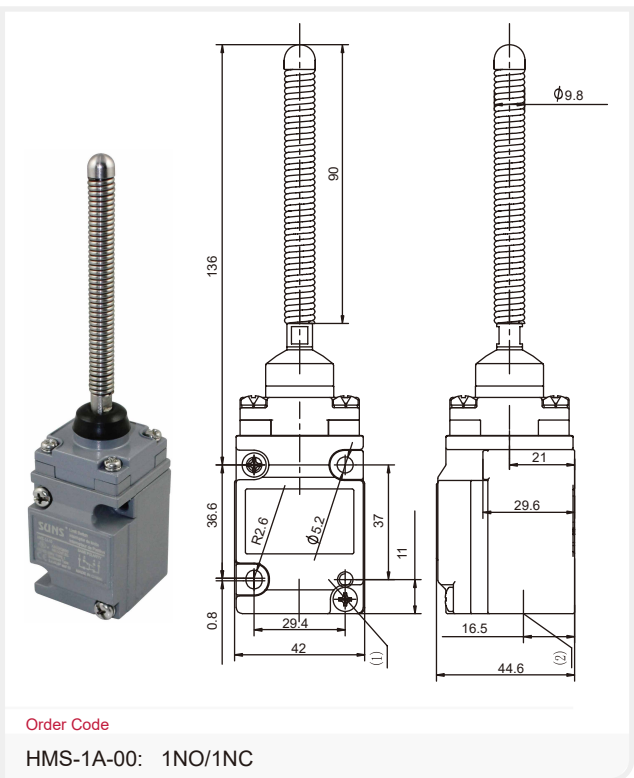
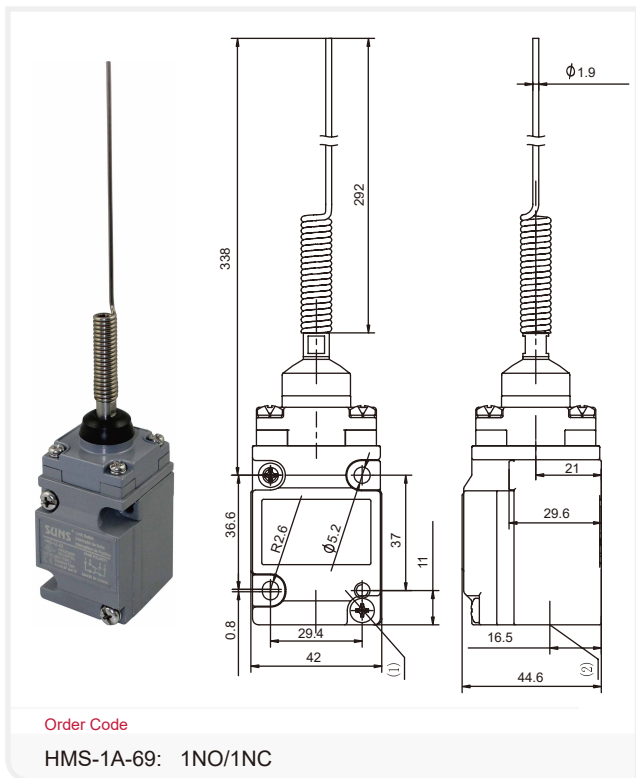
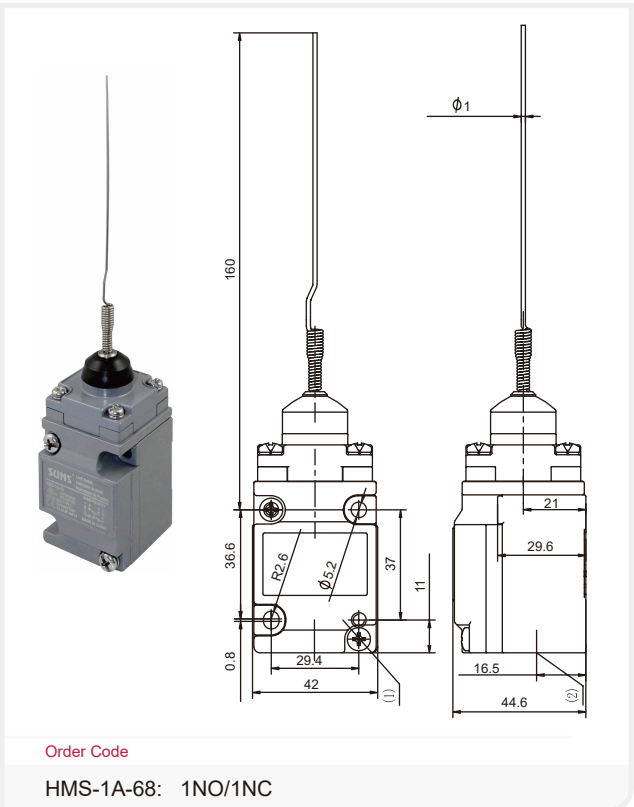
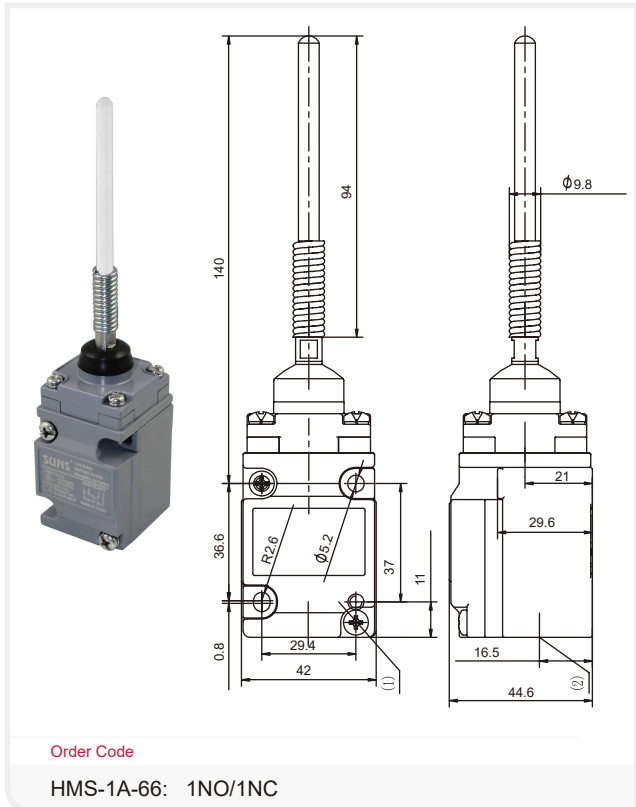
Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

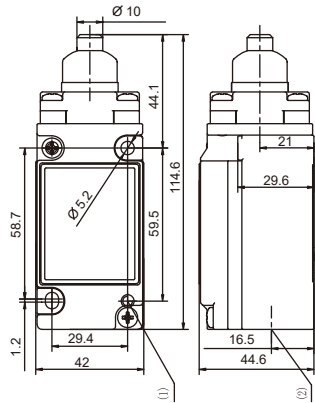
(2) Conduit opening type: 1/2NPT

## HMS Series Heavy Duty Limit Switches



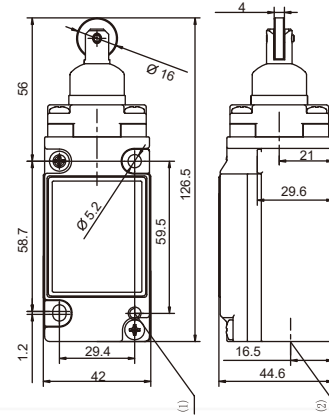
Note. (1) 2 x 10-24 UNC hole on the back for back side mounting. (2) Conduit opening type: 1/2NPT

## HLS Series Heavy Duty Limit Switches



**Order Code**

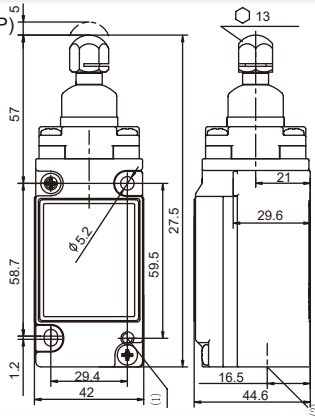
- HLS-1A-11: 1NO/1NC
- HLS-2A-11: 2NO/2NC
- HLS-3A-11: 2NO/2NC (2-stage)



**Order Code**

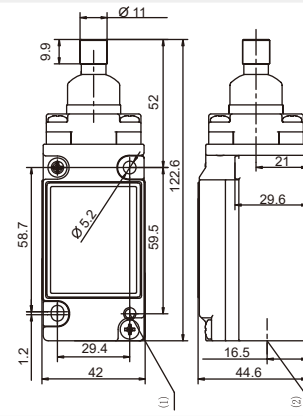
- HLS-1A-12: 1NO/1NC
- HLS-2A-12: 2NO/2NC
- HLS-3A-12: 2NO/2NC (2-stage)

**Adjustable Operating Position (OP)**



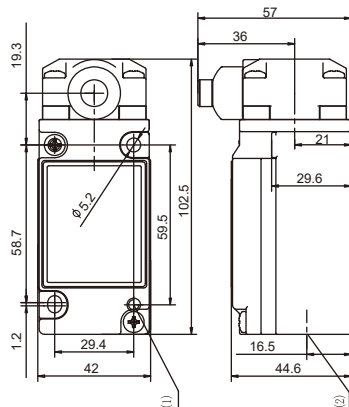
**Order Code**

- HLS-1A-13: 1NO/1NC
- HLS-2A-13: 2NO/2NC
- HLS-3A-13: 2NO/2NC (2-stage)



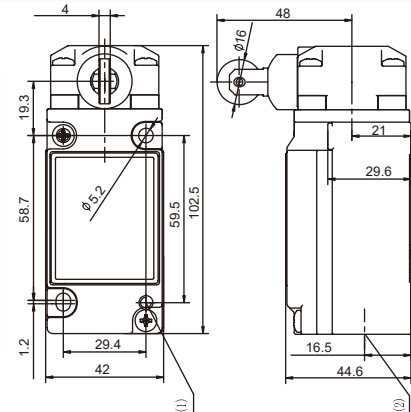
**Order Code**

- HLS-1A-01: 1NO/1NC
- HLS-2A-01: 2NO/2NC
- HLS-3A-01: 2NO/2NC (2-stage)



**Order Code**

- HLS-1A-11H: 1NO/1NC
- HLS-2A-11H: 2NO/2NC
- HLS-3A-11H: 2NO/2NC (2-stage)



\* Note: roller can be adjust to cross orientation

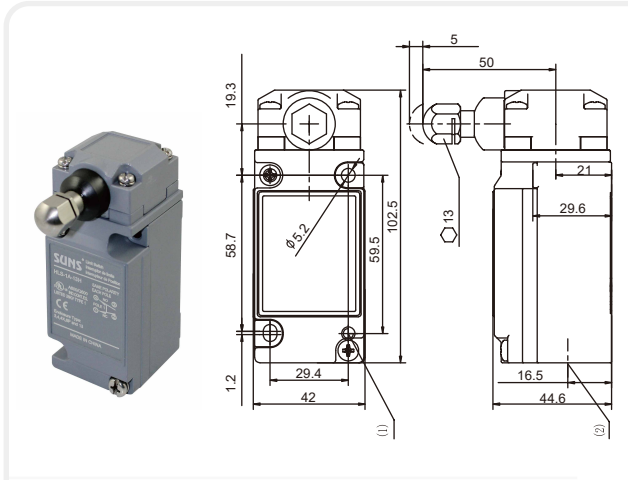
**Order Code**

- HLS-1A-12H: 1NO/1NC
- HLS-2A-12H: 2NO/2NC
- HLS-3A-12H: 2NO/2NC (2-stage)

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

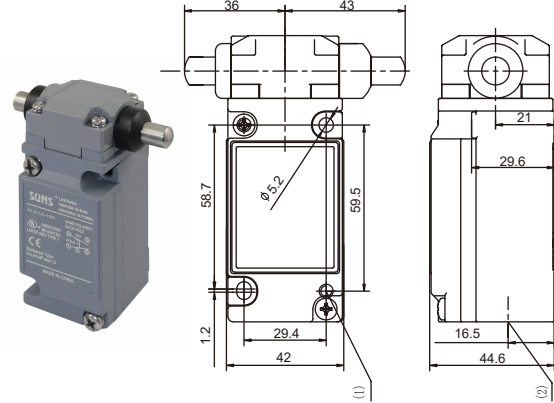
## HLS Series Heavy Duty Limit Switches



**Order Code**

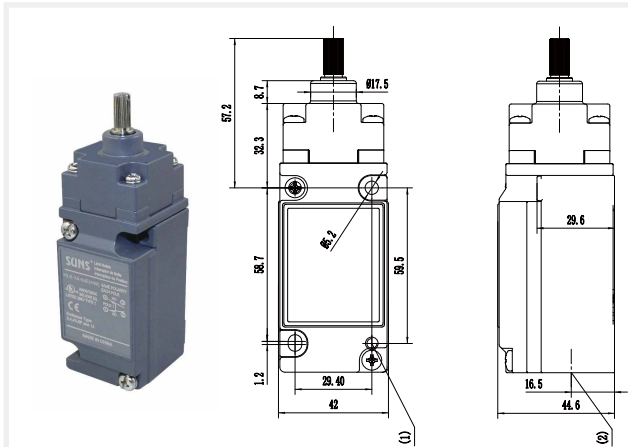
- HLS-1A-13H: 1NO/1NC
- HLS-2A-13H: 2NO/2NC
- HLS-3A-13H: 2NO/2NC (2-stage)

**Maintained**



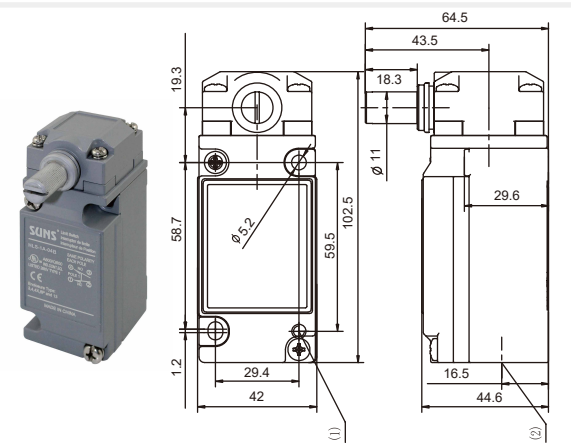
**Order Code**

- HLS-1A-10H: 1NO/1NC
- HLS-2A-10H: 2NO/2NC



**Order Code**

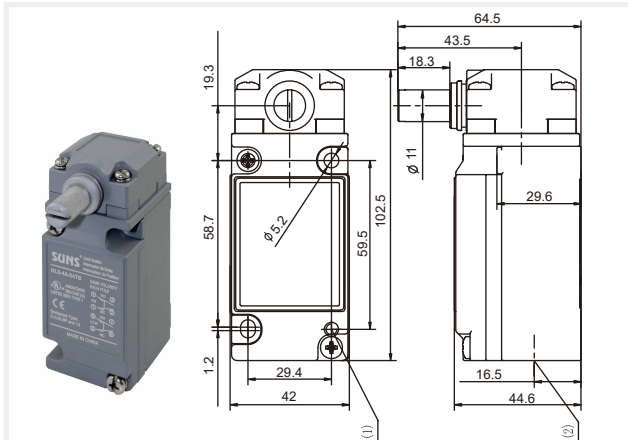
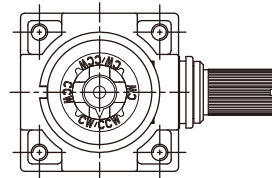
- HLS-1A-05B(HW): 1NO/1NC
- HLS-2A-05B(HW): 2NO/2NC



**Order Code**

- HLS-1A-04B: 1NO/1NC Standard Pretravel
- HLS-1A-04A: 1NO/1NC Low Pretravel
- HLS-1A-04N: 1NO/1NC Low Torque
- HLS-1A-04D: 1NO/1NC Low Torque, Low Pretravel
- HLS-2A-04B: 2NO/2NC Standard Pretravel
- HLS-2A-04A: 2NO/2NC Low Differential Travel
- HLS-2A-04N: 2NO/2NC Low Torque
- HLS-2A-04D: 2NO/2NC Low Torque, Low Pretravel
- HLS-3A-04B: 2NO/2NC (2-stage) Standard Pretravel
- HLS-3A-04A: 2NO/2NC (2-stage) Low Pretravel
- HLS-3A-04N: 2NO/2NC (2-stage) Low Torque
- HLS-3A-04D: 2NO/2NC (2-stage) Low Torque, Low Differential Travel

Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



**Neutral Position**

- HLS-4A-04TA: 2NO/2NC (Low Pretravel)
- HLS-4A-04TB: 2NO/2NC

**Maintained**

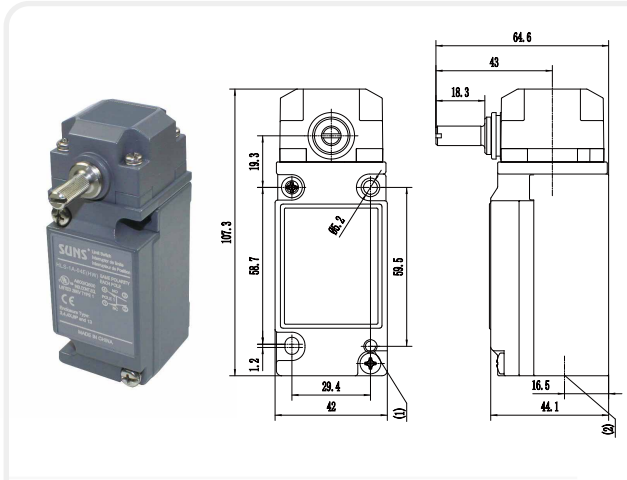
- HLS-1A-04C: 1NO/1NC
- HLS-2A-04C: 2NO/2NC

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

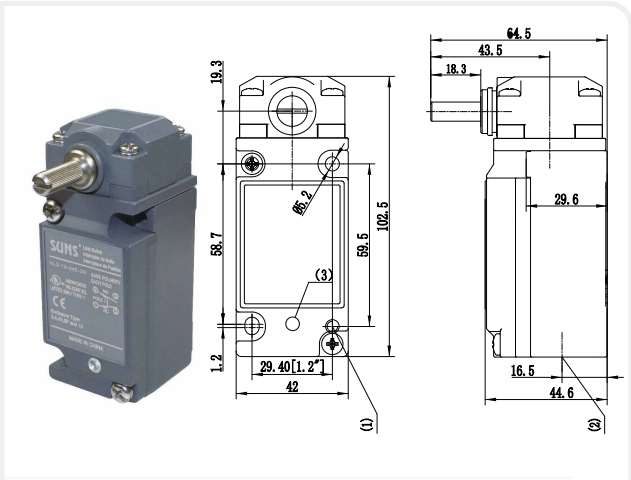
(2) Conduit opening type: 1/2NPT



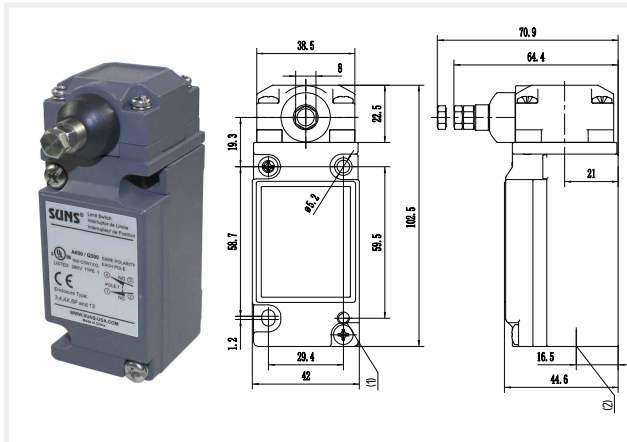
## HLS Series Heavy Duty Limit Switches



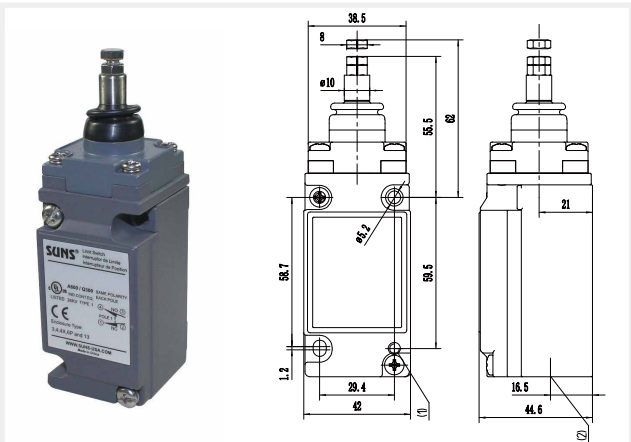
**Order Code**  
 HLS-1A-04E: 1NO/1NC 360° Maintained Rotation  
 HLS-2A-04E: 2NO/2NC 360° Maintained Rotation



**Order Code**  
 HLS-1A-04B-UR(HW): 1NO/1NC W/ Red LED(12V-270V)  
 HLS-2A-04B-UR(HW): 2NO/2NC W/ Red LED(12V-270V)



**Order Code**  
 HLS-1A-13H(OM): 1NO/1NC Adjustable Plunger  
 HLS-2A-13H(OM): 2NO/2NC Adjustable Plunger



**Order Code**  
 HLS-1A-13(OM): 1NO/1NC Adjustable Plunger  
 HLS-2A-13(OM): 2NO/2NC Adjustable Plunger

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.  
 (2) Conduit opening type: 1/2 NPT  
 (3) LED indicator light

## HLS Series Heavy Duty Limit Switches

Technical drawing showing three views of the HLS Series Heavy Duty Limit Switches (66) with a white roller. Dimensions include: total height 210.5, roller length 94, mounting hole offset 1.2, base width 42, and terminal spacing 29.4. Order codes are listed below.

**Order Code**  
 HLS-1A-66: 1NO/1NC  
 HLS-2A-66: 2NO/2NC  
 HLS-3A-66: 2NO/2NC (2-stage)

Technical drawing showing three views of the HLS Series Heavy Duty Limit Switches (68) with a thin wire roller. Dimensions include: total height 230.5, mounting hole offset 1.2, base width 42, and terminal spacing 29.4. Order codes are listed below.

**Order Code**  
 HLS-1A-68: 1NO/1NC  
 HLS-2A-68: 2NO/2NC  
 HLS-3A-68: 2NO/2NC (2-stage)

Technical drawing showing three views of the HLS Series Heavy Duty Limit Switches (69) with a roller and a long threaded stem. Dimensions include: total height 408.5, roller length 292, mounting hole offset 1.2, base width 42, and terminal spacing 29.4. Order codes are listed below.

**Order Code**  
 HLS-1A-69: 1NO/1NC  
 HLS-2A-69: 2NO/2NC  
 HLS-3A-69: 2NO/2NC (2-stage)

Technical drawing showing three views of the HLS Series Heavy Duty Limit Switches (00) with a roller and a long threaded stem. Dimensions include: total height 206.2, roller length 90, mounting hole offset 1.2, base width 42, and terminal spacing 29.4. Order codes are listed below.

**Order Code**  
 HLS-1A-00: 1NO/1NC  
 HLS-2A-00: 2NO/2NC  
 HLS-3A-00: 2NO/2NC (2-stage)

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

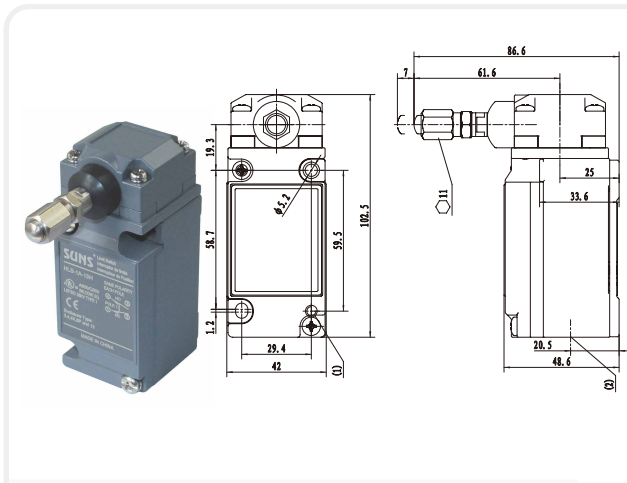
## HLS (AB) Series Heavy Duty Limit Switches

<p><b>Order Code</b></p> <p>HLS-1A-11(AB): 1NO/1NC                      HLS-2A-11(AB): 2NO/2NC                      HLS-3A-11(AB): 2NO/2NC (2-stage)</p>	<p><b>Order Code</b></p> <p>HLS-1A-12(AB): 1NO/1NC                      HLS-2A-12(AB): 2NO/2NC                      HLS-3A-12(AB): 2NO/2NC (2-stage)</p>
<p>Adjustable Operating Position (OP)</p>	
<p><b>Order Code</b></p> <p>HLS-1A-13(AB): 1NO/1NC                      HLS-2A-13(AB): 2NO/2NC                      HLS-3A-13(AB): 2NO/2NC (2-stage)</p>	<p><b>Order Code</b></p> <p>HLS-1A-01(AB): 1NO/1NC                      HLS-2A-01(AB): 2NO/2NC                      HLS-3A-01(AB): 2NO/2NC (2-stage)</p>
<p><b>Order Code</b></p> <p>HLS-1A-11H(AB): 1NO/1NC                      HLS-2A-11H(AB): 2NO/2NC                      HLS-3A-11H(AB): 2NO/2NC (2-stage)</p>	<p><b>Order Code</b></p> <p>HLS-1A-12H(AB): 1NO/1NC                      HLS-2A-12H(AB): 2NO/2NC                      HLS-3A-12H(AB): 2NO/2NC (2-stage)</p>

\* Note: roller can be adjust to cross orientation

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting. (2) Conduit opening type: 1/2NPT

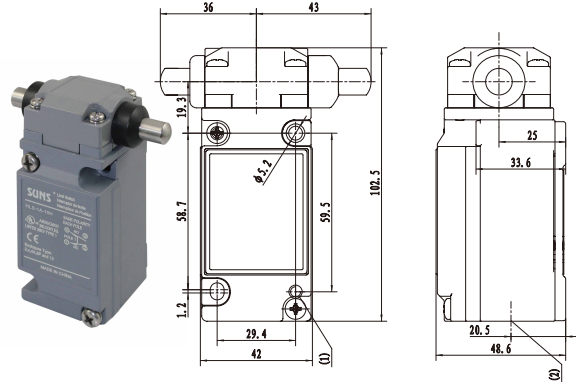
## HLS(AB) Series Heavy Duty Limit Switches



**Order Code**

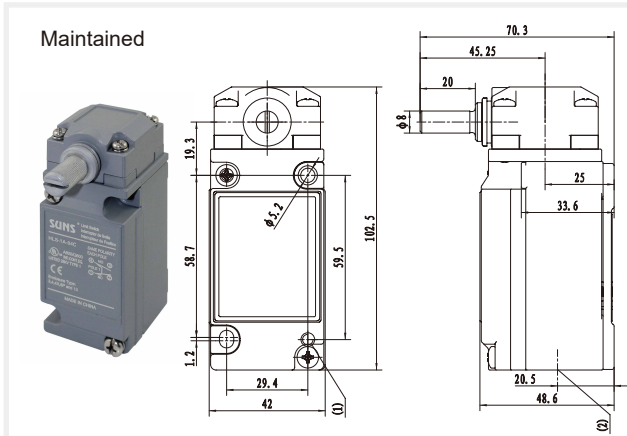
- HLS-1A-13H(AB): 1NO/1NC
- HLS-2A-13H(AB): 2NO/2NC
- HLS-3A-13H(AB): 2NO/2NC (2-stage)

**Maintained**



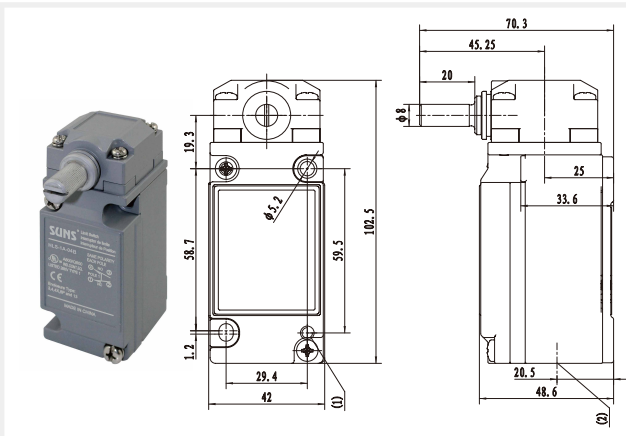
**Order Code**

- HLS-1A-10H(AB): 1NO/1NC
- HLS-2A-10H(AB): 2NO/2NC



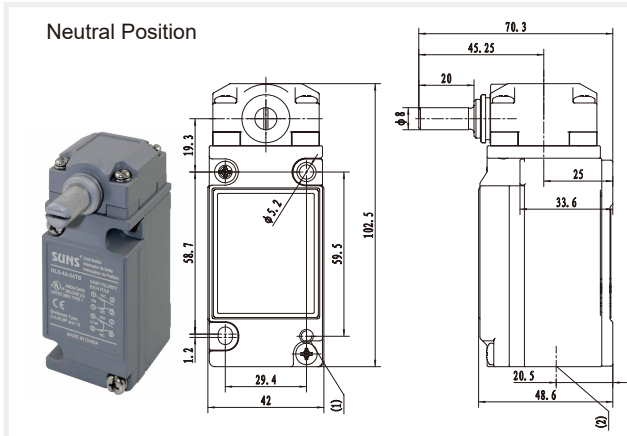
**Order Code**

- HLS-1A-04C(AB): 1NO/1NC
- HLS-2A-04C(AB): 2NO/2NC



**Order Code**

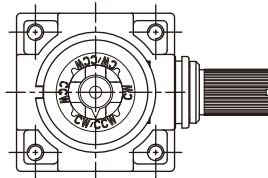
- HLS-1A-04B(AB): 1NO/1NC Standard Pretravel
- HLS-1A-04A(AB): 1NO/1NC Low Pretravel
- HLS-1A-04N(AB): 1NO/1NC Low Torque
- HLS-1A-04D(AB): 1NO/1NC Low Torque, Low Pretravel
- HLS-2A-04B(AB): 2NO/2NC Standard Pretravel
- HLS-2A-04A(AB): 2NO/2NC Low Differential Travel
- HLS-2A-04N(AB): 2NO/2NC Low Torque
- HLS-2A-04D(AB): 2NO/2NC Low Torque, Low Pretravel
- HLS-3A-04B(AB): 2NO/2NC (2-stage) Standard Pretravel
- HLS-3A-04A(AB): 2NO/2NC (2-stage) Low Pretravel
- HLS-3A-04N(AB): 2NO/2NC (2-stage) Low Torque
- HLS-3A-04D(AB): 2NO/2NC (2-stage) Low Torque, Low Differential Travel



**Order Code**

- HLS-4A-04TA(AB): 2NO/2NC (Low Pretravel)
- HLS-4A-04TB(AB): 2NO/2NC

Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting. (2) Conduit opening type: 1/2NPT

## HLS (AB) Series Heavy Duty Limit Switches

**Order Code**  
 HLS-1A-66(AB): 1NO/1NC  
 HLS-2A-66(AB): 2NO/2NC  
 HLS-3A-66(AB): 2NO/2NC (2-stage)

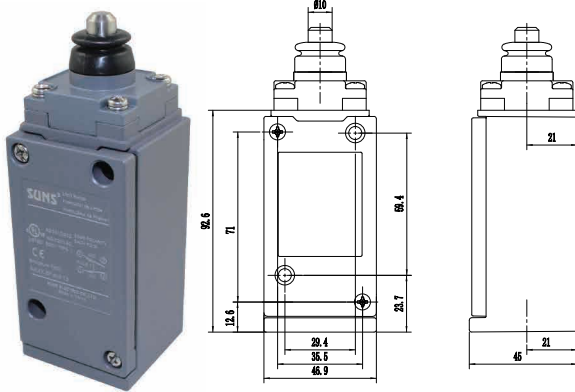
**Order Code**  
 HLS-1A-68(AB): 1NO/1NC  
 HLS-2A-68(AB): 2NO/2NC  
 HLS-3A-68(AB): 2NO/2NC (2-stage)

**Order Code**  
 HLS-1A-69(AB): 1NO/1NC  
 HLS-2A-69(AB): 2NO/2NC  
 HLS-3A-69(AB): 2NO/2NC (2-stage)

**Order Code**  
 HLS-1A-00(AB): 1NO/1NC  
 HLS-2A-00(AB): 2NO/2NC  
 HLS-3A-00(AB): 2NO/2NC (2-stage)

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting. (2) Conduit opening type: 1/2NPT

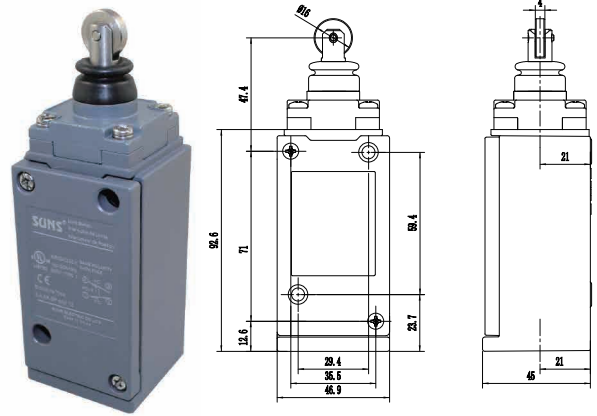
## HNS Series Heavy Duty Limit Switches



Order Code

HNS-1A-11: 1NO/1NC

HNS-2A-11: 2NO/2NC

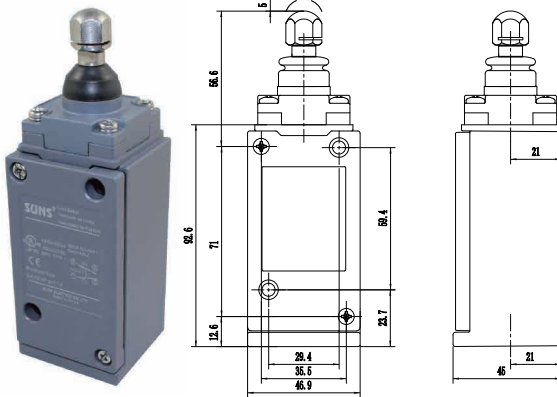


Order Code

HNS-1A-12: 1NO/1NC

HNS-2A-12: 2NO/2NC

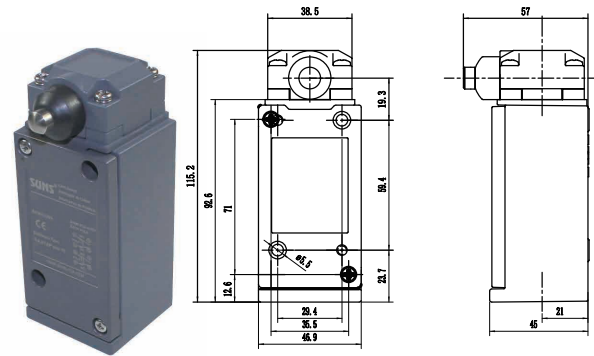
Adjustable Operating Position (OP)



Order Code

HNS-1A-13: 1NO/1NC

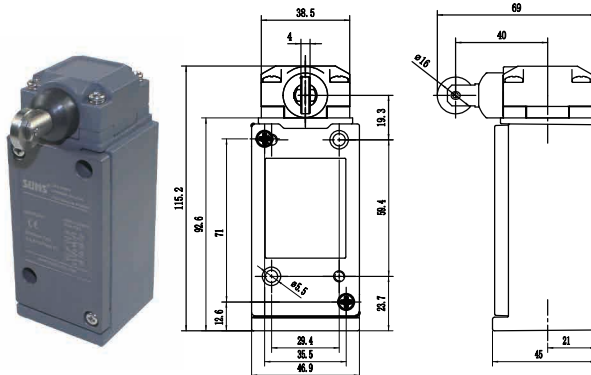
HNS-2A-13: 2NO/2NC



Order Code

HNS-1A-11H: 1NO/1NC

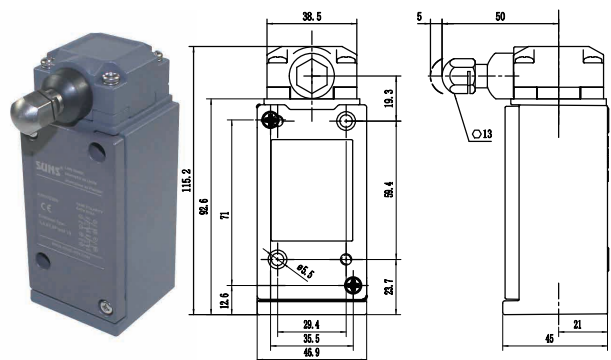
HNS-2A-11H: 2NO/2NC



Order Code

HNS-1A-12H: 1NO/1NC

HNS-2A-12H: 2NO/2NC



Order Code

HNS-1A-13H: 1NO/1NC

HNS-2A-13H: 2NO/2NC

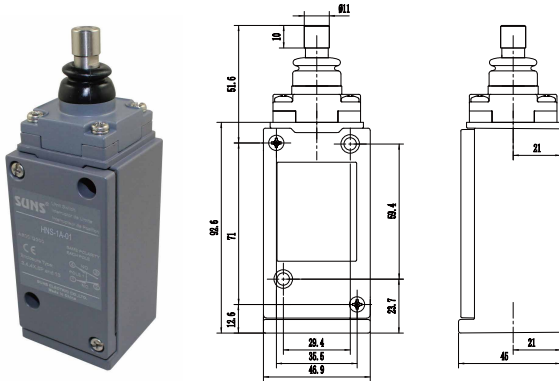
\* Note: roller can be adjust to cross orientation

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

## HNS Series Heavy Duty Limit Switches

### Adjustable Operating Position (OP)

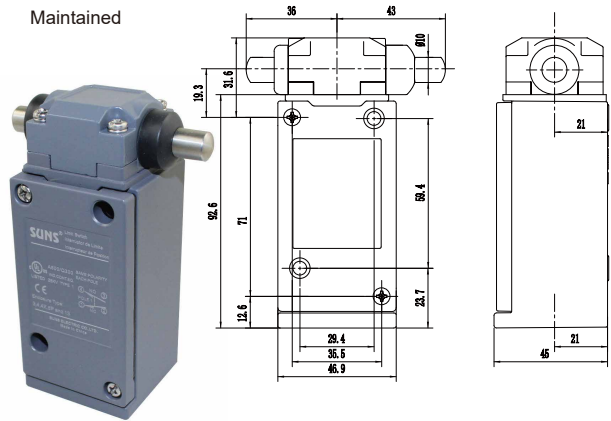


**Order Code**

HNS-1A-01: 1NO/1NC

HNS-2A-01: 2NO/2NC

### Maintained

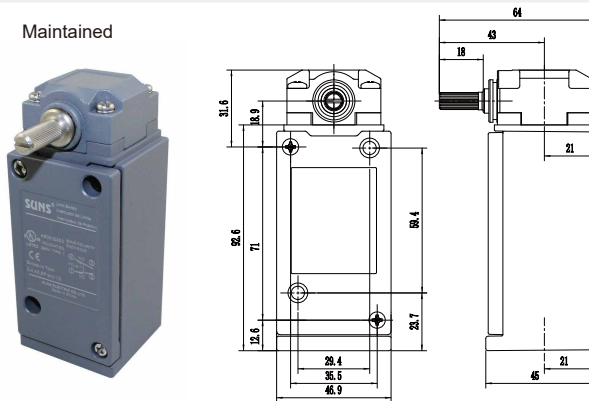


**Order Code**

HNS-1A-10H: 1NO/1NC

HNS-2A-10H: 2NO/2NC

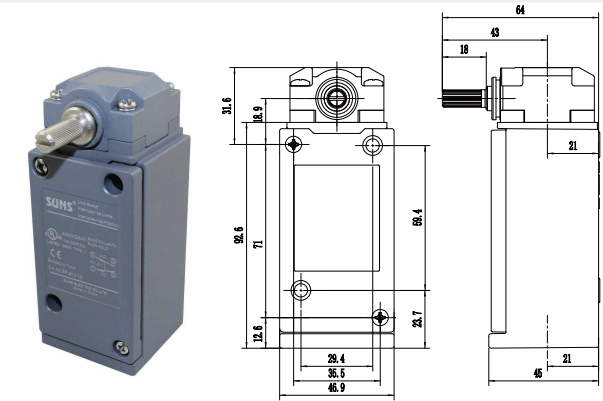
### Maintained



**Order Code**

HNS-1A-04C: 1NO/1NC

HNS-2A-04C: 2NO/2NC



**Order Code**

HNS-1A-04B: 1NO/1NC Standard Pretravel

HNS-1A-04A: 1NO/1NC Low Pretravel

HNS-1A-04N: 1NO/1NC Low Torque

HNS-1A-04D: 1NO/1NC Low Torque, Low Pretravel

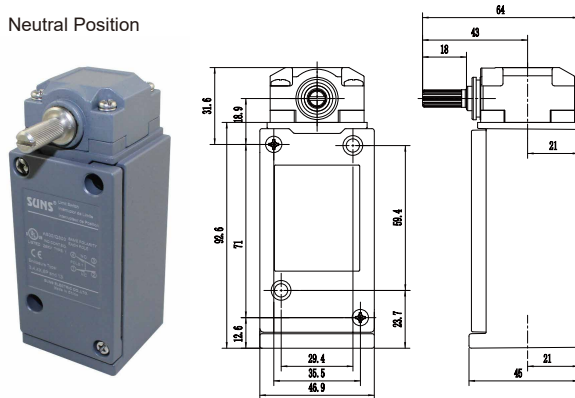
HNS-2A-04B: 2NO/2NC Standard Pretravel

HNS-2A-04A: 2NO/2NC Low Pretravel

HNS-2A-04N: 2NO/2NC Low Torque

HNS-2A-04D: 2NO/2NC Low Torque, Low Pretravel

### Neutral Position

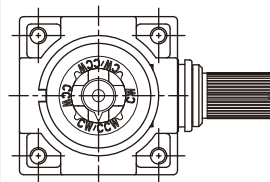


**Order Code**

HNS-4A-04TA: 2NO/2NC (Low Pretravel)

HNS-4A-04TB: 2NO/2NC

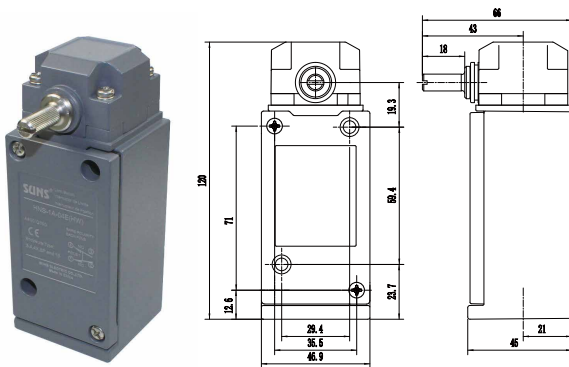
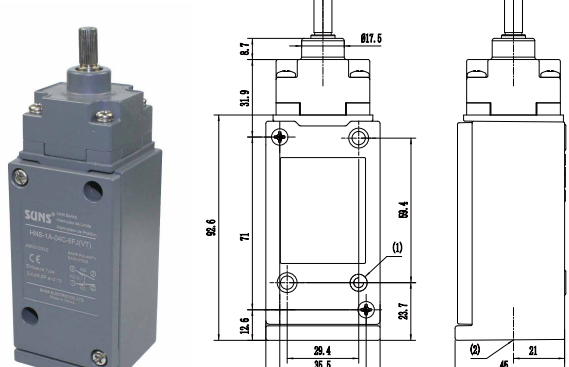
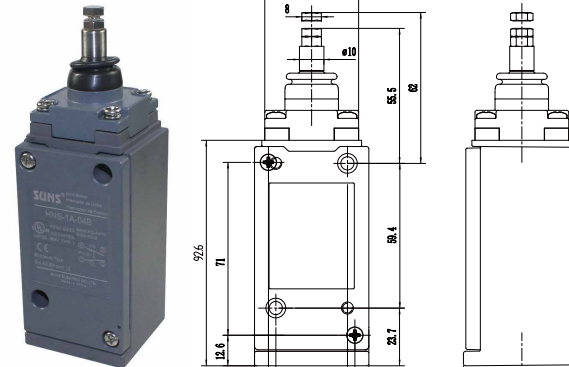
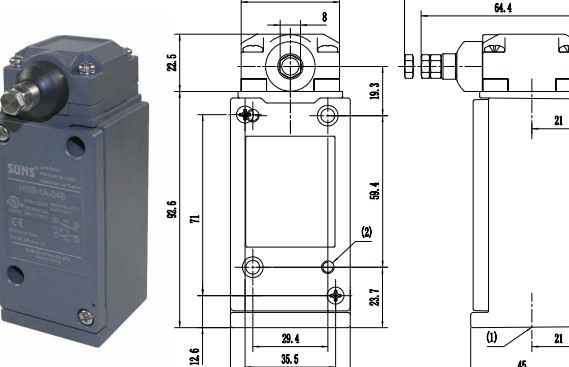
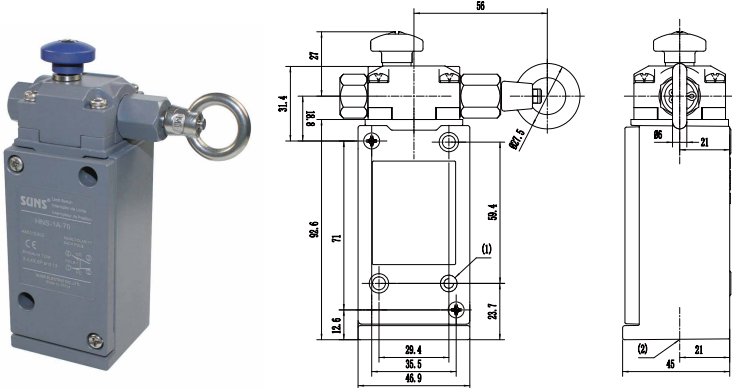
Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

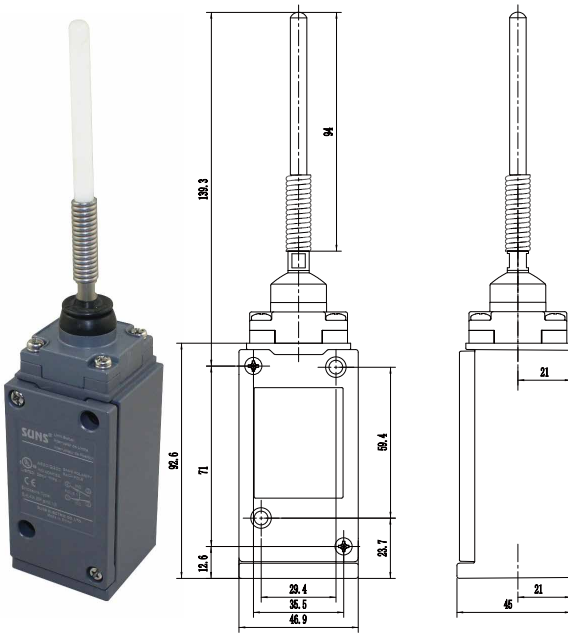
## HNS Series Heavy Duty Limit Switches

	<p>Maintained</p> 
<p><b>Order Code</b></p> <p>HNS-1A-04E: 1NO/1NC      360° Maintained Rotation</p> <p>HNS-2A-04E: 2NO/2NC      360° Maintained Rotation</p>	<p><b>Order Code</b></p> <p>HNS-1A-05E(HW): 1NO/1NC</p> <p>HNS-2A-05E(HW): 2NO/2NC</p>
	
<p><b>Order Code</b></p> <p>HNS-1A-13(OM): 1NO/1NC      Adjustable Plunger</p> <p>HNS-2A-13(OM): 2NO/2NC      Adjustable Plunger</p>	<p><b>Order Code</b></p> <p>HNS-1A-13H(OM): 1NO/1NC      Adjustable Plunger</p> <p>HNS-2A-13H(OM): 2NO/2NC      Adjustable Plunger</p>
	
<p><b>Order Code</b></p> <p>HNS-1A-70: 1NO/1NC</p> <p>HNS-2A-70: 2NO/2NC</p>	

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting. (2) Conduit opening type: 1/2NPT



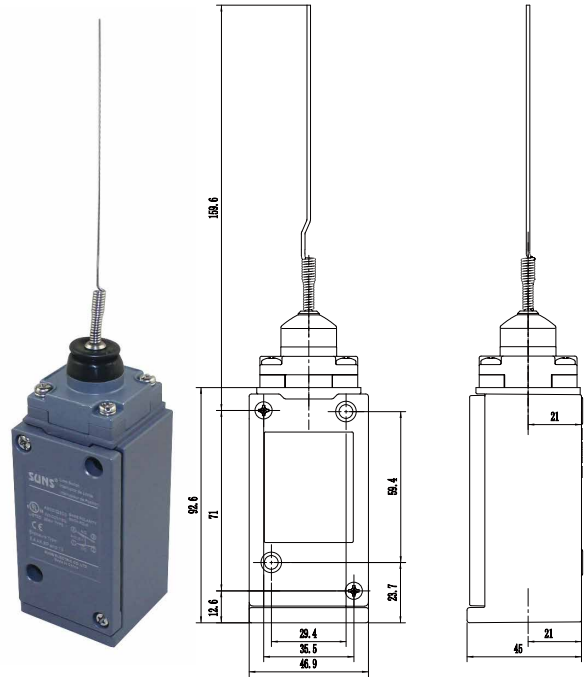
## HNS Series Heavy Duty Limit Switches



**Order Code**

HNS-1A-66: 1NO/1NC

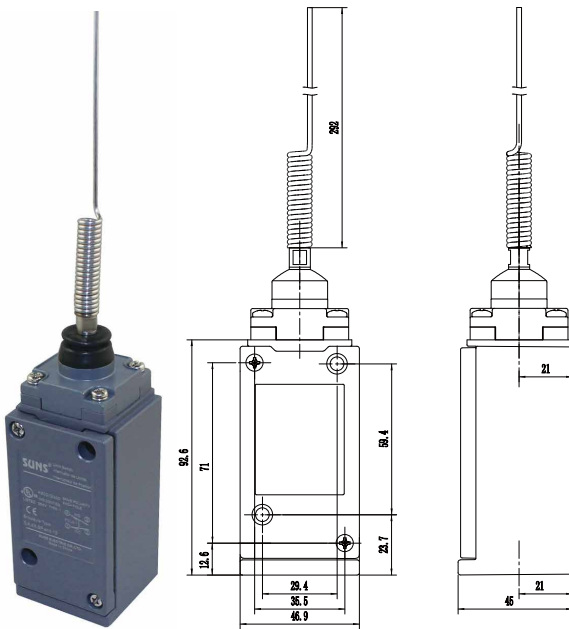
HNS-2A-66: 2NO/2NC



**Order Code**

HNS-1A-68: 1NO/1NC

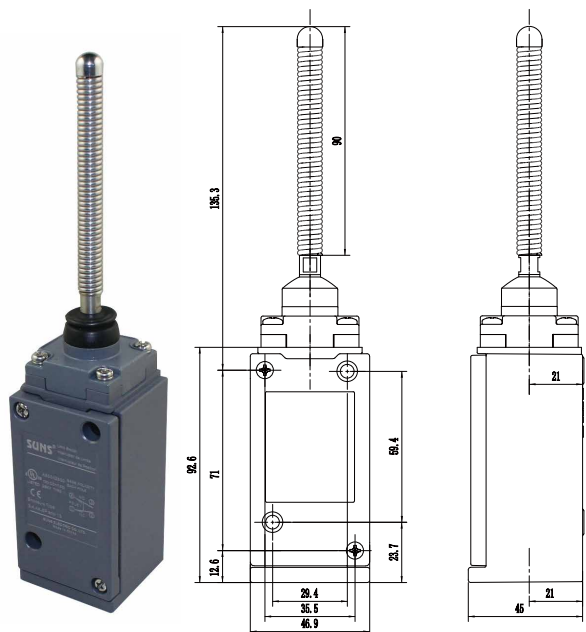
HNS-2A-68: 2NO/2NC



**Order Code**

HNS-1A-69: 1NO/1NC

HNS-2A-69: 2NO/2NC



**Order Code**

HNS-1A-00: 1NO/1NC

HNS-2A-00: 2NO/2NC

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting. (2) Conduit opening type: 1/2NPT

## Levers for Rotary Heads (HMS/HLS/HNS/HES Heavy Duty Limit Switches)



### Cast Aluminum Lever Arms with Roller

Add '-P' suffix for nylon roller (following part numbers are with steel roller)

Arm Length in. (mm)	Roller Diameter in. (mm)	Roller Width in. (mm)	Part Number
1.38 (35)	0.75 (19)	0.25 (6.3)	H-04B1
		0.63 (16)	H-04B2
	0.63 (16)	0.25 (6.3)	H-04B3
		0.63 (16)	H-04B4
		1 (25.4)	H-04B5
1.5 (38)	0.75 (19)	0.25 (6.3)	H-04C1
		0.63 (16)	H-04C2
		1.25(31.7)	H-04C6
	0.63 (16)	0.25 (6.3)	H-04C3
		0.63 (16)	H-04C4
		1(25.4)	H-04C5
2 (51)	0.75 (19)	0.25 (6.3)	H-04D1
		0.63 (16)	H-04D2
	0.63 (16)	0.25 (6.3)	H-04D3
		0.63 (16)	H-04D4
2.5 (63.5)	0.75 (19)	0.25 (6.3)	H-04E1
		0.63 (16)	H-04E2
	0.63 (16)	0.25 (6.3)	H-04E3
		0.63 (16)	H-04E4
3 (76)	0.75 (19)	0.25 (6.3)	H-04F1
		0.63 (16)	H-04F2
	0.63 16	0.25 (6.3)	H-04F3
		0.63 (16)	H-04F4

\* Mounting hole center to roller center distance

### Cast Aluminum Lever Arms with Rubber Roller

Arm Length in. (mm)	Roller Diameter in. (mm)	Roller Width in. (mm)	Part Number
2.5(63.5)	1.25 (31.8)	1.25 (31.8)	H-04E5-P2

### 90° Forked Cast Aluminum Lever Arms with Roller

Add '-P' suffix for nylon roller (following part numbers are with steel roller)



Arm Length in. (mm)	Roller			Part Number
	Roller Position	Diameter in. (mm)	Width in. (mm)	
1.5 (38)	Rollers on same side	0.75 (19)	0.25 (6.3)	H-05-1
		0.63 (16)	0.25 (6.3)	H-05-3
	R.H. Rollers on opposite side	0.75 (19)	0.25 (6.3)	H-05-1RH
		0.63 (16)	0.25 (6.3)	H-05-3RH
	L.H. Rollers on opposite side	0.75 (19)	0.25 (6.3)	H-05-1LH
		0.63 (16)	0.25 (6.3)	H-05-3LH

\* Mounting hole center to roller center distance

### Adjustable Length Lever Arm with Steel Roller



Lever Length in. (mm)	Roller Dia. in. (mm)	Roller Width in. (mm)	Part Number
Non-bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08-3
	0.63 (16)	0.63 (16)	H-08-4
	0.75(19)	0.25(6.3)	H-08-5
Bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08B-3
	0.63 (16)	0.63 (16)	H-08B-4
	0.75(19)	0.25(6.3)	H-08B-5

### Adjustable Length Lever Arm with Nylon Roller

Lever Length in. (mm)	Roller Dia. in. (mm)	Roller Width in. (mm)	Part Number
Non-bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08-3P
	1 (25.4)	0.63 (16)	H-08-5P
	0.75(19)	0.25(6.3)	H-08-7P
Bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08B-3P
	1.0 (25.4)	0.63 (16)	H-08B-5P

### Adjustable Length Lever Arm with Rubber Roller

Lever Length in. (mm)	Roller Dia. in. (mm)	Roller Width in. (mm)	Part Number
Non-bendable, adjustable from 22-101mm	2 (51)	0.63 (16)	H-08-6P

\* Original PN for use with 11mm shaft;  
for 7.0mm and 7.3mm shaft, add suffix (HW);  
for 8.0mm shaft, add suffix (AB)

## Levers for Rotary Heads (HMS/HLS/HES Heavy Duty Limit Switches)

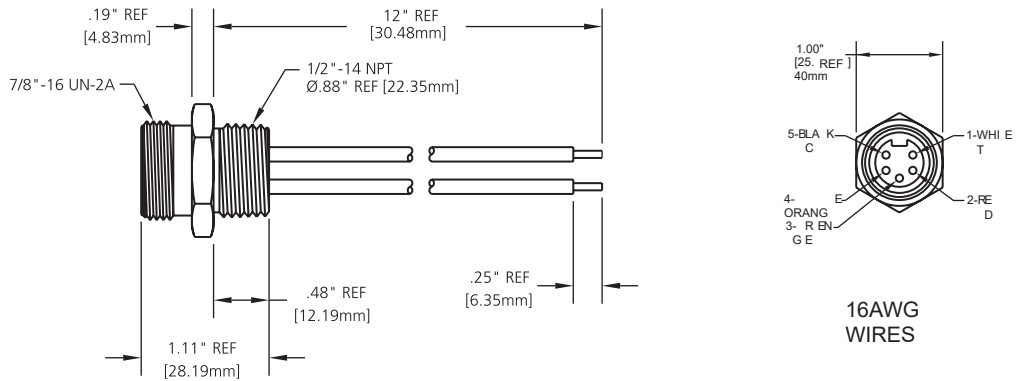


### Rod Type Lever Arms

Description	Length in. (mm)	Part Number
Stainless Steel Rod	10 (254)	H-07-10
Spring Rod, Steel	12 (304)	H-07S-12
Spring Rod, Delrin	12 (304)	H-07P-12
Looped Delrin Rod Arm	160MM(6.31N.)	H-06
Looped Delrin Rod Arm	228MM(9IN.)	H-09

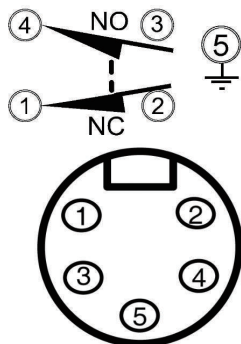
\* For used with 11mm shaft (suffix blank); 7.0mm shaft (suffix -CH); 7.3mm shaft (suffix -HW) and 8.0mm shaft (suffix -AB)

### NPT12-16-5P MALE STRAIGHT WITH 1/2" - 14NPT THREADS (5-PIN)



For prewired limit switches with NPT-12-16-5P connector, add -Q1 or -Q9 suffix

#### -Q1: wiring diagram



#### -Q9: wiring diagram

