

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

Electrical Ratings

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

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 Extended 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 ²)
Degree of Protection	IP 67 conforming to IEC 60529, NEMA Types 2, 4, 6, 6P, 12, 13

HMS
Compact



HLS
Standard



HNS
Non-plug-in



HNS
Stainless Steel



Selection Guide:

HLS	-	1	A	-	04	A	-	F	-	UR	-	AU	-	SS	
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
		1: SPDT (1NO/1NC) Snap action	A: 1/2" NPT			B: Standard		Blank: Standard		Blank: None					Blank: 11.0mm
		2: DPDT (2NO/2NC) Snap action	F: 3/4" NPT			A: High precision		F: High temp.		UR: Red indicator					(AB): 8.0mm
		3: DPDT (2NO/2NC) 2 stages				N: Low torque		FS: Extended temp.		light universal voltage(12V-270V)					(CH): 7.0mm
		4: DPDT (2NO/2NC) center neutral operation			2 digit or 2 digit + 1 letter	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

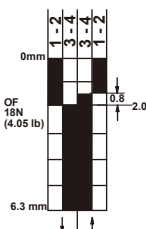
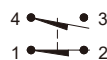
69

Cat Whisker type

68 Styles

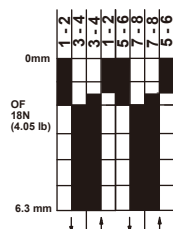
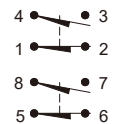


HMS-1A/
HLS-1A/
HNS-1A
1NO/1NC



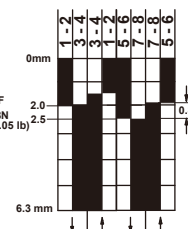
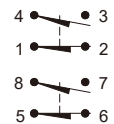
HLS-2A/
HNS-2A

2NO/2NC

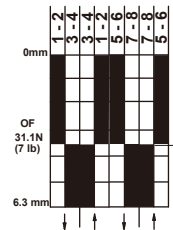
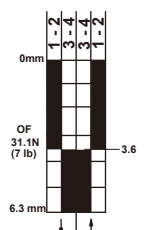
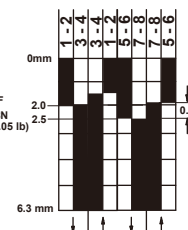
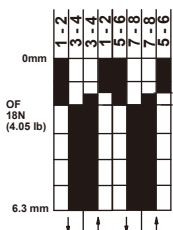
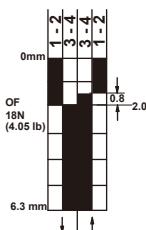


HLS-3A/
HNS-3A

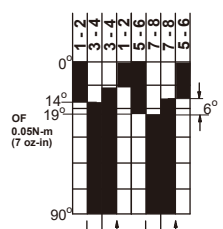
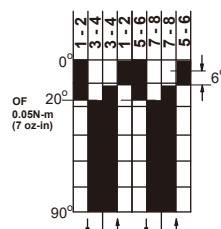
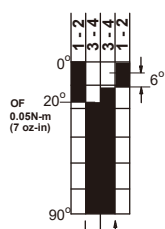
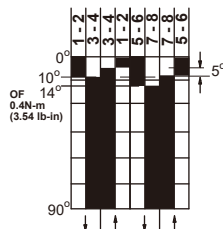
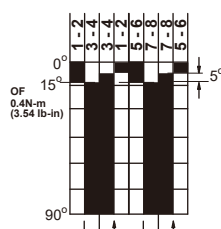
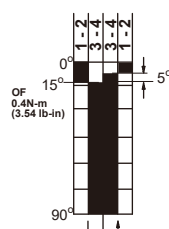
2NO/2NC(2-stages)



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

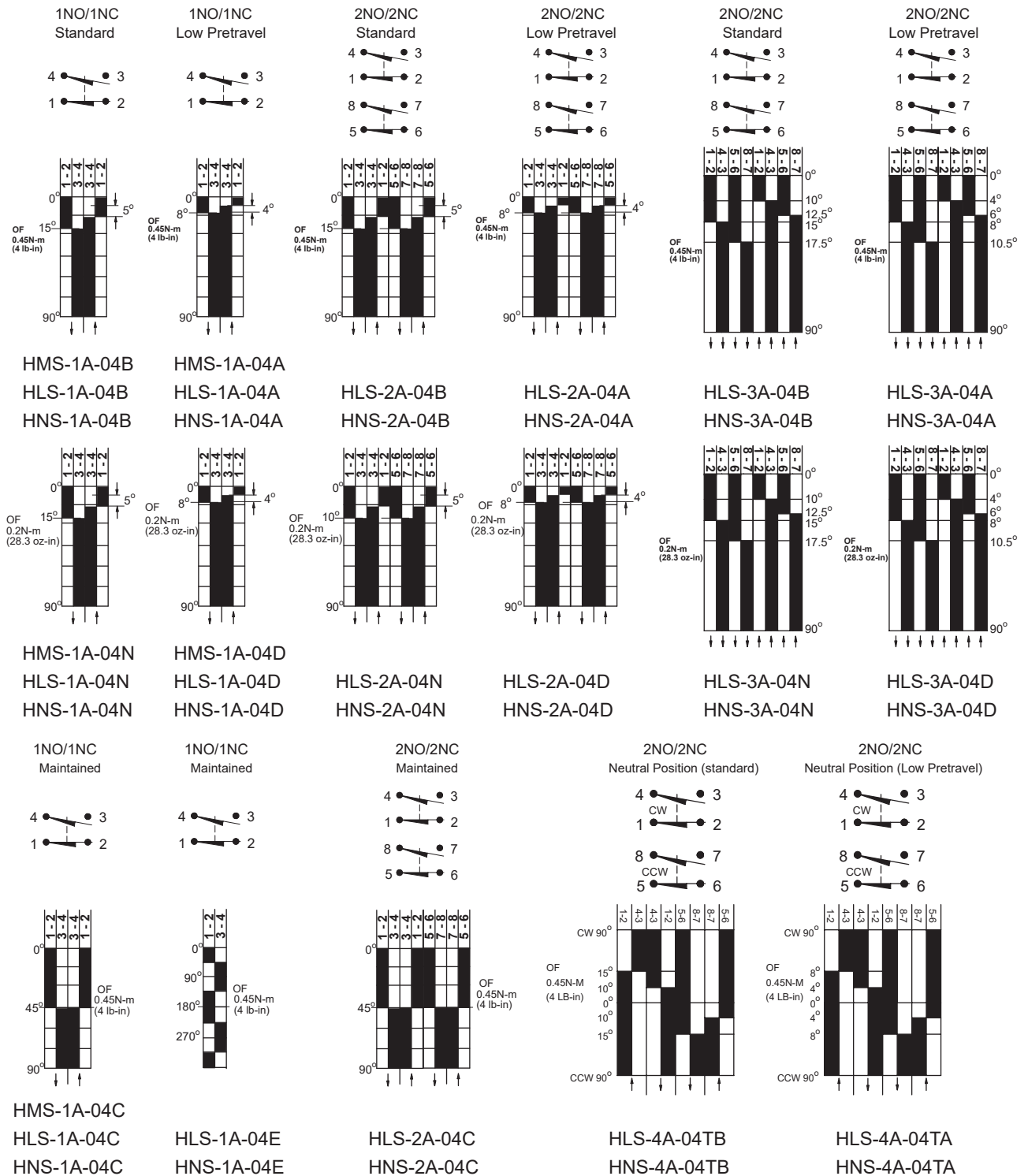


ON OFF

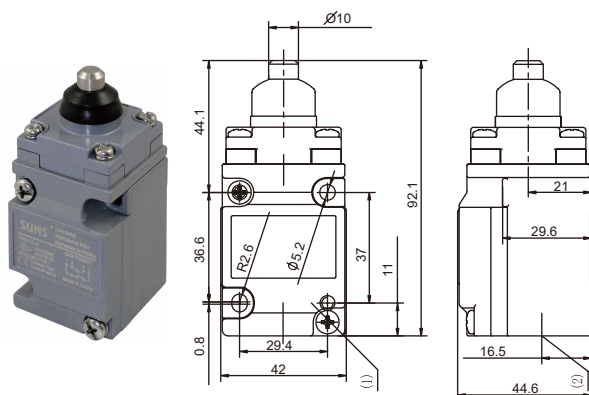


HMS/HLS Series Heavy Duty Limit Switches

Travel Diagram for Rotary Lever Styles

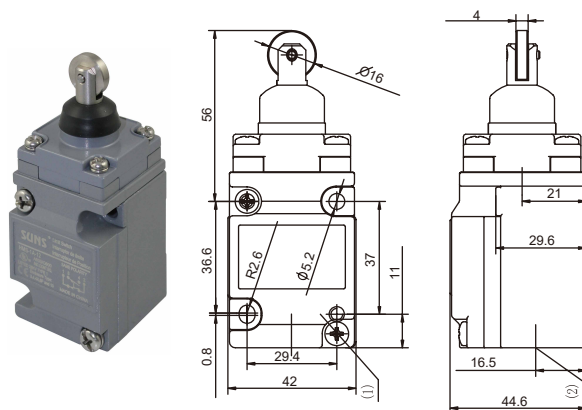


HMS Series Heavy Duty Limit Switches



Order Code

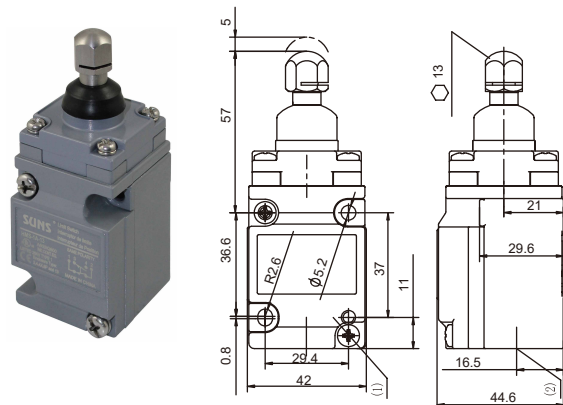
HMS-1A-11: 1NO/1NC



Order Code

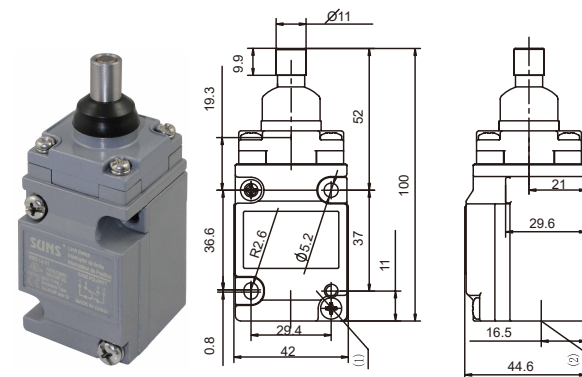
HMS-1A-12: 1NO/1NC

Adjustable Operating Position (OP)



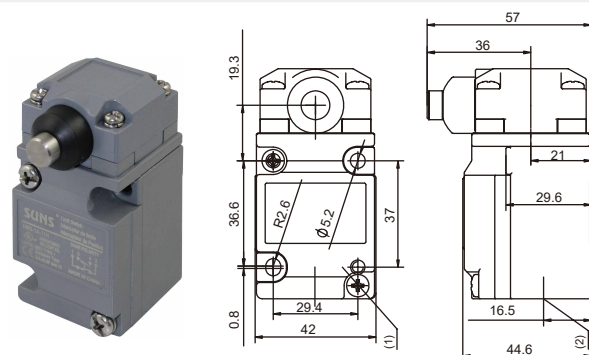
Order Code

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



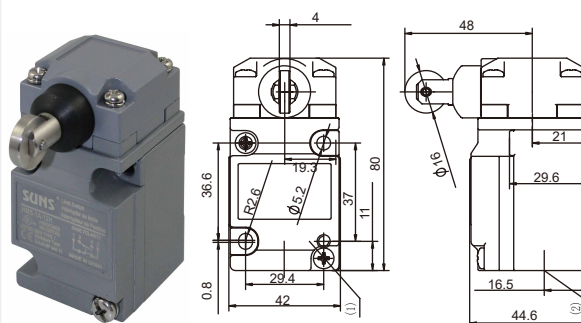
Order Code

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



Order Code

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



Order Code

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

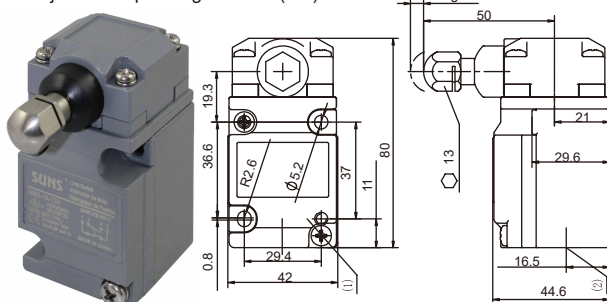
* Note: roller can be adjust to cross orientation

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

(2) Conduit opening type: 1/2NPT

HMS Series Heavy Duty Limit Switches

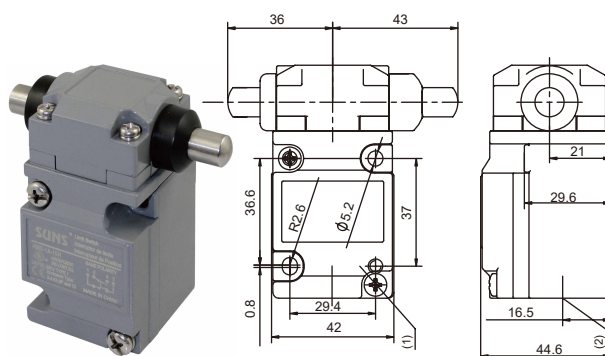
Adjustable Operating Position (OP)



Order Code

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

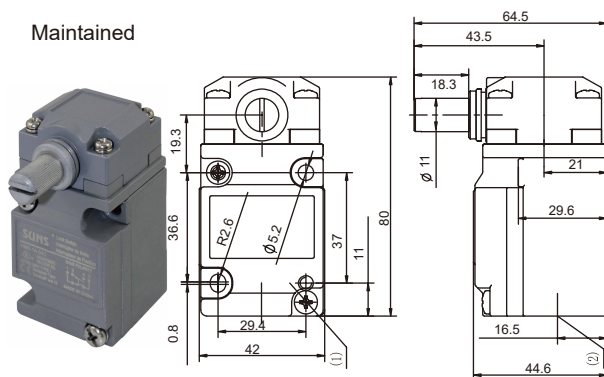
Maintained



Order Code

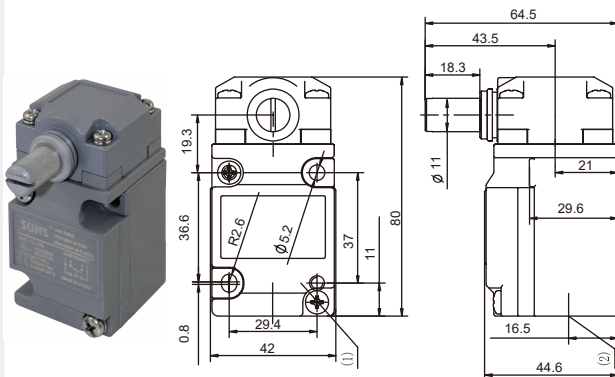
HMS-1A-10H: 1NO/1NC

Maintained



Order Code

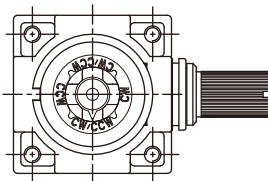
HMS-1A-04C: 1NO/1NC



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

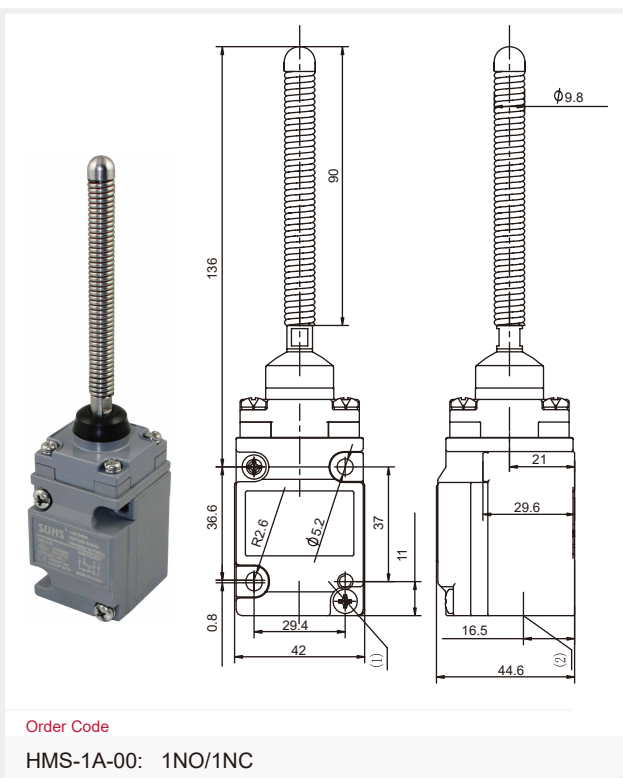
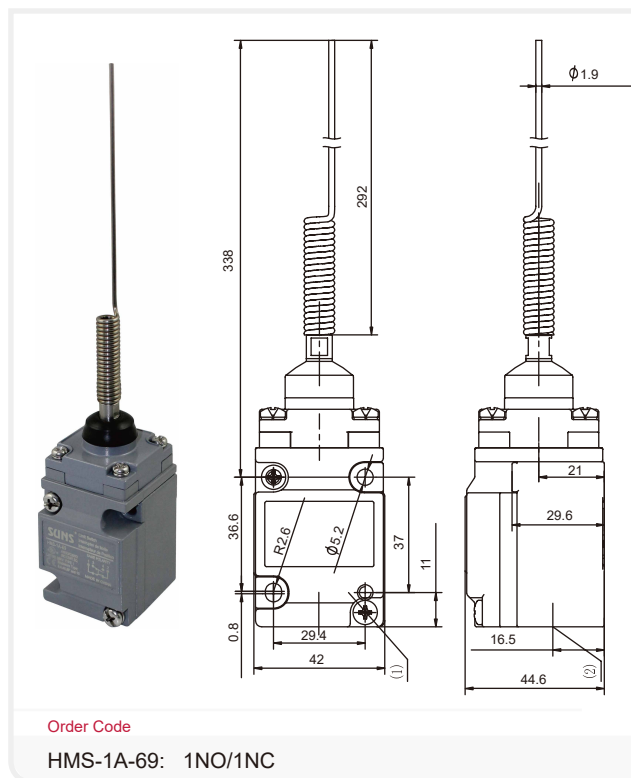
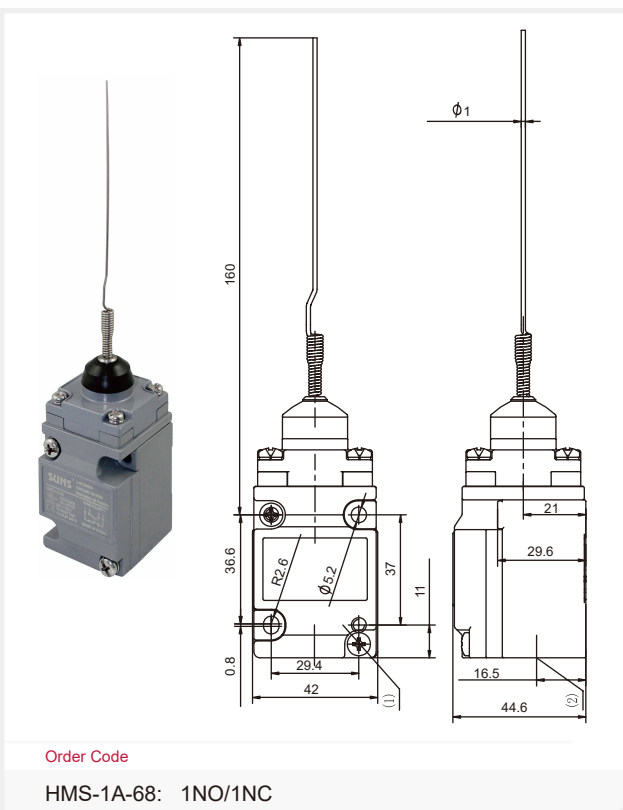
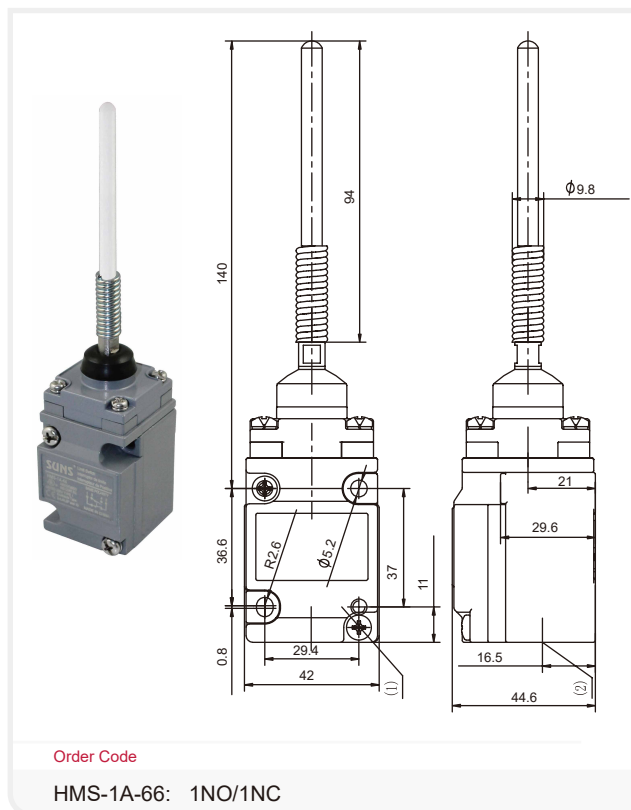
Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



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

(2) Conduit opening type: 1/2NPT

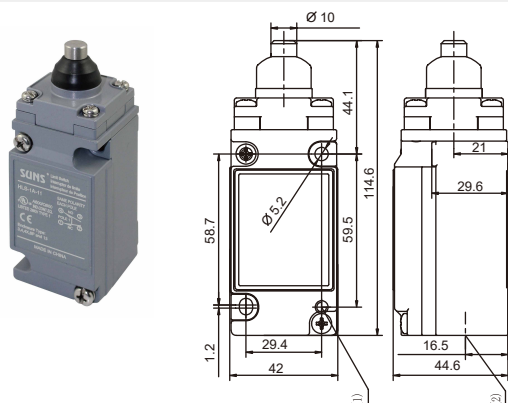
HMS Series Heavy Duty Limit Switches



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

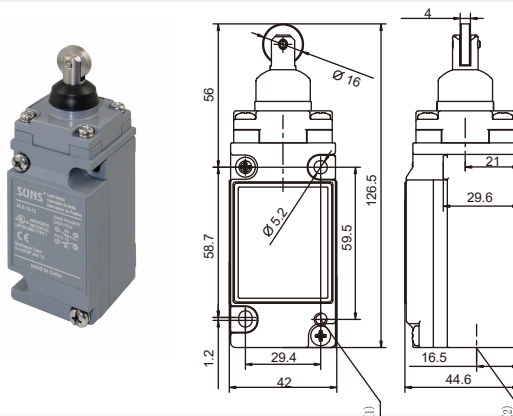
(2) Conduit opening type: 1/2NPT

HLS Series Heavy Duty Limit Switches



Order Code

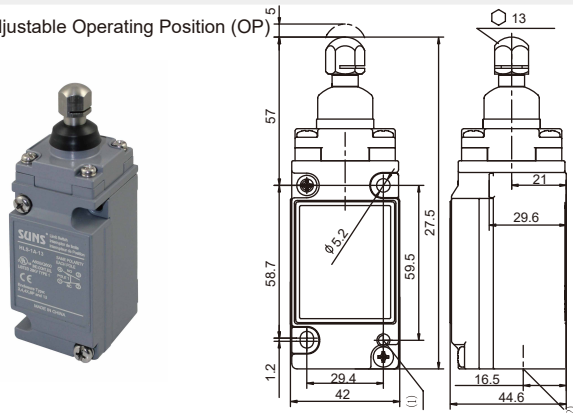
HLS-1A-11: 1NO/1NC
 HLS-2A-11: 2NO/2NC
 HLS-3A-11: 2NO/2NC (2-stage)



Order Code

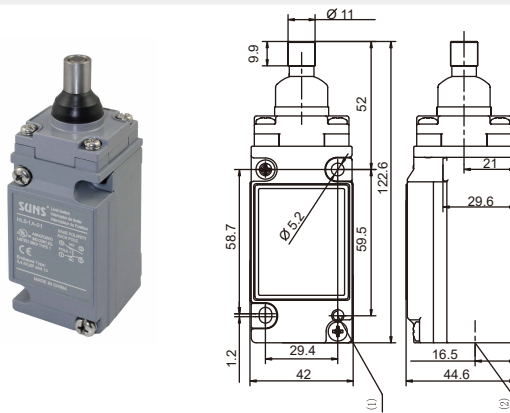
HLS-1A-12: 1NO/1NC
 HLS-2A-12: 2NO/2NC
 HLS-3A-12: 2NO/2NC (2-stage)

Adjustable Operating Position (OP)



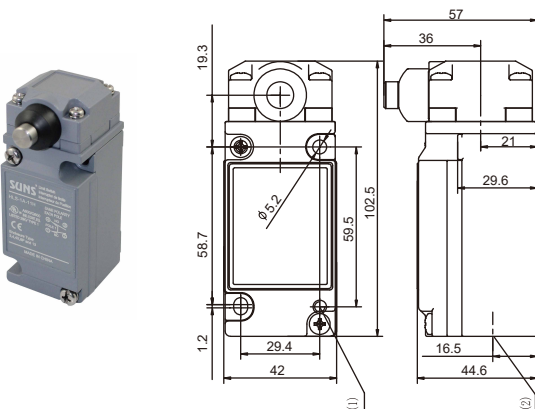
Order Code

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



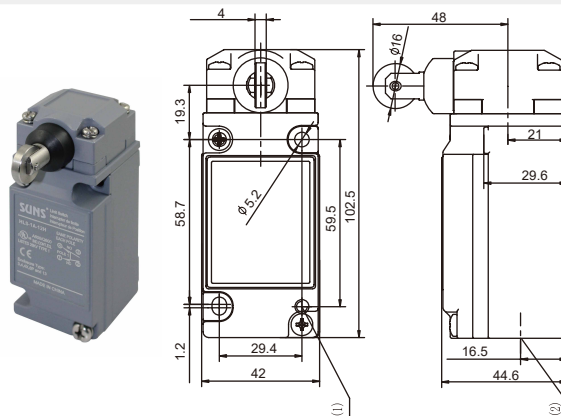
Order Code

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

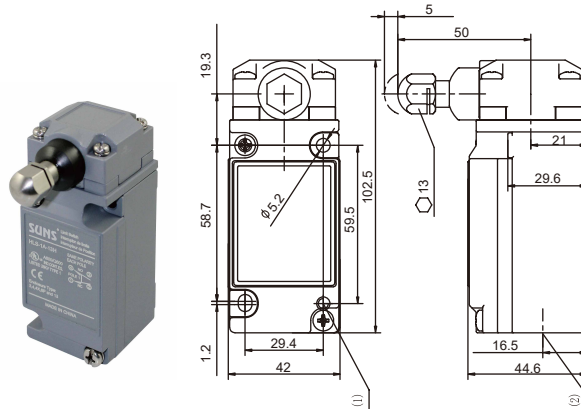
Order Code

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

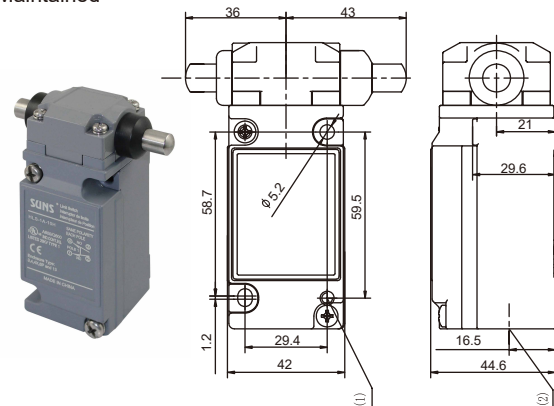
HLS Series Heavy Duty Limit Switches



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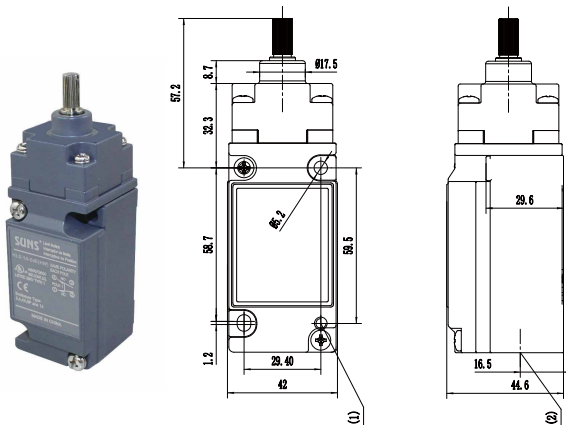
HLS-1A-13H: 1NO/1NC
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 HLS-3A-13H: 2NO/2NC (2-stage)

Maintained



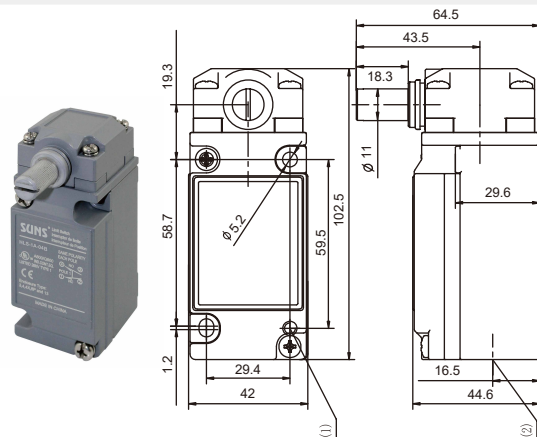
Order Code

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



Order Code

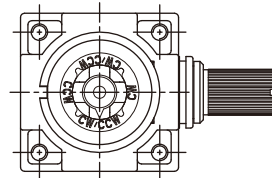
HLS-1A-05B(HW): 1NO/1NC
 HLS-2A-05B(HW): 2NO/2NC



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

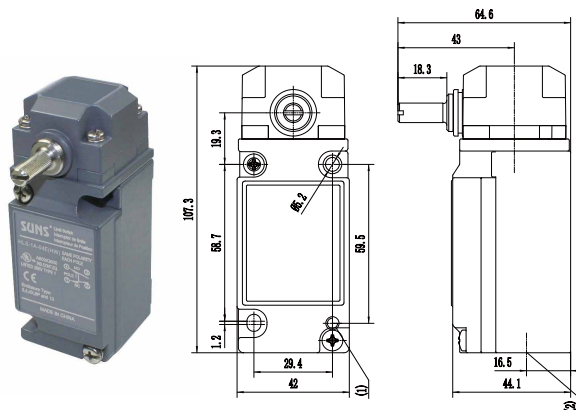
Maintained

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.

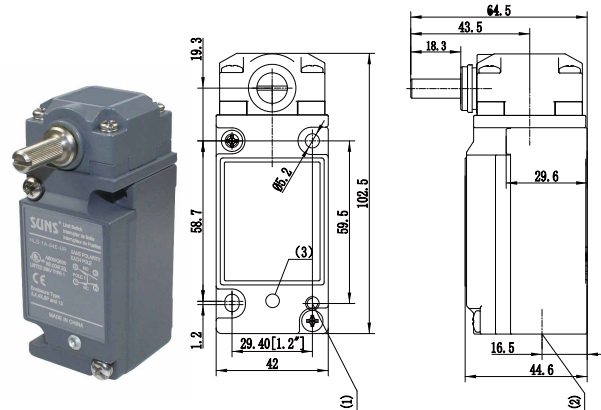
(2) Conduit opening type: 1/2NPT

HLS Series Heavy Duty Limit Switches



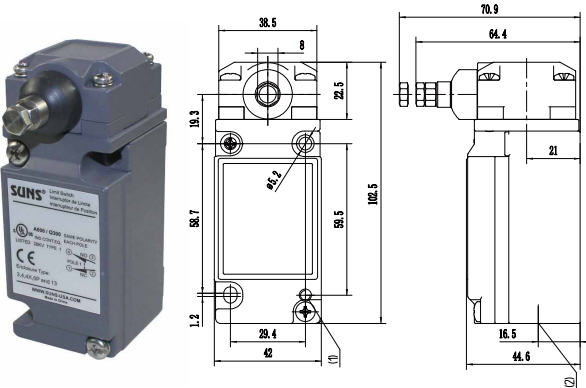
Order Code

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



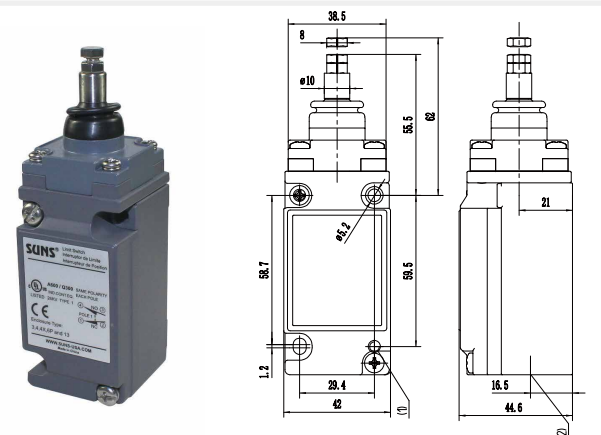
Order Code

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

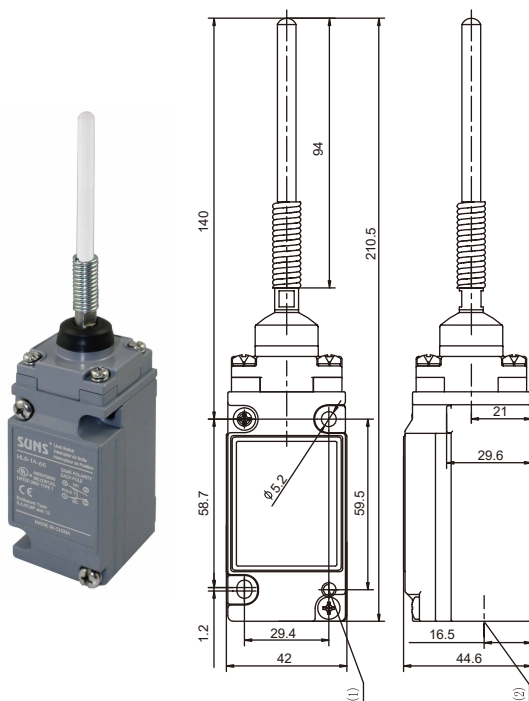


Order Code

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

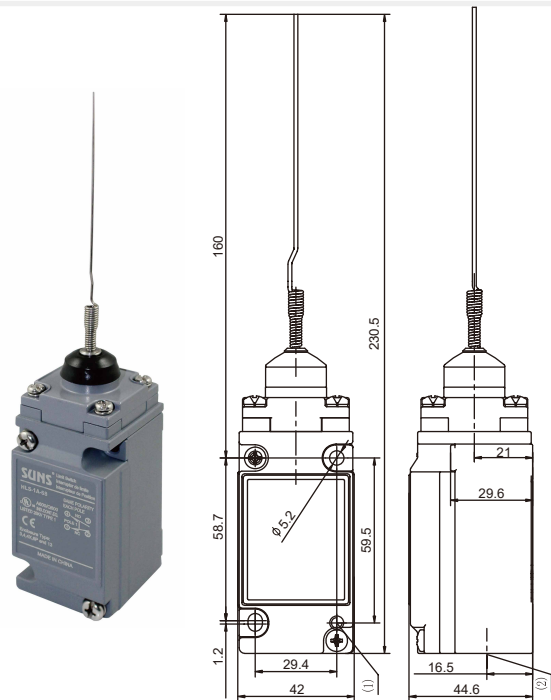


Order Code

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

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

HLS-3A-66: 2NO/2NC (2-stage)

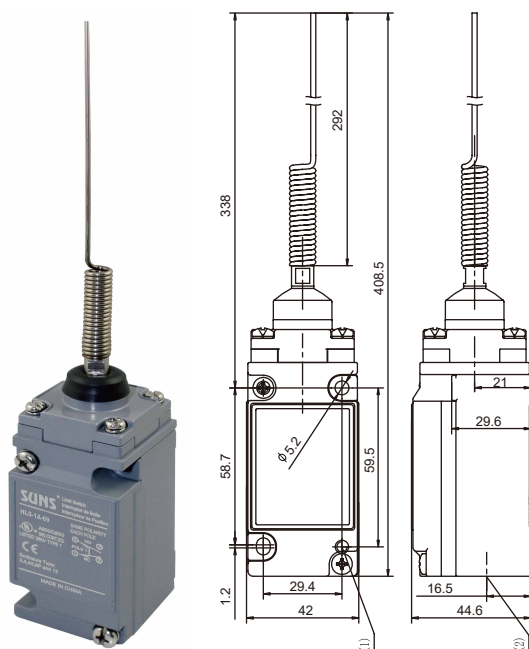


Order Code

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

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

HLS-3A-68: 2NO/2NC (2-stage)

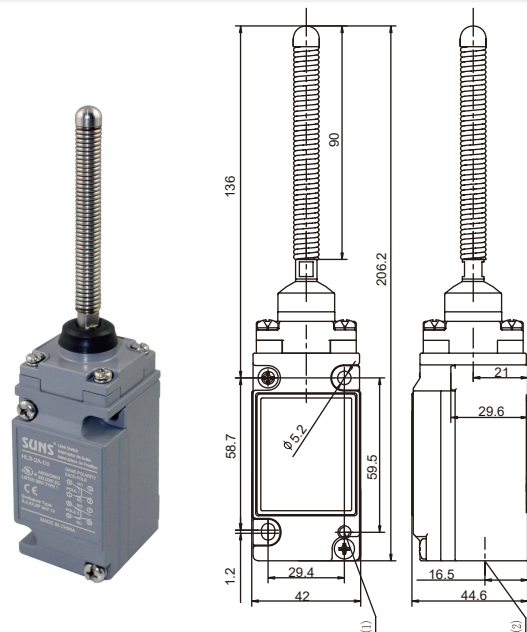


Order Code

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

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

HLS-3A-69: 2NO/2NC (2-stage)



Order Code

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

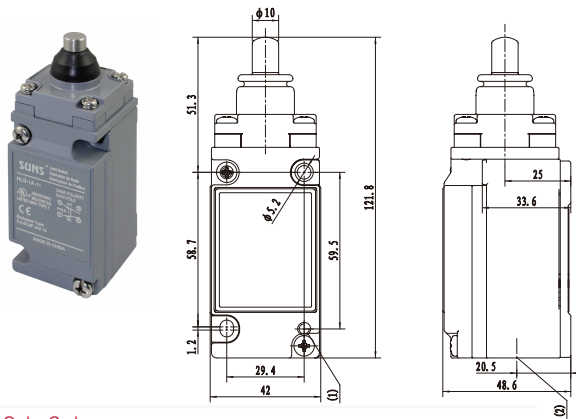
HLS-2A-00: 2NO/2NC

HLS-3A-00: 2NO/2NC (2-stage)

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

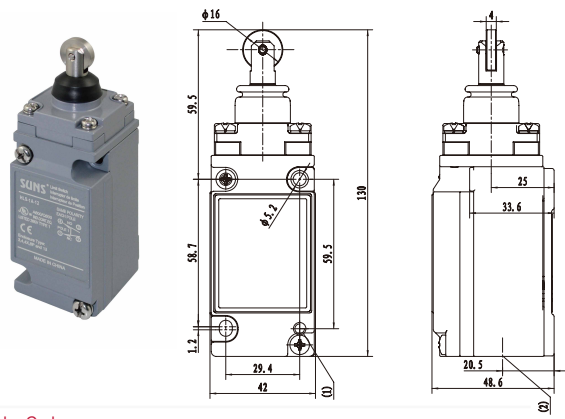
(2) Conduit opening type: 1/2NPT

HLS (AB) Series Heavy Duty Limit Switches



Order Code

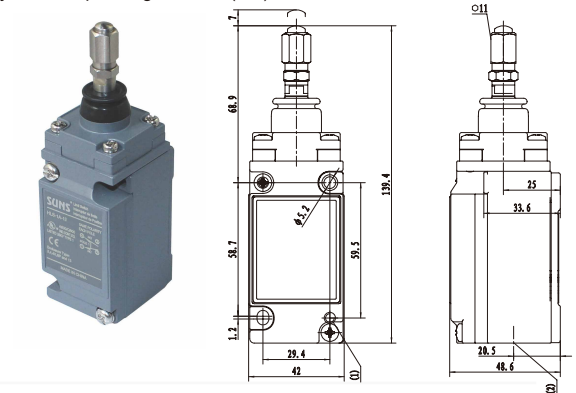
HLS-1A-11(AB): 1NO/1NC
HLS-2A-11(AB): 2NO/2NC
HLS-3A-11(AB): 2NO/2NC (2-stage)



Order Code

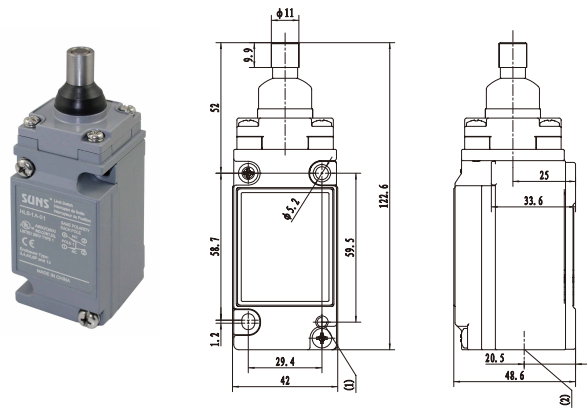
HLS-1A-12(AB): 1NO/1NC
HLS-2A-12(AB): 2NO/2NC
HLS-3A-12(AB): 2NO/2NC (2-stage)

Adjustable Operating Position (OP)



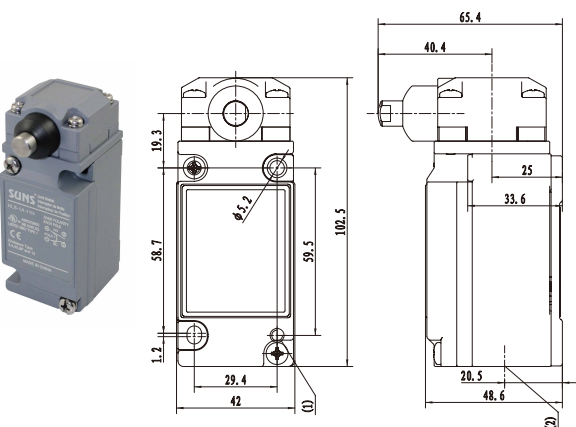
Order Code

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



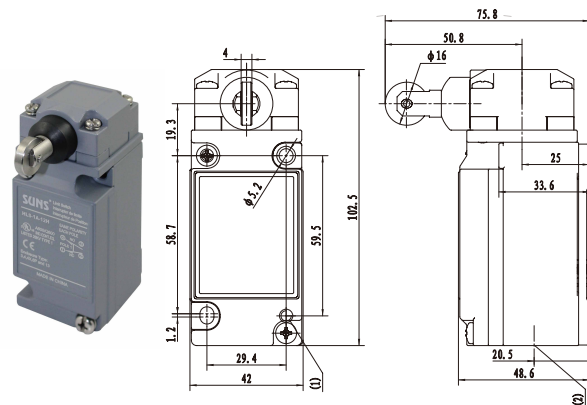
Order Code

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



Order Code

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



* Note: roller can be adjust to cross orientation

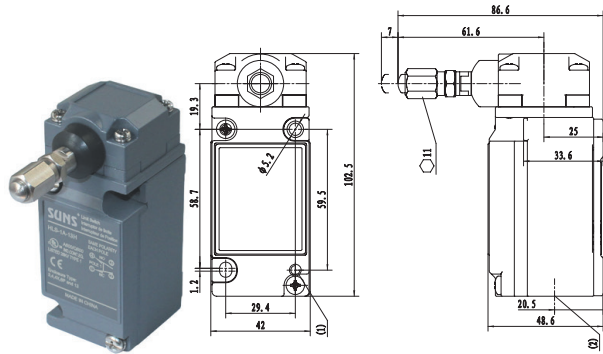
Order Code

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

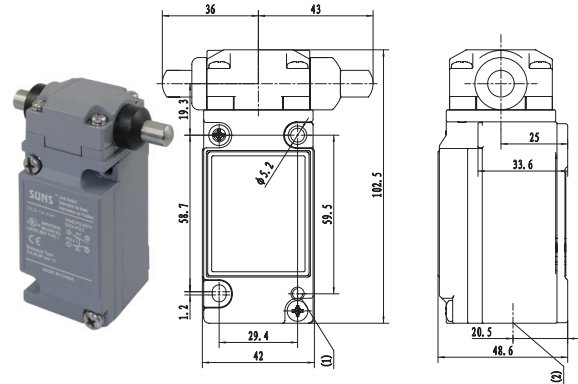
HLS(AB) Series Heavy Duty Limit Switches



Order Code

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

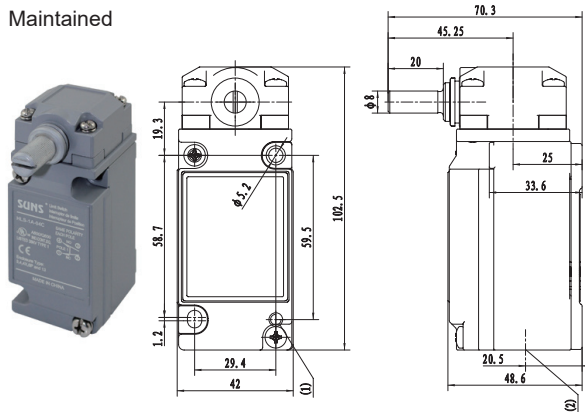
Maintained



Order Code

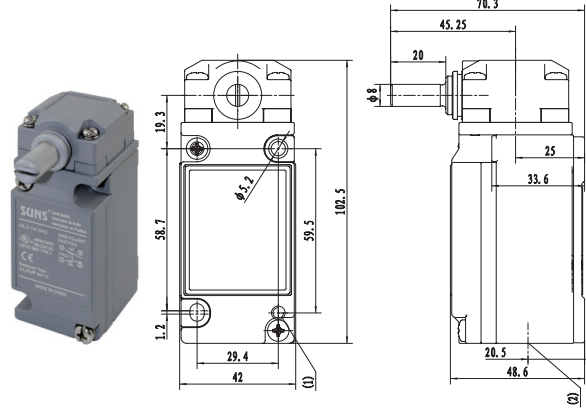
HLS-1A-10H(AB): 1NO/1NC
 HLS-2A-10H(AB): 2NO/2NC

Maintained



Order Code

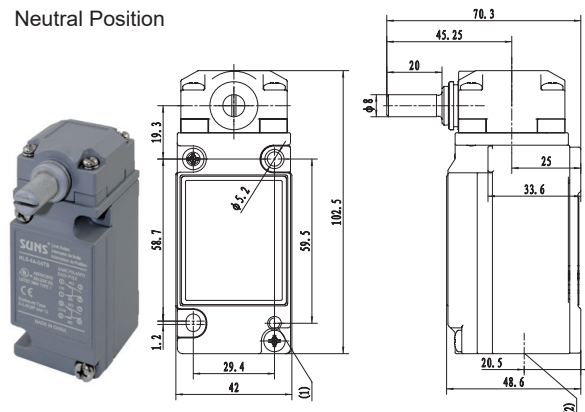
HLS-1A-04C(AB): 1NO/1NC
 HLS-2A-04C(AB): 2NO/2NC



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 Pretravel
 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 Pretravel

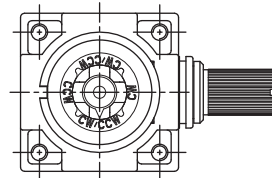
Neutral Position



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

The technical drawing illustrates the SUNS SLS-10-PSV pressure switch from three perspectives:

- Perspective View (Left):** Shows the physical device with its grey cast body, black top cap, and white cable. The label includes:
 - SUNS
 - Pressure Switch
 - Model SLS-10-PSV
 - Rated Pressure: 10 bar
 - Rated Voltage: 250 V AC
 - CE mark
 - MADE IN ITALY
- Front Cross-section (Middle):** Provides vertical and horizontal dimensions:
 - Total height: 210.5 mm
 - Height to top of cable: 140 mm
 - Body width: 42 mm
 - Mounting hole diameter: $\varnothing L_2$
 - Internal component height: 58.7 mm
 - Base mounting hole offset: 29.4 mm
 - Bottom flange thickness: 1.2 mm
 - Internal cavity depth: 59.5 mm
- Side Cross-section (Right):** Provides additional vertical and horizontal dimensions:
 - Top flange width: 25 mm
 - Main body width: 33.6 mm
 - Bottom flange width: 20.5 mm
 - Overall base width: 48.6 mm