



LSB Series

Valve Position Monitor

ΤΕΡΜΑΤΙΚΟΙ ΟΡΙΟΔΙΑΚΟΠΤΕΣ ΑΠΛΟΙ ΚΑΙ ΑΝΤΙΕΚΚΡΗΚΤΙΚΟΙ



All innovation
on driving your valve automation

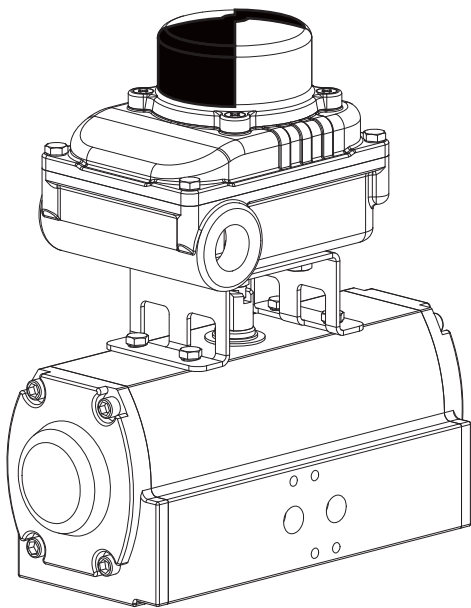




Robust valve position monitor with a good recognizable beacon, various switches and feedback options

Features

- ▶ Weatherproof to IP67 (optionally IP68)
- ▶ Rugged aluminum die-cast housing
- ▶ Various switches and sensors (available with Honeywell / P&F)
- ▶ NAMUR mounting shaft or fork lever shaft adjustable for a non-NAMUR pneumatic actuator



Options

- ▶ 2 x SPDT mechanical limit switch
- ▶ 4 x SPDT mechanical limit switch
- ▶ 2 x P&F proximity sensor

Specifications

Model	LSB-1000
Protection Class	IP67 (optionally IP68)
Switches / Sensors	See page 5
Operating Temperature	- 40 ~ +100 °C (-40 ~ +212 °F)
Electrical Connections	PT 3/4, NPT 3/4, PF 1/2, NPT 1/2, M20 x 1.5
Body Material / Painting	Aluminum die-cast / powdered-coating
Weight	0.8 kg



< With beacon indicator >



< With bottom indicator >



< With stainless steel 316 housing >

Explosion proof robust valve position monitor with a good recognizable beacon, bottom indicator, various switches and feedback options



Features

- ▶ Flameproof ATEX / IECEx / KC Ex d IIC
- ▶ Rugged aluminum die-cast housing or optionally stainless steel 316 housing
- ▶ Optionally dual beacons or bottom indicator
- ▶ Various switches and sensors (available with Honeywell / P&F / Westlock / Go switch)
- ▶ NAMUR mounting shaft or fork lever shaft adjustable for a non-NAMUR pneumatic actuator

Options

- ▶ 4 x SPDT mechanical limit switch
- ▶ 4 x P&F proximity sensor
- ▶ 4 x Hermetically-sealed magnetic sensor
- ▶ 2 x GO switch
- ▶ 4 - 20mA output position transmitter

Specifications

Model	LSB-30xx	LSB-31xx
Explosion proof / Protection Class	ATEX / IECEx / KC - Ex d IIC - IP67 (optionally IP68)	
	Ambient Temperature	T6 : - 40 ~ +75°C
		T5 : - 40 ~ +90°C
	T4 : - 40 ~ +125°C	
Switches / Sensors	See page 5	
Operating Temperature	- 40 ~ +100°C (-40 ~ +212°F)	
Electrical Connections	PT 3/4, NPT 3/4, PF 1/2, NPT 1/2, M20 x 1.5	NPT 3/4, NPT 1/2
Body Material / Painting	Aluminum die-cast / powdered-coating	Stainless steel 316 / 316L
Weight	1.6 kg	3.8 kg



Mechanical Switches



< SPDT Mechanical Switch - GSM >

< SPDT Mechanical Switch - V7/V15 >

< DPDT Mechanical Switch - 22104 >

Maker	Standard
Switch type	SPDT (Form C)
Contacts	Silver-plated
Approvals	UL, CSA
Electrical Rating	
16 amps / 250 VAC	
16 amps / 8 VDC , 10amps / 30 VDC	
Operating Temp.	-30 ~ +130°C

Maker	Honeywell
Switch type	SPDT (Form C)
Contacts	Silver-plated or gold-plated
Approvals	UL, CSA
Electrical Rating	
Silver : 16 amps / 125 / 250 VAC	
Gold : 0.1 amps / 125 / 250 VAC	
Operating Temp.	-40 ~ +125°C

Maker	Licon
Switch type	DPDT (Form CC)
Contacts	Silver-plated
Approvals	UL, CSA
Electrical Rating	
10 amps / 125 / 250 VAC	
10 amps / 28 VDC	
Operating Temp.	-30 ~ +80°C

Proximity Sensors



Part Number / Maker	NJ2-V3-N / P&F
Switching element function	NAMUR NC
Nominal Ratings	
Nominal voltage	8.2 VDC
Switching frequency	0 ~ 1000 Hz
Hysteresis	0.01 ~ 0.1 mm
Current consumption	
Measuring plate not detected	> 3 mA
Measuring plate detected	< 1 mA
Operating Temperature	-25 ~ +100°C

Part Number / Maker	NJ2(4)-12GK-SN / P&F
Switching element function	NAMUR NC
Nominal Ratings	
Nominal voltage	8 VDC
Switching frequency	0 ~ 2000 Hz
Hysteresis	3%
Current consumption	
Measuring plate not detected	> 3 mA
Measuring plate detected	< 1 mA
Operating Temperature	-40(-50) ~ +100°C

Magnetic Proximity Sensors



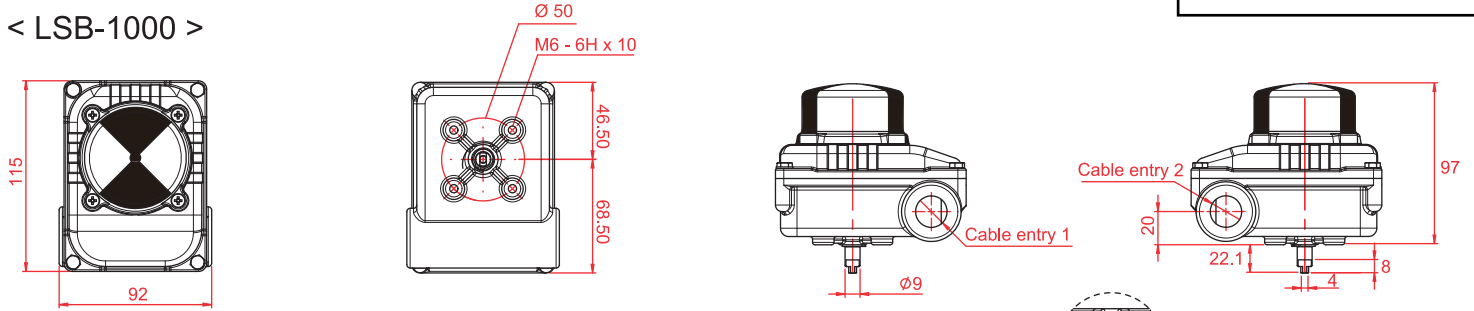
Part Number / Maker	MS Switch
Switch type	SPDT (Form C)
Contacts	Rhodium / Tungsten
Approvals	UL, CSA
Electrical Ratings	
MS20 : 830 mA / 24VDC, 180 mA / 120VAC	
MS25 : 1 A / 24VDC, 200 mA / 120VAC	
MS100 : 2 A / 24VDC, 3 A / 120VAC, 1.5 A / 240VAC	
Operating Temperature	-40 ~ +130°C

Part Number / Maker	GO Switch Model 35 / Topworx
Switch type	SPDT (Form C)
Contacts	Silver cadmium oxide, gold flashed
Approvals	UL, CSA
Electrical Ratings	
4 amps / 120 VAC, 2 amps / 240 VAC	
3 amps / 24 VDC	
Operating Temperature	-40 ~ +100°C

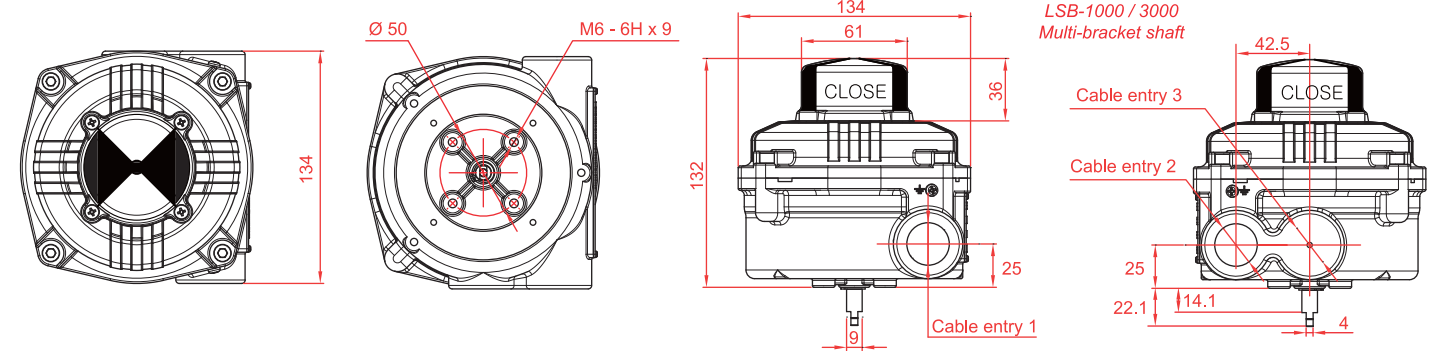
Switch Box Type	Body Material	Switches / Sensors	Position Transmitter	Explosion Proof	Beacon / Indicator	Electrical Connections	Number of Electrical Connections	Feedback Shaft	Mounting Bracket	Coil type	Power Supply	Pneumatic Connections
LSB-1 Weather-proof type	0 Aluminum die-cast	Mechanical switches 0 (2) SPDT 2 (4) SPDT P&F Sensors 4 (2) NJ2-V3-N 7 (2) NBB3-V3-Z4 9 (2) NBB2-V3-E2 Autonics sensors 8 (2) PSN17-5D Honeywell J (2) SPDT Hermetically-sealed sensors A (2) MS-25 (1A) C (2) MS-20 (0.8A)	0 None	7 Weatherproof IP67 8 Weatherproof IP68	N None A Beacon indicator 90° (Open / Close) T T port indicator L L port indicator	A PF 3/4 B NPT 3/4 C PF 1/2 D NPT 1/2 E M20 x 1.5 I M25 x 1.5 H PG 13.5	2 2 pcs	Rotary type N NAMUR shaft F Fork lever Linear type B Stroke 5 ~ 65mm C Stroke 5 ~ 130mm D Stroke 80 ~ 200mm	Rotary type N None 1 30x80 x20(H) 2 30x80 x30(H) 3 30x130 x30(H) 4 30x130 x50(H) M Multi-size Bracket R Other on request			
LSB-3 Explosion-proof type	0 Aluminum die-cast 1 Stainless steel 316 2 Stainless steel 316L (On request)	Mechanical switches 0 (2) SPDT 2 (4) SPDT 3 (2) DPDT P&F sensors 4 (2) NJ2-V3-N 5 (4) NJ2-V3-N 6 (2) NJ2-12GK-SN or NJ4-12GK-SN 7 (2) NBB3-V3-Z4 9 (2) NBB2-V3-E2 S(2) NJ2-12GM40-E2 R (2) NCN4-V3-NO T (2) SJ3 3.5-S1N Sensors 8 (2) PSN17-5D PNP or NPN N (2) D2VW-5L1-1M Hermetically-sealed proximity sensors	0 None T 4~20mA output signal 1 0~1k output signal 2 0~10k output signal	K7 KC Ex d IIC - IP67 A7 ATEX/IECEX Ex d IIC - IP67 I7 KC Ex ia IIC - IP67 K8 KC Ex d IIC - IP68 A8 ATEX/IECEX Ex d IIC - IP68 I8 KC Ex ia IIC - IP68	N None A Beacon indicator 90° (Open / Close) B Bottom indicator 90° (Open / Close) C Beacon & bottom indicator 90° (Open / Close) T T port indicator L L port indicator	A PF 3/4 B NPT 3/4 C PF 1/2 D NPT 1/2 E M20 x 1.5 I M25 x 1.5	2 2 pcs 3 3 pcs	Rotary type N NAMUR shaft F Fork lever Linear type B Stroke 5 ~ 65mm C Stroke 5 ~ 130mm D Stroke 80 ~ 200mm	Rotary type N None M Multi-size Bracket R Other on request			
LSB-7 Explosion-proof type (built-in solenoid v/v)	0 Aluminum die-cast 1 Aluminum die-cast switch box / 316SS solenoid V/V 2 316SS switch box & solenoid V/V	(Amp@24VDC) A (2) MS-25 (1A) B (4) MS-25 (1A) C (2) MS-20 (0.8A) D (4) MS-20 (0.8A) E (2) MS-100 (2A) F (4) MS-100 (2A) G (2) ESI-V3-CR H (4) ESI-V3-CR I (2) MONAS I(2A) Honeywell switches J (2) SPDT(SILVER) K (4) SPDT(SILVER) L (2) SPDT(GOLD) M (4) SPDT(GOLD) Other on request	0 None T 4~20mA output signal	K KC Ex d IIB+H2 - IP67 A ATEX/IECEX Ex d IIB+H2 - IP67	N None A Beacon indicator 90° (Open / Close) T T port indicator L L port indicator	A PF 3/4 B NPT 3/4 C PF 1/2 D NPT 1/2 E M20 x 1.5 I M25 x 1.5 F PF 1 G NPT 1	2 2 pcs 3 3 pcs 4 4 pcs	Rotary type N NAMUR shaft F Fork lever Linear type B Stroke 5 ~ 65mm C Stroke 5 ~ 130mm D Stroke 80 ~ 200mm	Rotary type N None M Multi-size Bracket R Other on request	N None S Single coil D Dual coil	N None A 220VAC B 110VAC C 24VDC D 48VDC	N None 1 PT 1/4 2 NPT 1/4
Switch Box Type	Body Material	Switches / Sensors	Position Transmitter	Explosion Proof	Beacon / Indicator	Electrical Connections	Number of Electrical Connections	Feedback Shaft	Mounting Bracket	Coil type	Power Supply	Pneumatic Connections



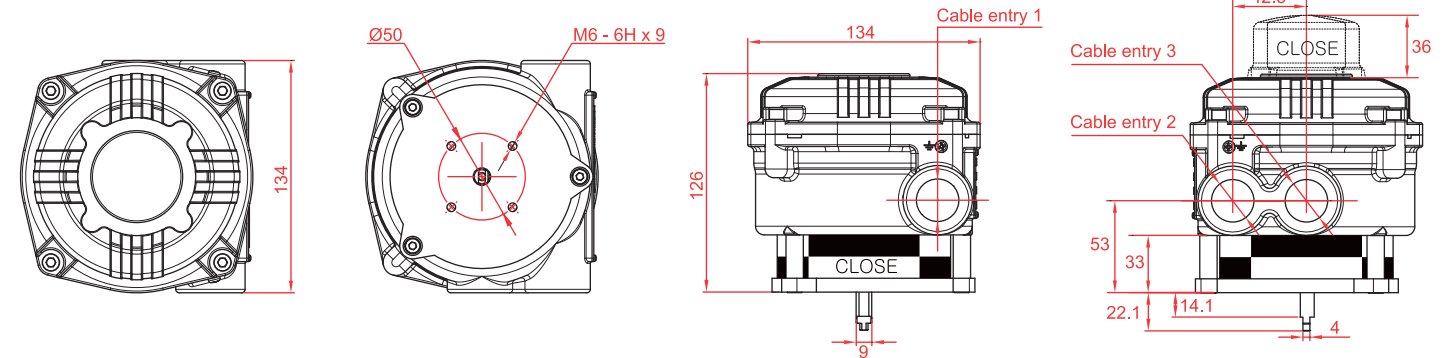
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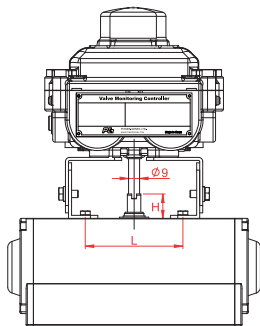
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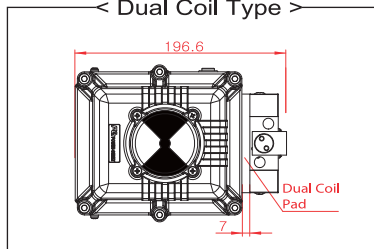
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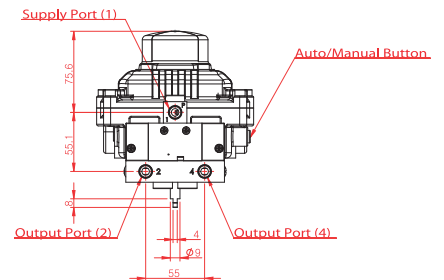
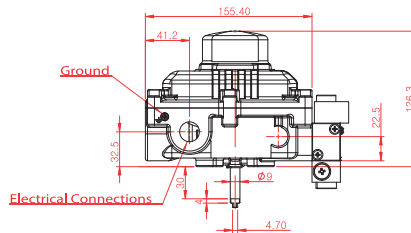
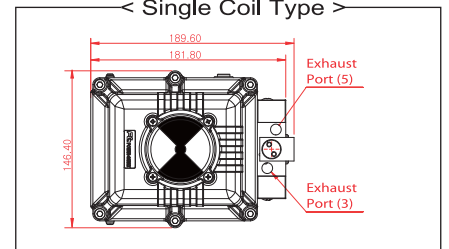
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< Dual Coil Type >

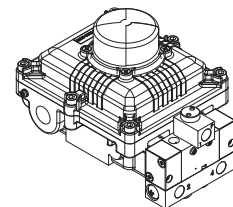
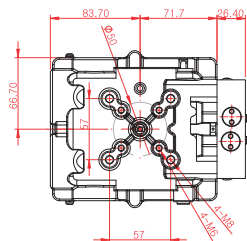


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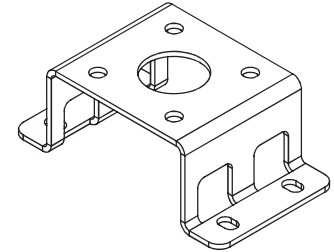
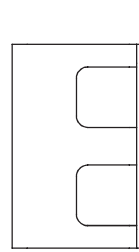
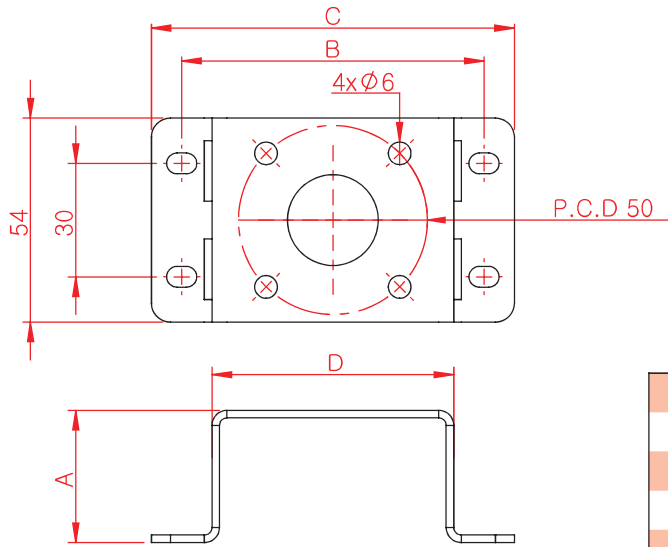


Size Variation of Multi-Size Bracket

- 1) 80 x 30 x 20 (H), 4) 130 x 30 x 20 (H)
 - 2) 80 x 30 x 30 (H), 5) 130 x 30 x 30 (H)
 - 3) 80 x 30 x 50 (H), 6) 130 x 30 x 50 (H)
- H : Rotary Actuator Shaft Height
L : Length (80 or 130mm)



< Bracket : LSB-1000 / 3000 >



	A	B	C	D
30x80x20	35	80	96	64
30x80x30	45	80	96	64
30x130x30	45	130	150	100
30x130x50	65	130	150	100

< Wiring Diagram >

