



# *LSB Series*

## *Valve Position Monitor*



All innovation  
on driving your valve automation

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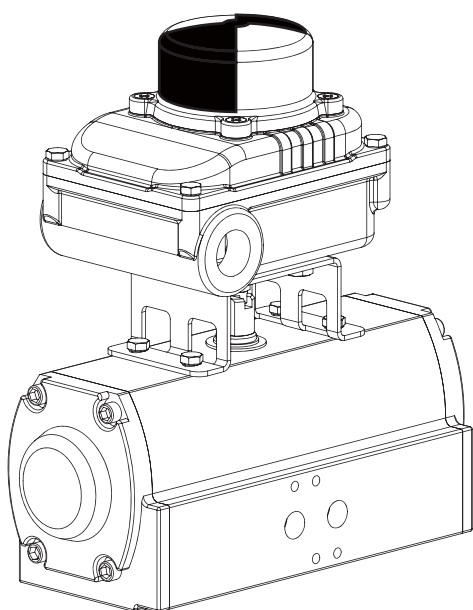




**Robust valve position monitor with a good recognizable beacon, various switches and feedback options**

## Features

- ▶ Weatherproof to IP66 & 67 (optionally IP68)
- ▶ Rugged aluminum die-cast housing or 316SS
- ▶ 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         | Ex ia IIC / IP66 & 67 (optionally IP68) |                     |
| Switches / Sensors       | See page 5                              |                     |
| Operating Temperature    | - 40 ~ +100 °C (-40 ~ +212 °F)          |                     |
| Electrical Connections   | PF 1/2, NPT 1/2, M20 x 1.5, PG13.5      |                     |
| Body Material / Painting | Aluminum die-cast / powdered-coating    | Stainless steel 316 |
| Weight                   | 0.8 kg                                  | 1.5 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 / EAC / KCs Ex d IIC
- ▶ Intrinsic safety ATEX / IECEx / EAC / KCs Ex ia 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 / Hermetically-sealed magnetic sensor)
- ▶ 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
- ▶ 4 - 20mA output position transmitter

## Specifications

| Model                              | LSB-30xx                                                  | LSB-31xx                   |
|------------------------------------|-----------------------------------------------------------|----------------------------|
| Explosion proof / Protection Class | Flameproof - Ex d IIC - IP66&67 (optionally IP68)         |                            |
|                                    | Intrinsic safety - Ex ia IIC - IP66&67 (optionally IP68)  |                            |
|                                    | Intrinsic safety - Ex ia IIIC - IP66&67 (optionally IP68) |                            |
| Switches / Sensors                 | See page 5                                                |                            |
| Operating Temperature              | - 40 ~ +110°C (- 40 ~ +230°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                             | 2 kg                                                      | 4 kg                       |



**With built-in solenoid valve**



**Explosion-proof robust valve position monitor with built-in solenoid and more feedback options and designed to provide an outstanding performance under harsh working environments**

## Features

- ▶ Flameproof ATEX / IECEx / TR-CU / KC Ex d IIB+H<sub>2</sub> T6
- ▶ Rugged aluminum die-cast or stainless steel housing
- ▶ Compact single unit with built-in solenoid valve
- ▶ More economical in costs and simple wiring to a single unit comparison with separate installations of explosion proof limit switches and explosion proof solenoid valve
- ▶ Auto / Manual button easy to convert
- ▶ NAMUR mounting shaft or fork lever shaft adjustable for a non-NAMUR pneumatic actuator

## Options

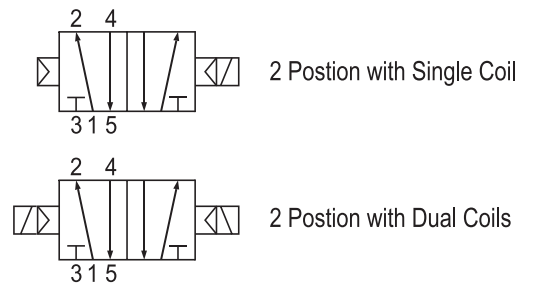
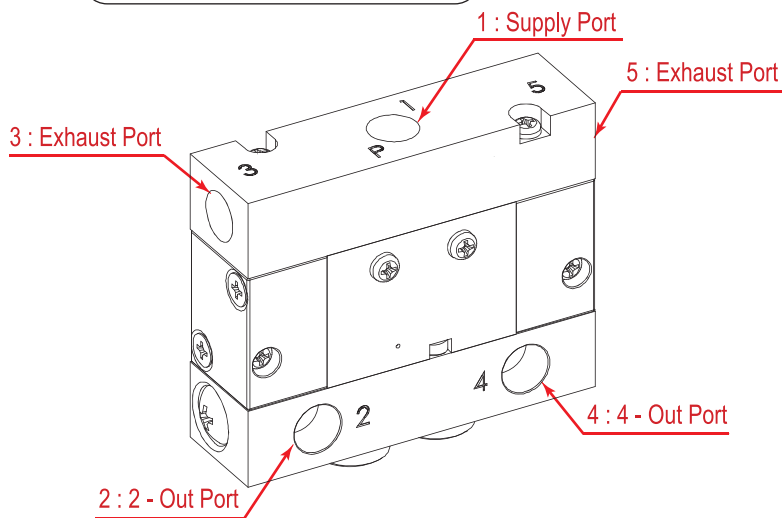
- ▶ 4 x SPDT mechanical limit switch
- ▶ 4 x P&F proximity sensor
- ▶ 2 x Hermetically-sealed magnetic sensor
- ▶ 4 - 20mA output position transmitter

## Specifications

| Model                                 | LSB-7000                                                      | LSB-7100            | LSB-7200                   |
|---------------------------------------|---------------------------------------------------------------|---------------------|----------------------------|
| Explosion proof / Protection Class    | ATEX / IECEx / TR-CU / KC - Ex d IIB+H <sub>2</sub> - IP66&67 |                     |                            |
| Operating Air Pressure                | 1.5 ~ 10 bar                                                  |                     |                            |
| Air Supply Pressure                   | Max. 10 bar                                                   |                     |                            |
| Mechanical Switches/Proximity Sensors | See page 5                                                    |                     |                            |
| Operating Voltage of Solenoid Valve   | 24 VDC / 48 VDC / 110 VAC / 220 VAC                           |                     |                            |
| Manual Override of Solenoid Valve     | Push button type                                              |                     |                            |
| Response Time of Solenoid Valve       | 25 ms                                                         |                     |                            |
| Coil Insulation Class                 | Class F                                                       |                     |                            |
| Operating Temperature                 | -30 ~ +75 °C                                                  |                     |                            |
| Pneumatic Connections                 | PT(Rc) 1/4, NPT 1/4                                           |                     | NTP 1/4                    |
| Electrical Connections                | PT 1, NPT 1<br>PT 3/4, NPT 3/4, PF 1/2, NPT 1/2               |                     | NPT 1,<br>NPT 3/4, NPT 1/2 |
| Body Material                         | Aluminum die-cast                                             |                     | Stainless steel 316        |
| Solenoid Valve Body Material          | Aluminum die-cast                                             | Stainless steel 316 |                            |
| Weight                                | 2.5 kg                                                        | 3.5 kg              | 5.8 kg                     |

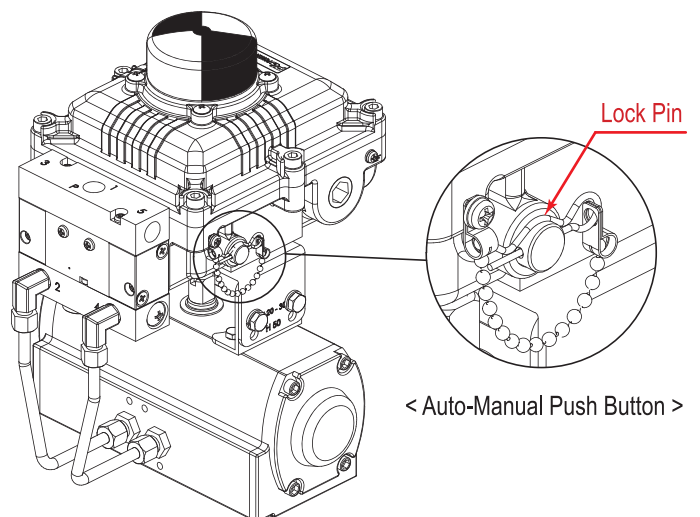


## Solenoid Valve



### < Symbols of Operation >

| Supply Air                                   |                             | Filtered, compressed, dry and non-oiled air |
|----------------------------------------------|-----------------------------|---------------------------------------------|
| Supply Air Pressure                          | 2 position with single coil | 1.5 ~ 9.9 bar                               |
|                                              | 2 position with dual coils  | 1.0 ~ 9.9 bar                               |
| Eff. Sectional Area (5 kfg/cm <sup>2</sup> ) |                             | 19.0 mm <sup>2</sup>                        |
| Manual Override                              |                             | Push button type                            |
| Response Time                                |                             | 25 ms or less                               |
| Max. Working Frequency                       |                             | 5 c/sec                                     |
| Power Consumption                            |                             | AC : 4.5 / 3.6VA (60Hz/50Hz)<br>DC : 2.8W   |
| Coil Insulation Class                        |                             | Class F or equivalent                       |
| Permissible Voltage Variation                |                             | ±10% of rated voltage                       |
| Lubrication                                  |                             | Not required                                |



# Specifications of Switches / Sensors

## 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℃   |

| 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℃                  |

| 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℃     |

## 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℃    |

| 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℃     |

## Magnetic Proximity Sensors



| Part Number / Maker                               | MS Series / Power-genex |
|---------------------------------------------------|-------------------------|
| 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℃             |

| Part Number / Maker                  | ESI-V3-CR / Euroswitch                 |
|--------------------------------------|----------------------------------------|
| Switch type                          | SPDT (Form C)                          |
| Contacts                             | Rhodium                                |
| Approvals                            | ATEX / IECEx / INMETRO<br>Ex ia IIC T6 |
| Electrical Ratings                   |                                        |
| 830 mA / 24VDC, 180 mA / 120VAC      |                                        |
| Ex : Ui = 30V, Ii = 250mA, Pi = 1.3w |                                        |
| Operating Temperature                | -20 ~ +80℃                             |

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

< LSB-1000 >

Technical drawings of the LSB-1000 sensor. The left drawing is a front view showing a square sensor with a central circular lens and four mounting holes. Dimensions include a height of 115 mm and a width of 92 mm. The right drawing is a side view showing the sensor's profile with a total height of 68.50 mm and a mounting flange height of 46.50 mm. It also shows a central hole with a diameter of Ø 50 and a mounting hole with a diameter of M6 - 6H x 10.

Technical drawing of the valve assembly showing dimensions L, H1, and Ø9.

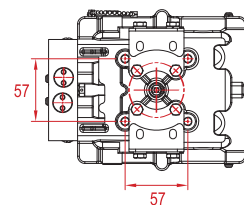
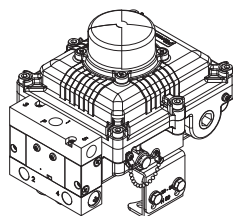
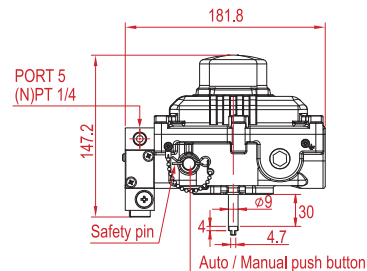
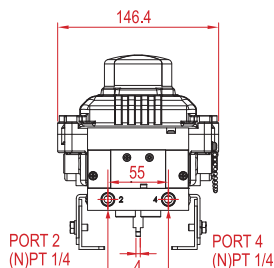
1) 80 x 30 x 20 (H) , 4) 130 x 30 x 20 (H)  
2) 80 x 30 x 30 (H) , 5) 130 x 30 x 30 (H)  
3) 80 x 30 x 50 (H) , 6) 130 x 30 x 50 (H)

H : Rotary Actuator Shaft Height  
L : Length ( 80 or 130mm )

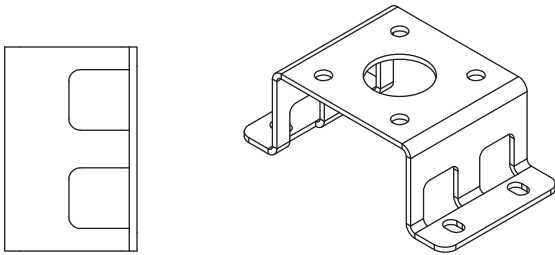
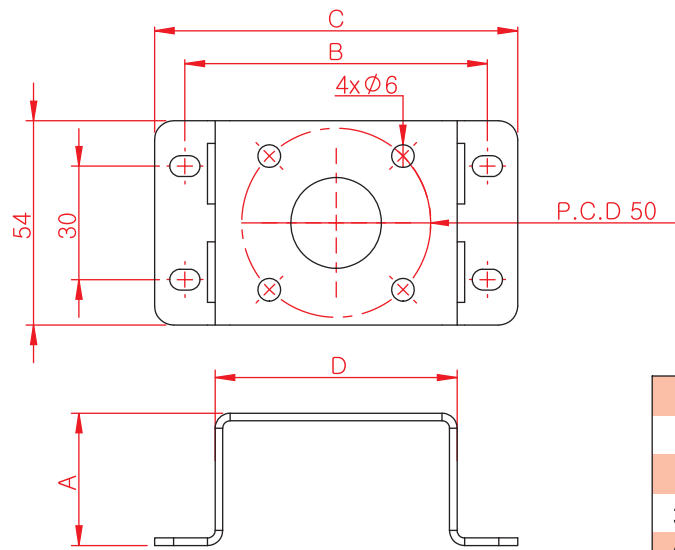
Dual Coil Type

188.8

7



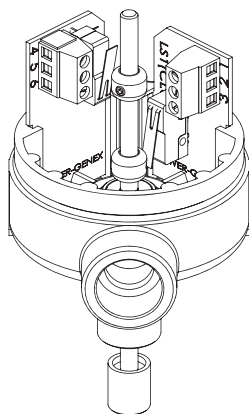
< Bracket : LSB-1000 / 3000 >



|           | 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 >

|                                               | LSB-1000 / 3000 / 7000                                                                                                                                                           | LSB-3000 / 7000                                                                                                                                                                                  |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mechanical Switches / Magnetic Sensors (SPDT) | <p>Wiring diagram for SPDT sensors on LSB-1000 / 3000 / 7000. It shows two sensors, SPDT1 and SPDT2, each with NO, C, and NC contacts. The terminals are numbered 1 to 8.</p>    | <p>Wiring diagram for SPDT sensors on LSB-3000 / 7000. It shows four sensors, SPDT1, SPDT2, SPDT3, and SPDT4, each with NO, C, and NC contacts. The terminals are numbered 1 to 12.</p>          |
| Mechanical Switches (DPDT)                    |                                                                                                                                                                                  | <p>Wiring diagram for DPDT sensors on LSB-3000 / 7000. It shows two sensors, DPDT1 and DPDT2, each with NO, C, and NC contacts. The terminals are numbered 1 to 12.</p>                          |
| Proximity Sensors (P&F)                       | <p>Wiring diagram for P&amp;F sensors on LSB-1000 / 3000 / 7000. It shows two sensors, Sensor 1 and Sensor 2, each with + and - contacts. The terminals are numbered 1 to 8.</p> | <p>Wiring diagram for P&amp;F sensors on LSB-3000 / 7000. It shows four sensors, Sensor 1, Sensor 2, Sensor 3, and Sensor 4, each with + and - contacts. The terminals are numbered 1 to 12.</p> |



Linear valve position monitor

Features

- ▶ Weatherproof to IP66
- ▶ Easy to mount and compact for angle seat valve or diaphragm valve

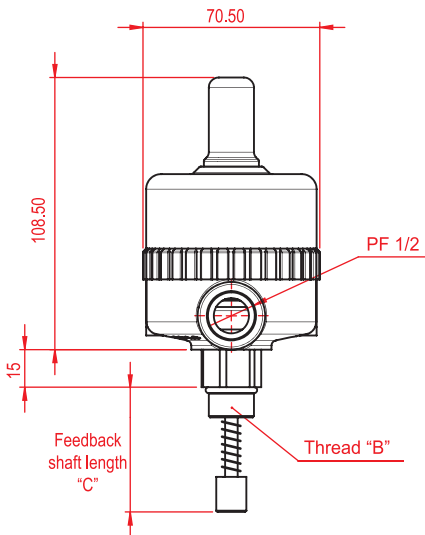
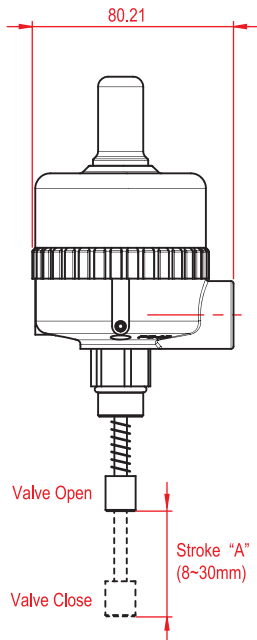
Specifications

|                            |                            |
|----------------------------|----------------------------|
|                            | LSB-2000                   |
| Protection Class           | IP66                       |
| Specifications of Switches | 2 x SPDT (250 VAC @ 10.1A) |
| Linear Operating Stroke    | 8 ~ 30mm                   |
| Operating Temperature      | -20 ~ +60℃ (-4 ~ +140°F)   |
| Electrical connections     | PF 1/2                     |
| Body material              | PA                         |
| Weight                     | 0.5 kg                     |

How to Order

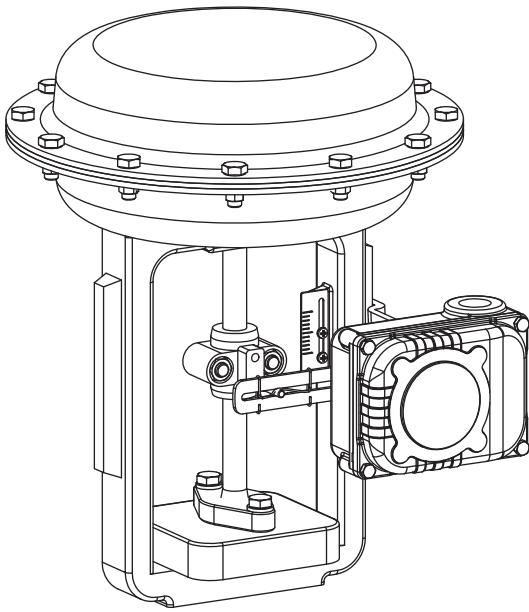
LSB-2000 - Stroke "A" - Mounting Threads "B" - Feedback Shaft Length "C"

| Description                | Code                       |
|----------------------------|----------------------------|
| Stroke (A) :               | On request (8mm ~ 30mm)    |
| Mounting Threads (B):      | On request (Ex. M30 x 2.0) |
| Feedback Shaft Length (C): | On request                 |

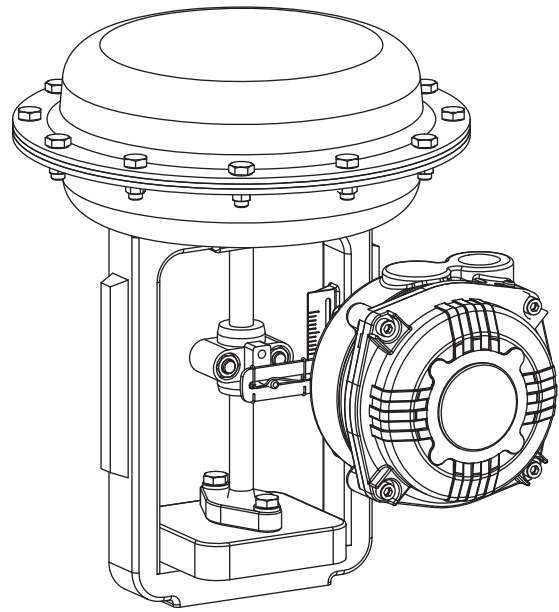


< SPDT Mechanical Switch - OMRON >

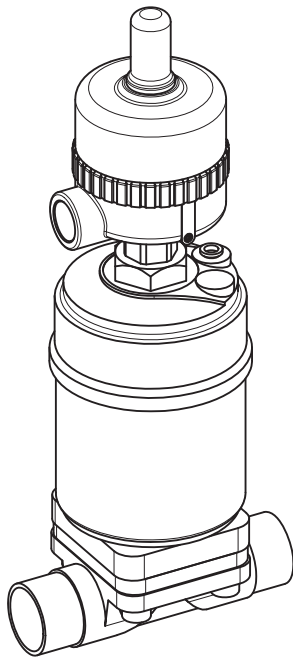
| Technical Data    |                     |
|-------------------|---------------------|
| Switch type       | SPDT (Form C)       |
| Contacts          | Silver-plated       |
| Approvals         | UL, CSA             |
| Electrical Rating | 10.1 Amps / 250 VAC |
| Operating Temp.   | -25 ~ +85℃          |



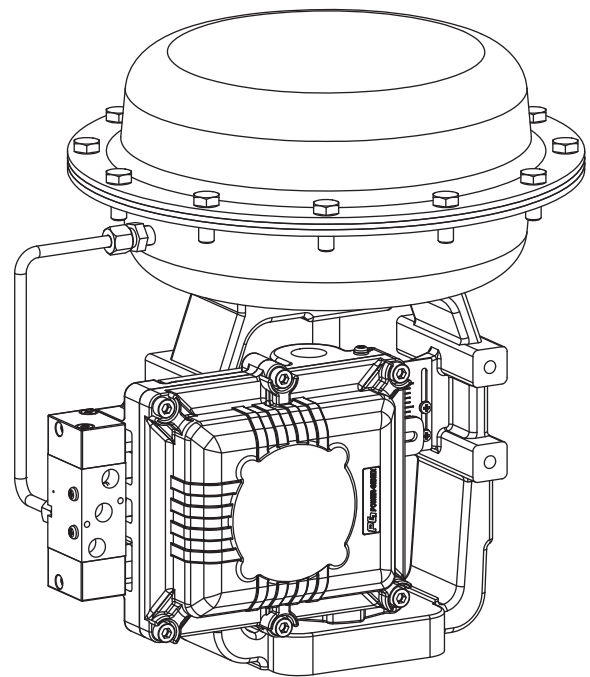
**< Linear type - LSB-1000 >**



**< Linear type - LSB-3000 >**



**< Linear type - LSB-2000 >**



**< Linear type - LSB-7000 >**

# Solenoid Valve



**ESV-S**  
(5/2 way)



**ESV-SS**  
(SS316 valve body)



**ESV-SC**  
(SS316)



**ESV-3**  
(3/2 way)



**ESV-3S**  
(SS316 valve body)

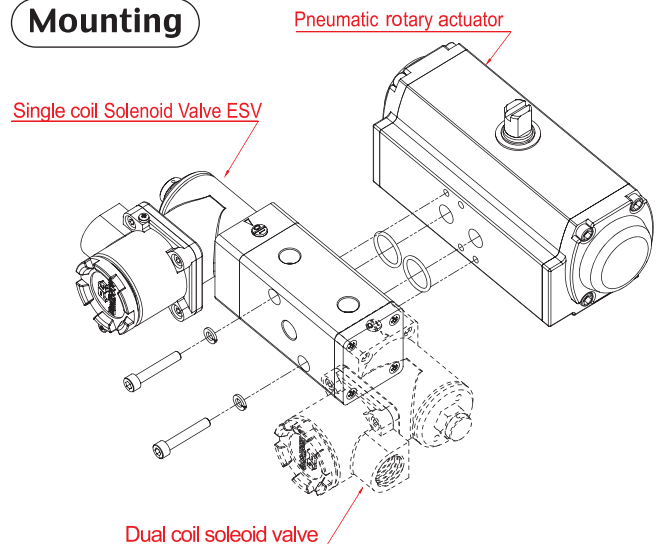


**ESV-31**  
(3/2 way)

## Features

- ▶ Flameproof ATEX / IECEx / KC Ex d IIC
- ▶ Rugged aluminum die-cast housing or optionally stainless steel 316 valve body
- ▶ Convertible from 5/2 way to 3/2 way
- ▶ Rotatable valve head for optimal mounting
- ▶ Direct NAMUR mounting or screw mounting

## Mounting



**PG POWER-GENEX®**

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