



LSB series position monitoring switch boxes are primarily a rotary position indication device designed to integrate valve and NAMUR rotary pneumatic actuator with a variety of mounting options, internal switches or sensors and configurations.

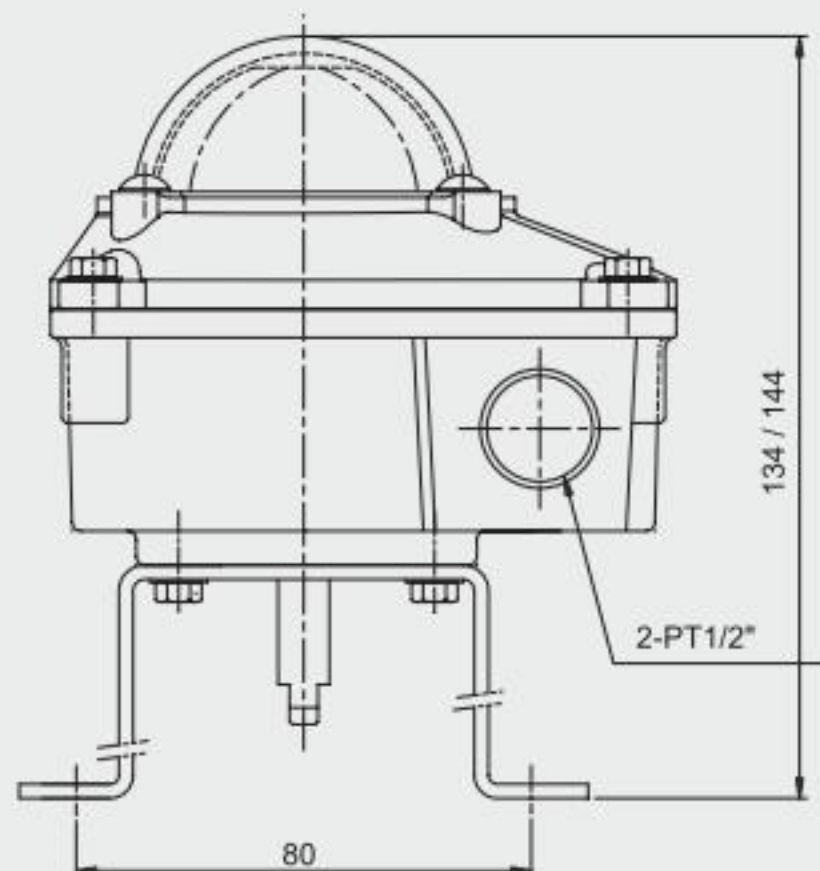
## LSB 100 series

LSB 100 series are specially designed suitable for small size pneumatic actuator and valves to reduce installation space, but provides high performance by equipping a variety of switches and sensors.

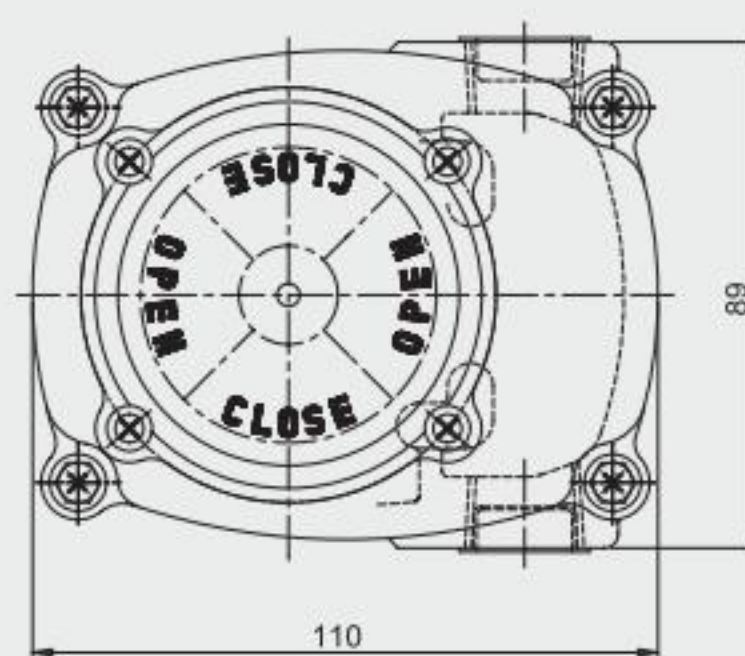
SPECIFICATION	Standard	Option
Enclosure	Weather proof IP67, O-ring sealed	IP 68
Outside coating	Epoxy-Polyester inside and outside against corrosion	Nylon Coating Special color Coating
Ambient temperature	-20°C~+80°C	Higher(~+100°C) and lower (-40°C~) temperature
Cable entries	2 - PT1/2", other standard threads	(NPT1/2", PF1/2", M20x1.5 and PG13.5)
Terminal block	8 nos of terminal strips (6 for switches, 2 for solenoid valve power)	
Position indicator	Dome type 0°~90°	Others(3 way L-port, T-port)
Mounting bracket	Stainless steel acc. to VDI/VDE3845, NAMUR, SS1, SS2 as standard	SS3, MT1 as option
Switches(Sensors)	2-SPDT mechanical switch(Form C) as standard	Proximity sensors(P & F, Autonics), Others

## DIMENSION

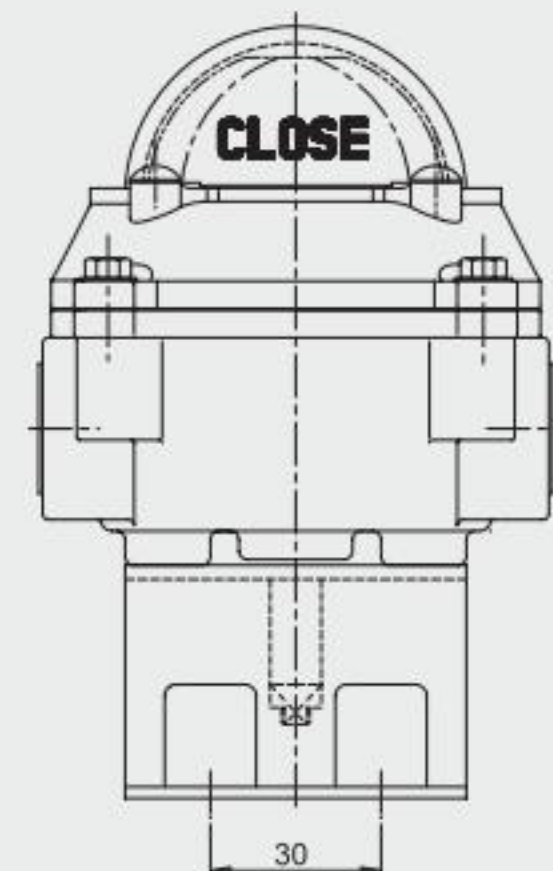
LSB 100 series



Front view



Top view



Side view



## Explosion Proof position monitoring switches

Rigid and compact design constructed from aluminum alloy die-casting capable of operating even in arduous conditions

### LSB 300 series

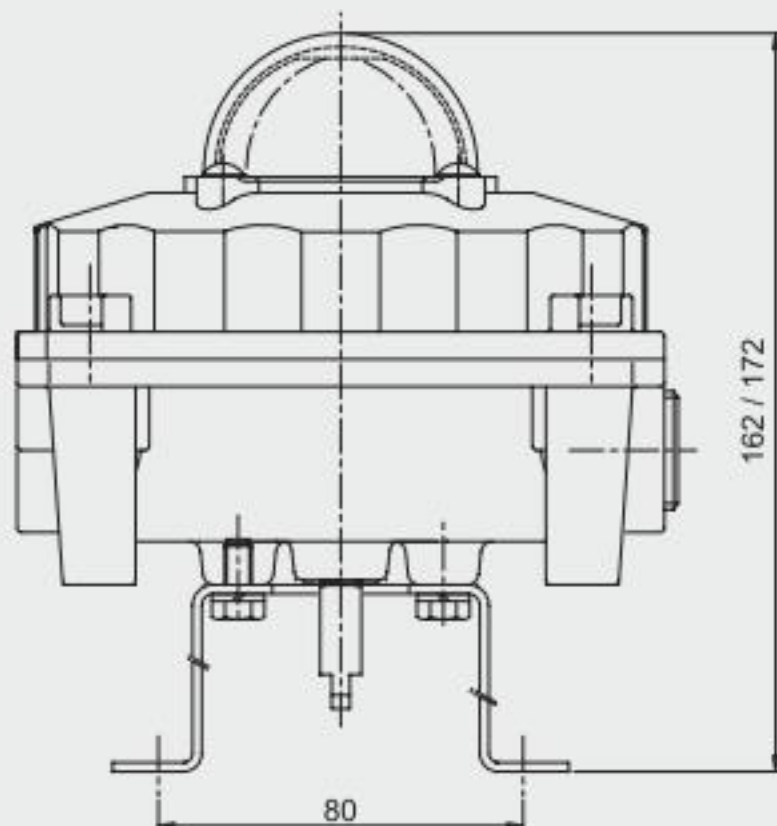
LSB 300 series are designed suitable for valve and actuators in hazardous area application, having compact but robust construction conforms to EN50014 and 50018, also suitable in Zone 1 and 2, and ingress protection IP67  
Standard aluminum housing provides reliable explosion proof performance.



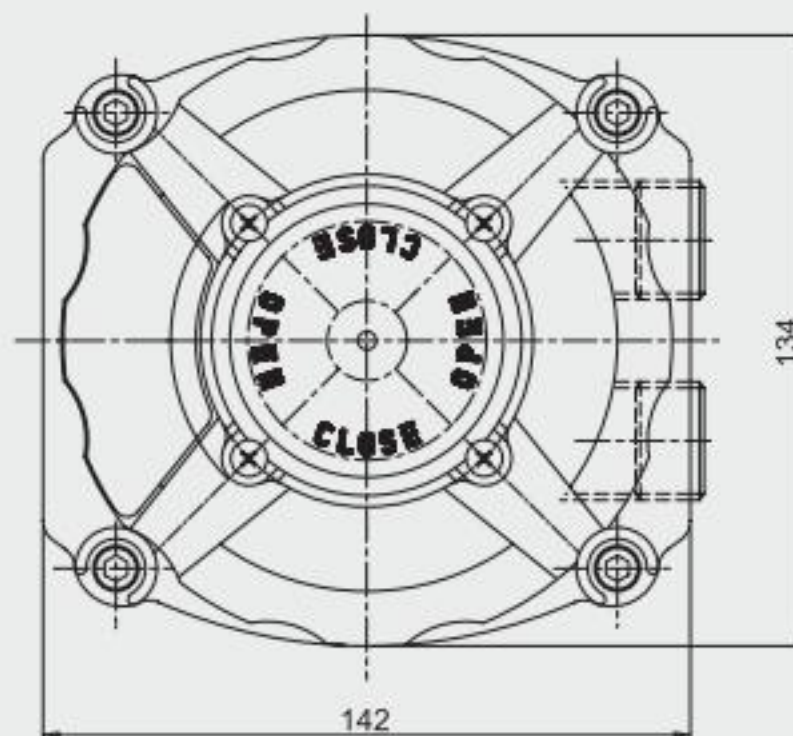
SPECIFICATION	Standard	Option
<b>Enclosure</b>	Explosion proof Ex d IIC T6, IP67, O-ring sealed	IP 68
<b>Outside coating</b>	Epoxy-Polyester outside against corrosion	Nylon Coating Special color Coating
<b>Ambient temperature</b>	-20°C~+80°C	Higher(~100°C) and lower (-40°C~) temperature (NPT3/4", PF3/4", M25x1.5)
<b>Cable entries</b>	2 - PF3/4", other standard threads	
<b>Terminal block</b>	8 nos of terminal strips (6 for switches, 2 for solenoid valve power)	
<b>Position indicator</b>	Dome type 0°~90°	Others(3 way L-port, T-port)
<b>Mounting bracket</b>	Stainless steel acc. to VDI/VDE3845 NAMUR, SS1, SS2 as standard	SS3, MT1 as option
<b>Switches(Sensors)</b>	2-SPDT mechanical switch(Form C)	DPDT Switches Proximity sensors(P & F, Autonics) Magnetic sensors Position transmitter (output 0~1Kohm, 4-20mA DC)

## DIMENSION

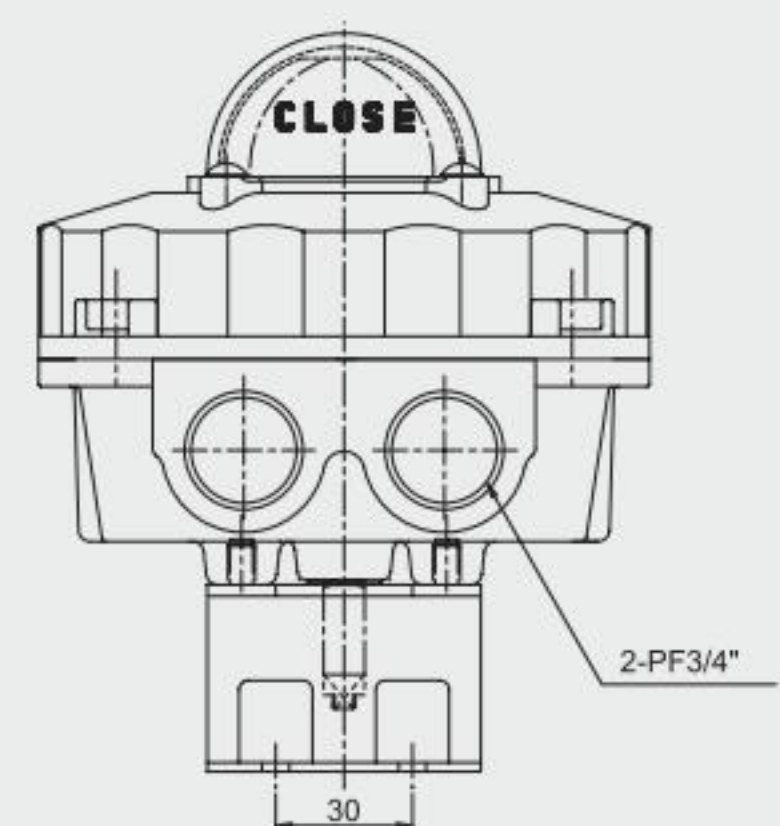
LSB 300 series



Front view



Top view



Side view



## Special Material position monitoring switches

Dome position indicator constructed from high impact resistance poly-carbonate material which offers instant visual recognition of valve or actuator position up to 50 meters distance.

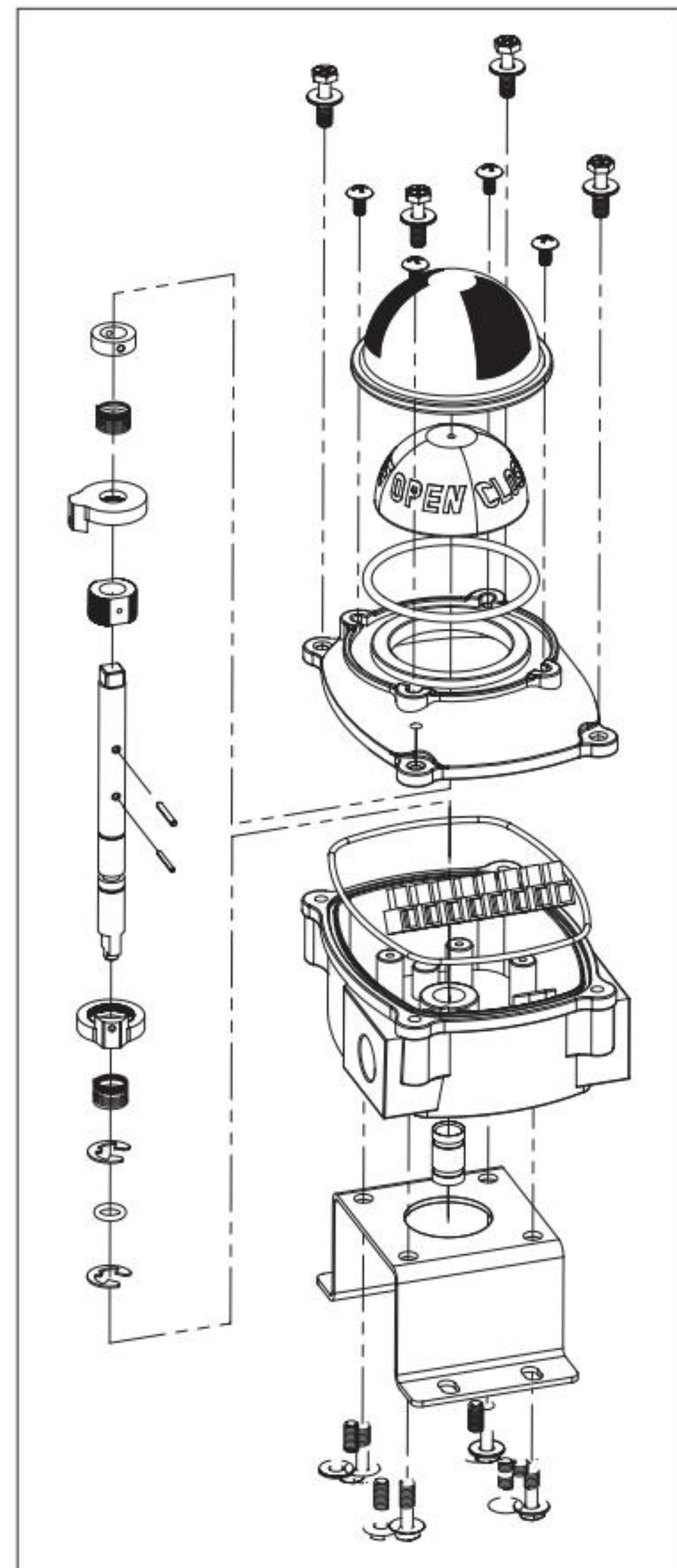


### LSB 500 series

Special stainless steel housing(316L or Duplex) provide very high protection performance against extremely corrosive environmental condition. Suitable for off-shore application. Other specification is same with ITS 300 series except for enclosure & coating.

## CONSTRUCTION MATERIAL

<b>Housing</b>	Low cooper aluminum die-casting
<b>Coating</b>	Epoxy-Polyester inside/outside(100 series) Chromated /Epoxy-Polyester(300 series) No painting on stainless steel housing
<b>Sealing</b>	NBR O-rings on each interface (Dome indicator, Lower/Upper housing, Shaft)
<b>Cams</b>	Poly-carbonate
<b>Bushings</b>	Bronze
<b>Shaft</b>	AISI303 Stainless steel
<b>Earth Lug</b>	Stainless steel
<b>Bolts</b>	All in stainless steel
<b>Mounting bracket</b>	Plate steel(ST series) Stainless steel(SS series and MT1)



## Easy set cam

Easy and precise cam set without setting tool  
Red cam for close, Green cam for open



Standard Cam

Cam with Sensing Target



## Terminal block and strips

Socket type terminal strip with screws  
Max. 2.5mm<sup>2</sup>, 26A at 30°C (approved by UL, CSA)

## Visual position indicator

Directly engaged with driving shaft to provide continuous position  
High strength, Chemical resistance and transparent polycarbonate  
High visibility and reliability  
Red for close, Yellow for open (Red for close, Green for open as option)

Standard



L-port

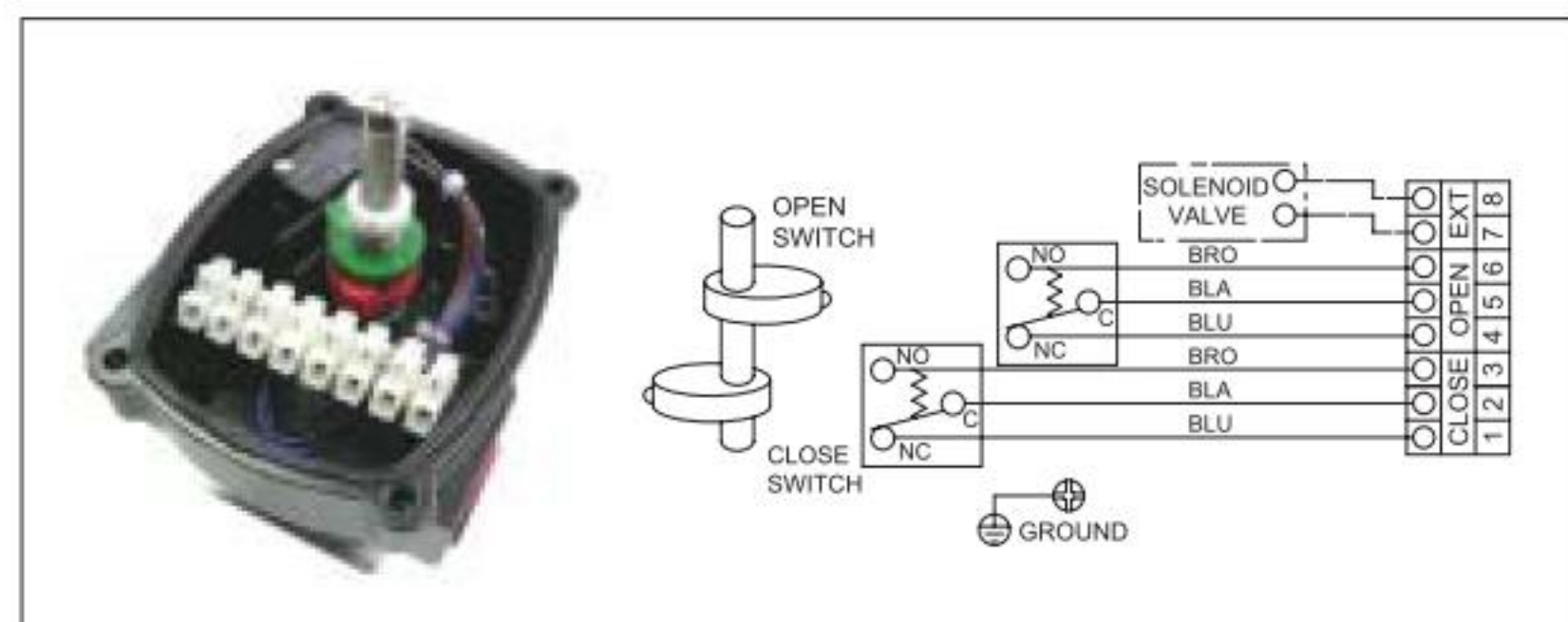


T-port

## Mechanical switches

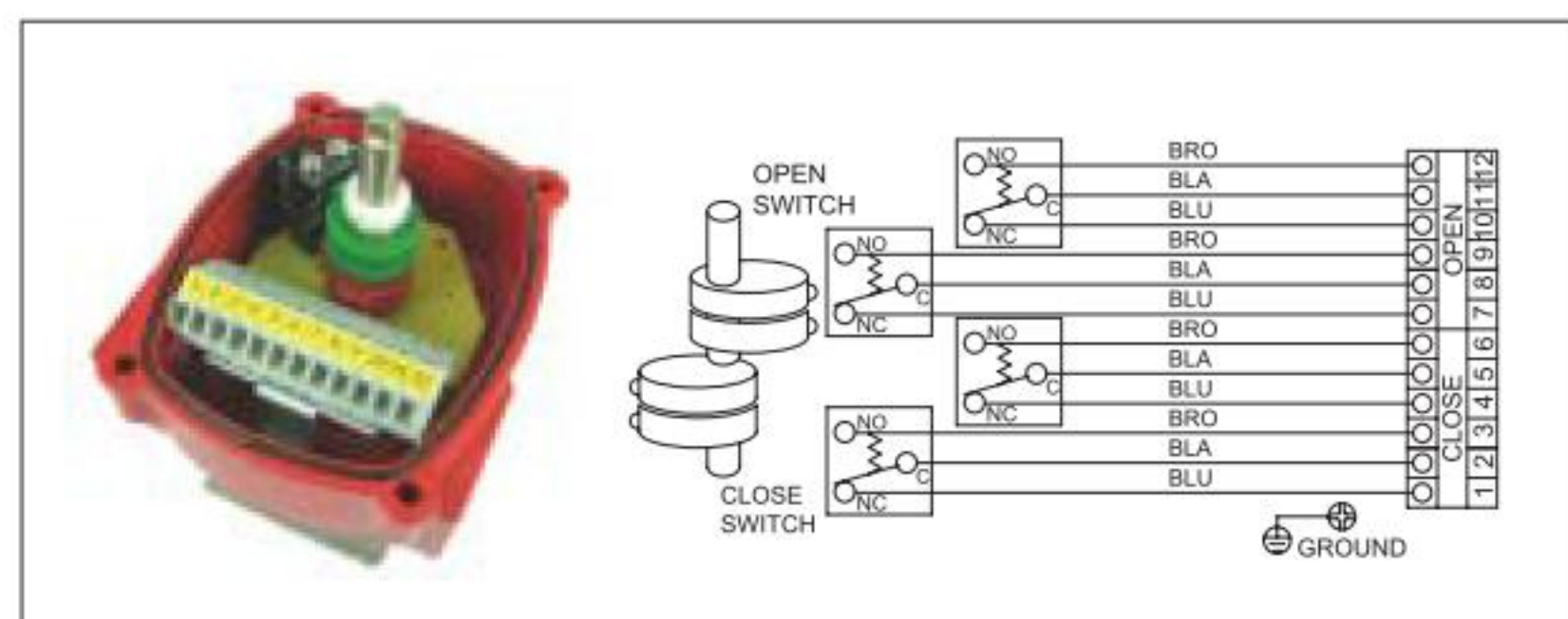
### 2-SPDT switches

Rating : 16A 1/2HP 125/250V AC,  
0.6A 125V DC  
0.3A 250V DC  
approved by UL, CSA



### 4-SPDT switches

Rating : 5A 125 V AC  
3A 125 V AC  
0.6A 125 V DC  
approved by UL, CSA

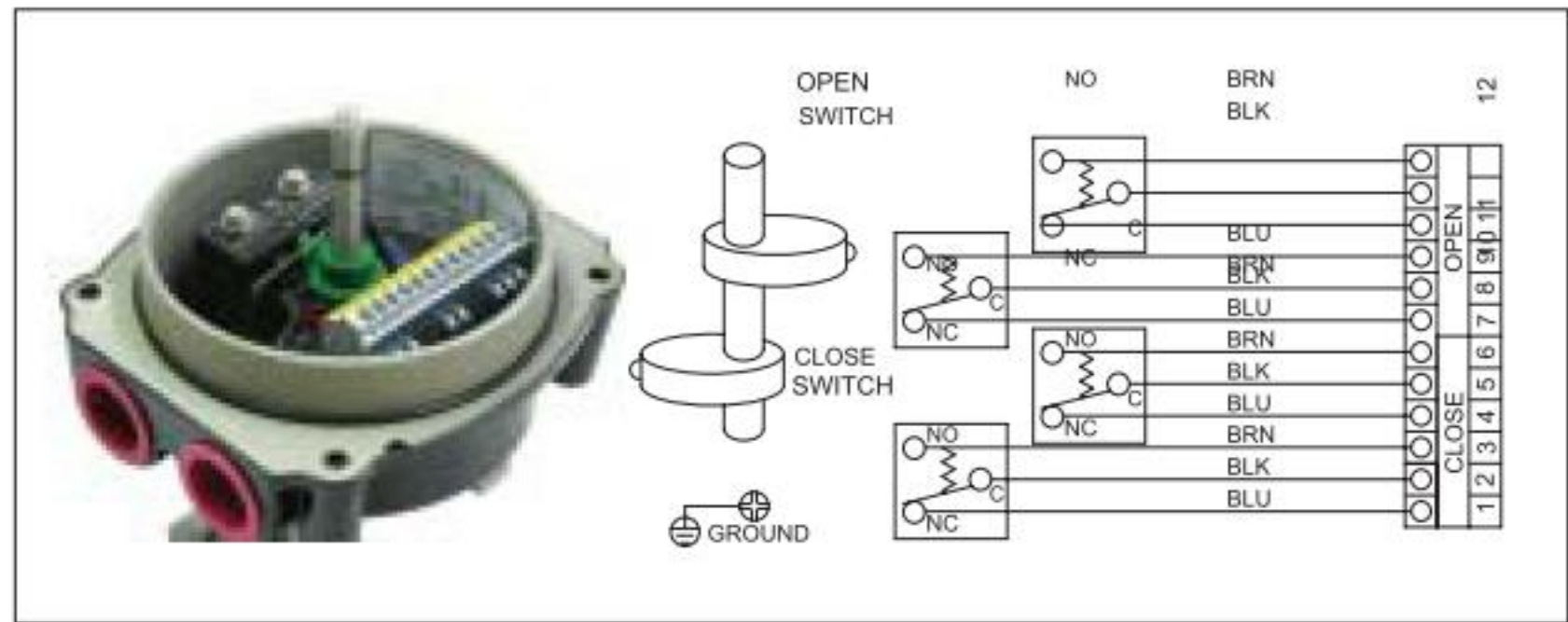




# LSB Series position monitoring switches

## Mechanical DPDT switches

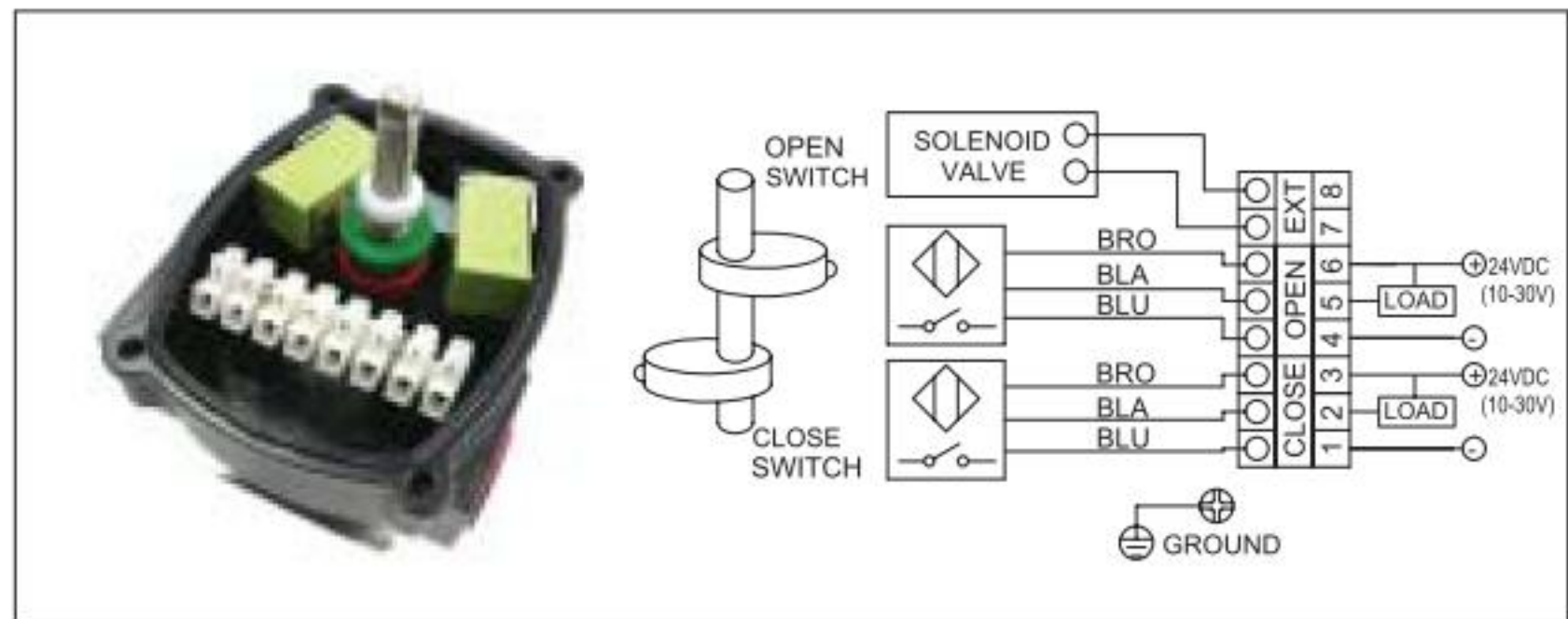
Rating : 10A 125 or 250V AC  
 2A 480V AC  
 1/8HP 125V AC  
 0.25HP 250V AC  
 0.5A 125V DC  
 0.25A 250V DC  
 approved by UL, CSA



## Proximity Sensors

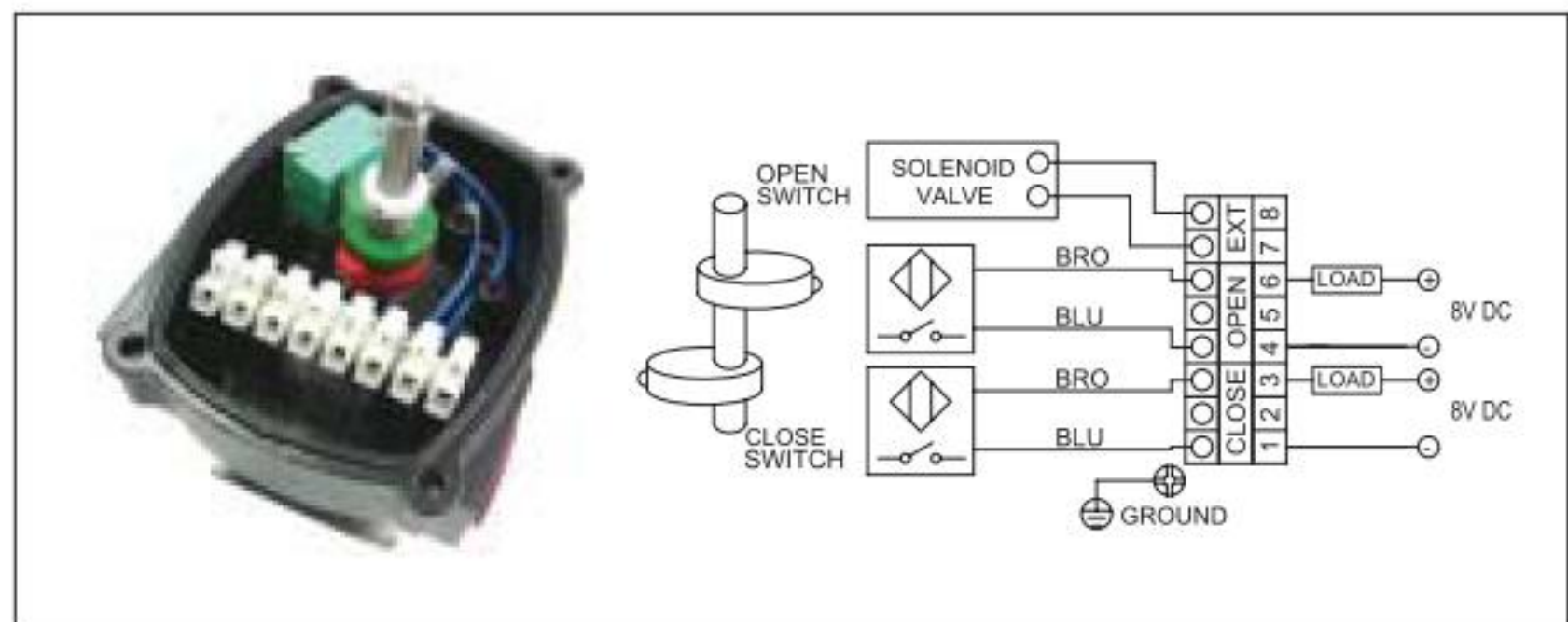
### Autonics sensors

**PS17-5DNU(NPN, PNP)**  
 Voltage rating : 10~30V DC  
 Sensing distance : 5mm  
 Ambient temperature : -25°C ~+70°C



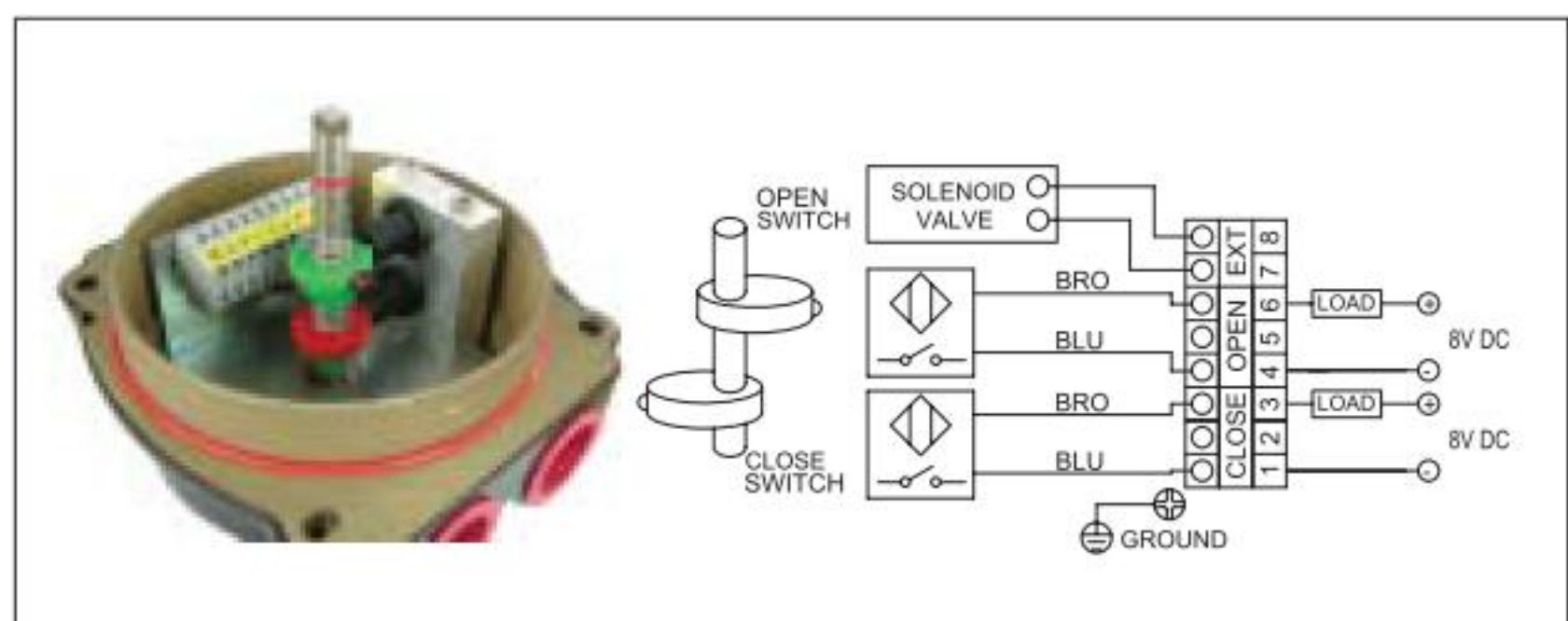
### P & F sensors

**NJ2-V3-N(Intrinsic safe, two wire)**  
 Voltage rating : 8V DC  
 Sensing distance : 2mm  
 Ambient temperature : -25°C ~+100°C



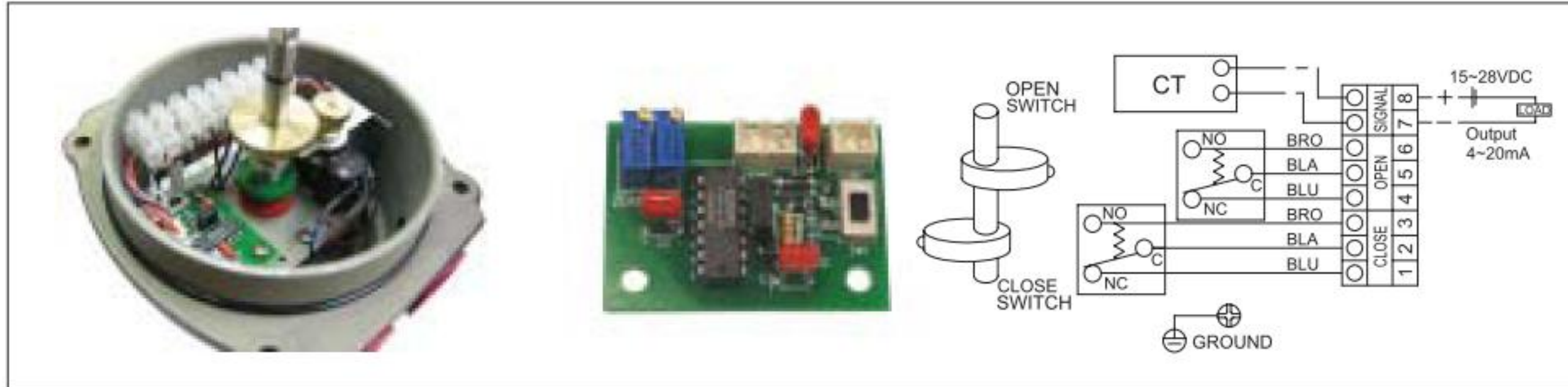
### NJ4-12GK-SN

Voltage rating : 8V DC  
 Sensing distance : 4mm  
 Ambient temperature : -50°C ~+100°C



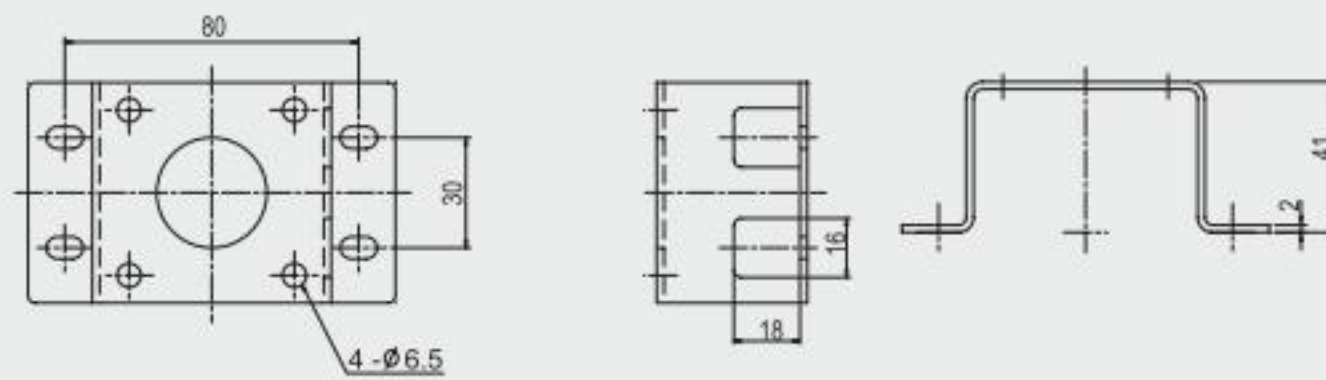
## Position transmitter

Providing 4-20mA DC(or 0~1Kohm) output signal as feedback, 15~28VDC loop power(24V DC input power)  
 Load impedance : 0~600 Ohm, Max output : 35mA DC  
 Adjustment : Zero and span

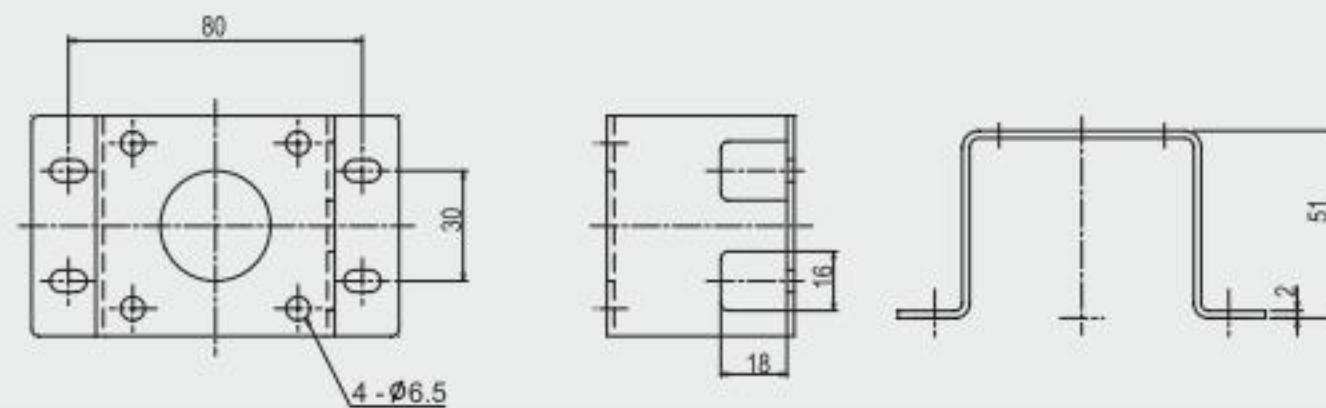


## Mounting bracket(Acc. to VDI/VDE3845)

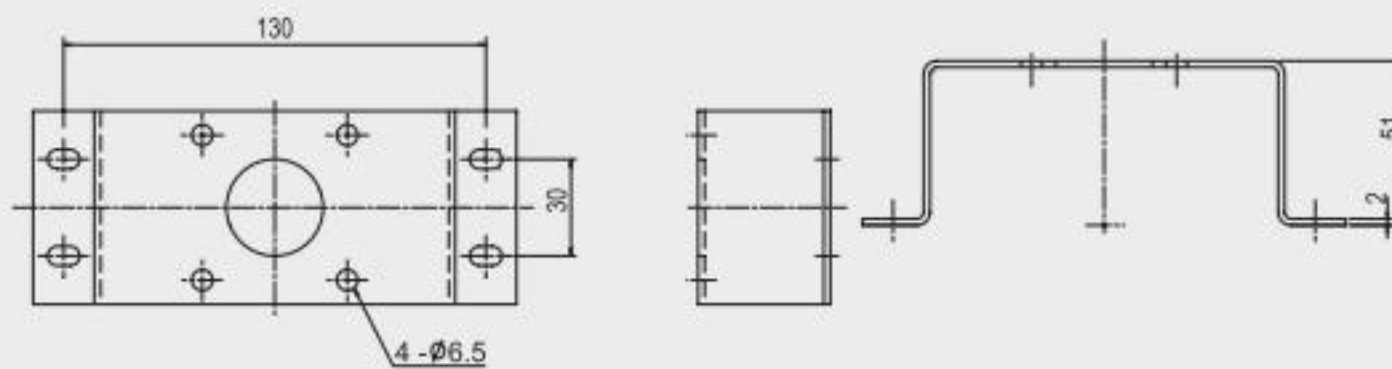
SS1



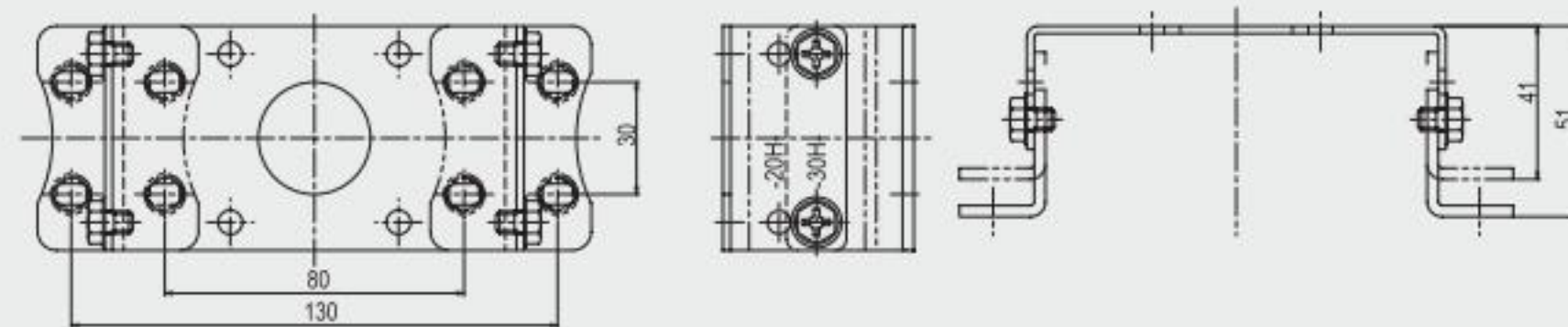
SS2



SS3



MT1



Standard bracket provided together with switch box(included)

SS1 30 x 80 x 20(H)

ST1 30 x 80 x 20(H)

SS2 30 x 80 x 30(H)

ST2 30 x 80 x 30(H)

Optional bracket provided with extra cost

SS3 30 x 130 x 30(H)

ST3 30 x 130 x 30(H)

MT1 30 x 80 x 20(H), 30 x 80 x 30(H)

30 x 130 x 20(H), 30 x 130 x 30(H)

Others as option



*LSB Series  
position monitoring switches*

## Model number Legend

LSB	1	0	0
	1: Weather proof	0: Mechanical switches	0 : 2 - SPDT
	3: Explosion proof		1 : 3 - SPDT
	5: Special material housing (316L, Duplex)		2 : 4 - SPDT
			3 : 2 - SPST
			4 : 2 - DPDT
			5 : 2 - SPDT + output(0~1Kohm)
			6 : S - SPDT + output(4-20mA)
		1 : Proximity sensors	0 : Autonics(PS17-5DNU)
			1 : P & F (NJ2-V3-N)
			S: Other type sensors

- Model numbers in Green are applicable to LSB100, 300 and 500 series
- Model numbers in Red are applicable to LSB300 and 500 series