

**Introduction**

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

**Features**

- Flameproof / explosion-proof enclosure (Exd IIB+H2 T6 IP66)
- 316SS Solenoid valve
- Compact single unit with built-in solenoid valve
- Auto / Manual button easy to convert
- NAMUR mounting shaft or fork lever shaft adjustable for a non-NAMUR pneumatic actuator

**Option**

- 4 x SPDT mechanical limit switches
- 4 x inductive sensors
- 4-20mA output position transmitter

**Specifications**

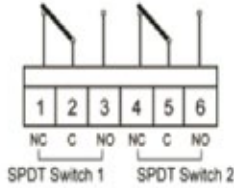
Protection Class	Flameproof ( Ex d IIB+H2 T6, IP66)
Operating Air Pressure	1.5 ~ 10kgf/cm2(single coil) 1.0 ~ 10kgf/cm2(double coil)
Air Supply(Max.)	Max 15kgf/cm2
Solenoid Valve Operating Voltage	24 VDC / 110 AC / 220 AC
Solenoid Valve Manual Override	Push Button
Solenoid Valve Response Time	25ms
Coil Insulation Class	F - Class
Operating Temperature	-30 ~ +75°C
Pneumatic Connections	NPT 1/4
Electrical Connections	G 3/4, G 1/2, G 1, NPT 3/4, NPT 1/2, NPT 1
Body Material	Aluminum die-cast / powder-painted
Weight	2.5 kg

**Mechanical Switches & Inductive Sensor Rating**

**Mechanical Switches**



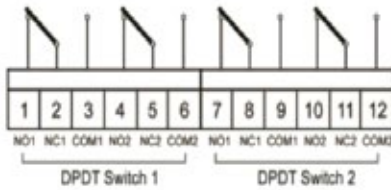
< SPDT Mechanical Switch >



SPDT, SZM-V16-2FA-61 / STARION					
Type		Non-inductive load		Inductive load	
		Resistive load	Lamp load	Inductive load	Motor load
Rating	250 VAC	16A	2A	10A	3A
	8 VDC	16A	4A	10A	6A
	30 VDC	10A	4A	10A	4A
	125 VDC	0.6A	0.1A	0.6A	0.1A
	250 VDC	0.3A	0.05A	0.3A	0.05A
Operating Temperature		-20 ~ +105 °C			



< DPDT Mechanical Switch >



DPDT, DZ-10G / OMRON								
Type		Non-inductive load				Inductive load		
		Resistive load		Lamp load	Inductive load		Motor load	
		NC	NO	NC	NO	NC	NO	NC
Rating	125 VAC	10A	2A	1A	6A	3A	1.5A	
	250 VAC	10A	1.5A	0.7A	4A	2A	1A	
	8 VDC	10A	3A	1.5A	6A	5A	2.5A	
	14 VDC	10A	3A	1.5A	6A	5A	2.5A	
	30 VDC	10A	3A	1.5A	4A	3A	1.5A	
	125 VDC	0.5A	0.5A	0.5A	0.05A	0.05A	0.05A	
	250 VDC	0.25A	0.25A	0.25A	0.03A	0.03A	0.03A	
Operating Temperature		-20 ~ +80 °C						

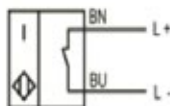
**Proximity Sensors**



< NJ2-V3-N / P&F >



< NJ4-12GK-N / P&F >



< Wiring >

NJ2-V3-N / P&F		NJ4-12GK-N / P&F	
<b>General Specifications</b>		<b>General Specifications</b>	
Switching element function	NAMUR NC	Switching element function	NAMUR NC
Rated operating distance	2mm	Rated operating distance	4 mm
Installation	embeddable	Installation	not embeddable
Output polarity	NAMUR	Output polarity	NAMUR
Assured operating distance	0 ~ 1.62mm	Assured operating distance	0 ~ 3.24 mm
<b>Nominal Ratings</b>		<b>Nominal Ratings</b>	
Nominal voltage	8.2 VDC	Nominal voltage	8.2 VDC
Switching frequency	0 ~ 1000 Hz	Switching frequency	0 ~ 1500 Hz
Hysteresis	0.01 ~ 0.1 mm	Hysteresis	3 %
Current consumption		Current consumption	
Measuring plate not detected	> 3 mA	Measuring plate not detected	> 3 mA
Measuring plate detected	< 1 mA	Measuring plate detected	< 1 mA
<b>Mechanical Specifications</b>		<b>Mechanical Specifications</b>	
Connection type	cable PCV, 130 mm	Connection type	cable PCV, 2 m
Core cross-section	0.14 mm	Core cross-section	0.34 mm
Housing material	PBT	Housing material	PBT
Sensing face	PBT	Sensing face	PBT
Protection degree	IP67	Protection degree	IP66
<b>Operating Temperature</b>	-25 ~ +100 °C	<b>Operating Temperature</b>	-25 ~ +100 °C

**How to Order**

**LSB-7M**

Switch  
Type

Switch /  
Sensor

Position  
Transmitter

Coil  
Type

Power  
Supply

Indicator  
Option

Electrical  
Connections

Pneumatic  
Connections

Feedback  
Shaft

Mounting  
Bracket

Description	Code
<b>Switch Type :</b>	0 : Mechanical switches 1 : Proximity sensors
<b>Switch / Sensor :</b>	N : None
- Mechanical Switches	0 : 2 x SPDT 1 : 3 x SPDT 2 : 4 x SPDT 4 : 2 x DPDT
- Proximity Sensors	6 : 2 x NJ2-V3-N / P&F 7 : 4 x NJ2-V3-N / P&F 8 : 2 x NJ4-12GK-N / P&F 9 : 4 x NJ4-12GK-N / P&F
<b>Position Transmitter :</b> (only for 2 x switch / sensor)	N : None O : 4 ~ 20mA output signal
<b>Coil Type :</b>	N : None S : Single coil type D : Dual coil type
<b>Pilot Power Supply</b>	A : 220VAC B : 110VAC C : 24VDC

Description	Code
<b>Indicator Option :</b>	N : 2-way (standard) L : 3-way L-port T : 3-way T-port
<b>Electrical Connections :</b>	A : 2 x PF(G) 1/2 B : 2 x NPT 1/2 C : 2 x M20 x 1.5 E : 2 x PF(G) 3/4 (standard) F : 2 x NPT 3/4 H : 2 x PF(G) 1 I : 2 x NPT 1
<b>Pneumatic Connections :</b>	O : None (without solenoid) 2 : NPT 1/4
<b>Feedback Shaft :</b>	F : Fork lever N : NAMUR shaft(direct mounting)
<b>Mounting bracket :</b>	N : None R : Multi-size bracket for IEC 60534-6-2 (VDI / VDE 3845)

Ex) LSB - 7M00 - O - SA - NF1 - NR : 316SS solenoid valve body / mechaical switches / 2xSPDT / 4~20mA output signal / 220 VAC single coil / 2-way indicator / 2xNPT 3/4 / Rc 1/4 / NAMUR shaft / Multi-size bracket