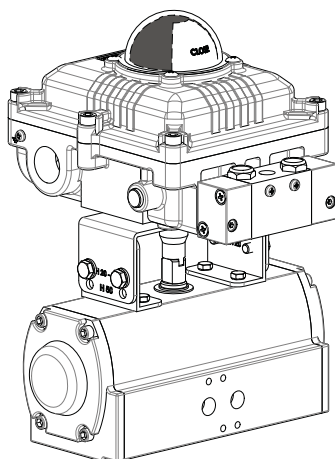




With built-in solenoid valve



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 IECEx / ATEX / KC Ex d IIB+H₂ T6 - IP66
- ▶ Rugged aluminum die-cast 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

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

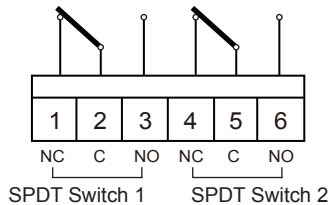
Specifications

	LSB-7
Protection Class	Flameproof IECEx / ATEX / KC Ex d IIB+H ₂ T6 - IP66
Operating Air Pressure	1.5 ~ 10 bar (single coil) / 1.0 ~ 10 bar (dual coils)
Air Supply	Max. 15 bar
Specifications of Mechanical Switches and Proximity Sensors	See next page
Operating Voltage of Solenoid Valve	24 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	-20 ~ +80 °C
Pneumatic Connections	Rc 1/4 or NPT 1/4
Electrical Connections	G 3/4, G 1/2, G 1, NPT 3/4 NPT 1/2 or NPT 1
Body Material	Aluminum die-cast / powder-painted
Weight	2.5 kg

Mechanical Switches



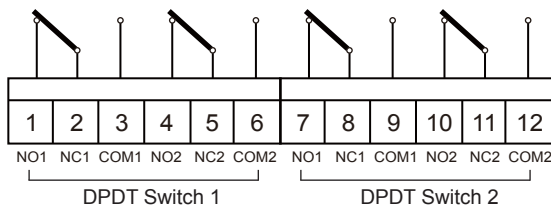
< SPDT Mechanical Switch >



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						

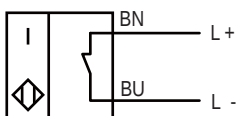
Proximity Sensors



< NJ2-V3-N / P&F >



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

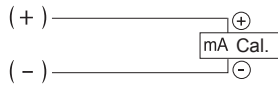


< Wiring >

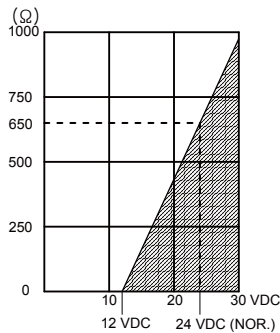
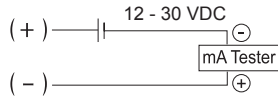
NJ2-V3-N / P&F		NJ4-12GM-N / P&F	
General Specifications		General Specifications	
Switching element function	NAMUR NC	Switching element function	NAMUR NC
Rated operating distance	2mm	Rated operating distance	4 mm
Installation	embeddable	Installation	not embeddable
Output polarity	NAMUR	Output polarity	NAMUR
Assured operating distance	0 ~ 1.62mm	Assured operating distance	0 ~ 3.24 mm
Nominal Ratings		Nominal Ratings	
Nominal voltage	8.2 VDC	Nominal voltage	8.2 VDC
Switching frequency	0 ~ 1000 Hz	Switching frequency	0 ~ 1000 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
Mechanical Specifications		Mechanical Specifications	
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	Stainless steel
Sensing face	PBT	Sensing face	PBT
Protection degree	IP67	Protection degree	IP67
Operating Temperature	-25 ~ +100 °C	Operating Temperature	-25 ~ +100 °C

Position Transmitter

① With mA loop calibrator



② With multimeter (mA)

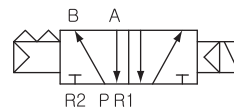
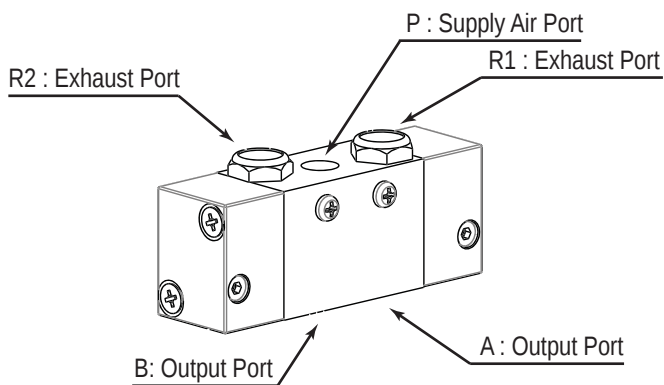


Transmitter Load Limitation

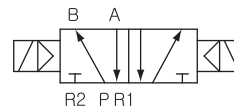
Position Transmitter

Output Signal	4 - 20 mA, 2-wire
Power Supply	12 - 30 VDC
Output Current Limit	30 mA DC
Linearity	±0.5% F.S
Operating Temperature	-20 ~ +80 °C

Solenoid Valve



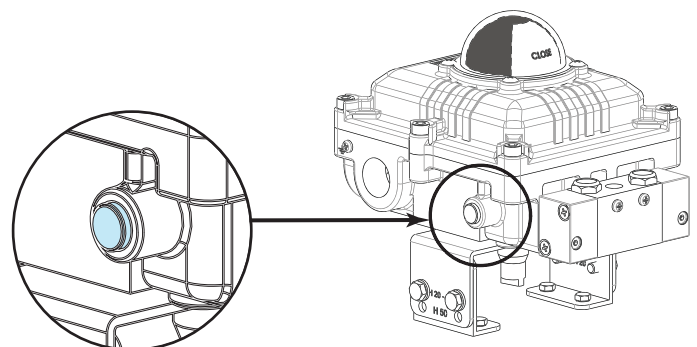
2 Position with Single Coil



2 Position with Dual Coils

< Symbols of Operation >

Supply Air	Filtered, compressed, dry and non-oiled air
Supply Air Pressure	1.5 ~ 9.9 bar
Eff. Sectional Area (5 kgf/cm ²)	19.0 mm ²
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) DC : 2.8W
Coil Insulation Class	Class F or equivalent
Permissible Voltage Variation	±10% of rated voltage
Lubrication	Not required



< Auto Manual Button >

LSB - 7

Mounting Bracket

Description	Code
Indicator Option :	N : 2-way (standard) L : 3-way L-port T : 3-way T-port
Electrical Connections :	A : 2 x PF 1/2 B : 2 x NPT 1/2 C : 2 x M20 x 1.5 E : 2 x PF 3/4 (standard) F : 2 x NPT 3/4 H : 2 x PF 1 I : 2 x NPT 1
Pneumatic Connections :	0 : None (without solenoid) 1 : Rc 1/4 2 : NPT 1/4
Feedback Shaft :	F: Fork lever N: NAMUR shaft (direct mounting)
Mounting bracket :	N: None R: Multi-size bracket for VDI/VDE 3845 (IEC 60534-6-2)

Dimensions

