



Paddle Type Level Switch

Model : SPS+ / SR7

SPS+/SR7

Paddle Type Level Switch

Introduction

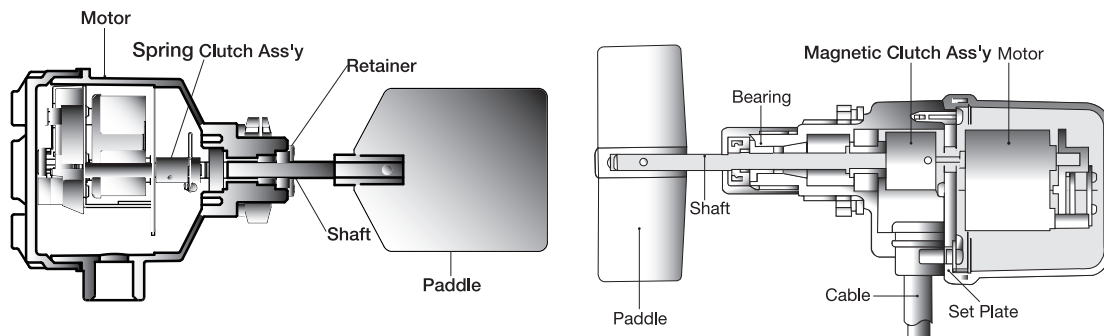
SPS and SR7 series Paddle Type Level Switches are designed to sense levels of powder and granular materials by motorized rotating paddles.

Features

- Appropriate operating torque can be easily set by adjust the spring inside the housing.
- The motor is protected from overload by means of Spring or magnetic slip clutch used between the paddle and the motor.
- Mechanism can be removed and serviced while the sensor body is still attached to a hopper.
- The rotating shaft can be protected from the shocks created by the flowing powder and grains by the flexible tip of the paddles.

Operating Principle

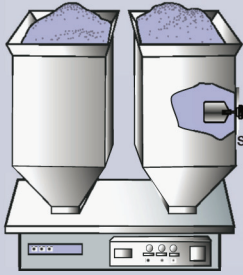
The paddle is free to rotate slowly when there is no material in contact with it, but the rotation of the shaft is stopped when the material touches the paddle and then an output signal is generated.



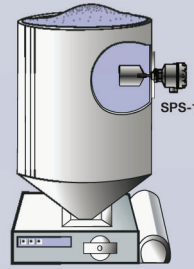
Specifications

DESCRIPTION		Model	SPS+	SR7
Application			Powder, Grain, Ore Silo, Bin, Hopper	Powder, Grains Hopper
Contact rating			250 V AC, 5A (1SPDT)	250 V AC, 3A (1SPDT)
Power Supply			220V AC \pm 10%, 5/60Hz	110 or 220V AC \pm 10%, 5/60Hz
Motor Speed			1.25rpm(50Hz) or 1.5rpm(60Hz)	1rpm(50Hz) or 1.2rpm(60Hz)
Sensing Torque			Approx.1.5Kgf-cm~5Kgf-cm	Approx.0.52Kgf-cm
Power Consumption			Max. 4.0 W	1.5 VA
Sensing Part Temp.			-10°C ~ +80°C (150°C Max.)	-10°C ~ +60°C (120°C Max.)
Humidity			80% R.H	
Materials	Sensor		304SS	304SS, P.C
	Body		ADC	ADC, PC, Brass
Enclosure			Weather proof	
Mounting			PF 1" (Std.) & Flange	PF 3/4" (Std.) & Flange
Cable Gland			PF 1/2"	None (Direct Cable Connection)

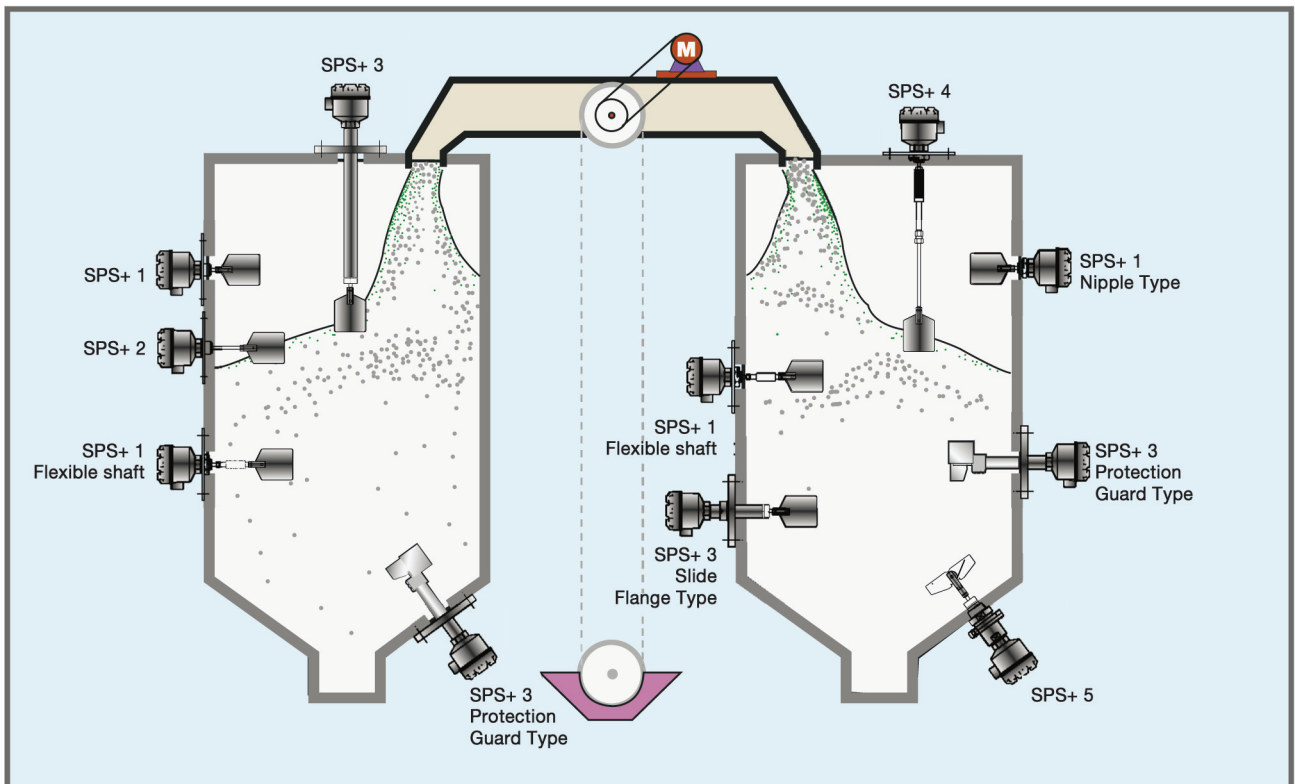
Applications



- Plastic molding machine
- Plastic rationalize equipment
- Hopper rotor
- Fixed quantity blending device
- Painting blending device
- Tube conveyor device
- Crusher
- Various kind of molding machine



- Plastic injection machine
- Rice cleaning machine
- Grain treatment machine
- Drier
- Milling machine
- Ore silo
- Grain silo
- Remicon process



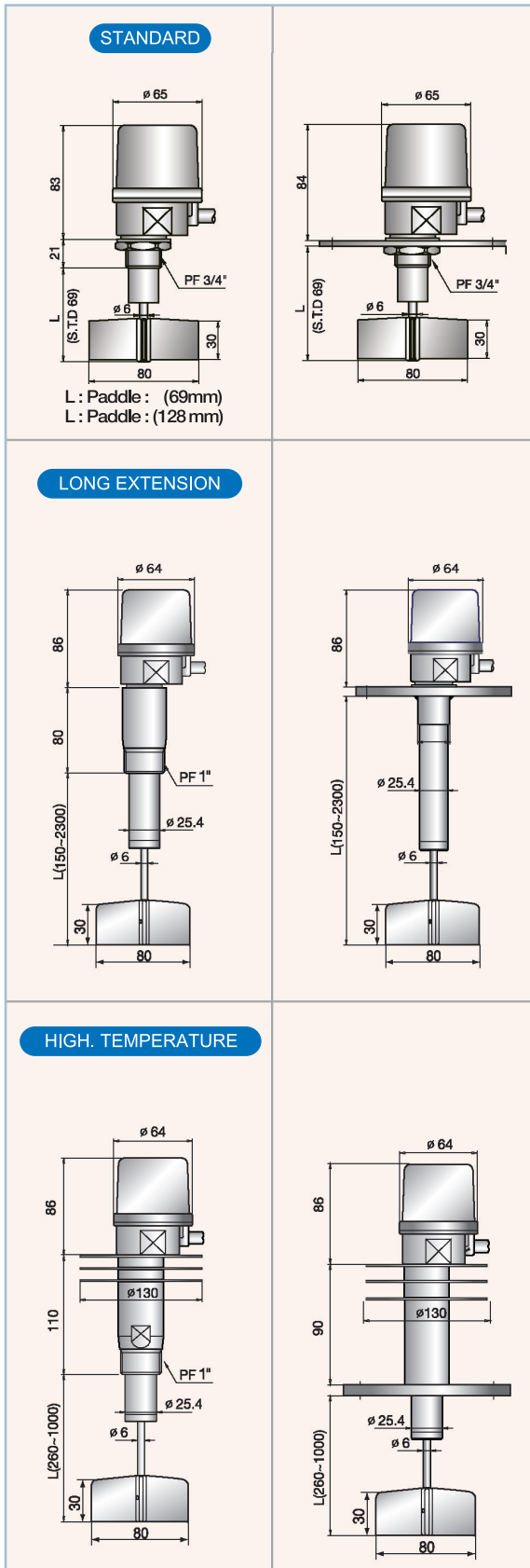
Paddle Type Level Switch

► Detailed specifications for each model

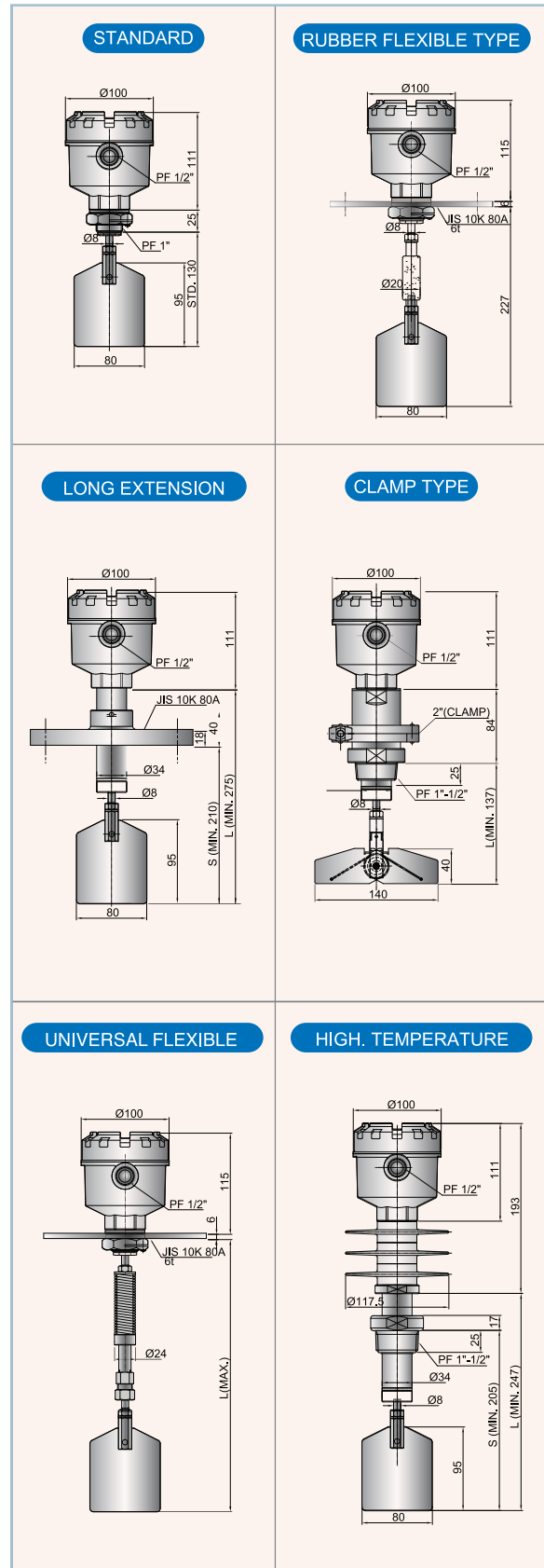
No.	Model	Type	Material of Detection parts	Temperature inside the Tank Max. °C	Tank Volume			Detection Level		Mounting		Weather-tight
					S	M	L	Hi	Low	Side	Top	
1	SR7	Standard	304SS P.C	60 (Max. 120°C)	●	●			●	●		
2	SPS+ 1	Standard	304SS ADC	80 (Max. 150°C)	●	●		●	●	●		●
3	SPS+ 2	Shaft extension	304SS ADC	80 (Max. 150°C)	●	●	●	●			●	●
4	SPS+ 3	Pipe extension	304SS ADC	80 (Max. 150°C)	●	●	●	●	●	●	●	●
5	SPS+ 4	Universal Flexible shaft	304SS ADC	80 (Max. 150°C)	●	●	●	●			●	●
6	SPS+ 5	Separation Head	304SS ADC	80 (Max. 150°C)	●	●	●	●	●	●	●	●

Overall Dimensions

SR7 Type

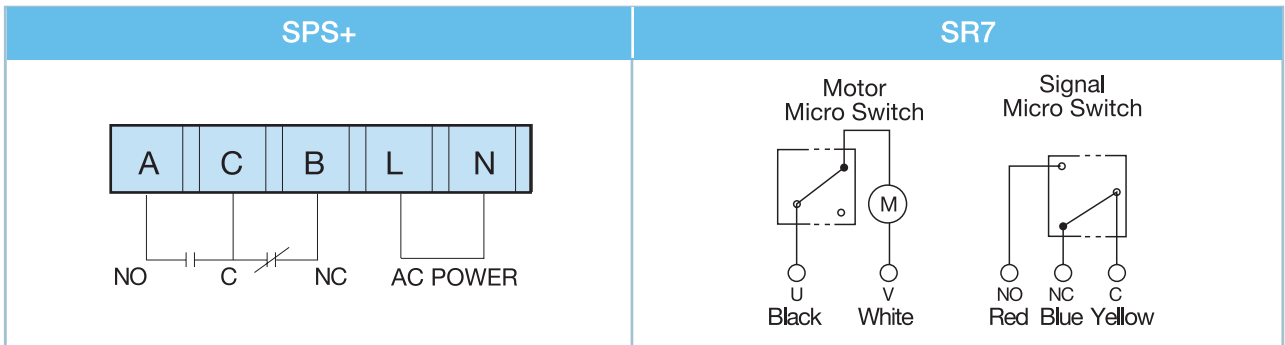


SPS+ Type



Overall Dimensions

SPS+TYPE				SR7 TYPE	
P Type (Powder)	O Type (Ore)	G Type (Grain)	F Type (Foil)	Cross Type	Flat Type
			Only SPS+	Only SR7X	



Ordering Information

■ Paddle Type Level Sensor

SR7	1	A	1	A	1	A	1
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TYPE OF PADDLE

- 1 = Cross Paddle (Std.)
- 2 = Flat Paddle
- OP = etc.

MOUNTING SIZE

- A = PF 3/4" Thread (Std.)
- B = PF 1" Thread
- C = JIS 10K 80A 6t FF Flange
- D = JIS 10K 100A 6t FF Flange
- E = Per customer request

MEASURING PARTS LENGTH

- 1 = Cross Paddle Std. (69mm)/Flat Paddle(128mm)
- 2 = 70 ~ 200mm Spindle Extension Type (Std.)
- 3 = 150 ~ 500mm Pipe Extension Pipe per 500mm
- 4 = Per Customer Request
- Surcharge for Extension Pipe per 500mm

OPERATING TEMPERATURE

- A = -10 ~ +60°C (Std.)
- B = -10 ~ +120°C (Max.)

DETECTION PARTS MATERIAL

- 1 = 304SS (Std.)
- 2 = 316LSS

TYPE OF SHAFT

- A = General Type (69mm Std.)
- B = Long Extension Type (150mm ~ 2300mm)
- C = Protection Guard Type (Only Flange Type)
- D = Slide Flange Type

INPUT VOLTAGE

- 1 = 100V AC
- 2 = 220V AC

■ When placing an order, selected ordering number should be indicated on the purchase order sheet.

Ordering Information

■Paddle Type Level Switch

SPS + 1 A 1 A 1 P 1 A

CONDUIT CONNECTION

A = PF 1/2" (Std.)
 B = PT 1/2"
 C = PF 3/4"
 D = PT 3/4"
 E = NPT 1/2"
 F = NPT 3/4"
 OP = etc.

SPECIAL OPTION

1 = None.
 2 = Neoprene Flexible shaft
 3 = Slide Flange Type
 4 = Protection Guard Type
 OP = etc.

TYPE OF PADDLE (SUS 304)

P = Powder type (Std.)
 G = Grain type (Half Vane)
 O = Ore type (Single Vane)
 F = Foil type (Folder Vane)
 OP = etc.

MOUNTING SIZE

1 = PF 1" Thread (Std.)
 2 = PF 3/4" Thread Type
 3 = JIS 10K 80A 6t FF Flange
 4 = JIS 10K 100A 6t FF Flange
 5 = PF 1-1/2" Thread (Extension type)
 OP = etc.

MEASURING PART LENGTH

A = Standard Shaft Type
 B = 200 ~ 500mm Shaft Extension Type
 C = 200 ~ 500mm Pipe Extension Type
 D = Extension shaft per 500mm (No guarantee)
 E = Extension Pipe per 500mm
 OP = etc.

OPERATING TEMPERATURE

1 = -10 ~ +80°C (Std.)
 2 = -10 ~ +150°C (Max.)

POWER CONSUMPTION

A = 220 V AC (Std.)

TYPE OF SHAFT

1 = General type. Shaft 135mm (Std. P Type Paddle) For Side Mount
 2 = Shaft Extension type (Min. 200mm/No guarantee of quality) For Top Mount Only
 3 = Pipe Extension type 200~2,300mm (Protection Pipe type) For Top & side Mount
 4 = Universal Flexible shaft type Min. 380mm(P type Paddle) ~ Max. 2300mm(Adjustable)
 5 = Easy Separation Head type (Std.)

NOTE.

1. The mounting size of the protection guard type should be 3"(80A) or greater than that.
2. PF1" and PF3/4" socket mounting cannot be compatible with pipe extension type shaft.
3. Shaft only extended type without a pipe is not out of our guarantee.

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 **SeoJin Instech Co., Ltd.**

14, Dunchon-daero 457beon-gil, Junwon-gu
 Seongnam-si, Gyeonggi-do, Korea[Zip.13218]

☎ +82-31-627-9000 📠 +82-31-624-5345

<http://www.seojin.biz>

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■Specifications subject to change without notice