

# Piston Type Level Switch

Model : SC5/SB3

# SC5/SB3

## Piston Type Level Switch

### Features

- Almost no trouble because of simple structure.
- It's suitable to use to detect low level of silo or tank as it's almost not effected by live load of material.
- Can select the proper model among the various model.
- No calibration is needed.

### Applications

#### ■ Chemical Industry :

Plastic, Medicines, Chemicals, Fertilizer.

#### ■ Food Industry :

Milling, Grain food oil, Confection, Sugar, Coffee, Seasoning, etc.

#### ■ Ceramic mining Industry :

Cement glass, Coal, Sand, Iron powder etc.

#### ■ Machine Industry :

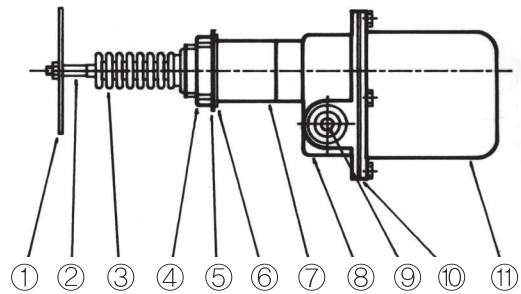
- Meter assembler conveyor, Farming machine (Rice milling machine)
- Constructing machine (Asphalt plant, Venture plant, Crasher)
- Casting machine (Sand treating)

Simple structure and superior endurance.

Can select the right model among the various type.

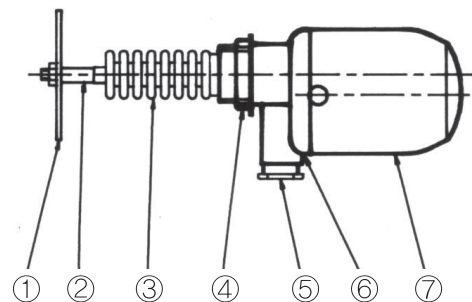
### Structure

#### SC5-X Type



| No. | Part           | Material        | No. | Part        | Material |
|-----|----------------|-----------------|-----|-------------|----------|
| 1   | Paddle         | 304SS           | 7   | Cap         | 304SS    |
| 2   | Shaft          | 304SS           | 8   | Housing     | ADC      |
| 3   | Shaft Seal     | Neoprene Rubber | 9   | Cable Gland | Brass    |
| 4   | Fitting Nut    | 304SS           | 10  | Packing     | NBR      |
| 5   | Fitting Washer | 304SS           | 11  | Cover       | P.C      |
| 6   | Packing        | NBR             |     |             |          |

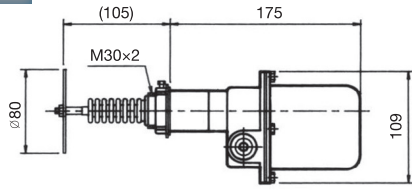
#### SB3-X Type



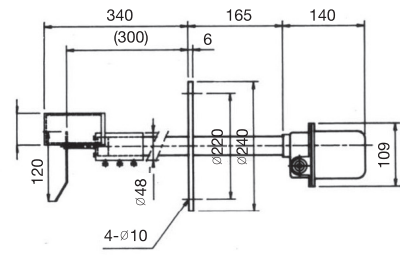
| No. | Part       | Material    | No. | Part        | Material    |
|-----|------------|-------------|-----|-------------|-------------|
| 1   | Paddle     | 304SS       | 5   | Cable Gland | ABS         |
| 2   | Shaft      | 304SS       | 6   | Housing     | Poly Phenol |
| 3   | Shaft Seal | NBR         | 7   | Cover       | P.C         |
| 4   | Nut        | Poly Phenol |     |             |             |

## Overall Dimensions

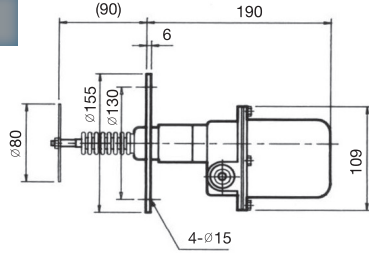
1. SC5-X



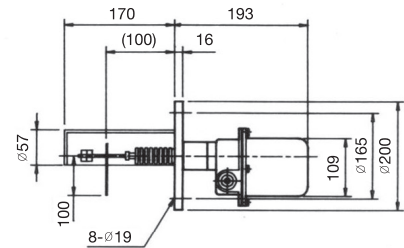
7. SC5-TA



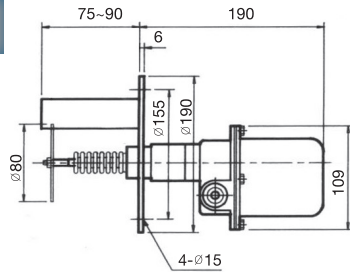
2. SC5-F



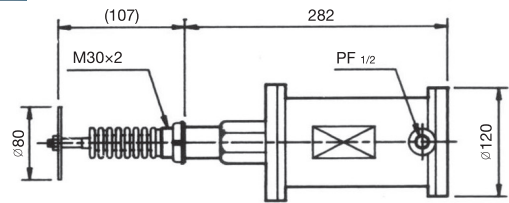
8. SC5-D



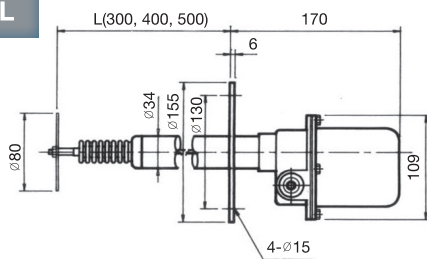
3. SC5-G



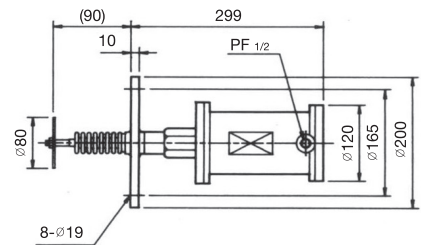
9. SC5-E



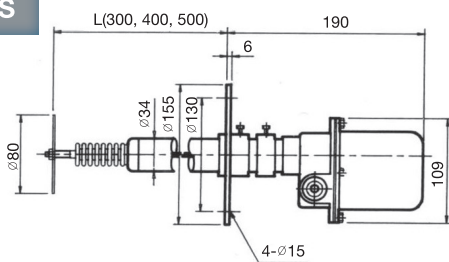
4. SC5-L



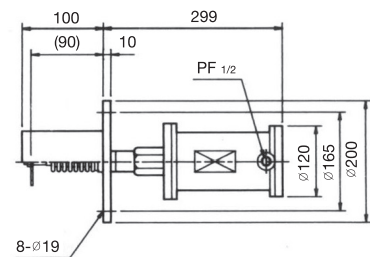
10. SC5-EF



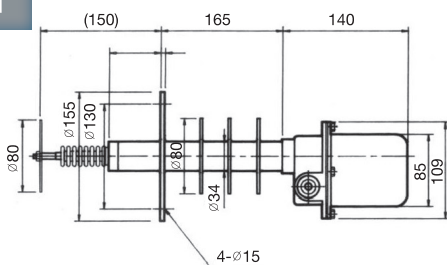
5. SC5-S



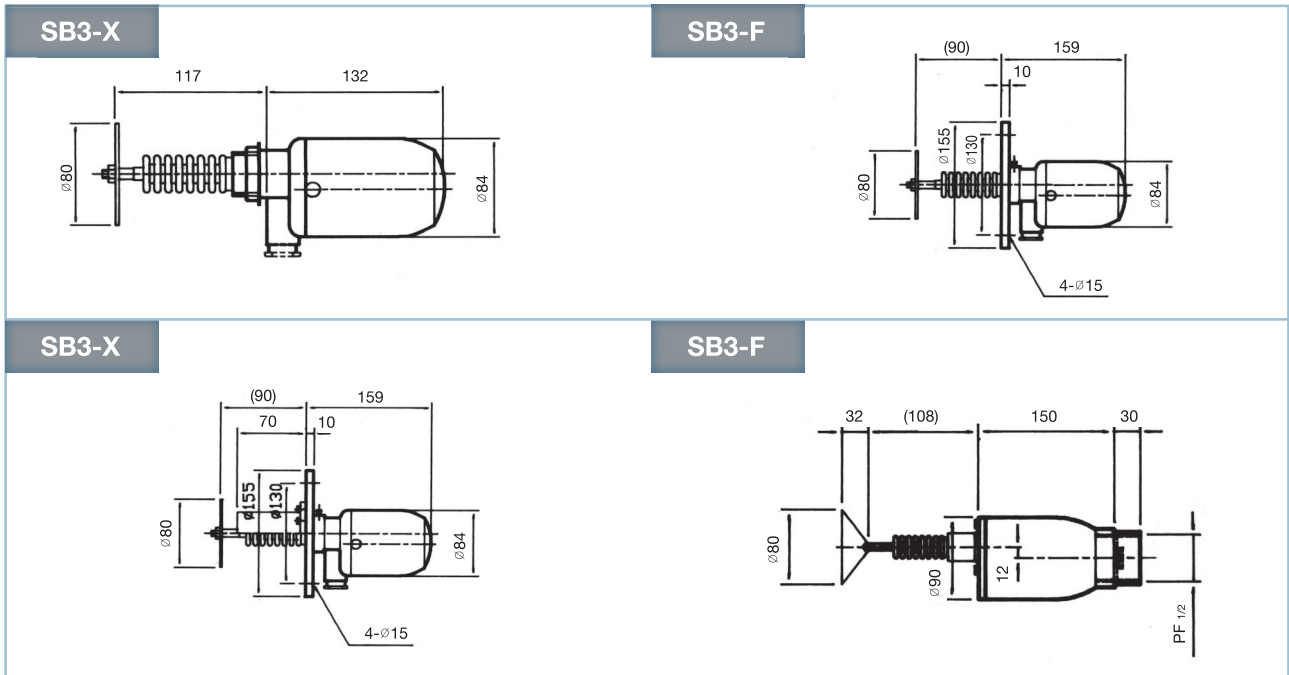
11. SC5-EG



6. SC5-T



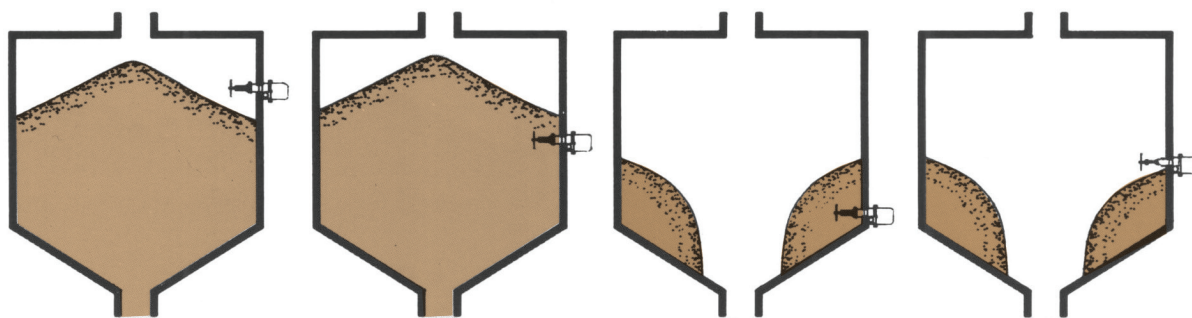
► SB3 type



► Detailed specifications for each model.

| No. | Model  | Type         | Material of Detection parts | Temperature inside the Tank Max. °C | Tank Volume |   |   | Detection Level |     | Mounting |     | Weather -Proof  | Remark |
|-----|--------|--------------|-----------------------------|-------------------------------------|-------------|---|---|-----------------|-----|----------|-----|---|--------|
|     |        |              |                             |                                     | S           | M | L | Hi              | Low | Side     | Top |   |        |
| 1   | SC5-X  | Basic        | 304SS<br>Neoprene           | 80                                  | ●           | ● |   | ●               | ●   | ●        |     |   |        |
| 2   | SC5-F  | Flange       | 304SS<br>Neoprene           | 80                                  | ●           | ● |   | ●               | ●   | ●        |     | Flange : 304SS  |        |
| 3   | SC5-G  | Guard        | 304SS<br>Neoprene           | 80                                  |             | ● |   |                 | ●   | ●        |     | Flange : 304SS  |        |
| 4   | SC5-L  | Long Shaft   | 304SS<br>Neoprene           | 80                                  | ●           | ● |   | ●               | ●   | ●        | ●   | Low detection of large tank, attach the guard               |        |
| 5   | SC5-S  | Slide Flange | 304SS<br>Neoprene           | 80                                  | ●           | ● |   | ●               | ●   | ●        | ●   | In case of vertical mounting, make the paddle to corn shape |        |
| 6   | SC5-T  | Heat Proof   | 304SS<br>Neoprene           | 150                                 | ●           | ● |   | ●               | ●   | ●        | ●   |   |        |
| 7   | SC5-TA | Shock proof  | 304SS<br>Neoprene           | 300                                 | ●           | ● |   | ●               | ●   | ●        |     | Asphalt plant   |        |
| 8   | SC5-D  | Shock proof  | 304SS<br>Neoprene           | 80                                  | ●           | ● |   | ●               | ●   | ●        |     | Venture plant   |        |
| 9   | SC5-E  | Ex proof     | 304SS<br>Neoprene           | 40                                  | ●           |   |   | ●               | ●   | ●        |     | d2G4  |        |
| 10  | SC5-EF | Ex proof     | 304SS<br>Neoprene           | 40                                  | ●           |   |   | ●               | ●   | ●        |     | d2G4  |        |
| 11  | SC5-EG | Ex proof     | 304SS<br>Neoprene           | 40                                  | ●           | ● |   | ●               | ●   | ●        |     | d2G4  |        |

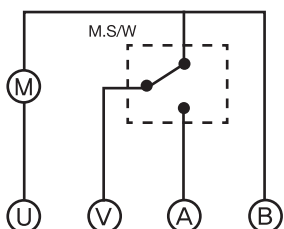
## Installation



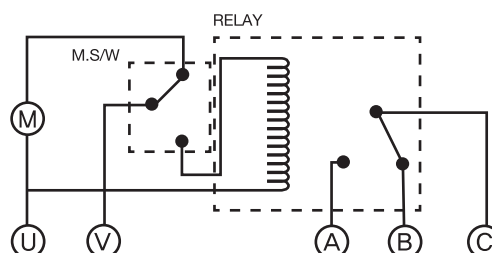
## Specifications

| Model               | SC5-X   | SC5-F              | SC5-G | SB3-X                 | SB3-F              | SB3-G |
|---------------------|---|--------------------|-------|-----------------------|--------------------|-------|
| Power supply        | 110V AC or 220V AC 50/60HZ                                |                    |       |                       |                    |       |
| Contact             | Micro switch  |                    |       |                       |                    |       |
| Contact capacity    | AC 250V / 10A   |                    |       | AC 250V / 5A          |                    |       |
| Temperature limit   | 80°C  |                    |       | 60°C                  | 80°C               |       |
| Ingress Protection  | Weather-proof   |                    |       | Non weather-proof     |                    |       |
| Material            | Detection parts   | ADC, 304SS, Rubber |       | 304SS<br>Neoprene Gum | ADC, 304SS, Rubber |       |
|                     | Body  | ADC, 304SS, Rubber |       | Poly Phenol           |                    |       |
| Cable gland         | JIS F 15C ( PF 1/2" )                                     |                    |       |                       |                    |       |
| Mounting            | M 30x2  | JIS 5K 65A 304SS   |       | M 30x2                | JIS 5K 65A 304SS   |       |
| Reciprocation St    | 10mm  |                    |       |                       |                    |       |
| Reciprocation speed | 50Hz : 5 reciprocation / min , 60Hz 6 reciprocation / min |                    |       |                       |                    |       |

## Connection Diagram



Standard connection



Relay built-in type connection

### ■ For ordering, notify the following in advance

- 1) Hopper size
- 2) Specific gravity of solid material
- 3) Material aspect
- 4) Presence of moisture & adhesion
- 5) Temperature inside the hopper
- 6) Pressure inside the hopper
- 7) Mounting method
- 8) Solid material name & operating temperature.

## Ordering Information

### ■ Piston Type Level Switch

SC5 - X 1 A 1 A 1 A

#### INPUT POWER

A = 110V AC  
B = 220V AC

#### CONDUIT CONNECTION

1 = PF 1/2" (Std.) 2 = PT 1/2"  
3 = PF 3/4" 4 = PT 3/4"  
OP = etc.

#### ENCLOSURE

A = Weather Proof (Std.)  
B = Explosion Proof

#### MEASURING PARTS LENGTH

1 = 98 mm Flange type (Std.)  
2 = 98 mm Socket type (Std.)  
3 = 99 ~ 200mm (Extension type)  
4 = 201 ~ 500mm (Extension type)

#### MOUNTING SIZE

A = PF 1" Socket type(Std.)  
B = JIS 10K 50A 304SS FF Flange(Std.)  
OP = etc.

#### OPERATING TEMPERATURE

1 = 0 ~ + 80 °C (Std.)  
2 = 0 ~ +150°C (Max.)

#### TYPE OF SENSING PARTS

X = Standard Socket type  
F = Standard Flange type  
G = Protection Guard type  
L = Range Extension type  
S = Range Free Setting type (Slide Flange)  
T = High Temp' type

D = Standard Shock Proof type  
TA = Range Extension + Shock Proof type  
E = Explosion Proof type  
EF = Explosion Proof + Flange type  
EG= Explosion Proof + Guard type

SB3 - F 1 A 1 A 1

#### INPUT POWER

1 = 110V AC  
2 = 220V AC

#### CONDUIT CONNECTION

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

#### ENCLOSURE

1 = Weather Proof  
2 = Explosion Proof

#### MOUNTING SIZE

A = JIS 10K 50A 304SS FF Flange (Std.)  
OP = etc.

#### MEASURING PARTS LENGTH

1 = 98 mm Flange type (Std.)

#### TYPE OF SENSING PARTS

F = Standard Flange type  
G = Protection Guard type

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

 **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