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Rotary Paddle Level Switch



PRODUCT INTRODUCTION

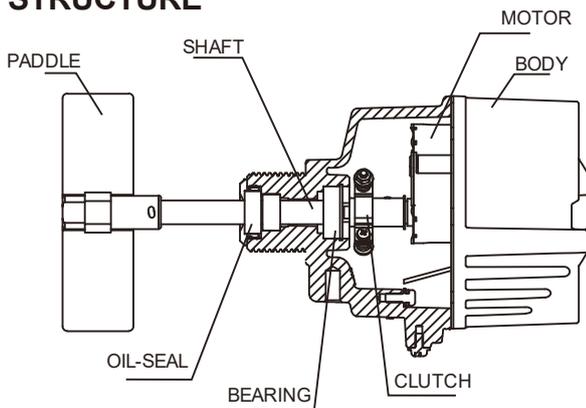
WORKING PRINCIPLE

The purpose of the rotary paddle level switch is to detect the presence of solid/powdery material in most kinds of tanks, bins and containers. The unit is usually located through a bin wall at the top, middle or low level of a bin. During normal operation (no material present) a synchronous motor rotates the paddle at RPM. When this paddle rotation is impeded by material, surrounding the paddle, motor will stall and cause the Micro-switch to change state (indicating an alarm or control).

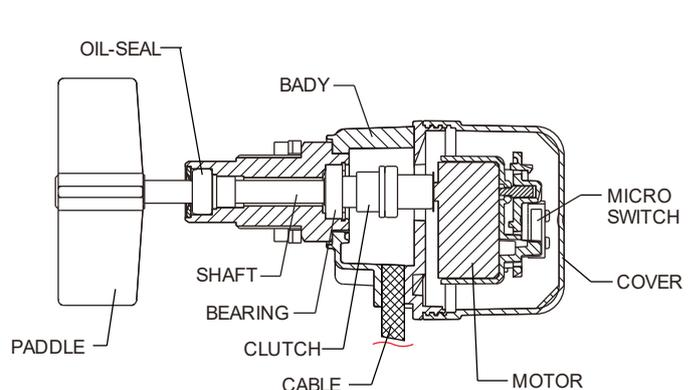
APPLICATIONS

- Plastics and synthetics
- Chemicals and fertilizer
- Pharmaceuticals
- Food and beverage,
- Agriculture and fodder mills/depots
- Cement as well as ceramics
- Power plants
- Various incinerators

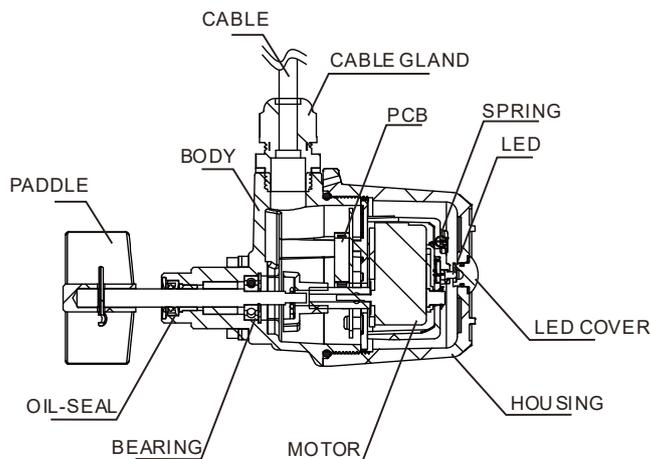
STRUCTURE



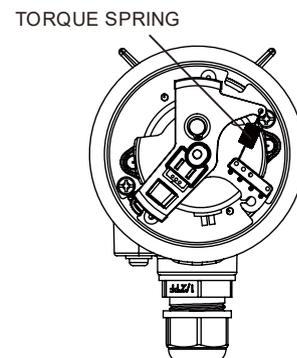
STANDARD TYPE SEX5



MINI TYPE SEX4



MINI TYPE SEX3



FEATURES

- Rugged sealing ring prevents dust from infiltrating the housing body along the shaft.
- Adjustable torque.
- If the rotary paddle encounters overloading, the motor will automatically shut down the motor to prevent damage to the inner mechanisms and extend motor life.
- Very suitable for small tanks and low density materials
- Adjustable and extendible shaft models available
- A wide variety of paddles are available

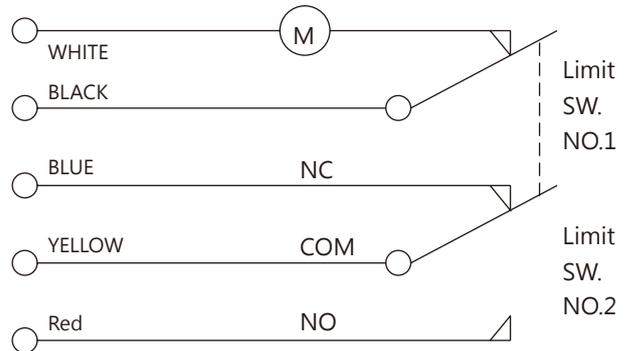
BENEFITS

- Airtight sealed device.
- Outdoor and strenuous environment application
- Stable and reliable performance.
- Lightweight and easy to install
- Practically designed to allow maintenance, checks and replacement
- Not necessary to remove the complete set from the tank.

WORKING PRINCIPLE & TORQUE ADJUSTING

CONTROL SWITCH WORKING PRINCIPLE

1. A synchronous turning motor indicates the tank or container's material isn't obstructing the paddles, C & L [COM & NC] are connected.
2. When the material is obstructing the paddles, C&L [COM & NC] are disconnected, C&H [COM & NO] are connected and the motor's current is cut off.
3. When the material drops away from the paddles and the motor starts again C & L [COM & NC] connect and the cycle has begun once again.

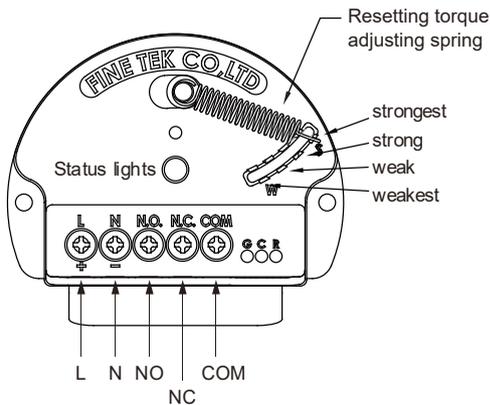


※Do not tamper with the spring as it may cause the Rotary Paddle to malfunction.

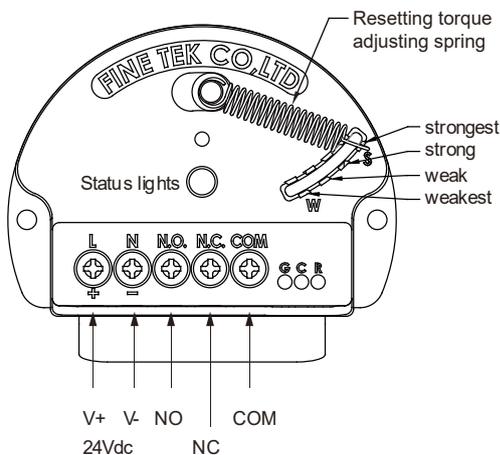
TORQUE ADJUSTING MECHANISM AND WIRING

The torque spring is applied to adjust the shaft output torque. Default settings are "weak" and can be adjusted to the customer's target based on the tank contents and S.G. (special gravity) of the material.

Higher S.G. materials require stronger torque settings. Start with high settings and slowly release the torque force until the appropriate setting is found.

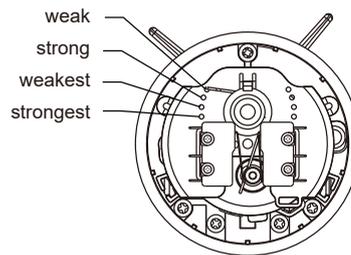


Available: SEX5 AC TYPE

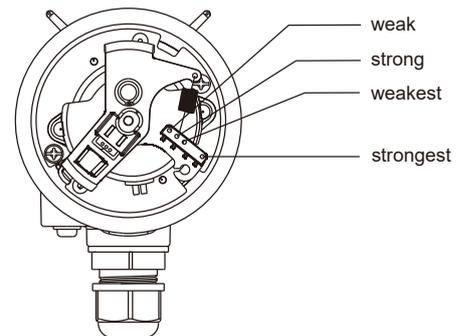


Available: SEX5 DC TYPE

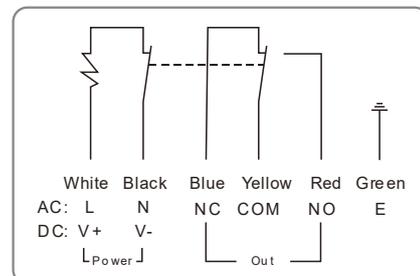
SPRING ADJUSTING HOLE



SEX4



SEX2



Available:SEX2/SEX4

GENERAL TYPE - SEX5

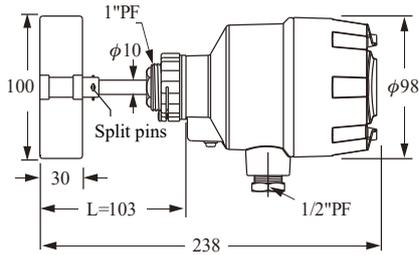
Power source : (A)110Vac,(B)220Vac,(C)240Vac,
 (D)24Vac,50/60Hz,(E)24Vdc
 Power consumptio : 3W
 Contact capacity : SPDT 5A/250Vac
 Rotary speed : 1 R.P.M.
 Insulation test voltage : 2500V

Connection : 1"PF screw or JIS 2-1/2"x5kg/cm²
 Protection/ material : IP65/ADC-12
 Conduit : 1/2"PF
 Material density : 0.5g/cm³ (30Lb/ft³)

SE110

SCREW TYPE

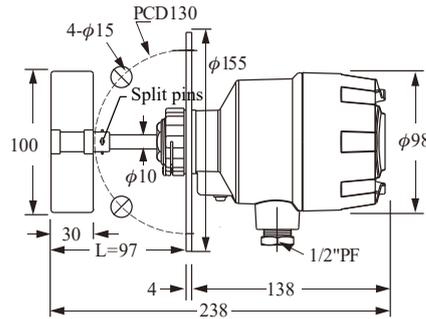
Horizontal mounting
 Operation Temp.: -20°C ~ 70°
 Weight: 1.2 kg



SE111

FLANGE TYPE

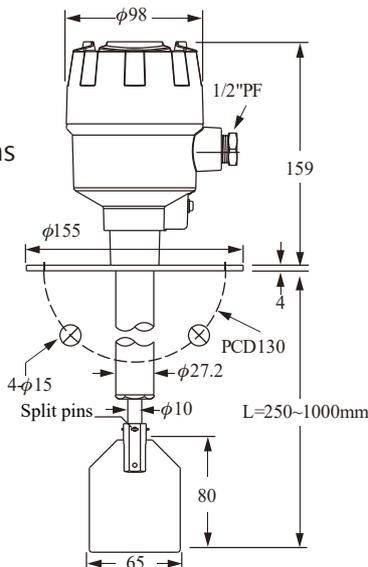
Horizontal mounting
 Operation Temp.: -20°C ~ 70°C
 Weight: 1.7 kg



SE120

SHAFT PROTECTIVE TUBE TYPE

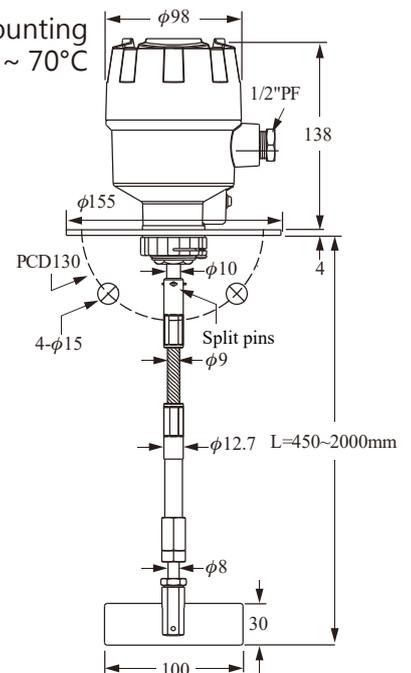
Horizontal / Vertical mounting
 Operation Temp.: -20°C ~ 70°C
 Weight: 1.2 kg
 Standard Length:
 L--250mm (2.2 kg)
 L--500mm (2.5 kg)
 L--750mm (2.8 kg)
 (Customized lengths available)



SE130

SHAFT LENGTH ADJUSTABLE TYPE

Horizontal / Vertical mounting
 Operation Temp.: -20°C ~ 70°C
 Weight: 1.2 kg
 Standard Length:
 L--630mm(2.5 kg)
 L--1000mm(2.8 kg)
 L--1200mm(3.0 kg)
 (Customized lengths available)



PRODUCT INTRODUCTION

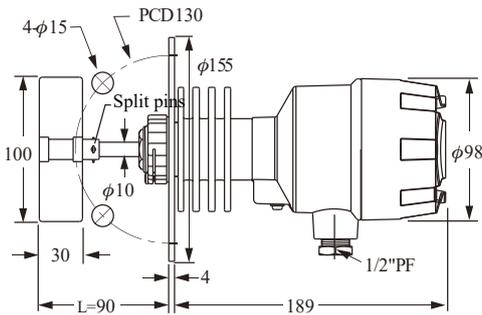
SE140

HI-TEMP TYPE

Horizontal mounting

Operation Temp.:Max.200°

Weight: 2.1 kg



SE141

HI-TEMP TYPE

PROTECTIVE TUBE TYPE

Horizontal / Vertical mounting

Operation Temp.:Max.200°

Weight: 1.2 kg

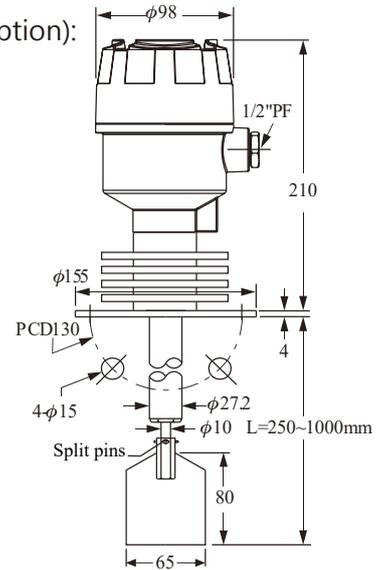
Standard Length (option):

L--250mm(2.6 kg)

L--500mm(2.9 kg)

L--750mm(3.2 kg)

(Special length is made by order)



SE146

HI-TEMP SHAFT

LENGTH ADJUSTABLE TYPE

Vertical mounting

Operation Temp.:Max.200°C

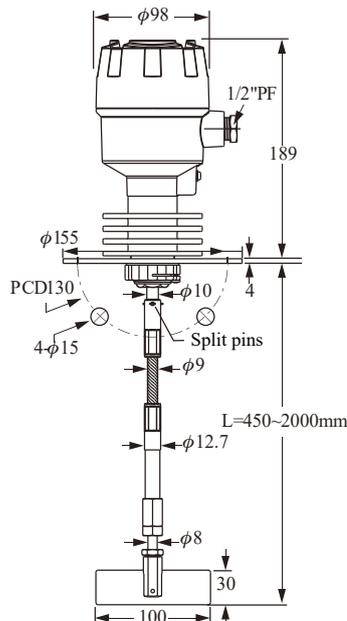
Standard Length (option):

L--630mm (3 kg)

L--1000mm(3.3 kg)

L--1200mm(3.5 kg)

(Special length is made by order)



SE160

CABLE WIRE TYPE

Vertical mounting

Operation Temp.: -20~70°C

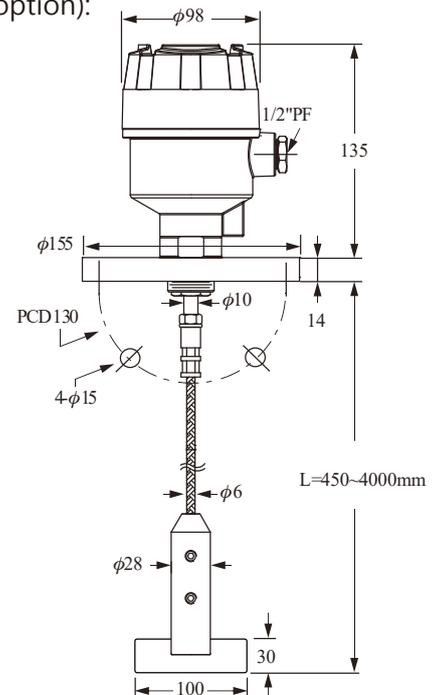
Standard Length (option):

L--450mm(2.5kg)

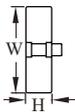
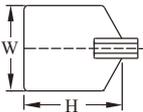
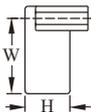
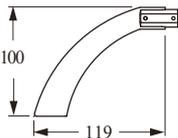
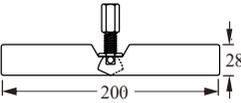
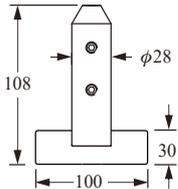
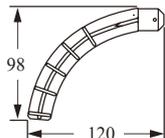
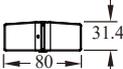
L--650mm(2.8kg)

L--750mm(3 kg)

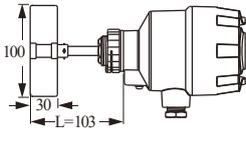
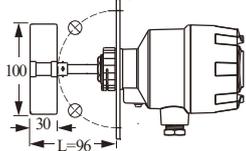
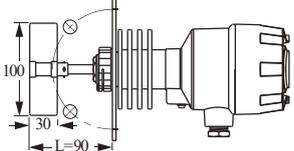
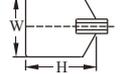
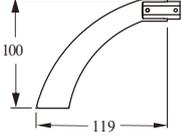
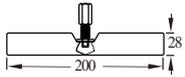
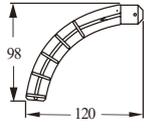
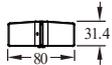
(Special length is made by order)



NEW / OLD PADDLE MODEL COMPARISON TABLE

New	Figure	Dimension(WxH)	Old
B	Rectangular shaped type 	100x30	A
C	Shovel shaped type 	65x80	B
D		65x120	C
E		80x80	D
F	Rectangular type, one sided 	50x30	E
G	Scimitar shaped type 	100x119	F
H	Folding type 	200x28	J
K	Weights type 	100x108	X
N	Scimitar shaped type (PC) 	98x120	
P	Cross bladed type (PC) 	80x32	

PROBE LENGTH LIST FOR GENERAL TYPE (WITH DIFFERENT PADDLES)

Product model		SE110	SE111	SE140
Paddle model				
Rectangular shaped type 	100x30	L=103	L=96	L=90
Shovel shaped type 	65x80	L=153	L=146	L=142
	65x120	L=193	L=186	L=182
	80x80	L=153	L=146	L=142
Rectangular type, one sided 	50x30	L=104	L=97	L=94
Scimitar shaped type 	100x119	L=192	L=184	L=182
Folding type 	200x28	L=126	L=119	L=114
Scimitar shaped type(PC) 	98x120	L=175	L=168	Not suitable for high temp.(>120°C) Stainless steel paddle suggested
Cross bladed type(PC) 	80x32	L=81	L=74	

WARNING LIGHT TYPE - SEX5

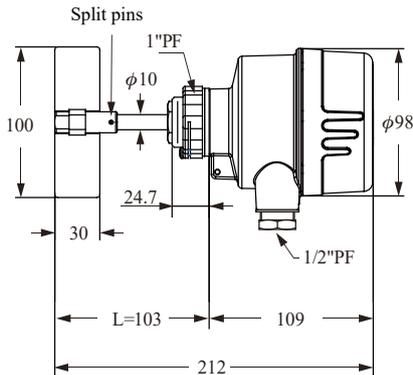
Power source : (A)110Vac,(B)220Vac,(C)240Vac,
(D)24Vac,50/60Hz,(E)24Vdc
Power consumptio : 3W
Contact capacity : SPDT 5A/250Vac
Rotary speed : 1 R.P.M.
Insulation test voltage : 2500V

Connection : 1"PF screw or JIS 2-1/2"x5kg/cm²
Upper cover protection / material : IP67 / Pc cover
Twrminal box protection / material : IP67 / ADC-12
Conduit : 1/2"PF
Material density : 0.5g/cm³ (30Lb/ft³)

SE110

SCREW TYPE

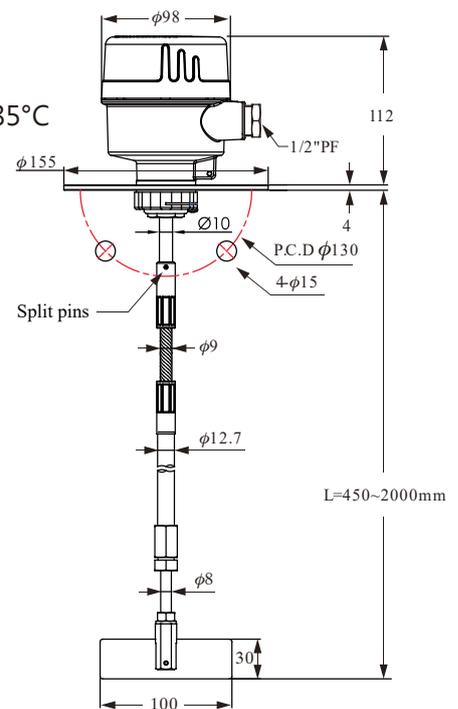
Horizontal mounting
Operation Temp.: -20°C ~ 85°C
Weight: 1.2 kg



SE130

SHAFT LENGTH ADJUSTABLE TYPE

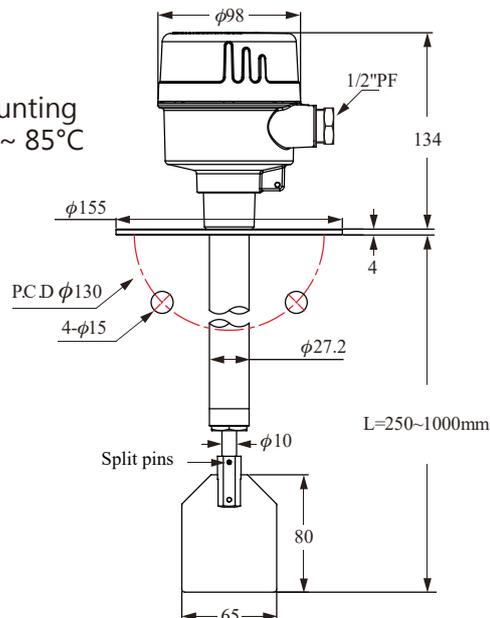
Vertical mounting
Operation Temp.: -20°C ~ 85°C
Weight: 1.2 kg
Standard Length:
L--630mm(2.5 kg)
L--1000mm(2.8 kg)
L--1200mm(3.0 kg)
(Customized lengths available)



SE120

SHAFT PROTECTIVE TUBE TYPE

Horizontal / Vertical mounting
Operation Temp.: -20°C ~ 85°C
Weight: 1.2 kg
Standard Length:
L--250mm (2.2 kg)
L--500mm (2.5 kg)
L--750mm (2.8 kg)
(Customized lengths available)

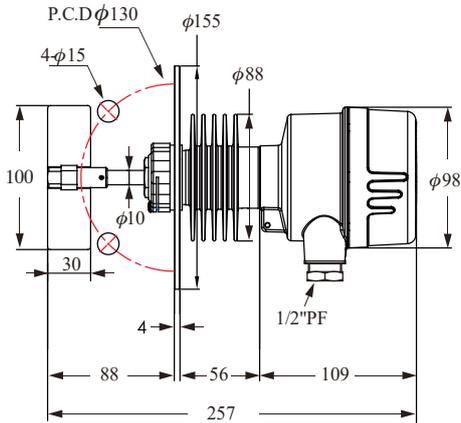


WARNING LIGHT TYPE - SEX5

SE140

SCREW TYPE

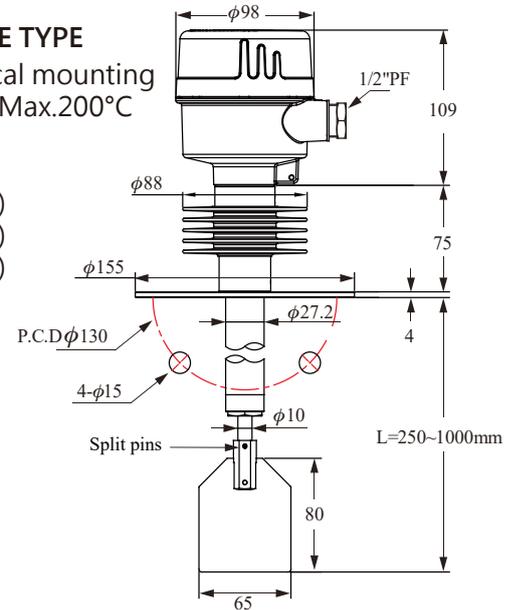
Horizontal mounting
 Operation Temp.: Max.200°C
 Weight: 2.1 kg



SE141

HI-TEMP TYPE PROTECTIVE TUBE TYPE

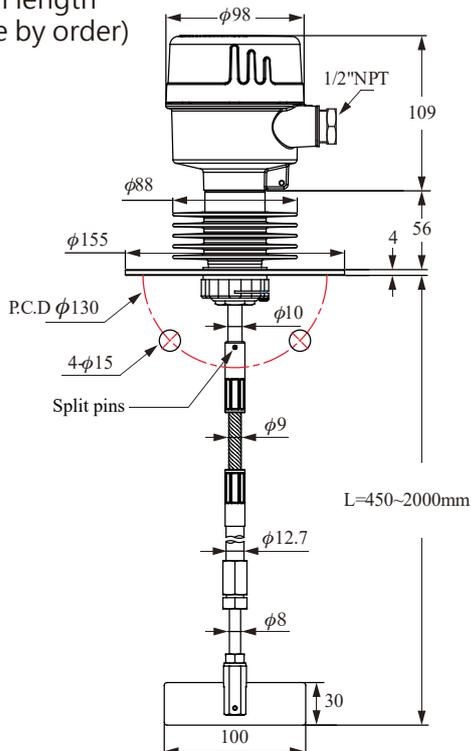
Horizontal / Vertical mounting
 Operation Temp.: Max.200°C
 Weight: 1.2 kg
 Standard Length:
 L--250mm (2.6 kg)
 L--500mm (2.9 kg)
 L--750mm (3.2 kg)
 (Special length
 is made by order)



SE146

HI-TEMP SHAFT LENGTH ADJUSTABLE TYPE

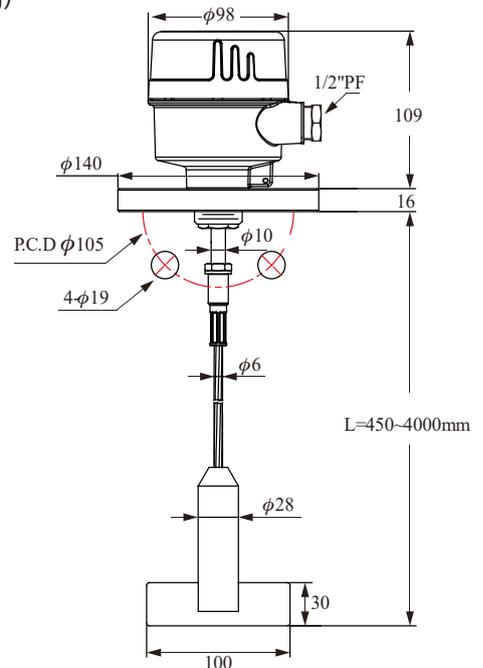
Vertical mounting
 Operation Temp.: Max.200°C
 Weight: 1.2 kg
 Standard Length:
 L-- 450~630mm (3 kg)
 L-- 650~1000mm (3.3 kg)
 L-- 750~1200mm (3.5 kg)
 (Special length
 is made by order)



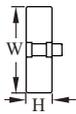
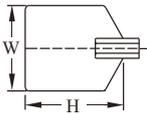
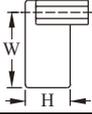
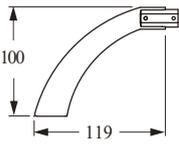
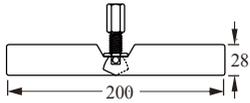
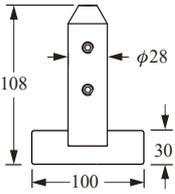
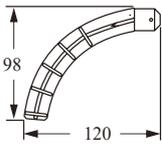
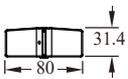
SE160

CABLE WIRE TYPE

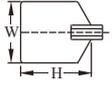
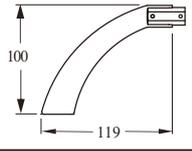
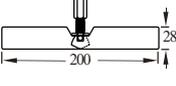
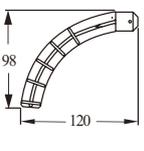
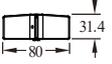
Vertical mounting
 Operation Temp.: -20°C ~ 85°C
 Weight: 1.2 kg
 Standard Length:
 L-- 450mm (2.5 kg)
 L-- 650mm (2.8 kg)
 L-- 750mm (3 kg)
 (Special length
 is made by order)



NEW / OLD PADDLE MODEL COMPARISON TABLE

New	Figure	Dimension(WxH)	Old
B	Rectangular shaped type 	100x30	A
C	Shovel shaped type 	65x80	B
D		65x120	C
E		80x80	D
F	Rectangular type, one sided 	50x30	E
G	Scimitar shaped type 	100x119	F
H	Folding type 	200x28	J
K	Weights type 	100x108	X
N	Scimitar shaped type (PC) 	98x120	
P	Cross bladed type (PC) 	80x32	

PROBE LENGTH LIST FOR WARNING LIGHT TYPE (WITH DIFFERENT PADDLES)

Product model Paddle model		SE110	SE111	SE140
Rectangular shaped type 	100x30	L=103	L=96	L=88
Shovel shaped type 	65x80	L=153	L=146	L=138
	65x120	L=193	L=186	L=178
	80x80	L=153	L=146	L=138
Rectangular type, one sided 	50x30	L=104	L=97	L=89
Scimitar shaped type 	100x119	L=192	L=185	L=178
Folding type 	200x28	L=126	L=119	L=112
Scimitar shaped type(PC) 	98x120	L=175	L=168	Not suitable for high temp.(>120°C) Stainless steel paddle suggested
Cross bladed type(PC) 	80x32	L=81	L=74	

EXPLOSION PROOF TYPE - SEX5

ATEX $\text{Ex II 1D/2D Ex ta/tb IIIC T85}^\circ\text{C...T200}^\circ\text{C}$
 IECEx $\text{Ex ta/tb IIIC T85}^\circ\text{C...T200}^\circ\text{C Da/Db}$
 CSA $\text{Ex ta/tb IIIC T85}^\circ\text{C...T200}^\circ\text{C Da/Db}$
 Zone 20 / Zone 21 AEx ta/tb IIIC T85°C...T200°C Da/Db
 Class II, Division 1, Groups E, F, G, T200°C

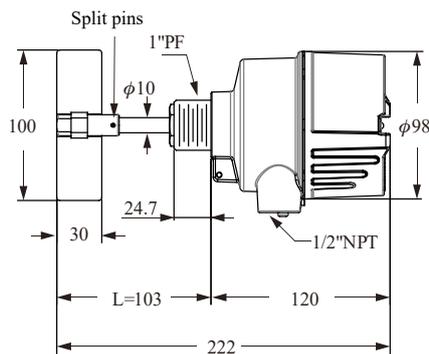
Power source : (A)110Vac,(B)220Vac,(C)240Vac,
 (D)24Vac,50/60Hz,(E)24Vdc
 Power consumptio : 3W
 Contact capacity : SPDT 5A/250Vac
 Rotary speed : 1 R.P.M.
 Insulation test voltage : 2500V

Connection : 1"PF screw (minimum)
 Protection/ material : IP67 / ADC-12
 Conduit : 1/2"NPT/ADC-12
 Material density : 0.5g/cm³ (30Lb/ft³)

SE110

SCREW TYPE

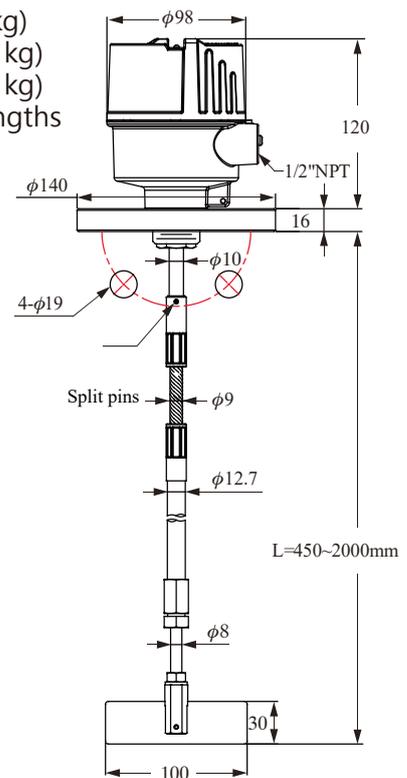
Horizontal mounting
 Operation Temp.: -20°C ~ 85°C
 Weight: 1.2 kg



SE130

SHAFT LENGTH ADJUSTABLE TYPE

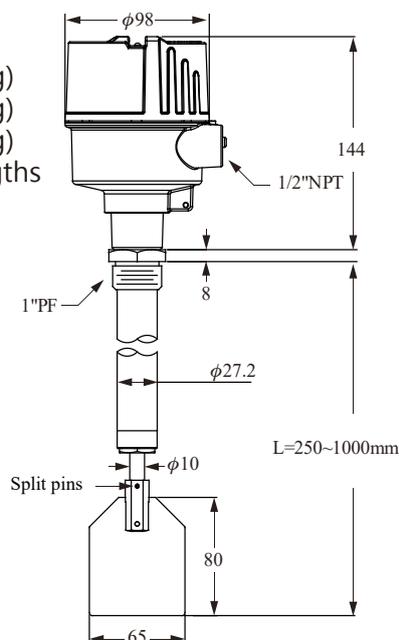
Horizontal / Vertical mounting
 Operation Temp.: -20°C ~ 85°C
 Weight: 1.2 kg
 Standard Length:
 L--630mm(2.5 kg)
 L--1000mm(2.8 kg)
 L--1200mm(3.0 kg)
 (Customized lengths available)



SE120

SHAFT PROTECTIVE TUBE TYPE

Horizontal / Vertical mounting
 Operation Temp.: -20°C ~ 85°C
 Weight: 1.2 kg
 Standard Length:
 L--250mm (2.2 kg)
 L--500mm (2.5 kg)
 L--750mm (2.8 kg)
 (Customized lengths available)



EXPLOSION PROOF TYPE - SEX5

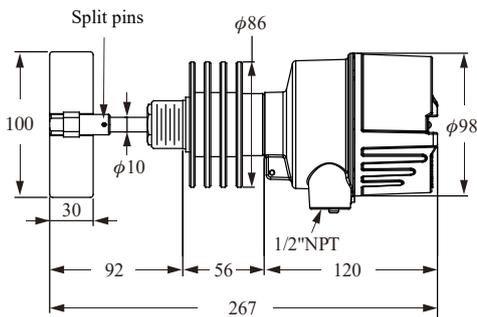
SE140

HI-TEMP TYPE

Horizontal mounting

Operation Temp.: Max.200°C

Weight: 2.1 kg



SE141

HI-TEMP TYPE

PROTECTIVE TUBE TYPE

Horizontal / Vertical mounting

Operation Temp. : Max.200°C

Standard Length:

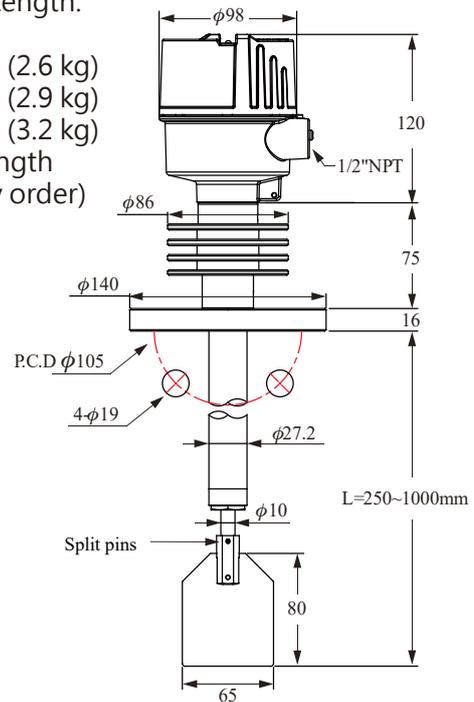
(Option)

L--250mm (2.6 kg)

L--500mm (2.9 kg)

L--750mm (3.2 kg)

(Special length is made by order)



SE146

HI-TEMP SHAFT

LENGTH ADJUSTABLE TYPE

Vertical mounting

Operation Temp.: Max.200°C

Standard Length:

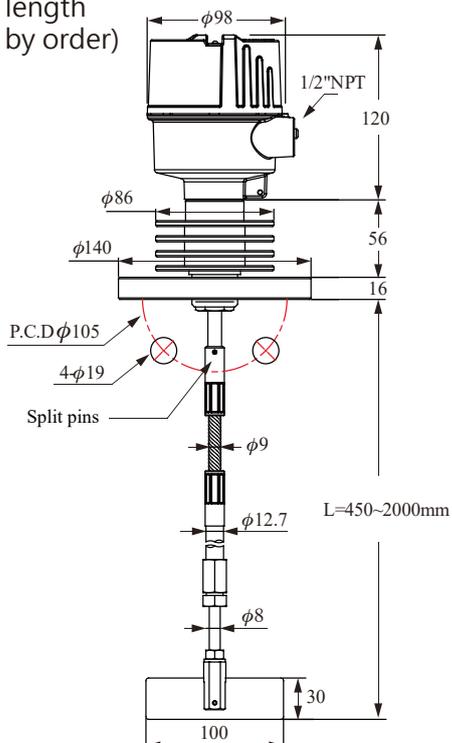
(Option)

L-- 450~630mm (3 kg)

L-- 650~1000mm (3.3 kg)

L-- 750~1200mm (3.5 kg)

(Special length is made by order)



SE160

CABLE WIRE TYPE

Vertical mounting

Operation Temp.: -20°C ~ 85°C

Standard Length:

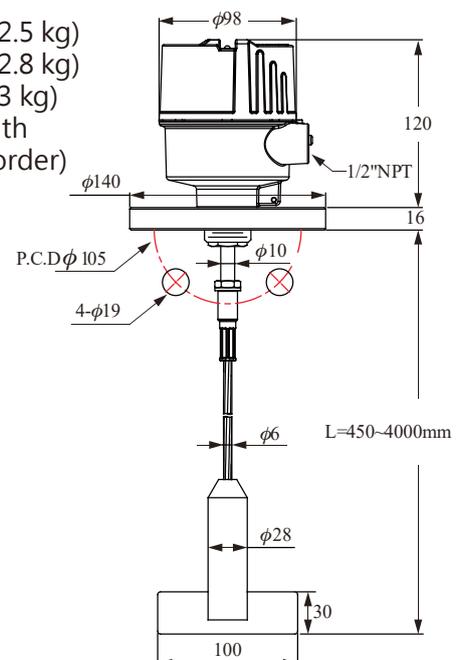
(Option)

L-- 450mm (2.5 kg)

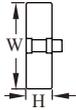
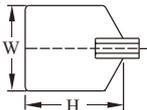
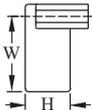
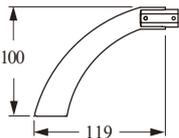
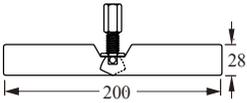
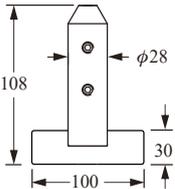
L-- 650mm (2.8 kg)

L-- 750mm (3 kg)

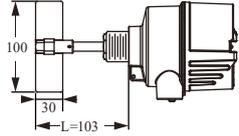
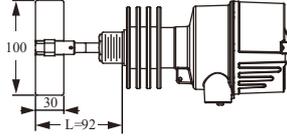
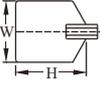
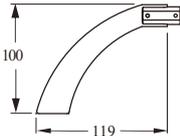
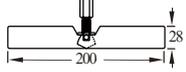
(Special length is made by order)



NEW / OLD PADDLE MODEL COMPARISON TABLE

New	Figure		Dimension(WxH)	Old
B	Rectangular shaped type		100x30	A
C	Shovel shaped type		65x80	B
D			65x120	C
E			80x80	D
F	Rectangular type, one sided		50x30	E
G	Scimitar shaped type		100x119	F
H	Folding type		200x28	J
K	Weights type		100x108	X

PROBE LENGTH LIST FOR WARNING LIGHT TYPE (WITH DIFFERENT PADDLES)

Product model Paddle model		SE110	SE140
			
Rectangular shaped type 	100x30	L=103	L=92
Shovel shaped type 	65x80	L=153	L=142
	65x120	L=193	L=182
	80x80	L=153	L=142
Rectangular type, one sided 	50x30	L=104	L=93
Scimitar shaped type 	100x119	L=192	L=181
Folding type 	200x28	L=126	L=115

ORDER INFORMATION

SEX5 ⁰⁵ ⁰⁶ ⁰⁷ ⁰⁸ - A ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ ²²

⁰⁵ ⁰⁶ Model

- 00: Standard
- 02: Hi-temperature

⁰⁷ ⁰⁸ Certification

- 1D: ATEX-Dust
- 2D: IECEx-Dust
- 6D: CSA-Dust

¹⁰ Construction

- A: General type
- B: Shaft protective tube type
- C: Shaft length adjustable type
- D: Cable wire type

¹¹ Power supply

- A: AC110V
- B: AC220V
- C: AC240V
- D: AC24V
- E: DC24V

Connection

¹² ¹³

- | | |
|--|--------------|
| Flange item | Thread item |
| AK: JIS-FF | AA: JIS |
| AS: DIN-FF | AB: ISO |
| AJ: JIS-RF | AC: ANSI/AST |
| AM: JIS-WNRF | |
| AL: JIS:SLIP | |
| AN: ANSI-RF | |
| AO: ANSI-FF | |
| AP: ANSI-WNRF | |
| AQ: ANSI-SLIP | |
| AR: DIN-RF | |
| AT: DIN-WNRF | |
| AU: DIN-SLIP Thread item | |
| AV: GB-RF | |
| AW: GB-FF | |
| BC: Standard thin flange
(Suitable for 2-1/2"dimension) | |

¹⁴ ¹⁵

- A7: 3/4"
- A8: 1"
- A9: 1-1/4"
- B1: 1-1/2"
- B2: 2"
- B3: 2-1/4"
- B4: 2-1/2"
- B5: 3"
- B6: 3-1/2"
- B7: 4"
- B8: 5"
- B9: 6"
- C1: 8"
- C2: 10"
- J9: M27
- K3: M30
- K5: M32
- K6: M33
- L9: M45
- SS: Special specification

¹⁶ ¹⁷

- 01: PT male
- 03: PF male
- 05: BSP male
- 07: NPT male
- 09: NPTR male
- 11: NRTF male
- 15: UNF male
- 23: UNC male
- 39: 5 kg/cm²x4T(Thin flange)
- 78: M*pitch1.0
- 80: M*pitch1.25
- 82: M*pitch1.5
- 84: M*pitch2
- 86: M*pitch2.5
- 88: M*pitch3
- 91: BSPT male
- SS: Special specification

¹⁸ Paddle model

- | | |
|----------------|--------------------------------------|
| A: None | F: 50x30(WxH) |
| B: 100x30(WxH) | G: Scimitar type 100x131(WxH) |
| C: 65x80(WxH) | H: Folding type 200x28(WxH) |
| D: 65x120(WxH) | K: Cable wire type only 100x108(WxH) |
| E: 80x80(WxH) | S: Special blade |

¹⁹ ²⁰ ²¹ ²² Length

Code	Length range
0001~4000	0001~4000mm

EXPLOSION PROOF TYPE



TS Ex db IIB T6...T3 Gb
 Ex tb IIIC T85°C...T200°C Db
 NEPSI Ex d IIC T3~T6 Gb
 Ex tD A20/A21 IP65 T80°C / T95°C / T130°C / T190°C
 ATEX Ex II 2G Ex d IIB T3 or T4 or T5 or T6 Gb
 Ex II 2D Ex tb IIIC T200°C or T135°C or T100°C or T85°C Db
 IECEx Ex db IIB T3 or T4 or T5 or T6 Gb
 Ex tb IIIC T200°C or T135°C or T100°C or T85°C Db

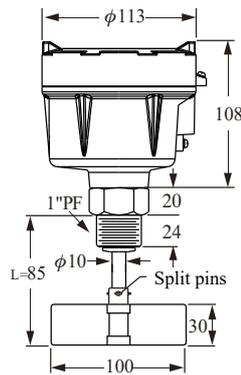
Power source : (A)110Vac,(B)220Vac,(C)240Vac,
 (D)24Vac,50/60Hz
 Power consumptio : 3W
 Contact capacity : SPDT 3A/250Vac
 Rotary speed : 1 R.P.M.
 Insulation test voltage : AC 1500Vx1minute

Connection : 1"PF screw or flange 1"~6"
 2-1/2"x5kg/cm² (std.)
 Housing material : AL Alloy, ADC-12
 Conduit : 1/2" (std.) or 3/4"NPT
 Material density : 0.5g/cm³

SE170

EXPLOSION PROOF CONNECTION TYPE

Horizontal mounting
 Operation Temp.: 20°C ~ 70°C

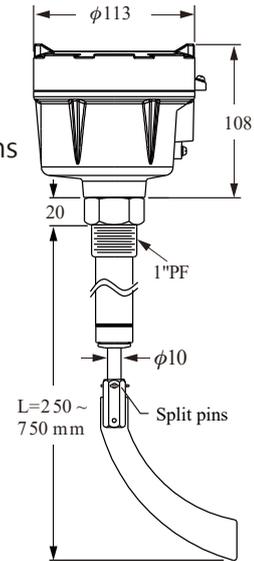


SE172

EXPLOSION PROOF CONNECTION TYPE

Horizontal mounting
 Operation Temp.: 20°C ~ 70°C
 Standard Length:

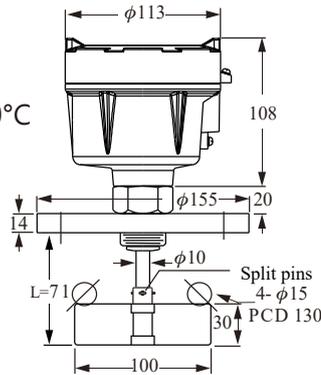
(Option)
 L-- 250 mm
 L-- 500 mm
 L-- 750 mm
 (Customized lengths available)



SE171

EXPLOSION PROOF FLANGE TYPE

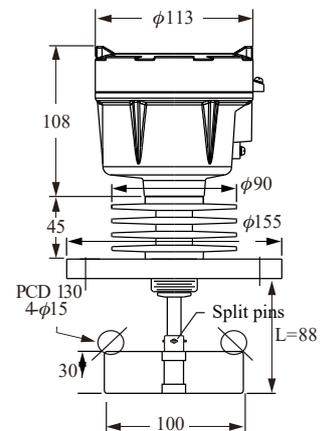
Horizontal mounting
 Operation Temp.: 20°C ~ 70°C



SE174

EXPLOSION PROOF FLANGE TYPE

Horizontal mounting
 Operation Temp.: Max.190°C

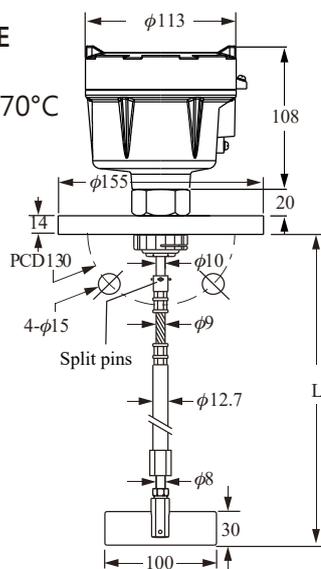


SE173

EXPLOSION PROOF ADJUSTABLE SHAFT TYPE

Vertical mounting
 Operation Temp.: -20°C ~ 70°C
 Standard Length:

(Option)
 L-- 450~630mm
 L-- 650~1000mm
 L-- 750~1200mm
 (Special length is made by order)



TS Ex db IIB T6...T3 Gb
 Ex tb IIIC T85°C...T200°C Db
 NEPSI Ex d IIC T3~T6 Gb
 Ex tD A20/A21 IP65 T80°C / T95°C / T130°C / T190°C
 ATEX Ex II 2G Ex d IIB T3 or T4 or T5 or T6 Gb
 Ex II 2D Ex tb IIIC T200°C or T135°C or T100°C or T85°C Db
 IECEx Ex db IIB T3 or T4 or T5 or T6 Gb
 Ex tb IIIC T200°C or T135°C or T100°C or T85°C Db

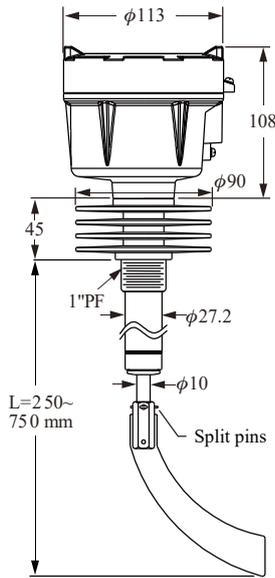


EXPLOSION PROOF TYPE

SE175

EXPLOSION PROOF HI-TEMP SHAFT PROTECTIVE TUBE TYPE

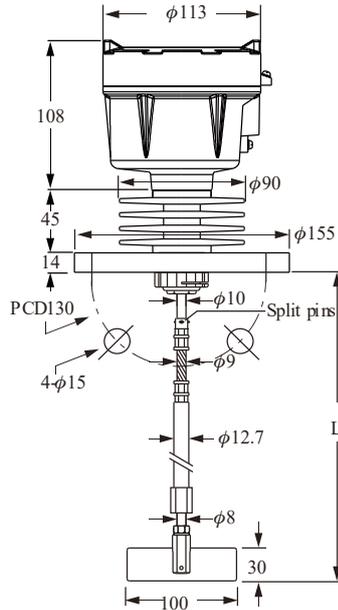
Horizontal mounting
 Operation Temp.: Max.190°C
 Special length is made by order



SE176

EXPLOSION PROOF HI-TEMP ADJUSTABLE SHAFT TYPE

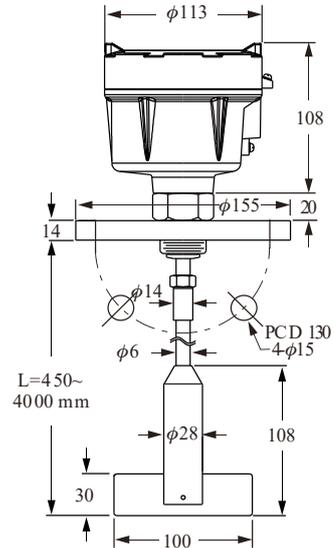
Vertical mounting
 Operation Temp.: Max.190°C
 Special length is made by order



SE177

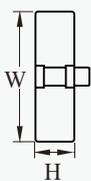
EXPLOSION PROOF CABLE WIRE TYPE

Vertical mounting
 Operation Temp.: -20°C ~ 70°C
 Special length is made by order



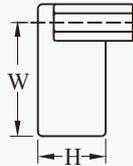
PADDLE INTRODUCTION

A



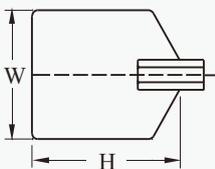
(A) 100x30(WxH), Min. fixed hole diameter size φ90mm.

E



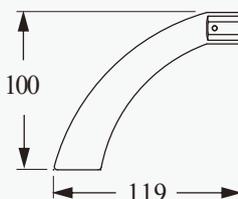
(E) 50x30 (WxH), Suitable for high S.G. raw materials. Use a small size paddle to decrease the impact of material falling directly on paddle.

B,C,D



(B) 65x80 (WxH), Directly mounted into 2-1/2" fixed hole.
 (C) 65x120 (WxH), Directly mounted into 2-1/2" fixed hole.
 (D) 80x80 (WxH)

F



(F) Scimitar model paddle, Screw tightly on the 1" diameter fixed hole, It is easier to mount and dismount.

MODEL NUMBER / ORDER CODE COMPARISON TABLE

Model Number	Order Code
SE170	SEX300□□-AA
SE171	
SE172	SEX300□□-AB
SE173	SEX300□□-AC
SE174	SEX302□□-AA
SE175	SEX302□□-AB
SE176	SEX302□□-AC
SE177	SEX300□□-AD

ACCESSORIES

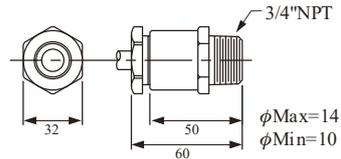
Cable Conduit - Ex d IIC

Material: Washer ---NBR

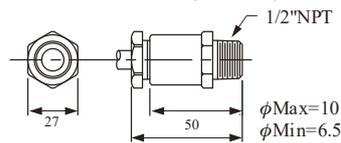
Body--- Copper alloy(3/4"NPT)

Nickel plated(1/2"NPT)

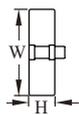
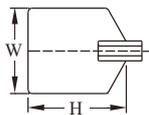
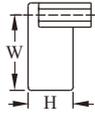
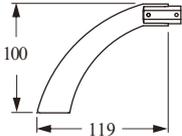
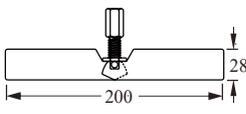
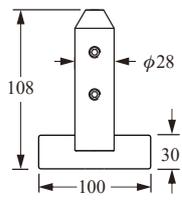
HP415-A23100MH01(29-1104)



HP415-A23000MG01(29-1108)



NEW / OLD PADDLE MODEL COMPARISON TABLE

New	Figure	Dimension(WxH)	Old
B	Rectangular shaped type 	100x30	A
C	Shovel shaped type 	65x80	B
D		65x120	C
E		80x80	D
F	Rectangular type, one sided 	50x30	E
G	Scimitar shaped type 	100x119	F
H	Folding type 	200x28	J
K	Weights type 	100x108	X

ORDER INFORMATION

SEX3 ⁰⁵ ⁰⁶ ⁰⁷ ⁰⁸ - A ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ ²²

⁰⁵ ⁰⁶ **Model**
 00: Standard
 02: Hi-temperature

⁰⁷ ⁰⁸ **Certification**
 1C: ATEX-Exd
 2C: IECEX-Exd
 5C: TS-Exd
 7C: NEPSI-Exd

¹⁰ **Construction**
 A: General type
 B: Shaft protective tube type
 C: Shaft length adjustable type
 D: Cable wire type

¹¹ **Power supply**
 A: AC110V
 B: AC220V
 C: AC240V
 D: AC24V

Connection

¹² ¹³
 Flange item
 AK: JIS-FF
 AN: ANSI-RF
 AS: DIN-FF

¹⁴ ¹⁵
 A8: 1"
 B1: 1-1/2"
 B2: 2"
 B4: 2-1/2"

¹⁶ ¹⁷
 01: PT male
 03: PF male
 07: NPT male
 40: 5 kg/cm²
 42: 10 kg/cm²
 48: 150 Lbs
 49: 300 Lbs
 57: PN10
 58: PN16

Thread item
 AA: JIS
 AC: ANSI

¹⁸ **Paddle model**
 A: None
 B: 100x30(WxH)
 C: 65x80(WxH)

F: 50x30(WxH)
 G: Scimitar type
 K: 100x108(WxH)(Cable wire type only)

¹⁹ ²⁰ ²¹ ²² **Length**

Code	Length range
0001~4000	0001~4000mm

MINI TYPE(ALUMINUM ALLOY COVER)

Housing cover code:
 0: Aluminum cover
 1: Aluminum cover with LED lamp

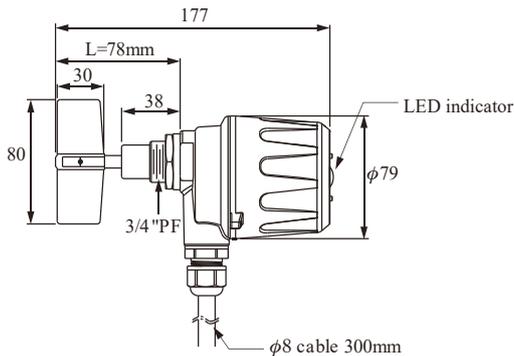
Power source : (A)110Vac,(B)220Vac,(C)240Vac,
 (D)24Vac,50/60Hz,(E)24Vdc
 Power consumptio : 1.5W
 Contact capacity : 5A/250Vac, 5A/30Vdc
 Rotary speed : 1 R.P.M.
 IP rating : IP65

Housing material : Aluminum alloy
 Ambient temperature : -40°C ~ 85°C
 Cable length : 300mm (available for custom length)
 Display status : Green(Working), Red(Stopped)
 Material density : 0.3g/cm³

SE38□0

STANDARD TYPE

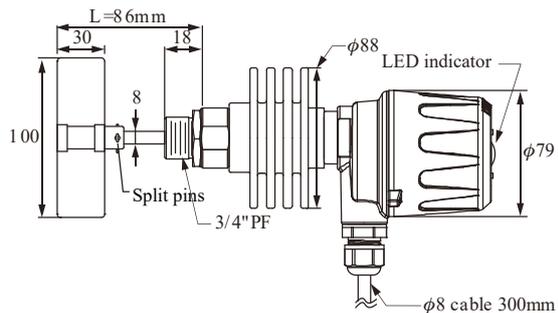
Operation Temp.: -40°C ~ 85°C
 Paddle material: PC



SE38□4

HIGH TEMPERATURE TYPE

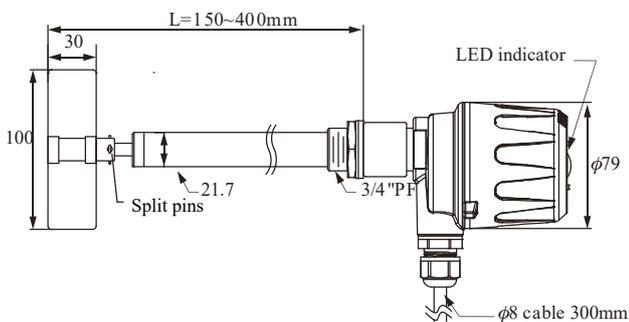
Operation Temp.: -40°C ~ 200°C
 Paddle material: SUS304



SE38□2

SHAFT PROTECTIVE TUBE TYPE

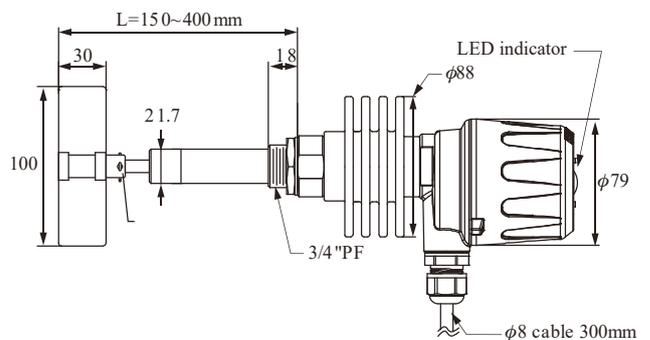
Operation Temp.: -40°C ~ 85°C
 Paddle material: SUS304



SE38□5

HIGH TEMPERATURE SHAFT PROTECTIVE TUBE TYPE

Operation Temp.: -40°C ~ 200°C
 Paddle material: SUS304





Ex ta/tb IIIC T*Da/Db

MINI TYPE(EXPLOSION PROOF)

Power source : (A)110Vac,(B)220Vac,(C)240Vac,
(D)24Vac,50/60Hz,(E)24Vdc

Power consumptio : 1.5W

Contact capacity : 5A/250Vac, 5A/30Vdc

Rotary speed : 1 R.P.M.

IP rating : IP65

Housing material : Aluminum alloy

Ambient temperature : -40°C ~ 85°C

Cable length : 300mm (available for custom length)

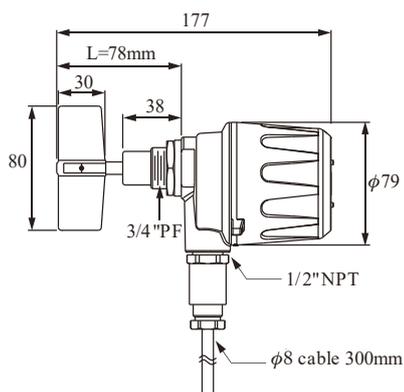
Material density : 0.3g/cm³

SE3700

STANDARD TYPE

Operation Temp.: -40°C ~ 80°C

Paddle material: PC

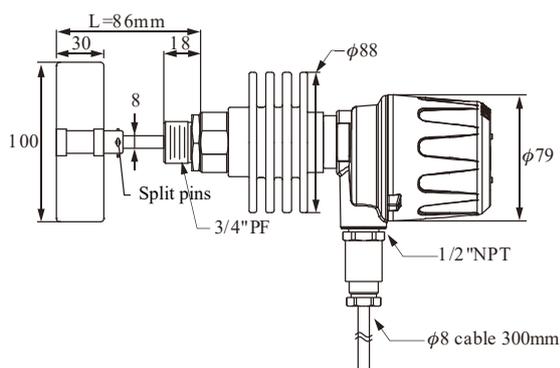


SE3704

HIGH TEMPERATURE TYPE

Operation Temp.: -40°C ~ 195°C

Paddle material: SUS304

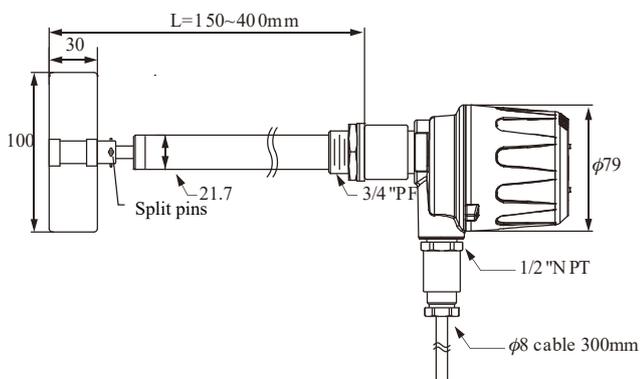


SE3702

SHAFT PROTECTIVE TUBE TYPE

Operation Temp.: -40°C ~ 80°C

Paddle material: SUS304

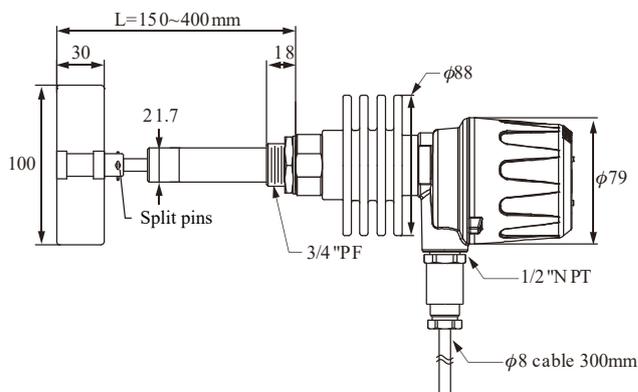


SE3705

HIGH TEMPERATURE SHAFT PROTECTIVE TUBE TYPE

Operation Temp.: -40°C ~ 195°C

Paddle material: SUS304



MINI TYPE(PLASTIC COVER)

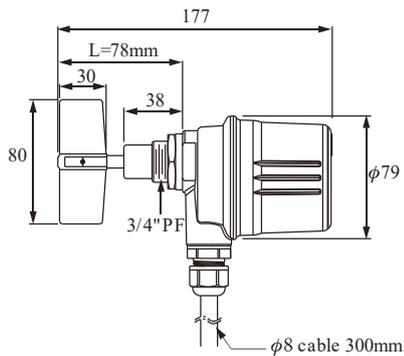
Power source : (A)110Vac,(B)220Vac,(C)240Vac,
(D)24Vac,50/60Hz,(E)24Vdc
Power consumptio : 1.5W
Contact capacity : 5A/250Vac, 5A/30Vdc
Rotary speed : 1 R.P.M.
IP rating : IP65

Housing material : Plastic cover
Ambient temperature : -40°C ~ 85°C
Cable length : 300mm (available for custom length)
Material density : 0.3g/cm³

SE3820

STANDARD TYPE

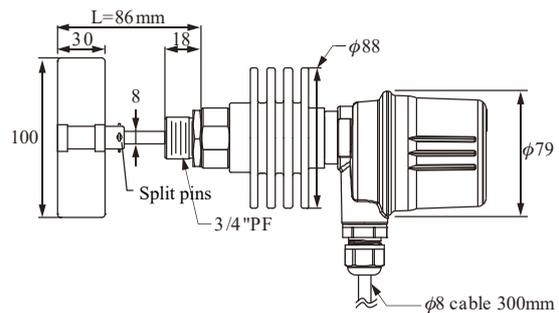
Operation Temp.: -40°C ~ 85°C
Paddle material: PC



SE3824

HIGH TEMPERATURE TYPE

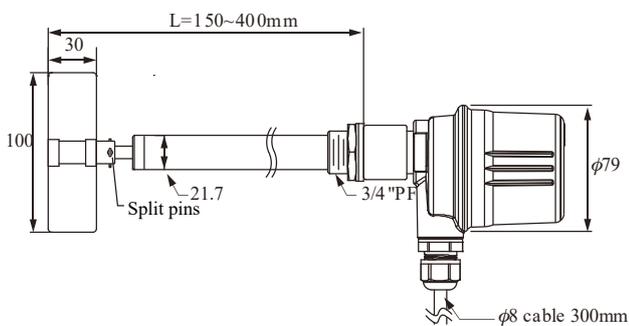
Operation Temp.: -40°C ~ 200°C
Paddle material: SUS304



SE3822

SHAFT PROTECTIVE TUBE TYPE

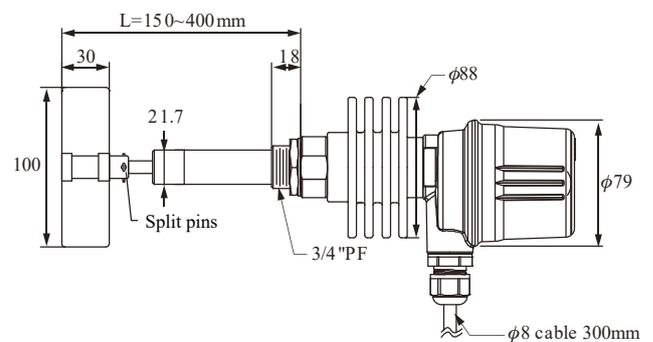
Operation Temp.: -40°C ~ 85°C
Paddle material: SUS304



SE3825

HIGH TEMPERATURE SHAFT PROTECTIVE TUBE TYPE

Operation Temp.: -40°C ~ 200°C
Paddle material: SUS304

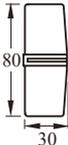
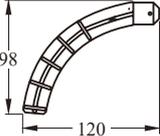
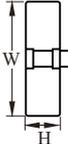
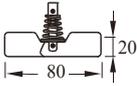


MODEL NUMBER / ORDER CODE COMPARISON TABLE

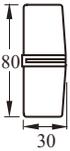
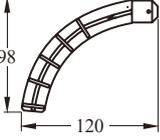
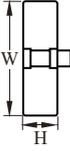
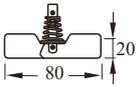
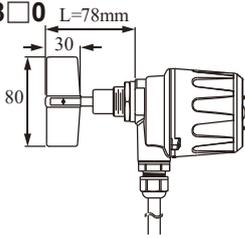
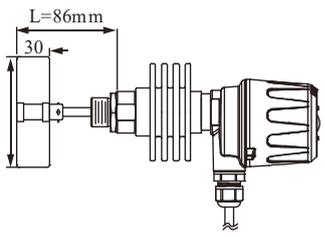
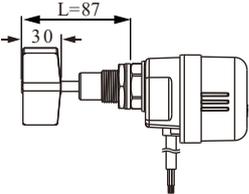
Model Number	Order Code
SE3700	SEX2007D-AA
SE3702	SEX2007D-AB
SE3704	SEX2027D-AA
SE3705	SEX2027D-AB
SE3800	SEX20000-AA
SE3810	SEX20000-BA
SE3820	SEX20000-CA
SE3802	SEX20000-AB

Model Number	Order Code
SE3812	SEX20000-BB
SE3822	SEX20000-CB
SE3804	SEX20200-AA
SE3814	SEX20200-BA
SE3824	SEX20200-CA
SE3805	SEX20200-AB
SE3815	SEX20200-BB
SE3825	SEX20200-CB

NEW / OLD PADDLE MODEL COMPARISON TABLE

New	Figure	Dimension(WxH)	Old
G	Cross bladed type 	80x30	G
H	Scimitar shaped type 	98x120	H
I	Rectangular shaped type 	100x30	I
K	Hinged type 	80x20	K

PROBE LENGTH LIST FOR MINI TYPE (WITH DIFFERENT PADDLES)

Paddle model				
Appearance diagram	Cross bladed type 80x30 (PC)	Scimitar shaped type 98x120 (PC)	Rectangular shaped type 100x30 (SUS)	Hinged type 80x20 (SUS)
SE38□0 	L=78	L=174	L=104	L=100
SE38□4 	Not suitable for high temperature (> 120°C) Stainless steel paddle suggested		L=86	L=82
SE2□0 	L=87	L=183	L=113	L=109

ORDER INFORMATION



SEX2 ⁰⁵ ⁰⁶ ⁰⁷ ⁰⁸ ⁰⁹ ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ ²² ²³ ²⁴ ²⁵ ²⁶

¹⁸ Paddle model

- A: None
- G: PC; Cross type
- H: PC; Scimitar type 120x98(WxH)
- I: SUS; 100x30(WxH)
- K: SUS; Folding type 80x20(WxH)

¹⁹ ²⁰ ²¹ ²² Length

Code	Length range
0001~400	0001~400mm

²³ ²⁴ ²⁵ ²⁶ Cable wire length

Code	Length range
0300~5000	0300~5000mm

MINI TYPE(ECONOMY)

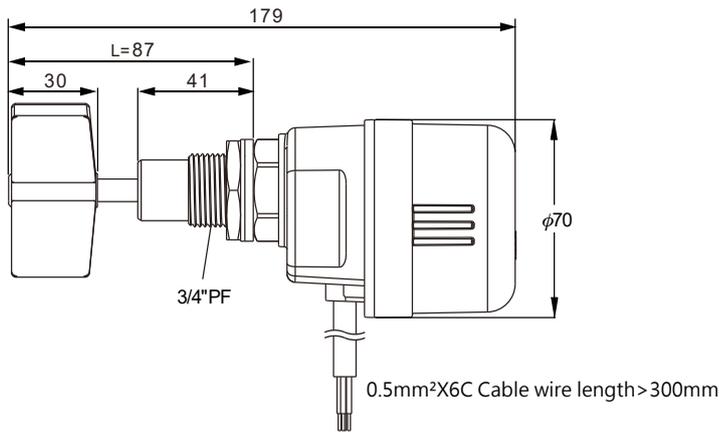
Power source : (A)110Vac,(B)220Vac,
 (D)24Vac,50/60Hz,(E)24Vdc
 Power consumptio : 1.5W
 Contact capacity : 3A/250Vac, 3A/30Vdc
 Rotary speed : 1 R.P.M.
 IP rating : IP65

Housing material : Plastic cover
 Ambient temperature : -20°C ~ 80°C
 Cable length : >300mm (available for custom length)
 Material density : 0.3g/cm³

SE290

STANDARD TYPE

Operation Temp.: -20°C ~ 80°C
 Paddle material: PC



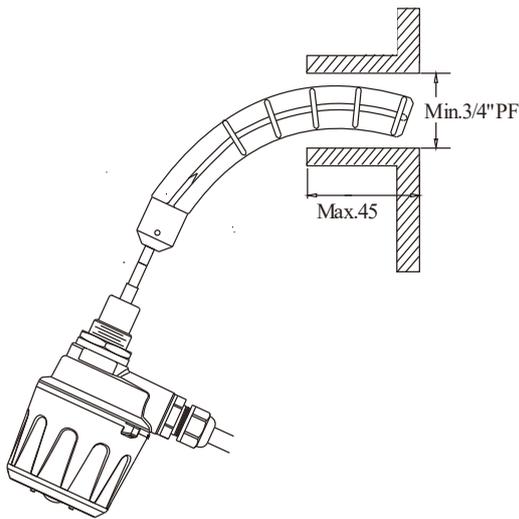
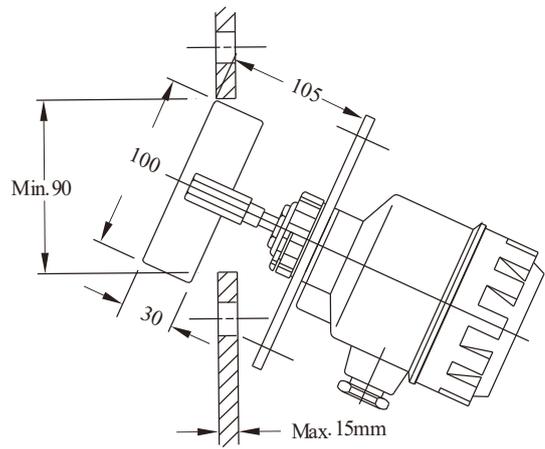
MODEL NUMBER / ORDER CODE COMPARISON TABLE

Model Number	Order Code
SE290A	SEX40000-CAA
SE290B	SEX40000-CAB
SE290D	SEX40000-CAD
SE290E	SEX40000-CAE

MOUNTING EXAMPLES

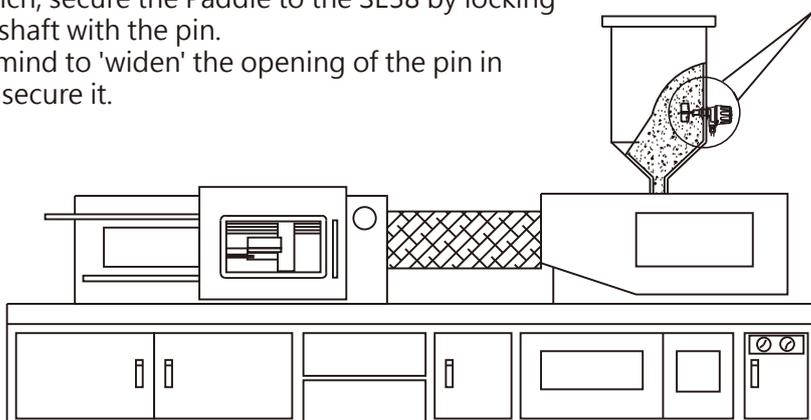
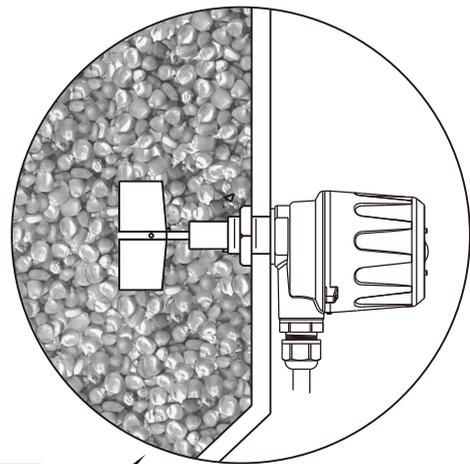
Regular models such as the SE11 should be installed directly on the tank side.
Mount at a 35° angle the blade through the tank opening or hole sliding the blade in first.

- ※ The SE170 series minimum hole size should be 95mm in diameter.
The scimitar model is directly installed on the tank wall method as shown below.
(Assuming an arc-shaped tank with a 3/4 "connection) and then screwing it tight.

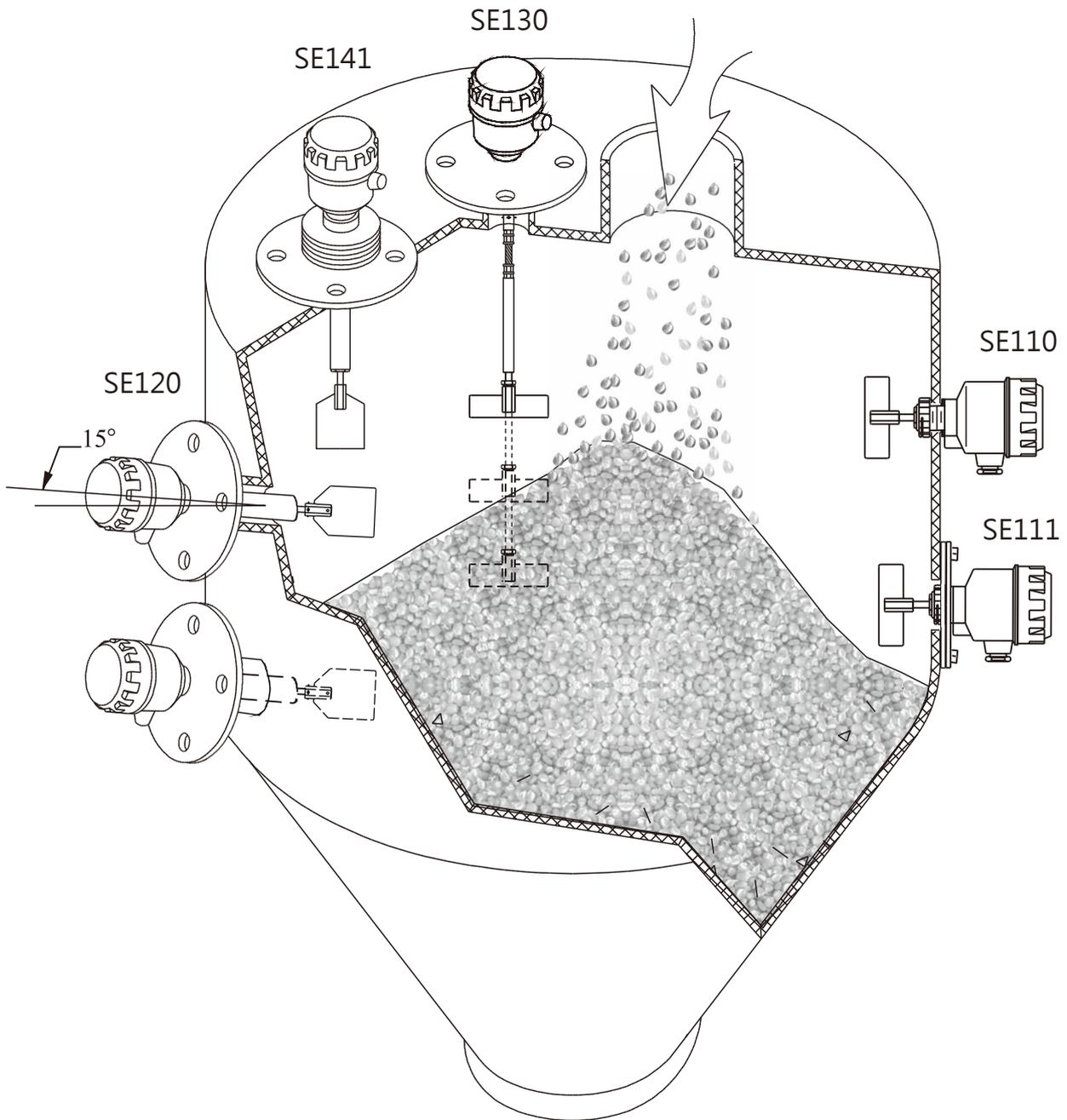


INJECTION MOLDING MACHINES

Injection Molding Machine usually require the SE38.
Install the Rotary Paddle through a 20mm diameter hole on the tank/silo.
Remove the paddle from the device by taking out the fastening pin.
Insert the SE38 through the mounting hole and tighten it.
After which, secure the Paddle to the SE38 by locking it to the shaft with the pin.
Keep in mind to 'widen' the opening of the pin in order to secure it.



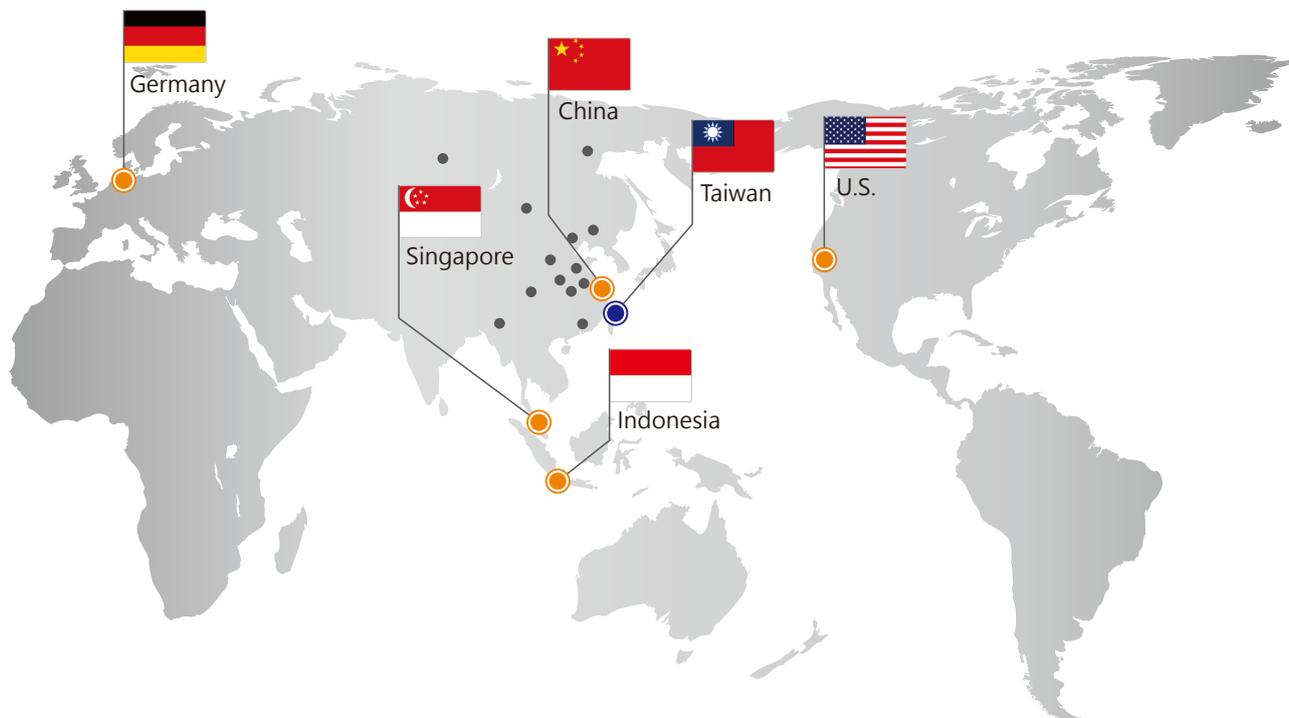
EXAMPLES



INSTALLATION NOTICESEXAMPLES

1. Side mount the sensor at a downward angle of 15° ~ 20° to decrease the material inflow impact.
2. For high temperature application (more than 70°C), please use the SE149 Series.
3. For SE110~SE140 using a 1" inlet, please apply the scimitar model and screw directly.
4. For SE130, SE146 series have flexible and extendible shafts.
5. Please ensure the lead wire enters the housing from the bottom and the nuts are fastened to secure the device.

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