SE3 Series
Compact Rotary Paddle
Point Level Sensor

A⁺Fine

Aplus Finetek Sensor, Inc.

PRODUCT INTRODUCTION

PRINCIPLE

The SE3 series is a compact rotary paddle point level sensor that uses a robust synchronous drive motor to rotate a stainless steel shaft at approximately 1 rpm. A paddle actuating mechanism is attached to the stainless steel shaft inside of the bin or hopper that the SE3 is mounted on. A clutch mechanism is also a key component with the SE3 assembly. With the target material not present at the units paddle inside the bin, the paddle will rotate freely and the internal switch output will be in its starting position and the internal LED will illuminate Green indicating that the paddle is rotating free of material. When material is in contact with the paddle inside the bin or hopper the clutch will disengage, the switch output changes state, the motor power is disconnected internally and the Red LED illuminates indicating material presence.
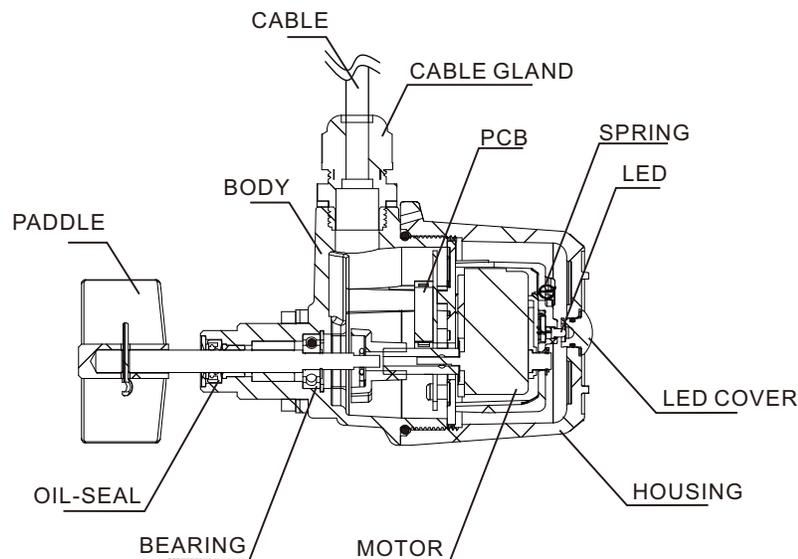
FEATURES

- Compact robust design fits virtually anywhere
- Unique bi-color LED (Green/Red) for local indication of material presence/absence
- Standard, reinforced extended shaft and high temperature versions available
- Easily adjusted sensitivity if required
- Folding stainless steel paddle affords installation without internal bin access
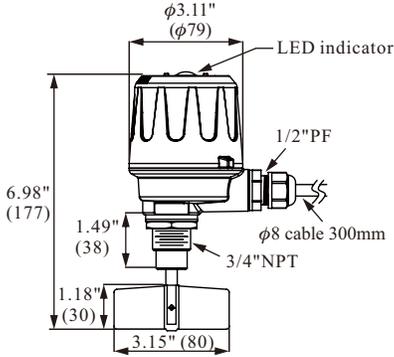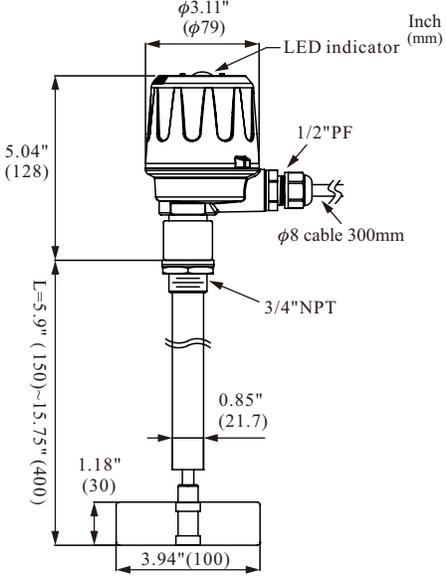
INDUSTRY USE AND APPLICATIONS

The SE3 series includes an adjustable sensitivity spring to allow it to be used in a wide range of applications with its available paddles. In addition, the wide operating temperature range makes the SE3 series a great fit for a variety of applications including within the following industries or type of facilities:

- Plastic Processing
- Food & Ingredients
- Pharmaceutical
- Specialty Chemical
- Wood Processing
- Foam and Fiber Production
- Grain Processing
- Many Others

INTERNAL DIAGRAM

TYPES & SPECIFICATIONS

	Standard	Reinforced Shaft
Dimensions		
Type	Standard	Reinforced Shaft
Order no.	SE3810	SE3812
Ambient temp.	-40^{0}F~185^{0}F (-40^{0}C~85^{0}C)	
Storage temp.	-40^{0}F~185^{0}F (-40^{0}C~85^{0}C)	
Process temp.	-40^{0}F~185^{0}F (-40^{0}C~85^{0}C)	
Relative humidity	20%~80% RH non-condensed	
Pressure	58psi (4 bar)	
Housing material	Diecast Aluminum (powder coated)	
Protection	NEMA 4X / IP65	
Connection	3/4"NPT	
Conduit entrance	One 1/2"G	
Paddle speed	1 RPM	
Supply voltage	24VAC, 110VAC, 220VAC, 240VAC 50/60Hz, 24VDC	
Output rating	One Microswitch SPDT, 5A @ 250Vac/30Vdc	
Power consumption	Max. : 1.5W	
Bulk density	18~62lbs/ft^3 (0.3~1g/cm^3)	
Sensitivity	Adjustable Torque: Weakest, Weak, Strong, Strongest	
LED Indication	Material Absent – Green, Material Present – Red	

| Dimensions		
Type	High Temperature Standard	High Temperature Reinforced Shaft
Order no.	SE3814	SE3815
Ambient temp.	-40°F~185°F (-40°C~85°C)	
Storage temp.	-40°F~185°F (-40°C~85°C)	
Process temp.	-40°F~392°F (-40°C~200°C)	
Relative humidity	20%~80% RH non-condensed	
Pressure	58psi (4 bar)	
Housing material	Diecast Aluminum (powder coated)	
Protection	NEMA 4X / IP65	
Connection	3/4"NPT	
Conduit entrance	One 1/2"G	
Paddle speed	1 RPM	
Supply voltage	24VAC, 110VAC, 220VAC, 240VAC 50/60Hz, 24VDC	
Output rating	One Microswitch SPDT, 5A @ 250Vac/30Vdc	
Power consumption	Max. : 1.5W	
Bulk density	18~62lbs/ft^3 (0.3~1g/cm^3)	
Sensitivity	Adjustable Torque: Weakest, Weak, Strong, Strongest	
LED Indication	Material Absent – Green, Material Present – Red	

TYPES OF ACCESSORIES

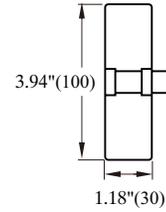**PADDLES – DIRECT CONNECT (ATTACH BY USING PIN ONLY)**

| G | SEB-1192 |

3.15"(80)

1.18"(30)
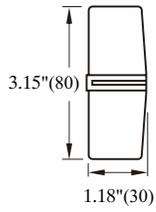
Material: Polycarbonate

| H | SEB-1193 |

3.84"(98)

4.71"(120)
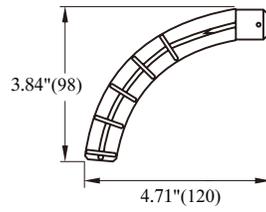
Material: Polycarbonate

| I | SEB-1194 |

3.94"(100)

1.18"(30)

Material: Stainless steel

| K | EB-0192 |

0.79"(20)

3.15"(80)
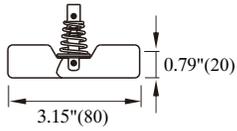
Material: Stainless steel

INSTALLATION

15°
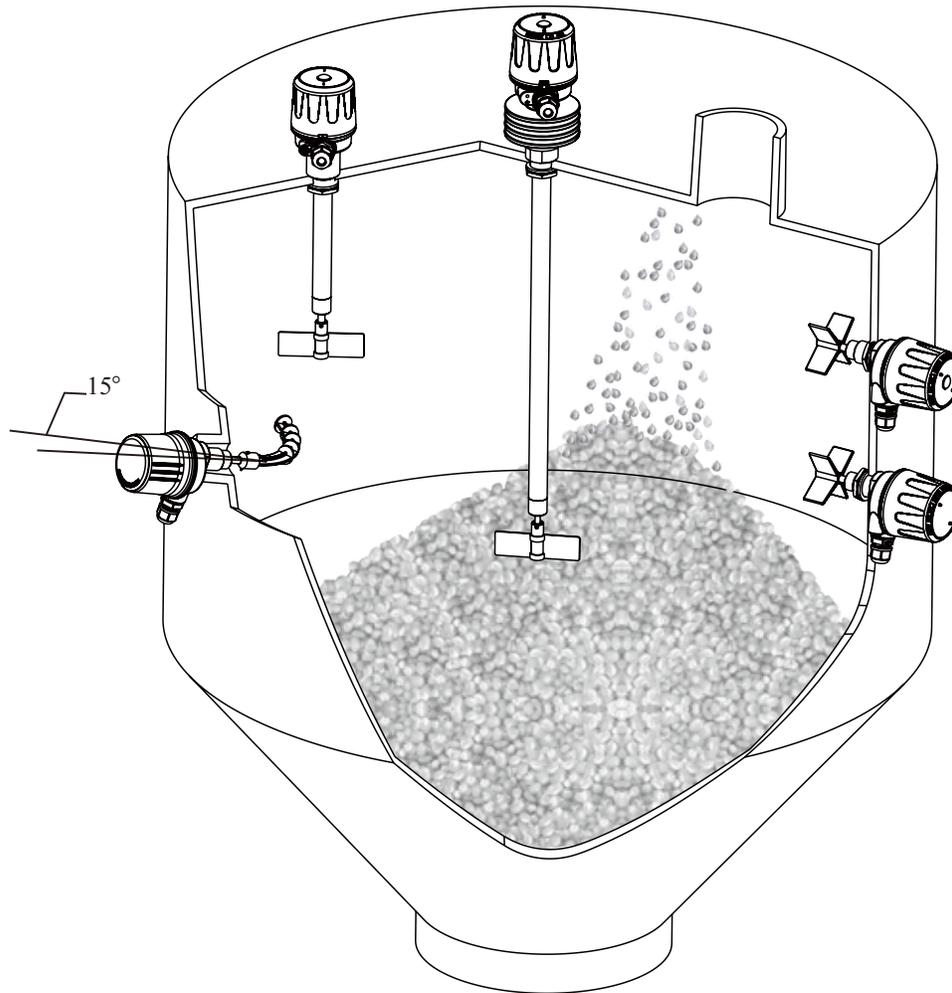
NOTES

- For side mount installation do not install where paddle and shaft will be in the direct flow stream of incoming material during filling.
- Conduit opening should always be positioned downward with conduit or cable connection tight and sealed to prevent ingress of moisture through conduit/cable connection.
- Always disconnect power from unit power source before opening enclosure or prior to initial installation.
- Consult factory when internal bin environment may be highly corrosive to aluminum process connection. Stainless steel or other material for the process connection may be available.
- Ensure that the internal bin and ambient temperatures do not exceed the unit specifications.

ORDER INFORMATION

SE3 ☐☐☐☐☐☐☐ (☐☐☐☐)

Enclosure Type

7: Explosionproof version
8: Nonexplosionproof version

Enclosure Cover

0: Aluminum without lens
1: Aluminum with LED lens *
2: Plastic *
* Selections 1 and 2 are not available for use
  with explosionproof SE37 version

Model

0: Standard
2: Reinforced Shaft
4: High Temperature Standard
5: High Temperature Reinforced Shaft

Power

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

Process Connection

Threaded: Flanged:
CU: 3/4" NPT   EO: 1-1/2" ANSI 150lbs
DU: 1" NPT   FO: 2" ANSI 150lbs
3U: 1-1/4" NPT   HO: 3" ANSI 150lbs
EU: 1-1/2" NPT   IO: 4" ANSI 150lbs
FU: 2" NPT   KO: 6" ANSI 150lbs
SS: Special

**Paddle**

-: No paddle (Purchase Paddle Separately as Accessory)
G: 4-Vane Cross Paddle (polycarbonate plastic)
H: 1-Vane "banana" Paddle (polycarbonate plastic)
 I: 2-Vane Paddle (stainless steel)
K: 2-Vane Folding Paddle (stainless steel)

Electrical Cable Length *

0500: Below 20" (500mm)
1000: Range from 20" to 39" (501~1000mm)
1500: Range from 40" to 59" (1001~1500mm)
2000: Range from 60" to 79" (1501~2000mm)
2500: Range from 80" to 98" (2001~2500mm)
3000: Range from 99" to 118" (2501~3000mm)
3500: Range from 119" to 138" (3001~3500mm)
4000: Range from 139" to 157" (3501~4000mm)
S: Special
* Standard length is 11.8" (300mm)

Global Network
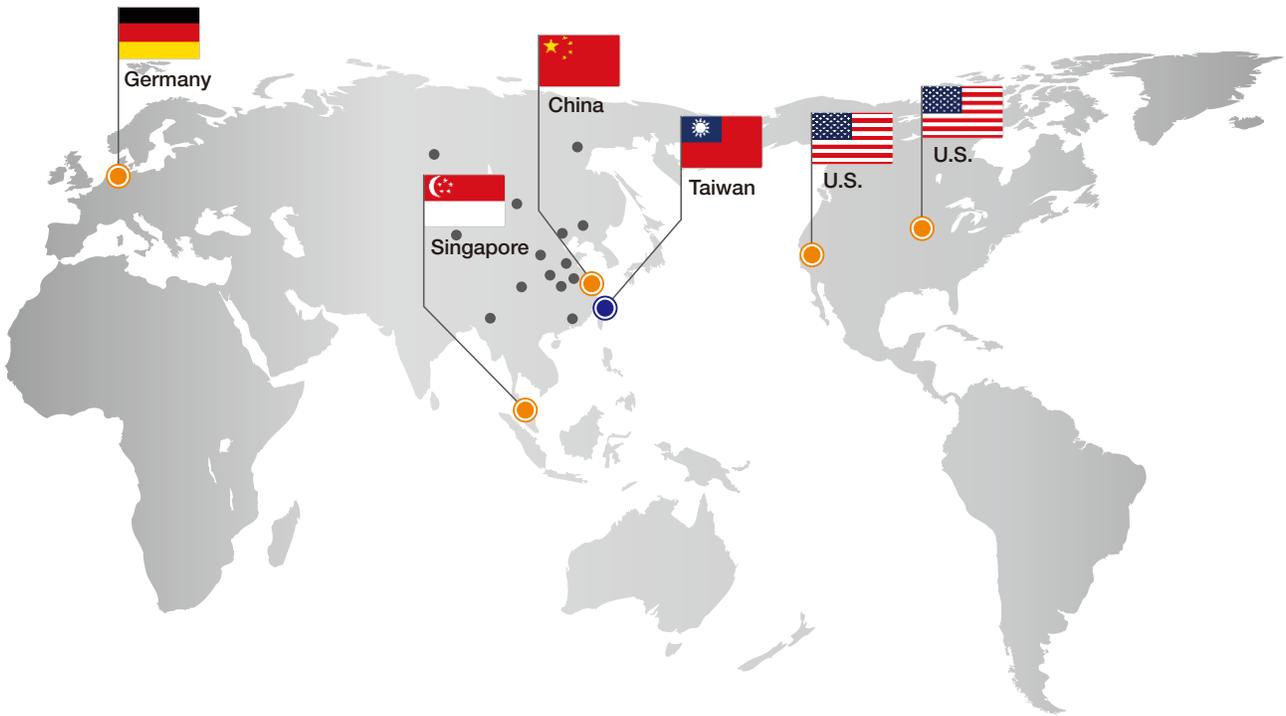
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