

ROTARY PADDLE LEVEL

PRINCIPLE

The RP series operating principle is simple. A 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 1 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)

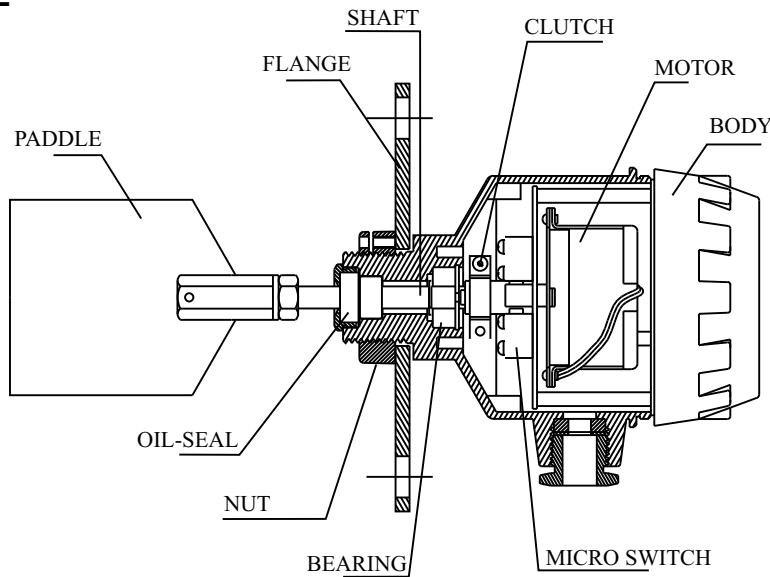
APPLICATIONS

Suitable for powdery producing & processing industries such as plastic, chemical, medical, forage, cement and fertilizer powders.

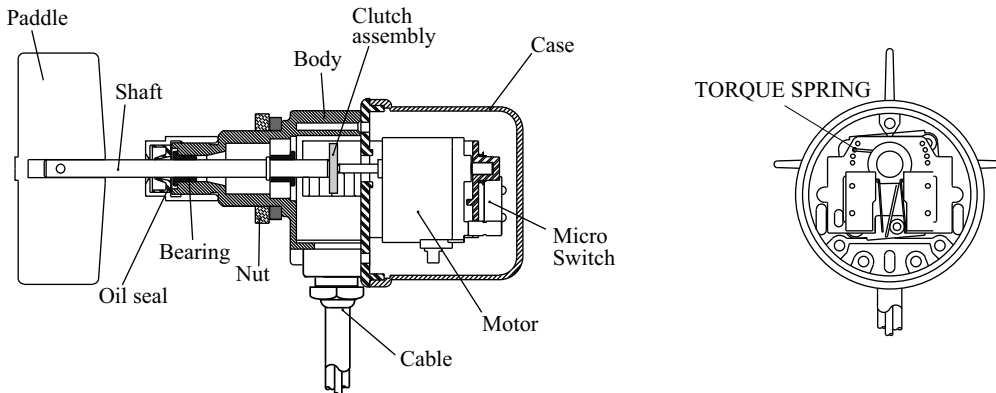
FEATURES

- ★ Airtight sealing device, outdoor application is available.
- ★ Unique sealing ring design, it can perform good dust protection to avoid the dust permeate into housing body along with the shaft.
- ★ The torque force is adjustable.
- ★ The performance of torsion is stable and reliable.
- ★ If the rotary paddle bears an extra overload, the motor will be appeared slide to prevent the inside mechanism damaged.
- ★ It is rationally designed, the inside mechanisms are easily tore down for checking, maintenance and replacement. It doesn't necessary to remove the complete set from the tank.

STRUCTURE



PADDLE TYPE LEVEL SENSOR

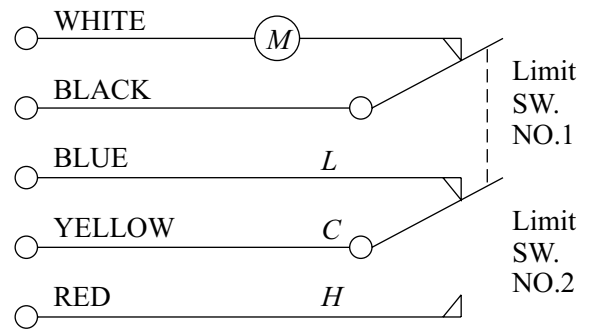


MINI PADDLE TYPE LEVEL SENSOR

INTRODUCTION

CONTROL SWITCH DEVICES WORKING PRINCIPLE

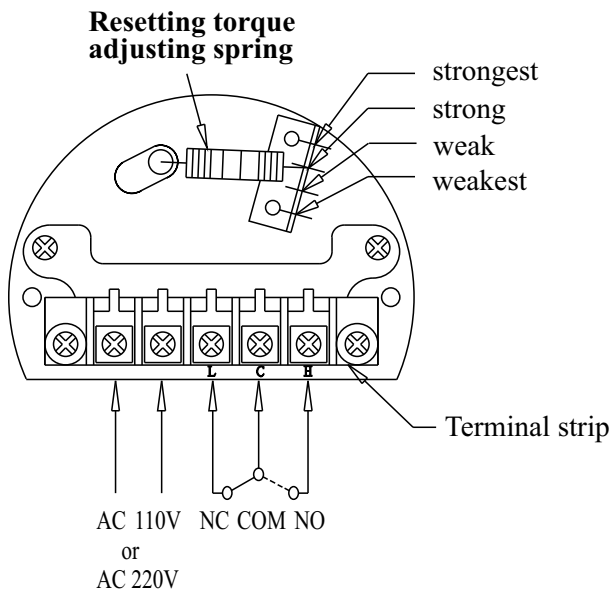
1. When the synchronous motor is turning. It means that material isn't touching the paddles, the (C.L) stands for "terminal point connected".
2. When material is touching the paddles, (C.L) stands for "cut-off", (C.H) stands for "connected" the synchronous motor's current is to be cut off.
3. When the material drops away from the paddles, the synchronous motor runs again and the terminal point is connected, (C.L) show that the cycle has begun again.



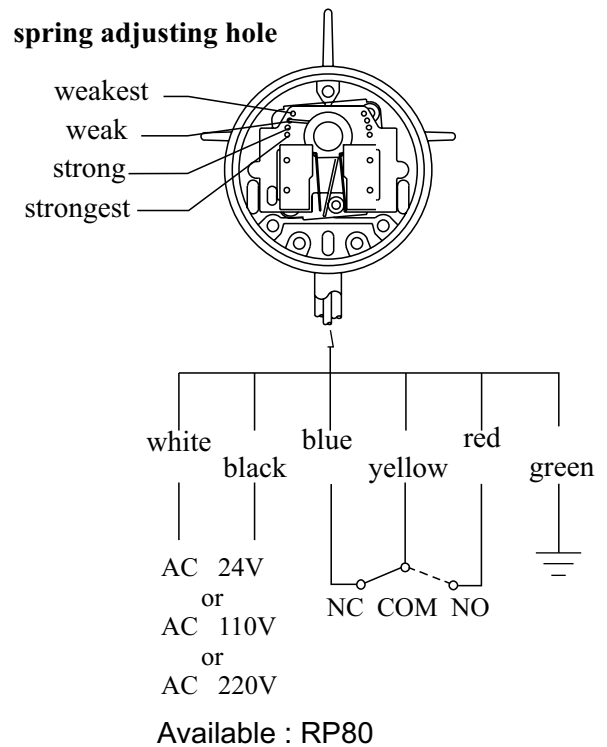
TORQUE ADJUSTING MECHANISM

The torque spring is applied to adjust the shaft output torque force, which is set at "weak" position at factory side, it is adjustable as per customer side target measuring material S.G. (special gravity), if the measured material with higher S.G., please try to release it to more

stronger spring force position step until you found the proper orientation. The paddle sensitivity will be interacted by more weaker, otherwise, the low S.G. material will release torque spring to the weakest position, which will cause the paddle performance to be more sensitive.



Available : RP10, 20, 30, 40, 60, 70



Available : RP80

STANDARD SPECIFICATION

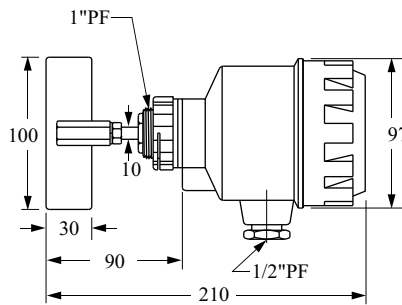
Power source : A-110VAC, B-220VAC, C-240VAC, 50/60Hz
Power consumption : 3W
Contact capacity : SPDT, 5A/250VAC
Rotary speed : 1 R.P.M.
Insulation test voltage : AC 1500V 1minute

Torque : 0.5 ~1.0 kg-cm
Connect : 1"PF screw or JIS 2-1/2" 5kg/cm² flange
Protection/ material : IP65 / ADC-12
Conduit : 1/2"PF
Specific gravity : 0.5g/cm³ (30Lb/ft³)

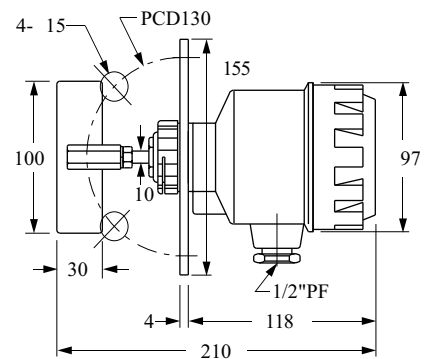
RP10A/B/C SCREW TYPE

- Horizontal mounting
- Temp. (-10 C ~ 70 C)
- Weight: 1.2 kg

RP10A/B/C



RP11A/B/C



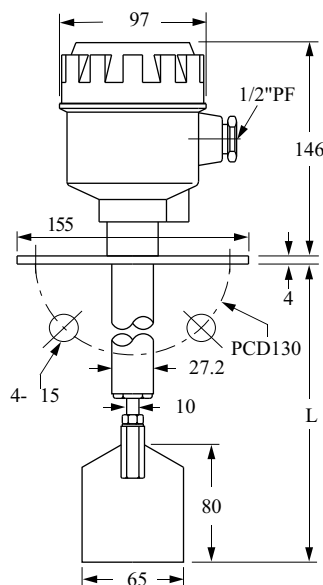
RP11A/B/C FLANGE TYPE

- Horizontal mounting
- Temp. (-10 C ~ 70 C)
- Weight: 1.7 kg

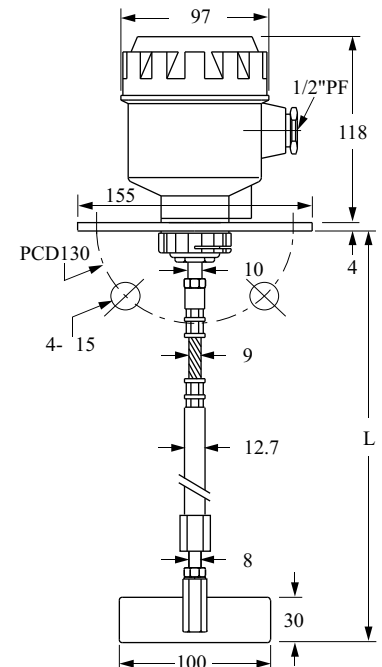
RP20A/B/C SHAFT PROTECTIVE TUBE TYPE

- Horizontal /Vertical mounting
- Temp. (-10 C ~ 70 C)
- Weight: 1.2 kg
- The whole section from flange to paddle are made of SUS 304
- Standard Length (option):
 L--250mm (2.2 kg)
 L--500mm (2.5 kg)
 L--750mm (2.8 kg)
- Special length is made by order

RP20A/B/C



RP30A/B/C



RP30A/B/C SHAFT LENGTH ADJUSTABLE TYPE

- Vertical mounting
- Temp. (-10 C ~ 70 C)
- Standard Length (option):
 L-- 450 ~650mm (2.5 kg)
 L-- 650 ~1000mm (2.8 kg)
 L-- 750 ~1200mm (3.0 kg)
- Special length is made by order

STANDARD SPECIFICATION

Power source : A-110VAC, B-220VAC, C-240VAC, 50/60Hz
Power consumption : 3W
Contact capacity : SPDT, 5A/250VAC
Rotary speed : 1 R.P.M.
Insulation test voltage : AC 1500V 1minute

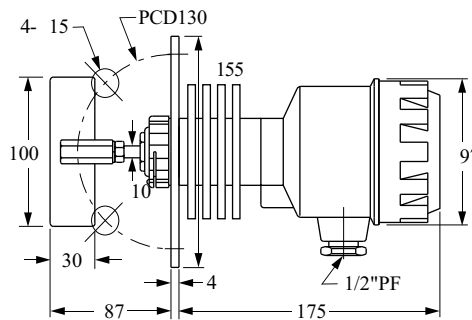
Torque : 0.5 ~1.0 kg-cm
Connect : 1"PF screw or JIS 2-1/2" 5kg/cm² flange
Protection/ material : IP65 / ADC-12
Conduit : 1/2"PF
Specific gravity : 0.5g/cm³ (30Lb/ft³)

RP40A/B/C

HI-TEMP TYPE

- Horizontal mounting
- Temp. (-10 C ~ 200 C)
- Weight: 2.1 kg

RP40A/B/C

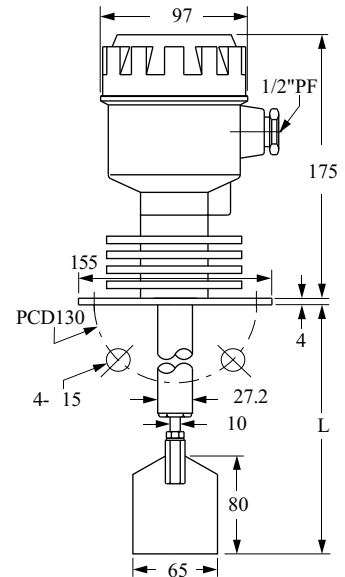


RP41A/B/C

HI-TEMP SHAFT PROTECTIVE TUBE TYPE

- Horizontal /Vertical mounting
- Temp. (-10 C ~ 200 C)
- The whole section from flange to paddle are made of SUS 304
- Standard Length (option):
 L--250mm (2.6 kg)
 L--500mm (2.9 kg)
 L--750mm (3.2 kg)
- Special length is made by order

RP41A/B/C

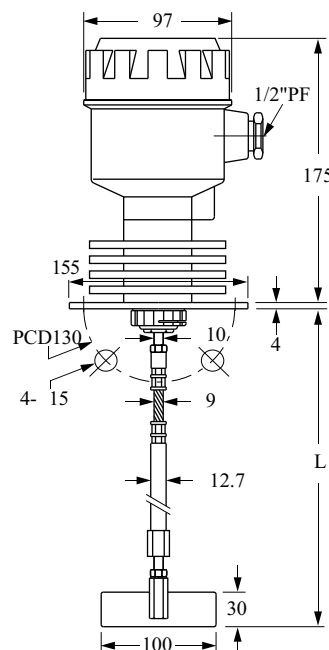


RP46A/B/C

HI-TEMP SHAFT LENGTH ADJUSTABLE TYPE

- Vertical mounting
- Temp. (-10 C ~ 200 C)
- Standard Length (option):
 L-- 450 ~650mm (3 kg)
 L-- 650 ~1000mm (3.3 kg)
 L-- 750 ~1200mm (3.5 kg)
- Special length is made by order

RP46A/B/C

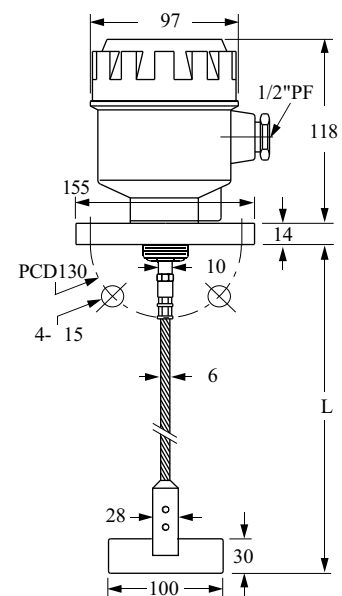


RP60A/B/C

CABLE WIRE TYPE

- Vertical mounting
- Temp. (-10 C ~ 70 C)
- Standard Length (option):
 L-- 450mm (2.5 kg)
 L-- 650mm (2.8 kg)
 L-- 750mm (3 kg)
- Special length is made by order

RP60A/B/C



STANDARD SPECIFICATION

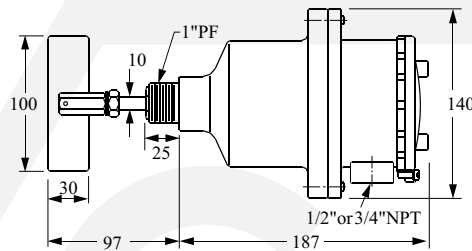
Power source : A-110VAC, B-220VAC, C-240VAC, 50/60Hz
Power consumption : 3W
Contact capacity : SPDT, 5A/250VAC
Rotary speed : 1 R.P.M.
Insulation test voltage : AC 1500V 1minute
Torque : 0.5 ~1.0 kg-cm

Connect : 1"PF screw or JIS 2-1/2" 5kg/cm² flange
Enclosure material : AL Alloy, ADC-12
Enclosure Protection : Ex d IIB T4
Conduit : 1/2" (std.) or 3/4"NPT
Specific gravity : 0.5g/cm³ (30Lb/ft³)

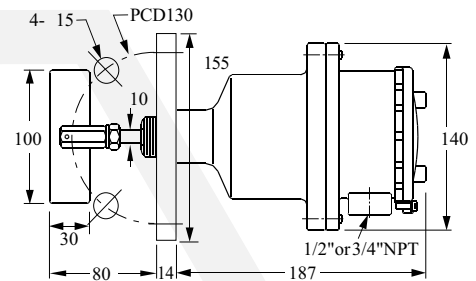
RP70A/B/C EXPLOSION PROOF SCREW TYPE

- Horizontal mounting
- Temp. (-10 C ~ 70 C)

RP70A/B/C



RP71A/B/C



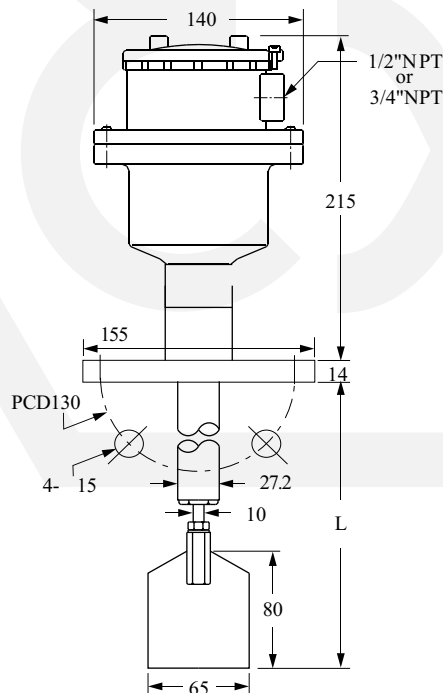
RP71A/B/C EXPLOSION PROOF FLANGE TYPE

- Horizontal mounting
- Temp. (-10 C ~ 70 C)

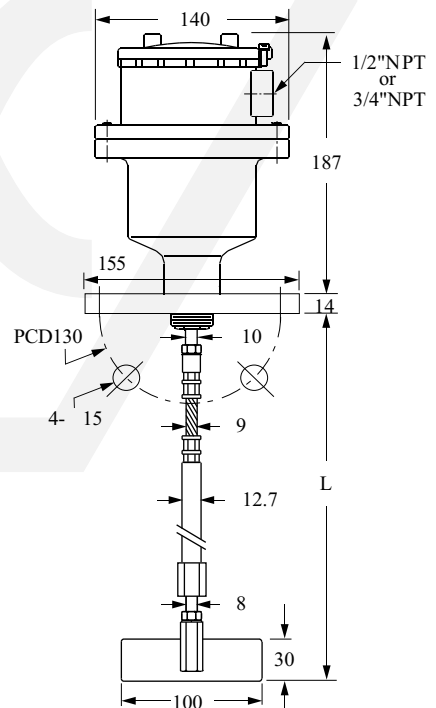
RP72A/B/C EXPLOSION PROOF SHAFT PROTECTIVE TUBE TYPE

- Horizontal /Vertical mounting
- Temp. (-10 C ~ 70 C)
- Standard Length (option):
L-- 250mm
L-- 500mm
L-- 750mm
- Special length is made by order

RP72A/B/C



RP73A/B/C



RP73A/B/C EXPLOSION PROOF SHAFT LENGTH ADJUSTABLE TYPE

- Vertical mounting
- Temp. (-10 C ~ 70 C)
- Standard Length (option):
L-- 450 ~650mm
L-- 650 ~1000mm
L-- 750 ~1200mm
- Special length is made by order

STANDARD SPECIFICATION

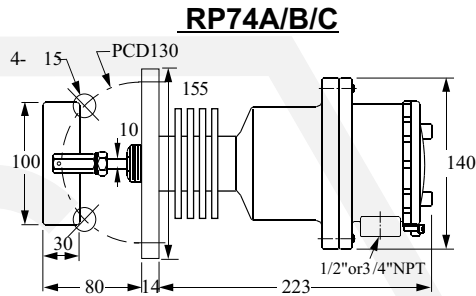
Power source : A-110VAC, B-220VAC, C-240VAC, 50/60Hz
Power consumption : 3W
Contact capacity : SPDT, 5A/250VAC
Rotary speed : 1 R.P.M.
Insulation test voltage : AC 1500V 1minute
Torque : 0.5 ~1.0 kg-cm

Connect : 1"PF screw or JIS 2-1/2" 5kg/cm² flange
Enclosure material : AL Alloy, ADC-12
Enclosure Protection : Ex d IIB T4
Conduit : 1/2" (std.) Or 3/4"NPT
Specific gravity : 0.5g/cm³ (30Lb/ft³)

RP74A/B/C

EXPLOSION PROOF HI-TEMP TYPE

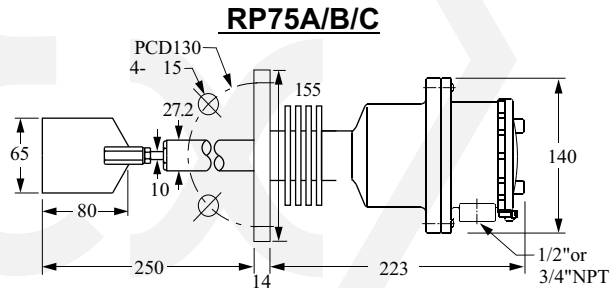
- Horizontal mounting
- Temp. (-10 C ~ 200 C)



RP75A/B/C

EXPLOSION PROOF HI-TEMP SHAFT PROTECTIVE TUBE TYPE

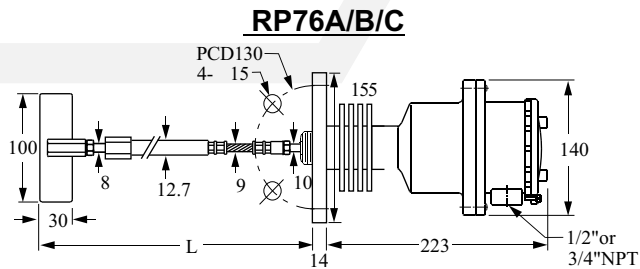
- Horizontal /Vertical mounting
- Temp. (-10 C ~ 200 C)
- Special length is made by order



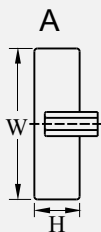
RP76A/B/C

EXPLOSION PROOF HI-TEMP SHAFT LENGTH ADJUSTABLE TYPE

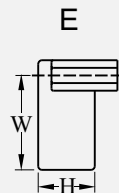
- Vertical mounting
- Temp. (-10 C ~ 200 C)
- Special length is made by order



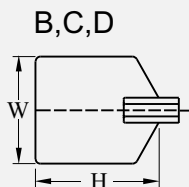
Paddle Introduction (Big)



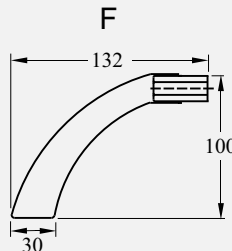
(A) 100x30 (WxH), Min. fixed hole diameter size 90mm.



(E) 50x30 (WxH), Suitable for high S.G. raw material, application by small size paddle to decrease the material flowing impact directly.



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



(F) Scimitar type paddle, Directly screwed through 1" diameter fixed hole, It is more easy to be mounted dispense with labor of tank cut-out.

STANDARD SPECIFICATION

Power source : A-110VAC, B-220VAC, C-240VAC, D-24VAC 50/60Hz

Power consumption : 1.5W

Contact capacity : AC 250V 3A

Rotary speed : 1 R.P.M.

Protection/ material : IP65 / PC

Temp. : -10 C ~ 70 C

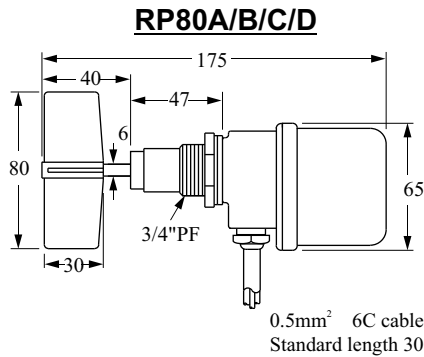
Cable length : 30cm (available for custom length)

Torque : 30 ~100 kg-cm

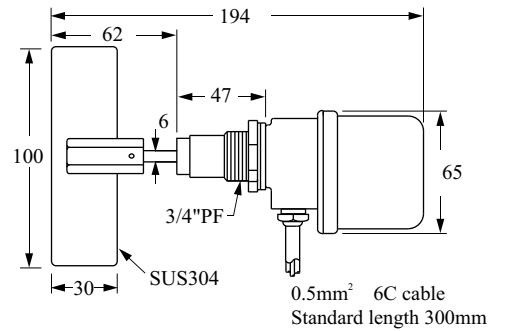
Specific gravity : 0.3g/cm³ (20Lb/ft³)

RP80A/B/C/D CROSS-LIKE 4 BLADE PADDLE

- Horizontal mounting
- Weight : 0.42 kg



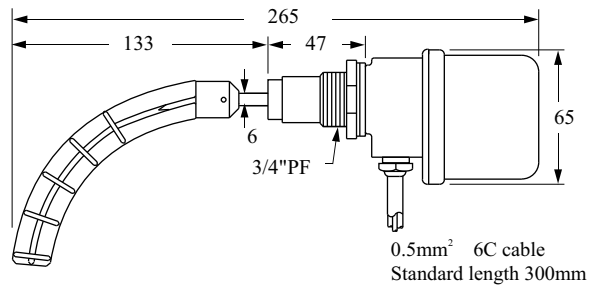
RP80 CRI



RP80 CRH SCIMITAR TYPE PADDLE

- Horizontal mounting
- Weight : 0.42 kg

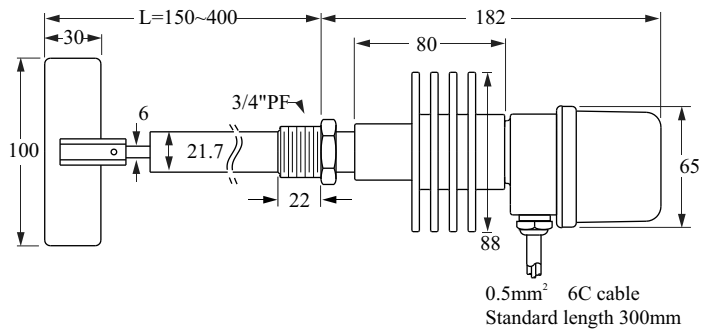
RP80 CRH



RP80 CRI RECTANGLE 100 30 SUS304 PADDLE

- Horizontal mounting
- Weight : 0.48 kg

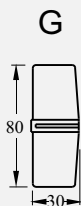
RP84 CRI



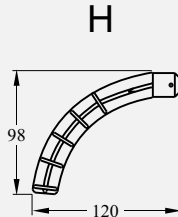
RP84 CRI HI-TEMP TYPE SUS304 PADDLE

- Horizontal / Vertical mounting
- Temp. Max: 200 C

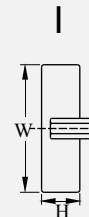
Paddle Introduction (Mini)



(G) Cross type paddle
material: polycarbonate



(H) Scimitar type paddle, directly
screwed through 3/4" diameter
fixed hole.

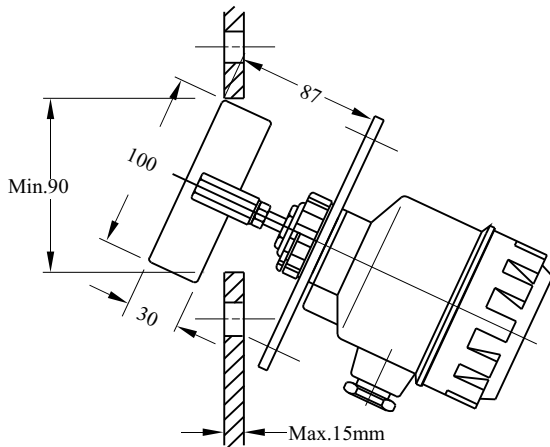


(I) 100x30 (WxH)
Material: SUS304

EXAMPLES OF MOUNTING

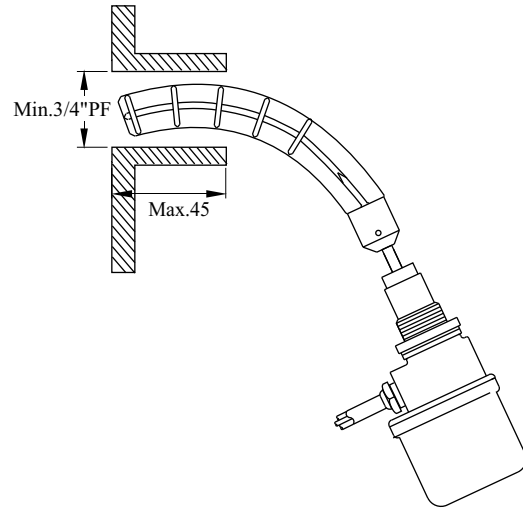
EXAMPLES OF MOUNTING TO TANK

Where the RP10A type paddle cannot be attached to the main shaft from inside the storage tank. The paddle can be set on the main shaft when the distance from the flange face to the tip of paddle is more than 90mm, the relative dimensions being as illustrated right.

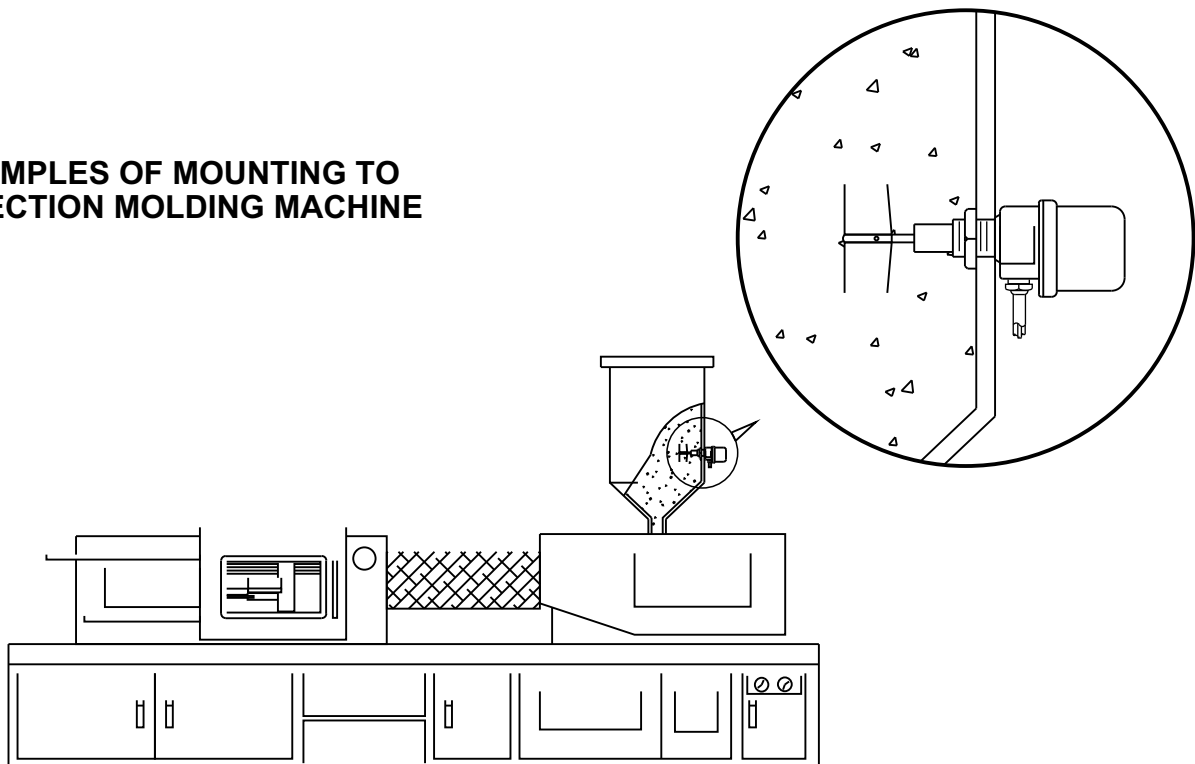


EXAMPLES OF MOUNTING TO TANK

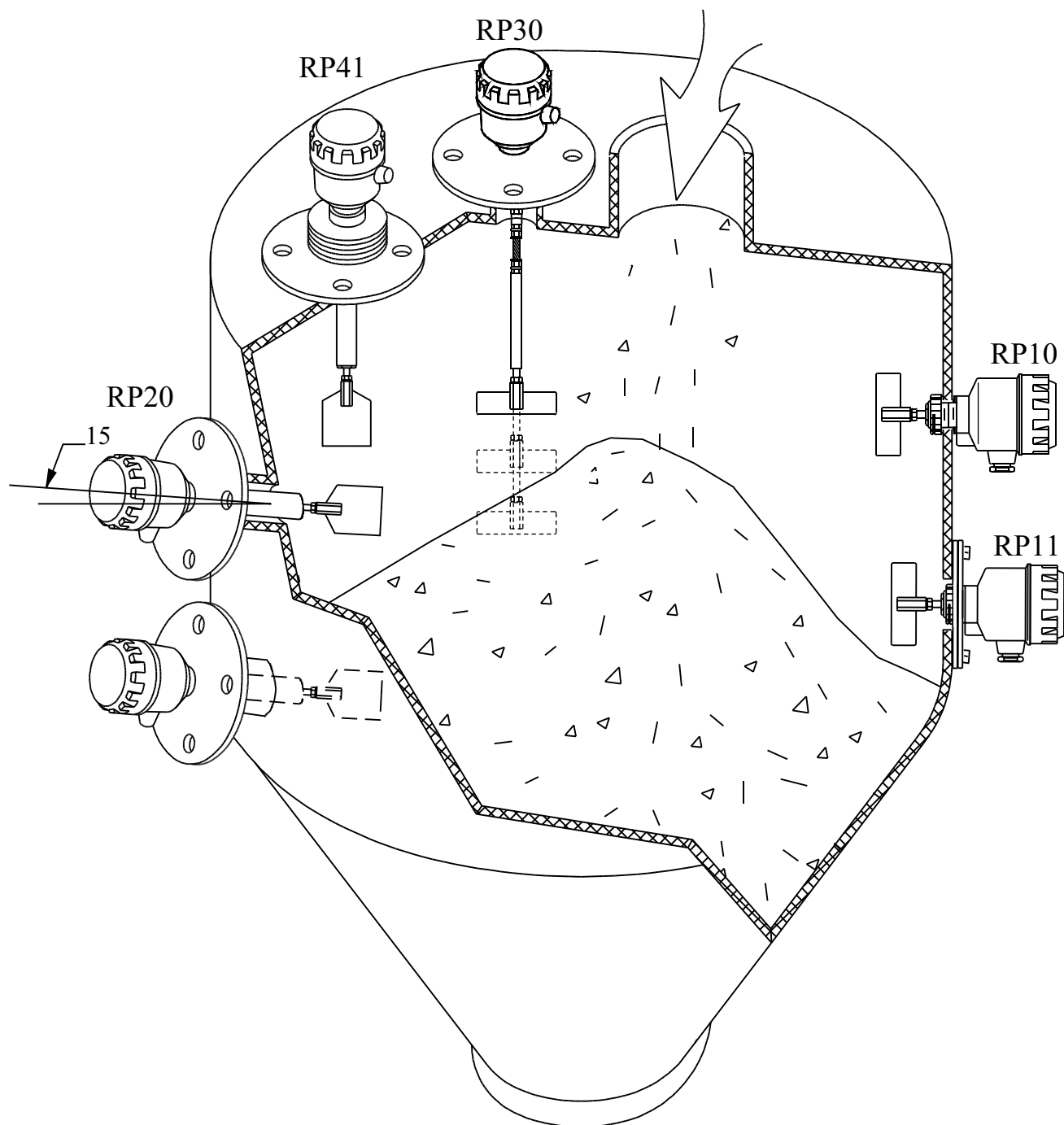
The scimitar paddle penetrate through 3/4"PF inlet directly like illustrated drawing, then screw tightly.



EXAMPLES OF MOUNTING TO INJECTION MOLDING MACHINE



EXAMPLE



INSTALLATION NOTICES

1. Please side mount the sensor by inclined 15 ~20 to decrease the material inflowing impact.
2. Please select RP40 family items on tank internal operating temperature more than 60 C.
3. RP10~RP40 on 1"connection pipe inlet, please apply scimitar type to screw directly.
4. RP30, RP46 family items are with flexible and extensible shaft.

ORDER INFORMATION

RP

Model

- | | |
|-----------------------------------|---------------------------|
| 10 : Standard type | 60 : Cable wire type |
| 20 : Shaft protective tube type | 70 : Explosion Proof type |
| 30 : Shaft length adjustable type | 80 : Mini type |
| 40 : Hi-temp type | |

Voltage

A : 110V B : 220V C : 240VAC D : 24VAC 50/60HZ

Mounting

Size for flange or screw	
C: 3/4"	I: 4"
D: 1"	J: 5"
E: 1-1/2"	K: 6"
F: 2"	S: Others
G: 2-1/2"	3: 1-1/4"
H: 3"	

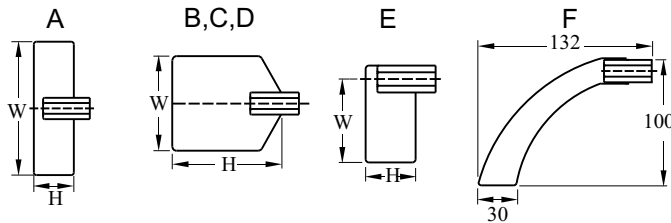
Pressure range or other
M: 5kg/cm ²
N: 10kg/cm ²
O: 150 Lbs
P: 300 Lbs
Q: PT
R: PF
T: BSP
S: Others

* RP10~RP70 series: The size of connecting screw is 1".

Paddle Shapes

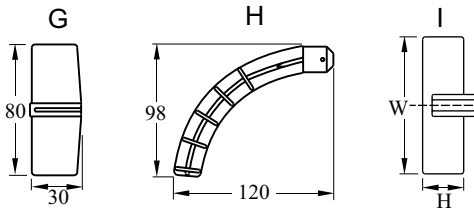
RP10~RP70

- A : 100x30 (WxH)
- B : 65x80 (WxH)
- C : 65x120 (WxH)
- D : 80x80 (WxH)
- E : 50x30 (WxH)
- F : Scimitar



RP80 (Mini paddle type)

- G : Cross type paddle
- H : Scimitar type paddle
- I : 100x30 (WxH)



Length (mm)

RP10~70 L: The distance from flange to paddle.

RP80 L: Length of cable.

The total length of item will be allowed a tolerance to 6mm.

* Order Notice

1. Please make sure the Voltage 24VAC, 110VAC, 220VAC or 240VAC, 50/60 Hz.
2. Please make sure the side or top mounting.
3. Please make sure the material specific gravity (S.G.) value.
4. Please make sure whether any bridge block or vibrating motor installed onto the tank wall.
Please try to apply our item ME40 capacity sensor.
5. Please make sure the rotary paddle size is available to enter into the flange inlet.