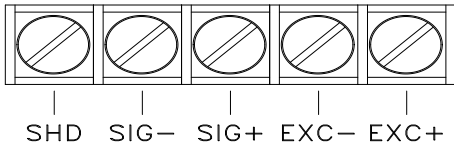
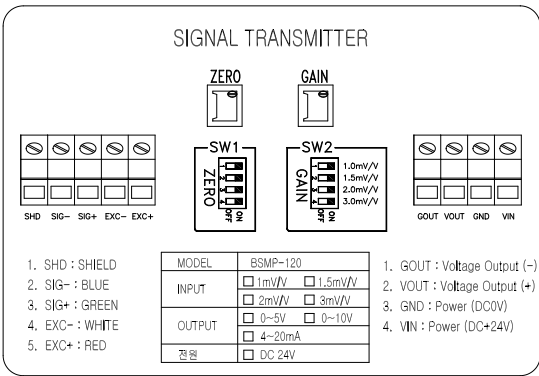


# SIGNAL TRANSMITTER BSMP-120 MANUAL

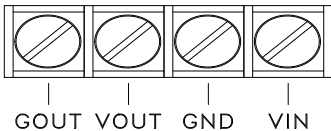
## 1. Specification & Features

- ❖ Input Signal : 0.5 ~ 3.0mV/V DC
- ❖ Sensor Excitation Transducer : DC 10V
- ❖ Analog Output : DC 0 ~10V, 4 ~ 20mA
- ❖ Accuracy : ±0.2%
- ❖ Temp. Coefficient : ±0.05% /°C
- ❖ Operating Temperature : -10 ~+50°C
- ❖ Power : DC 24V
- ❖ Case Material & Protection : ABS, IP66

## 2. Connection Diagram

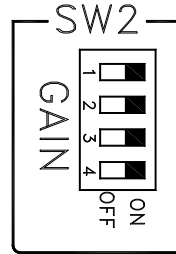


- SHD : SHIELD  
 SIG - : Load Cell signal (-)  
 SIG + : Load Cell signal (+)  
 EXC - : Load Cell Excitation voltage (-)  
 EXC + : Load Cell Excitation voltage (+)



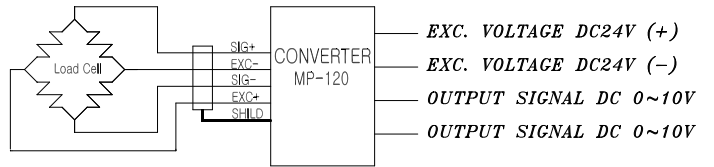
- GOUT : Voltage Output (-)  
 VOUT : Voltage Output (+)  
 GND : DC24V Ground  
 VIN : DC24V Input

## 3. Output Selection



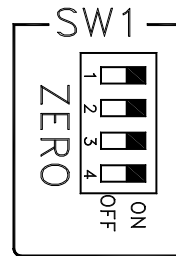
Set-up	Dip Switch ON
1.0 mV/V	1
1.5 mV/V	2
2.0 mV/V	3
3.0 mV/V	4

## 4. Installation Diagram



## 5. Calibration

### 1) Zero Adjustment



Select the output format required and set the correct setting of DIP switch SW2 and SW1.

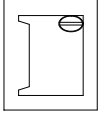
#### Example :

Load cell sensitivity around 2mV/V  
 DIP switch and switch setting are as follows :

SW1	Set-up	Dip Switch ON
	? mV/V	1

SW2	Set-up	Dip Switch ON
	2.0 mV/V	3

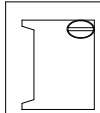
## ZERO



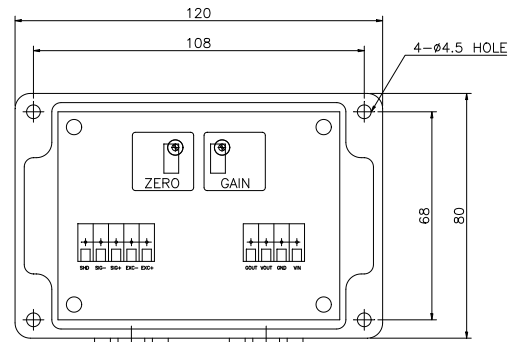
Remove all the load on the weighing platform.  
Adjust the coarse and ZERO variable resistor to get output of 0V according to the kind of output format selected.  
In Example, set to 0V

## 2) Span Adjustment

## GAIN



Put the standard weight onto the platform.  
Adjust the coarse and GAIN variable resistor to get output of 10V according to the kind of output format selected.  
In Example, set to 10V

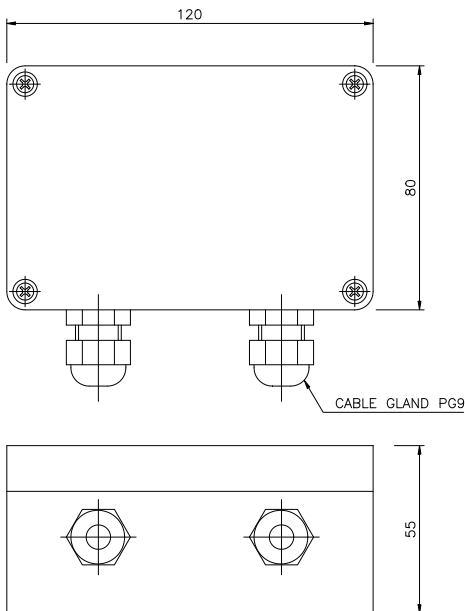


LOADCELL

OUTPUT &  
POWER

- |                 |                              |
|-----------------|------------------------------|
| 1. SHIELD       | 1. GOUT : Voltage Output (-) |
| 2. SIG- (BLUE)  | 2. VOUT : Voltage Output (+) |
| 3. SIG+ (GREEN) | 3. GND : Power (DC0V)        |
| 4. EXC- (WHITE) | 4. VIN : Power (DC24V)       |
| 5. EXC+ (RED)   |                              |

## 6. OUTLINE DIMENSIONS



## 7. After Service and Technical Service

Address : 148, SANGDAEWON-DONG, JUNGWON-KU, SEONGNAM-CITY,  
Gyeonggi-do, KOREA

TEL : 82-31-742-6661

FAX : 82-31-742-66614

WEB : [www.bongshin.com](http://www.bongshin.com)

E-Mail : [loadcell@bongshin.com](mailto:loadcell@bongshin.com)



3) Connector diagram

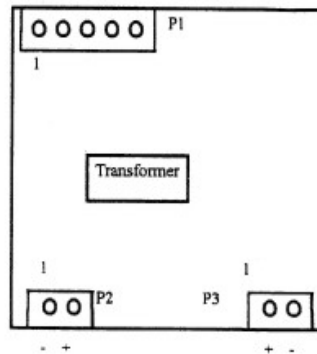


Figure 1

- P1: Load cell connector
- P2: Power connector
- P3: Output connector
  
- P1: 1 – Excitation voltage –  
 2 – Excitation voltage +  
 3 – Shield  
 4 – Signal-  
 5 – Signal+
  
- P2: 1 – DC24V ground or AC24V pin1  
 2 – DC24V input or AC24V pin2
  
- P3: 1 – Current or voltage output+  
 2 – Current or voltage output-

1) Introduction

PT350C is designed using the latest SMT technology and made in Japan. It is compact in size. Various output format is available and user selectable. Two kinds of load cell sensitivity input selection is available. Zero and span calibration is independent to each the other. It is suitable for commercial and industrial applications ranging from platform weighing to tank, hopper and crane weighing etc.

2) Technical data

- Main supply : 24VDC or AC  $\pm 10\%$
- Power consumption : 5.3VA (max.)
- Operating temperature :  $-5^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- Relative humidity : 90% non-condensing
- Load cell type : All strain gauge type
- Load cell supply : 10V DC, 120mA max.
- Input sensitivity : 1.5mV/V or 3.5mV/V user selectable
- Output : 0-10V  
 0-20mA or 4-20mA (user selectable)
- Allowable load resistance : 0-20mA less than  $550\Omega$   
 4-20mA less than  $550\Omega$   
 0-10V more than  $4\text{K}\Omega$
- Non-linearity : Within 0.05% of F.S.
- Zero adjustment range : 0 to 80%  
 Coarse and fine tune by using variable resistor. Maximum input is 20mV
- Span adjustment range : 100 to 20%  
 Coarse and fine tune by using variable resistor
- Dimension : 75mm(W)  $\times$  75mm(L)  $\times$  55mm(H)
- Weight : 150g approximately

4) Output selection

i) Output format selection

Output format	SW3							
	1	2	3	4	5	6	7	8
DC 0-20mA	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
DC 4-20mA	ON	OFF	ON	OFF	ON	ON	OFF	OFF
DC 0-10V	OFF	ON	OFF	OFF	OFF	OFF	ON	ON

OPEN = open circuit  
 CLOSE = short circuit

ii) Sensitivity selection

Sensitivity	SW1
1.5mV/V	DOWNWARD
3.5mV/V	UPWARD



iii) Remove case

DIP switch SW3 is located on the top of the P.C.B. Remove the transparent cover of PT350C to access the DIP switch SW3.

Switch SW1 is located on the bottom side of the P.C.B. The lower part of the case must be removed to access the switch. Use a screw driver to move the locks of the lower case toward inside. Pull the upper and lower case toward the opposite direction.

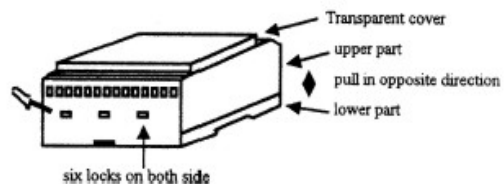


Figure 2

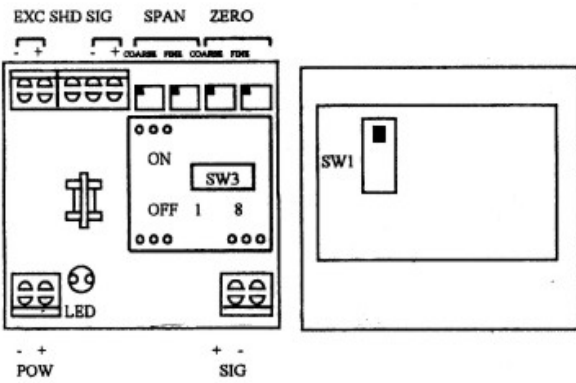


Figure 3 (Top view)

Figure 4 (Bottom view)

ii) Span adjustment

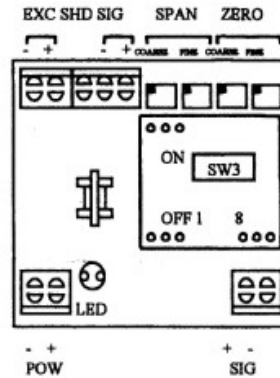


Figure 7

5) Installation diagram

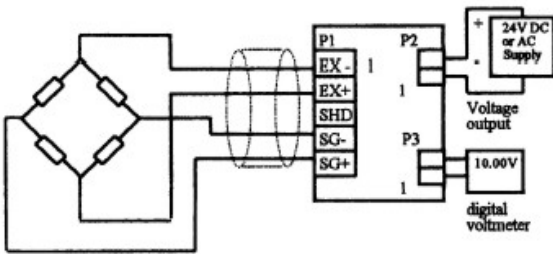


Figure 5

Put the standard weight onto the platform  
Adjust the coarse and fine variable resistor to get output of 10V or 20mA according to the kind of output format selected.

In example 1, set to 20mA

6) Calibration

i) Zero adjustment

Select the output format required and set the correct setting of DIP switch SW3 and switch SW1.

Example 1: Output - 4~20mA

Load cell sensitivity around 3mV/V

DIP switch and switch setting are as follows:

SW3	1	2	3	4	5	6	7	8
	ON	OFF	ON	OFF	ON	ON	OFF	OFF

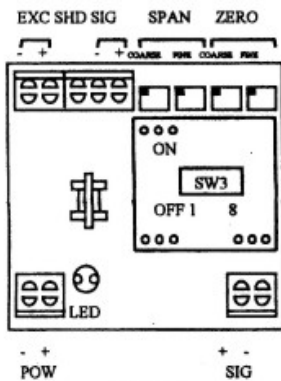
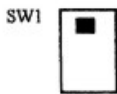


Figure 6

Remove all the load on the weighing platform.  
Adjust the coarse and fine variable resistor to get output of 0V, 0mA or 4mA according to the kind of output format selected.  
In example 1, set to 4mA

7) Dimension

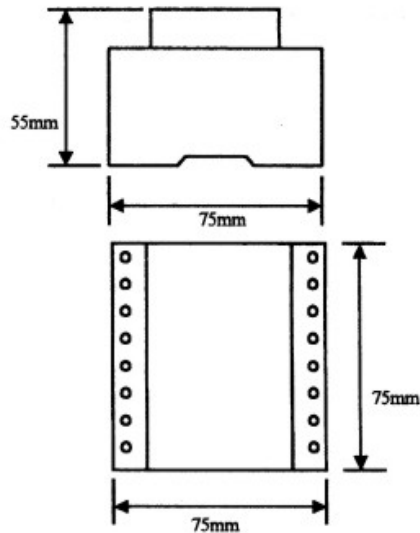


Figure 8

**BONGSHIN LOAD CELL CO., LTD**

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