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Dew-point instrument

TMM-100

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SPECIFICATIONS

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Specifications are subject to change without prior notice.

Rev.	DATE	Revision history			ChangeNo.	Rep.
Create	August 31, 2017	<b>PANTOS CO., LTD.</b>				
Revision						
Text	3 pages	Writing	Check	Approve	Document number	Rev.
Figure	2 sheets	Kumeki	Miura	Miura	TMM100-00-0001	
Cover	1 sheet					

# 1. Outline

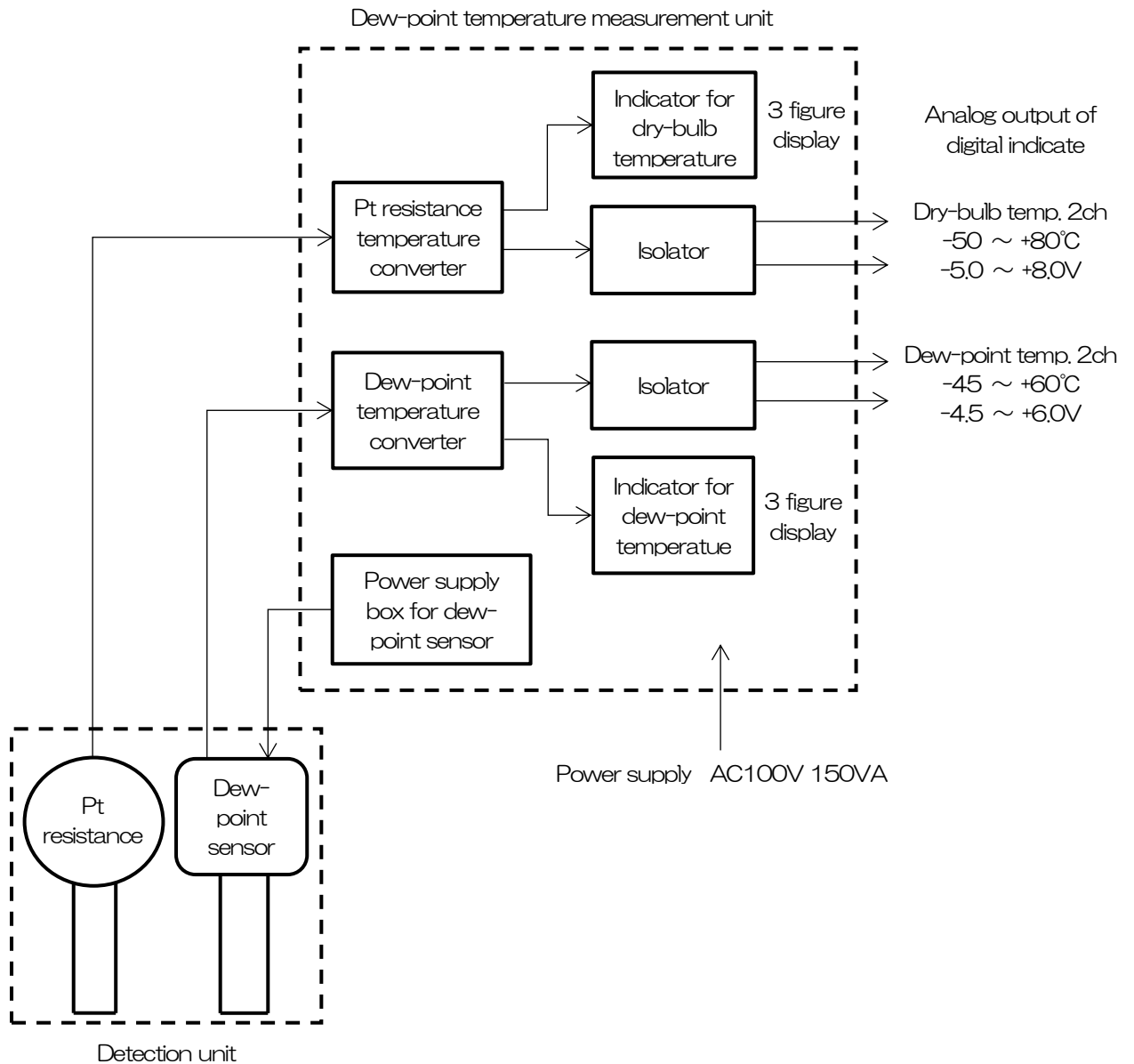
## 1.1 Outline of equipment

This equipment is the dew-point instrument which measures the dew-point temperature and dry-bulb temperature, and consists of the dew-point detection unit and the dew-point temperature measurement unit.

The dew-point temperature measurement unit can digitally display the dew-point temperature and dry-bulb temperature detected by the sensor and output the value as an analog voltage signal.

Since the detection unit and the dew-point measurement unit can be installed separately, it is suitable for applications such as checking the condition of another room where the detection unit is installed.

## 1.2 Composition figure



## 1.3 External appearance

### a) Detection unit

Wall attachment type      240(W) × 320(H) × 180(D) Max

### b) Dew-point temperature measurement unit

JIS 19 inch Cabinet rack installed type

480(W) × 199(H) × 505(D) Max

## 2. Specifications

### 2.1 Detection unit

#### a) Dew-point temperature sensor

- Product by YOKOGAWA Wall attachment type for room  
Thermal average temperature measurement method by saturated vapor pressure of lithium chloride
- Measurement range -45 ~ +60°C
- Heater Gold-plating wire heater
- Resistance temperature sensor Nickel wire
- Dry and wet part application solution Lithium chloride (One bottle included)
- Wind velocity Less than 0.25m/sec
- Heater power supply 25V AC

#### b) Dry-bulb temperature sensor

- Product by OKAZAKI Sheath with protection tube, Wall attachment type
- Detection element Resistance temperature sensor JIS Pt100
- Operating temperature range -50 ~ +80°C

### 2.2 Dew-point temperature measurement unit

#### a) General specifications

- Power supply AC100V ±10% 50/60Hz Approx.150VA
- Environmental conditions 0 ~ +40°C 20~80%RH (No dew condensation)

#### b) Display Dew-point temperature/Dry-bulb temperature

- Display the amount of physics (°C) Manual setting scaling method
- 3 figure display Dew-point temperature -45.0 ~ +60.0°C  
Dry-bulb temperature -50.0 ~ +80.0°C
- Display element Character height 14mm RED LCD
- Comprehensive accuracy (The accuracy of the sensor is not included)
 

Dew-point temperature	Accuracy rating	±0.4°C
	Temperature drift	±0.2°C/10°C
Dry-bulb temperature	Accuracy rating	±0.3°C
	Temperature drift	±0.2°C/10°C

#### c) Analog output Dew-point temperature/Dry-bulb temperature (Room temperature)

- Number of outputs  
There are two outputs each for Dew-point temperature and Dry-bulb temperature, totaling 4 outputs  
Each output is an isolated output  
(Between each of input / output / power supply / enclosure)
 

Insulation resistance	100MΩ
Electric strength	1500V AC/1min
- Output voltage
 

Dew-point temperature	-4.5 ~ +6.0V / -45.0 ~ +60.0°C
Dry-bulb temperature	-5.0 ~ +8.0V / -50.0 ~ +80.0°C
- Permission load resistance More than 10kΩ
- Comprehensive accuracy (The accuracy of the sensor is not included)
 

Dew-point temperature	Accuracy rating	±0.6% F.S.
	Temperature drift	±0.5%/10°C
Dry-bulb temperature (Room temperature)	Accuracy rating	±0.35% F.S.
	Temperature drift	±0.5%/10°C

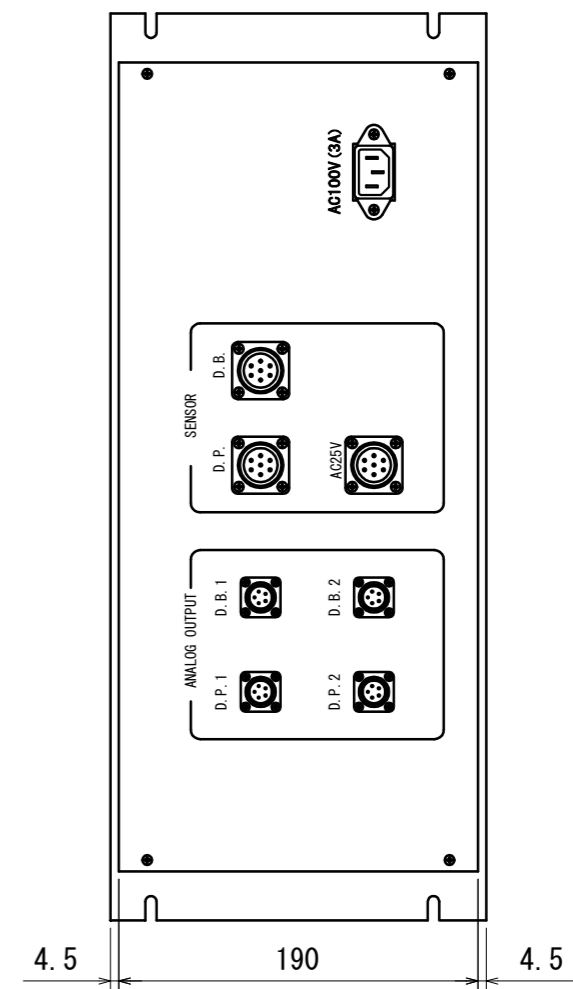
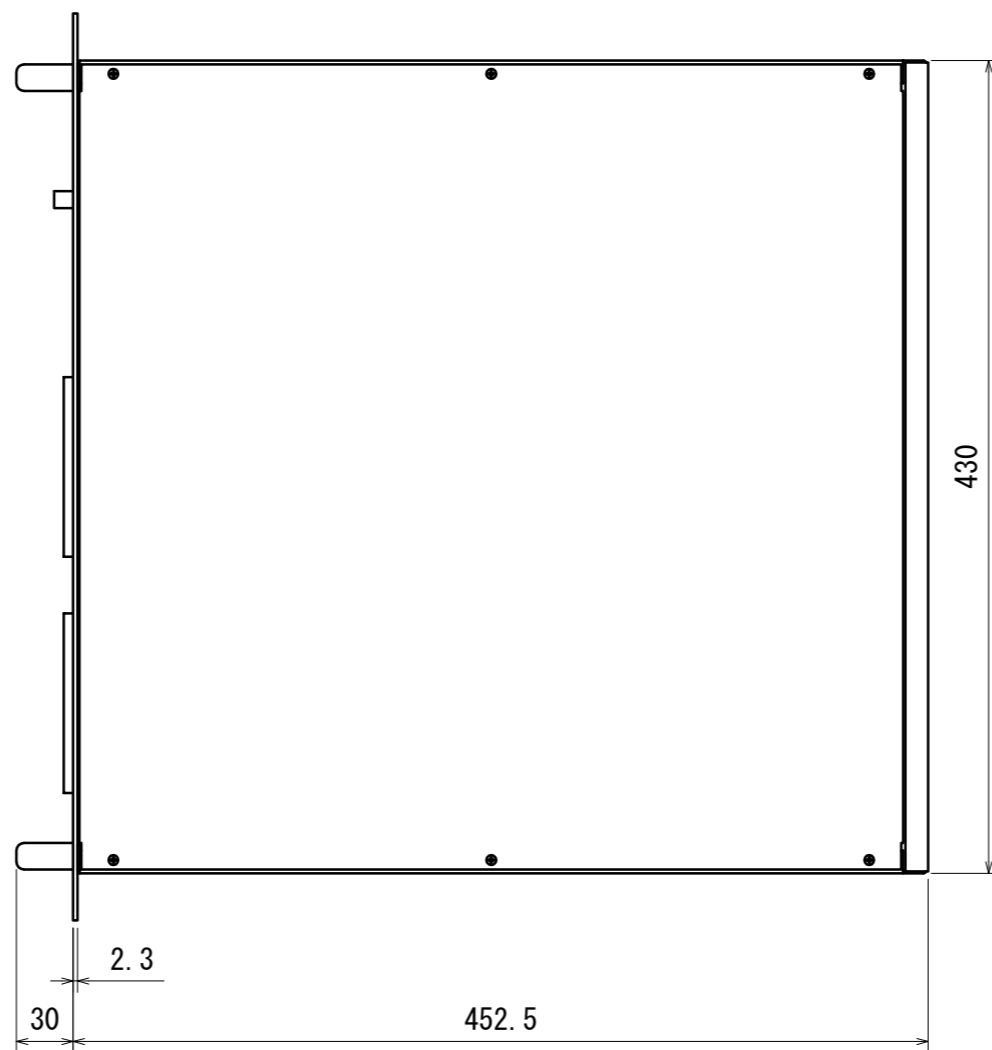
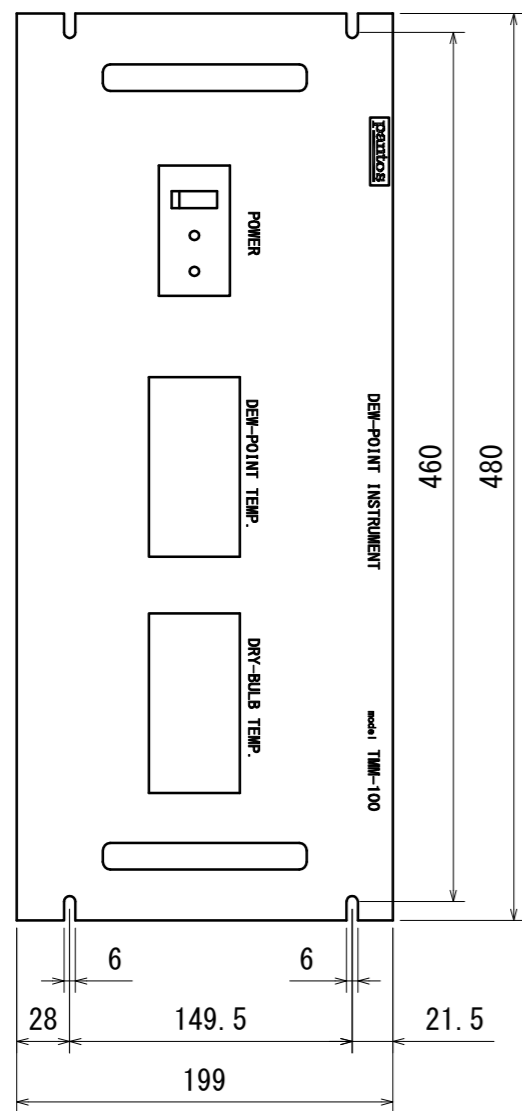
d) Input and output connector

- Power supply input : 3P inlet Connector
- Sensor input : Product by JAE
  - Dew-point signal input MS3102A 14S-6S Receptacle
  - Dew-point power supply output MS3102A 14S-7S Receptacle
  - Dry-bulb signal input MS3102A 14S-2S Receptacle
- Analog output : Product by TAJIMI 2 outputs each (2 connectors)
  - Dew-point signal output PRC03-21A10-4F Receptacle
  - Dry-bulb signal output PRC03-21A10-3AF Receptacle

- e) Power supply switch : Short circuit breaker With a test button (gray button)
- Rated current 20A
  - Short sensitivity current 30mA

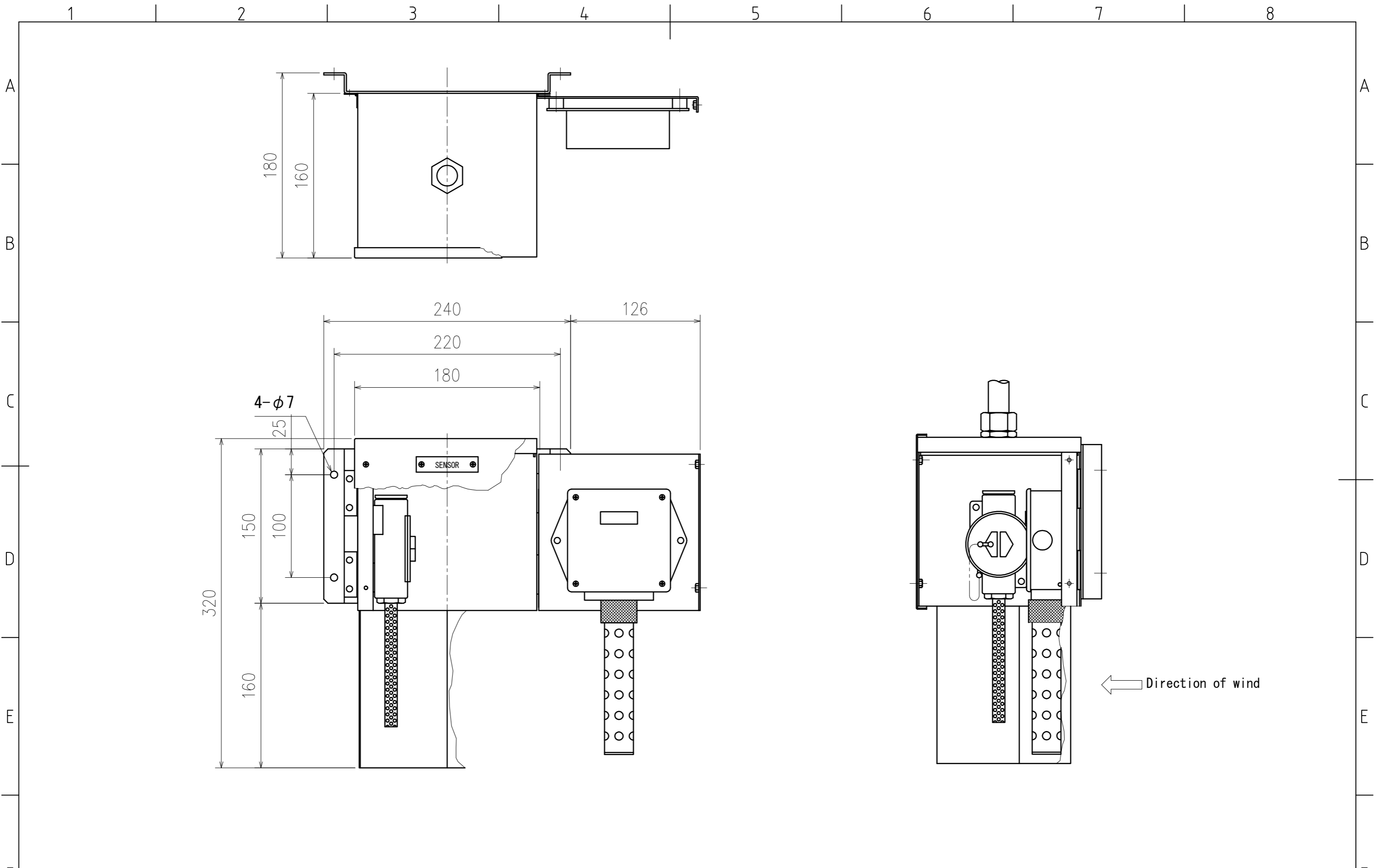
2.3 Test room and Measurement room cable

- Electric wire 1.25sq Vinyl cab tire electric wire 3 set
- Cable length Production according to installation environment.



JIS 19 inch cabinet rack mount type

改訂 REV				担当 SIGN	尺度 SCALE	作成 DATE	3RD ANGLE PROJ DIM in mm	製品名称 NAME	図面名称 TITLE
改訂 REV				担当 SIGN		'09/09/10		DEW-POINT INSTRUMENT	Appearance fig. of Meas. unit part
改訂 REV				担当 SIGN	設計 DSG	製図 DWG	検図 CHK	承認 APP	図面番号 DWG No.
改訂 REV				担当 SIGN	MIURA	KOBA.	MIURA	TAKUMI	TMM100-01-0011
改訂 REV				担当 SIGN				PANTOS CO., LTD	改訂 REV



REVISION				SIGN		SCALE	CREATED DATE	3RD ANGLE PROJ DIM in mm	PRODUCT NAME	TITLE
REVISION				SIGN		0.3:1	'07/09/20		DEW-POINT INSTRUMENT	Appearance figure of Sensor part
REVISION				SIGN		DESIGN	DRAWING	CHECK	APPROVAL	DWG No.
REVISION				SIGN		MIURA	KOBAYASHI	MIURA	TAKUMI	REV
REVISION	A	'17/08/23	Changed so that the sensor mounting part opens to the left and right.	SIGN	KUMEKI					TMM100-01-0012
									<b>PANTOS CO., LTD.</b>	A