

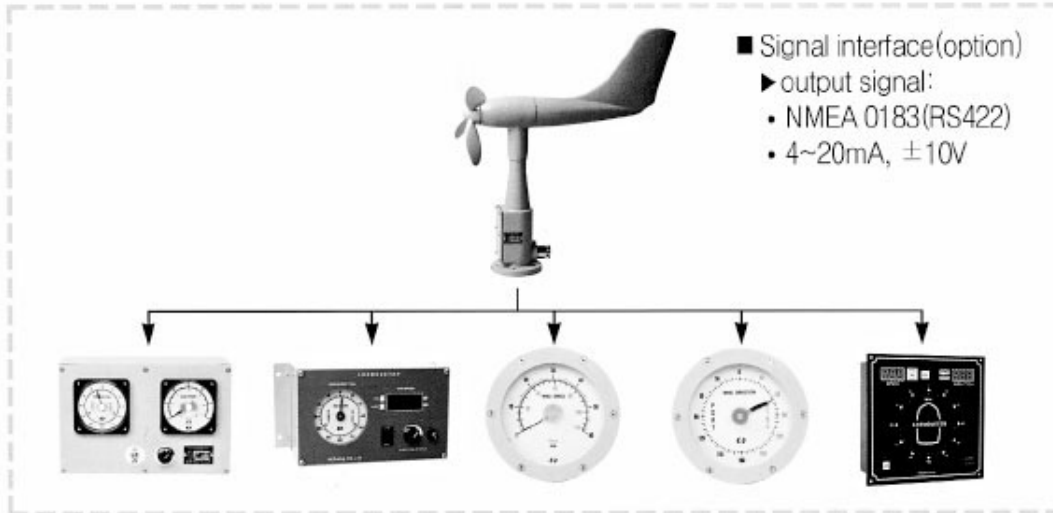
The logo features a stylized yellow 'H' inside a circular shape, with a blue shadow effect.

# HERIANA



HERIANA CO.,LTD.  
(주)해리아나

## ANEMOMETER & ANEMOSCOPE



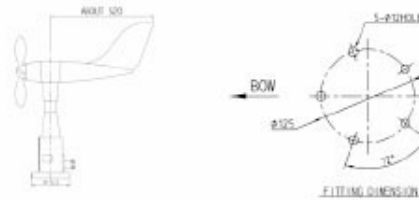
- Signal interface(option)
  - ▶ output signal:
    - NMEA 0183(RS422)
    - 4~20mA,  $\pm 10V$

### TRANSMITTER



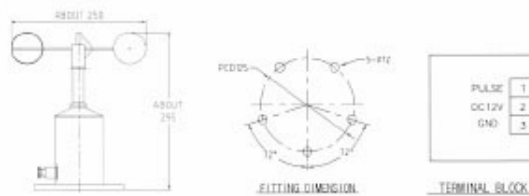
#### AT-200

- Start of wind direction axis ▶  
Wind speed more than 1m/s at 90°
- Wind direction ▶  
Synchro motor type AC 220V/50Hz or 60Hz
- Wind speed ▶  
starting wind speed - 1m/s  
maximum permissible wind speed - 60m/s

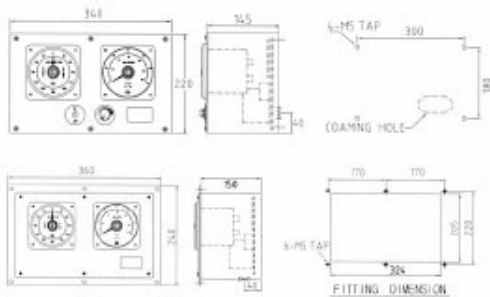


#### AT-100

- Start of wind direction axis ▶  
Wind speed more than 1m/s at 90°
- Wind speed ▶  
starting wind speed : 1m/s  
maximum permissible wind speed : 60m/s



## INDICATOR



### AC-W / F

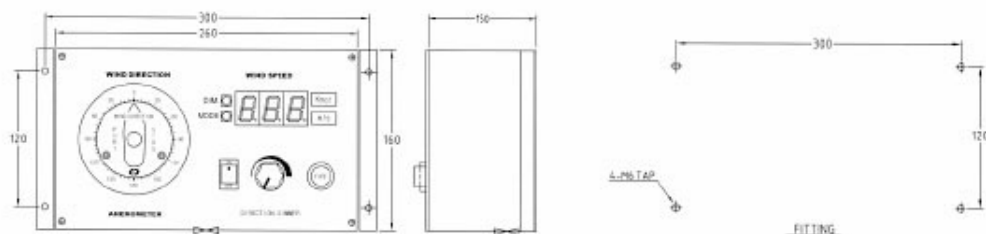
- Wind direction▶  
Synchro motor type  
AC 220V/ 50Hz or 60Hz  
PORT : 0-180°,STBD : 0-180°
- Wind speed▶  
Moving-coil voltmeter type  
0-60m/s

MODEL	DESCRIPTION	WEIGHT
AC-W10	INCLUDED DIMMER & POWER S/W	9.0Kg
AC-W11	SEPARATED DIMMER & POWER S/W	9.0Kg
AC-F10	INCLUDED DIMMER & POWER S/W	9.0Kg
AC-F11	SEPARATED DIMMER & POWER S/W	9.0Kg



### AC-DW10

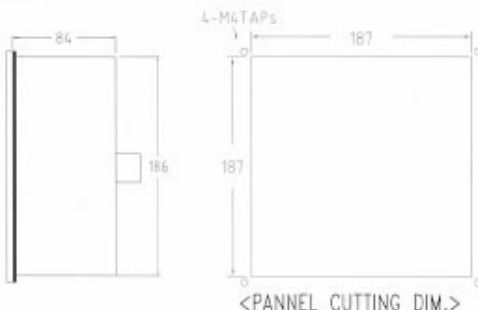
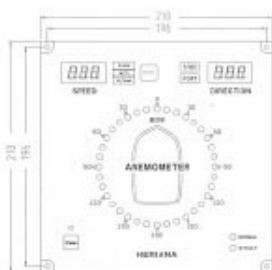
- Wind direction▶  
Synchro motor type  
AC 220V/ 50Hz or 60Hz  
PORT : 0-180°,STBD : 0-180°
- Wind speed▶  
Digital type(3-digit)  
0-60m/s  
0-115Knot





### AC-D10

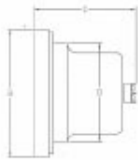
- Wind direction▶  
Digital type(3-digit)  
Analogue : PORT : 0-180°  
STBD : 0-180°
- Wind speed▶  
Digital type(3-digit)  
0-60m/s  
0-115Knot



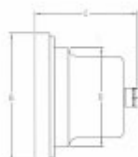
### AS-F, AD-F

Wind direction(AD-F),Wind speed(AS-F)

- Wind direction▶  
Synchro motor type  
AC 220V/ 50Hz or 60Hz  
PORT : 0-180°,STBD : 0-180°
- Wind speed▶  
moving-coil voltmeter type  
0-60m/s

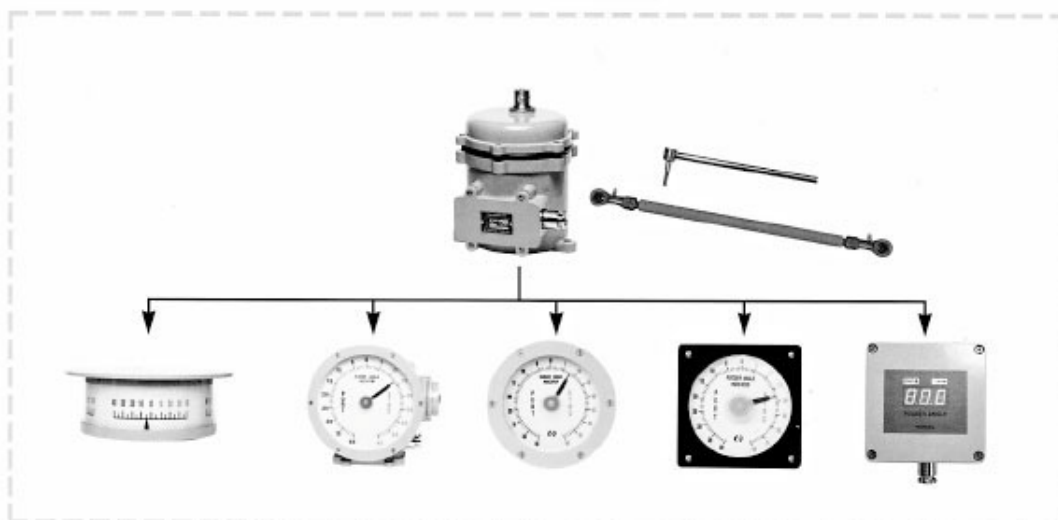


MODEL	DIMENSION						WEIGHT
	A	B	C	D	E	F	
50R	Ø150	200	155	Ø166	Ø168	Ø182	3.5Kg
200R	Ø200	250	158	Ø210	Ø212	Ø232	4.9Kg



MODEL	DIMENSION						WEIGHT
	A	B	C	D	E	F	
50R	Ø150	200	155	Ø166	Ø168	Ø182	3.5Kg
200R	Ø200	250	158	Ø210	Ø212	Ø232	4.9Kg

## RUDDER ANGLE INDICATOR



### ■ GENERAL SPECIFICATION

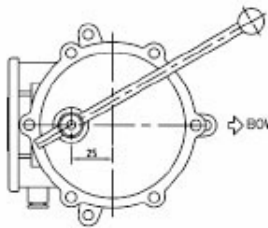
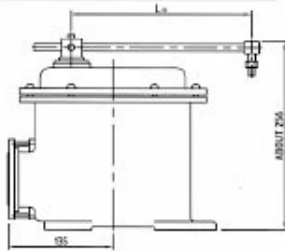
	STANDARD	OPTION
POWER	220V AC 60Hz ±10%	ACCORDING TO ORDER
ACCURACY	MAX. 1°	
CONNECTION METHOD	2mm Cu. TERMINAL	
AMBIENT TEMP.	(-25° C) ~ (+55° C)	TEST REPORT NO : 2002361230
HUMIDITY	MAX. 95% RELATIVE	
VIBRATION TEST	ACCORDING TO CE APPROVAL	TEST REPORT NO : 2002361230
EMI	ACCORDING TO CE APPROVAL	TEST REPORT NO : 2002361230
SCALE ANGLE (one side of Port / starboard)	40° (DIAL SPREAD 160°)	50° (DIAL SPREAD 150°) 70° (DIAL SPREAD 140°)
ILLUMONATION	LED ILLUMINATION WITH BUILT-IN DIMMER OR SEPARATED DIMMER	
SCALE BASE FIGURES DIVISION LINES	BLACK, RED, GREEN	
PROTECTION GRADE SD-200R RT-472, 3C-200R	IP 56 IP 22	TEST REPORT NO : 2002361230
POWER CONSUMPTION 3C-200 200R RT472	MAX. 20W MAX. 3W MAX. 5W	
SIGNAL INTERFACE		NMEA 0183(RS422) 4~20mA, ±10V

**TRANSMITTER**



**RT-472, RT-453**

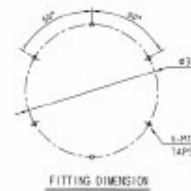
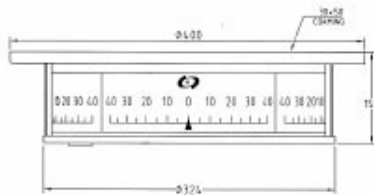
MODEL	CABLE GLAND	RATIO TX : RX	WEIGHT
RT 472	20b	1 : 1	8,6Kg
RT 472		1 : 2	
RT 472		1 : 4	
RT 453	20b	1 : 9	10,6Kg



**INDICATOR**

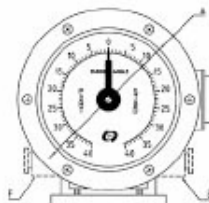


**3C-200R**



**SE/SD/SL-150, 200**

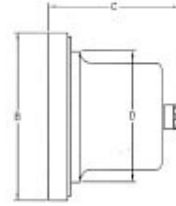
MODEL	DIMENSION						WEIGHT
	A	B	C	D	E	F	
SE 150							4,2Kg
SD 150	Ø150	Ø180	Ø200	145	20b	20b	4,8Kg
SL 150							4,2Kg
SE 200							5,5Kg
SD 200	Ø200	Ø220	Ø250	145	20c	20c	6,0Kg
SL 200							5,5Kg





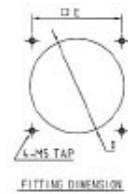
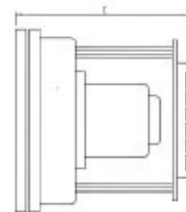
## FE/FL-150, 200

MODEL	DIMENSION						WEIGHT
	A	B	C	D	E	F	
FE 150	Ø150	200	165	Ø168	Ø168	Ø182	3,5kg
FL 150	Ø150	200	165	Ø168	Ø168	Ø182	3,5kg
FE 200	Ø200	250	168	Ø210	Ø212	Ø232	4,5kg
FL 200	Ø200	250	168	Ø210	Ø212	Ø232	4,5kg

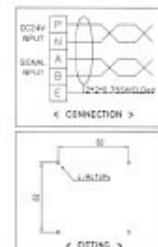
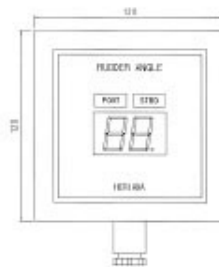


## FE/FL-130

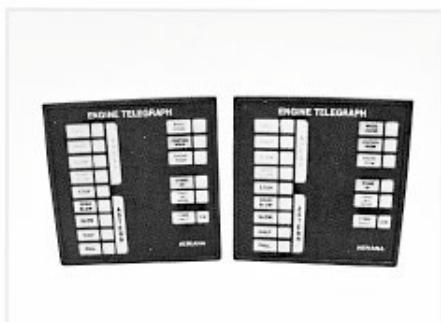
MODEL	DIMENSION					WEIGHT
	A	B	C	D	E	
FE 130	Ø130	142	148	Ø136	124	1,9kg
FL 130	Ø130	142	148	Ø136	124	2,0kg



## WD-130

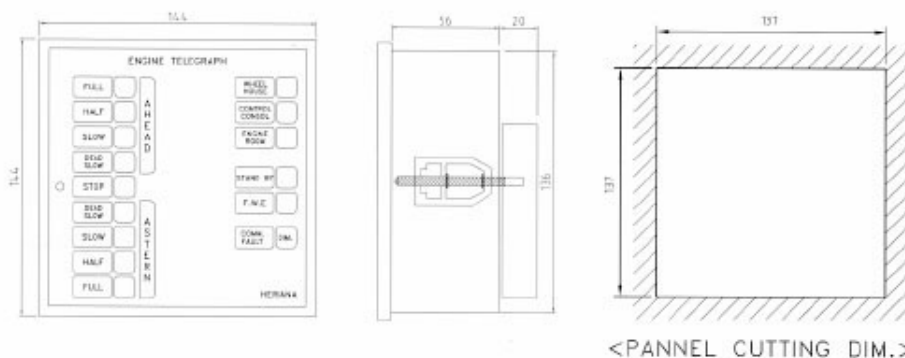


## ENGINE TELEGRAPH



### FLUSH TYPE

- ORDER TYPE ▶ ONE-WAY TYPE
- ORDER POINT ▶
  - AHEAD(FULL, HALF, SLOW, DEAD SLOW)
  - ASTERN(FULL, HALF, SLOW, DEAD SLOW)
  - STAND-BY, STOP, FINISH ENGINE
- COMMUNICATION ▶ RS 485
- POWER ▶ DC24V
- SIGNAL INTERFACE(OPTION)
  - ▶OUTPUT SIGNAL : NMEA 0183(RS422)

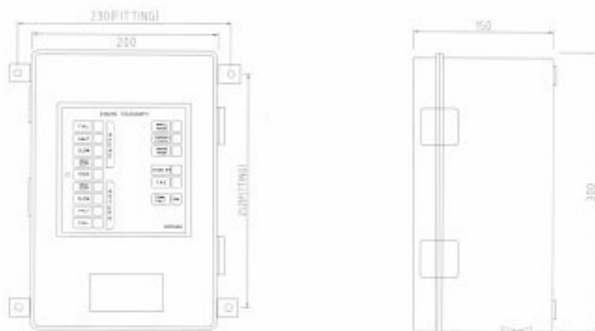


<PANNEL CUTTING DIM.>



### SURFACE TYPE

- ORDER TYPE ▶ ONE-WAY TYPE
- ORDER POINT ▶
  - AHEAD(FULL, HALF, SLOW, DEAD SLOW)
  - ASTERN(FULL, HALF, SLOW, DEAD SLOW)
  - STAND-BY, STOP, FINISH ENGINE
- COMMUNICATION ▶ RS 485
- POWER ▶ DC24V
- SIGNAL INTERFACE(OPTION)
  - ▶OUTPUT SIGNAL : NMEA 0183(RS422)





## TEMPERATURE TRANSMITTER

### Resistance Bulb Type

Resistance bulb are used to measure temperature in the range -200 to +600°C.

The measuring principles is based on the change in resistance of metals as a function of temperature. Normally, standardized platinum resistors with a resistance of 100Ω at 0°C are used.

2-wire connection is used. Take into account that the resistance of the measuring lead between the sensor and the display unit is included in the measurement.

therefor, when measure temperature, it is more than detailed that use 3-wire or 4-wire connection

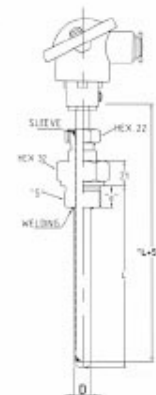
### Tolerance of Resistance Bulb

Operating Temperature	Class	Tolerance(°C)
-200~600	A	±(0.15+0.002  t )
	B	±(0.3+0.005  t )



### HR101

- FOR MEASURING AND REGULATING TEMPERATURE AT ANY POINT
- GASEOUS OR LIQUID MEDIA
- MEASURING RANGE : 0~200°C
- PT 100 RESISTANCE ELEMENT
- APPROVALS : LR, GL, DNV, ABS



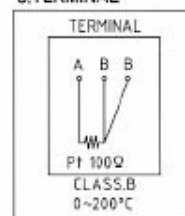
#### 1.STANDARD LENGTH

EXECUTION-NO	L(mm)	ØD	"E"	TEMP.RANGE
L80	L=80	12.7	20	0~200 °C
L100	L=100			
L120	L=120			
L150	L=150	13.8		
L180	L=180			
L200	L=200			
L250	L=250			

#### 2.FITTING THREAD(S)

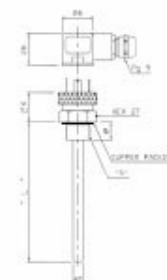
EXECUTION-NO	S
1	PF3/4
2	PF1/2
3	M33×2
4	M24×2
5	M18×1.5

#### 3.TERMINAL



### HR101-P

- FOR MEASURING AND REGULATING TEMPERATURE AT ANG POINT
- GASEOUS OR LIQUID MEDIA
- MEASURING RANGE : 0~200°C
- PT 100 RESISTANCE ELEMENT
- APPROVALS : LR, GL, DNV, ABS



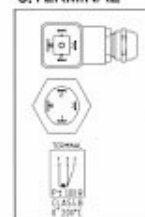
#### 1.STANDARD LENGTH

EXECUTION-NO	L(mm)	ØD	"E"	TEMP.RANGE
L80	L=80	12.7	20	0~200 °C
L100	L=100			
L120	L=120			
L150	L=150	13.8		
L180	L=180			
L200	L=200			
L250	L=250			

#### 2.FITTING THREAD(S)

EXECUTION-NO	S
1	PF3/4
2	PF1/2
3	M33×2
4	M24×2
5	M18×1.5

#### 3.TERMINAL

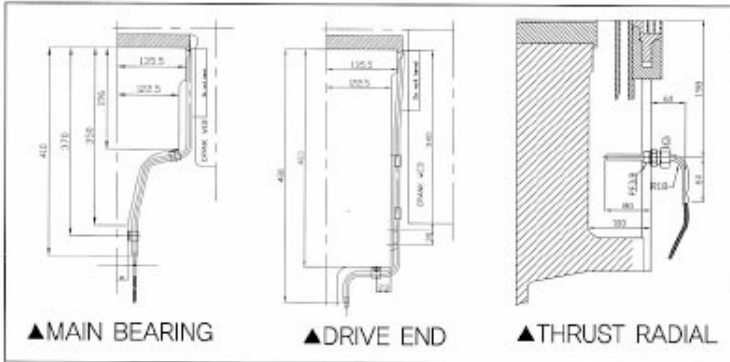




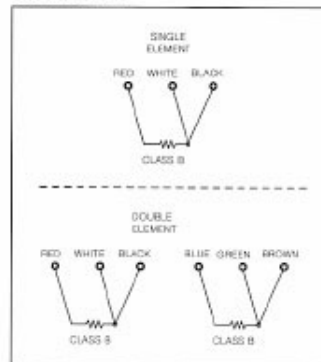
### HC301-M

- USE FOR MAIN BEARING
- MATERIAL SENSOR PIPE: SUS 304/316
- PROTECTION GRADE : IP56
- TEMP RANGE : -50~150°C
- ENGINE TYPE : 50MC, 60MC, 70MC, 80MC, 92MC, 98MC

#### INSTALLATION



#### CONNECTION



### HC301-I/T/P

- USE FOR INTER SHAFF BEARING, THRUST PAD, PISTON COOLING OIL
- MEASURING RANGE : 0~150°C
- PT 100 RESISTANCE ELEMENT
- APPROVALS : LR, GL, DNV. ABS

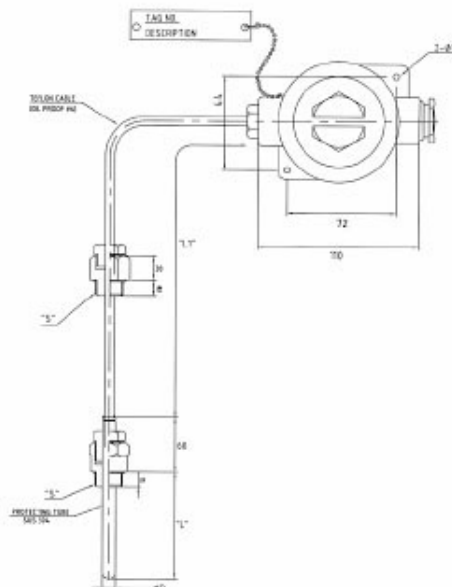
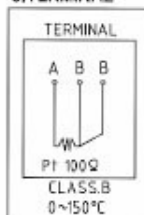
#### 1. STANDARD LENGTH

EXECUTION-NO	L(mm)	ØD	"e"	TEMP. RANGE
L80	L=80	10	20	0-150 °C
L100	L=100			
L120	L=120			
L150	L=150			
L180	L=180			
L200	L=200			
L220	L=220			

#### 2. FITTING THREAD(S)

EXECUTION-NO	S
1	PF3/4
2	PF1/2
3	M33×2
4	M24×2
5	M18×1.5

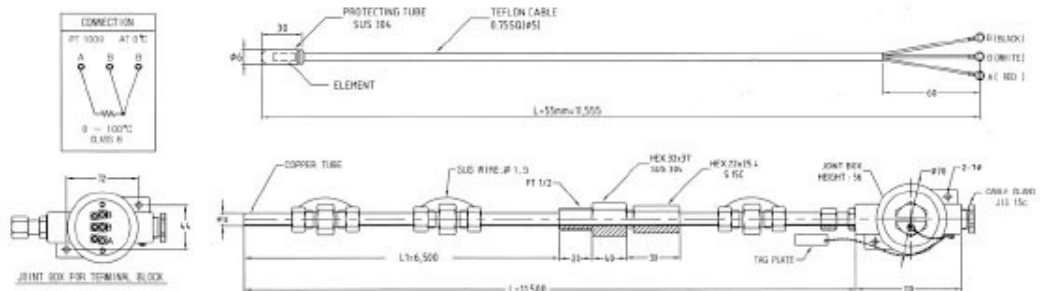
#### 3. TERMINAL





## HC301-S

- USE FOR STERN TUBE SENSOR
- MEASURING RANGE : 0~150°C
- PT 100 RESISTANCE ELEMENT
- APPROVALS : LR, GL, DNV, ABS



## HT201

- USE FOR EHX.GAS OR HIGH TEMPERATURE
- TYPE : K TYPE THERMOCOUPLE
- MEASURING RANGE : 0~600°C
- APPROVALS : LR, GL, DNV, ABS

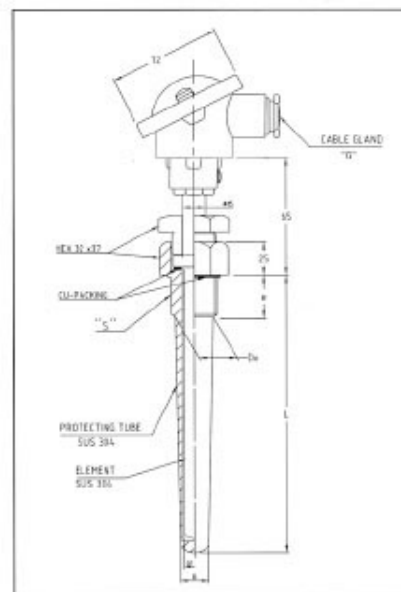
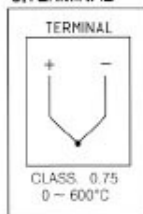
### 1.STANDARD LENGTH

EXECUTION-NO	L(mm)	ØD	"E"	TEMP.RANGE
L80	L=80	17	25	0-600 °C
L100	L=100			
L120	L=120			
L150	L=150			
L180	L=180	23/17		
L200	L=200			
L250	L=250			

### 2.FITTING THREAD(S)

EXECUTION-NO	S
1	PF3/4
2	PF1/2
3	M33×2
4	M24×2
5	M18×1.5

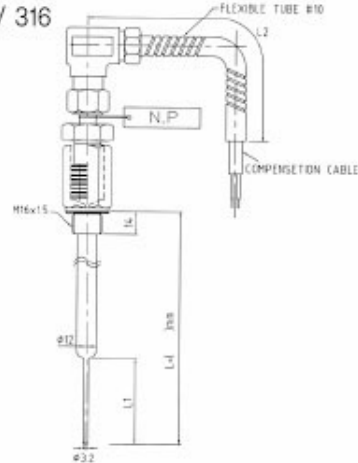
### 3.TERMINAL



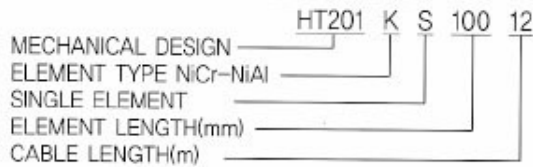


### HT201-K

- USE FOR CYL LINER
- TYPE : THERMOCOUPLE K TYPE
- MEASURING RANGE : 0~600°C
- MATERIAL : SUS 304/ 316

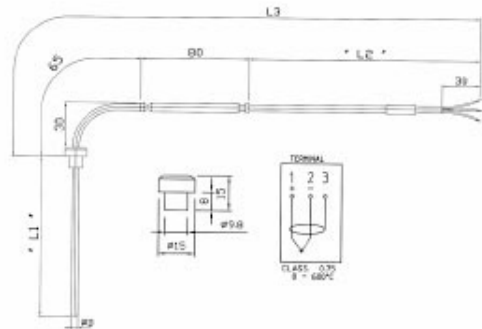


#### ORDERING EXAMPLE



### HT201-K-I

- USE FOR HIGH TEMPERATURE
- TYPE : THERMOCOUPLE K TYPE
- MEASURING RANGE : 0~600°C
- MATERIAL : SUS 304



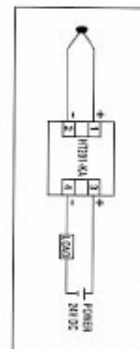
NO 1	STANDARD LENGTH "L1"
08	L=80mm
10	L=100mm
12	L=120mm
15	L=150mm
20	L=200mm
25	L=250mm
30	L=300mm

NO 2	STANDARD LENGTH "L2"
4	L2=4,000mm
5	L2=5,000mm
6	L2=6,000mm
7	L2=7,000mm
8	L2=8,000mm



### HT201-KA

- AMBIENT TEMP : 0~70°C
- CONSUMP CURRENT : 2~20mA
- CIRCUIT CURRENT : 4~20mA
- MAX. LOAD IMPEDANCE : 250Ω
- ACCURACY : ±1.0%
- POWER SOURCE : DC24(+10%, -15%)
- MEASURING RANGE : 0~600°C



CONNECTION ▶

## THERMOMETER



### DB & DR TYPE

- OUTDIA :  $\varnothing 75, \varnothing 100$
- CONSTRUCTION : WEATHER PROOF
- MATERIAL : ALL SUS304
- LENGTH : 80~250mm

#### 3. FITTING THRED

EXECUTION-NO	S
1	PF3/4
2	PF1/2
3	M33x2
4	M24x2

#### 1. TEMP. RANGE

EXECUTION-NO	RANGE(°C)
120	0-120
150	0-150

#### 2. LENGTH

EXECUTION-NO	LENGTH(mm)
L080	80
L100	100

#### 4. DIAMETER(D)

EXECUTION-NO	D
A	$\varnothing 75\text{mm}$
B	$\varnothing 100\text{mm}$



### CAPILLARY TYPE

- OUTDIA :  $\varnothing 100$
- CONSTRUCTION : WEATHER PROOF
- MATERIAL : ALL SUS304
- CAPILLARY LENGTH : 1~7m

#### 3. FITTING THRED

EXECUTION-NO	S
1	PF3/4
2	PF1/2
3	M33x2
4	M24x2

#### 1. TEMP. RANGE

EXECUTION-NO	RANGE(°C)
120	0-120
150	0-150

#### 2. LENGTH

EXECUTION-NO	LENGTH(mm)
L200	200
L250	250

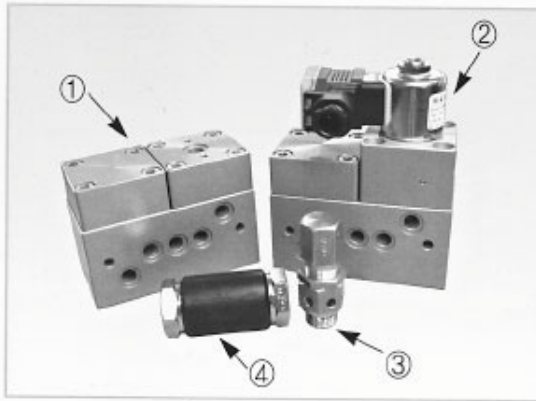
#### 4. DIAMETER(D)

EXECUTION-NO	D
A	$\varnothing 100\text{mm}$
B	$\varnothing 150\text{mm}$

### THERMO GAUGE PANEL



## OTHERS



- ① 5-2WAY VALVE
- ② 5-2WAY SOLENOID VALVE
- ③ SAFETY VALVE
- ④ NON RETURN VALVE

## CERTIFICATES

