



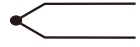
Thermocouple



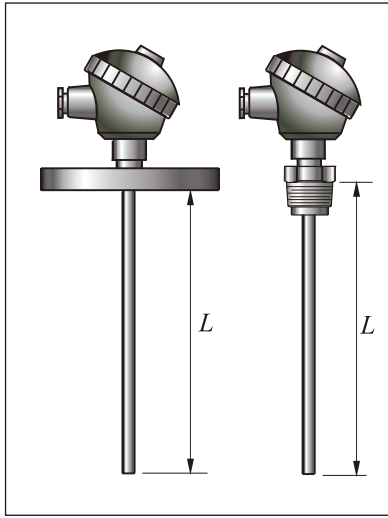
www.fine-tek.com



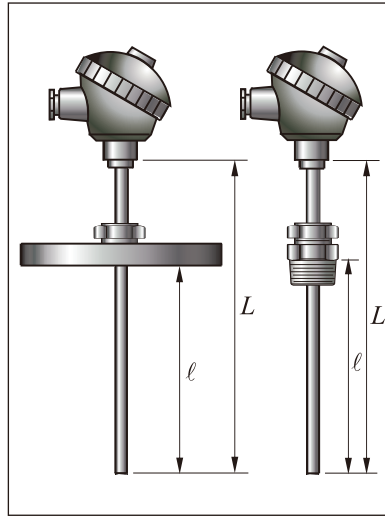
THERMOCOUPLE



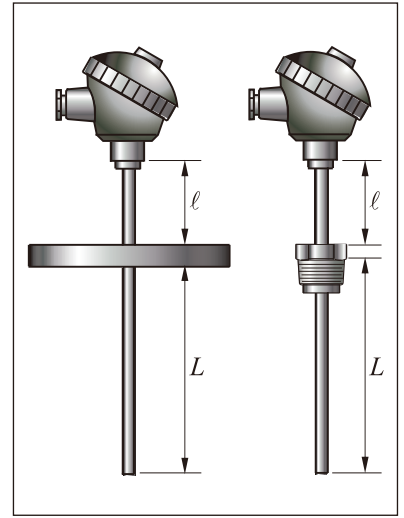
RESISTANCE BULB



STANDARD TYPE



ADJUSTABLE TYPE



EXTENSION TYPE

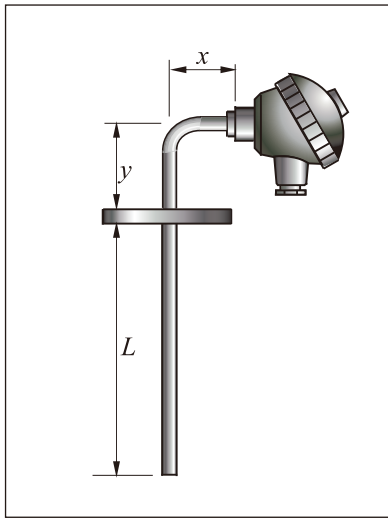
Type	STANDARD TYPE		ADJUSTABLE TYPE		EXTENSION TYPE	
	GKEA	GPEA	GKEB/GKKB	GPEB/GPKB	GKEC/GKKC	GPEC/GPKC
Operating Temp.	0~1200°C	-50~500°C	0~1200°C	-50~500°C	0~1200°C	-50~500°C
Class Tolerance	JIS 0.75 grade $\pm 0.0075 \times t $	IEC 751 CLASS B $0.3 \pm 0.005 \times t $	JIS 0.75 grade $\pm 0.0075 \times t $	IEC 751 CLASS B $0.3 \pm 0.005 \times t $	JIS 0.75 grade $\pm 0.0075 \times t $	IEC 751 CLASS B $0.3 \pm 0.005 \times t $
Protective Grade	IP65	IP65	IP65/IP44	IP65/IP44	IP65/IP44	IP65/IP44
Connection	1", 1 1/2" × 5kg/cm ² 1/2"PT, 3/4"PT	1", 1 1/2" × 5kg/cm ² 1/2"PT, 3/4"PT	1", 1 1/2" × 5kg/cm ² 1/2"PT, 3/4"PT	1", 1 1/2" × 5kg/cm ² 1/2"PT, 3/4"PT	1", 1 1/2" × 5kg/cm ² 1/2"PT, 3/4"PT	1", 1 1/2" × 5kg/cm ² 1/2"PT, 3/4"PT
Tube diameter	φ5, φ6 φ8, φ9.5	φ8, φ12.7 φ17.2	φ5, φ6 φ8, φ9.5	φ8, φ12.7 φ17.2	φ5, φ6 φ8, φ9.5	φ8, φ12.7 φ17.2
Material	SUS304/316 Titanium	SUS304/316 Titanium	SUS304/316 Titanium	SUS304/316 Titanium	SUS304/316 Titanium	SUS304/316 Titanium
Isolation resistance	> 1000MΩ / 500V	> 1000MΩ / 500V	> 1000MΩ / 500V	> 1000MΩ / 500V	> 1000MΩ / 500V	> 1000MΩ / 500V
Wire	Nickel-Aluminum Nickel-Chromium	---	Nickel-Aluminum Nickel-Chromium	---	Nickel-Aluminum Nickel-Chromium	---

★ Special specification are acceptable

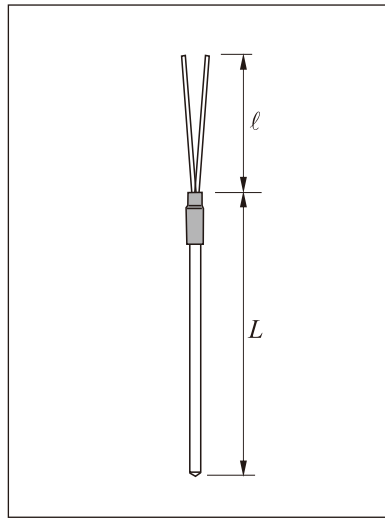
THERMOCOUPLE



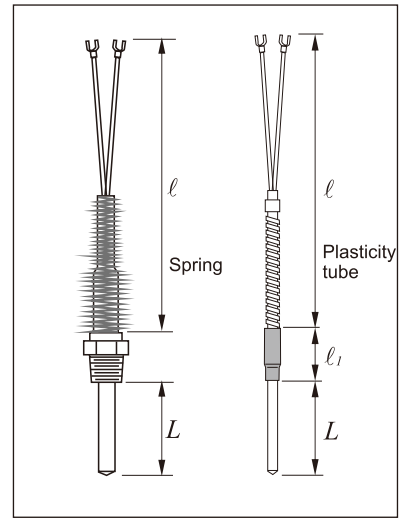
RESISTANCE BULB







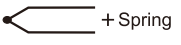

L SHAPE TYPE



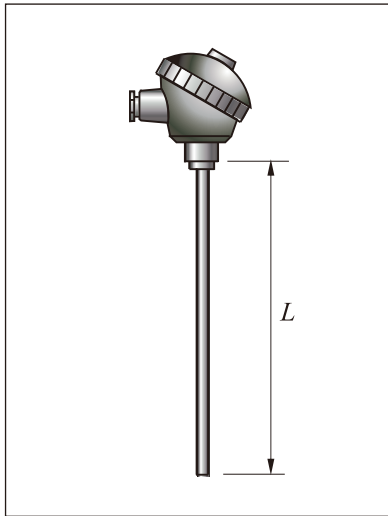
ECONOMICAL TYPE



ECONOMICAL TYPE

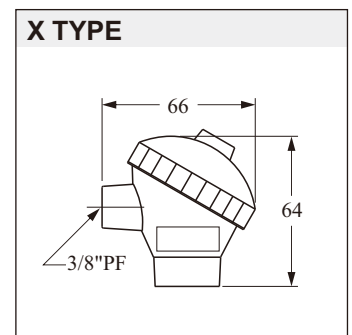
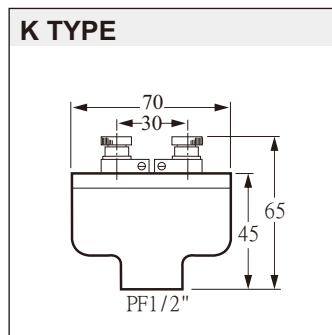
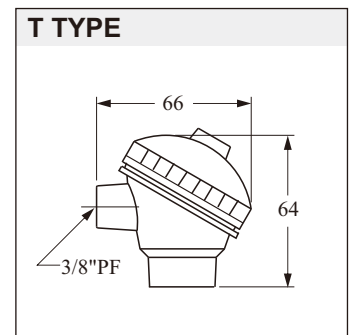
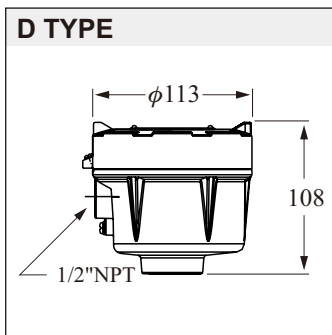
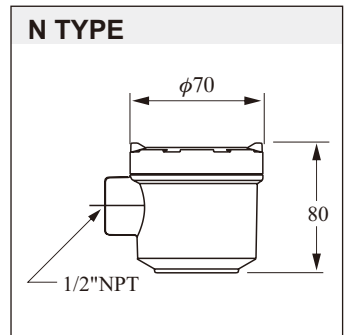
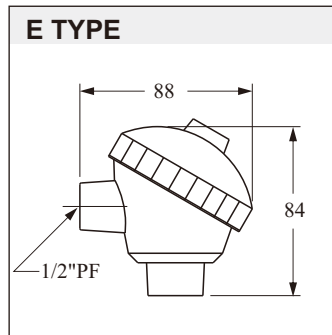
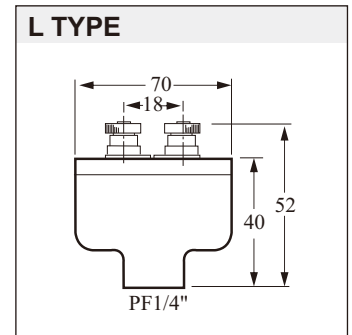
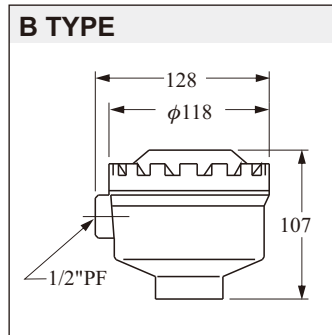
						
Type	GKED/TKKD	GPED/GDKD	GK-E	GP-E	GK-F	GP-G
Operating Temp.	0~1200°C	-50~500°C	0~480°C	-50~250°C	0~480°C	-50~250°C
Class Tolerance	JIS 0.75 grade $\pm 0.0075 \times t $	IEC 751 CLASS B $0.3 \pm 0.005 \times t $	JIS 0.75 grade $\pm 0.0075 \times t $	IEC 751 CLASS B $0.3 \pm 0.005 \times t $	JIS 0.75 grade $\pm 0.0075 \times t $	IEC 751 CLASS B $0.3 \pm 0.005 \times t $
Protective Grade	IP65/IP44	IP65/IP44	IP44	IP44	IP44	IP44
Connection	1", 1 1/2" x 5kg/cm ²	1", 1 1/2" x 5kg/cm ²	---	---	1/4"PT	1/4"PT
Tube diameter	$\phi 5, \phi 17.2$	$\phi 8, \phi 12.7$ $\phi 17.2$	$\phi 6, \phi 17.2$	$\phi 6, \phi 17.3$	$\phi 6, \phi 17.2$	$\phi 6, \phi 17.3$
Material	SUS304/316 Titanium	SUS304/316 Titanium	SUS304/316 Titaniu, PTFE	SUS304/316 PP, PTFE	SUS304/316 Titaniu, PTFE	SUS304/316 PP, PTFE
Isolation resistance	>1000M Ω /500V	>1000M Ω /500V	>1000M Ω /500V	>1000M Ω /500V	>1000M Ω /500V	>1000M Ω /500V
Wire	Nickel-Aluminum Nickel-Chromium	---	Nickel-Aluminum Nickel-Chromium	---	Nickel-Aluminum Nickel-Chromium	---
Compensating Lead Wire	---	---	Isolated Cable PVC Cable	PTFE Silver Wire PTFE Copper Wire PVC Cable	Isolated Cable PVC Cable	PTFE Silver Wire PTFE Copper Wire PVC Cable



★ Special specification are acceptable



INTERCALARY TYPE

TERMINAL BOX



Type	 GKEH	 GPEH
Operating Temp.	0~480°C	-50~250°C
Class Tolerance	JIS 0.75 grade $\pm 0.0075 \times t $	IEC 751 CLASS B $0.3 \pm 0.005 \times t $
Protective Grade	IP65	IP65
Connection	---	---
Tube diameter	$\phi 6, \phi 17.2$	$\phi 6, \phi 17.3$
Material	SUS304/316 Titanium, PTFE	SUS304/316 Titanium
Isolation resistance	$> 1000M\Omega / 500V$	$> 1000M\Omega / 500V$
Wire	Nickel-Aluminum Nickel-Chromium	---

★ Special specification are acceptable

ORDER INFORMATION

G P E A S 2 E M 0 1 0 0

TYPE

C: C Type Thermocouple R: R Type Thermocouple
 J: J Type Thermocouple P: P Type Resistance Bulb
 K: K Type Thermocouple S: Others

TERMINAL BOX

B: Aluminum (Big space)
 E: Thermocouple head (Aluminum)
 J: Explosion-proof (Exd IIB T4)
 K: T Type terminal (Big size)
 L: T Type terminal (small size)
 P: Thermocouple head (plastic)
 S: Others
 T: Small Thermocouple head (plastic)
 X: Small Thermocouple head (Aluminum)
 -: Without terminal box

CONNECTING TYPE

A: Standard Type F: Economical Type (Spring)
 B: Adjustable Type G: Economical Type (plasticity tube)
 C: Extension Type H: Intercalary Type
 D: L shape Type J : Simple Type
 E: Economical Type S : Others

ROD MATERIAL & DIAMETER

S1: SUS304 φ 5	S9: SUS304 φ 12.7	P1: P.P. φ 5	T1: Titanium φ 5
S2: SUS316 φ 5	SA: SUS316 φ 12.7	P2: P.P. φ 6	T2: Titanium φ 12.7
S3: SUS304 φ 6	SB: SUS304 φ 17.2	P3: P.P. φ 9.5	TS: Others size
S4: SUS316 φ 6	SC: SUS316 φ 17.2	P4: P.P. φ 17.6	F1: Teflon φ 5
S6: SUS316 φ 8	SD: SUS304 φ 21.7	PS: Others size	F2: Teflon φ 6
S7: SUS304 φ 9.5	SE: SUS316 φ 21.7		F3: Teflon φ 8
S8: SUS316 φ 9.5	SS: Others size		FS: Others size

CONNECTING CODE

1: 1/8"	F: 2" (50A)	M: 5 kg/cm ²	W: PN10 (10Bar)
2: 1/4"	G: 2-1/2" (65A)	N: 10 kg/cm ²	X: PN16 (16Bar)
3: 1-1/4" (32A)	H: 3" (80A)	O: 150 Lbs	Y: PN25 (25Bar)
A: 3/8" (12A)	I: 4" (100A)	P: 300 Lbs	Z: PN40 (40Bar)
B: 1/2" (15A)	J: 5" (125A)	Q: PT	S: Others
C: 3/4" (20A)	K: 6" (150A)	R: PF	
D: 1" (25A)		T: BSP	
E: 1-1/2" (40A)			

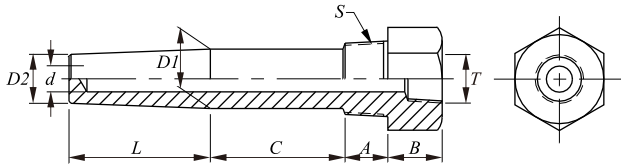
LENGTH (UNIT: mm)

Please confirm below request information before you order it.

- * Operating temperature range.
- * Lead wire: material, length, quantity
- * Rod length: ℓ, ℓ₁, X, Y
- * Quantities of sensor

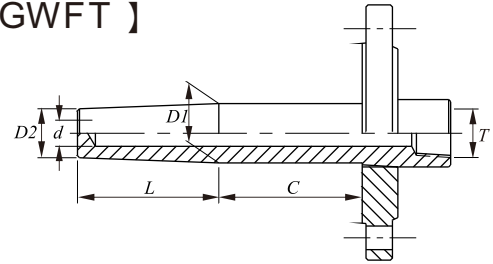
Screw Type

【GWTT】

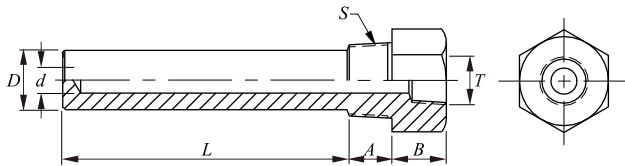


Flange Type

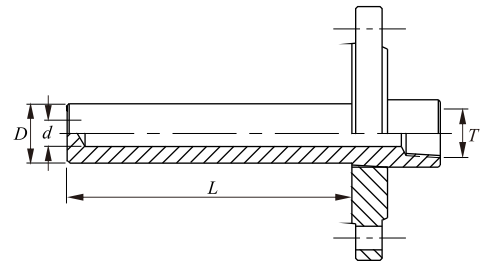
【GWFT】



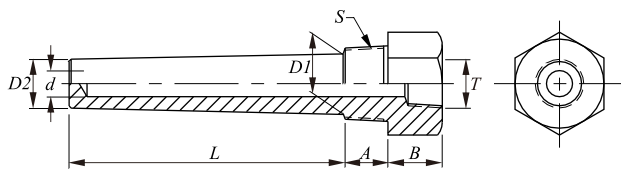
【GWTD】



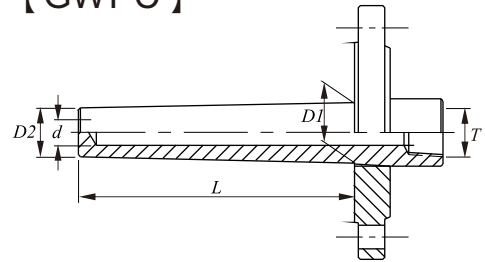
【GWFD】



【GWTC】



【GWFC】

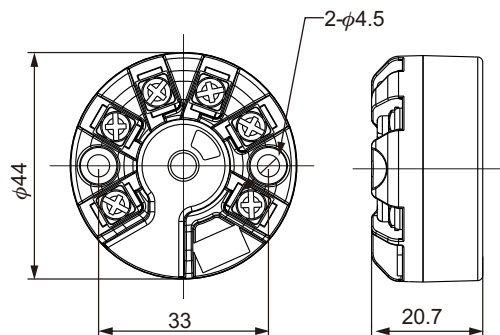


TR160 ECONOMICAL SERIES TEMPERATURE TRANSMITTER

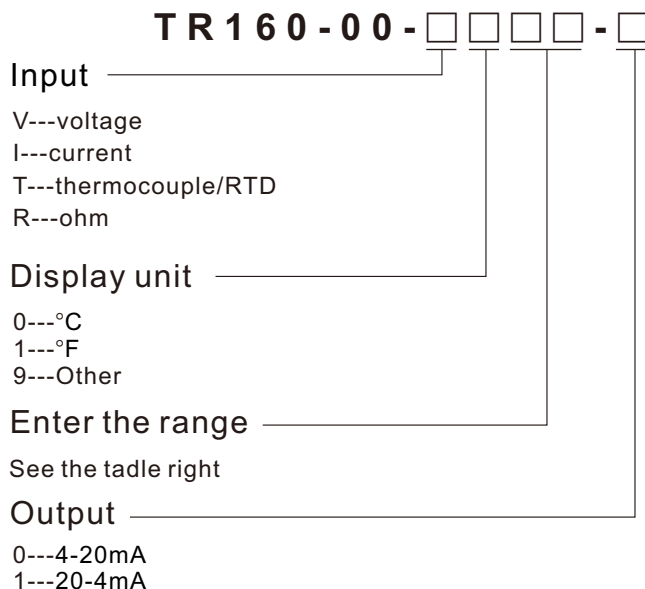
【TR160】

Supply Voltage: Loop Power 10~36 Vdc
 DCV Input: 0~100 mV
 Thermocouple Input: K / J / T / E / R / S / B / N
 RTD / Resistance Input: PT100 / 0~400Ω
 Analog Output: 4~20mA (Loop Power)
 Accuracy: 12 bits
 Operational Temperature: -40~85°C
 Warm Up Time: 10 minutes

Terminal Connection

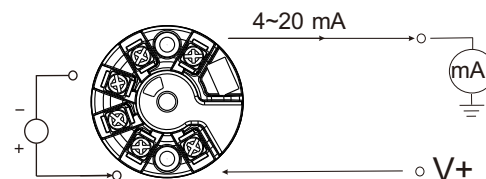


Terminal Connection

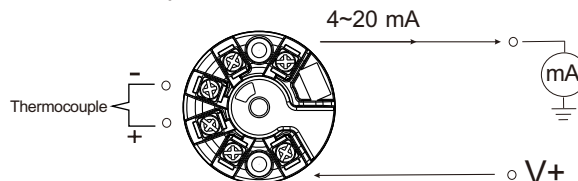


Specifications

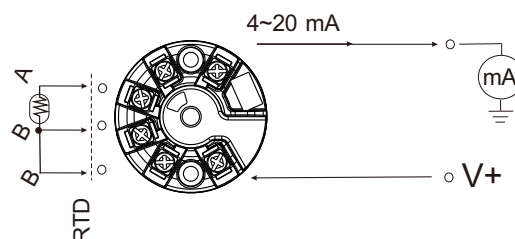
1. V and mV to 4~20 mA



2. Thermocouple to 4~20 mA



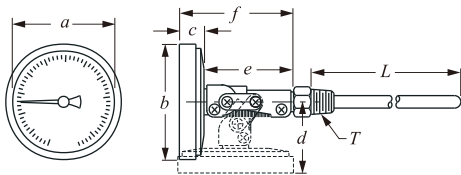
3. PT100 and Resistance to 4~20 mA



Input type	Unit	Input range		
V	0:V	01	DC Voltage	0~0.5V
		02	DC Voltage	0~1V
		03	DC Voltage	0~5V
		04	DC Voltage	0~10V
		05	DC Voltage	0~20V
I	0:mA	01	DC Current	0~20mA
		02	DC Current	4~20mA
R	0:Ohm	01	Resistance	0~400Ohm
T	0:°C 1:°F	00	ALL Type	
		01	K Type	-200°C~1370°C
		02	J Type	-210°C~1200°C
		03	T Type	-200°C~400°C
		04	E Type	-200°C~1000°C
		05	R Type	-50°C~1200°C
		06	S Type	-50°C~1200°C
		07	B Type	250°C~1820°C
		08	N Type	-200°C~1300°C
09	PT100	-200°C~850°C		

THERMOMETER

**BIMETALLIC THERMOMETER
(ADJUSTABLE ANGLE TYPE)**
MODEL : **GMBA** (without-contact)
GMBAC



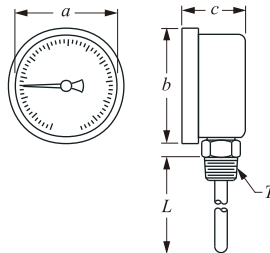
Size	a	b	c	d	e	f	T
3"	74	85	18	52	65	83	1/4"PT
4"	100	118	21	52	65	86	1/2"PT
5"	110	127	18	52	65	83	1/2"PT
6"	140	162	25	52	65	90	1/2"PT

1. Material: Stainless Steel (304)
Cases And Stems.
2. 1/4", 1/2" PT Or NPT Thread By Order.
3. Anti-parallax Sealed Glass Windows,
Dials With Black Figures.
4. Accuracy: $\pm 1\%$ of full scale.
5. Temperature Ranges: $-50\sim 600^{\circ}\text{C}$

The following information is needed to order the products from us:

- ☞ model
- ☞ Temperature range
- ☞ Measuring distance
- ☞ diameter of sensing probe.
- ☞ Length of sensing probe.

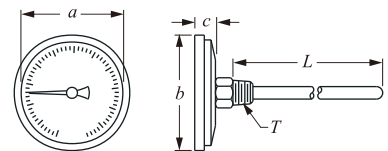
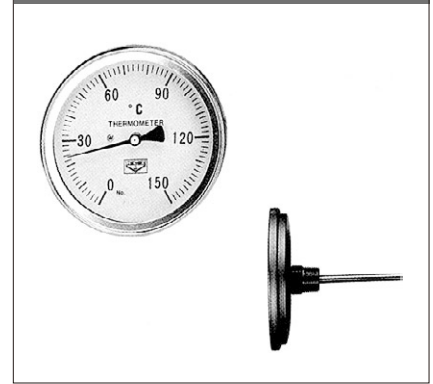
**BIMETALLIC THERMOMETER
(BOTTOM ENTRY TYPE)**
MODEL : **GMBI** (without-contact)
GMBIC



Size	a	b	c	T
3"	74	85	50	1/4"PT
4"	100	118	50	1/2"PT
5"	110	127	50	1/2"PT
6"	140	162	50	1/2"PT

1. Material: Case & cover:
stainless steel SUS304
(SUS316 is also available)
Transparent plate: Resin or glass
Dial scale plate: Aluminum White
background, black figures & marks
2. Temperature range: $-50\sim 600^{\circ}\text{C}$
3. Outside dia. of stem: $\phi 6.35\sim 9.5\text{mm}$
4. Length of stem: 2-1/2"~50" by orders
5. Indicating accuracy: $\pm 1\%$ of full scale.

**BIMETALLIC THERMOMETER
(BACK ENTRY TYPE)**
MODEL : **GMBTT**

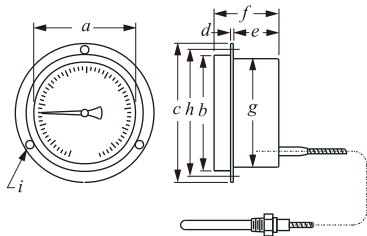


Size	a	b	c	T
1.5"	32	35	10	---
2"	50	58	15	1/4"PT
3"	74	83	15	1/4"PT
4"	100	115	15	1/2"PT
5"	110	127	18	1/2"PT
6"	140	162	28	1/2"PT

1. Material: Case & cover:
stainless steel SUS304
(SUS316 is also available)
Transparent plate: Resin or glass
Dial scale plate: Aluminum White
background, black figures & marks
2. Temperature range: $-50\sim 600^{\circ}\text{C}$
3. Outside dia. of stem: $\phi 6.35\sim 9.5\text{mm}$
4. Length of stem: 2-1/2"~50" by orders
5. Indicating accuracy: $\pm 1\%$ of full scale.

THERMOMETER

**REMOTE READING THERMOMETER
(FLUSH MOUNTING W/FLANGE TYPE)**
MODEL : **GMFF** (without-contact)
GMFFC



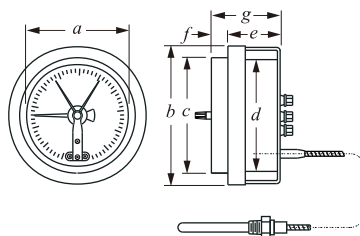
Size	a	b	c	d	e	f	g	h	i
3"	74	85	101	14	36	83	77	92	5
4"	100	118	137	15	25	86	100	122	8
5"	110	127	160	15	30	83	117	145	8
6"	140	160	191	17	30	90	150	180	8

- Temperature Range: -50~650°C
Accuracy: ±1%
- Capillary Length: 3M
Longest: 20M
- Stem Diameter:
Standard: ϕ 2mm
(6.35mm~12mm Is Available)
- Material: Outer Case With SUS304
Sensor With SUS304
Thread Connection To Be Ordered
- With Inner Adjustable Point

The following information is needed to order the products from us:

- ☞ model
- ☞ Temperature range
- ☞ Measuring distance
- ☞ measuring distance.
- ☞ diameter of sensing probe.
- ☞ length of sensing probe.

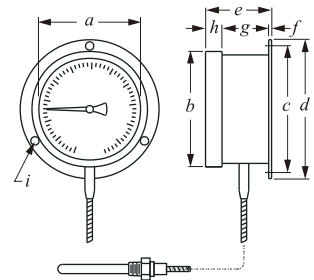
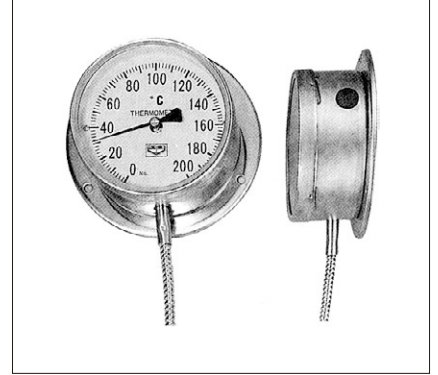
**REMOTE READING THERMOMETER
(FLUSH MOUNTING W/O FLANGE TYPE)**
MODEL : **GMFU** (without-contact)
GMFUC



Size	a	b	c	d	e	f	g
3"	74	100	84	76	36	14	50
4"	100	108	118	100	25	16	41
5"	110	160	127	117	30	15	50
6"	140	191	160	150	30	15	45

- Temperature Range: -50~650°C
Accuracy: ±1%
- Capillary Length: 3M
Longest: 20M
- Stem Diameter:
Standard: ϕ 12mm
(6.35m/m~12m/m Is Available)
- Material: Outer Case With SUS304
Sensor With SUS304
- With Inner Adjustable Point

**REMOTE READING THERMOMETER
(WALL MOUNTING WITH FLANGE TYPE)**
MODEL : **GMWF** (without-contact)
GMWFC

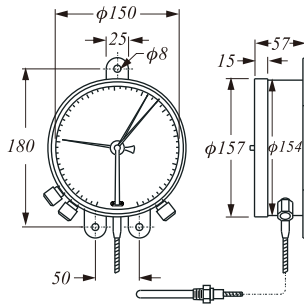
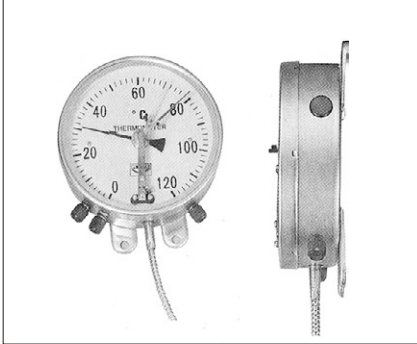


Size	a	b	c	d	e	f	g	h
3"	74	85	92	101	49	1	36	12
4"	100	118	122	137	49	3	35	11
5"	110	127	145	160	50	2	35	11

- Temperature Range: -50~650°C
Accuracy: ±1%
- Capillary Length: 3M
Longest: 20M
- Stem Diameter:
Standard: ϕ 12mm
(6.35mm~12mm Is Available)
- Material: Outer Case With SUS304
Sensor With SUS304
Thread Connection To Be Ordered
- With Outer Adjustable Point
(except 3")

THERMOMETER

REMOTE READING THERMOMETER (WALL MOUNTING W/EAR TYPE)
MODEL : GMWE (without-contact) GMWEC

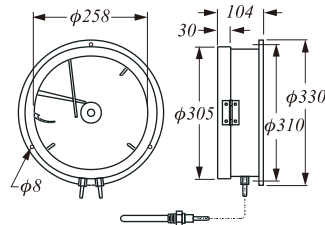
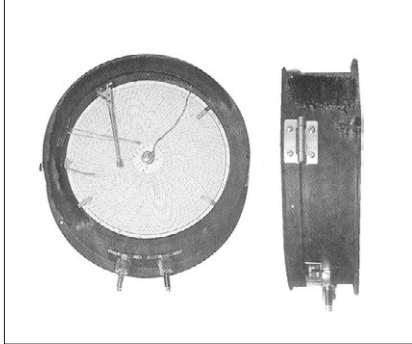


1. Scale Size: 6" Only
Temperature Range: -50~650°C
Accuracy: ±1%
2. Capillary Length: 3M
Longest: 20M
3. Stem Diameter:
Standard: φ12mm
(6.35mm~12mm Is Available)
4. Material: Outer Case With SUS304
Sensor With SUS304
Thread Connection To Be Ordered
5. With Outer Adjustable Point

The following information is needed to order the products from us:

- ☞ model
- ☞ Temperature range
- ☞ Measuring distance

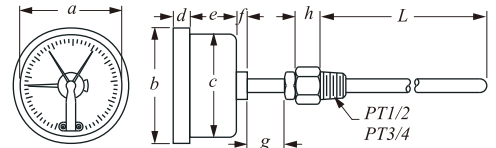
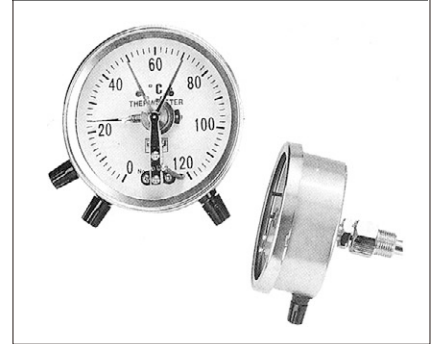
MODEL : GMTR1 THERMOMETER RECORDER
MODEL : GMTR2 THERMOMETER RECORDER
MODEL : GMTRH HYGROMETER RECORDER



1. Material: Outer Case With SUS304
Sensor With SUS304
2. Recording Ranges:
Hygrometer: 0~100°C
0~120°C
0~150°C
Thermometer: -50~500°C
3. Length Of Spiral:
Standard: 3M
Longest: 10M
4. Circle Time: 24 Hours

- ☞ measuring distance.
- ☞ diameter of sensing probe.
- ☞ length of sensing probe.

DIRECT READING THERMOMETER (BACK ENTRY W/O FLANGE TYPE)
MODEL : GMDT (without-contact) GMDTC

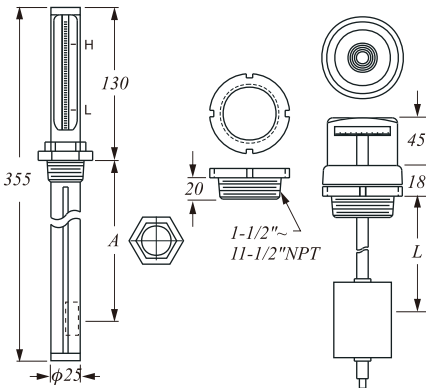


Size	a	b	c	d	e	f	g	h
3"	74	84	75	12	34	8	27	18
4"	100	118	108	11	40	8	27	18
5"	110	127	117	11	35	8	27	18
6"	140	160	148	13	32	8	27	18

1. Temperature Range: -50~650°C
Accuracy: ±1%
2. Material: Outer Case With SUS304
Sensor With SUS304
3. Stem: φ8mm & 5" Length (standard)
Thermowell: φ11mm & 5" Length (standard)
(standard Connection: 1/2" Chrome Brass Material)
4. With Inner Adjustable Point
5. For External Adjustment, Please See Right Page.

THERMOMETER

**LEVEL THERMOMETER
(COMPOUND TYPE)**
MODEL : GMLT1(I Type)
GMITT(T Type)



TMLTI

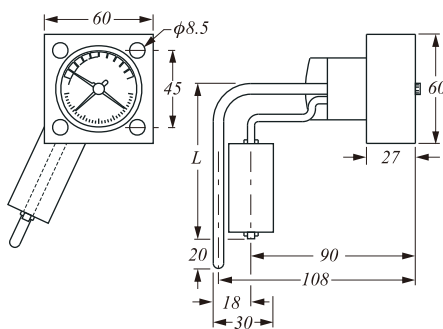
Material:
SUS304
Temperature
range:
(Spirit type)
-0~120°C

TMLTT

Material:
Aluminum Alloy
with anodize.
Temperature range:
(Spirit type)
-0~120°C
Measuring range
of liquid level:
30mmL

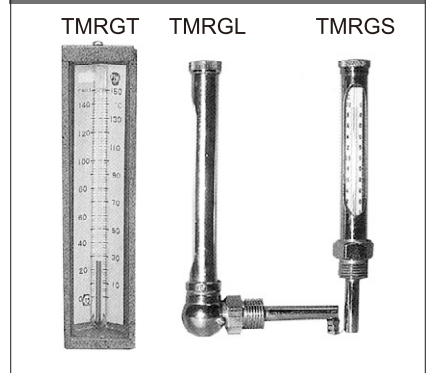
Model	Length (A)	Color
L01	135	Red
L02	115	Red
L03	95	Yellow

**LEVEL THERMOMETER
(ALCOHOL TYPE/FLOAT TYPE)**
MODEL : GMLTL



Temperature range: -50~650°C
Material: Aluminum Alloy with anodize.
Front panel: black panel with
fluorescent yellow-word.
Fluorescent green-word above
scale N
Fluorescent red-word below scale N
Color of pointer :
Temperature painter-yellow
Pointer-fluorescent green.
Third pointer fluorescent-red.

**GLASS THERMOMETER
(TRIANGLE TYPE/ROUND TYPE)**
MODEL : GMRGT/GMRGL
/GMRGS



Model: TG Series
Material Of Case: Plastics Or
Aluminum
Material Of Stem: Brass

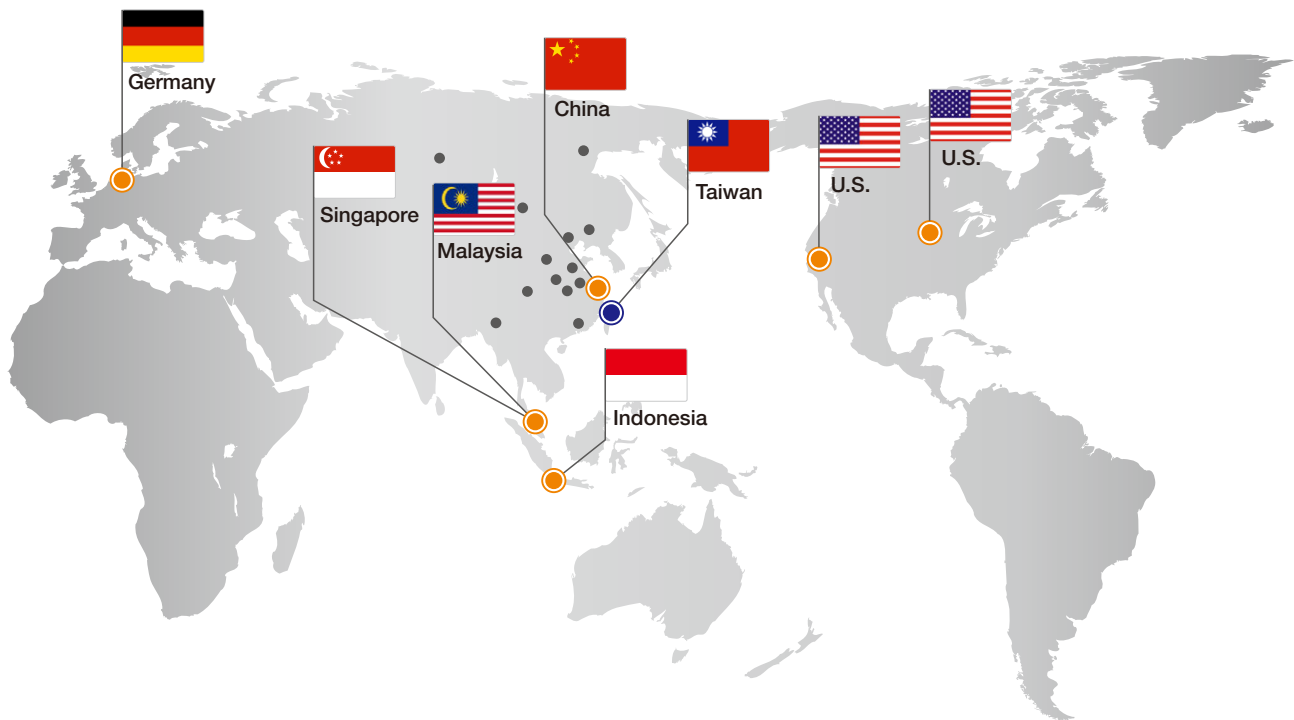
Model: RG Series
Material Of Case:
Chromium Plated Brass
Or Aluminum
Material Of Stem:
Chromium Plated Brass
or SUS304

The Above Common
Specifications:
Filling: Red Organic Liquid
Or Mercury
Temperature: Organic
Liquid Filled...-50~200°C
Mercury Filled ...-50~500°C

The following information is needed to order the products from us:

- The length "A"
- The length of "L"
- Model
- Material
- Measuring range.
- Length of sensing probe.

Global Network



■ Asia

● Taiwan

FineTek Co., Ltd. - Taipei Head Quarter
 No.16, Tzuchiang St., Tucheng Industrial Park
 New Taipei City 236, Taiwan
 TEL: 886-2-2269-6789
 FAX: 886-2-2268-6682
 EMAIL: info@fine-tek.com

● China

Fine automation Co., Ltd. - Shanghai Factory
 No.451 DuHui Rd, MinHang District, Shanghai,
 China 201109
 TEL: 86-21-6490-7260
 EMAIL: info.sh@fine-tek.com

● Singapore

FineTek Pte Ltd. - Singapore Office
 No. 60 Kaki Bukit Place, #07-06 Eunos
 Techpark 2 Lobby B, Singapore 415979
 TEL: 65-6452-6340
 EMAIL: info.sg@fine-tek.com

● Indonesia

FineTek Co., Ltd. - Indonesia Office
 Ruko Golden 8 Blok H No.40
 Gading Serpong, Tangerang, Indonesia
 TEL: 62 (021)-2923-1688
 EMAIL: info.id@fine-tek.com

● Malaysia

FineTek Co., Ltd. - Malaysia Office
 8-05, Plaza Azalea, Persiaran Bandaraya,
 Seksyen 14, 40000 Shah Alam, Selangor, Malaysia
 TEL: 603-5524-7168
 EMAIL: info.my@fine-tek.com

■ North America

● California, U.S.

Aplus Finetek Sensor Inc. - US Office
 355 S. Lemon Ave, Suite D, Walnut,
 CA 91789
 TEL: 1 909 598 2488
 FAX: 1 909 598 3188
 EMAIL: info@aplusfine.com

● Illinois, U.S.

Aplus Finetek Sensor Inc.
 TEL: 1 815 632-3132
 FAX: 1 815 716 8464
 EMAIL: info@aplusfine.com

■ Europe

● Germany

FineTeK GmbH - Germany Office
 Frankfurter Str. 62, OG D-65428
 Ruesselsheim, Germany
 TEL: +49-(0)6142-17608-0
 FAX: +49-(0)6142-17608-20
 EMAIL: info@fine-tek.de



Distributor: