



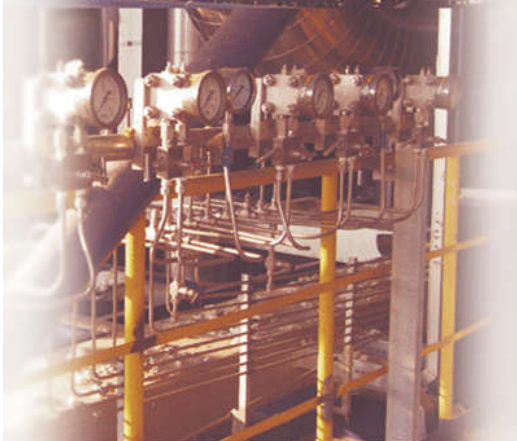
*We're There.*



# WINTERS

## HVAC PRODUCT OVERVIEW





## *Why Winters?*

### *We're There.*

**Global.** Operating from 7 worldwide offices in Toronto, Calgary, Buffalo, Houston, Shanghai, Montevideo and Buenos Aires, Winters works closely with a vast network of distribution partners in over 80 countries to ensure that customers receive the instrumentation they require. This also allows Winters to provide local support to ensure our customers are individually serviced in the markets they operate in.

**Cover All Markets.** We work with customers in industries such as fluid power, wastewater, pharmaceutical, petrochemical, oil and gas, process control, HVAC, power generation, plumbing, food and beverage, agriculture, pulp and paper, and many others. In addition, many of Winters' products are manufactured, tested and certified in accordance to globally recognized third party agency requirements (3A, CSA, CRN, CE, Ex, FM, UL, NACE, RoHS).

**High Field Support.** Winters maintains field located regional sales managers who provide on-site visits and product support to distributors, end users and OEMs. Our customer service team is well trained in order management and can also provide telephone support on technical challenges. In addition to our world class customer service, Winters conducts training programs every quarter to provide our distribution partners with comprehensive sales tools and keep them up-to-date on new developments in instrumentation.

## *Your Global Partner*

Since 1953, Winters Instruments has been providing quality built instrumentation to all markets that require pressure and temperature measurement. Through the years, the company has grown in size and reputation and is now a leading, global manufacturer of industrial instrumentation. Our comprehensive product lines of pressure gauges, thermometers, diaphragm seals, transmitters, switches, and accessories are brought to market by an extensive network of distribution partners who share our successes of being trusted by some of the world's most recognized Fortune 500 companies and leading municipal organizations.

Winters Instruments is proud to be an ISO 9001:2008 registered manufacturer. We maintain complete control in our product offering of industrial instrumentation, from design, engineering and manufacturing, to servicing, calibration, repairs and product training for all markets. Put simply, We're There.





## PEM

### Economy Gauge



- **Dial Size (mm)** 40, 50, 63, 100, 150  
(Assembled with U-Clamp for dial size 40, 50, 63 only)
- **Range** Vacuum to 350 bar / 5000 psi
- **Case** Steel, painted black
- **Ring** 40mm, 50mm, 63mm, 100mm  
chrome electroplated or steel painted black,  
150mm steel, painted black
- **Wetted Parts** Brass
- **Accuracy**  $\pm 3-2-3\%$  ANSI / ASME Grade B

## PFQ

### Stainless Steel Liquid Filled Gauge



- **Dial Size (mm)** 40, 50, 63, 100
- **Range** Vacuum to 1000 bar / 15000 psi
- **Case** 304 SS
- **Ring** Crimp - On
- **Wetted Parts** 316 SS / Brass
- **Accuracy** 40mm, 50mm -  $\pm 2.5\%$  ANSI / ASME Grade B  
63mm, 100mm -  $\pm 1.6\%$  ANSI / ASME Grade B

## PFD

### WinAIR Differential Gauge



- **Dial Size (mm)** 100mm
- **Range** Vacuum to 5 psi
- **Case** Die-cast black aluminum
- **Ring** Threaded die-cast black aluminum
- **Wetted Parts** 316 SS / Brass
- **Accuracy**  $\pm 3\%$  of full scale value accuracy  
 $\pm 4\%$  of full scale value accuracy

## PCT Series

## Contractor Pressure Gauges



- **Dial Size** (mm) 115mm
- **Range** Vacuum to 350 bar / 5000 psi
- **Case** 304 SS
- **Ring** 304 SS push on
- **Wetted Parts** Brass
- **Accuracy** ±1% ANSI / ASME Grade 1A

## PFE

## Sprinkler Gauge



- **Dial Size** (mm) 90mm
- **Range** 0...80 to 0...300 kPa/psi
- **Case** Black plastic
- **Ring** Polycarbonate, threaded
- **Wetted Parts** Silver Alloy
- **Accuracy** ±3-2-3% ASME Grade B

## LE1

## Pressure Transmitter



- **Pressure Range** From 0...1bar to 0...600bar
- **Case** 304 SS
- **Process connection** 304 SS or 316 SS
- **Accuracy** 0.5% FSO
- **IP Protection** IP65 or IP67(Depending on electrical connection)
- **Output Signal** 4...20mA 2wire 0.5...4.5V 3wire
- **Supply voltage** 12...30VDC 10...30VDC 5V±10%

## TIS

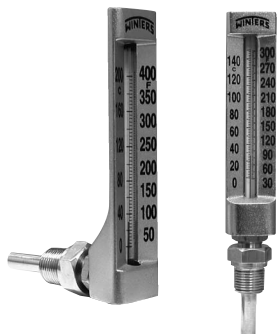
## Compact RTD sensor



- **Case Dia** Ø 18mm
- **Case Material** 304 SS
- **Electric connection** M12\*1 with 4pins
- **Output signal** Pt100 or 4...20mA 2-wire
- **Sensor material** 316LSS
- **Sensor dia** Ø 6mm
- **Sensor length** < 3000 mm
- **IP protection** IP 67
- **Sensor Accuracy** Pt100 DIN/EN/IEC 60751
- **Ambient temperature** -40...125°C

## TAG

## HVAC Gold Case Thermometers



- **Temperature Range** -40°C to 40 °C / -5°C to 80 °C / 0°C to 115 °C / 0°C to 150 °C / 10°C to 200 °C and relevant ranges in °F
- **Scale Size** 4.5" (110mm), 6" (150mm)
- **Case Material** Aluminum, anodized gold
- **Tube** Glass cushioned
- **Liquid Filling** Organic liquid
- **Configuration** Angled or Straight
- **Connection Size of Thermowell** 1/2", 3/4" / NPT, G, BSPP, BSPT, M20x1.5
- **Insertion Length** (Included thread length) 2", 3" 4" 6" 8" 10"
- **Thermowell Material** Brass or 304 SS
- **Enclosure Rating** IP 65
- **Accuracy** ±2% of full scale

## TBM Series

## Bi-Metal Thermometers



- **Temperature Range** -70°C....70°C to 0°C....600°C
- **Dial Size** 1" (25mm), 2" (50mm), 3" (75mm), 4" (100mm), 5" (125mm), 6" (150mm) aluminum with black markings, dish-shaped
- **Case Material** AISI 304 SS
- **Lens Material** 1" (25mm):Acrylic  
Others: Glass standard, hermetically sealed (Option:safety glass)
- **Connection Type** Centre back, bottom or adjustable angle configurations  
2" (50mm): centre back connection only
- **Stem Material** 304 SS (Optional: 316SS)
- **Stem Diameter** 3.8mm (1" dial only), 6mm, 6.35mm (standard), 8mm, 9.5mm, 12mm
- **Stem Length** 2.5", 3", 4", 5" (standard for 1" dial), 6"  
(Included threaded connection length)  
Note: minimum insertion length is 63mm  
maximum insertion length is 900mm for stem diameter 6mm or 6.35mm  
maximum insertion length is 1770mm for stem diameter 8mm, 9.5mm, 12mm
- **Connection Size** 3.8mm (1" dial only), 6mm, 6.35mm (standard), 8mm, 12mm  
1" (25mm): None  
2" (50mm): 1/4" NPT standard  
3" (75mm), 4" (100mm), 5" (125mm), 6" (150mm): 1/2" NPT standard
- **Enclosure Rating** IP65
- **Accuracy** ±2.0% - dial size 1" (25mm), 2" (50mm), 3" (75mm)  
±1.0% - dial size 4" (100mm), 5" (125mm), 6" (150mm)

## TBT Series

## HVAC Bi-Metal Thermometers



▪ <b>Temperature Range</b>	0°C...121°C ( 30°F...250°F ) / 0°C...48°C ( 0°F...120°F )
▪ <b>Dial Size</b>	3.5" (90mm) and 4" (100mm) aluminum with black markings
▪ <b>Case Material</b>	Steel painted black
▪ <b>Lens Material</b>	Glass
▪ <b>Ring Material</b>	Steel chrome plated
▪ <b>Movement</b>	Bi-metallic coil
▪ <b>Pointer</b>	Aluminum, painted black
▪ <b>Stem</b>	Brass
▪ <b>Connection Configuration</b>	Bottom and Centre back
▪ <b>Thermowell Material</b>	304 SS, 316 SS, Brass
▪ <b>Thermowell Thread Connection</b>	1/2" NPT, 1/2" G, 3/8" NPT
▪ <b>Over Range Enclosure Rating</b>	±25% of full scale value
▪ <b>Ambient Temperature</b>	-22 °F to 158 °F (-30 °C to 70 °C)
▪ <b>Process Temperature</b>	-22 °F to 250 °F (-30 °C to 120 °C)
▪ <b>Enclosure Rating</b>	IP 52
▪ <b>Accuracy</b>	±2% of full scale

## TIM Series

## Industrial 9IT Thermometers



▪ <b>Temperature Range</b>	-40 °F to 110 °F & -40 °C to 40 °C / 0 °F to 120 °F & -15 °C to 50 °C 0 °F to 160 °F & -15 °C to 70 °C / 30 °F to 180 °F & 0 °C to 80 °C 30 °F to 240 °F & 0 °C to 115 °C / 30 °F to 300 °F & 0 °C to 150 °C
▪ <b>Dial Size</b>	9" (230mm) aluminum or Valox® case, impact resistant
▪ <b>Scales</b>	Aluminum painted white with black markings
▪ <b>Lens Material</b>	Glass
▪ <b>Liquid Filling</b>	Organic liquid filled tube
▪ <b>Bulb Chamber</b>	Tapered cast aluminum with graphite fill
▪ <b>Thermowell Connection</b>	3/4" NPT with thermowell 1 1/4" UNF swivel nut (no thermowell) 3/4" brass separable socket (Other thermowells available)
▪ <b>Thermowell Length</b>	From 3.5" to 10" (Included thread length)
▪ <b>Adjustment</b>	Fully adjustable
▪ <b>Enclosure Rating</b>	IP54
▪ <b>Accuracy</b>	±1%

## TAS Series

## Industrial 5AS Thermometers



▪ <b>Temperature Range</b>	-40°C to 40 °C / -5°C to 80 °C / 0°C to 115 °C/ 0°C to 150 °C / 10°C to 200 °C and relevant ranges in °F
▪ <b>Scale Size</b>	6" (150mm)
▪ <b>Case / Lens Material</b>	Black polypropylene / Glass
▪ <b>Tube / Liquid Filling</b>	Glass cushioned / Kerosene
▪ <b>Configuration</b>	Angled or Straight
▪ <b>Connection Size of Thermowell</b>	1/2", 3/4" / NPT, G, BSPP, BSPT, M20x1.5
▪ <b>Insertion Length</b> (Included thread length)	2.5", 3", 4", 6"
▪ <b>Thermowell Material</b>	Brass or 304 SS
▪ <b>Enclosure Rating</b>	IP 54
▪ <b>Accuracy</b>	±2% of full scale



## STP Series

## Test Plug



- **Body Material**
- **Diaphragm/Core**
- **Temperature Rating**
- **Maximum Pressure Rating**
- **Process Connection**

Brass

EPDM

350 °F (176 °C)

1,000 psi (6895 kPa)

### Brass Test Plug

1/4" NPT Connection Male

1/2" NPT Connection Male

### Gauge Adaptor

2.75 OAL x 1.75" x 0.125" probe

2.25 OAL x 1.75" x 0.125" probe

## SMV Series

## Mini Ball Valve



- **Body Material**
- **Ball**
- **Gaskets**
- **Handle**
- **Process Temperature**
- **Maximum Operating Pressure**
- **Process Connection**
- **Instrument Connection**

Forged brass

Stainless steel

Teflon®

Stainless steel

-9°F to 212°F (23°C to 100 °C)

400 psi (2,758 kPa)

1/4" NPT male

1/4" NPT female

## LMF11/11B

### General Application, Battery-operated



LMF11  
(General Application)



LMF11B  
(Battery-operated)

- **Medium temperature** -25 ~ 200 C
- **Nominal size** DN6 –DN2000 DN10 –DN1200
- **Operating Pressure** 0.6MPa / 1.0MPa / 1.6MPa / 2.5MPa / 4.0MPa / on request
- **Output signal** 4-20mA /Pulse/ Frequency
- **Flange material** Carbon steel/ 304 SS/ 316 SS/ 316L SS
- **Electrical connection** M20 x1.5 1/2" –14NPT M16 x1.5
- **IP protection** IP65 (standard) IP67 IP68 (remote type only)
- **Accuracy** ±0.2%, ±0.5%

## LMF12

### Heat Meter (BTU)



- **Medium temperature** -25 ~ 200 C
- **Nominal size** DN6 –DN2000
- **Operating Pressure** 0.6MPa / 1.0MPa / 1.6MPa / 2.5MPa / 4.0MPa / on request
- **Output signal** 4-20mA /Pulse/ Frequency
- **Flange material** Carbon steel/ 304 SS/ 316 SS/ 316L SS
- **Electrical connection** M20 x1.5 1/2" –14NPT
- **IP protection** IP65 (standard) IP67 IP68 (remote type only)
- **Accuracy** ±0.5%

## LMF14/14B

### Insertion Type, with / without Battery-operated



LMF14  
(External Power)



LMF14B  
(Battery-operated)

- **Medium temperature** -25 ~ 130 C
- **Nominal size** DN200 –DN2000
- **Operating Pressure** 0.6MPa / 1.0MPa / 1.6MPa
- **Output signal** 4-20mA / Pulse/ Frequency
- **Flange material** 304 SS/ 316 SS/ 316L SS
- **Electrical connection** M20 x1.5 1/2" –14NPT M16 x1.5
- **IP protection** IP65 (standard) IP67 IP68 (remote type only)
- **Power supply** 230 VAC/ 24VDC 12-24 VDC external power
- **Accuracy** ±1.5%

## WR1/WT1

### Indoor Temperature Sensor and Transmitter



A Type



B Type

- **Sensing element** Pt1000、Pt100 or Other
- **Range** 0-50 °C、-20-80 °C、-40-60 °C
- **Accuracy**  $\pm 0.2$  °C (@25 °C)
- **Output signal** 4-20mA、0-10V、0-5V、RS485
- **Case material** ABS
- **IP protection** IP30

## WR2/WT2

### Probe Type Temperature Sensor and Transmitter



- **Sensing element** RTD & NTC sensor selectable from table;  
Transmitter: Pt1000, Class A
- **Range** 0-50 °C、0-100 °C、-20-80 °C、-40-60 °C  
Other temperature measurement ranges can be ordered  $\pm 0.2$  °C (@25 °C)
- **Accuracy**  $\pm 0.5$  °C (F.S)
- **Power supply** 24 VAC/DC、24 VDC (2 wires)
- **Output signal** 4-20mA、0-10V、0-5V、RS485
- **Case material** ABS+PC
- **IP protection** IP65

## WR3/WT3

### Submersible Temperature Sensor and Transmitter



- **Sensing element** RTD Sensor, refer selection table  
Transmitter: Pt1000, Class A
- **Range** 0-50 °C、0-100 °C、-20-80 °C、-40-60 °C  
Other temperature measurement ranges can be ordered  $\pm 0.2$  °C (@25 °C)
- **Accuracy**  $\pm 0.5$  °C (@25 °C)  $\pm 1$  °C (F.S)
- **Power supply** 24VAC/DC ; Compatible with 24Vdc power supply 4-20mA output  
2-wire & 3 wires
- **Output signal** 4-20mA、0-10V、0-5V、RS485
- **Case material** ABS+PC
- **IP protection** IP65

## WR5/WT5

### Outdoor/ Indoor Temperature Sensor and Transmitter



- **Sensing element** WR5: Pt100、Pt1000、Ni1000、NTC1.8K、NTC3K、NTC10K、NTC20K、NTC100K.....  
WT5: Pt1000 (Glass A)
- **Range** 0-50 ℃、0-100 ℃、-20-80 ℃、-40-60 ℃
- **Accuracy** ±0.5 ℃ (@25 ℃) ±1 ℃ (F.S)
- **Power supply** 24VDC/AC ±20%; 24VDC (2-wires)
- **Output signal** 4-20mA、0-10V、0-5V
- **Case material** ABS+PC
- **IP protection** IP65

## WR4DA/WT4DA

### Average Temperature sensor and Transmitter



- **Sensing element** WR4DA: Pt100、Pt1000、Ni1000、NTC1.8K、NTC3K、NTC10K、NTC20K、NTC100K.....  
WT4DA: Pt1000 (Glass A)
- **Range** 0-50 ℃、0-100 ℃、-20-80 ℃、-40-60 ℃
- **Accuracy** ±1 ℃ (F.S)
- **Power supply** 24VDC/AC ±20%; 24VDC (2-wires)
- **Output signal** 4-20mA、0-10V、0-5V
- **Case material** ABS+PC
- **IP protection** IP65

## WR4/WT4

### Probe Type Temperature Sensor and Transmitter



- **Sensing element** WR4: Pt100、Pt1000、Ni1000、NTC1.8K、NTC3K、NTC10K、NTC20K、NTC100K.....  
WT4: Pt1000 (Glass A)
- **Range** 0-50 ℃、0-100 ℃、-20-80 ℃、-40-60 ℃
- **Accuracy** ±0.5 ℃ (@25 ℃) ±1 ℃ (F.S)
- **Power supply** 24VDC/AC ±20%; 24VDC (2-wires)
- **Output signal** 4-20mA、0-10V、0-5V
- **Case material** PC、ABS+PC
- **IP protection** IP65

## WC01

## Carbon Monoxide (CO) Transmitter



- **Range** 0-100PPM or 0-400PPM (Standard)
- **Accuracy** < 5%
- **Power supply** 15-28 VAC / 15-36 VDC
- **Output signal** 4-20mA、0-10V、0-5V、RS485/RS232、SPDT
- **Case material** ABS+PC
- **IP protection** IP30 (Space Type), IP65 (Duct Type)

## WLTC

## Antifreeze Temperature Switch



- **Range** -30-80 °C
- **Electrical connections** Terminal ×3, 1.5mm² Cable
- **Electrical strength** AC1500V/1min (AC1800V/1s)
- **Sensing Element** Copper capillary, φ 2mm, Length 1m/ 3m/ 6m
- **Case material** Optional upper case PC, Lower case fire proof ABS
- **IP protection** IP54

## WEVA

## Damper Actuator



- **Range** -30-50 °C、-40-80 °C
- **Power Supply** 24VAC/DC, 110-220VAC
- **Output Torque** 2 - 40 Nm (Optional)
- **Control type** Analog Type, Switch type
- **IP protection** IP65



## WRH1/ WTH1

### Indoor Temperature & Humidity Sensor and Transmitter



A Type



B Type

- **Range** Temperature: 0-50℃、-20-80℃、-40-60℃  
Humidity: 0-100% RH
- **Accuracy** Temperature:  $\pm 0.5^{\circ}\text{C}$  (@25℃)  
Humidity:  $\pm 2\%$ 、 $\pm 3\%$ 、 $\pm 5\%$  (@25℃ & 20-80% RH)
- **Power supply** 12VDC,  $RL \leq 250\Omega$       24VDC,  $RL \leq 500\Omega$
- **Output signal** 4-20mA、0-10V、0-5V、RS485/RS232
- **Case material** ABS+PC
- **IP protection** IP30

## WRH2/ WTH2

### Duct Type Temperature Sensor & Humidity and Transmitter



- **Range** Temperature: 0-50℃、-20-80℃、-40-60℃  
Humidity: 0-100% RH
- **Accuracy** Temperature:  $\pm 0.3^{\circ}\text{C}$  (@25℃)  
Humidity:  $\pm 2\%$ 、 $\pm 3\%$ 、 $\pm 5\%$  (@25℃ & 20-80% RH)
- **Power supply** 24VAC/DC、24VDC (2-Wires)
- **Output signal** 4-20mA、0-10V、0-5V、RS485/RS232
- **Case material** ABS+PC
- **IP protection** IP65

## WRH5/ WTH5

### Outdoor Temperature & Humidity Sensor and Transmitter



- **Range** Temperature: 0-50℃、0-100℃、-20-80℃、-40-60℃  
Humidity: 0-100% RH
- **Accuracy** Temperature:  $\pm 0.3^{\circ}\text{C}$  (@25℃)  
Humidity:  $\pm 2\%$ 、 $\pm 3\%$ 、 $\pm 5\%$  (@25℃ & 20-80% RH)
- **Power supply** 24VAC/DC、24VDC (2-Wires)
- **Output signal** 4-20mA、0-10V、0-5V、RS485/RS232
- **Case material** ABS+PC
- **IP protection** IP65

## WC02

## Carbon Dioxide (CO2) Transmitter



- **Range** 0-2000 PPM
- **Accuracy** Refer Selection Table
- **Power supply** 24 VAC/ DC
- **Output signal** 4-20mA、0-10V、0-5V、RS485/RS232
- **Case material** ABS+PC
- **IP protection** IP30 (Space Type), IP65 (Duct Type)

## WTV0C

## Air Quality Transmitter



- **Range** WCO2 (equivalent): 0 - 2000 PPM  
WTVOC (equivalent): 0 - 600 PPB
- **Accuracy** ±5%FS
- **Power supply** 24VAC/ DC Power Consumption: ≤ 3W
- **Output signal** 4-20mA / 0-10V / 0-5V
- **Case IP protection** IP65 refer IEC529-598/GB 700-86/ GB 4208

## WPM2B/ WPM2D

## PM2.5 Dust Transmitter



- **Range** 0 - 500  $\mu\text{g} / \text{m}^3$
- **Accuracy** ±10% @ 25°C / 50%RH
- **Power supply** 24VAC/ DC ± 15%
- **Output signal** 4-20mA / 0-10V / Rs485 / Relay contact SPST
- **Case IP protection** IP30 (PM2B) ; IP65 (PM2D)

# WINTERS INSTRUMENTS

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