

Catalog

INSTRUMENTS FOR SEMICONDUCTOR

WISE

www.wisecontrol.com

Pressure
Instruments

Temperature
Instruments

Flow & Level
Instruments

WISE



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Catalog

INSTRUMENTS FOR SEMICONDUCTOR

WISE

UPT100 Series

UHP Pressure Transmitter with Display Indicating Type

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

Analog output: $\pm 0.5\%$ of full span
Display: $\pm 0.5\%$ of full span +1 digit

RANGE

-0.1~0, 0~1MPa

DISPLAY

7-Segment LED, 4-digit, 270°rotatable

WORKING TEMPERATURE

80°C

PRESSURE CONNECTION

Type 316L Stainless steel Electropolished surface
finish $Ra \leq 0.13\mu m$
· 1.125" W or C Seal

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power, 0~5V, 1~5V, 0~10V

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

UPT200 Series

UHP Pressure Transmitter with Display Indicating Type

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

Analog output: $\pm 0.5\%$ of full span
Display: $\pm 0.5\%$ of full span +1 digit

RANGE

-0.1~0, 0~1MPa

DISPLAY

7-Segment LED, 4-digit, 270°rotatable

WORKING TEMPERATURE

80°C

PRESSURE CONNECTION

Type 316L Stainless steel Electropolished surface finish
 $Ra \leq 0.13\mu m$
· 1.125" W or C Seal

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power, 0~5V, 1~5V, 0~10V

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

PT850 Series

UHP Pressure Transmitter (Flameproof Enclosure)

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

$\pm 0.25\%$ of full span

RANGE

-0.1~0, 0~21MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $Ra \leq 0.13\mu m$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXPLOSION PROTECTION

Ex db IIC T6 Gb



UPT852 Series

UHP Pressure Transmitter (Non-incendive Equipment)

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.25% of full span

RANGE

-0.1~0, 0~21MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $Ra \leq 0.13 \mu m$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXPLOSION PROTECTION

Class I, Division 2, Group A, B, C, D; T6...T4
Ex nA IIC T6...T4

UPT853 Series

UHP Pressure Transmitter

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.25% of full span

RANGE

-0.1~0, 0~21MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $Ra \leq 0.13 \mu m$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

PT860 Series

UHP Pressure Transmitter (Flameproof Enclosure)

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.25% of full span

RANGE

-0.1~0, 0~21MPa

WORKING TEMPERATURE

Ambient: -20~70°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $Ra \leq 0.13 \mu m$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXTERNAL ZERO ADJUSTMENT

EXPLOSION PROTECTION

Ex db IIC T6 Gb



UPT861 Series

UHP Pressure Transmitter (Intrinsic Safety)

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.25% of full span

RANGE

-0.1~0, 0~21MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $Ra \leq 0.13 \mu\text{m}$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXTERNAL ZERO ADJUSTMENT

EXPLOSION PROTECTION

Ex ia IIC T4 Ga



UPT862 Series

UHP Pressure Transmitter (Non-Incendive / Increased Safetyequipment)

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.25% of full span

RANGE

-0.1~0, 0~21MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $Ra \leq 0.13 \mu\text{m}$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXTERNAL ZERO ADJUSTMENT

EXPLOSION PROTECTION

Class I, Division 2, Group A, B, C, D; T6...T4
Ex ec IIC T6...T4 | Ex nA IIC T6...T4



UPT863 Series

UHP Pressure Transmitter

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.25% of full span

RANGE

-0.1~0, 0~21MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $Ra \leq 0.13 \mu\text{m}$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXTERNAL ZERO ADJUSTMENT



UPT300 Series

UHP High Performance Pressure Transmitter

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.2% of full span

RANGE

-0.1~0, 0~35MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $R_a \leq 0.13 \mu\text{m}$ (Ra 5)
· Swivel male or female face seal fitting
· Flow through male or female face seal fitting

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power, 1~5V, 0~10V

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 or 316L with electropolished wetted surface

EXTERNAL ZERO ADJUSTMENT

EXPLOSION PROTECTION

Ex ia, nA, e

UPT400 Series

UHP High Performance Pressure Transmitter

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

±0.2% of full span

RANGE

-0.1~0, 0~1MPa

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $R_a \leq 0.13 \mu\text{m}$ (Ra 5)
· Swivel male or female face seal fitting
· 1.125" W or C Seal

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power, 1~5V, 0~10V

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXTERNAL ZERO ADJUSTMENT

UPT700 Series

UHP Hybrid Thermo-Pressure Sensor

TECHNOLOGY

MEMS Piezoresistive effect sensor

ACCURACY

Pressure: ±0.2% of full span
Temperature: $\pm(0.15 + 0.002 | t |)$

RANGE

-0.1~21MPa

TEMPERATURE RANGE

-20~100°C

WORKING TEMPERATURE

Ambient: -20~80°C / Process: -20~100°C

PROCESS CONNECTION

Type 316L double melt electropolished low mount
Surface finish $R_a \leq 0.13 \mu\text{m}$ (Ra 5)
· Swivel male or female face seal fitting
· Modular surface mount

INPUT POWER

12~24VDC

OUTPUT SIGNAL

Pressure: 4~20mA DC 2-wire loop power
Temperature: Pt100, 3-wire, Resistance Output

SENSOR MATERIAL WETTED BY PROCESS

Hastelloy C22 with electropolished wetted surface

EXTERNAL ZERO ADJUSTMENT (ONLY PRESSURE)



CPT100 Series

Acid Proof and Chemical Resistant Pressure Transmitter

ACCURACY

Analog output: $\pm 0.5\%$ of full span

RANGE

0~400 to 0~800kPa

0~0.4 to 0~0.8MPa

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

WORKING TEMPERATURE

Ambient: 15~50°C / Process: 15~90°C

BODY MATERIAL

PTFE(Option: PP or PFA)

SENSOR MATERIAL

Ceramic(Option: Sapphire)

PROCESS CONNECTION

1/4", 3/8", 1/2" Straight MF, MP, PT Thread male

CPT200 Series

Acid Proof and Chemical Resistant Pressure Transmitter

ACCURACY

Analog output: $\pm 0.5\%$ of full span

Display: $\pm 0.5\%$ of full span +1 digit

RANGE

0~400 to 0~800kPa

0~0.4 to 0~0.8MPa

INPUT POWER

12 ~ 24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

WORKING TEMPERATURE

Ambient: 15~50°C / Process: 15~90°C

BODY MATERIAL

PTFE(Option: PP or PFA)

SENSOR MATERIAL

Ceramic(Option: Sapphire)

PROCESS CONNECTION

1/4", 3/8", 1/2" Straight MF, MP, PT Thread male

CPT300 Series

Acid Proof and Chemical Resistant Pressure Transmitter

ACCURACY

$\pm 0.5\%$ of full span

RANGE

0~400 to 0~800kPa

0~0.4 to 0~0.8MPa

INPUT POWER

12~24VDC

OUTPUT SIGNAL

4~20mA DC 2-wire loop power

WORKING TEMPERATURE

Ambient: 15~50°C / Process: 15~90°C

BODY MATERIAL

PTFE(Option: PP or PFA)

SENSOR MATERIAL

Ceramic(Option: Sapphire)

PROCESS CONNECTION

3/4" Flow through MF



P810 Series_EP Grade
P820 Series_EP Grade / Double Melt
P830 Series_BA Grade

UHP Pressure Gauge

NOMINAL DIAMETER

P810, P830: 35(1 1/2"), 50(2"), and 63mm(2 1/2")
P820: 50(2"), and 63mm(2 1/2")

ACCURACY

P810, P830:
Grade A(ASME B40.1): 50(2") and 63mm(2 1/2")
Grade B: 35(1 1/2"), 50(2") and 63mm(2 1/2")

P820:

Grade A(ASME B40.1): 50(2") and 63mm(2 1/2")
Grade B(ASME B40.1): 50(2") and 63mm(2 1/2")

SCALE RANGE

0~25MPa

WORKING TEMPERATURE

Ambient: -40~65°C / Process: Max. 100°C

PRESSURE CONNECTION

Type 316L Stainless steel Electropolished low mount
or center back mount surface finish $Ra \leq 0.25\mu m$
·1/4"NPT male thread
·Swivel male or female face seal fitting

ELEMENT

Type 316L SS
< 6MPa: C-type bourdon tube
≥ 6MPa: Helical type bourdon tube

P840 Series

UHP Pressure Switch

NOMINAL DIAMETER

50mm(2")

SWITCH POINT ACCURACY

±2.0% of full scale

SCALE RANGE

0~25MPa

PRESSURE CONNECTION

316L SS Electropolished low mount or center back
mount surface finish $Ra \leq 0.25\mu m$
·1/4"NPT male thread
·Swivel male or female face seal fitting

ELEMENT

Type 316L SS
< 6MPa: C-type bourdon tube
≥ 6MPa: Helical type bourdon tube

CASE

Type 304SS, Electropolished with pressure relief

CONNECTION

26 AWG, Teflon, 6 feet(2M)

P850 Series

UHP Miniature Pressure Gauge

NOMINAL DIAMETER

28mm

ACCURACY

±3.0% of full sale

SCALE RANGE

-0.1~0.2, -0.1~1MPa

WORKING TEMPERATURE

-5~60°C

PRESSURE CONNECTION

Type 316L Stainless steel Electropolished center
back mount surface finish $Ra \leq 0.25\mu m$
·Swivel male or female face seal fitting
·1.125" W or C Seal

DIAPHRAGM

Type 316L

CASE

Type 304SS



P870 Series

Anti-Corrosion Pressure Gauge

NOMINAL DIAMETER

50mm(2")

ACCURACY

±1.5% of full scale(Only available with 0.6 and 1MPa)
±2.0% of full scale

RANGE

-0.1~0 to 0~1MPa

WORKING PRESSURE

Steady pressure: 75% of full scale

WORKING TEMPERATURE

Ambient: 10~30°C / Process: Max. 150°C

PRESSURE CONNECTION

Fluorine resin(PTFE, PFA)

ELEMENT

Bellows: Fluorine resin(PFA)

CASE AND COVER

PP resin

WINDOW

Screw type PET resin



UFS100 Series

UHP Excess Flow Switch

PROCESS CONNECTION

·Male or female face seal fitting
·Fitting size: 1/4", 1/2"

MATERIAL

Body · Float: 316L SS

WORKING TEMPERATURE

-40~125°C

ALARM POINT

2 / 5 / 10 / 25 / 50 / 100 slpm(N2 at 100psig)

ACCURACY

±10 % of Alarm point (Min. 0.5slpm)

INTERNAL SURFACE FINISH

Ra ≤ 0.13μm

PROOF PRESSURE

150% of Oper. Pressure

BURST PRESSURE

300% of Oper. Pressure



UBS100 Series

UHP Temperature Switch

PERMISSIBLE TEMPERATURE RANGE

-20~115°C

ENCLOSURE RATING

IP65

EXPLOSION PROTECTION

KCs Ex nC IIC T6...T4

MATERIAL

316L SS

ELECTRICAL RATING

Max. 250 Vac / 5A, 125 Vac / 7A, 60 Vdc / 2.2A



UTE Series

Temperature Element

ELEMENT

Thermocouple: K, E, J, T, N, R, S, B
RTD: Pt 100Ω at 0°C

TOLERANCES ON TEMPERATURE READING

Thermocouple:
Class 1, Class 2
(DIN/IEC584-2, BS/EN60584-2, JIS C1602)
Special, Standard (ASTM E230, E988, ISA-MC96.1)

RTD:

Class A: $\pm(0.15 + 0.002 |t|)$
Class B: $\pm(0.3 + 0.005 |t|)$

SHEATH OUTER DIAMETER

Thermocouple: 1.0, 1.6, 2.3, 3.2, 4.8, 6.4, 8.0, 9.5
and 12.7mm
RTD: 3.2, 4.8, 6.4 and 8.0mm

SENSING ELEMENT STRUCTURE

316L SS

ELECTRICAL RATING

Protection tube or sheathed



BTT3000·A7100 Series

Slim Type Temperature Transmitter· Integral Type Thermowell

PROCESS CONNECTION

G 3/8" (F) (With well type)

MATERIAL

316L SS

WORKING TEMPERATURE

Ambient: -40 to 85°C
Process: -50 to 200°C (With well type)

POWER SUPPLY

DC 10~30V

INPUT

RTD: Pt100Ω at 0°C (A Class)
RTD: Pt100Ω at 0°C (B Class)

OUTPUT

4~20 mA / DC 2-wire loop powered technique

CABLE CONNECTION

M12 Connection

RESPONSE TIME(10~90%)

≤ 2seconds

SURFACE ROUGHNESS OF WETTED PART

Ra ≤ 0.64μm



Semiconductor Experience List

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YMTC



SMIC



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ASML

SEMES

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WONIK Materials



Wonik IPS



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Organization



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