

**VTHP550****Ultra High****Pressure Transmitters****FEATURES**

- Integral pressure cavity preventing leakage.
- One-body sensor core design providing high pressure overload resistance.
- Reverse Polarity Protection on Input
- Micro-fused technology for long term stable linearity and repeatability performance.
- Up to $\pm 0.5\%$ Accuracy
- Up to $\pm 1\%$ Total Error Band
- -40°C to $+120^{\circ}\text{C}$ Operating Temperature
- Weatherproof

SPECIFICATIONS

- Superior material and design on thread providing safety for long term ultra high pressure applications
- Variety of pressure ports and electrical configurations
- Optional damper
- CE compliant and weatherproof
- Gage, compound

APPLICATIONS

- Water jet cutting; water knife cutting
- Test-bed
- Large hydraulic press
- Ultra-high booster pump
- High-pressure pasteurization; pasteurization
- High pressure cleaning

PressureRange (MPa)	Pressure range (Bar)	Pressure range (Psi)	Gage	Absolute	Compound
0 to 160	0 to 1600	23206	•		
0 to 250	0 to 2500	36259	•		
0 to 400	0 to 3500	58015	•		
0 to 500	0 to 5000	72518	•		
0 to 600	0 to 6000	87022	•		
0 to 700	0 to 7000	101526	•		

Intermediate ranges available upon request. Ambient Temperature: 25°C (unless otherwise specified)

PERFORMANCE SPECIFICATIONS

Ambient Temperature: 25° C (unless otherwise specified)					
PARAMETERS	Min	Typical	Max	Unit	Remarks
Accuracy (including non-linearity)		0.5		%F.S. BFSL	A
hysteresis, repeatability		0.5		%F.S. BFSL	B
Insulation (signal relative housing)	100			MΩ	@250VDC
Pressure cycle life	1X10 ⁷			Zero to full range pressure cycle	
Overload pressure	2X			Rated	No more than the thread connection strength
Breakdown Pressure	3X			Rated	No more than the thread connection strength
Long-term stability (year)		±0.25		%F.S	
Comprehensive Accuracy	-1	±1	1	%F.S	Within the compensation temperature range
Compensation temperature range	-20		120	°C	
Operating temperature range	-40		120	°C	
Storage temperature range	-55		+150	°C	
load (R _L)	RL > 100k			Ω	Voltage output
load (R _L)	< (Voltage Supply-9V) / 0.02A			Ω	Current output
Power consumption current			10	mA	Voltage output
Response time (10% to 90%)	<2ms (Voltage output); <3ms (Current output)				
Membrane material	17-4PH (Class A)				
Impact Force	50g, 11msec Half Sine Shock per MIL-STD-202G, Method 213B, Condition A				
Vibration	±20g, MIL-STD-810C, Procedure 514.2-2, Curve L				

For custom configurations, consult factory.

Notes

Compensated Temperature: The temperature range over which the product will produce an output proportional to pressure within the specified performance limits.

Operating Temperature: The temperature range over which the product will produce an output proportional to pressure but may not remain within the specified performance limits.

Storage Temperature: The temperature range over which the product can be stored safely in occasions without pressure applied or power input and remains rated performance. Beyond this temperature range may cause permanent damage to the product.

All configurations are built with supply voltage reverse and output short-circuit protections.

CE Compliance (For reference only)

EN 55022 Emissions Class A & B

IEC 61000-4-2 Electrostatic Discharge Immunity (8kV contact/15kV air)

IEC 61000-4-3 Radiated, Radio-Frequency Electromagnetic Field Immunity (10V/m, 80M-1GHz)

IEC 61000-4-4 Electrical Fast Transient Immunity (1kV)

IEC 61000-4-5 Surge Immunity (V+ to V-: $\pm 2\text{KV}/42\Omega$; L to Case: $\pm 1\text{KV}/12\Omega$; V- to V0: $\pm 1\text{KV}/42\Omega$)

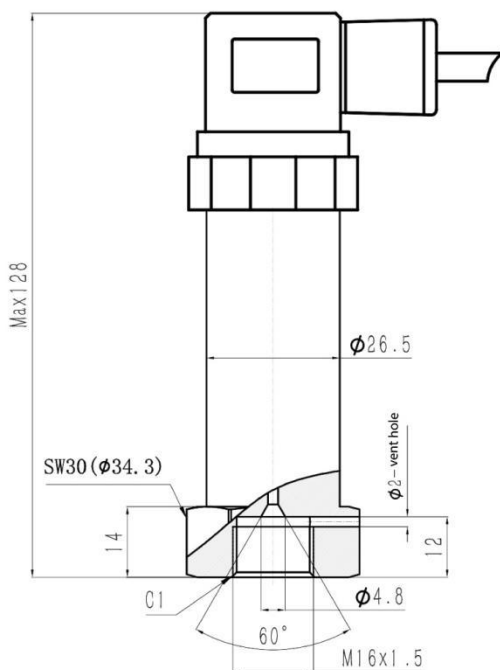
IEC 61000-4-6 Immunity to Conducted Disturbances Induced by Radio Frequency

Fields (150K~80MHz, 10V level for voltage output models, 3V level for current output model)

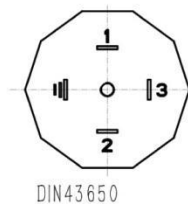
IEC 61000-4-9 Pulse Magnetic Field Immunity (100A/m peak)

For all CE compliance tests, max allowed output deviation $\pm 1.5\%$ F.S.

Dimension [mm]



Wiring Definition

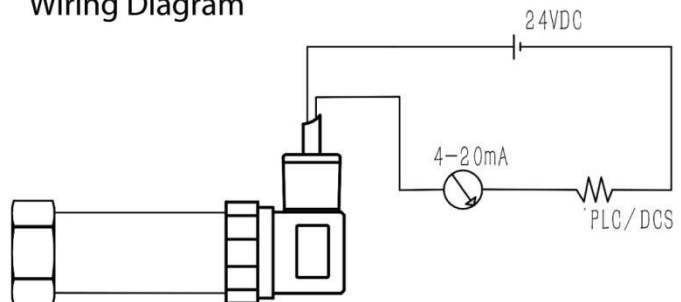


PIN1: +24VDC (Signal)

PIN2: 0V (Signal)

out: (4-20) mA

Wiring Diagram

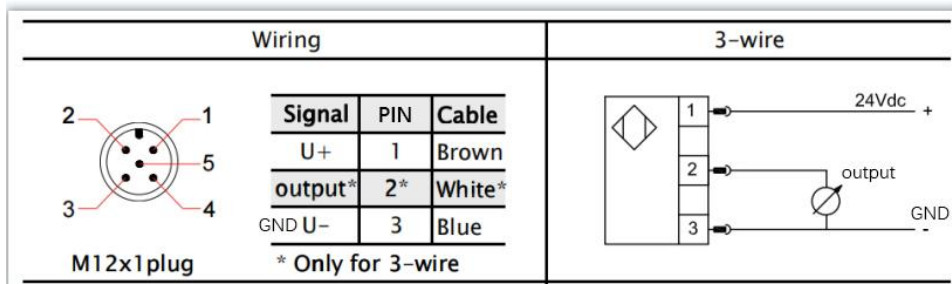


CODE	PRESSURE PORT TYPE		
	PORT	DIM "A"	DIM "B"
1	G1/4 JIS B2351	0.472 [12.00]	0.3 [8.0]
2	M20 x 1.5 mm ISO 6149-2	0.661 [16.8]	0.3 [8.0]
3	1/4-18 NPT	0.600 [15.24]	0.3 [8.0]
4	7/16-20UNF FEMALE SAE J513 STRAIGHT THREAD WITH INTEGRAL VALVE DEPRESSOR	0.687[17.5]	0.3 [8.0]
5	M14 x 1.5 mm ISO 6149-2	0.472[12.0]	0.3 [8.0]
6	1/8-27 NPT	0.390[9.91]	0.3 [8.0]
7	M12 x 1.5 mm ISO 6149-2	0.472[12.0]	0.3 [8.0]
8	M10 x 1.0 mm ISO 6149-2	0.374[9.5]	0.3 [8.0]
9	G1/4 DIN 3852 FORM E GASKET DIN3869-14 NBR	0.512 [13.00]	0.3 [8.0]

WIRING DIAGRAMS

Circular connector M12 x 1 (4-pin)

	2-wire	3-wire
		
UB	1	1
OV	3	3
S+	-	4



CODE	CONNECTION TYPE	DIM C (MAX)
1	CABLE 3 FT	1.97 [50.0]
2	CABLE 10 FT	1.97 [50.0]
3	PACKARD CONNECTOR	2.10 [53.5]
4	NEBU-M12 CONNECTOR	1.71 [43,5]
5	FORM A CONNECTOR	1.93 [49.0]

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IEC 61000-4-5 Surge Immunity (V+ to V-: $\pm 2KV/42\Omega$; L to Case: $\pm 1KV/12\Omega$; V- to V0: $\pm 1KV/42\Omega$)

IEC 61000-4-6 Immunity to Conducted Disturbances Induced by Radio Frequency

Fields (150K~80MHz, 10V level for voltage output models, 3V level for current output model)

IEC 61000-4-9 Pulse Magnetic Field Immunity (100A/m peak)

For all CE coFpliance tests, max allowed output deviation $\pm 1.5\%$ F.S

WATERPROOF

WEATHER-PROOF RATING	
CONNECTION	P CODE
PACKARD CONNECTOR	IP66
CABLE	IP67
M12 CONNECTOR	IP67
FORM A CONNECTOR	IP65

OUTPUTS

CODE	OUTPUT SIGNAL	SUPPLY VOLTAGE
1	0.5 - 4.5V	5 ± 0.25V
	RATIOMETRIC	PROTECTED to 16V
2	1 - 5V	8 - 36V
3	4 - 20mA	9 - 36V
4	0 - 5V	8 - 36V
5	0 - 10V	13 - 36V
6	1 - 6V	8 - 36V
7	0.5 - 4.5V	7.5- 36V
8	I2C	3.3V or 5V

WIRING

Current Output Wiring					
CONNECTION	+SUPPLY	-SUPPLY	NC. PINS		P REF VENT
Packard, A	A	B	C		Hole Through Connector
Packard, B	B	A	C		
FORM A	1	2	3,4		
M12	1	2	3,4		
CABLE	RED	BLK			Pipe In Cable
Voltage Output Wiring					
CONNECTION	+SUPPLY	+OUTPOT	COMMON	NC. PINS	P REF VENT
Packard, A	A	C	B		Hole Through Connector
Packard, B	B	C	A		
FORM A	1	3	2	4	
M12	1	3	2	4	
CABLE	RED	WHT	BLK		Pipe In Cable

CONNECTION TYPES

CONNECTION	DESCRIPTION	MATING HOUSING P/N	MATING TERMINAL PIN
Packard	3-PIN METRI-PACK 150	12078090	12103881, QTY 3
M12	BINDER SERIES 713, 09 3431 77 04 OR EQUIV	4-POS FEMALE CONNECTOR	
FORM A	OMAL ARB03S or ARB03R	OMAL AHB6733 3+PE	

ORDERING INFORMATION

VTHP550	3	4	1	0	0	5	40000P	G
Model	Output Signal	Connection Type	Port Material	Snubber	Label	Pressure Port	Pressure Range	Pressure Type
VTHP550	1:0.5 - 4.5V RATIOMETRIC	1: CABLE	1:304Screw+ 17-4Diaphragm	0: No Snubber	0: No Lable (OEM)	1: G1/4 JIS B2351	40000psi B: Bar M: Mpa P: PSI K: Kpa	G: Gage
	2: 1 - 5V	2: PACKARD A	2: 17-4 Integral Screw	1: Witn Snubber	1: Adhesive Labe	2:M20 x 1.5 3: 1/4-18 NPT		C: Compound
	3: 4 - 20mA	3: PACKARD B	3: *SST316L Port+304 Hex		2: Laser Marking	4: 7/16-20UNF FEMALE SAE		
	4: 0 - 5V	4: M12	X:Customer SPecial			5: M16 x 1.5 FEMALE SAE		
	5: 0 - 10V	5: FORM A				6: 1/8-27 NPT		
	6: 1- 6V					7:M12 x 1.5		
	7: 0.5 - 4.5V					8: M10 x 1.0		
	8: I ² C					9: G1/4 DIN 3852		
	X: Customer					A: G3/8 JIS B2351 X: Customer Special		

Order code : VTHP550-341005-40000PG