GP:50

AEROSPACE

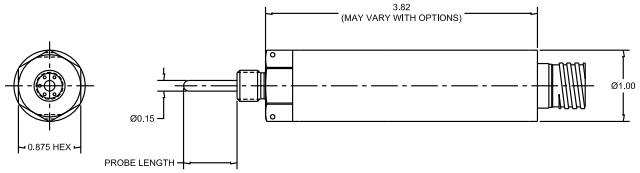
MODEL 7880

DUAL - PRESSURE & TEMPERATURE TRANSDUCER

STANDARD WIRING CONFIGURATION*

PIN	DUAL 4-20mA OUTPUT	3-WIRE OUTPUT WITH DUAL VDC
A/1	+EXC/SIG (PRESS)	+EXC (PRESS)
B/2	-EXC/SIG (PRESS)	+SIG (PRESS)
C/3	+EXC/SIG (TEMP)	-EXC/SIG (PRESS)
D/4	-EXC/SIG (TEMP)	+EXC (TEMP)
E/5	N/C	+SIG (TEMP)
F/6	N/C	-EXC/SIG (TEMP)

*FOR NON-STANDARD WIRING CONFIGURATION (MR) SEE SALES ORDER



See page two for additional wiring options.

REF DIMENSIONS ONLY.
CONSULT FACTORY FOR ACTUAL DIMENSIONS.

PRODUCT OVERVIEW:

GP:50's 7880 aerospace grade pressure and temperature transducer provides reliable measurements from -65 °F to +250 °F (-59 °C to +121 °C) while withstanding the harsh conditions associated with space exploration. The compact size and rugged design are an excellent choice for on-board space flight or military vehicle applications where space and weight constraints are critical.

FEATURES:

- Dual pressure and temperature outputs
- Operating ranges from -65 °F to +250 °F (-54 °C to +121 °C)
- Lightweight, 8 oz (0.2 kg)
- Dual analog outputs
- 100 or 1000 Ω platinum RTD on temperature
- Pressure ranges from 0-1 PSI thru 0-15,000 PSI

APPLICATIONS:

- Propulsion systems
- Military and defense applications
- Space flight vehicles
- Military vehicles

OPTIONS:

- 0 to 5 Vdc or 0 to 10 Vdc output (4-wire isolated option)
- 4-20 mA output
- Digital outputs: CanBUS, RS485 or USB
- 2, 3 or 4 wire RTD
- Hydrogen or LOX compatibility options
- Custom probe lengths
- Various MIL-SPECS available. Consult factory.

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GP:50 MODEL 7880

REFERENCE SPECIFICATIONS (Standard configurations shown, consult factory for other options)

ELECTRICAL	
Output Signal:	Pressure: 4-20 mA 0 to 5 Vdc or 0 to 10 Vdc or (isolated options) CanBUS or RS485 Options Temperature: 4-20 mA 0 to 5 Vdc or 0 to 10 Vdc or (isolated options) CanBUS or RS485 Options 100 Ohm 2 wire Platinum RTD 0.00385 Alpha Ω/ Ω/deg C, Class B 1000 Ohm 2 wire Platinum RTD 0.00385 Alpha Ω/ Ω/deg C, Class B
Excitation Voltage:	10 to 36 Vdc (Options may affect this)
RLoad max:	(4-20 mA)=((Power supply Voltage - 9.0V) / .020) - Wire Resistance. (Options may affect this, consult factory)
Circuit Protection:	EMI/RFI, some options may affect ratings
Response Time:	Pressure: <4 ms Temperature: <2 Seconds

MATERIALS OF CONSTRUCTION	
Sensor/Probe:	17-4 PH (316SS, Inconel, Monel or Nitronic 50 available)
Housing:	316 Stainless Steel
O-Ring:	Buna-N (Nitrile) is standard.
Internal Fill:	Fomblin oil fill <300 PSI (Consult factory for options)

ACCURACY (RSS): Hysteresis, Non-Linearity & Repeatability @ +70 °F	
Standard:	Pressure: ≤±0.3% FSO Temperature: <±3.0% FSO, (±1.0% FSO optional)
Non-linearity:	≤±0.20% FSO (Typ)
Hysteresis:	≤±0.1% FSO (Typ)
Repeatability:	≤±0.1% FSO (Typ)
Zero Balance:	±1.0% FSO
Span Balance:	±1.0% FSO

(BFSL method used. Improved options available.)

Calibration:	NIST Traceable Cert
Workmanship:	IPC-A-610 Soldering
Quality System:	AS9100

Options may affect specifications.
Please consult factory for your specific needs.

MECHANICAL	
Process Connection:	per AS930-4
Electrical Connection:	D38999 standard, options available
Probe Length:	1" From port end (optionals lengths and ports available)
Proof Pressure:	1.5X or 22.5X Max whichever is less (May affect Probe size)
Burst Pressure:	2X-5X, range dependent
Approximate Weight:	8 oz (0.2 kg)

PRESSURE RANGES
15 thru 0 to 15K PSIA, PSIG or PSISG options (1 thru 1,034 BAR)

PRESSURE TRANSMITTER THERMAL SPECIFICATIONS	
Operating Range:	-65 °F to +250 °F (-54) °C to +121 °C)
Compensated Range:	0 °F to +180 °F (-17.8 °C to +82 °C)
Compensated Ranges from -65 °F to +250 °F (-54 °C to +121 °C) available	
Effect on Zero & Span:	±1.0% FSO/100 °F (Improved specifications available)

STANDARD WIRING CONFIGURATION*

	PIN	DESCRIPTION WITH 3-WIRE RTD	DESCRIPTION WITH 2-WIRE RTD
4-20mA OUTPUT	A/1	+EXC/SIG (PRESS)	+EXC/SIG (PRESS)
	B/2	N/C	N/C
	C/3	RTD**	N/C
	D/4	-EXC/SIG (PRESS)	-EXC/SIG (PRESS)
	E/5	RTD**	RTD
	F/6	RTD	RTD

	PIN	DESCRIPTION WITH 3-WIRE RTD	DESCRIPTION WITH 2-WIRE RTD
VDC 3-WIRE OUTPUT	A/1	+EXC (PRESS)	+EXC (PRESS)
	B/2	+SIG (PRESS)	+SIG (PRESS)
	C/3	RTD**	N/C
	D/4	-EXC/SIG (PRESS)	-EXC/SIG (PRESS)
	E/5	RTD**	RTD
	F/6	RTD	RTD

*FOR NON-STANDARD WIRING CONFIGURATION CONSULT FACTORY
**JUMPERED

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