MODEL 7730
DUAL CRYOGENIC PRESSURE & TEMPERATURE TRANSDUCER
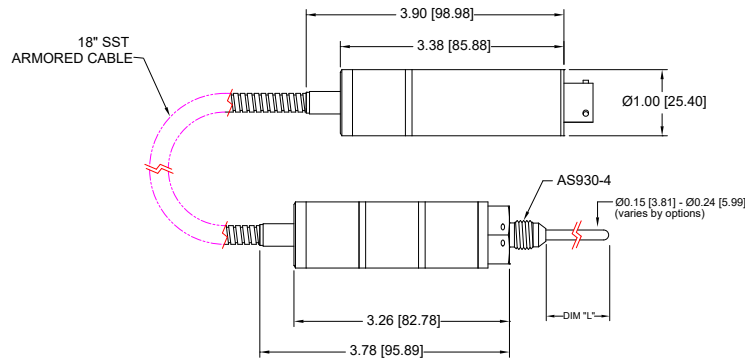
STANDARD WIRING

PIN	VDC	4-20mA
A/1	+EXC	+EXC/SIG
B/2	+SIG	N/C
C/3	-SIG	N/C
D/4	-EXC	-EXC/SIG
E/5	RTD	RTD
F/6	RTD	RTD

L = 0.50 TO 7.00 INCH PROBE LENGTH

**REF DIMENSIONS ONLY.
CONSULT FACTORY FOR ACTUAL DIMENSIONS.**

PRODUCT OVERVIEW:

GP:50's 7730 cryogenic series provides pressure and temperature measurement in one device down to -320 °F (-196 °C). The remote mounted electronics offers a high level output of 4-20 mA, 0 to 5 Vdc or various digital protocols at high accuracies. 100 or 1,000 Ω platinum RTD is available as well as dual analog outputs.

FEATURES:

- Cryogenic service down to -320 °F (-196 °C)
- Isolated electronics provide 4-20 mA, 0-5 Vdc or digital outputs
- Remote electronics via stainless steel armored cable
- High accuracy, 0.3% RSS standard
- Lightweight, <10 oz. (0.2 kg)
- Hydrogen and LOX compatibility options available
- Platinum RTD

APPLICATIONS:

- Liquefied fuel pressures
- Manifolds, propulsion systems
- Military and defense programs
- Liquid gas custody transfer

OPTIONS:

- 0 to 5 Vdc, 0 to 10 Vdc or 4-20 mA output
- RS232, RS485 and Can outputs
- Custom probe lengths
- Zero and span adjustments
- Optional electrical connections
- High-temp version to +350 °F (+177 °C) (see Model 7780)
- Various MIL-SPECS available. Consult factory.

A5SL-054
REV-L

GP:50 MODEL 7730

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

ELECTRICAL

Output Signal:	0 to 5 Vdc, 0 to 10 Vdc (3- and 4-wire isolated or non-isolated) and 4-20 mA
Temperature Output:	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:	9 to 32 Vdc, 14-32 Vdc for 0-10V, and isolated output
Circuit Protection:	EMI/RFI, some options will affect EMR/RFI rating
Response Time:	Pressure: <4 ms Temperature: <2 seconds

MATERIALS OF CONSTRUCTION

Wetted Parts:	Inconel 718 Standard (17-4-PH SST, Nitronic 50 or Monel available)
Housing:	316 Stainless Steel
Armored Cable:	Braided 316L

ACCURACY   (RSS): Hysteresis, Non-Linearity & Repeatability @ +70 °F

Static Accuracy (RSS):	≤±0.3% FSO
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:	ISO 9001

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

MECHANICAL

Process Connection:	AS930-4 pressure port
Electrical Connection:	MIL PTIH-10-6P standard, options available
Probe Length (Temp):	0.75" to 7" available
Proof Pressure:	1.5X pressure range
Burst Pressure:	2X pressure range
Approximate Weight:	<10 oz. (0.2 kg)

PRESSURE RANGES

Standard Ranges:	0 to 300 thru 0 to 6K PSIA, PSIS (21 thru 413 BAR)
Consult factory for ranges <300 or >6,000 PSIA, PSIS	

TEMPERATURE RANGES

-320°F to +70 °F (-200 °C to +20 °C)

THERMAL SPECIFICATIONS

Operating Range:	(Ambient) -40 °F to +185 °F (-40 °C to +85 °C) (Process) -320 °F to +250 °F (-196 °C to +121 °C)
Compensated Range:	-320 °F to +70 °F (-196 °C to +21.1 °C)
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

AEROSPACE

GP:50