

ULTRA HIGH-PRESSURE TRANSDUCER WITH HIGH OPERATING TEMPERATURE RANGE

mV/V Output

0-5000 to 0-200,000 psi

0-350 to 0-14,000 bar

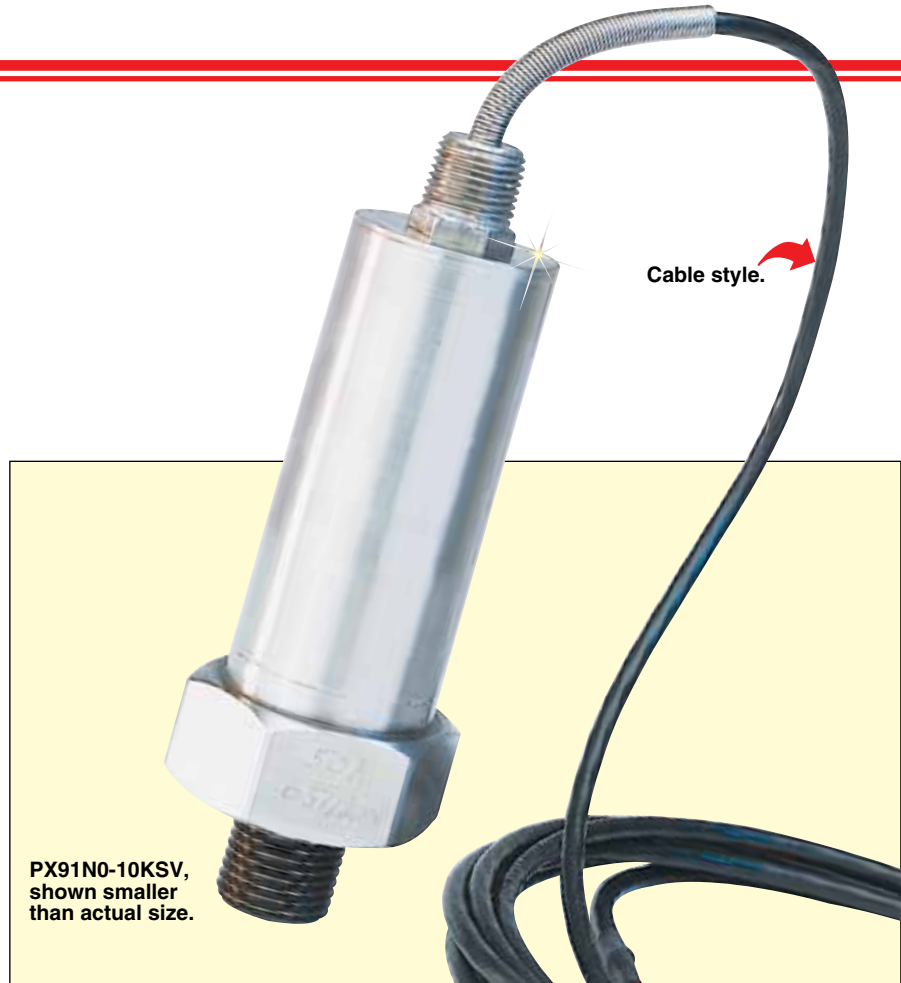
1 bar = 14.5 psi

1 kg/cm² = 14.22 psi

1 atmosphere = 14.7 psi = 29.93

inHg = 760.2 mmHg = 1.014 bar

PX91 Series



- ✓ All Stainless Steel Construction
- ✓ High Operating Temperature, up to 204°C (400°F)
- ✓ Hermetically Sealed for Harsh Environments

OMEGA's PX91 is a rugged, ultra-high pressure transducer series. Hermetically sealed, with all stainless steel construction, it is designed for use in test chambers. The PX91 is available in sealed gage pressures up to 200,000 psi. It has a high operating temperature up to 204°C (400°F). The pressure connection is via a high-pressure ferrule connection.

To Order			
RANGE		MODEL NO.	COMPATIBLE METERS**
CABLE STYLE, SEALED GAGE PRESSURE			
0 to 5000 psi	0 to 345 bar	PX91N0-5KSV	DP41-S, DP25B-S
0 to 10,000 psi	0 to 689 bar	PX91N0-10KSV	DP41-S, DP25B-S
0 to 15,000 psi	0 to 1034 bar	PX91N0-15KSV	DP41-S, DP25B-S*
0 to 20,000 psi	0 to 1379 bar	PX91N0-20KSV	DP41-S, DP25B-S*
0 to 30,000 psi	0 to 2068 bar	PX91N0-30KSV	DP41-S, DP25B-S*
0 to 35,000 psi	0 to 2413 bar	PX91N0-35KSV	DP41-S, DP25B-S*
0 to 50,000 psi	0 to 3447 bar	PX91N0-50KSV	DP41-S, DP25B-S*
0 to 60,000 psi	0 to 4137 bar	PX91N0-60KSV	DP41-S, DP25B-S*
0 to 80,000 psi	0 to 5516 bar	PX91P0-80KSV	DP41-S, DP25B-S*
0 to 100,000 psi	0 to 6895 bar	PX91P0-100KSV	DP41-S, DP25B-S*
0 to 120,000 psi	0 to 8274 bar	PX91P0-120KSV	DP41-S, DP25B-S*
0 to 150,000 psi	0 to 10,342 bar	PX91P0-150KSV	DP41-S, DP25B-S*
0 to 200,000 psi	0 to 13,790 bar	PX91P0-200KSV	DP41-S, DP25B-S*

Comes complete with 5-point NIST traceable calibration.

Metric ranges available – consult Engineering.

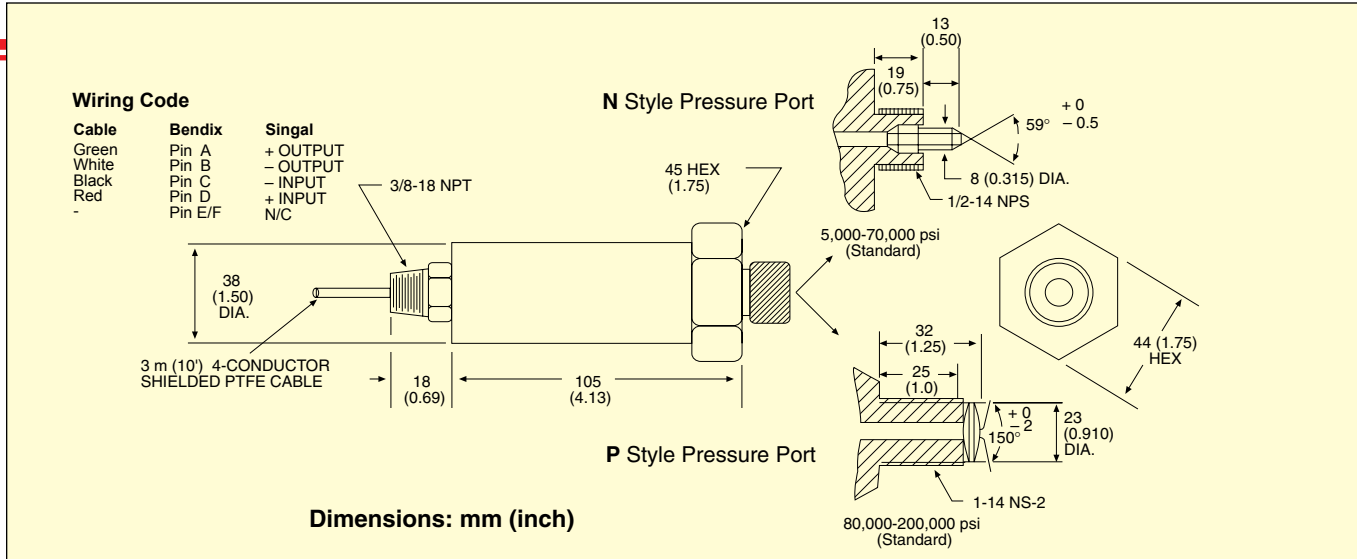
* 4-digit meter. ** Visit us online for compatible meters.

Ordering Examples: PX91P0-100KSV, 100,000 psi sealed gage model with 1-14 NS fitting and 3 m (10') cable.

PX91N0-15KSV, 15,000 psi sealed gage model with 1/2-14 NPSM fitting and 3 m (10') cable.

HIGH-TEMPERATURE/HIGH-PRESSURE TRANSDUCER

SPECIALTY
PRESSURE TRANSDUCERS
B



SPECIFICATIONS

mV/V Output

Excitation: 10 Vac/Vdc (15V max)

Output: 1 mV/V ±0.5%

Bridge Resistance: 350 Ω nominal

Zero Balance: ±2.5%

Linearity:

≤70K psi: ±0.35% FSO

>70K psi: ±0.50% FSO

Hysteresis: ±0.10% FSO

Repeatability: ±0.10% FSO

Operating Temp Range:

-56 to 204°C (-70 to 400°F)

Compensated Temp Range:

21 to 218°C (70 to 425°F)

Thermal Effects:

Span: 0.01% rdg/°F

Zero: 0.01% FSO/°F

Proof Pressure:

≤70K psi: 120% of rated pressure

>70K psi: 110% of rated pressure

Burst Pressure:

≤70K psi: 150% of rated pressure

>70K psi: 120% of rated pressure

Wetted Parts:

≤70K psi: 17-4 PH stainless steel

>70K psi: 455 stainless steel

Pressure Port:

≤70K psi: ½-14 NPSM

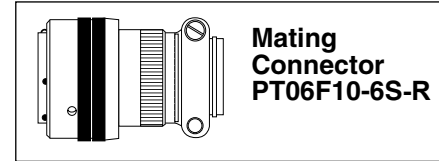
(use with 0.315" dia. 59° ferrule)

>70K psi: 1-14 NS-2

(use with 0.910" dia 150° ferrule)

Electrical Connection:

3 m (10') 4-conductor shielded cable



CUSTOM CONFIGURATIONS

PX91 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (psi) [3]	UNITS [4]	OUTPUT [5]	OPTIONS [6]
			5K	S = Sealed gage	V = mV/V	Visit us online for additional options.
			10K			
			15K			
			20K			
			30K			
			35K			
			50K			
			60K			
			80K			
			100K			
			120K			
			150K			
			200K			
<p>To order a custom configuration:</p> <ol style="list-style-type: none"> 1. Select a pressure port 2. Select electrical connection 3. Select a pressure range 4. Select pressure units 5. Select output 						

Metric ranges available – consult Engineering.

To order extra cable on cable style models, add suffix “-(length in feet) FT” for additional cost per foot beyond the standard 3 m (10') length.

Ordering Examples: PX91N0-50KSV-25FT, 50,000 psi sealed gage pressure range model with mV/V output, ½-14 NPSM fitting and 7.6 m (25') cable.

PX91P0-100KSV, 100,000 psi sealed gage pressure range model with mV output, 1-14 NS-2 fitting and 3 m (10') cable.

ULTRA-HIGH-PRESSURE TRANSDUCERS CABLE OR CONNECTOR STYLE

0-5 Vdc Output
0-5000 to 0-200,000 psi
0-350 to 0-14,000 bar

1 bar = 14.5 psi
1 kg/cm² = 14.22 psi
1 atmosphere = 14.7 psi = 29.93 inHg = 760.2 mmHg = 1.014 bar

PX91 Series



PX91N1-30KS5T



Both models shown smaller than actual size.

PX91N0-30KS5T

Cable style.



- ✓ Ranges Up to 200,000 psi
- ✓ High Operating Temperature, Up to 121°C (250°F)
- ✓ Hermetically Sealed for Harsh Environments
- ✓ Internal Shunt Resistor

OMEGA's PX91 amplified output series comprises rugged, high-temperature/ultra-high-pressure transducers. They are hermetically sealed, with all stainless steel construction, and are designed for the harshest test chamber environments. The PX91 is available in sealed gage pressures from 5000 psi to 200,000 psi. The electrical connection is either a sealed connector or a lightning-protected, amplifier housing. The pressure connection is via a high-pressure ferrule.

To Order

RANGE	MODEL NO.	COMPATIBLE METERS**
SEALED GAGE PRESSURE – [*] INSERT "0" FOR CABLE OR "1" FOR CONNECTOR		
0 to 5000 psi	0 to 345 bar	PX91N[*]-5KS5T DP41-E, DP25B-E, DP24-E
0 to 10,000 psi	0 to 689 bar	PX91N[*]-10KS5T DP41-E, DP25B-E, DP24-E
0 to 15,000 psi	0 to 1034 bar	PX91N[*]-15KS5T DP41-E, DP25B-E*, DP24-E*
0 to 20,000 psi	0 to 1379 bar	PX91N[*]-20KS5T DP41-E, DP25B-E*, DP24-E*
0 to 30,000 psi	0 to 2068 bar	PX91N[*]-30KS5T DP41-E, DP25B-E*, DP24-E*
0 to 35,000 psi	0 to 2413 bar	PX91N[*]-35KS5T DP41-E, DP25B-E*, DP24-E*
0 to 50,000 psi	0 to 3447 bar	PX91N[*]-50KS5T DP41-E, DP25B-E*, DP24-E*
0 to 60,000 psi	0 to 4137 bar	PX91N[*]-60KS5T DP41-E, DP25B-E*, DP24-E*
0 to 80,000 psi	0 to 5516 bar	PX91P[*]-80KS5T DP41-E, DP25B-E*, DP24-E*
0 to 100,000 psi	0 to 6895 bar	PX91P[*]-100KS5T DP41-E, DP25B-E*, DP24-E*
0 to 120,000 psi	0 to 8274 bar	PX91P[*]-120KS5T DP41-E, DP25B-E*, DP24-E*
0 to 150,000 psi	0 to 10,342 bar	PX91P[*]-150KS5T DP41-E, DP25B-E*, DP24-E*
0 to 200,000 psi	0 to 13,790 bar	PX91P[*]-200KS5T DP41-E, DP25B-E*, DP24-E*

Comes complete with 5-point NIST traceable calibration.
Metric ranges available – consult Engineering.

* 4-digit meter.

** Visit us online for compatible meters.

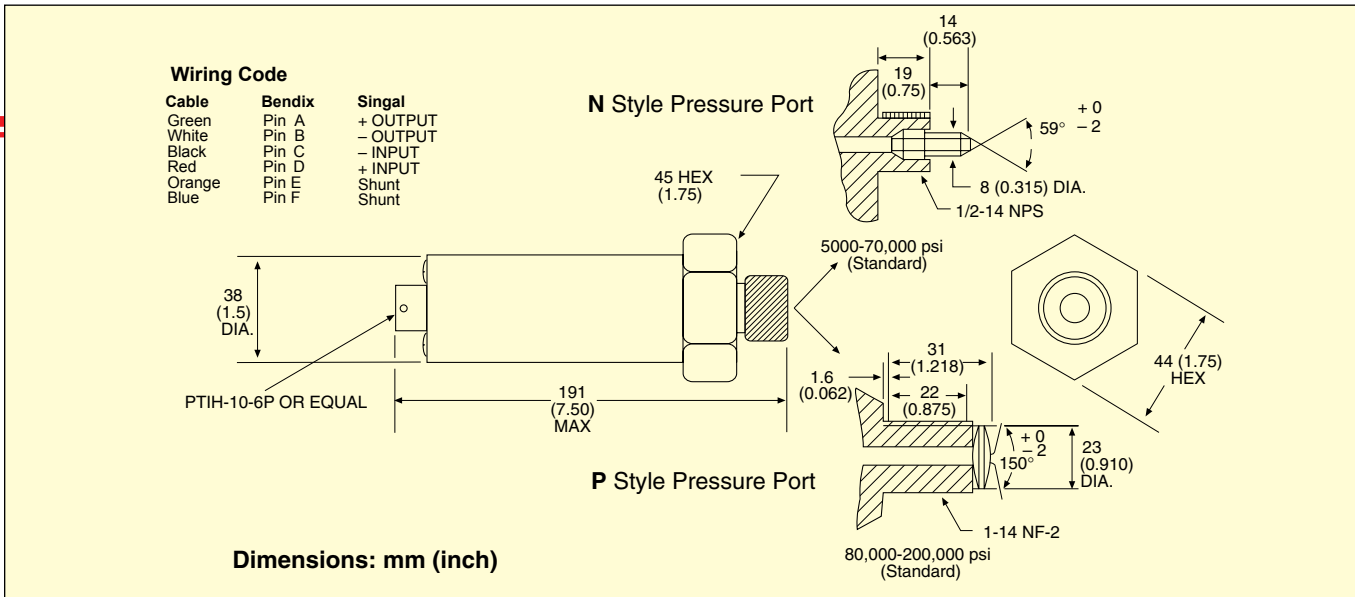
[*] Insert "0" for 3 m (10') cable, "1" for connector style or "5" for amplifier housing.

Ordering Examples: PX91N1-60KS5T, 60,000 psi sealed gage model with 0 to 5 Vdc output, 1/2 -14 NPSM fitting, connector style. PT06F10-6S-R, mating connector (sold separately).

PX91P0-80KS5T, 80,000 psi sealed gage model with 0 to 5 Vdc output, 1-14 NS fitting and 3 m (10') PTFE cable.

ULTRA-HIGH-PRESSURE TRANSDUCERS

SPECIALTY
PRESSURE TRANSDUCERS
B



SPECIFICATIONS

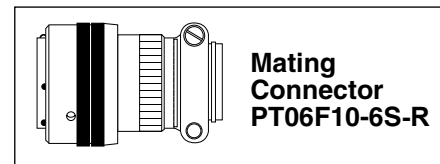
Excitation: 28 Vdc ± 4 V
Output: 0 to 5 Vdc $\pm 10\%$ adj
Zero Balance: 0 V $\pm 10\%$ FSO adj
Non-Linearity:
 ≤ 70 K psi: 0.35% FS
 > 70 K psi: 0.5% FS
Hysteresis: 0.10% FS
Repeatability: 0.10% FS
Operating Temp Range:
 -46 to 121°C (-50 to 250°F)
Shunt: 80% FSO
Compensated Temp Range:
 17 to 71°C (60 to 160°F)

Thermal Effects:
Span: 0.005% rdg/ $^\circ\text{F}$
Zero: 0.005% FSO/ $^\circ\text{F}$
Proof Pressure:
 ≤ 50 k PSI: 120% of rated pressure
 > 50 k PSI: 110% of rated pressure
Burst Pressure:
 ≤ 50 k PSI: 150% of rated pressure
 > 50 k PSI: 120% of rated pressure
Wetted Parts:
 ≤ 70 K: 17-4 PH SS
 > 70 K: 455 SS

Pressure Port:
 ≤ 70 K psi: $\frac{1}{2}$ -14 NPSM (fits 0.315" dia. 59° ferrule)
 > 70 K psi: 1-14 NS-2 (use 0.910" dia. 150° ferrule)

Electrical Connection:
 PTIH-10-6P or 10' cable
Optional: Lightning-protected amplifier housing

Mating Connector: For connector style, PT06F10-6S-R (sold separately)



CUSTOM CONFIGURATIONS

PX91 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (psi) [3]	UNITS [4]	OUTPUT [5]	OPTIONS [6]
Ranges $\leq 70,000$ psi N = $\frac{1}{2}$ -14 NPSM (use with 0.315" dia. 59° ferrule) Ranges $> 70,000$ psi P = 1-14 NS-2 (use with 0.910" dia. 150° ferrule)			5K 10K 15K 20K 30K 35K 50K 60K 80K 100K 120K 150K 200K	S = Sealed gage	5T = 0 to 5 Vdc	Visit us online for additional options, including extended compensated temperatures.
0 = 3 m (10') cable + add cost/ft over 3 m (10') 1 = PTIH-10-6P connector (or equal, no charge) Mating connector (sold separately), order PT06F10-6S-R Amplified Models Only { 5 = Lightning-protected amplifier housing (no charge)						

Metric ranges available – consult Engineering.

To order a custom configuration:

1. Select a pressure port
2. Select electrical connection
3. Select a pressure range
4. Select pressure units
5. Select output

To order extra cable on cable style models, add suffix “-(length in feet) FT” for additional cost per foot beyond the standard 3 m (10') length.
Ordering Examples: PX91P5-100KS5T, 100,000 psi sealed gage pressure range model with 0 to 5 Vdc output, 1-14 NS-2 fitting and lightning-protected amplifier housing. PX91P1-80KS5T, 80,000 psi sealed gage pressure range model with 0 to 5 Vdc output, 1-14 NS-2 fitting and integral connector. PT06F10-6S-R, mating connector (sold separately). PX91N0-50K5T-25FT, 50,000 psi sealed gage pressure range model with 0 to 5 Vdc output, NPSM fitting and 7.6 m (25') cable. PX91P0-100KS5T, 100,000 psi sealed gage pressure range model with 0 to 5 Vdc output, 1-14 NS fitting and twist-lock 6 pin connector. PT06F10-6S-R, mating connector (sold separately).

ULTRA-HIGH-PRESSURE TRANSMITTER LIGHTNING-PROTECTED HEAD STYLE

4 to 20 mA Output
0-5000 to 0-200,000 psi
0-350 to 0-14,000 bar

1 bar = 14.5 psi
1 kg/cm² = 14.22 psi
1 atmosphere = 14.7 psi = 29.93 inHg = 760.2 mmHg = 1.014 bar

PX91 Series



- ✓ Ranges Up to 200,000 psi
- ✓ All Stainless Steel Case
- ✓ High Operating Temperature, Up to 121°C (250°F)
- ✓ Lightning-Protected Amplifier Housing

OMEGA's PX91 amplified output series comprises rugged, high-temperature/ultra high-pressure transducers. They are hermetically sealed, with all stainless steel construction, and are designed for the harshest test chamber environments. The PX91 is available in sealed gage pressures from 5000 psi to 200,000 psi. The electrical connection is a lightning-protected amplifier housing. The pressure connection is via a high-pressure ferrule.



PX91N5-50KSI shown much smaller than actual size.

To Order Visit omega.com/px91-ic for Pricing and Details

RANGE		MODEL NO.	COMPATIBLE METERS**
PROTECTED HEAD STYLE, SEALED GAGE PRESSURE, 4 to 20 mA OUTPUT			
0 to 5000 psi	0 to 345 bar	PX91N5-5KSI	DP41-E, DP25B-E, DP24-E
0 to 10,000 psi	0 to 689 bar	PX91N5-10KSI	DP41-E, DP25B-E, DP24-E
0 to 15,000 psi	0 to 1034 bar	PX91N5-15KSI	DP41-E, DP25B-E*, DP24-E*
0 to 20,000 psi	0 to 1379 bar	PX91N5-20KSI	DP41-E, DP25B-E*, DP24-E*
0 to 30,000 psi	0 to 2068 bar	PX91N5-30KSI	DP41-E, DP25B-E*, DP24-E*
0 to 35,000 psi	0 to 2413 bar	PX91N5-35KSI	DP41-E, DP25B-E*, DP24-E*
0 to 50,000 psi	0 to 3447 bar	PX91N5-50KSI	DP41-E, DP25B-E*, DP24-E*
0 to 60,000 psi	0 to 4137 bar	PX91N5-60KSI	DP41-E, DP25B-E*, DP24-E*
0 to 80,000 psi	0 to 5516 bar	PX91P5-80KSI	DP41-E, DP25B-E*, DP24-E*
0 to 100,000 psi	0 to 6895 bar	PX91P5-100KSI	DP41-E, DP25B-E*, DP24-E*
0 to 120,000 psi	0 to 8274 bar	PX91P5-120KSI	DP41-E, DP25B-E*, DP24-E*
0 to 150,000 psi	0 to 10,342 bar	PX91P5-150KSI	DP41-E, DP25B-E*, DP24-E*
0 to 200,000 psi	0 to 13,790 bar	PX91P5-200KSI	DP41-E, DP25B-E*, DP24-E*

Comes complete with 5-point NIST traceable calibration and operator's manual.
Metric ranges available – consult Engineering.

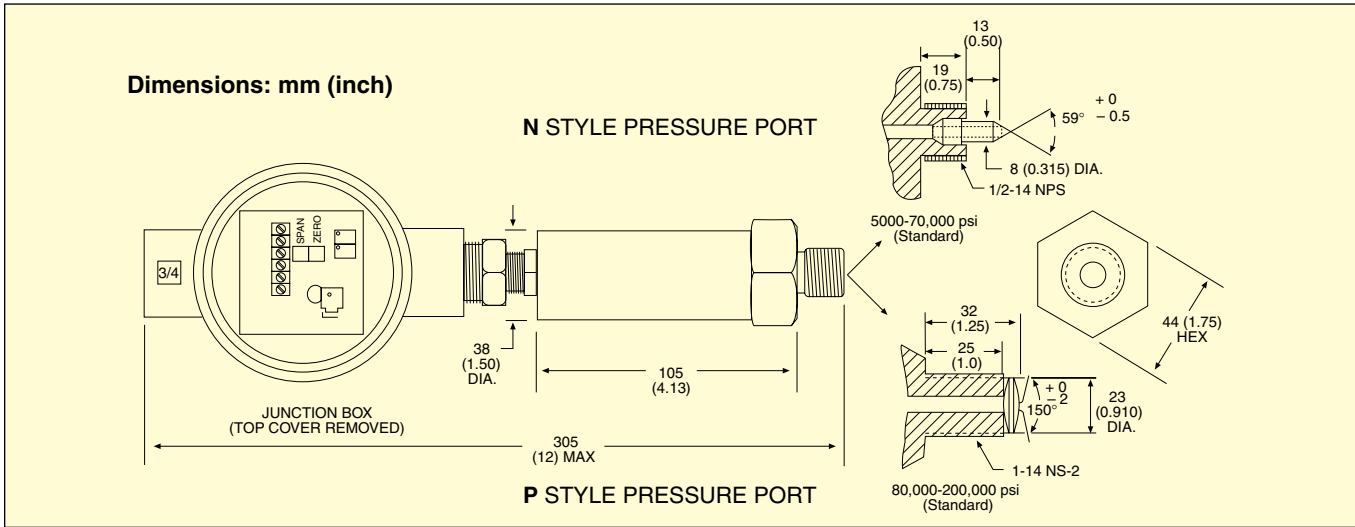
* 4-digit meter.

** See omega.com for compatible meters.

Ordering Examples: **PX91N5-60KSI**, 60,000 psi sealed gage model with 4 to 20 mA output, 1/2-14 NPSM fitting and lightning-protected amplifier housing.

PX91P5-80KSI, 80,000 psi sealed gage model with 4 to 20 mA output, 1-14 NS fitting and lightning-protected amplifier housing.

ULTRA-HIGH-PRESSURE TRANSMITTER



SPECIFICATIONS

4 to 20 mA Output

ELECTRICAL

Excitation: 12 to 40 Vdc

Output: 4 to 20 mA ±10% adj

Zero Balance: 4 mA +10% -2% adj

Linearity:

≤70K psi: ±0.35% FSO

>70K psi: ±0.50% FSO

Hysteresis: ±0.10% FSO

Repeatability: ±0.10% FSO

Operating Temp Range:

-46 to 121°C (-50 to 250°F)

Compensated Temp Range:

17 to 71°C (60 to 160°F)

Thermal Effects:

Span: 0.005% rdg/°F

Zero: 0.005% FSO/°F

Proof Pressure:

≤50k PSI: 120% of rated pressure

>50k PSI: 110% of rated pressure

Burst Pressure:

≤50k PSI: 150% of rated pressure

>50k PSI: 120% of rated pressure

Wetted Parts:

≤70K psi: 17-4 PH stainless steel

>70K psi: 455 stainless steel

Pressure Port:

≤70K psi: ½-14 NPSM
(use 0.315" dia. 59° ferrule)

>70K psi: 1-14 NS-2
(use 0.910" dia. 150° ferrule)

Electrical Connection: Terminal strip inside lightning-protected amplifier housing

Optional: PTIH-10-6P or equal

Mating Connector: PT06F10-6S-R (sold separately)

CUSTOM CONFIGURATIONS

PX91 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (psi) [3]	UNITS [4]	OUTPUT [5]	OPTIONS [6]
Ranges ≤70,000 psi N = ½-14 NPSM (use with 0.315" dia 59° ferrule)			5K 10K 15K 20K 30K 35K 50K 60K 80K 100K 120K 150K 200K	S = Sealed gage	I = 4 to 20 mA	See omega.com for additional options.
Ranges >70,000 psi P = 1-14 NS-2 (use with 0.910" dia. 150° ferrule)						
0 = 3 m (10') PTFE cable + add cost/ft over 3 m (10')						
1 = PTIH-10-6P connector (or equal, no charge) Mating connector (sold separately), order PT06F10-6S-R						
Amplified Models Only } 5 = Lightning-protected amplifier housing (no charge)						

To order a custom configuration:

1. Select a pressure port
2. Select electrical connection
3. Select a pressure range
4. Select pressure units
5. Select output

Metric ranges available – consult Engineering.

To order extra cable on cable style models, add suffix “-(length in feet) FT” for additional cost per foot beyond the standard 3 m (10') length.

Ordering Examples: PX91P5-100KSI, 100,000 psi sealed gage pressure range model with 4 to 20 mA output, 1-14 NS-2 fitting and lightning-protected amplifier housing.

PX91P1-100KSI, 100,000 psi sealed gage pressure range model with 4 to 20 mA output, 1-14 NS fitting and integral twist-lock connector.

PT06F10-6S-R, mating connector (sold separately).