



THREAD MOUNT PRESSURE TRANSDUCERS MP5X-SERIES DATASHEET



MP50 – CONSTANT VOLTAGE EXCITED

MP52 – CONSTANT CURRENT EXCITED

GENERAL

- Threaded, miniature, low cost pressure transducers
- Made of **corrosive resistant titanium** (6AL4V) – excellent performances with corrosive media
- **Absolute** or **sealed reference** options
- **Long term stability** versions
- **High vibrations** options
- **Coating options** for liquids and bio-fluids (PTFE or nanostructured surface)
- Compatible with Micron's pressure fittings and calibration adaptors



MECHANICAL

Standard pressure ranges	2	3.5	7	15	20	35	70	140	200	350	bar
	25	50	100	200	300	500	1000	2000	3000	5000	psi
Non-standard pressure ranges	1	1.5	2	2.5	3.5	7	10	15	17.5	700	bar
	15	20	30	35	50	100	150	200	250	1000	psi

Other possible ranges	Consult Factory
Over Pressure (No change out of spec.)	2 x Range
Usable Pressure (Small change in balance)	3 x Range
Burst Pressure	6 x Range

PERFORMANCE

Performance Option	OPTIONS (ALL VALUES MAXIMUM)				
	A (STD)	B	C	D	
Balance (Zero)	± 3.00	± 2.00	± 2.00	± 2.00	mV
Full Scale Sensitivity MP50	20 ± 2.00	20 ± 2.00	20 ± 2.00	20 ± 2.00	mV/V
Full Scale Sensitivity MP52	27 ± 1.40	27 ± 1.40	27 ± 1.40	27 ± 1.40	mV/mA
Static Error Band	± 0.5	± 0.25	± 0.25	± 0.25	% FS (BFSL)
Thermal Balance (Zero) Shift	± 0.036	± 0.036	± 0.018	± 0.009	% FS/°C
Thermal Sensitivity Shift	± 0.036	± 0.036	± 0.018	± 0.009	% FS/°C
Long Term Stability (std)	< ± 2	< ± 2	< ± 2	< ± 2	% FS/yr
Long Term Stability Options	L10	L5	L2	L1	% FS/yr
	< ± 1	< ± 0.5	< ± 0.2	< ± 0.1	

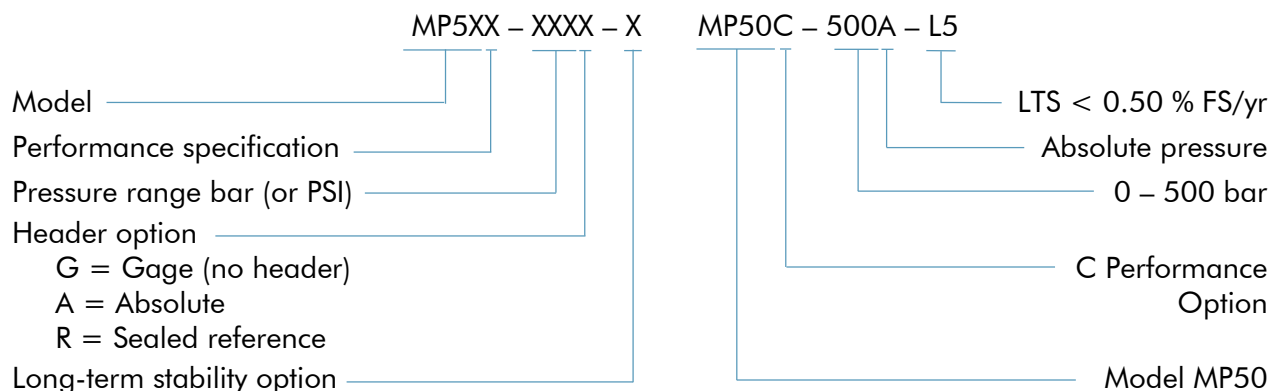
ENVIRONMENTAL

Storage and Operating Temperature	-20 °C to +80 °C
Compensated Temperature Range (Consult factory for other ranges)	0°C to +55 °C
Extended Temperature Range	-54 °C to + 95 °C
Acceleration (Consult factory for high vibration options)	100g's any axis
Media Compatibility (wetted surface)	Titanium 6AL4V

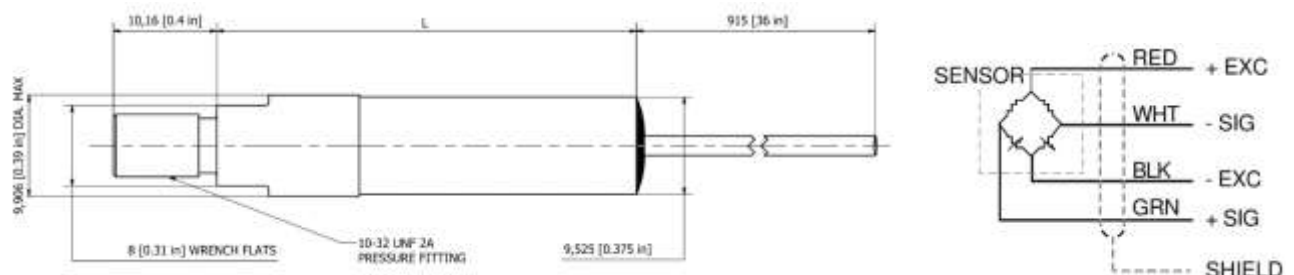
ELECTRICAL

	MP 50	MP 52
Input Constant Voltage Excited [V DC or AC]	5	-
Input Constant Current Excited [mA DC or AC]	-	4.0
Maximum Voltage (for short periods) [V]	30	30
Input Resistance [Ω]	1400 \pm 400	725 \pm 200
Output Resistance [Ω]	850 \pm 200	600 \pm 150
Insulation Resistance Minimum @50 VDC [M Ω]	50	50

ORDERING FORMAT EXAMPLE



OUTLINE



Unit type	Transducer length L
Gage	41,91 mm [1.65 in]
Absolute, sealed reference	52,07 mm [2.05 in]

MP502

GENERAL

- **Threaded, miniature, low cost** pressure sensor
- **Automatic compensation** for line resistance and power supply changes
- Made of **corrosive resistant titanium** (6AL4V) – excellent performance with corrosive media
- **Absolute** or **sealed reference** options
- **Long term stability** versions
- **High vibrations** options
- Compatible with Micron's pressure fittings and calibration adaptors



MECHANICAL

Standard pressure ranges	2	3.5	7	15	20	35	70	140	200	350	500	bar
	25	50	100	200	300	500	1000	2000	3000	5000	7000	psi
Non-standard pressure ranges	1	1.5	2	2.5	3	5	10	17.5	30	700		bar
	15	20	30	35	40	75	150	250	400	1000		psi

Other possible ranges	Consult Factory
Over Pressure (No change out of spec.)	2 x Range
Usable Pressure (Small change in balance)	3 x Range
Burst Pressure	6 x Range

PERFORMANCE

OPTIONS (ALL VALUES MAXIMUM)

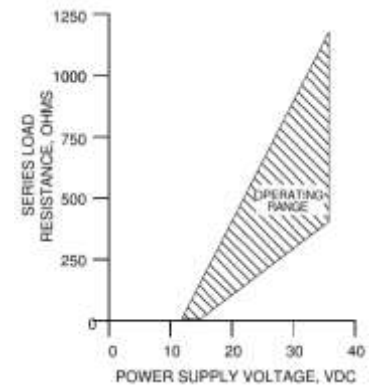
Performance Option	A (STD)	B	C	D	
Balance (Zero)	4.00 ± 0.5	4.00 ± 0.3	4.00 ± 0.2	4.00 ± 0.2	mV
Full Scale Sensitivity	20 ± 0.5	20 ± 0.3	20 ± 0.2	20 ± 0.2	mV/V
Static Error Band	± 0.5	± 0.25	± 0.25	± 0.25	% FS (BFSL)
Thermal Balance (Zero) Shift	± 0.036	± 0.036	± 0.018	± 0.009	% FS/°C
Thermal Sensitivity Shift	± 0.036	± 0.036	± 0.018	± 0.009	% FS/°C
Long Term Stability (std)	< ± 2	< ± 2	< ± 2	< ± 2	% FS/yr
Long Term Stability Options	L10 < ± 1	L5 < ± 0.5	L2 < ± 0.2	L1 < ± 0.1	% FS/yr

ENVIRONMENTAL

Storage and Operating Temperature	-20°C to +80° C
Compensated Temperature Range (Consult factory for other ranges)	0°C to +55°C
Extended Temperature Range	-54°C to + 95°C
Acceleration (Consult factory for high vibration options)	100g's any axis
Media Compatibility (wetted surface)	Titanium 6AL4V

ELECTRICAL

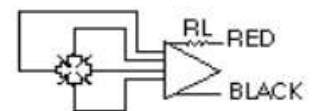
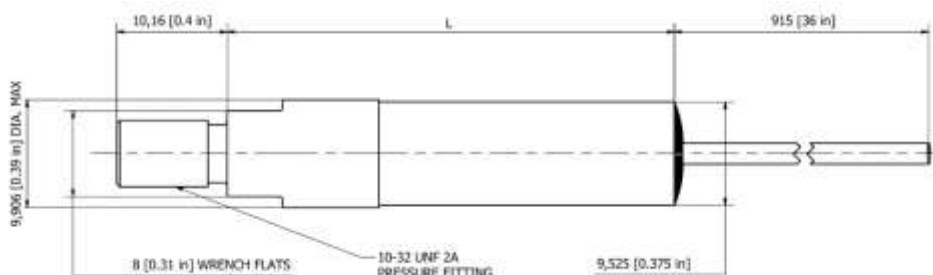
Input Constant Voltage Excited [V DC]	24
Maximum Voltage (for short periods) [V]	30
Input Resistance [Ω]	500
Insulation Resistance Minimum @50 VDC [$M\Omega$]	50



ORDERING FORMAT EXAMPLE

	MP5XXX – XXXX – X	MP502C – 500A – L5	
Model			LTS < 0.50 % FS/yr
Performance specification			Absolute pressure
Pressure range bar (or PSI)			0 – 500 bar
Header option			C Performance Option
G = Gage (no header)			
A = Absolute			
R = Sealed reference			
Long-term stability option			Model MP502

OUTLINE



Unit type	Transducer length L
Gage	52,07 mm [2.05 in]
Absolute, sealed reference	59,69 mm [2.35 in]

MP 56 – CONSTANT VOLTAGE OUTPUT MP 562 – CONSTANT CURRENT OUTPUT

GENERAL

- Threaded, miniature, low cost pressure transducers
- Made of corrosive resistant titanium (6AL4V) – excellent performance with most corrosive media
- **INSENSITIVE TO SCREW DOWN TORQUE**
- 1/4 NPT, 1/8 NPT or metric threaded option
- **Coating options** for liquids and bio-fluids (PTFE or nanostructured surface)
- Compatible with Micron's and Swagelock pressure fittings



MECHANICAL

Standard pressure ranges	3.5	7	15	20	35	70	140	200	350	500	bar
	50	100	200	300	500	1000	2000	3000	5000	7000	psi
Non-standard pressure ranges					0.7	1	1.7				bar
					10	15	25				psi
Over Pressure (No change out of spec.)					2 x Range						
Usable Pressure (Small change in balance)					3 x Range						
Burst Pressure					6 x Range						

PERFORMANCE

Performance Option	OPTIONS (ALL VALUES MAXIMUM)				
	A (STD)	B	C	D	
Balance (Zero) MP56	± 3.00	± 2.00	± 2.00	± 2.00	mV
Full Scale Sensitivity MP56	20 ± 2.00	20 ± 2.00	20 ± 2.00	20 ± 2.00	mV/V
Balance (Zero) MP562	4 ± 0.50	4 ± 0.30	4 ± 0.20	4 ± 0.20	mA
Full Scale Sensitivity MP562	20 ± 0.50	20 ± 0.30	20 ± 0.20	20 ± 0.20	mA
Static Error Band	± 0.5	± 0.25	± 0.25	± 0.25	% FS (BFSL)
Thermal Balance (Zero) Shift	± 0.036	± 0.036	± 0.018	± 0.009	% FS/°C
Thermal Sensitivity Shift	± 0.036	± 0.036	± 0.018	± 0.009	% FS/°C
Long Term Stability (std)	< ± 2	< ± 2	< ± 2	< ± 2	% FS/yr

ENVIRONMENTAL

Storage and Operating Temperature

-20°C to +80°C

Compensated Temperature Range (Consult factory for other ranges)

0°C to +55°C

Extended Temperature Range

-54 °C to + 95 °C

Acceleration (Consult factory for high vibration options)

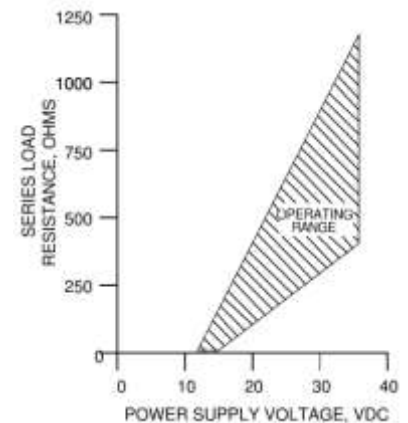
100g's any axis

Media Compatibility (wetted surface)

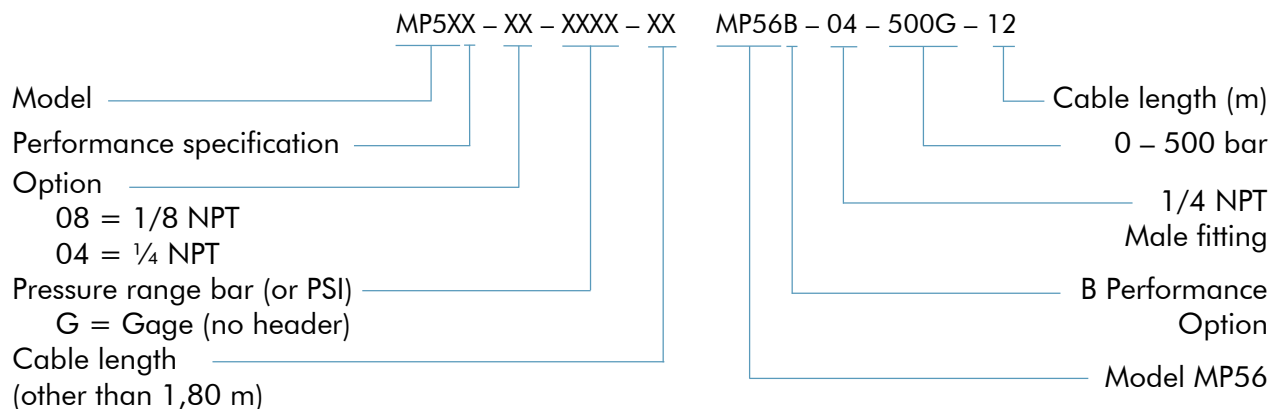
Titanium 6AL4V

ELECTRICAL

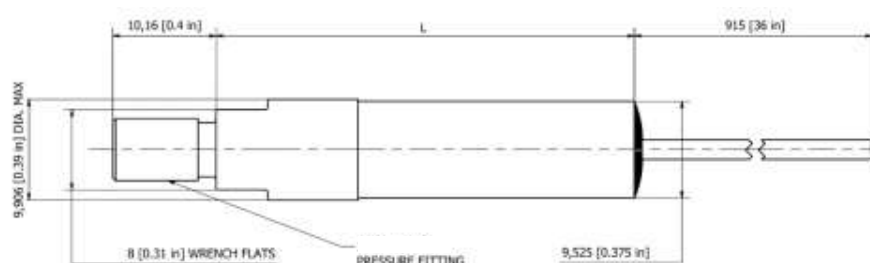
	MP 56	MP 562
Input Constant Voltage Excited [V DC]	5 or 10	12 to 32
Maximum Voltage (short periods) [V]	50	32
Input Resistance [Ω]	1400 \pm 400	-
Output Resistance [Ω]	850 \pm 200	-
Load Resistance [Ω]	-	See chart
Insulation Resistance Minimum @50 VDC [$M\Omega$]	50	50



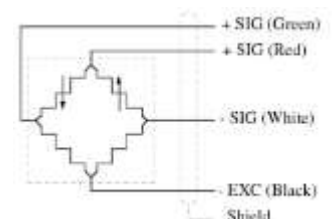
ORDERING FORMAT EXAMPLE



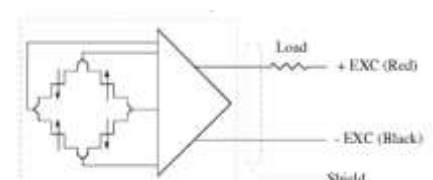
OUTLINE AND OUTPUT SCHEMATIC



MP 56 mV output



MP 562 mA output



Unit type	Transducer length L
Gage	52,07 mm [2.05 in]
Absolute, sealed reference	59,69 mm [2.35 in]