



BOARD LEVEL PRESSURE SENSORS

Digital Output and Altimeter



	MS4515DO, MS4525DO	MS5803	MS5837	MS5840
Package	8 pin DIL	Surface mountable	Surface mountable	Surface mountable
Туре	Gage, compound (MS4515DO) Gage, absolute, differential, compound (MS4525DO)	Absolute	Absolute	Absolute
Pressure Range	0 - 2 to 30″ H₂O (MS4515DO) 0 - 1 to 150 psi (MS4525DO)	0 - 1 to 30 bar	0 - 2 bar 0 - 30 bar	0 - 2 bar Operating range: 300 to 1200 mbar
Output/Span	14-bit ADC SPI or I ² C	24-bit ADC I ² C and SPI (Mode 0, 3)	24-bit ADC I ² C	24-bit ADC I ² C
Resolution	-	12 µbar (MS5803-01BA) 0.5 mbar (MS5803-30BA)	0.016 mbar (2 bar) 0.2 mbar (30 bar)	13 cm of air
Unique Features	 Optional gel coat, low power Pressure and temperature measurement Single supply of 3.3 or 5.0 VDC Top, side barbed or manifold o-ring port J lead or thru hole pins 	 24-bit digital sensor, software calibration and temperature compensation (I²C and SPI), no external components Supply voltage 1.8 to 3.6 V 	 Supply voltage: 1.5 to 3.6 V Pressure and temperature measurement Excellent long term stability Hermetically sealable for outdoor devices Sealing designed for 1.8 x 0.88 mm o-ring 	 Supply voltage: 1. Pressure and tem measurement Low power, 0.6 μ (standby ≤ 0.1 μA Protected against direct sunlight
Linearity/Absolute Accuracy	0.25%/1% TEB	±1.5 mbar at 25°C (MS5803- 01BA) ±250 mbar at 0°C to 40°C (MS5803-30BA)	±.5 mbar (2 bar) ±400 mbar (30 bar)	±0.5mbar at 20°C ±4mbar from -20°0
Overpressure	300 psi	10 bar (1, 2 bar) 30 bar (5, 7, 14 bar) 50 bar (30 bar)	10 bar (2 bar) 50 bar (30 bar)	-
Operating Temp.	-10°C to 85°C (MS4515DO) -25°C to 105°C (MS4525DO)	-40°C to 85°C	-20°C to 85 °C	-20°C to 85 °C
Dimensions (mm)	12.5 x 9.9	6.4 x 6.2 x 2.9	3.3 x 3.3 x 2.75	3.3 x 3.3 x 1.7mm
Typical Applications	Medical instruments, air flow measurements, process control, leak detection	Precision altimeter, diving and multi-mode watches, in-building navigation, variometers/flight instruments	Mobile water depth measurement systems, diving computers, adventure or multi- mode watches, data loggers	Altimeter and barc applications, adver or multi-mode wat drones, bike comp



- 1.5 to 3.6 V
- emperature
- µA IA at 25°C) nst

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BOARD LEVEL PRESSURE SENSORS

Digital Output and Altimeter



MS5525DSO

Package	SOIC-14	Surface mount
Туре	Gage, absolute, differential, compound	Absolute
Pressure Range	0 - 1 to 30 psi	10 - 2K mbar
Output/Span	24-bit ADC SPI or I ² C protocol	24-bit ADC I ² C
Resolution	_	0.016 mbar
Unique Features	 24-bit digital small outline sensor Pressure and temperature measurement Single supply of 1.8 or 3.6 VDC Barb, tube and hole package style options 	 24-bit digital 13 cm resolution 10 cm resolution Supply voltage (MS5607, MS56) Low power, 0
Linearity/Absolute Accuracy	0.25%/2.5% TEB	±2.0 mbar at 2
Overpressure	3X range	6 bar
Operating Temp.	-40°C to 125°C	-40°C to 85°C
Dimensions (mm)	12.5 x 7.9	3 x 3 x 0.9 (MS
Typical Applications	Medical respirators, ventilators, factory automation, altitude and airspeed measurements, leak detection, home appliances	Smart phones, tire pressure m



	MS5805
Package	Surface mountable
Туре	Absolute
Pressure Range	10 - 2K mbar
Output/Span	24-bit ADC I ² C
Resolution	0.02 mbar
Unique Features	 24-bit digital sensor 20 cm resolution Supply voltage: 1.8 to 3.6 V Sealing designed for 2.5 x 1 mm o-ring Silicone gel protection Waterproof
Linearity/Absolute Accuracy	±2.0 mbar at 25°C
Overpressure	5 bar
Operating Temp.	-40°C to 85°C
Dimensions (mm)	4.5 x 4.5 x 3.5
Typical Applications	Mobile altimeter and barometer systems, bike computers, adventure or multi-mode watches, variometers, data loggers



MS5607, MS5611, MS5637

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• 24-bit digital sensor • 13 cm resolution (MS5607, MS5637) • 10 cm resolution (MS5611) • Supply voltage: 1.5 to 3.6 V (MS5637) Supply voltage: 1.8 to 3.6 V (MS5607, MS5611) • Low power, 0.6 μ A (Standby \leq 0.1 μ A at 25°C)
±2.0 mbar at 25°C
6 bar
-40°C to 85°C
3 x 3 x 0.9 (MS5637) 5 x 3 x 1 (MS5607, MS5611)
Smart phones, tablets, personal navigation devices, tire pressure monitoring, compressors



MS8607

Surface mountable

Absolute

10 - 2K mbar

24-bit ADC I²C

0.016 mbar

Integrated pressure, humidity and temperature
Supply voltage: 1.5 to 3.6 V
Fully factory calibrated sensor

±4 mbar

6 bar

-40°C to 85°C

5 x 3 x 1

Mobile water depth measurement systems, diving computers, adventure or multi-mode watches, data loggers



BOARD LEVEL PRESSURE SENSORS

mV Output

Package



MS1451, MS1471 Surface mountable

Туре	Gage, absolute
Pressure Range	0 - 5 to 500 psi
Output/Span	60 mV typical
Unique Features	 Low cost Coarse calibrated at room temp. (MS1471) With gel to protect against moisture Tube or hole
Accuracy	±0.25% non-linearity
Operating Temp.	-40°C to 125°C
Dimensions (mm)	7.6 x 7.6, application dependent
Typical Applications	Altitude measurement, barometric pressure, medical instrumentation, consumer appliances, tire pressure



MS52xx, MS54xx

Surface mountable

Gage, absolute

0 - 1 to 12 bar

150 mV, 240 mV

- Small size (MS54xx)
- High linearity or high sensitivity options
- Plastic tube or metal ring options
- With gel to protect against moisture
- High endurance (Option HM)

±0.05%, ±0.15% FS non-linearity (MS52xx) ±0.05%, ±0.2% FS non-linearity (MS54xx)

-40°C to 125°C

7.6 x 7.6, application dependent (MS52xx) 6.4 x 6.2 (MS54xx)

Absolute pressure sensor systems, engine controls, high resolution altimeters, variometers, waterproof watches, diver computers, barometers, tire pressure monitoring systems (TPMS), medical instrumentation, pneumatic controls

DISPOSABLE MEDICAL PRESSURE SENSORS

mV Output



1620, 1630

Package	Hybrid assembly	
Туре	Gage	
Pressure Range	-30 to 300 mmHg	
Output/Span	5 μV/V/mmHg	
Unique Features	 Low cost, disposable design Supplied in tape and reel Compliant to AAMI spec ISO13485 certified 	
Operating Temp.	10°C to 40°C	
Dimensions (mm)	1620: 11.43 x 8.13 x 4.20 1630: 12.7 x 5.08 x 3.94	
Typical Applications	Disposable blood pressure, surgical procedures, ICU, kidney dialysis machines, medical instrumentation	



Fully Assembled 1620 (Customized per customer specifications)

Plastic housing

Gage

-30 to 300 mmHg

5 µV/V/mmHg

- Low cost, disposable design
- Compliant to AAMI spec • Custom designs available

10°C to 40°C

42.8 x 30.3 x 19.0

Disposable blood pressure, kidney dialysis machines, surgical procedures and intensive care units. Ready to use, fully assembled disposable sensor units with cable, connector, stop cock, flush device in a plastic housing.

MEDIA ISOLATED PRESSURE SENSOR MODULES

Digital Output

Package

Pressure Range

Output/Span

Accuracy

Unique Features

Type



 Pressure and temperature read-out Cable and connector options Low power option
±0.25% span
±1.0% FSO

Total Error Band Overpressure Operating Temp. Dimensions (mm)

2X -40°C to 125°C Ø1585x79 Level controls, tank level measurement, corrosive fluids **Typical Applications** and gas measurement systems, sealed systems, manifold

pressure measurement.

submersible depth monitoring



86BSD

• 16 mm diaphragm diameter O-ring mount

Gage, absolute

0 - 0.07 to 20 bar / 0 - 1 to 300 psi

- 14-bit ADC I²C or SPI
- Pressure and temperature read-out • Cable and connector options
- Low power option
- ±0.25% span ±1.0% FSO

2X

-40°C to 125°C

Ø1582 x 93

Level controls, tank level measurement, corrosive fluids and gas measurement systems, sealed systems, manifold pressure measurement. submersible depth monitoring



89BSD

• 9 mm diaphragm diameter Threaded or weldable

Absolute, sealed gage

0 - 6 to 30 bar

24-bit ADC I²C

- Pressure and temperature read-out
- Low power: 1 μA (Standby < 0.15 μA)

±0.3% span ±3.0% FSO max.

2X

-40°C to 85°C

Ø904 x 75

Level controls, tank level measurement, corrosive fluids and gas measurement systems, sealed systems, manifold pressure measurement, dive computers



154BSD

• 19 mm diaphragm diameter O-ring mount

Gage, absolute

0 - 1 to 300 psi

14-bit ADC I²C or SPI

• Pressure and temperature read-out

• Cable and connector options Low power option

±0.25% span

±1.0% FSO 2X

-40°C to 125°C

Ø19 x 13 8

Level controls, tank level measurement, corrosive fluids and gas measurement systems, sealed systems, manifold pressure measurement. submersible depth monitoring

TRANSDUCERS AND TRANSMITTERS

Industrial Wireless



	M5600, U5600	MSP100
Туре	Gage, sealed, absolute, compound	Gage
Pressure Range	0 - 50 to 15K psi (M5600), 0 - 5 to 10K psi (U5600)	0 - 100 to 500 psi
Output/Span	24-bit ADC I ² C	100 mV typical
Unique Features	 Pressure and temperature 2.3 - 3.6 V supply voltage Compact and battery-powered Weather resistant (IP66 and IP67) Stainless steel and polycarbonate enclosure 	 Microfused Low cost stainless steel isolat No threads needed for pressu Highly customized for OEM a Small size Solid state reliability
Accuracy	±0.25% FS (M5600) Down to ±0.1% FS (U5600)	±0.5% FSO
Operating Temp.	-20°C to 85°C	0°C to 55°C
Dimensions (mm)	24 x 24 x 69	12.7 x 24.38 x 20.32
Typical Applications	Industrial process control and monitoring, advanced HVACR systems, refrigeration systems, automotive test stands, off-road vehicles, pumps and compressors, hydraulic and pneumatic systems, agriculture equipment, energy generation and management	Beverage dispensing systems, HVACR controls, energy and w management, pumps, compres pneumatic equipment
Agency Approvals	CE, FCC	_



- ated transducer sure connect
- application

automation, water essors



MSP300, MSP340

Gage

0 - 100 to 10K psi (MSP300) 0 - 50 to 10K psi (MSP340)

0 - 100 mV, 0.5 - 4.5 VDC, 1 - 5 VDC, 4 - 20 mA

Microfused

- Highly customized for OEM applications
- Small size • Solid state reliability

±1% FSO

-20°C to 85°C

MSP300: 22.23 x 22.23 x 55.88 MSP340: 15.88 x 15.88 x 75.44

Paint sprayers, braking systems, HVACR controls, energy and water management, pumps, compressors, pneumatic equipment, off road heavy equipment, agriculture equipment

UL 508 (MSP300)

Specifications subject to change. Dimensions for reference purpose only.





MEDIA ISOLATED PRESSURE SENSOR MODULES

Analog Output



	82, 85 with Fittings
Package	Weldable (85) or process fitting
Туре	Gage, absolute, vacuum gage
Pressure Range	0 - 5 to 500 psi (85), 0 - 1 to 500 psi (82)
Output/Span	100 mV typical
Unique Features	• Modular design
Non-linearity	±0.3% FSO (1 psi) ±0.2% FSO (5 psi) ±0.1% FSO (≥15 psi)
Operating Temp.	-40°C to 125°C
Dimensions (mm)	Fittings: application dependent
Typical Applications	Medical, process control, refrigeration compressor, oceanography, level systems



89 Button, 89 with Fittings

Weldable or process fitting Sealed gage, absolute 0 - 1K to 10K psi 100 mV typical • High pressure • Modular design ±0.25% FSO

-40°C to 125°C

89 Button: Ø9.04 x 13.2 89 with Fittings: application dependent

Air tank pressure, hydraulics, process control, robotics, refrigeration compressors, oceanography



86A Amplified

5/8" (16 mm) diameter o-ring mount

Gage, absolute 0 - 1 to 150 psi

0.5 - 4.5 VDC

Small diameter, amplified outputBar ranges available

±1.0% FSO

-20°C to 85°C

Ø15.82 x 9.3

Level measurement, OEM transmitters and transducers, process control

MEDIA ISOLATED PRESSURE SENSOR MODULES

Analog Output



	82, 85, 85F, 86, 154N	DP86 O-Ring Mount, with Fittings/Cable
Package	 3/4" (19 mm) diameter o-ring mount (82, 154N) 5/8" (16 mm) diameter o-ring mount (86) 1/2" (13 mm) diameter o-ring flush mount (85F) 1/2" (13 mm) diameter o-ring mount (85) 	• 5/8" (16 mm) diameter o-ring mount or threaded process fittings
Туре	Gage, absolute, vacuum gage (82, 85, 86, 154N) Gage, absolute (85F)	Differential
Pressure Range	0 - 1 to 500 psi (Absolute, gage: 82, 154N) 0 - 5 to 500 psi (Absolute, gage: 85, 86) 0 - 15 to 500 psi (85F, vacuum gage: 82, 85, 86, 154N)	0 - 1 to 500 psi
Output/Span	100 mV typical	100 mV typical/sensitivity dependent
Unique Features	 High performance High stability for OEM applications Minimizes trapped volume (85F) 	• Wet/wet differential pressure • Line pressure max. 1,000 psi
Non-linearity	±0.3% FSO (1 psi), ±0.2% FSO (5 psi) ±0.1% FSO (≥15 psi), ±0.1% FSO (85F)	±0.3% FSO (1 psi) ±0.2% FSO (5 psi) ±0.1% FSO (≥15 psi)
Operating Temp.	-40°C to 125°C (82 / 85 / 86 / 154N), -20°C to 125°C (85F)	-40°C to 125°C
Dimensions (mm)	82: Ø19 x 6.48 86: Ø15.82 x 11.4 154N: Ø18.97 x 13.8 85F: Ø17.2 x 11.33 85: Ø15.85 x 9.3	O-ring: Ø15.82 x 17.5 Fittings: Application dependent
Typical Applications	Hydraulic controls, process control, oceanography, refrigeration/compressors, pressure transmitters, level systems, dialysis machines, infusion pumps, medical systems	Level controls, tank level measurement, corrosive fluids and gas measurement systems, flow measurement



U86B

• Mountable with o-ring seal

Sealed gage, absolute

0 - 5 to 13 bar/0 - 50 to 200 psi

0.5 - 4.5 VDC (Ratiometric output)

Amplified

±0.5% FSO

-7°C to 105°C

Ø15.82 x 13.6 Socket spacing: 31.75

Urea level, urea pressure, air brakes, corrosive fluid measurement for engine & vehicle applications



Industrial





TRANSDUCERS AND TRANSMITTERS

0.5 - 4.5 VDC [Ratiometric output] 1 - 5 VDC [Regulated] (M7100) 0.5 - 4.5 VDC [Ratiometric output] (U7100)

• Survives high vibration and immersion

• ±1% FSO TEB (-20°C to 85°C)

• Microfused technology (M7100)

• UltraStable technology (U7100)

• Copper tube for HVACR (M7100)

HVACR refrigeration controls, off road vehicles engine control, compressors,

hydraulic, energy and water management

Solid state reliability

0.25% ESO

-40°C to 125°C

26.7 x 26.7 x 50.0

CE (EMC), UL 508

Heavy Industrial

Туре

Pressure Range

Output/Span

Unique Features

Operating Temp.

Dimensions (mm)

Typical Applications

Agency Approvals

Accuracy



M7100, U7100 P900, P981, P1200, P700, P9000 Gage, no vent gage (M7100) Gage, Gage, absolute sealed gage, absolute (U7100) 0 - 10 to 700 bar/0 - 150 to 10K psi (M7100) 0 - 1 to 10 bar/0 - 15 to 150 psi (U7100) 0 - 5 bar to 700 bar/0 - 75 to 10K psi

0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA

- High overpressure (10X over pressure)
- Shock and vibration resistant
- Heavy industrial grade transducer (P9000)
- Advanced digital compensation / calibration
- Mechanical over pressure stops
- High temperature operation

0.1% to 0.2% ESO

-54°C to 120°C

Application dependent

Steel mills, hydraulic controls, power generation equipment, torpedo depth, military and aerospace, vehicle braking systems

CE, CENELEC (Intrinsically Safe)



P101, P105, P125

Gage

0 - 10 to 7K bar/0 - 150 to 100K psi

7.5 to 20 mV (4 V; 5 V optional)

- Stainless steel diaphragm
- Female pressure connectors: M16 x 1.5, M20 x 1.5, 1/4 NPT
- Metal to metal seal

+0.3% ESO

-20°C to 80°C

Ø29 x 85 max.

Harsh environments, aggressive liquids

TRANSDUCERS AND TRANSMITTERS

Miniature







XPC10

0 - 10 to 500 bar/0 - 150 to 7.5K psi

12 mV FSO, 4 V FSO (Amplified)

- Amplified output available
- For static and dynamic applications

M10 x 1 or 3/8-24 UNF thread; Hex 15

Aerospace, test benches, oven monitoring equipment,



Miniature





	EB, EPRB	EPIH	EPB, EPB-PW, EPL
Туре	Gage, sealed, absolute	Gage, sealed, absolute	Gage, sealed, absolute
Pressure Range	0 - 0.35 to 700 bar/0 - 5 to 10K psi	0 - 0.35 to 20 bar/0 - 5 to 300 psi	0 - 0.35 to 350 bar/0 - 5 to 5K psi
Output/Span	0.5 to 4.5 VDC	12 mV to 75 mV	10 mV to 125 mV
Unique Features	 High accuracy Miniature design UltraStable technology EMI protected Combined pressure and temperature 	 Diffused silicon diaphragm with a large variety of sizes and shapes available as small as 0.05" outside diameter High frequency response (To 1.7 MHz) Ultra-miniature design 	 Miniature flush mountable Flush stainless steel diaphragm, flanged or non-flanged Bonded silicon gage, high frequency response (To 400 KHz) IP68 ingress protection in Titanium construction (EPB-PW)
Accuracy	±0.25% FSO	±1.0% FSO	±0.5 to ±1% FSO
Operating Temp.	-40°C to 125°C (Available option up to 150°C)	-40°C to 120°C	-40°C to 120°C
Dimensions (mm)	11 body diameter	Application dependent	3.2 to 7 outside diameter
Typical Applications	Motor sport, hydraulic/pneumatic systems, automotive test stands, military and aerospace test stands	Aerospace testing, wind tunnels, biomedical testing, aircraft body and wing dynamics, high frequency measurements	Air flow testing, hydraulic pressure systems, air pressure systems, bearing studies, ballistics, water hammer, miniature scale model testing, centrifuge pore water pressure measurements
Agency Approvals	CE (EMC)	-	-

TRANSDUCERS AND TRANSMITTERS

Liquid Level



	U5700
Туре	Gage, sealed, absolute, compound
Pressure Range	0 - 2 to 10K psi
Output/Span	0.5 - 4.5 V, 1 - 5 V, 0 - 5 V, 0 - 10 V, 4 - 20 mA, 1 - 6 V
Unique Features	 UltraStable technology High accuracy IP68 rated connection and submersible Polyurethane jacketed cable Optional Polyoxymethylene cap
Accuracy	0.1 % FSO
Operating Temp.	-10°C to 60°C
Dimensions (mm)	22.23 x 22.23 x 98.04
Typical Applications	Industrial process control and monitoring, advanced HVACR systems, refrigeration systems, automotive test stands, off road vehicles, pumps and compressors, hydraulic/ pneumatic systems, agriculture equipment, energy generation and management, liquid level applications
Agency Approvals	CE (EMC)



AST45xx

Gage, absolute

- 0 1 to 100 psi (AST4500, AST4510, AST4520)
- 0.5 4.5 V [Ratiometric], 1 5 V, 4 20 mA, 0.5 2.5 V
- Intrinsically safe ratings
 Material options including: 316L, alloy C276, and PVDF
- Low power optionsHigh quality cable options

±0.25% FSO

-40°C to 85°C

Application dependent

Diesel tanks, chemical tanks, water tanks

UL/CSA Class I Div I, ATEX/IECEx Exia, ABS, CE





TRANSDUCERS AND TRANSMITTERS

Hazardous Location



	AST43xx, AST44xx				
Туре	Gage, sealed gage, compound, absolute				
Pressure Range	0 - 1 to 15 psi (AST43LP, AST44LP) 0 - 25 to 20K psi (AST4300, AST4400, AST4401)				
Output/Span	0.5 - 4.5 V [Ratiometric], 1 - 5 V, 4 - 20 mA, 0.5 - 2.5 V				
Unique Features	 Available with 316L, Hastalloy C276, or Inconel 718 materials Low current consumption options Low power options High proof and burst pressure 				
Accuracy	±0.25% FSO				
Operating Temp.	-40°C to 85°C				
Dimensions (mm)	Application dependent				
Typical Applications	Compressors, well sites, ships, factory automation, SCADA equipment, offshore equipment				
Agency Approvals	UL/CSA Class I Div I and II, ATEX/IECEx Exia/ Exn, CCOE, CNEx, ABS, CE				



AST46xx

Gage, sealed gage, compound, absolute

0 - 1 to 20K psi

0.5 - 4.5 V [Ratiometric], 1 - 5 V, 4 - 20 mA, 0.5 - 2.5 V, switch (AST46SW)

- Available with 316L, Hastalloy C276, or Inconel 718 materials
- Low current consumption optionsLow power options
- Low power options
 Local display (AST46DS)
- Additional temperature output

±0.25% FSO (AST4600, AST46DS), ±0.1% FSO (AST46HA, AST46PT) -40°C to 85°C

Application dependent

SCADA/RTU, well sites, offshore equipment, hydraulic controls

CSA Class I/II Div I, ATEX/IECEx Exd, ABS, CE



	AST5100, AST5300, AST5400				
Туре	Differential				
Pressure Range	0 - 5 H ₂ O to 5K psi				
Output/Span	0.5 - 4.5 V [Ratiometric], 0 - 5 V, 1 - 5 V, 4 - 20 mA				
Unique Features	 Wide range of pressures available Full line pressure on either side without zero shifts Hazardous location approvals (AST5300, AST5400) 				
Accuracy	±0.25% FSO (AST5100, AST5300), 1% TEB (AST5400)				
Operating Temp.	-40°C to 85°C				
Dimensions (mm)	Application dependent				
Typical Applications	Filter monitoring, flow measurement, tank level measureme				
Agency Approvals	CSA Class I/II Div I and II, ATEX/IECEx Exd/Exn, ABS, CE				



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Gage, sealed gage 0-10 PSI to 10000 PSI

0.5 - 4.5 V [Ratiometric] 1 - 5 V, 4 - 20 mA

- 20 bar, 448 bar, 900 bar
- High pressure H2 StorageCE EN61326

±0.25% BFSL

-40°C to 85°C

Application dependent

PEM fuel cells, hydrogen storage, hydrogen filling stations, backup power

EC-79 e24*79/2009*406/2010*0006*02 CE EN61326