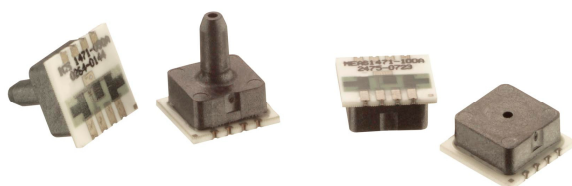


Model 1471



- PC Board Mountable Pressure Sensor
- 0-60 mV Output
- Gage and Absolute
- Low Cost

DESCRIPTION

The Model 1471 is a piezoresistive silicon pressure sensor packaged in a surface mount configuration. It is intended for high volume applications where small size, light weight, low cost, and compatibility with automated assembly equipment are required. Offset and span are calibrated at room temperature for OEMs requiring higher accuracies.

The pressure sensor is available with a gage or absolute pressure sensing chip that is attached to a surface mountable ceramic substrate. A plastic cap is attached to the ceramic substrate, protecting the chip and providing the pressure port.

The devices are shipped in plastic anti-static shipping tubes for use with automated production equipment. The drawing shows a standard tube version. Ports are also available with a narrow hole or a large hole to interface with the pressure media.

FEATURES

- Surface Mount Package
- $\pm 0.25\%$ Pressure Non Linearity
- 3 Pressure Port Options
- Solid State Reliability
- Low Power

APPLICATIONS

- Altitude Measurement
- Barometric Pressure
- Medical Instrumentation
- Consumer Appliances
- Tire Pressure

STANDARD RANGES

Range	psia	psig
0 to 5		W, N, T
0 to 15	W, N, T	W, N, T
0 to 30	W, N, T	W, N, T
0 to 50	W, N, T	W, N, T
0 to 100	W, N, T	W, N, T
0 to 250	W, N	
0 to 500	W, N	

Port Options:

W = Wide Hole (Gel Fill option available), N = Narrow Hole, T = Tube

Model 1471

PERFORMANCE SPECIFICATIONS

Supply Voltage: 5 Vdc

Ambient Temperature: 25 °C (unless otherwise specified)

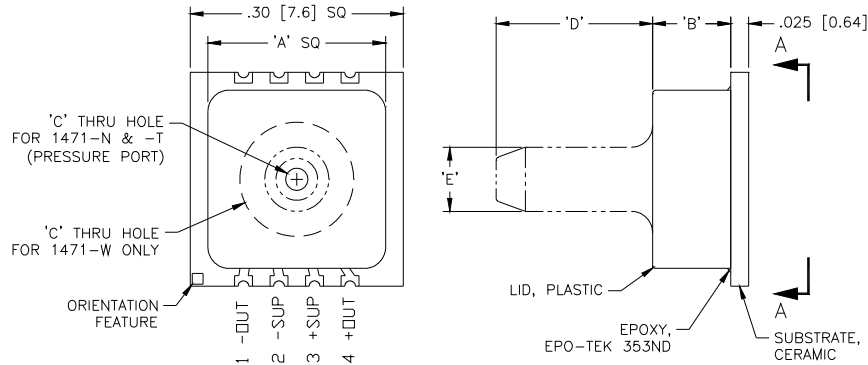
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Sensitivity	10	13	16	mV/V	1
Zero Pressure Output	-0.5		0.5	mV/V	2
Pressure Non Linearity	-0.25		0.25	%Span	3
Pressure Hysteresis	-0.1		0.1	%Span	
Input Resistance	3500		25k	Ω	
Output Resistance	3500	5000	6000	Ω	
Thermal Hysteresis – Zero	-0.2		0.2	%Span	4
Supply Voltage		5.0	12.0	Vdc	
Response Time (10% to 90%)		1.0		mS	5
Output Noise (10Hz to 1kHz)		1.0		μV p-p	
Long Term Stability (Offset & Span)		0.5		%Span	6
Pressure Overload			3X	Rated	7
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+150	°C	
Weight			0.3	grams	
Soldering Temperature	250 °C Max 5 Sec.				8
Media	Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Gold, LCP (Liquid Crystal Polymer), and Aluminum				

Notes

1. Ratiometric to supply voltage.
2. For absolute pressure devices, offset limit will be $\pm 5\text{mV/V}$.
3. Best fit straight line.
4. Over the temperature range 0-50 °C with respect to 25 °C.
5. For a zero-to-full scale pressure step change.
6. Long term stability over a one year period with constant voltage and temperature.
7. For sensors above 100 psi, the entire sensor is required to be inside the pressure chamber.
8. For mounting instructions, please refer to the application note "Mounting Instructions for SMT Pressure Sensors."

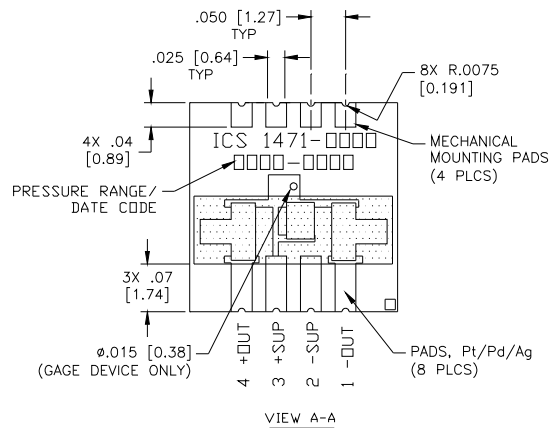
Model 1471

DIMENSIONS

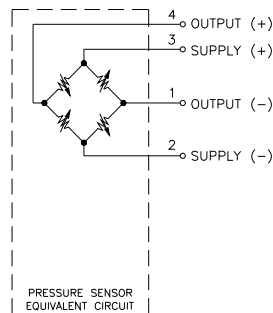


MODEL 1471 LID TABULATION			
	1471-N (NO TUBE)	1471-W (WIDE HOLE)	1471-T (TUBE)
'A'	.25 [6.4]	.25 [6.4]	.25 [6.4]
'B'	.110 [2.79]	.110 [2.79]	.110 [2.79]
'C'	∅.031 [0.78]	∅.160 [4.06]	∅.031 [0.78]
'D'			.220 [5.59]
'E'			∅.090 [2.29]

ALL DIMENSIONS ARE IN INCHES [mm]



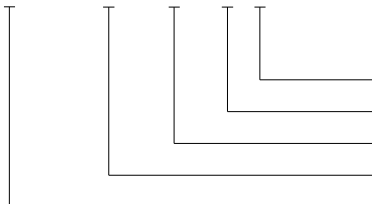
CONNECTIONS



Model 1471

ORDERING INFORMATION

1471 - 015 A - T F



Coating (F = Gel Fill, Blank = No Coating)

Port (T = Tube, N = Narrow Hole, W = Wide Hole)

Type (A = Absolute, G = Gage)

Pressure Range

Model

NORTH AMERICA

Measurement Specialties
 45738 Northport Loop West
 Fremont, CA 94538
 Tel: 1-800-767-1888
 Fax: 1-510-498-1578
 Sales: pfg.cs.amer@meas-spec.com

EUROPE

Measurement Specialties
 (Europe), Ltd.
 26 Rue des Dames
 78340 Les Clayes-sous-Bois, France
 Tel: +33 (0) 130 79 33 00
 Fax: +33 (0) 134 81 03 59
 Sales: pfg.cs.emea@meas-spec.com

ASIA

Measurement Specialties
 (China), Ltd.
 F1.6-4D, Tian An Development
 Compound
 Shenzhen, China 518048
 Tel: +86 755 8330 1004
 Fax: +86 755 8330 6797
 Sales: pfg.cs.asia@meas-spec.com

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Headquarter Switzerland:
Pewatron AG
Thurgauerstrasse 66
CH-8050 Zurich
Phone +41 44 877 35 00
info@pewatron.com

Office Germany:
Pewatron Deutschland GmbH
Edisonstraße 16
D-85716 Unterschleißheim
Phone +49 89 374 288 87-0
info.de@pewatron.com



PEWATRON
SENSORS · POWER SOLUTIONS

We are here for you. Addresses and Contacts.

Sales Germany & Austria

Postcode 00000 – 31999
Postcode 38000 – 39999
Postcode 80000 – 99999
Austria

Kurt Stritzelberger

Phone +49 89 260 52 80
Mobile +49 171 803 41 35

kurt.stritzelberger@pewatron.com

Postcode 32000 – 37999
Postcode 40000 – 79999

Gerhard Vetter

Phone +49 674 394 75 75
Mobile +49 163 762 74 30

gerhard.vetter@pewatron.com

Geometrical sensors
Sensor elements

Thorsten Ravagni

Phone +49 60 479 53 627

thorsten.ravagni@pewatron.com

Sales Switzerland & Liechtenstein

Postcode 3000 – 9999

Basil Frei

Phone +41 44 877 35 18
Mobile +41 76 279 37 26

basil.frei@pewatron.com

Postcode 1000 – 2999

Christian Mohrenstecher

Mobile +41 76 444 57 93

christian.mohrenstecher@pewatron.com

Sales International Key Accounts

Peter Felder

Phone +41 44 877 35 05
Mobile +41 79 406 49 83

peter.felder@pewatron.com

Sales Other Countries / Product Management

Pressure Sensors

Philipp Kistler
Phone +41 44 877 35 03
philipp.kistler@pewatron.com

Accelerometers / Level Flow sensor elements

Thorsten Ravagni
Phone +49 60 479 53 627
thorsten.ravagni@pewatron.com

Drive technology CH Postcode 5000 – 9999 / DE

Roman Homa
Mobile +41 76 444 00 86
roman.homa@pewatron.com

Gas sensors / Gas sensor modules Load cells

Dr. Thomas Clausen
Phone +41 44 877 35 13
thomas.clausen@pewatron.com

Power supplies

Sebastiano Leggio
Phone +41 44 877 35 06
sebastiano.leggio@pewatron.com

Drive technology CH Postcode 1000 – 4999 / AT / IT / FR

Christian Mohrenstecher
Mobile +41 76 444 57 93
christian.mohrenstecher@pewatron.com

Flow / Level / Medical products

Dr. Adriano Pittarelli
Phone +49 8245 774 95 44
adriano.pittarelli@pewatron.com

Linear position sensors Angle sensors

Eric Letsch
Phone +41 44 877 35 14
eric.letsch@pewatron.com

Current sensors Power solutions

Osman Coban
Phone +49 71 635 363 898
osman.coban@pewatron.com