



142PC30A



Actual product appearance may vary.

Pressure Sensors: Measurement Type: Absolute; Signal Conditioning: Amplified; Pressure Range: 0 psia to 30.0 psia; Port Style: Straight

Features

- Robust package
- PCB termination
- Fully signal conditioned
- Amplified

Potential Applications

Environmental

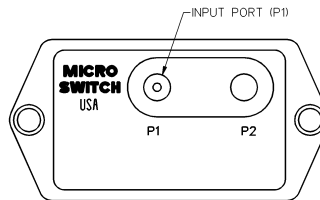
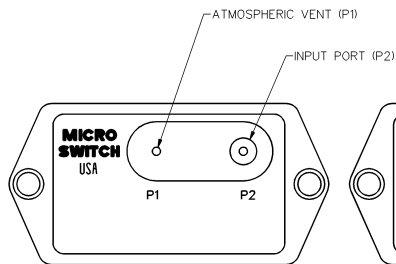
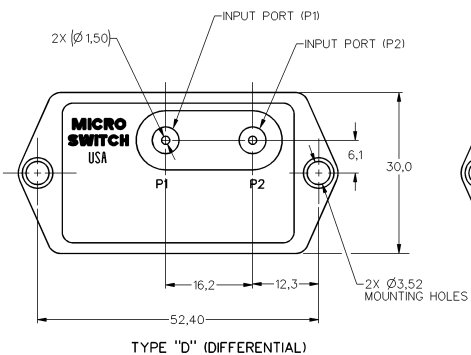
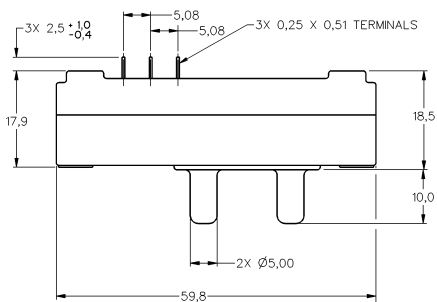
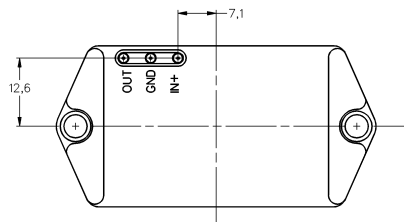
- Weather monitoring equipment
- Altimeters
- Radiometers
- Leak detection systems in underground telecommunications cables

Description

140PC Series pressure sensors provide an output voltage that is proportional to the pressure applied. They operate in ranges from 0 psia to 15.0 psia to 0 psia to 30.0 psia using a single, positive supply voltage ranging from 7.0 Vdc to 16.0 Vdc.

Product Specifications	
Measurement Type	Absolute
Signal Conditioning	Amplified
Pressure Range	0 psia to 30.0 psia
Maximum Overpressure	60.0 psia
Supply Voltage	7.0 Vdc min., 8.0 Vdc typ., 16.0 Vdc max.
Compensated	Yes
Output Calibration	Yes
Response Time	1 ms max.
Termination	PCB
Port Style	Straight
Package Style	Honeywell - 100PC
Linearity	± 0.40% span max. (P2 < P1)
Typical Sensitivity	0.167 V/psi
Full Scale Span	4.67 Vdc typ.

Null Offset	1.33 Vdc typ.
Repeatability & Hysteresis Error	± 0.15 % span typ.
Shock	Qualification tested to 150 g
Vibration	MIL-STD-202 Method 213 (150 g half sine 11 ms)
Weight	28 g [0.987 oz]
Operating Temperature Range	-40 °C to 85 °C [-40 °F to 185 °F]
Compensated Temperature Range	-18 °C to 63 °C [0 °F to 145 °F]
Storage Temperature Range	-55 °C to 125 °C [-67 °F to 257 °F]
Media Compatibility	Port 1: Dry gases only. Port 2: Wetted materials. Polyester housing, epoxy adhesive, silicon, borosilicate glass and silicon-to-glass bond.
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers
Availability	Global
Series Name	140PC



CATALOG LISTING	TYPE	OPERATING PRESSURE RANGE
142PC30A	A	0 TO 30 PSIA
142PC30D	D	0 TO 30 PSID
142PC30G	G	0 TO 30 PSIG

- NOTES
1 - INPUT MEDIA:
P1 - DRY GASES ONLY; CONNECTION SIDE OF SENSOR
P2 - LIMITED ONLY TO THOSE MEDIA THAT WILL NOT ATTACK POLYESTER, SILICON OR SILICONE BASED ADHESIVE
2 - TERMINALS ARE PLATED FOR SOLDERING
3 - LIMIT SOLDERING TO 315°C MAX FOR 10 SECONDS MAX
4 - UNITS ARE OF PLASTIC CONSTRUCTION

M 140PC30 SERIES CHART 1

GENERAL OPERATING CHARACTERISTICS

PRESSURE RANGE	0 TO 1550 mmHg (0 TO 30 PSI)
OVERPRESSURE	3100 mmHg (60 PSI)
TEMPERATURE RANGES	
STORAGE	-55°C TO +125°C
OPERATING	-40°C TO +85°C
COMPENSATED	-18°C TO +63°C
SUPPLY VOLTAGE	7 TO 16 VDC
SUPPLY CURRENT	20mA MAX WITH 10K LOAD
OUTPUT VOLTAGE	PROPORTIONAL TO SUPPLY VOLTAGE OVER ABOVE RECOMMENDED RANGE
SHORT CIRCUIT LIMIT	MAY BE SHORTED INDEFINITELY
OUTPUT RIPPLE	NONE
GROUND REFERENCE	SUPPLY AND OUTPUT ARE COMMON

ELECTRICAL PERFORMANCE AT 25°C AND 8.00±0.01 VDC SUPPLY

OUTPUT VOLTAGE	
142PC30D OR G	
NULL (0 PSIG)	1.000±0.050 VDC
FULL SCALE (30 PSIG)	6.000VDC TYP P2 > P1
SPAN	5.000±0.050 VDC
SENSITIVITY	166.7 mV/PSI TYP
LINEARITY (B.F.S.L.)	.75% SPAN MAX P1 > P2 .150% SPAN MAX P2 > P1
HYSTERESIS & REPEATABILITY	.15% SPAN TYP
TEMPERATURE ERROR	
+5°C TO +45°C	.50% SPAN TYP
-18°C TO +63°C	1.00% SPAN MAX
-40°C TO +85°C	2.00% SPAN TYP
142PC30A	
NULL (0 PSIA)	1.000 VDC TYP
REFERENCE (2 PSIA)	1.333±0.050 VDC
FULL SCALE (30 PSIA)	6.000 VDC TYP P1 > P2
SPAN (2 TO 30 PSIA)	4.667±0.050 VDC
SENSITIVITY	166.7 mV/PSI TYP
LINEARITY (B.F.S.L.)	.80% SPAN MAX
HYSTERESIS & REPEATABILITY	.16% SPAN TYP
TEMPERATURE ERROR	
+5°C TO +45°C	.54% SPAN TYP
-18°C TO +63°C	1.07% SPAN MAX
-40°C TO +85°C	2.14% SPAN TYP

METRIC	INCH
0.4	.016
0.25	.010
0.51	.020
1.0	.039
1.5	.064
2.5	.099
3.52	.139
5.08	.200
6.1	.240
7.1	.280
10.0	.39
12.5	.494
12.6	.496
16.2	.64
17.9	.70
18.5	.73
30.0	1.18
52.40	2.06
59.8	2.35

THIRD ANGLE PROJECTION
SCALE 2 : 1
DO NOT SCALE PRINT
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE
NO PLACE (0.1) ±1 mm
ONE PLACE (0.0) ±0.4 mm
TWO PLACE (0.00) ±0.15 mm
ANGLES ±
WEIGHT 31 GRAMS

MASTER REDUCED
ANSI Y14.5M-1982 APPLIES

MICRO SWITCH
a Honeywell Division
FED. MFG. CODE 91829

PRESSURE TRANSDUCER

CATALOG LISTING
140PC30 SERIES
CHART 1