

Miniature Pressure Transmitter

Model : P364 (Silicon cell with Mini DIN Connector)
P366 (Silicon cell with DIN Connector)



Advantages

- Miniature pressure transmitter for industrial applications
- Extremely corrosion resistant
- Rugged piezoresistive ceramic or silicon measuring cell
- Shock and vibration resistant
- Miniature design
- Measuring ranges
 - Silicon sensor : - 1~ 0.5 to 100 bar relative,
0 ~ 1 to 25 bar absolute

Applications

The transmitters can be used for a wide range of applications in process control, automatic machinery and hydraulic or pneumatic system design.

- Standard hydraulic and pneumatic equipments
- Process control
- Machine tools and automatic machinery
- Monitoring systems
- Servo valves and drives
- Chemical and petrochemical industry
- Air and gas compressors
- Loading and brake systems



P364



P366

Descriptions

P360 series miniature designed pressure transmitter meets the requirements for a general purpose, reliable and economical pressure measurements for industrial and process control installations. This pressure transmitter measures of gases and liquids in industrial applications and is available wide range of pressure in -1 ~ 0.5 to 100 bar relative pressure and 0 ~ 1 to 25 bar absolute pressure.

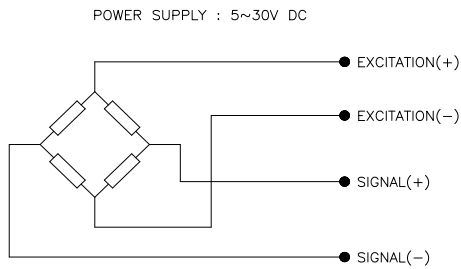
It is extremely versatile and suitable for measuring dynamic and static pressure.

The built-in piezoresistive silicon measuring cell is highly corrosion resistant, stable and an excellent price / performance ratio. The transmitters are available with either 2-wire current or 3-wire voltage output. The measuring principle of ceramic sensor is that the pressure to be measured acts without transmitting liquid on a stable, corrosion resistant ceramic measuring cell. Piezoresistive resistors are attached to the cell and connected into a Wheatstone bridge configuration. In case of isolated silicon sensor, the pressure to be measured acts through thin corrosion resistant stainless steel 316L diaphragm on a silicon measuring element. The pressure transmitting medium is silicon oil. The measuring element contains diffused piezoresistive resistors which are connected into a Wheatstone bridge. The output signal of this bridge is converted into a standardized current or voltage output signal.

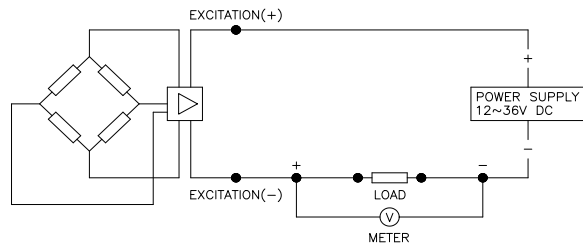
Specification

Input	
Model	P364 / P366
Technology	Piezoresistive silicon pressure sensor
Pressure ranges	-1 ~ 0 ~0.5 to 100 bar relative pressure
	0~1 to 25 bar absolute pressure
Pressure reference	Vacuum, Gauge & Absolute
Overload	2x full scale without damage
Burst Pressure	6x full scale (max 300 bar)
Output	
Amplified	4~20mA current (2-wire)
	1~5V voltage(3-wire)
	Other signals available on request
Electrical Specification	
Excitation voltage	9~30V DC
Load resistance max @ 24V	500Ω at 24V
Influence of excitation	0.01% FSO/V
Power ripple	≤500mV P-P
Reverse polarity	Protected
Insulation Resistance	≥100MΩ/500VDC(200MΩ/250VDC)
Shock resistance	≤ 200g/1ms (IEC 60068-2-27)
Response time (10~90%)	≤4 milliseconds
Adjustment	Fixed value by default
Performance Specification	
Accuracy	±0.5% FSO typical
Linearity,Hysteresis & Repeatability	±0.35% FSO typical
Stability	±0.25% FSO/a@25°C
Cutoff frequency(-3 d B)	≤2KHz
Reference temperature	25 °C
Operating temperature range	-10~60°C
Storage temperature range	-20~70°C
Thermal sensitivity shift	≤ ±0.03% FSO typical
Thermal zero shift	≤ ±0.2% FSO typical
Physical Specification	
Process connection	PT1/4 , PT3/8 , PT1/2 male thread
	PF1/4 , PF3/8 , PF1/2 male thread
	Female thread & other connections available on request
Process media	Gases and liquids compatible with
Materials	Diaphragm : Stainless steel 316L
	Housing and process connection : stainless steel 316
	Gasket O-ring : Viton (HNBR, CSM, etc.)
Enclosure rating	IP65
Influence of mounting position	~ 20kPa : ≤ ±0.5% FSO
	20kPa ~ : ≤ ±0.2% FSO
	Under 0.5kgf/cm2, mounting vertically
Weight	Approx. (50 ~ 85g)
Options	Cooling Fin
	Siphon tube

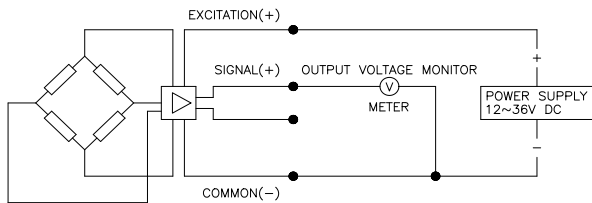
System connection for unamplified



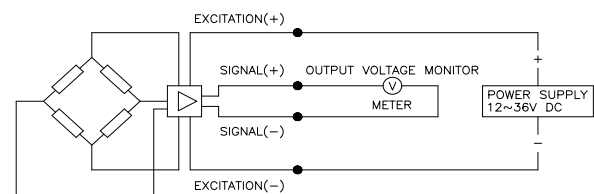
System connection for 2-wire transmitter



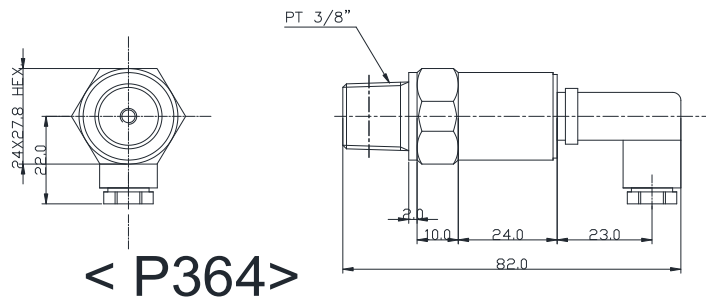
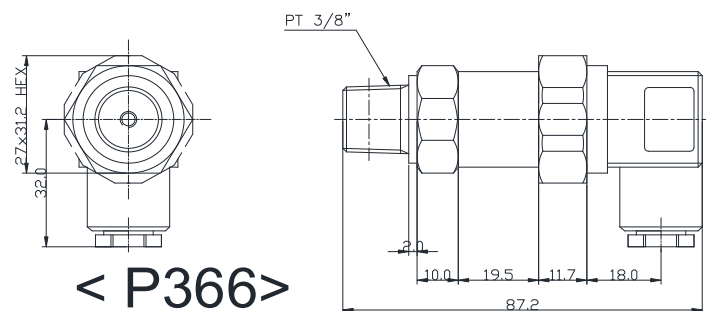
System connection for 3-wire transmitter



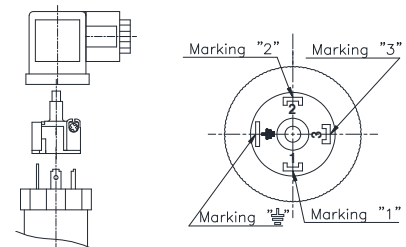
System connection for 4-wire transmitter



Dimension (mm)



Electrical connection



< Electrical connector >

• Wiring diagrams

E : Excitation

S : Signal

C : Common

System Conn.	Wire		
	2	3	4
PIN 1	E +	E +	E +
PIN 2	E -	C -	E -
PIN 3		S +	S +
GND	Shielded	Shielded	S -

Ordering Information

Miniature Pressure Transmitter

1. Base model

[illegible]

2. Electrical connection type

[illegible]

3. Pressure reference

[illegible]

4. Process connection type "1"

[illegible]

5. Process connection type "2"

0.1 Process connection type					
T					PT thread as standard
N					NPT thread
F					PF thread
X					Other process connections available on request

Process connection size	Process connection size	Process connection size	Process connection size	Process connection size	Process connection size
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102
103	104	105	106	107	108
109	110	111	112	113	114
115	116	117	118	119	120
121	122	123	124	125	126
127	128	129	130	131	132
133	134	135	136	137	138
139	140	141	142	143	144
145	146	147	148	149	150
151	152	153	154	155	156
157	158	159	160	161	162
163	164	165	166	167	168
169	170	171	172	173	174
175	176	177	178	179	180
181	182	183	184	185	186
187	188	189	190	191	192
193	194	195	196	197	198
199	200	201	202	203	204
205	206	207	208	209	210
211	212	213	214	215	216
217	218	219	220	221	222
223	224	225	226	227	228
229	230	231	232	233	234
235	236	237	238	239	240
241	242	243	244	245	246
247	248	249	250	251	252
253	254	255	256	257	258
259	260	261	262	263	264
265	266	267	268	269	270
271	272	273	274	275	276
277	278	279	280	281	282
283	284	285	286	287	288
289	290	291	292	293	294
295	296	297	298	299	300
301	302	303	304	305	306
307	308	309	310	311	312
313	314	315	316	317	318
319	320	321	322	323	324
325	326	327	328	329	330
331	332	333	334	335	336
337	338	339	340	341	342
343	344	345	346	347	348
349	350	351	352	353	354
355	356	357	358	359	360
361	362	363	364	365	366
367	368	369	370	371	372
373	374	375	376	377	378
379	380	381	382	383	384
385	386	387	388	389	390
391	392	393	394	395	396
397	398	399	400	401	402
403	404	405	406		

1						1/4"
2						3/8"
3						1/2"
X						Other units available on request

7. Accuracy

S					±0.5% F.S.O
---	--	--	--	--	-------------

8. Measuring range

Calibration range			
03			0 ~ 0.5 (Only available relative)
04			0 ~ 1
05			0 ~ 2
06			0 ~ 5
07			0 ~ 10
08			0 ~ 20
09			0 ~ 35 (Only available relative)
10			0 ~ 50 (Only available relative)
11			0 ~ 100 (Only available relative)
xx			Other calibration ranges available on request

9. Unit

M		Calibration in mmH ₂ O
K		Calibration in kgf/cm ²
A		Calibration in Mpa
B		Calibration in bar
P		Calibration in psi
X		Other units available on request

10. Output signal / Electrical connection type	Other units available on request
--	----------------------------------

A1	4~20mA, DC, 2-wire output
B1	1~5V, DC, 3-wire output
B2	0~5V, DC, 3-wire output
B3	0~10V, DC, 3-wire output

11. Option

N	None options
C	Cooling Fin
S	Siphon tube
X	Other accessories available on request

P36	4	R	M	T	1	H	07	K	A1	N	Sample ordering code
-----	---	---	---	---	---	---	----	---	----	---	----------------------

Specifications subject to change without notice