HCX Series

Fully signal conditioned pressure transducer

FEATURES

- **Pressure ranges from ±5 mbar to 5 bar differential, 1 and 2 bar absolute**
- **TTL power supply**
- **0.5...4.5 V output**
- **Inline pinning for easy PCB-mounting**
- **Externally adjustable offset and span**

SERVICE

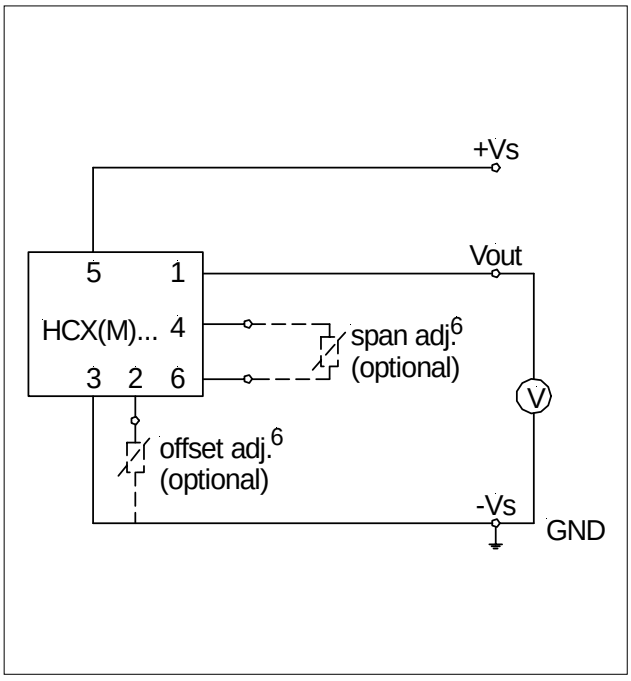
Non-corrosive, non-ionic working fluids, such as dry air and dry gases.

SPECIFICATIONS

Maximum ratings

Excitation voltage	4.8 to 15 V
Output current	
Source	5 mA
Sink	5 mA
Temperature limits	
Operating	-20 to 70°C
Storage	-40 to 85°C
Compensated	0 to 50°C
Lead temperature (2...4 sec. soldering)	250°C
Humidity	0 - 95 %RH
Proof pressure[1]	
HCXPM005..., HCXM010... and HCXM020	700 mbar
HCXM050 to HCXM350	1.4 bar
all other devices	2 x rated pressure
Tightening torque (mounting screws M2.5)	10 Ncm

ELECTRICAL CONNECTION



PERFORMANCE CHARACTERISTICS

(unless otherwise noted, V_S = 5 V, R_L > 100 kΩ, t_{amb} = 25°C)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure	HCXPM005D6... HCXM010D6... HCXPM010D6... HCXM020D6... HCXM050D6... HCXM100D6... HCXM350D6... HCX001...6... HCX002...6... HCX005...6...	-5 0 -10 0 0 0 0 0 0 0		5 10 10 20 50 100 350 1000 2000 5000	mbar
Zero pressure offset	all HCXPM... HCXM010D6... / HCXM020D6... all other devices	2.40 0.40 0.45	2.50 0.50 0.50	2.60 0.60 0.55	V
Span[5]	HCXPM... all other devices	1.95 3.95	2.0 4.0	2.05 4.05	
Full scale output			4.5		
Output at lowest specified pressure	HCXPM... only		0.5		
Thermal effects (0 to 50°C)[4] Combined offset and span	HCXP...M005D6... HCXM010D6... to HCXM050D6... HCXM100D6..., HCXM350D6... all other devices			0.20 0.12 0.10 0.05	%FSO/°C
Non-linearity and hysteresis (BSL)[2]	HCXM020D6... all other devices		0.5 0.1	1.0 0.5	%FSO
Long term stability[3]			±0.2		
Output impedance				50	Ω
Power supply rejection	Offset Span		0.05 0.03		%FSO/V
Power consumption (no load)			50		mW

Specification notes:

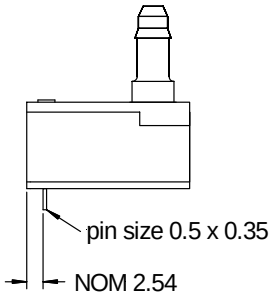
1. Proof pressure is the maximum pressure which may be applied without causing damage to the sensing element.
2. Non-linearity - the maximum deviation of measured output at constant temperature, from **"B**est **S**traight **L**ine" through three points (offset pressure, full scale pressure and 1/2 full scale pressure).
3. Change after one year or 1 million pressure cycles.
4. Thermal effects tested and guaranteed from 0°C to 50°C relative to 25°C. All specifications shown are relative to 25°C.
5. Span is the algebraic difference between the output at full scale pressure and offset.
6. Under normal conditions external offset and span calibrations are not needed. In case fine trimming is required, offset adjustments are possible to lower values only. Do not trim for nominal value minus 150 mV. Span adjustments are possible to lower pressure range (higher gain). Do not trim for more than 15 % of full scale pressure.

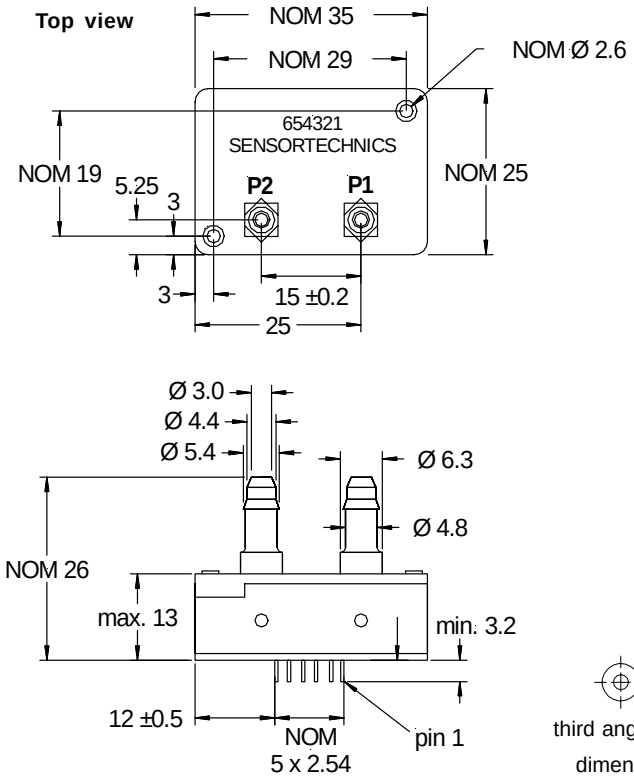
OUTLINE DRAWING

HCX(M)...6H, HCXPM...6H

P1: **High pressure port for 5 mbar and 10 mbar devices**

P2: **High pressure port for all other devices (forward gage)**





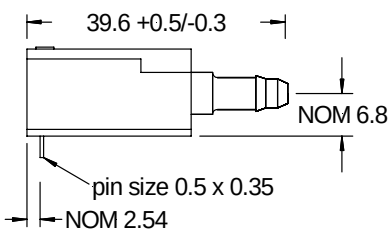
third angle projection
dimensions in mm

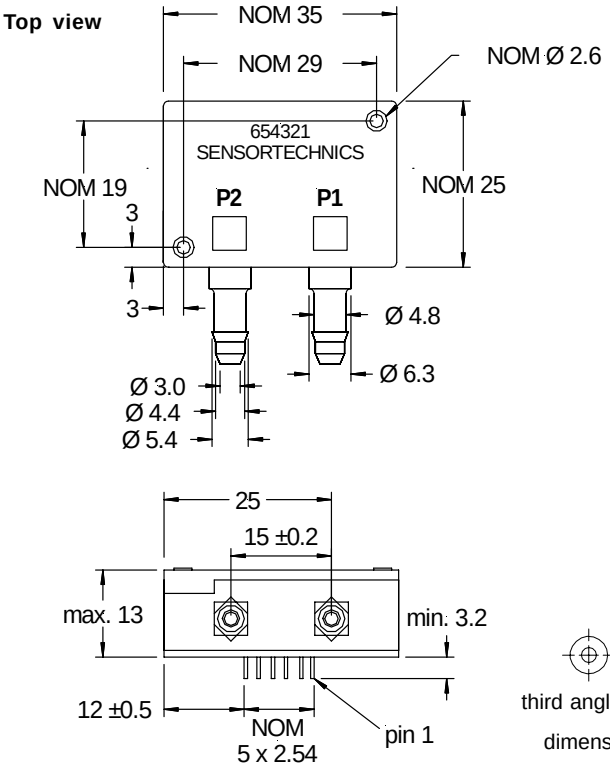
mass: 14 g

HCX(M)...6V

P1: **High pressure port for 5 mbar and 10 mbar devices**

P2: **High pressure port for all other devices**





third angle projection
dimensions in mm

mass: 14 g

ORDERING INFORMATION

Pressure range	Part number / Package version	
	Side facing ports	Top facing ports
differential / gage devices		
0 to ±5 mbar	HCXPM005D6V	HCXPM005D6H
0 to 10 mbar	HCXM010D6V	HCXM010D6H
0 to ±10 mbar	HCXPM010D6V	HCXPM010D6H
0 to 20 mbar	HCXM020D6V	HCXM020D6H
0 to 50 mbar	HCXM050D6V	HCXM050D6H
0 to 100 mbar	HCXM100D6V	HCXM100D6H
0 to 350 mbar	HCXM350D6V	HCXM350D6H
0 to 1 bar	HCX001D6V	HCX001D6H
0 to 2 bar	HCX002D6V	HCX002D6H
0 to 5 bar	HCX005D6V	HCX005D6H
absolute devices		
0 to 1 bar	HCX001A6V	HCX001A6H
0 to 2 bar	HCX002A6V	HCX002A6H