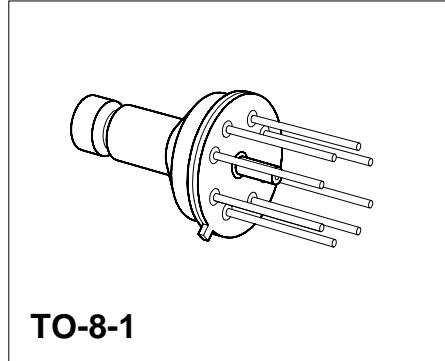


Silicon Piezoresistive Relative Pressure Sensor

KPY 33-R

Features

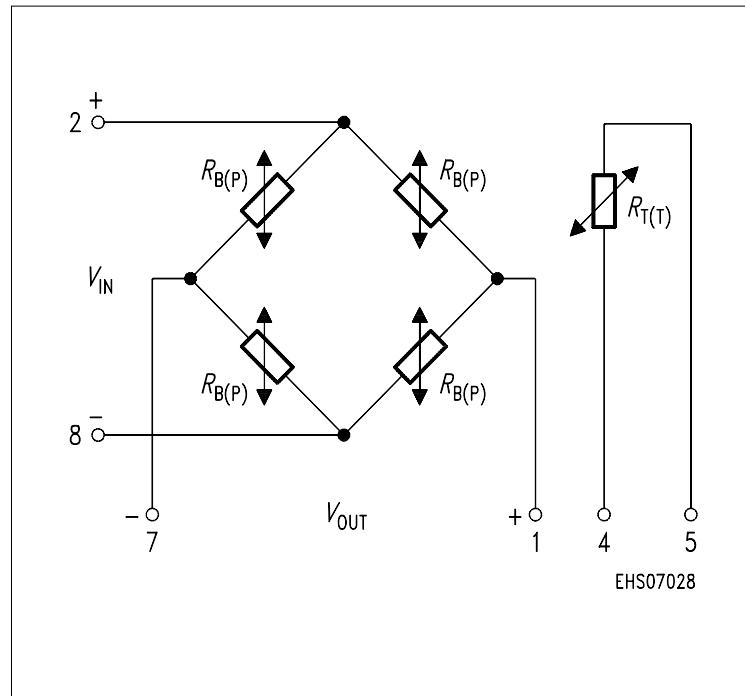
- Low pressure and temperature hysteresis
- Fast response
- High sensitivity and linearity
- Fatigue free monocrystalline silicon diaphragm giving high load cycle stability
- High long term stability
- Metal Housing



Type and Marking	Symbol	Pressure Range	Unit	Ordering Code
KPY 33-R	$P_0 \dots P_N$	0 … 0.1	bar	Q62705-K151

Pin Configuration

1	$+V_{OUT}$
2	$+V_{IN}$
3	Not connected
4	Temperature sensor
5	Temperature sensor
6	Shielding, to be connected to $+V_{in}$
7	$-V_{OUT}$
8	$-V_{IN}$



Absolute Maximum Ratings

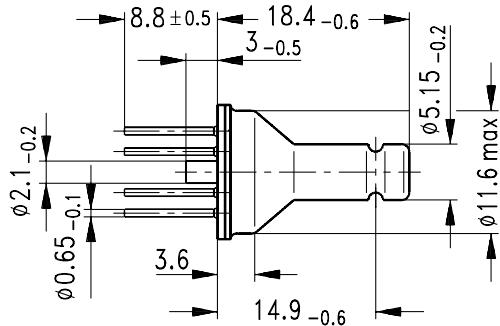
Parameter	Symbol	Limit Values		Unit
Pressure overload	P_{MAX}	1.0		bar
Operating temperature range	T_A	– 40 ... + 125		°C
Storage temperature range	T_{stg}	– 50 ... + 150		°C
Supply voltage	V_{IN}	12		V

Electrical Characteristicsat $T_A = 25$ °C and $V_{\text{IN}} = 5$ V, unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Bridge resistance	R_B	4	–	8	kΩ
Sensitivity	s	56.0	80.0	–	mV/Vbar
Output voltage	V_{fin}	28.0	40.0	–	mV
Offset voltage $P = P_0$	V_0	– 25	–	+ 25	mV
Linearity error (Best fit straight line) $P = P_0 \dots P_N$	F_L	–	± 0.2	± 0.5	% V_{fin}
Pressure hysteresis $P_1 = P_0, P_2 = P_N, P_3 = P_0$	P_H	–	± 0.1	–	% V_{fin}

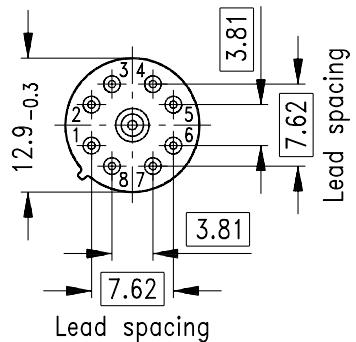
Electrical Characteristicsat $T_1 = 25$ °C, $T_2 = 125$ °C, $T_3 = 25$ °C and $V_{\text{IN}} = 5$ V, unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Temperature coefficient of V_{fin}	$TC_{V_{\text{fin}}}$	– 0.19	–	– 0.10	%/K
Temperature coefficient of V_0	TC_{V_0}	– 0.05	–	+ 0.05	%/K
Temperature coefficient of R_B	TC_{RB}	–	+ 0.095	–	%/K
Temperature hysteresis of $V_0; V_{\text{fin}}$	TH	– 0.7	± 0.1	+ 0.7	% v. V_{fin}

Package Outline**TO-8-1**

Approx. weight 2.5 g

- 2; 8 Supply voltage V_{IN}
- 1; 7 Output voltage V_{OUT}
- 3...5 Not connected
- 6 Substrate (connect to $+V_{IN}$!)



GMX06798

Weight approx. 3.3 g

Dimensions in mm

Exterior Packaging

I.e. tubes, trays, boxes are shown in our Data Book "Package Information".