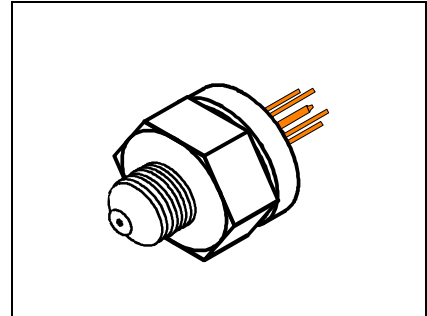


Silicon Piezoresistive Absolute Pressure Sensor

KPY 66-A
...KPY 69-A

Preliminary Data

- 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
- Built in silicon temperature sensor
- Corrosion resistant stainless steel threaded housing

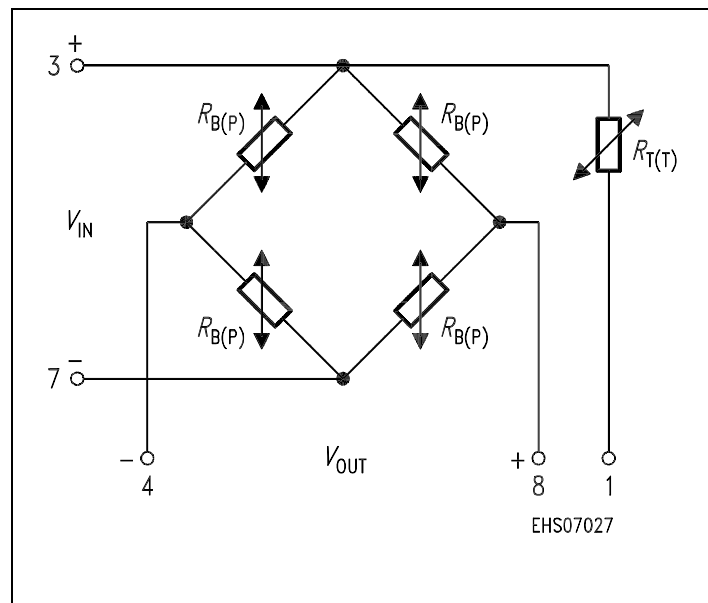


Type and Marking	Thread	Symbol	Pressure Range	Unit	Ordering Code
KPY 66 A	ISO M12*1.5	$P_0 \dots P_N$	0 ... 25	bar	Q62705-K... *)
KPY 67 A	NPTF 1/8"x27		0 ... 60		Q62705-K... *)
KPY 68 A			0 ... 160		Q62705-K... *)
KPY 69 A			0 ... 400		Q62705-K... *)

*) delivery on request

Pin Configuration

1	Temp.-Sensor (typ. $R_{25} = 2 \text{ k}\Omega$)
2	Not connected
3	+ V_{in} ; Temp.-Sensor
4	- V_{out}
5	Capillary tube
6	Shielding, to be connected to + V_{in}
7	- V_{in}
8	+ V_{out}



Maximum Ratings

Parameter	Symbol	Value	Unit
Pressure overload KPY 66 A KPY 67 A KPY 68 A KPY 69 A	P_{MAX}	50 70 200 500	bar
Operating temperature range	T_A	- 40 ... + 125	°C
Storage temperature range	T_{stg}	- 40 ... + 125	°C
Supply voltage	V_{IN}	12	V

Electrical Characteristics

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

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
Bridge resistance	R_B	4	–	8	kΩ
Sensitivity KPY 66 A KPY 67 A KPY 68 A KPY 69 A	s	1.1 0.63 0.38 0.16	2.1 1.0 0.53 0.22	3.0 1.4 0.66 0.27	mV/Vbar
Output voltage KPY 66 A KPY 67 A KPY 68 A KPY 69 A	V_{fin}	150 190 310 330	260 300 420 440	370 410 530 550	mV
Offset voltage $P = P_0$	V_0	- 25	–	+ 25	mV
Linearity error (Best fit straight line) $P = P_0 \dots P_N$ KPY 66 ... 69 A	F_L	–	± 0.3	± 0.5	% V_{fin}
Pressure hysteresis $P_1 = P_0, P_2 = P_N, P_3 = P_0$ KPY 66 ... 69 A	P_H	–	± 0.1	–	% V_{fin}

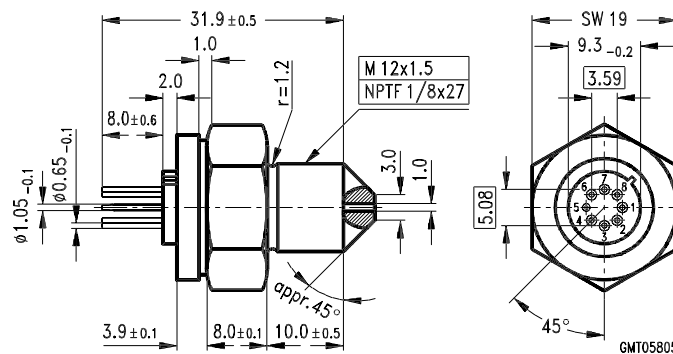
Electrical Characteristics

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

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
Temperature coefficient of V_{fin} KPY 66 ... 69 A	$TC_{V_{fin}}$	- 0.22	- 0.18	- 0.15	%/K
Temperature coefficient of V_0 KPY 66 A KPY 67 A KPY 68 A KPY 69 A	TC_{V_0}	- 0.015 - 0.01 - 0.01 - 0.01	- - - -	+ 0.015 + 0.01 + 0.01 + 0.01	%/K
Temperature coefficient of R_B KPY 66 ... 69 A	TC_{R_B}	-	+ 0.23	-	%/K
Temperature hysteresis of V_0 ; V_{fin} KPY 66 ... 69 A	TH	-	± 0.2	-	% v. V_{fin}

Package Outline

Stainless Steel Threaded Housing, TO-39



Weight approx. 35 g

Dimensions in mm

Sorts of Packing

Package outlines for tubes, trays etc. are contained in our Data Book "Package Information".

VAKAT