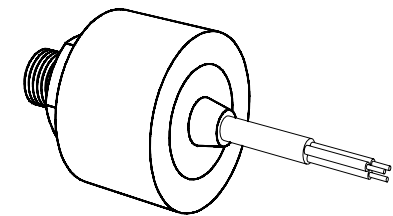


Silicon Pressure Sensor Module

KPY 41-MR
KPY 46-MA/MR

Features

- Silicon piezoresistive technology
- High stability
- Excellent linearity
- Temperature compensated span and offset voltages
- Rugged stainless-steel housing
- Threaded pressure connection port
- Full scale 5 V output signal
- Open collector output



Stainless Steel Package

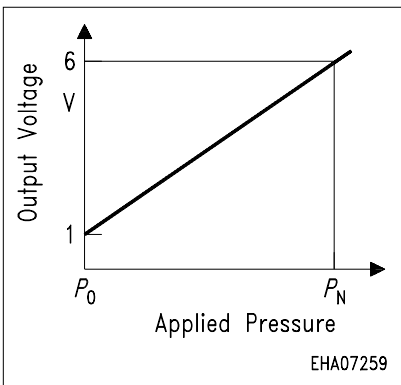
Type and Marking	Rated Pressure Range $P_0 \dots P_N$	Over Pressure P_{MAX}	Unit	Ordering Code
KPY 41-MR	0 ... 0.250	2	bar	Q62705-K ... ¹⁾
KPY 42-MA	0 ... 0.6	6		Q62705-K323
KPY 42-MR	0 ... 0.6	6		Q62705-K324
KPY 43-MA	0 ... 1.6	10		Q62705-K325
KPY 43-MR	0 ... 1.6	10		Q62705-K326
KPY 44-MA	0 ... 4	16		Q62705-K ... ¹⁾
KPY 44-MR	0 ... 4	16		Q62705-K ... ¹⁾
KPY 45-MA	0 ... 10	30		Q62705-K327
KPY 45-MR	0 ... 10	30		Q62705-K328
KPY 46-MA	0 ... 25	40		Q62705-K ... ¹⁾
KPY 46-MR	0 ... 25	40		Q62705-K ... ¹⁾

1) delivery on request

Wire Configuration

+ V_{IN}	brown
Gnd	blue
V_{OUT}	black

For absolute pressure sensors, P_0 = vacuum
 For relative pressure sensors, P_0 = atmospheric pressure
 P_N = rated pressure



Absolute Maximum Ratings

Parameter	Symbol	Limit Values	Unit
Operating temperature range	T_A	– 20 ... + 85	°C
Storage temperature range	T_{stg}	– 40 ... + 100	°C
Supply voltage	V_{IN}	12 ... 20	V

Electrical Characteristics

at $T_A = 25\text{ °C}$ and $V_{IN} = 12\text{ V}$

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Sensitivity 0 ... P_N KPY 41-MR KPY 42-MA/R KPY 43-MA/R KPY 44-MA/R KPY 45-MA/R KPY 46-MA/R		–	20.0 8.3 3.1 1.25 0.5 0.2	–	V/bar
Output voltage $P = P_N$ KPY 41 ... 46-MA/R	V_{OUT}	5.95	6	6.05	V
Offset voltage P_0 KPY 41 ... 46-MA/R	V_0	0.95	1.0	1.05	V
Linearity error (Best fit straight line) KPY 41 ... 46-MA/R		–	–	± 0.25	% V_{FS}
Repeatability and pressure hysteresis KPY 41 ... 46-MA/R		–	± 0.1	–	% V_{FS}
Temperature error of span and offset voltage (– 20°C ... + 85 °C) KPY 41 ... 46-MA/R	TC_{VOUT}	–	± 0.1	–	% V_{FS}
Temperature hysteresis KPY 41 ... 46-MA/R	T_H	–	± 0.1	–	% V_{FS}
Response time KPY 41 ... 46-MA/R		–	< 0.1	–	ms
Supply current KPY 41 ... 46-MA/R		–	–	24.0	mA

