



PWM Interface
PWM

Pressure Transducer PTP-40 PWM Output

- Piezoresistive MEMS-Sensing
- Modular Design, RoHS Conform
- Automotive Qualified for Engine Mounted Application

Description

The SMS-PTP-40 is a compact Pressure Transducer, designed for harsh automotive requirements. The sensor is available in different pressure ranges and can be supplied with a customer specific electrical connector and pressure port. The SMS-PTP-40 is a cost-effective product and due to its flexibility suitable for various low and high volume applications.

Applications

- *Automotive*
 - Air conditioning systems
 - Brake systems
 - Fuel pressure
 - Oil pressure
- *HVAC, climate control*
- *Hydraulic systems*
- *Pneumatic*
- *Industrial process control*

Features

- Pressure type gage or absolute
- Output: PWM interface
- Calibration and temperature compensation via ASSP
- Extended temperature range
- Automotive protection
- Compact size

Technical Specification

Pressure		Environment	
<i>Operating Pressure</i> ¹⁾	1 - 40 bar (14.5 psia - 580 psia)	<i>Operational Temperature</i>	-40°C to +135°C
<i>Over Pressure</i>	60 bar	<i>Short Term Operating Temp.</i>	140°C (15min)
<i>Burst Pressure</i>	> 90 bar	<i>Storage Temperature</i>	-40°C to +150°C
		<i>Classification</i>	IP6K9K
Accuracy		Durability	
<i>Accuracy</i> ²⁾	± 1.0% Vcc (25°C)	<i>Pressure Cycles</i>	> 12 million @ 135°C
<i>Linearity</i>	1.0% (-40°C to +135°C)		
<i>Total Error Band</i> ²⁾	2% max @ -20°C to +100°C		
	3% max @ -40°C to +135°C		
Electrical Parameters		Mechanical Parameters	
<i>Supply</i>		<i>Housing Material</i>	Aluminum (stainless steel upon request)
Voltage (VBAT)	8 - 18 V	<i>Pressure Port</i> ³⁾	Hex 14mm, M10 x 1.25
Current	10mA max.	<i>Electrical Connector</i> ³⁾	Packard
<i>Output</i>		<i>Dimensions (L x W)</i>	48 x 23.4 mm
Signal Range ⁴⁾	5 - 90%	<i>Media Compatibility</i>	R134a, PAG-oil, motor oil, diesel, polluted air
Output Current	15 mA max.	<i>Weight</i>	15g (Aluminum Housing)
PWM Mode ⁵⁾	High side switch		
<i>Protection</i>			
Overvoltage Protection	-18 V/+40 V		
Reverse Polarity Protection	GND, VBAT		
Short Circuit	Continuous		
ESD Protection	HBM 8 kV		
<i>Response Time (90%)</i>	11 ms		

1) Other pressure ranges upon request

2) Includes nonlinearity, hysteresis, offset, repeatability, temperature effects

3) Other pressure ports and electrical connectors upon request

4) Other signal ranges upon request

5) Low side switch upon request