

General description

HPSD 7000 is a new generation of ceramic pressure sensors made with low-temperature co-fired ceramic (LTCC) technology and a patented sensor-construction solution.

The pressure sensor element is made with LTCC technology using piezo-resistive principle to detect the pressure. The LTCC material is compatible with many types of aggressive media like water, hydraulic oils, diesel and others, which makes the sensor suitable for pressure measurements in **harsh environments**. Special protection of the piezo-resistors also makes this sensor suitable for **wet-wet applications**.

High performance and accuracy are achieved with the patented sensor construction, which allows this sensor to be used in many applications, and with its compact and convenient design it is very suitable for OEM users.

The HPSD 7000 pressure sensors are amplified and temperature compensated from 0 to 70°C with special signal conditioning electronics.

The HPSD 7000 family consists of standard 100 mbar, 350 mbar, 1 bar, 2bar, 4bar and 10 bar differential pressure ranges.

Features

- Suitable for **harsh environment** and **wet-wet** applications
- Single 5V supply voltage
- Wide compensated range (0-70°C)
- Total accuracy down to **0.75%FS** (typ.) over 0-70°C, all effects included.
- Standard **0.5 – 4.5V voltage output** and **digital I2C output** available (pressure & temperature)
- High performance OEM

Applications

- Pressure measurements of gases and liquids
- Instrumentation & measuring equipment
- Process control
- Level control systems
- HVAC
- Leak detection



This is preliminary data sheet. This information applies to a product under development. Its characteristics and specifications are subject to change without notice. HYB d.o.o. assumes no obligation regarding future manufacture unless otherwise agreed to in writing.

Available types overview

$T_{AMB}=25^{\circ}\text{C}$, $V_{CC} = 5\text{V}$ unless otherwise noted.

Pressure range	100 mbar	350 mbar	1 bar
ID group	HPSD 7000-100M	HPSD 7000-350M	HPSD 7000-001B
Pressure types	Differential	Differential	Differential
V_{OUT}	0.5 to 4.5V	0.5 to 4.5V	0.5 to 4.5V
Temperature ranges	Operating: -25°C to 85°C Compensated: 0°C to 70°C Storage: -40 to 105°C		
Over pressure ¹⁾	300 mbar	800 mbar	2 bar
Burst. pressure ²⁾	400 mbar	1200 mbar	2.2 bar

Pressure range	2 bar	4 bar	10 bar
ID group	HPSD 7000-002B	HPSD 7000-004B	HPSD 7000-010B
Pressure types	Differential	Differential	Differential
V_{OUT}	0.5 to 4.5V	0.5 to 4.5V	0.5 to 4.5V
Temperature ranges	Operating: -25°C to 85°C Compensated: 0°C to 70°C Storage: -40 to 105°C		
Over pressure ¹⁾	4 bar	8 bar	20 bar
Burst. pressure ²⁾	4.5 bar	9 bar	22 bar

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