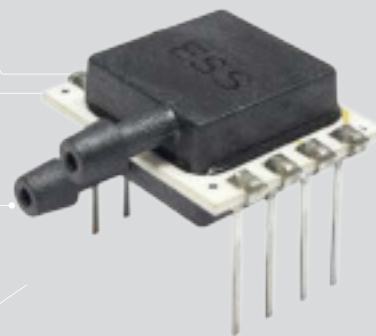
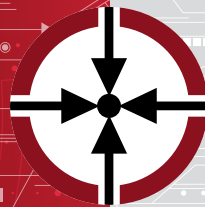


# ESCP-BMS1

Board Mountable  
MEMS Capacitive Pressure Sensors



ES Systems has developed a series of board mountable pressure sensors targeting a variety of markets requiring high resolution and accuracy for absolute, gauge or differential pressure measurements. The ESCP-BMS1 is a MEMS capacitive pressure sensor with state-of-the-art performance. The MEMS pressure sensor die is underpinned by ES Systems' innovative SOI-surface micromachining technology.

ESCP-BMS1 is an absolute, gauge or differential pressure sensor of ultra-high resolution with analog (0-3,3V), PWM, SPI or I<sup>2</sup>C interface. The output is fully calibrated, and temperature compensated based on the internal temperature sensor and the factory calibration coefficients which are stored in the embedded memory. The sensor is ready to be installed directly to the end system without further processing. The total error including repeatability, hysteresis, non-linearity, thermal offset and calibration error between 0°C and 60°C is better than 0.25% FS.

Different power modes are available enabling low power operation, while the output rate and thus the conversion speed is programmable allowing the end user to customize/optimize performance. The sensor can be configured to provide both high accuracy 32-bit pressure and temperature outputs.

ESCP-BMS1 is a silicon capacitive pressure sensor with excellent long-term stability. The sensor is incorporated in a standard 8-pin DIP package with a single or two pneumatic ports. The top port is the high side and the bottom port is the low side.



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# ESCP-BMS1

Board Mountable  
MEMS Capacitive Pressure Sensors



## Specifications

<b>Pressure Type</b>	Absolute, Gauge, Differential
<b>Pressure Range, Absolute</b>	50mbara... 10bara
<b>Pressure Range, Gauge</b>	0barg... 11barg
<b>Pressure Range, Differential</b>	±10mbar ... ±1bar
<b>Power Supply</b>	3,3V
<b>Current Consumption, full operation</b>	< 1 mA
<b>Accuracy</b>	0.1% FS
<b>Operating Temperature</b>	-40°C ... +125°C
<b>Compensation Temperature</b>	0°C ... +60°C, -20°C ... +85°C, -40°C ... +125°C
<b>Digital Output</b>	Calibrated Pressure & Temperature
<b>Analog Output</b>	Calibrated Pressure
<b>Overpressure Tolerance</b>	Up to 100x
<b>Media Compatibility</b>	Gases, liquids

## Ordering Information

**ESCP-BMS1 – N – NNNNNNN – NN – NN – NN – N**

**Media**

- G Dry glass only
- L Liquid media

**Pressure Range**

Absolute	Gauge	Differential
00100MA	00060MG	00010MD
00200MA	00100MG	00050MD
00500MA	00160MG	00100MD
01000MA	00250MG	00150MD
01250MA	00400MG	00200MD
02000MA	00600MG	00250MD
05000MA	01500MG	00500MD
10000MA	04500MG	00750MD
00010KA	07000MG	01000MD
00020KA	11000MG	00001KD
00050KA	00006KG	00005KD
00100KA	00010KG	00010KD
00125KA	00016KG	00015KD
00200KA	00025KG	00020KD
00500KA	00040KG	00025KD
01000KA	00060KG	00050KD
00002PA	00150KG	00075KD
00005PA	00450KG	00100KD
00010PA	00700KG	00001PD
00015PA	01100KG	00002PD
00020PA	00001PG	00003PD
00030PA	00002PG	00004PD
00075PA	00003PG	00005PD
00145PA	00004PG	00006PD
	00005PG	00007PD
	00010PG	00010PD
	00020PG	00015PD
	00065PG	
	00100PG	
	00160PG	

**Temperature Sensor**

- Y Yes
- N No

**Compensation Temperature**

- 01 0°C to 50°C
- 02 -20°C to 85°C
- 03 -40°C to 125°C

**Pressure Port**

- 11 
- 02 

**Output Type**

01	°C (address 0x28)	05	SPI
02	°C (address 0x29)	06	PWM
03	°C (address 0x2A)	07	Analog
04	°C (address 0x2B)		



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