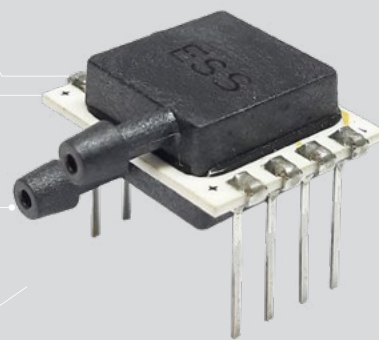


# ESCP-BMS1

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, 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. 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.



62, I. Metaxa str.  
19441 Koropi - Athens, Greece

**T** +30 216 2000500

**F** +30 216 2000555

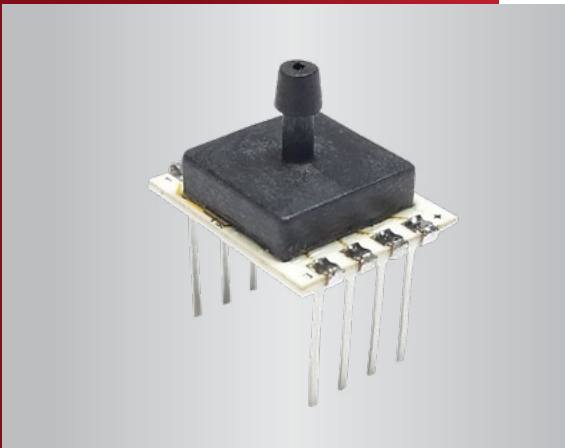
**info@esenssys.com**

**www.esenssys.com**



# ESCP-BMS1

Board Mountable  
MEMS Capacitive Pressure Sensors



## Specifications





<b>Pressure Type</b>	Absolute, Gauge, Differential
<b>Pressure Range, Absolute</b>	200mbara...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>	±0.15% FSS
<b>Total Error Band</b>	±0.25% FSS
<b>Operating Temperature</b>	-20°C ... +85°C
<b>Compensation Temperature</b>	0°C ... +60°C, -20°C ... +85°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

## Ordering Information

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

<b>Media</b>												
G Dry glass only												
<b>Pressure Range</b>												
Absolute	Gauge	Differential										
00500MA	00060MG	00010MD										
01000MA	00100MG	00050MD										
01250MA	00160MG	00100MD										
02000MA	00250MG	00150MD										
05000MA	00400MG	00200MD										
10000MA	00600MG	00250MD										
00050KA	01500MG	00500MD										
00100KA	05500MG	00750MD										
00125KA	07000MG	01000MD										
00200KA	11000MG	00001KD										
00500KA	00006KG	00005KD										
01000KA	00010KG	00010KD										
00010PA	00016KG	00015KD										
00015PA	00025KG	00020KD										
00020PA	00040KG	00025KD										
00030PA	00060KG	00050KD										
00075PA	000150KG	00075KD										
00145PA	00550KG	00100KD										
	00700KG	00001PD										
	01100KG	00002PD										
	00001PG	00003PD										
	00002PG	00004PD										
	00003PG	00005PD										
	00004PG	00006PD										
	00005PG	00007PD										
	00010PG	00010PD										
	00020PG	00015PD										
	00080PG											
	00100PG											
	00160PG											

<b>Temperature Sensor</b>		
Y Yes		
N No		
<b>Pressure Response Time</b>		
1 15Hz		
2 1kHz		
<b>Compensation Temperature</b>		
01 0°C to 60°C		
02 -20°C to 85°C		
<b>Pressure Port</b>		
11 	15 	
02 	08 	
<b>Output Type</b>		
01 SPI / I <sup>2</sup> C (address 0x28)	05 Analog	
02 SPI / I <sup>2</sup> C (address 0x29)		
03 SPI / I <sup>2</sup> C (address 0x2A)		
04 SPI / I <sup>2</sup> C (address 0x2B)		



62, I. Metaxa str.  
19441 Koropi - Athens, Greece

T +30 216 2000500

F +30 216 2000555

info@esenssys.com

www.esenssys.com