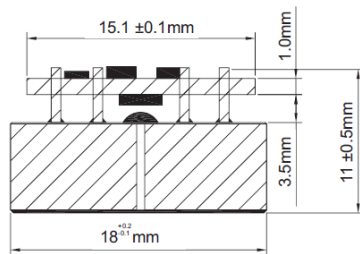


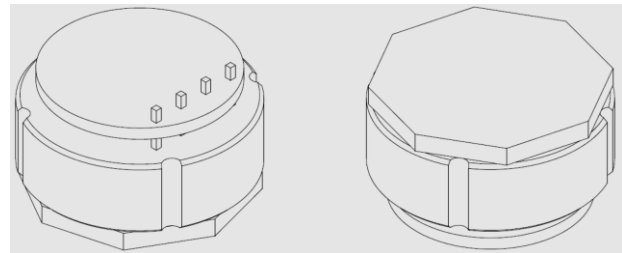
## ME77x

### Ceramic pressure sensor with flush membrane and signal conditioning

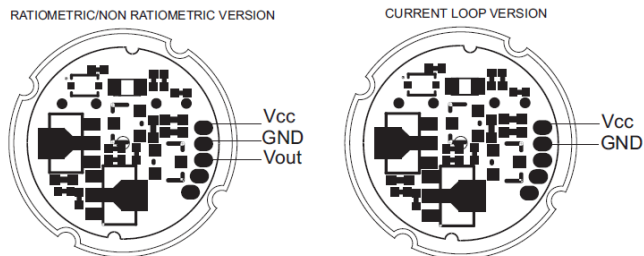
The pressure sensors of the serie ME77X are piezoresistive ceramic sensors with four different output signal options: Ratiometric 0.5...4.5V, non ratiometric 0...10Volt, current loop 4...20mA or digital I2C. The sensors are based on the two piece sensors elements of the ME501/505 series and therefore are available in gauge, absolute and sealed gauge versions. The pressure and temperature calibration is done electronically with the ASIC on-board. When the temperature changes, the electronics provide an offset and span correction and also an aging detection and compensation. This new method guarantees good precision and long term stability. This series meets EMI requirements. The ASIC stores lot specific data for sensor traceability. Custom calibration may be available. Due to the good chemical immunity of the ceramic, the ME77x sensors are suitable for nearly all aggressive media. The ME77x sensors are easy to mount.



Pic.1 Mechanical dimension



Pic.2 Top and Bottom 3d representation



Pic.3 Electrical connection



Pic.4: Available with different output signal configuration

- **Temperature compensated.**
- **Excellent resistance to corrosion and abrasion**
- **Signal conditioning.**
- **High linearity and low hysteresis value**
- **EMI Certified.**
- **Zero-stress mounting software.**

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# ME77x

## ME77x - Datasheet

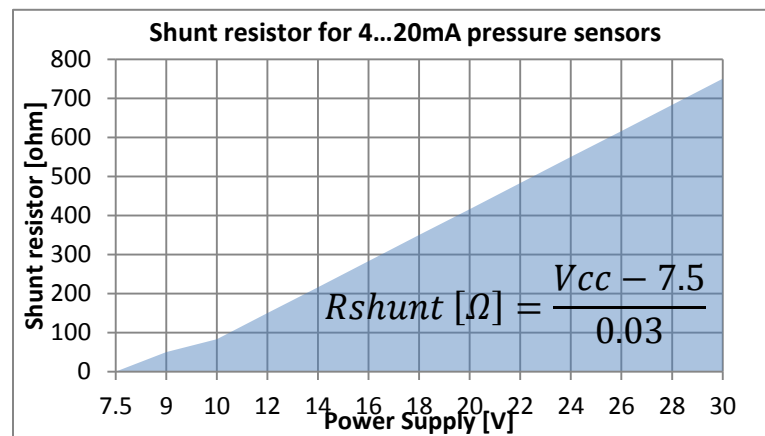
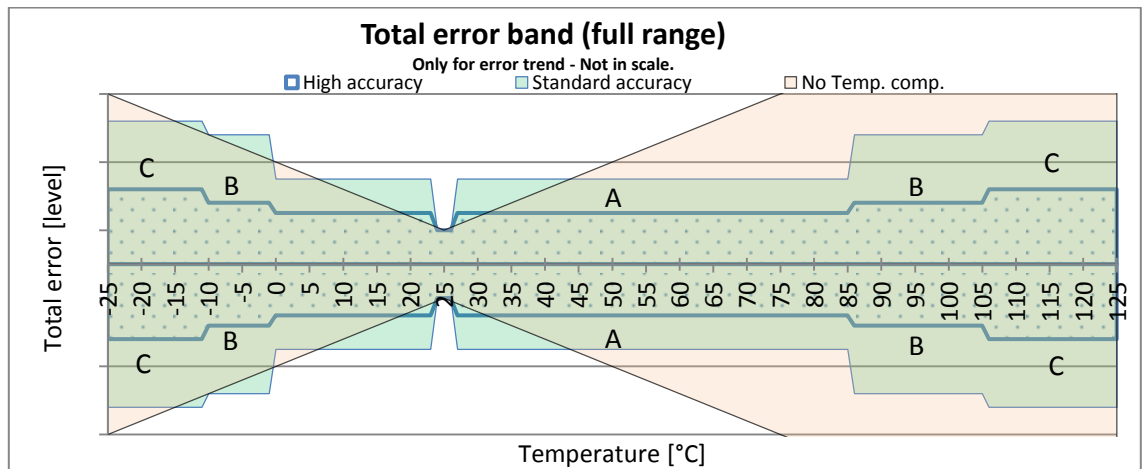
	ME77x												
Pressure range [bar]	0.5	1	2	5	10	16	20	50	100	200	250	400	600
Vacuum capability[bar]	-0.1	-0.2		-0.3	-0.95				-				
Overload [bar]	1	2	4	10	20	40	40	100	200	400	400	650	880
Burst pressure [bar]	2	4	5	12	25	50	50	120	250	500	500	650	880
Thickness [mm] ±0.1	6.13	6.20	6.25	6.30	6.35	6.55	6.55	6.70	6.70	7.05	7.05	7.35	7.55
Absolute	No	Yes							No				
Gauge	Yes								No				
Sealed Gauge	No	Yes											

### High Accuracy 1) [±%FS]

Accuracy at 25 [°C]	Max	1.5	1.0						1.5
A)Temp range 0...85[°C]	Max	1.5	1.4		1.6	1.8	2.4		2.8
B)Temp range -10...105[°C]	Max	1.8	1.7		1.8	2.2	2.6		3.2
C)Temp range -25...125[°C]	Max	2.2	2.0		2.2	2.5	3.1		3.5

### Standard Accuracy 1) [±%FS]

Accuracy at 25 [°C]	Max	1.5	1.0						1.5
A) Temp range 0...85 [°C]	Max	2.5	2.4		2.6	2.8	3.4		3.8
B) Temp range -10...105 [°C]	Max	3.8	3.7		3.8	4.2	4.6		4.6
C) Temp range -25...125 [°C]	Max	4.2	4.0		4.2	4.5	5.5		5.5



Rshunt defined with 30mA (Current consumption during programming mode)

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# ME77x

ME77x - Datasheet	ME770	ME771	ME772
Output type	Ratiometric	Current Loop	Non ratiometric
Output range	0.5...4.5 [V]	4...20 [mA]	0...10 [V]
Pressure Range [bar]	0.5 – 600		
Pressure type	Gauge or absolute or seal gauge		
Technology	Piezo resistive		
Sensor type	Membrane		
Response time [ms]	≤5		
Stability [%FS/year]	≤ ±0.3 @ 25 [°C]		
Supply voltage range [Vdc]	4,5...5,5	9...35	12...35
Current consumption [mA]	<6	4...20 <sup>2)</sup>	<8
Operating temp.	-25 / +125 [°C]		
Storage temperature	-40 / +135 [°C]		
Material	Sensor and membrane – Ceramic Al <sub>2</sub> O <sub>3</sub> 96%		
Sensor dimension	∅≈18.0 <sup>+0.2/-0.1mm</sup> x 12 [mm]		
Membrane dimension	16.54 <sup>±0.2</sup> [mm] (diagonal)		
Mass [g]	≤ 9		
Electrical Connection	3 Wires Red = Vcc Black = Gnd White = Out	2 Wires Red = Vcc Black = Gnd	3 Wires Red = Vcc Black = Gnd White = Out
RoHS compliance	RoHS		
Norms compliance	Radiated electromagnetic field	IEC/EN 61000-4-3(2006)	
	Electrical fast transient burst	IEC/EN 61000-4-4(2004)	
	RF conducted disturbances	IEC/EN 61000-4-6(2006)	

**NOTES:**

1) Total Error Band includes room temperature errors of linearity, hysteresis and repeatability, offset and span deviation PLUS temperature coefficient of span (TCS) and temperature sensitivity of offset (TSO); Total Error Band is calculated under ideal mechanical conditions; Total Error Band excludes temperature hysteresis which primarily depends on mechanical conditions (housing, o-ring, etc) of actual application.

2) During calibration or autozero process the current consumption is <30 [mA]

Unless indicated, all data are based on a reference temperature of 25°C.

Pressure ranges not shown specifically in the accuracy chart have performance of the nearest listed pressure range.

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## Ordering code ME77x

ME77  -  -  -  -  -

### Option 0: Output signal

Ratiometric	0.5...4.5 [V]	0
Current Loop	4...20 [mA]	1
Non ratiometric	0...10 [V]	2

### Option 1: Kind of pressure

Absolute pressure	[1...50 bar]	A
Gauge pressure	[0.5...50 bar]	R
Sealed gauge	[1...600 bar]	S

### Option 2: Pressure range

0 ...0.5 bar	[-/R/-]	0p5
0 ...1 bar	[A/R/S]	001
0 ...1.6 bar	[A/R/S]	1p6
0 ...2 bar	[A/R/S]	002
0 ...2.5 bar	[A/R/S]	2p5
0 ...4 bar	[A/R/S]	004
0 ...5 bar	[A/R/S]	005
0 ...6 bar	[A/R/S]	006
0 ...10 bar	[A/R/S]	010
0 ...16 bar	[A/R/S]	016
0 ...20 bar	[A/R/S]	020
0 ...25 bar	[A/R/S]	025
0 ...40 bar	[A/R/S]	040
0 ...50 bar	[A/R/S]	050
0...100 bar	[-/-/S]	100
0...200 bar	[-/-/S]	200
0...250 bar	[-/-/S]	250
0...400 bar	[-/-/S]	400
0...600 bar	[-/-/S]	600
Others on request (*)		999

### Option 3: Calibration

High accuracy	0
Standard accuracy	1
No temperature compensation	2
Not calibrated (electrical tested)	3
Others on request	9

### Option 4: Electrical connection

Wires 50.8mm	0
Pretinned soldering pads	1
Wires 50.8mm + 2 program. wires	2
Others on request (*)	9

### Option 5: Additional coating

Without	0
Parylene C	1
Others on request (*)	9

(\*) please specify

We reserve the right to modify the specifications without prior notification.

Other pressure and temperature ranges on request.

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