

## FEATURES

- Various housings: cylindrical from diam. 1.27 to 2.36 mm, low profile housing or threads M4x0.7, M5x0.8, 6-32UNC, 10-32UNF
- Frequency 0-25 KHz through 340 KHz
- CE approved

## APPLICATIONS

- Space flight and test
- Automotive tests
- Wind tunnels measurement
- Racing testing

## EPIH

### Sub-Miniature Pressure sensor

#### SPECIFICATIONS

- Ranges 0.35 to 20 bar (5 to 300 psi)
- Extremely small size
- Flush diaphragm
- High frequency response
- Various housings available

The **EPIH** is a subminiature pressure sensor, specifically designed for dynamic and high frequency measurements with resonant frequency up to 1.7 MHz

Available with many various housings, **EPIH** is one of the smallest pressure sensors in the world. The **EPIH** is offered in pressure ranges from 0-5 to 300 psi (0-0.35 through 20 bar). Various compensated temperature ranges are available from -40°C up to 80°C.

Suitable for dry gas and some fluids with Parylene or RTV protection (options). Non-standard excitation, compensated temperatures are available as options.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

## STANDARD RANGES

Pressure ranges		Pressure Reference			Pressure Limit	Resonant Frequency <sup>(1)</sup> (nom.)	Sensitivity "FSO" (nom.)	CNL&H (%FS)	Thermal Zero Shift "TZS" (/50°C)
bar	psi	gage (type1)	sealed (type2)	abs. (type3)					
0.35	5	•	•	•	5 x FS	500 KHz	2.4 mV/V	± 1%	± 0.1 mV/V
0.7	10	•	•	•	5 x FS	500 KHz	4.8 mV/V	± 1%	± 0.1 mV/V
1	15	•	•	•	3 x FS	500 KHz	7.2 mV/V	± 1%	± 0.1 mV/V
1.5	25	•	•	•	2 x FS	500 KHz	12 mV/V	± 1%	± 2.5 % FSO
3.5	50	•	•	•	2 x FS	600 KHz	15 mV/V	± 1%	± 2.5 % FSO
5	75	•	•	•	2 x FS	700 KHz	15 mV/V	± 1%	± 2.5 % FSO
7	100	•	•	•	2 x FS	1.0 MHz	15 mV/V	± 1%	± 2.5 % FSO
14	200	•	•	•	2 x FS	1.4 MHz	20 mV/V	± 1%	± 2.5 % FSO
20	300	•	•	•	2 x FS	1.7 MHz	20 mV/V	± 1%	± 2.5 % FSO

Note 1: useful frequency is 20% of Resonant Frequency

## PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)

PARAMETERS	VALUES	NOTES
Supply Voltage	5Vdc	See option table for other Voltage
Input Resistance	1500Ω nom.	
Output Resistance	1500Ω nom.	
Non-Repeatability	± 0.25 % FS	Recommended warm-up time > 15 min
Thermal Sensitivity Shift "TSS" in CTR	- 2% to - 8% /50°C	
Operating Temperature Range (OTR)	-40°C to 120°C	
Compensated Temperature Range (CTR)	20°C to 80°C	See option table for other Temperature
Zero Offset	± 2 mV/V	
CE conformance according to	EN 61010-1, EN 50081-1, EN 50082-1	

## INSTALLATION

Recommended installation torque:  
1.2 Nm (10 in.lbf) for all threaded models

### PRESSURE SENSING END TYPE

No screen



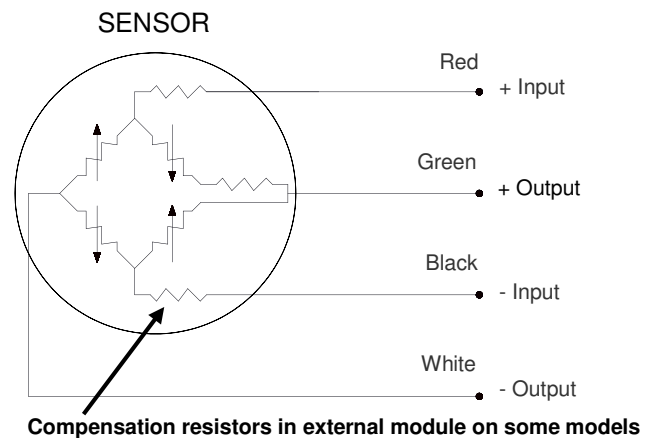
B screen



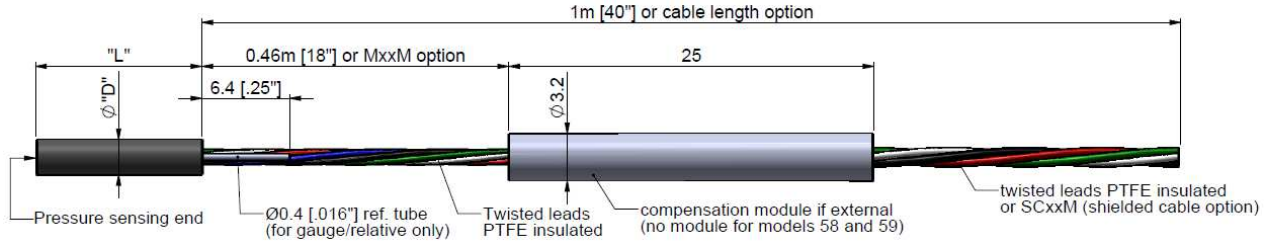
M screen



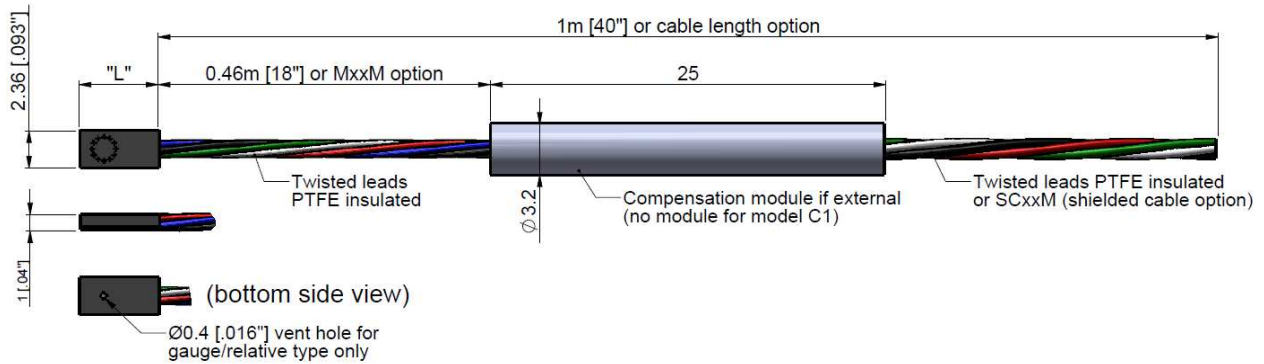
## CONNECTIONS



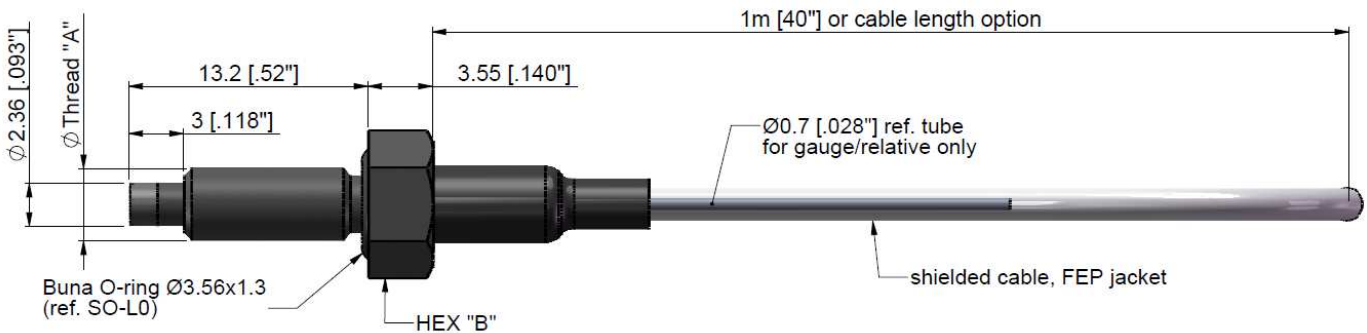
**DIMENSIONS in metric (in inches)**



EPIH model	Sensing end style	Body $\phi$ "D"	Body length "L"	Custom body length (option)	Compensation
EPIH-11	No screen	1.27 [.05"]	6.4 [.25"]	From 6.4 to 38mm	External module
EPIH-17	No screen	1.27 [.05"]	11.4 [.45"]	No (see model 11)	External module
EPIH-37	B screen	1.63 [.064"]	11.4 [.45"]	From 6.4 to 38mm	External module
EPIH-41	No screen	2.03 [.08"]	6.4 [.25"]	From 6.4 to 38mm	External module
EPIH-58	M screen	2.36 [.093"]	11.4 [.45"]	From 11.4 to 38mm	Internal
EPIH-59	No screen	2.36 [.093"]	11.4 [.45"]	From 11.4 to 38mm	Internal



EPIH model	Sensing style	Body width "W"	Body length "L"	Compensation
EPIH-C1	B screen	2.36 [.093"]	12.7 [.50"]	Internal
EPIH-C3	B screen	2.36 [.093"]	5.0 [.20"]	External module



EPIH model	Sensing end style	Thread "A"	HEX "B"	Custom body length (option)	Compensation
EPIH-L1	No screen	M4x0.7-6g	7 [.28"]	From 6.4 to 38mm	Internal
EPIH-L2	M screen	M4x0.7-6g	7 [.28"]	From 6.4 to 38mm	Internal
EPIH-T1	No screen	6-32 UNC-2A	6.4 [.25"]	From 6.4 to 38mm	Internal
EPIH-T2	M screen	6-32 UNC-2A	6.4 [.25"]	From 6.4 to 38mm	Internal

## OPTIONS AND ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated Temperature Ranges	<b>Z0</b> <b>Z1</b> <b>Z2</b> <b>Z*</b>	-40°C to 20°C -20°C to 40°C 0°C to 60°C Non-standard
Supply Voltage	<b>V00</b> <b>V10</b> <b>V*</b>	Replace "00" with Voltage between 1 and 5. If less than 5, Sensitivity FSO will decrease accordingly 10V Excitation, Input impedance = 3000Ω, TSS = -4% /50°C nom. (not available for model 58 and 89) Non-standard Excitation with standard FSO and non-standard TSS
Cable Length Option	<b>L00M</b> <b>SC00M</b>	Replace "00" with total length in meter (regular cable) Replace "00" with total length in meter (shielded cable instd of leads)
Special Module Location : (only for models 11, 17, 37, 41, C3)	<b>M00M</b>	Replace "00" with distance between sensor and module in meter
Custom Length Hex to Tip	<b>0000M</b>	Replace "0000" with thread length between 6.4mm and 38mm
Protective Coatings on Diaphragm (only for model without screen)	<b>PAR</b> <b>RTV</b> <b>RTVB</b>	Parylene RTV silicone rubber Black RTV silicone rubber (protection against light sensitivity)

## ORDERING INFORMATION

EPIH	-	11	2	-	7B	-	/Z1/L2M
Model	-	Body	Pres. Ref.	-	Range & Unit	-	/Options
<b>EPIH</b>	-	<b>11, 17, 37, 41, 58, 59</b> <b>C1, C3</b> <b>L1, L2, T1, T2</b>	<b>1</b> = Gauge <b>2</b> = Sealed <b>3</b> = Absolute	-	<b>0.35B</b> <b>0.7B</b> <b>1B</b> <b>1.5B</b> <b>3.5B</b> <b>5B</b> <b>7B</b> <b>14B</b> <b>20B</b>	<b>5P</b> <b>10P</b> <b>15P</b> <b>25P</b> <b>50P</b> <b>75P</b> <b>100P</b> <b>200P</b> <b>300P</b>	- <b>/Z0, Z1, Z2, Z*</b> <b>/V1, V5, V10 or V*</b> <b>/L00M</b> <b>/M00M</b> <b>/0000M</b> <b>/PAR, RTV, RTVB</b>

Note: select ranges in BAR with body L and ranges in PSI with body T

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