

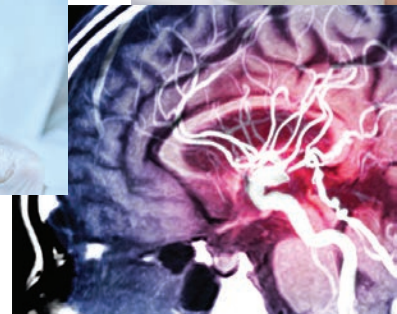
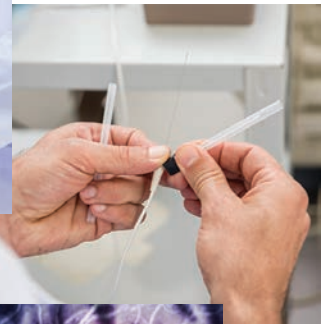
Pressure Sensors for Catheters

When small is not small enough, look to NovaSensor's line of MEMS pressure sensor die for the perfect fit in your medical catheter application. With products ranging in size, pressure range, and ease of integration, we have the sensor solution you are looking for. Along with in-house wafer fabrication, NovaSensor possesses the technical knowledge and manufacturing infrastructure to design, build, test and modify sensors right within our own facilities.

NovaSensor offers the smallest and best performing catheter die solutions and capabilities in the industry. With ultra-small MEMS pressure die comes ultra-small handling and assembly challenges, which is why NovaSensor offers evaluation kits and die with wire sub-assemblies. This takes the manufacturing difficulty out, making it easier to connect to the die, bringing the output signal to a standard usable form.

Catheter Applications

- Cardiovascular
- Urinary
- Intracranial
- Urological/Rectal
- Ablation



Pressure Die Capabilities

- Custom design die per customer application
- Solder bumps for ease of solderability
- Wire attachments for ease of assembly
- Eval Kits for ease of testing

Don't see a die that will fit your application exactly? We have the engineering expertise to design a custom die for your requirements.

NovaSensor MEMS Catheter Pressure Die Products

Parameter	Units	P162	P330	P2490	P330B / P330F
Size (L x W x T)	µm	1150 x 725 x 180	900 x 330 x 180	800 x 240 x 90	900 x 330 x 120
Circuit		Two piezoresistors (half-bridge). Need to add two resistors to complete the bridge			
Excitation	V	1...6 DC, 10V DC maximum			
Pressure Range	mmHg	0-300 differential	450-1050 absolute	450-1050 absolute	450-1050 absolute
Bridge resistance ¹	Ohm	800	3200	2000	2000
Sensitivity ¹	µV/V/mmHg	18	10	8	15 / 6
Nonlinearity*	mmHg	<1	<1	<1	<1
Offset at 1 bar ¹	mV/V	1	9	within ±3	within ±3
TC Offset	µV/V/C	±40	±30	±20	±20
TC Sensitivity ¹	%/C	-0.12	-0.2	-0.2	-0.2
TC Resistance ¹	%/C	0.12	0.10	0.13	0.13
Operating temp. ²	C	15...45			
Proof pressure	mmHg	2000	2700	3000	3000 / 30000
Wire connection		Wire bonding (WB)		Soldering (solder bumps on die)	
Samples		Available	Available	Available	Available
Product status		Released	Released	In development	Released

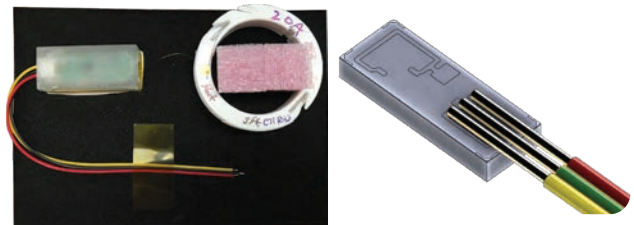
All products have gold metallization.

1. Typical value.

2. Range can be extended after additional validation.

Sub-Assemblies and Eval Kits:

Part No.	Description
EP330W-3FT	P330B with 3 feet of trifilar wire
EP330W-6FT	P330B with 6 feet of trifilar wire
P330W-EVAL-D3	Digital Eval Kit using P330B die
P330W-EVAL-A3	Analog Eval Kit using P330B die



Amphenol Advanced Sensors is a leading innovator in advanced sensing technologies and embedded measurement solutions customized for a wide range of applications, including catheter-based measurements in the medical field, to provide critical information for real time decisions. We offer industry leading domain expertise, rapid customization, world-class manufacturing capability and lasting customer relationships to deliver the greatest value products to our customers.

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