

20PC SMT Pressure Sensors Common Mode Pressure (CMP)

Technical Note

BACKGROUND

Honeywell Sensing and Control's 20PC surface mount transducer (SMT) products may be used in a wide variety of applications and markets. To ensure optimum performance, it is important to consider the effects of common mode pressure when using the 20PC SMT product in various applications.

PURPOSE

To assist our customers with the specifying process, this technical note provides common mode pressure information.

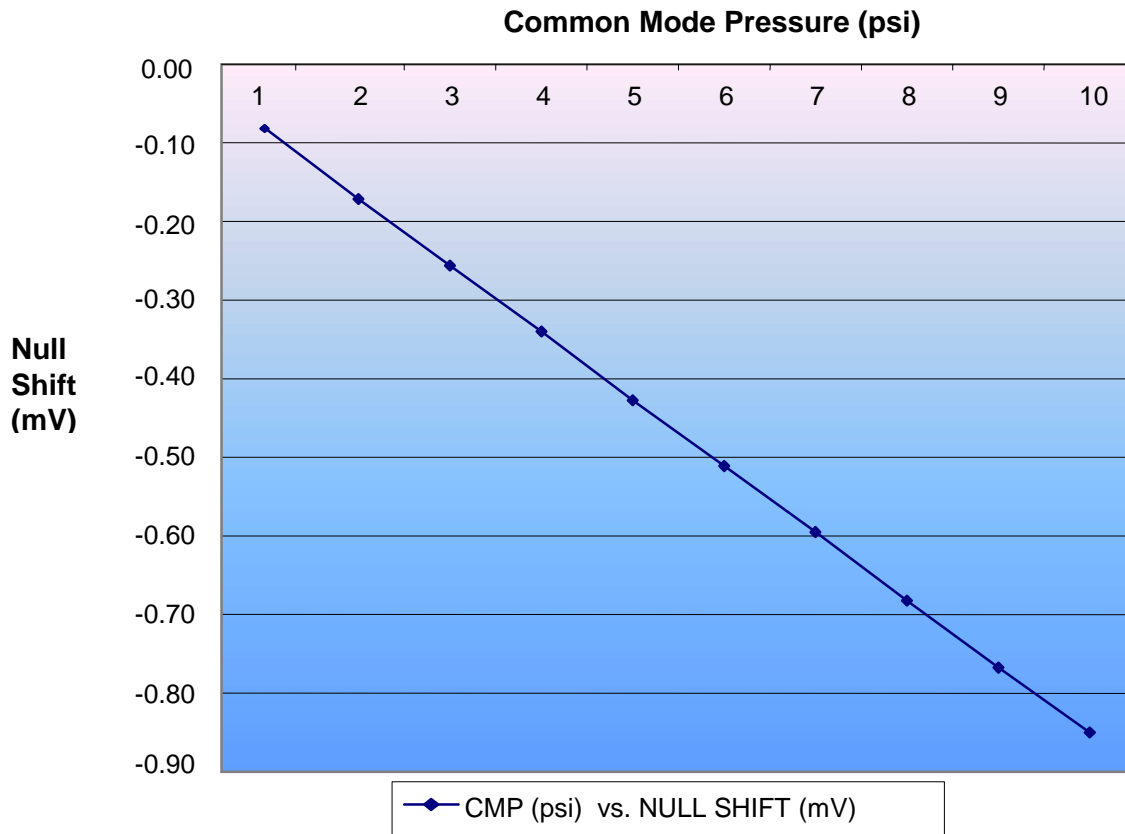
COMMON MODE PRESSURE

The 20PC SMT product has an output proportional to CMP. This product's output responds very linearly and predictably to CMP. Because pressure sensors are stress sensors, they will respond to any kind of stress.

An increase in common mode pressure (psi) generally makes the null shift offset (mV) become more negative (see graph). This is due to a slightly different seal durometer (hardness measurement) value on one side of the sensing chip (piezoresistive die) versus the other side. The biggest concern with an output that varies with CMP is that it is impossible to tell the difference between a change in CMP and a change in pressure on one side of the sensing chip versus the other side when measuring differential pressure. If an application has a varying CMP, you may eliminate this concern by installing a second pressure gauge sensor to monitor the CMP. This second sensor will allow you to measure a change in CMP and compensate for its effect on the null shift offset (see graph).

CONTACT INFORMATION

For additional assistance, call our application center (1-800-537-6945) and speak to one of our application engineers.



WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

For application assistance, current specifications, pricing, or name of the nearest Authorized Distributor, contact a nearby sales office. Or call:
1-800-537-6945 USA
1-800-737-3360 Canada
1-815-235-6847 International

FAX

1-815-235-6545 USA

INTERNET

<http://www.sensing.honeywell.com>
info.sc@honeywell.com

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Honeywell

Sensing and Control

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