POTENTIAL CONSUMER MEDICAL APPLICATIONS

NON-INVASIVE BLOOD PRESSURE MONITORS

Description: Blood pressure is measured by placing an inflatable cuff on the patient that restricts blood flow. A manometer is typically then used to measure the pressure which could be replaced by a pressure sensor to automate the reading and facilitate recording the patient’s blood pressure measurement remotely so that multiple patients at the same time can be monitored by the medical staff.

Function in application: May be used to measure the systolic and diastolic pressure using the air pressure from the cuff. The sensor can also be used to measure the patient’s pulse.

Customer benefits: An accurate, compensated sensor is required to maintain accurate blood pressure readings. The sensor’s small size helps to facilitate compact monitor design. Low power consumption enhances battery life.

MINIATURE PUMPS (LIQUID AND AIR SUCTION IN SMALL MEDICAL/DENTAL TOOLS AND BREAST PUMPS)

Function in application: May be used to measure partial vacuum on the suction side of miniature pumps to provide continuous suction pressure monitoring.

Customer benefits: Enables enhanced pump control, allowing detection of suction side leaks to avert pump damage. Enhanced accuracy enables more accurate pump control. Small size allows integration into small housings. These sensors are compatible with a variety of liquid media.

POTENTIAL NON-CONSUMER MEDICAL APPLICATIONS

WOUND THERAPY

Description: Wounds may be caused by burns, ulcers, surgery, accidents, and pressure sores (such as bedsores).
Physicians use negative-pressure wound therapy (NPWT) to promote healing by creating controlled negative pressure over the wound.

**Function in application:** May be used to monitor the pressure applied to the wound via the suction system.

**Customer benefits:** Designed to provide enhanced therapeutic effect without causing the patient harm.

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**POTENTIAL CONSUMER APPLIANCE APPLICATIONS**

### COFFEE MACHINES

**Description:** In recent years, many home and office coffee machines have seen improvements in reliability and coffee quality. Electric drip coffee machines have been replaced with higher end, single-serve or single-cup coffee makers.

**Function in application:** May be used to measure the pressure at various points in the system during the coffee brewing process, including the water level in the reservoir/holding tank, the inlet pressure on a hard-plumbed system, the output pressure from the system pump, and the heater system pressure.

**Customer benefits:** Continuous higher resolution water level measurement and enhanced accuracy enable more accurate liquid level measurement at lower water volumes, allowing both water and energy cost savings. These sensors are compatible with a variety of liquid media.

### DISHWASHERS

**Description:** Today’s more powerful and efficient dishwashers use less water than older versions.

**Function in application:** May be used to measure the water level. The MPR Series pressure sensor may be integrated into the liquid level measurement assembly at the bottom of the water reservoir, with an air column between the media and the sensor surface. It measures the pressure exerted on the air column due to increase in liquid level. A pressure measurement may be used to determine rate of change of the water column during drain mode; enabling the system to detect clogged drain, when no change in liquid level is detected.

**Customer benefits:** Continuous higher resolution water level measurement and enhanced accuracy enable a more precise liquid level measurement, allowing both water and energy cost savings. Small sensor size allows integration into existing system over-mold packages. These sensors are compatible with a variety of liquid media.

### WASHING MACHINES

**Description:** Newer, high-efficiency washing machines use much less water than older versions. Compact machines use the same washing system as a full-size machine and fit into smaller spaces.

**Function in application:** May be used to measure the water level. The MPR Series pressure sensor may be integrated into the liquid level measurement assembly at the end of the air tube column to measure the pressure exerted on the air column due to increase in liquid level.

**Customer benefits:** Continuous higher resolution water level measurement and enhanced accuracy enable more accurate liquid level measurement at lower water volumes, allowing both water and energy cost savings. These sensors are compatible with a variety of liquid media.

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### MPR SERIES FEATURES

- 5 mm x 5 mm [0.20 in x 0.20 in] package footprint
- Calibrated and compensated
- 60 mbar to 2.5 bar | 6 kPa to 250 kPa | 1 psi to 30 psi
- 24-bit digital I2C or SPI-compatible output
- IoT (Internet of Things) ready interface
- Stainless steel pressure port
- Compatible with a variety of liquid media
- Absolute and gage pressure types
- Total Error Band after customer auto-zero: As low as ±1.25 %FSS
- Compensated temperature range: 0ºC to 50ºC [32ºF to 122ºF]
- REACH and RoHS compliant
- Meets IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1
- Select sensors available on breakout board for easy evaluation and testing
- Ultra-low power consumption (as low as 0.01 mW typ. average power, 1 Hz measurement frequency)
- Sensor materials have been tested and certified for these food safety standards:
  - NSF-169
  - BPA Free
  - LFGB

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![BPA Free](image)

![NSF](image)
WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell’s standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, 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. In no event shall Honeywell be liable for consequential, special, or indirect damages.

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer’s sole responsibility to determine the suitability of the product in the application.

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

FOR MORE INFORMATION

Honeywell Advanced Sensing Technologies services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit our website or call:

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