

GORE™ MEMBRANE VENTS

Screw-In Vent: POV/M12x1

As Effective as Hermetically Sealed ... at a Fraction of the Cost



GORE™ Membrane Vents POV/M12x1

GORE™ Membrane Vents Enhance the Reliability, Quality and Image of Your Products.

Designing an electronic device for use in a harsh, wet environment is a balance between protection, cost and serviceability.

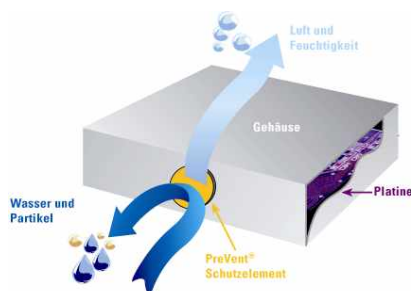
Hermetically sealing and potting are excellent sealing methods, but they make board level repairs or board swaps impossible. Gasketed enclosures provide the serviceability, but getting a water-tight housing and seal design can be difficult, especially in applications that will see thermal or altitude cycling.

GORE™ Membrane Vents are designed to enhance the ingress protection (IP) of gasketed enclosures. The microporous expanded polytetrafluoroethylene (ePTFE) membrane continuously allows the free passage of gases and vapors, equalizing the pressure differential between the enclosure and ambient before it builds to the point that a seal is compromised.

Water, dust, dirt, cleaning agents and most oils are repelled by the oleophobic membrane, thereby protecting expensive and sensitive electronics.

The free-flow of gases makes GORE™ Membrane Vents indispensable when it comes to designing a water proof battery powered device. By allowing hydrogen gas to diffuse through the membrane vent, the concentration of hydrogen inside the case is kept below potentially explosive levels.

With over 50 million vents installed worldwide in automotive and electronic applications, GORE™ Membrane Vents are proven to be a reliable, rugged and cost effective solution.



Typical enclosure with GORE™ Membrane Vent

- Water proof and dust proof to IP69K, protecting sensitive electronics.
- High airflow allows pressure equalization to prevent stress on enclosure seals, ultimately lowering enclosure design and manufacturing costs.
- Water and oil repellant ePTFE membrane is inert, non-shedding, chemically resistant, UV resistant and enclosed in a tough polyamide housing to ensure a long trouble-free service life even in extreme conditions.
- The microporous structure of the ePTFE membrane even keeps salt crystals from passing, minimizing electrical malfunctions caused by salt corrosion.
- Moisture vapor permeable to help aid in condensation and fogging reduction.
- Screw-in housing for easy installation.

All GORE™ Membrane Vents incorporate the unique GORE-TEX® expanded PTFE membrane from the world leaders in ePTFE technology, W. L. Gore & Associates.



GORE™ MEMBRANE VENTS

POV/M12 x1

Membrane Characteristic (AATCC 118-1989ASTM)
 Hydrophobic and Oleophobic
 Oil Rating 6
 Water entry pressure of the membrane $\geq 0,6$ bar/60 sec

Ingress Protection class of the installed POV/M12x1
 IP65 - Water jets
 IP67 - 1 meter water submersion for 30 minutes
 IP69K - High pressure spray

Moisture Transfer Rate (typical value) 0,036 g/24h
 Temperature 20°C
 Test Chamber 100% r.H.
 Environment 45% r.H.

Temperature Resistance (DIN IEC 68-2-14, Na)
 Cycle test Cycles 400
 $T_{\text{dwell}}=20$ min, $t_{\text{change}}<10$ sec.

POV/M12x1 vents are designed for service temperature range of -40°C to 125°C.

UV and Climate Resistance
 Industrial climate test (DIN 50-0-18) Test criteria SFW 2,0 S
 Cycle 9

UV and climate resistance: other than a little yellowing of the top surface, no significant change in mechanical characteristics.

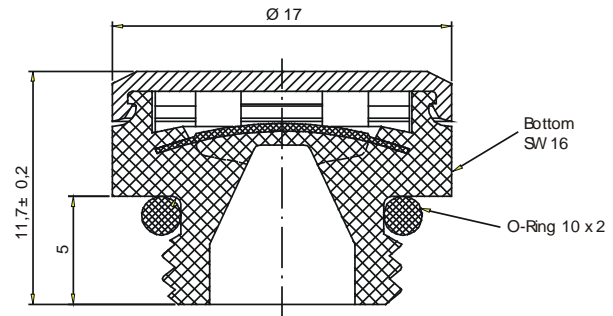
Salt Spray Test (DIN 50-0-21)
 No penetration of salt crystals through the membrane into the housing.

85/85 Storage Test (DIN IEC 60068-2-3: 85°C, 85% r.H.)
 dwell time 1000 hours
 No significant change in mechanical characteristics.

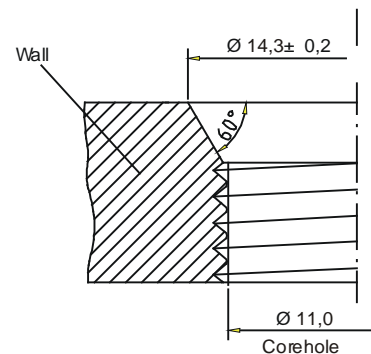
Available Designs

Part Number	Plastic	Color	O-Ring	Typical Airflow @ dp = 70mbar in ml/min
PMF100318	PA6 GF10 / UL-V0	Black	Silicone 50° Shore A / UL-V0	400
PMF100319	PA6 GF10 / UL-V0	Gray	Silicone 50° Shore A / UL-V0	400

Design and Dimensions



Recommended Installation



Maximum applied torque: 0,6 – 0,8 Nm



For customized design please contact us

W. L. Gore & Associates

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Note: The optimal performance of any GORE™ Membrane Vent is dependent on how it is handled and incorporated into the final product. This includes such elements as the device design, sealing method and assembly method. While Gore is able to provide general guidelines based upon our experience with the GORE™ Membrane Vent, it is ultimately the responsibility of the device manufacturer to validate each product and its performance for its intended electronic application. Contact one of our technical sales associates today for assistance in determining the best GORE™ Membrane Vent for your specific electronic application. Specifications are subject to change without notice.
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