

GORE™ MEMBRANE VENTS

Screw-In Vent: POV/M12 x1,5

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



GORE™ Membrane Vents POV/M12x1,5

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.

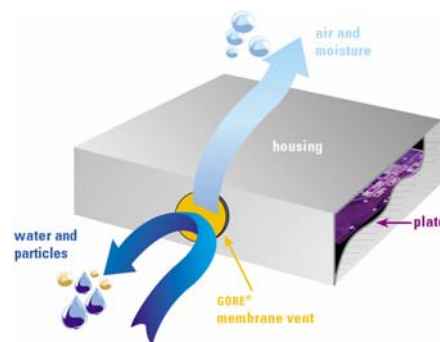
Hermetically sealing and potting are excellent sealing methods, but they make board level repairs or board swaps impossible. Gasketed enclosures provide the serviceability, but getting a water-tight housing and seal design can be difficult, especially in applications that will see thermal or altitude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

Screw-In Vent: POV/M12 x1,5

Membrane Characteristic

Hydrophobic and Oleophobic

Oil Rating 3 (AATCC 118-1997ASTM)

Water entry pressure of the membrane ≥ 0.6 bar/60 sec

Ingress Protection class of the installed

POV/M12x1,5

IP65 - Water jets

IP67 - 1 meter water submersion for 30 minutes

IP69K - High pressure spray

Temperature Resistance (DIN IEC 68-2-14, Na)

Cycle test Cycles 400

$T_{\text{dwell}} = 20$ min, $t_{\text{change}} < 10$ sec.

POV/M12x1,5 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.

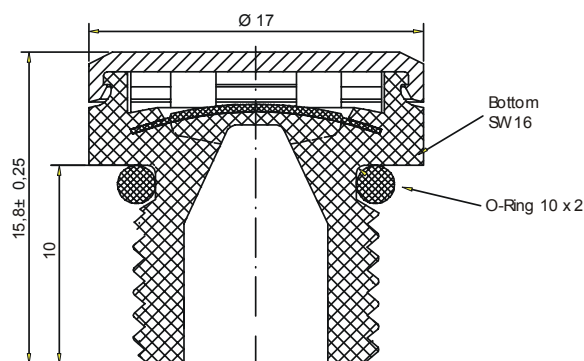
Salt Spray Test (DIN 50-0-21)

No penetration of salt crystals through the membrane into the housing.

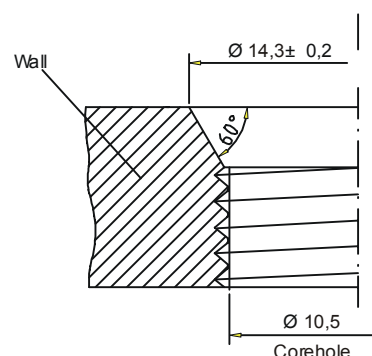
85/85 Storage Test (DIN IEC 60068-2-3: 85°C , 85% r.H. dwell time 1000 hours)

No significant change in mechanical characteristics.

Design and Dimensions



Recommended Installation



Maximum applied torque: 0.6 – 0.8 Nm.

Recommendations for through holes (require backing nut):

Through hole ID 12.2 mm / Chamfer OD 14.0 mm.

For more information on installation recommendation for thinner walls and trough hole, please see Gore Technical Bulletins:

Additional installation recommendations for POV/M12x1,5.

Available Designs

Part Number	Plastic	Color	O-Ring	Typical Airflow @ dp=70mbar in ml/min
PMF100320	PA6 GF10 / UL-V0	Black	Silicone 50° Shore A / UL-V0	400
PMF100321	PA6 GF10 / UL-V0	Grey	Silicone 50° Shore A / UL-V0	400
M10510-007 (Backing Nut)	PA6 GF10 / UL-V0	Black		



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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