GORE™ MEMBRANE VENTS

Screw-In Vent: POV/Metal Vent

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



GORE™ Membrane Vents POV/Metal Vent

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.

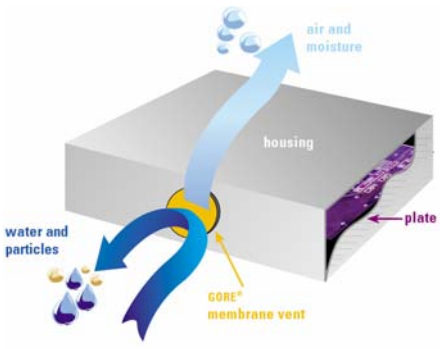
Hermetically sealing and potting are excellent sealing methods, but they make board level repairs or board swaps impossible. Gasketed enclosures provide the serviceability, but getting a water-tight housing and seal design can be difficult, especially in applications that will see thermal or altitude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

GORE™ Membrane Vents are designed to enhance the ingress protection (IP) of gasketed enclosures in harsh environments. The microporous expanded polytetraflouroethylene (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 Ex approval of GORE™ Metal Vent guarantees its functionality even in explosive environments like oil or gas industries.

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.



- Water proof and dust proof to IP69K, protecting sensitive electronics.
- EMI Protection
- Explosion proof
  Ex I M2 II 1D 2G EEx e I/II IP66
- 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 metal 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™ expanded PTFE membrane from the world leaders in ePTFE technology - W. L. Gore & Associates.

GORE
Creative Technologies Worldwide

GORE™ MEMBRANE VENTS

POV/Metal Vent

Membrane Characteristic
Hydrophobic and Oleophobic
Oil Rating 7 (AATCC 118-1997ASTM)
Water entry pressure of the membrane ≥ 0.3 bar/60 sec

Ingress Protection class of the installed POV/M12x1,5
IP66 - Water jets
IP67 - 1 meter water submersion for 30 minutes
IP69K - High pressure spray

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

Service Temperature
POV/M12x1,5 vents are designed for service temperature range of -40°C to 125°C.

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.

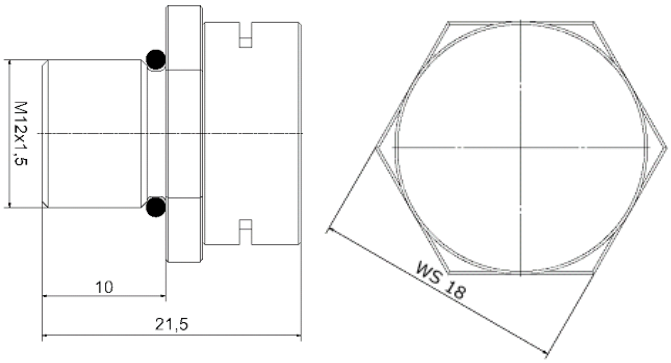
Ex-Approval
According to Council Directive 94/9/EC ATEX (95)

Ⓔx I M2 EEx e I,

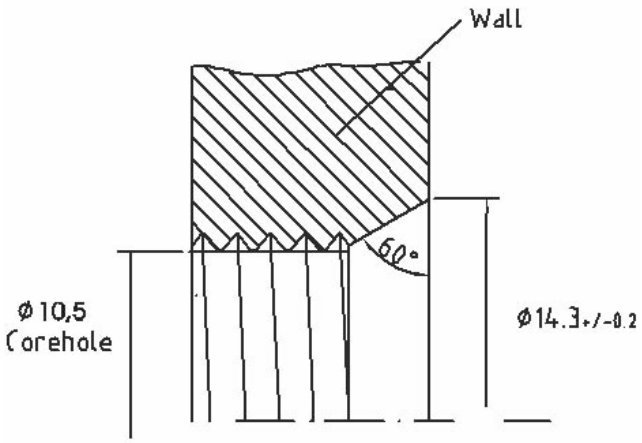
Ⓔx II 2G EEx eII, CE

Ⓔx II 1D

Design and Dimensions



Recommended Installation



Maximum applied torque: 0.6 – 0.8 Nm.

Preferred position: Screw thread in horizontal position.

Recommendations for through holes (require backing nut): Through hole ID 12.2 mm / Chamfer OD 14.0 mm.

Available Design

Part Number	Metal	Color	O-Ring	Typical Airflow @ dp=70mbar in ml/min
PMF100444	Basic Material: Zinc Coating: Ni, Cu	Grey	Silicone 50° Shore A	1300

GORE Creative Technologies Worldwide

For customized design please contact us

W. L. Gore & Associates

Gore Technical Venting Solutions
www.gore.com/ventsolutions
Email: vents@wlgore.com

Sales & Customer Service Sites

Argentina	+54 351 488 6427	Netherlands	+49 (0) 89 46 12 22 11
Australia	+61 2 9473 6800	Singapore	+65 275 4673
China	+86 21 6247 1999	Sweden	+46 (0) 31 70 67 800
France	+33 (0) 156 95 65 65	Taiwan	+886 2 8771 7799
Germany	+49 (0) 89 46 12 22 11	UK	+44 (0) 1506 460123
Italy	+39 04 56 20 92 40	USA	+1 410 392 4440

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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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