

Herriott Cell dual / quad detector



Art. no. VKM047041X

Extending the optical path to several meters within a robust 120 mm cell body.

Micro-Hybrid's compact Herriott-type multipass cells are designed to boost NDIR measurement sensitivity in an exceptionally small footprint. This enables reliable detection of low and trace gas concentrations in industrial, analytical, and OEM sensor platforms.

The portfolio includes three optical path length options: 2.5 m, 3.9 m, and 5.2 m. These offer different balances between sensitivity and integration requirements: shorter paths for compact designs and fast response, and longer paths for maximum sensitivity at low concentrations.

The cell is available in dual and quad variants. Dual versions are ideal for classic reference / measurement configurations. Quad versions support multi-channel detector concepts, enabling advanced multi-gas designs or multiple spectral channels within one compact optical platform.

Applications

- Industrial emission monitoring
- Safety & leak detection
- Analytical instruments (lab and portable gas analyzers)
- OEM NDIR sensor modules (HVAC, indoor air quality, and industrial gas sensing)

Product benefits

- High sensitivity in a compact form factor (2.5 m / 3.9 m / 5.2 m path in a 120 mm cell)
- Two detector configurations: dual or quad
- Stable long-term performance under harsh conditions (rigid mirror mounts, vibration-resistant design, gas-tight O-ring sealing)

Features

- O-ring sealing with validated pressure capability 500–1300 hPa
- Rigid vibration-resistant mirror mounts, gold-coated K9 mirrors, CaF₂ windows, 6061-T6 aluminum housing with PTFE coating for corrosion resistance
- Broad multi-gas capability: supports IR measurement channels for CO, CO₂, CH₄, SO₂, NO, N₂O, SF₆ and additional gases



PRODUCT DATA SHEET

Gas Sensors / Herriott Cell dual / quad detector



Technical data

Technical parameter	Value	Unit
Operating wavelength min.	2	µm
Operating wavelength max.	12	µm
Optical path length	2.5 3.9 5.2	m
Ambient pressure min.	500	hPa
Ambient pressure max.	1300	hPa
Sample volume	≈ 120	ml
Wavelengths outside operating range	> 12	µm

Product line

Article Number	Product name
VKM0470413	MH Multipass 2.5-2 Channel
VKM0470414	MH Multipass 3.9-2 Channel
VKM0470415	MH Multipass 5.2-2 Channel
VKM0470416	MH Multipass 2.5-4 Channel Pyro
VKM0470417	MH Multipass 3.9-4 Channel Pyro
VKM0470418	MH Multipass 5.2-4 Channel Pyro

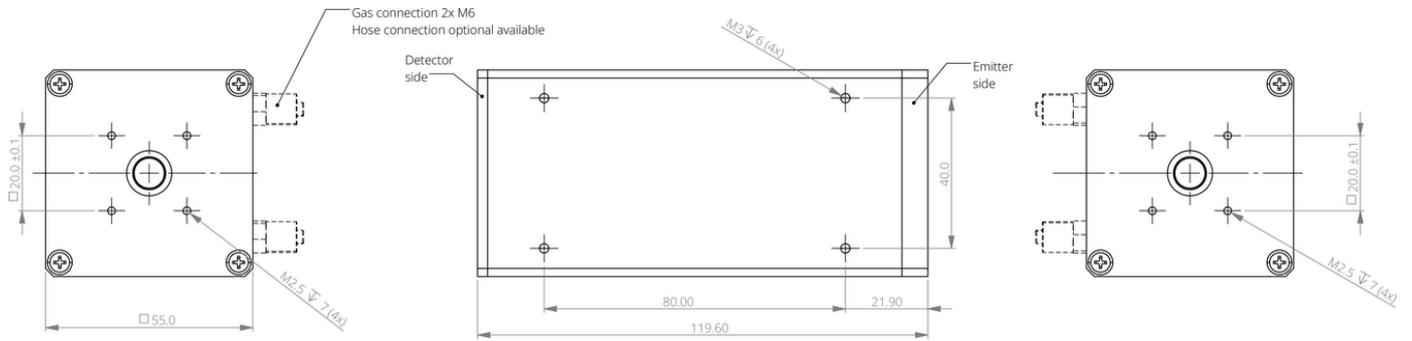


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Technical Drawing



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All rights reserved. All information in this data sheet is based on latest knowledge, results of practical experience and tests carried out. Earlier specifications are hereby invalid. All specifications – technical included – are subject to change without notice. It is the customer's responsibility to ensure that the performance of the product is suitable for customer's specific application. No liability is accepted for indirect damage, in particular for the use or inability to use the product. Any liability we may have is limited to the value of the product itself.

