



KAM® OID™
DENSITOMETER LOOP



KAM® OID™
INSERTABLE

KAM® OID™ OPTICAL INTERFACE DETECTOR



The KAM® OID™ Optical Interface Detector has been a preferred sensor for interface detection between refined products since its inception in 1995. Literally like eyes in the pipe, it provides **accurate, real-time data on product interface and quality**. That data allows operators to monitor interface in real time, making the most advantageous cut and significantly reducing product downgrade and/or transmix. In addition, the KAM® OID™ detects sediment and water contamination for product quality monitoring.

The simplicity of design and quality of engineering employed in the OID™ detector mean there are no moving parts. Fiber optics within the patented optical probe respond to the absorption, fluorescence, and refractive properties of the fluid which is turned into an analog signal, or "optical signature."

By placing a preview OID™ sensor 30-60 minutes out from the station, operators are able to **determine the optimal placement for the cut prior to the interface arriving in the station**. Product quality information from the preview sensor also enables operators to divert contaminated fuels when necessary. A second sensor installed in the station indicates the arrival of the interface which can then be cut according to previous intelligence. This process **prevents the unnecessary product downgrade** caution would require when using flow measurement and/or manual intelligence.

The **simplicity of design** and quality of engineering employed in the KAM® OID™ mean there are no moving parts. Using long-lasting LED light sources ensures long-term, stable performance with limited maintenance and power requirements. In addition, locating the electronics within an explosion-proof enclosure directly on the atmospheric end of the optical probe creates a complete and compact unit with **maximum installation flexibility**.

Measurement is completely automatic without the need for operator intervention or supervision, and the output signal can be sent to the SCADA, PLC's, or to a Central Control Room for logging or display on chart recorders or monitors.

KAM CONTROLS IS AN ISO 9001 CERTIFIED COMPANY

KEY KAM® ADVANTAGES

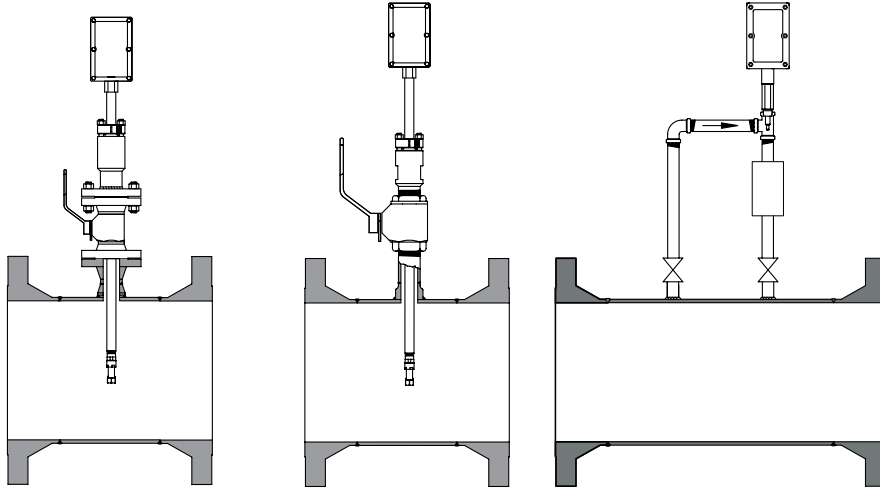
- Patented optical probe utilizes optimal wavelength for interface detection
- Detects the interface of specialty fuels such as ULSD
- LED's for long-term performance with minimal power and maintenance requirements

SIMPLICITY SAVES TIME AND MONEY

- Lenses do not require cleaning
- No moving parts
- Measurement is fully automatic
- Insertable/retractable and flow through models available
- Output signal can be sent to the SCADA, PLC's, or to a Central Control Room
- Insertable model installs without having to drain the pipe

KAM[®] OID[™] OPTICAL INTERFACE DETECTOR

AVAILABLE MODELS and MOUNTING OPTIONS



Insertable OID[™] on a main pipe, with 2", 3", or 4" flanged seal housing

Insertable OID[™] on a main pipe, with 2" MNPT seal housing

Option 1: Fixed-mount OID[™] on a densitometer loop, with 3/4" or 1" MNPT

SPECIFICATIONS

Media:	Refined products
Material:	Wetted parts-316 stainless steel
Power:	12-24 VDC 15 Watts max
Output:	4-20 mA
Fluid temperature:	-40° to 160°F (-40° to 70°C)
Electronics temp.:	-40° to 160°F (-40° to 70°C)
Pressure ratings:	ANSI 150, 300, 600, 900 Threaded models (3/4", 1", 2" MNPT) designed maximum working pressure of 3000 psig
Mounting:	3/4" and 1" MNPT 2" MNPT Seal Housing 2", 3", or 4" Flanged Seal Housing
EX enclosure:	3" x 6" x 3" (76mm x 152mm x 76mm)
Shaft length:	12" to 60"
Pipe size:	3/4" to 48"
Weight:	from 10 lbs. (4.5kg)

APPLICATIONS

- Batching
- Interface detection
- Product transmix management
- Product downgrade management
- Pipeline automation
- Chemicals interface
- Clear oil interface
- Quality control



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