



# 浅水多相流量计

针对渤海及类似浅水工况研制的一款结构紧凑、重量轻且性能稳定的浅水多相流量计，可进行水下单井油、气、水产量的实时在线计量。该产品基于业内最成熟的伽马射线及文丘里技术，并结合经过长期现场验证的动态计量模型，可在0-100%的含气率范围内得到精确的油、气、水各相流量。产品严格按国际规范设计，并由国际权威第三方挪威船级社（DNV）完成型式认证。

## 技术指标

内容	技术指标
型号	SMPFM-4000
设计压力	5000psi
设计温度	-29~121°C
设计水深	200米
设计寿命	20年
材质等级	HH
通讯协议	Modbus RTU, Modbus Ethernet or CANopen
产品规范等级	PSL 3G
端部接口	API 6A 4 1/16" 10K 6BX Flange (其他可选)
参考标准	API 6A, API 17D, API 17F, API 17S 等
能耗	≤ 15W
重量	325 kg
供电	18~36 VDC
尺寸	700(L) x 490(W) x 500(H) mm
含水率范围	0~100%
含气率范围	0~100%

## 产品特点

- 产品紧凑、重量轻
- 无可动部件、非插入式
- 冗余设计，可靠性高
- 权威第三方认证
- 实时、准确的测量数据
- 远程操作及控制、无需物理维护
- 优异的动态响应
- 压损小
- 能耗小

## 应用

- 单井计量、水突监测

## 应用效果

- 降低油气田开发投资成本
- 监测早期出水
- 单井实时、连续的产量监控
- 协助优化生产管理
- 提升油藏开发效能

# Shallow Water Multiphase Flow Meter

Shallow Water Multiphase Flow Meter is a compact, lightweight Multiphase Flow Meter developed for the Bohai Sea and similar shallow water conditions with stable performance. It allows for real-time online measurement of oil, gas and water production from subsea wells. This product is based on the matured technologies of gamma-ray and Venturi, driven by a dynamic and field proven flow model. It is capable of accurately measuring the individual phase flows of oil, gas, and water within 0-100% Gas Volume Fraction (GVF) range. The product is designed in strict accordance with international standards and qualified by the authoritative third party, DNV.

## Benefits

- Reduces capital investment costs in oilfield development
- Monitors early water breakthrough
- Real-time, continuous production monitoring of single wells
- Production optimization
- Enhances reservoir development efficiency

## Specifications

Items	Specifications
Model	SMPFM-4000
Design Pressure	5000psi
Design Temperature	-29~121°C
Water Depth	200m
Design Life	20 years
Material grade	HH
Communication protocol	Modbus RTU, Modbus Ethernet or CANopen
PSL level	PSL 3G
End connection	API 6A 4 1/16" 10K 6BX Flange (others on request)
Design Reference	API 6A, API 17D, API 17F, API 17S etc.
Power consumption	≤ 15W
Power supply	325 kg
Weight	18~36 VDC
Dimension	700(L) x 490(W) x 500(H) mm
WLR range	0~100%
GVF range	0~100%

## Features

- Compact size and light weight
- No moving parts, non-intrusive design
- Redundant design ensuring high reliability
- Authoritative third-party certification
- Real-time and accurate measurement
- Remote operation and control, no physical maintenance required
- Excellent dynamic response
- Low pressure drop
- Low power consumption

## Applications

- Single well metering, water breakthrough monitoring

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