

# Rheos-Xwh™ Flowmeter Instrumentation

Provides accurate flow measurement in remote well applications

## Applications

- Desert, arctic, and swamp environments
- Satellite platforms

## Features

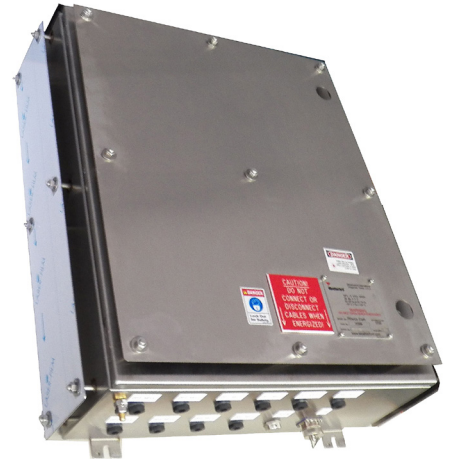
- Monitors up to eight flowmeters serially, which reduces the cost and complexity for multizone and pad-level applications.
- ATEX Zone-2 approved design enables operations in flammable gas atmospheres, which provides enhanced safety at the wellhead.

## Tool Description

The Rheos-Xwh flowmeter instrumentation units, part of the nPhase™ flow measurement solution family, provide flow measurements in remote well applications when used with OmniWell® optical sensing systems. The units are installed at the wellhead and can be linked remotely (via network) to a reservoir monitoring system (RMS) control room or linked directly to an adjacent RMSwh™ instrumentation unit. The Rheos-Xwh units have the ability to serially monitor up to eight flowmeters, which is advantageous for multi-zone and pad-level applications.

## Options

- System configuration depends on the selected flowmeter design.
  - The acoustic-tolerant version is optimal for intelligent wells with inflow control valves (ICVs).
  - The high-sensitivity version is optimal for quieter wells without ICVs.
- The number of available flowmeter channels is 1, 2, 4, and 8.
- The cold weather version (Rheos-Xwh LT) is rated to operating temperatures as low as -40°F (-40°C). The standard version (Rheos-Xwh ST) is rated to operating temperatures as low 5°F (-15°C).
- The system is Zone-2 ATEX rated; Zone-1 ATEX rating is available upon request.



When used with Weatherford Omniwell® sensing solutions, Rheos flowmeter instrumentation systems can serially monitor up to eight remote flowmeters.



## Rheos-Xwh™ Flowmeter Instrumentation

### Specifications

#### General

Flowmeter monitoring capability	Up to 8
Operating temperature range	-40 to 131°F (-40 to 55°C) Rheos-Xwh LT 5 to 131°F (-15 to 55°C) Rheos-Xwh ST
Update rate	90 sec per measurement
Units of measure	SI (metric), Imperial, custom
Output options	RMSwh dependent

#### Electrical Power

24 Vdc nominal	230 to 240 Vac (required for heaters) Rheos-Xwh LT 18 to 36 Vdc Rheos-Xwh ST
Maximum current	0.87 A @ 230 Vac Rheos-Xwh LT 3.33 A @ 18 Vdc Rheos-Xwh ST
Power consumption	200 W (2 x 100W heaters) Rheos-Xwh LT 60 W Rheos-Xwh ST

#### Physical

Dimensions, W × H × D	24 in. × 30 in. × 8 in. (762 mm × 610 mm × 203 mm)
Weight	152 lb (68.9 kg) Rheos-Xwh LT 144 lb (65.3 kg) Rheos-Xwh ST

#### Environmental

Storage temperature range	-4 to 149°F (-20 to 65°C)
Relative humidity	95%, noncondensing
Operational vibration	1 g peak, 5 Hz to 100 Hz, 0.1 oct/min 90 minutes per axis, 3 axes
Operational shock	10 g and 20 g, 11-ms, half-sine shock 3 shocks, ± per direction, 3 axes (10G), 2 axes (20G)
Transportation vibration	3.0 GRMS, random NAVMAT P9492
Certification	ATEX Zone 2 (Zone 1 available on request)

