



Specifications

WC measurement range	0-100%
WC measurement accuracy	<±2% WC across entire operating envelope.
WC measurement resolution	±0.1%
GVF application range	0-99.9%
Built-in temperature sensor	Calibrated Pt100 Class A temperature sensor at probe tip.
Output update frequency	Adjustable averaging period to suit any flow dynamics; fast water-cut transients can be captured . 1 output update per 10 seconds (0.1 Hz) by default.
External input requirements	None – There is no requirement for PVT, pressure temperature, conductivity or density.
Water salinity effect	Not affected by salinity or water chemistry.
Hydrate inhibitors effect	Not affected by MeOH, MEG, DEG, TEG.
Self-diagnostics	Multi-parameter fault detection and reporting. Automatic continuous optical window condition monitoring.

Installation

Form factor	Flanged probe.
Orientation	Any; vertical, horizontal or inclined. Rotatable display.
Flow regime	Any; including multiphase or two-phase flow, emulsions, mist flow, transient slug flow, partially stratified flow.
Location	Onshore or offshore topside, upstream or downstream of separator, installation can make use of existing thermowell or sampling probe location.
Process pipe size	3" through to 24".



Mechanical

Wetted materials

SS316L or Hastelloy C276, synthetic sapphire.
Optional tungsten-carbide cover sleeve for erosion mitigation.

Main meter body

SS316L or marine-grade epoxy coated aluminium or customer-specified paint and application process.

Process connection

2" ASME/ANSI B16.5 flange #300, #600, #900, #1500 RF, or 2" RTJ flange, or customer-specified.

Operating pressure

As determined by flange type, up to 3625 PSI (250 bar) cold working pressure.

Operating temperature

Ambient -40 °C (-40 °F) through to +60 °C (158 °F).
Process fluids up to +150 °C (302 °F).

Electrical

Power requirement

<10W typ. Other power options (e.g. battery pack, solar, available on request).

Voltage

10-36 V DC, 24 V DC typ.

Communications

Standard: 2x 4-20 mA HART, 1x RS232, 1x Modbus RTU over RS485.

Optional: Modbus TCP over Ethernet, Bluetooth (for configuration), other protocols available on request.

Compliance

Functional

100% unit test as part of factory acceptance testing.
Optional certificate from testing at NEL AMF.

Optional testing to customer-specified conditions and environment.



Compliance

Safety

Hazardous location approvals include UKCA (UK), ATEX (Europe), CSA (Canada), NEC (USA), EAC Ex (Eurasia), IECEx (International) for operation in Zone 1 designated locations.

Double-sealed sensing head from process fluids to UL 122701.

Compliant with NACE MR0175/ISO 15156 for sour service without limit on the H₂S partial pressure up to the maximum process fluid temperature of +150 °C (302 °F).

Compliant with ASME PTC 19.3 TW-2016 thermowell code.

Ingress

IP66 – complete protection against dust and strong water jets.