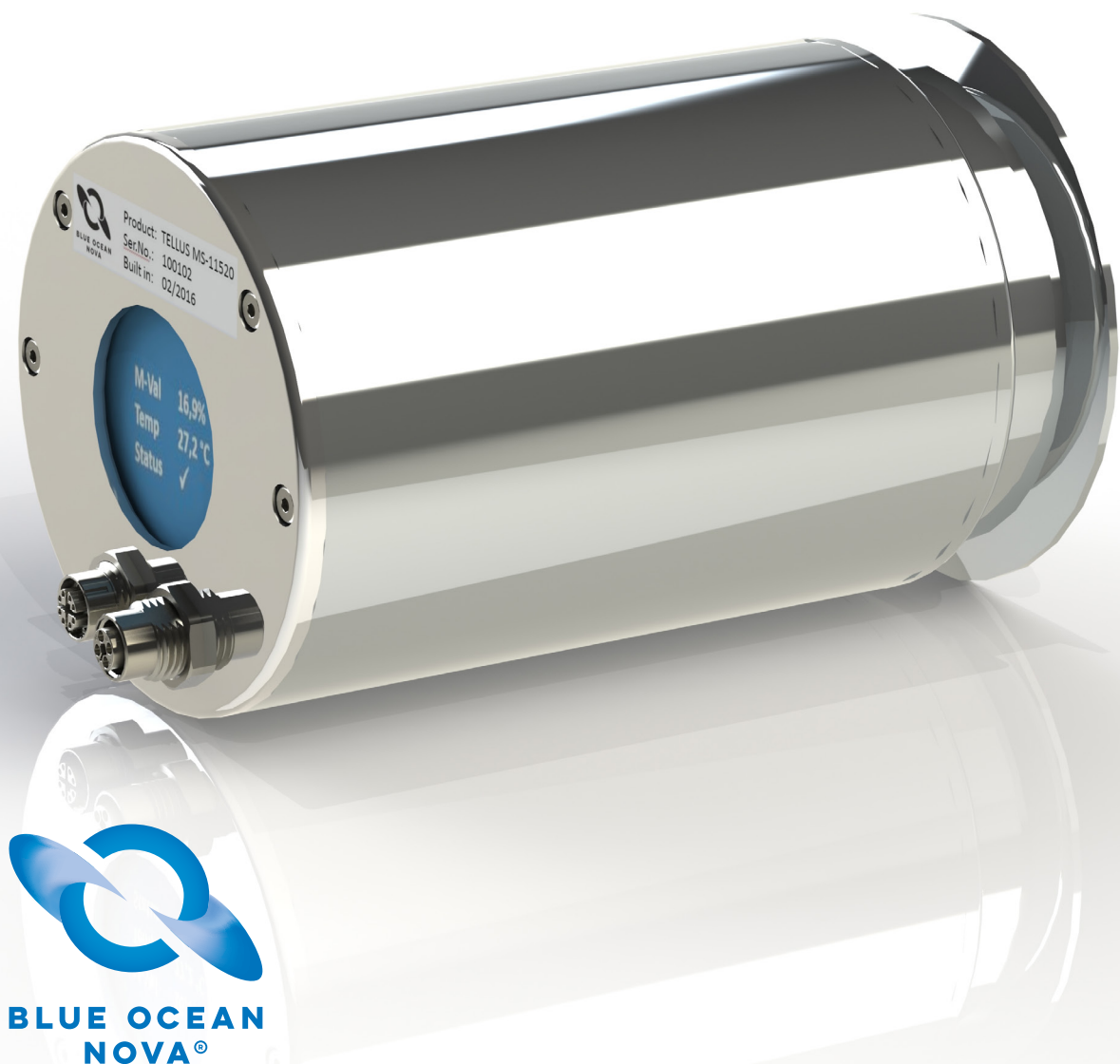


TELLUS-BM SERIES FOR SOLIDS

IN-LINE BLEND MONITOR

Improper mixing results in a non-homogenous product that lacks consistency with respect to desired attributes like chemical composition, color, texture, flavor, reactivity, and particle size. The sensor Tellus-BM measures blend offers inline blend monitoring.



- Inline blend monitoring in realtime
- No more time based endpoint determination
- UV spectral sensor integrated with measurement probe, no external fiber optics
- Fully compliant with FDA requirements (CFR 21 part 11)
- Contact measurement
- Hazardous area certification
- Robust product design
- Process parameter display direct
- Increase utilization and efficiency

REALTIME BLEND MONITORING INSIDE THE MANUFACTURING PROCESS

MEASUREMENT METHOD: The BON blending monitor mounts on the lid of the blender and analyses the blend through a Sapphire window. Monitoring can be done either by analyzing the relative change of the spectra over time, the so called qualitative monitoring; or by quantifying the exact concentration of each of the ingredients.

UNIQUE: ONLINE BLEND MONITORING

The Tellus BM sensor offers the first integrated online monitoring solution for blending processes without the need for any external technology to analyze the data. BON offers online monitoring of the blending process, either batch blending or continuous blending, with the spectral sensor directly integrated into the process. It has been nearly impossible to measure a sample in continuous blend, but with online monitoring with Tellus BM, analysis of the blend quality throughout the blend cycle is now possible. As the quality of the blending has considerable impact on the content uniformity of the final product, it is important to analyze the blend at different process conditions.

SPECIFICATIONS FOR SENSOR FAMILY TELLUS BM

Measurement method	Near-Infrared - Reflection measurement
Resolution	< 5 nm
Integration time	typically < 1 sec
Measurement distance to material	non contact, measurement through sapphire glass
Dimensions	Length 364 mm, diameter 114 mm, shaft 20 mm
Weight	1.5 kg
Materials of construction	Stainless steel, sapphire
Light source	Flashed lamp, (life span 10 ⁹ flashes)
Detector	InGaAs photodiode
Operating temperature	5 °C to 45 °C (without cooling mechanism)
Voltage	24 VDC, max. 0,2 A
Industry protocols	Ethernet-IP, OPC, WiFi
Process interface	Tri-Clamp,
Additional components	automated self-cleaning and recalibrating mechanism
Protection class	IP67
EX-Certificate and/or hygiene certificate	Available



All BON sensors have a display to show to directly monitor the relevant process parameter in real-time. This eliminates the need for operators to be skilled in spectroscopy and able to quickly see when measurements are in spec or not.



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