

ULTRAMOIST MICROWAVE MOISTURE MONITOR

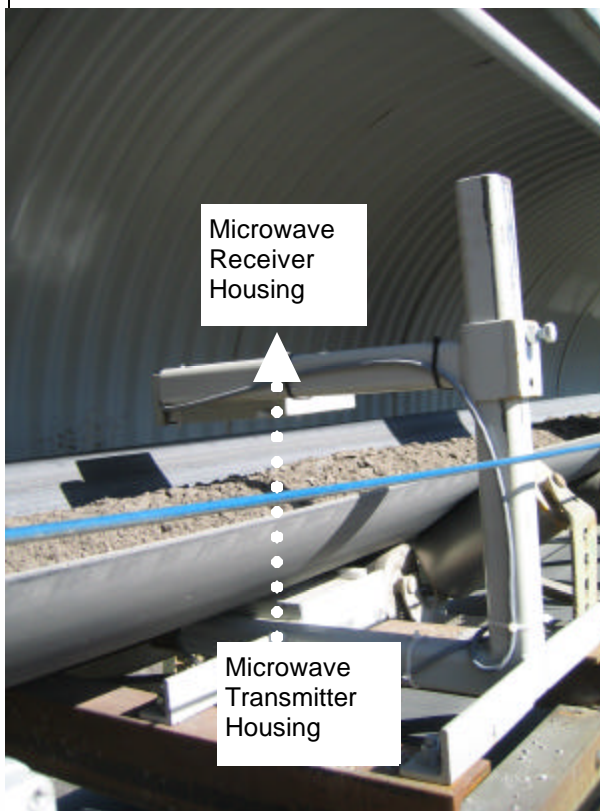
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**GREENBANK ENERGY SOLUTIONS INC.
ULTRAMOIST MICROWAVE MOISTURE MONITOR**

Moisture measurement has always been an important process parameter. Traditionally this has been carried out using the conventional laboratory analysis of a manual sample. Not only is this an expensive and time consuming process but the time taken to provide the result means that the information is only of historical value. During the time interval between taking the sample and reporting the result, operational conditions



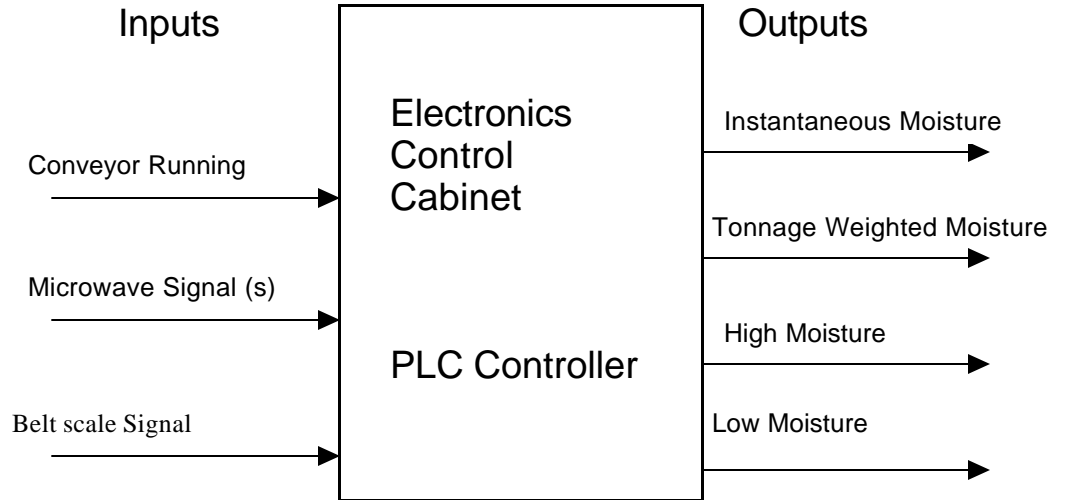
may have changed so that the reported result is no longer valid to the changed conditions. The **UltraMOIST** On-Belt Moisture Measurement System now allows the accurate measurement of moisture in real-time. This ready availability of moisture information allows proactive process control actions. The information can be used in a number of ways including:



The moisture content of the material is determined by measuring the transmission of a microwave beam through the process material. This beam is emitted from a transmitter located in the lower arm of the Measurement C-Bracket located under the conveyor belt. The transmitted microwave signal is detected by the receiver located in the upper arm of the Measurement C-Bracket. The effect on the microwave signal by the material it passes through is recorded and used in the determination of the moisture content.

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Operational	
Conveyor width	Up to 55" as standard (over 55" requires a customised On-belt C-Bracket)
Conveyor speed	No limit
Material top size	Typically up to 12" (material dependent)
Bed depth range	Typically 3/4" to 12" (material dependent)
Moisture range	0 to 80%
Measurement update time	Typically 1 minute user configurable
Instrument precision	Typically 0.3% at 1 standard deviation (ultimate precision achievable 0.1%)
Electrical Requirements	
At the Electronics Control Cabinet	240 volt or 110 volt, single phase, 2 amp supply
Environmental Requirements	
Operating temperature range	0 to 115°F with protection from direct sun and rain
Humidity	0 to 95% relative (non condensing)
Outputs	
Instantaneous moisture	0 to 10 volts or 4 to 20 mA current loop indicating the moisture content accumulated over any period.
Tonnage weighted moisture	0 to 10 volts or 4 to 20 mA current loop indicating the accumulated moisture content since the last reset
High moisture	Relay closure
Low moisture	Relay closure
Shipping mass	50 kg
Shipping dimensions	35.5" long x 27.5" wide x 25.5" high