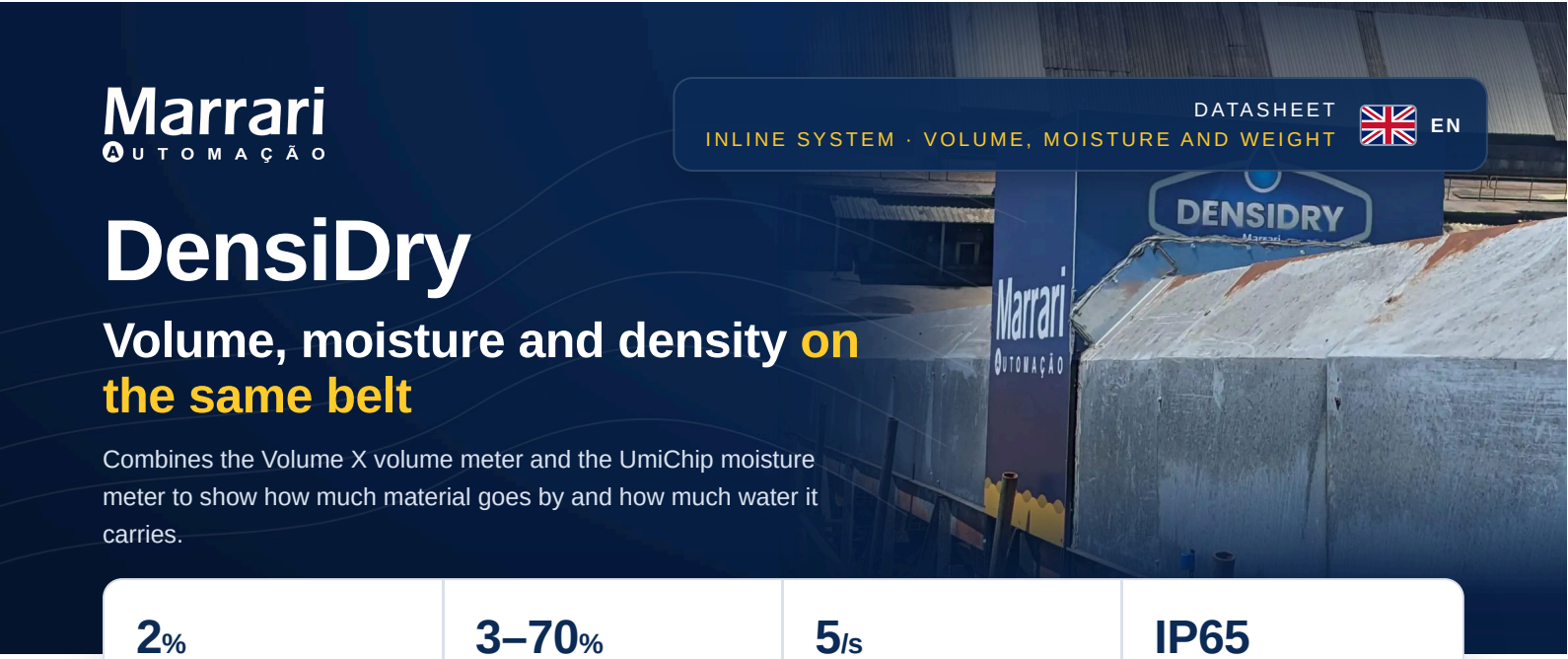
Marrari AUTOMAÇÃO

DATASHEET
INLINE SYSTEM · VOLUME, MOISTURE AND WEIGHT
EN



DensiDry

Volume, moisture and density on the same belt

Combines the Volume X volume meter and the UmiChip moisture meter to show how much material goes by and how much water it carries.

2%	3–70%	5/s	IP65
static volume accuracy	moisture range (wet basis)	moisture readings	scanner protection

01 WHY USE IT

Know what enters the process, in volume and in water.

Real-time volume
Volume flow (m³/h) and totalized volume (m³) from a non-contact laser scanner.

Continuous moisture
Moisture of the material on the belt, 5 times per second, by the dielectric method.

Bulk density
With a belt scale, it combines weight and volume to calculate density.

02 HOW IT WORKS

The **laser scanner** traces the load profile and, with the belt speed, calculates volume. The **moisture sensor** measures the water in the material on the same line. The central unit brings both signals together and raises production and moisture alarms.

1. **Laser scanner** — HR900 or HR2000 · volume
   — Same belt —
2. **Moisture sensor** — 304 stainless · dielectric
   — M12 · + belt scale —
3. **Central unit** — PLC and HMI · calculations
   — RS232/RS485 · Modbus RTU —
4. **Data software** — Volume View and Umi-View

With the signal from a belt scale on the same conveyor, the system combines volume, moisture and weight and calculates the material's bulk density.

APPLICATIONS

For plants that buy and burn biomass

Receiving and boiler feed, with data to:

- Check received loads by volume
- Track the material's bulk density
- Pay for biomass by its moisture
- Adjust the boiler feed

03 COMPONENTS AND SPECIFICATIONS



Central unit

Dimensions	500 × 400 × 250 mm · IP54 · 17 kg
Power supply	95 to 240 Vac, 50/60 Hz · 500 W max.
Communication	1 RS232 · 1 RS485 · 1 Ethernet
Protocols	Proprietary RS232/RS485 and TCP · Modbus RTU · Profibus DP on request

Sensors

Scanner	HR900: load up to 600 mm · HR2000: belt up to 5,000 mm
Moisture sensor	304 stainless · 190 × 190 × 91 mm · M12 IP67 connector

04 DATA AND SERVICES

Volume
Laser scanner
Instant and totalized volume, belt speed and min/max flow alarms.

Moisture
Dielectric sensor
Direct, filtered or trend moisture, with 100 recipes by material type.

Density
With a belt scale
Bulk density and mass flow, combining weight with measured volume.

Tracker
Recipe adjustment
Statistical software that tunes recipes with lab results and lowers the average error.

Yearly maintenance
Performed by Marrari
Software update and check against Marrari standards, once a year.

Warranty
6 months
Made in Brazil, with support and training from the after-sales team: posvendas@marrari.com.br.

General specifications

Volume	Laser, non-contact
Volume accuracy	Static 2% · dynamic up to 5%
Moisture	Dielectric, 3 to 70% (wet basis)
Moisture accuracy	Better than 3 p.p.
Reading	Moisture 5 per second
Protection	Scanner IP65 · central unit IP54
Recipes	100 programmable
Outputs	m³/h, m³, %, kg/m³, t
Set	Central unit, scanner, moisture sensor and speed sensor
Documents	MR600 and MR700 manuals · Annexes 05.b and 05.c