DINI ARGEO

A RICE LAKE WEIGHING SYSTEMS COMPANY

BS143

High accuracy custom made belt scale weigh frame "BS143" series, for belt conveyors



The BS143 MASTER belt scale weigh frame is suitable for medium to heavy capacity belt conveyors, for high accuracy continuous weighing applications. The special free-floating structure and the multiple idler technology allows to obtain very high performances.

> For belt width from 500 to 3000 mm
> Up to 20.000 t/h
> Up to 7 m/s
> Up to 25 degrees of inclination
> Accuracy from 0,25 %

The best solution for advanced industrial applications

MAIN ADVANTAGES

- FOR HIGH CAPACITIES, up to 20.000 t/h
- CUSTOMIZED DIMENSIONS for any conveyor width, from 500 to 3000 mm.
- VERY ACCURATE: from 0,25 % of accuracy (*), MID approved
- SUITABLE FOR INCLINED BELTS up to 25 degrees(*), thanks to its special technology.

(*) these features are strongly influenced by the mechanical quality of the conveyor structure, typology of the conveyed material, installation environment etc.; contact us for more details or send us the data request sheet with the specifications of your system (see in "download" section of this page).

FOR MORE INFORMATION

- Contact us at:
  bulkmaterial@diniargeo.com

WEIGH FRAME TECHNICAL FEATURES

- Structure made in heavy powder coated steel, for harsh industrial environments (galvanised steel or stainless steel available upon request).
- 4 stainless steel load cells, made according to OIML R60 standards, with protection against dust and water splashes according to IP65 standards (350 Ohm input resistance), capacity from 50 to 1000kg. Load cells are protected against dust and shocks by a metallic enclosures.
- Load cell safety stops against overloads.
- IP66 junction box.Up to 15 Vdc power supply.
- Grounding system for load cell protection.
- Standard flow rate capacity up to 20.000 t/h, higher speeds upon request.
- Maximum belt inclination up to 25 degrees, higher inclinations upon request.
- ATEX approved version for 21 or 22 zones are available upon request.

MICROCONTROLLER UNIT FEATURES

- High performance digital microcontroller with programmable inputs and outputs, fitted with 3 serial ports, transmissions protocols for data communication, completely programmable printouts, graphic display.
  The wide range of connectable fieldbus converters, accessories and printers guarantees the maximum interfaceability and versatility.

Mechanical Features:

- Waterproof 25-key numerical functional keyboard.
- Programmable function keys, for customising the keyboard functions according to the needs.
- Easy to consult backlit graphic LCD display, with a clear visualisation of the weight and wide range of information.
- Fitted with 3-way control light made up to sinoptic bar-graph with 3 groups of 3 Leds each, to tollerance check and setpoint.
- IP68 stainless steel waterproof case, easy to clean and resistant in harsh and corrosive environments.
- Dimensions, including support bracket: 269x58,8x183mm.
- Suitable for use on the table, wall mounting or panel mounting.

Electrical Features:

- Real time clock and permanent data memory.
- Selection of the programme language directly in the set-up.
- A/D 24 bit sigma-delta 4-channel conversion, up to 3200 conv./sec. with automatic selection. Filtering system through programmable software, adjustable according to the system.
- Calibration and Set-Up parameters, configurable from PC with Dinitools or with the keyboard; theoretical calibration with the entry of the characteristics of the load cells.
- Up to 1.000.000d displayable for internal factory use.
- Up to 10.000e or multirange 3 x 3000e @ 0,3 µV/d in CE-M approved version for legal for trade use.
- Internal resolution of up to 3.000.000 points.
- 230 Vac or 24 Vdc power supply, 16 VA power.
- 2 RS232 serial ports configurable for connection to printers, PC or PLC, radio modules or other external units.
- 1 RS232 serial port (optional RS485) configurable for connection to repeater, bar code reader, or digital load cells.
- 4 optoisolated outputs, up to 16 on request.
- 2 optoisolated inputs, up to 8 on request.
- Fieldbus interface (optional).
- Bluetooth connection, for quick wireless programming through PC (optional).
- Keyboard emulation input.

CONSULTING SERVICE

- If you need an help to select the most suitable bar for your application and verify the feasibility of the system, fill in the data request form, which may be downloaded in the "Download" area of this datasheet.
- This data request form, correctly filled in, can be analyzed form our technical department in order to find the best solutions for your application.

SPEED SENSOR FEATURES

- Reliable mounting in wide variety of installation situations
- Standard encoder for use Worldwide
- Sturdy (Safety-lock™) design bearing structure
- Resistant die-cast housing

Mechanical Characteristics:

- IP66

Rotor Moment of Inertia:

- Shaft version: approx. 1,8 x 10-6 kgm2
- Hollow shaft version: approx. 6 x 10-6 kgm2
- Radial load capacity shaft: 80N
- Axial load capacity shaft: 40N

CE Requirements:
EN61000-6-4, EN61000-6-4, and EN61000-6-3

- Operating Temperature:-40° C to 85° C
- Connection:M23 or M12 connector

Electrical Characteristics:

- Output circuit: TTL compatible
- Supply voltage: push-pull 10 50 30 VDC (or 7272 - 5 to 30 VDC)
- Power consumption: push-pull 50 mA to 100 mA
- Permissible load/channel: ±20 MA to 300 kHz
- Signal level high: push-pull min UB-1V (7272-UB-2.0V)
- Rise time/fall time: push-pull max 1 µs
- Dimensions: OD 50,8 mm, installation depth max 47 mm

DETAIL 1



DETAIL 2



DETAIL 3



DETAIL 4



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SALES AND TECHNICAL ASSISTANCE SERVICE

All the specifications and images can be subject to variations and upgrades without prior notice.