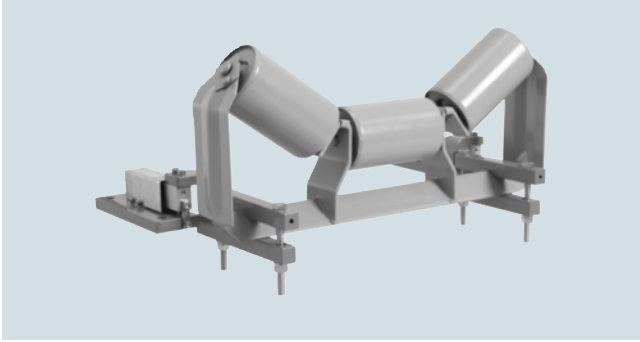


Belt Scales

Milltronics belt scales

Milltronics MBS

Overview



Milltronics MBS is a basic, modular, medium-duty belt scale providing dynamic weighing information for process indication. Idler not included with belt scale.

Benefits

- Unique modular design
- Simple installation
- Low cost
- Easy retrofit

Application

Milltronics MBS is used with aggregates, sand, or minerals, animal feeds or grains, providing basic continuous in-line weighing at a minimal cost. With no cross bridge, this versatile unit will fit most conveyor widths and standard idlers, and product buildup is reduced.

The construction and easy assembly of the MBS ensure quick delivery to meet even the tightest of schedules. Where scales are moved from conveyor to conveyor, the MBS also provides unmatched flexibility.

Operating with Milltronics BW500, or SIWAREX FTC microprocessor-based integrators, the MBS provides indication of flow rate, total weight, belt load, and speed of bulk solids materials on a belt conveyor. A speed sensor monitors conveyor belt speed for input to the integrator.

Technical specifications

Milltronics MBS	
Mode of operation	
Measuring principle	Heavy duty strain gauge load cells measuring load on belt conveyor idlers
Typical applications	<ul style="list-style-type: none"> • Monitor feed rates of fractionated stone, sand, animal feeds, grains • Track daily production totals
Performance	
Accuracy ¹⁾	± 1 % of totalization over 33 ... 100 % operating range, application dependent
Medium conditions	
Max. material temperature	70 °C (158 °F)
Belt design	
Belt width	<ul style="list-style-type: none"> • Standard duty up to 1 000 mm (CEMA width up to 42 inch) • Refer to dimensional drawing
Belt speed	Up to 3.0 m/s (600 fpm) ²⁾
Capacity	Up to 1 500 t/h (1 650 STPH) at maximum belt speed
Conveyor incline	<ul style="list-style-type: none"> • ± 20° from horizontal, fixed incline • Up to ± 30° with reduced accuracy³⁾
Idlers	
Idler profile	<ul style="list-style-type: none"> • Flat to 35° • To 45° with reduced accuracy³⁾
Idler diameter	50 ... 150 mm (2 ... 6 inch)
Idler spacing	0.6 ... 1.5 m (2.0 ... 5.0 ft)

Milltronics MBS	
Load cell	
Construction	Aluminum
Degree of protection	IP66
Cable length	3 m (10 ft)
Excitation	10 V DC nominal, 15 V DC max.
Output	2 ± 0.02 mV/V excitation at rated load cell capacity
Non-repeatability	0.01 % of rated output
Non-linearity	0.02 % of rated output
Hysteresis	0.02 % of rated output
Capacity	30, 50, 100 kg (66, 110, 220 lb)
Overload	150 % of rated capacity, ultimate 200 % of rated capacity
Temperature	<ul style="list-style-type: none"> • -30 ... +70 °C (-22 ... +158 °F) operating range • -10 ... +40 °C (15 ... 105 °F) compensated
Weight	12 kg (26 lb), 6 kg (13 lb) per side
Interconnection wiring (to integrator)	<ul style="list-style-type: none"> • < 150 m (500 ft) 18 AWG (0.75 mm²) 6 conductor shielded cable • > 150 m (500 ft) to 300 m (1 000 ft) 18 ... 22 AWG (0.75 ... 0.34 mm²) 8 conductor shielded cable
Hazardous locations	Consult the factory
Approvals	CE, RCM, GOST-R

¹⁾ Accuracy subject to: On factory approved installations the belt scale system's totalized weight will be within the specified accuracy when compared to a known weighed material test sample.

The test rate must be within the specified range of the design capacity and held constant for the duration of the test. The minimum material test sample must be equivalent to a sample obtained at the test flow rate for three revolutions of the belt or at least ten minutes running time, whichever is greater.

²⁾ Contact Siemens application engineering (factorysupport.smpi@siemens.com) for consideration of higher belt speeds.

³⁾ Review by Siemens application engineer required.

Belt Scales

Milltronics belt scales

Milltronics MBS

Selection and ordering data

Milltronics MBS belt scale

A basic, modular, medium-duty belt scale providing dynamic weighing information for process indication.

Standard [up to 1 000 mm (42 inch) belt width]

Load cell capacity

30 kg (66 lb)

50 kg (110 lb)

100 kg (220 lb)

Not specified¹⁾

Fabrication

Polyester painted mild steel

Polyester painted mild steel, for use with flat bar or MWL calibration

Further designs

Please add **"-Z"** to article no. and specify order code(s).

Stainless steel tag [69 x 38 mm (2.7 x 1.5 inch)], Measuring-point number / identification (max 27 characters), specify in plain text.

Manufacturer's test certificate:
According to EN 10204-2.2

Operating instructions

- English
- French
- German

Belt Scale Application Guidelines

- English
- French
- German
- Spanish

Note: The operating instructions and application guidelines manual should be ordered as separate lines on the order.

This device is shipped with the Siemens Milltronics manual DVD containing the complete operating instructions library.

Spare parts

Load cell, 30 kg (66 lb), aluminum

Load cell, 50 kg (110 lb), aluminum

Load cell, 100 kg (220 lb), aluminum

Conduit replacement kit

Article No.

7MH7121-

0

1

AB

AC

AE

XX

1

2

Order Code

Y15

C11

Article No.

7ML1998-5JN01

7ML1998-5JN11

A5E32007525

7ML1998-5GA01

7ML1998-5GA11

7ML1998-5GA31

7ML1998-5GA21

7MH7725-1BK

7MH7725-1BL

7MH7725-1BM

7MH7723-1NA

Calibration weights

Flat bar/MWL retrofit kit

Calibration test arm assembly, c/w one 8.2 kg (18 lb) calibration weight

Calibration test arm assembly, c/w two 8.2 kg (18 lb) calibration weights

MBS/MCS calibration arm c/w idler clip (holds up to two 8.2 kg (18 lb) weights)

Calibration weight, 8.2 kg (18 lb)

Calibration weight, 6.0 lb (2.7 kg)

Milltronics flat bar calibration weights, see page 4/59.

Note: The calibration arm and weights should be ordered as separate lines on the order.

Article No.

7MH7723-1HA

7MH7723-1FR

7MH7723-1FS

7MH7726-1AD

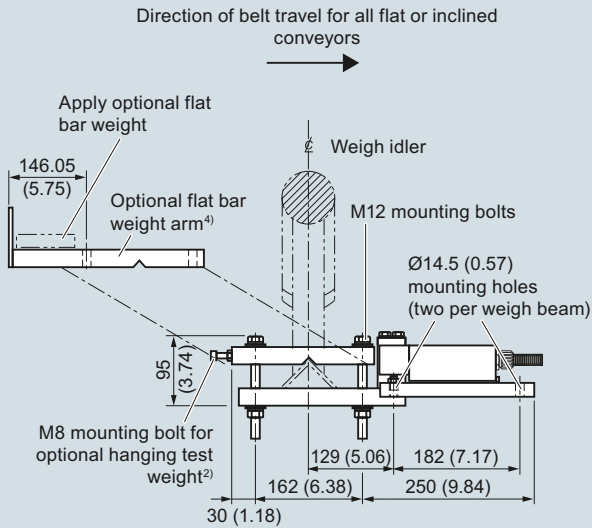
7MH7724-1AA

7MH7724-1AB

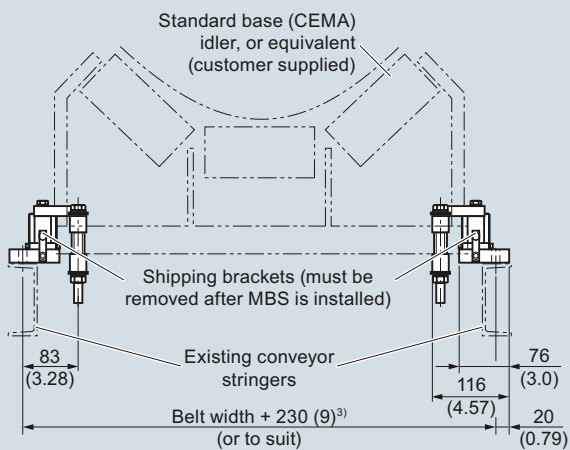
¹⁾ Only for quotation purposes, not a valid ordering option.

Dimensional drawings

Side View



Front View

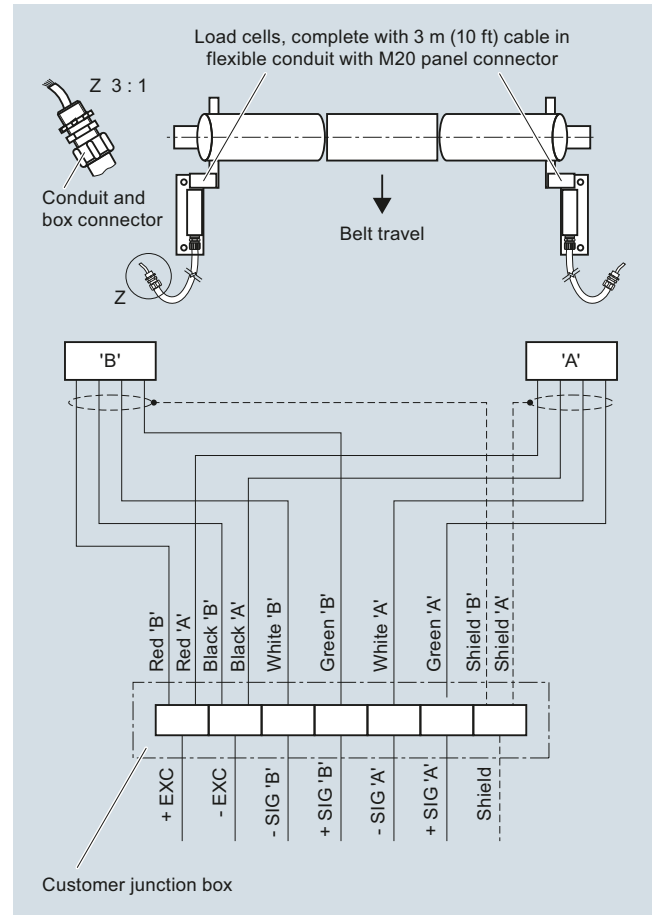


Notes:

- ¹⁾ 2 approach and 2 retreat idlers should be aligned with the weigh idler to within 0.8 mm (1/32 inch) to 0 mm (0 inch). Call your Siemens representative for more information.
- ²⁾ Test weights (customer supplied), may be hung on the M8 bolts. If this method is chosen, equal mass should be applied to each weigh beam, and the test weights should hang free of the fixed structure.
- ³⁾ Based on CEMA sizes
- ⁴⁾ Not recommended for declined conveyor applications

MBS dimensions in mm (inch)

Schematics



MBS connections