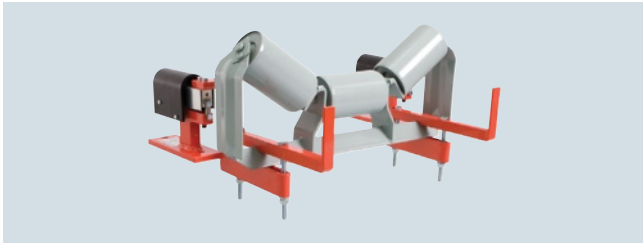


Belt Scales

Milltronics belt scales

Milltronics MUS

Overview



Milltronics MUS is a modular designed, medium to heavy-duty belt scale for process indication.

Idler not included with belt scale.

Benefits

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

Application

Milltronics MUS operates with products like aggregates, sand, or minerals, providing 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 build-up is reduced.

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

Operating with Milltronics BW500, or SIWAREX FTC microprocessor-based integrators, the MUS 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 MUS	
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 fractionated stone on secondary surge belts and recirculating loads • Track daily production totals
Measurement accuracy	
Accuracy ¹⁾	± 0.5 ... 1 % of totalization over 25 ... 100 % operating range, application dependent
Repeatability	± 0.1 %
Medium conditions	
Max. material temperature	65 °C (150 °F)
Belt design	
Belt width	<ul style="list-style-type: none"> • Standard duty up to 1 000 mm (CEMA width up to 42 inch) • Heavy-duty up to 1 524 mm (CEMA width up to 60 inch) • Refer to dimensional drawing
Belt speed	Up to 3.0 m/s (600 fpm) ²⁾
Capacity	Up to 5 000 t/h 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 ... 180 mm (2 ... 7 inch)
Idler spacing	0.6 ... 1.5 m (2.0 ... 5.0 ft)
Load cell	
Construction	Nickel plated alloy steel
Degree of protection	IP66
Cable length	3 m (10 ft)
Excitation	10 V DC nominal, 15 V DC max.
Output	2 mV/V excitation at rated load cell capacity
Non-linearity and hysteresis	0.02 % of rated output
Non-repeatability	0.01 % of rated output
Capacity	
• Standard duty ranges	20, 30, 50, 75, 100 kg (44, 66, 110, 165, 220 lb)
• Heavy-duty ranges	50, 100, 150, 200, 500 kg (110, 220, 330, 440, 1 100 lb)
Overload	150 % of rated capacity, ultimate 200 % of rated capacity
Temperature	<ul style="list-style-type: none"> • -40 ... +65 °C (-40 ... +150 °F) operating range • -10 ... +40 °C (15 ... +105 °F) compensated

Milltronics MUS	
Weight	Standard duty up to 44 lb (20 kg), 22 lb (10 kg) per side Heavy-duty up to 64 lb (30 kg), 32 lb (15 kg) 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 ... 300 m (500 ... 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, CMC

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 MUS

Selection and ordering data

Milltronics MUS belt scale

Modular design, medium- to heavy-duty scale for process indication.

Flat bar calibration weights are optional and should be ordered as separate items, see page 4/59.

➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

Scale construction

Standard for belt width up to 1 000 mm (42 inch), nickel plated steel load cells

Heavy-duty for belt width up to 1 524 mm (60 inch), nickel plated steel load cells

Load cell capacity

Standard Duty Scale Load Cell

20 kg (44.1 lb)¹⁾

30 kg (66.1 lb)¹⁾

50 kg (110.2 lb)¹⁾

75 kg (165.3 lb)¹⁾

100 kg (220.4 lb)¹⁾

Not specified²⁾

Heavy-Duty Scale Load Cell

50 kg (110.2 lb)³⁾

100 kg (220.4 lb)³⁾

150 kg (330.7 lb)³⁾

200 kg (440.9 lb)³⁾

300 kg (661.4 lb)³⁾

500 kg (1102.3 lb)³⁾

Fabrication

Polyester painted mild steel

Article No.

7MH7123-

0

1

2

AA

AB

AC

AD

AE

XX

BA

BB

BC

BD

BE

BF

1

Order Code

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.

Application Eng. reference number (max. 15 characters), specify in plain text.

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

Operating instructions

- English
- French
- Spanish
- German
- Dutch

Belt Scale Application Guidelines

- English
- French
- Spanish
- German

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

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

Spare parts

Standard Duty Scale Load Cell

20 kg (44.1 lb)

30 kg (66.1 lb)

50 kg (110.2 lb)

75 kg (165.3)

100 kg (220.5 lb)

Heavy-Duty Scale Load Cell

50 kg (110.2 lb)

100 kg (220.5 lb)

150 kg (330.7 lb)

200 kg (440.9 lb)

300 kg (661.4 lb)

500 kg (1120.3 lb)

Rock Guard, MUS Standard Duty Scale, spare

Conduit replacement kit

Calibration weights

Milltronics flat bar calibration weights, see page 4/59

Note: Calibration accessories should be ordered as a separate item on the order

Y15

Y31

C11

Article No.

7ML1998-5CQ02

7ML1998-1CQ11

7ML1998-1CQ21

A5E32015599

7ML1998-1CQ41

7ML1998-5GA01

7ML1998-5GA11

7ML1998-5GA21

7ML1998-5GA31

7MH7725-1CP

7MH7725-1CQ

7MH7725-1CR

7MH7725-1CS

7MH7725-1CT

7MH7725-1CU

7MH7725-1CV

7MH7725-1CW

7MH7725-1CX

7MH7725-1CY

7MH7725-1DA

7MH7723-1DM

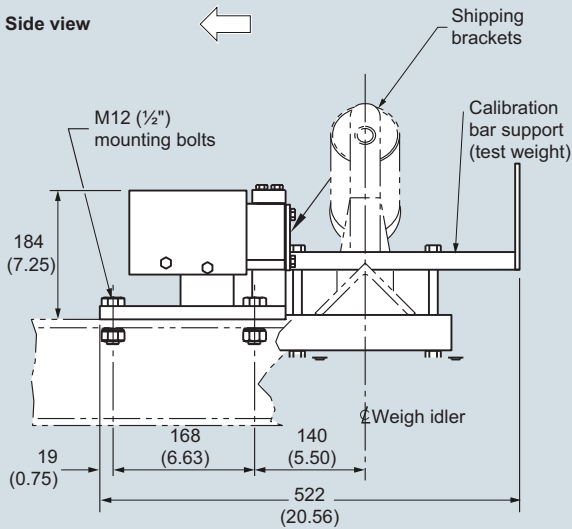
7MH7723-1NA

Dimensional drawings

Standard duty

Belt direction for all flat or inclined conveyors

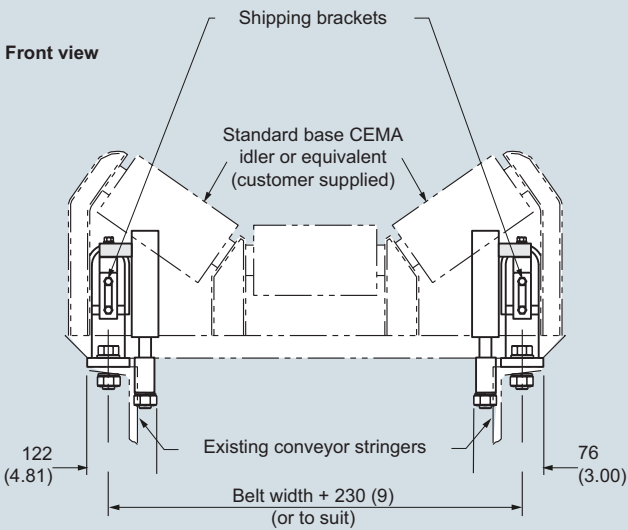
Side view



Note:

(2) approach and (2) retreat idlers should be aligned with the weigh idler to within 0.8 (+1/3) to 0 (0).

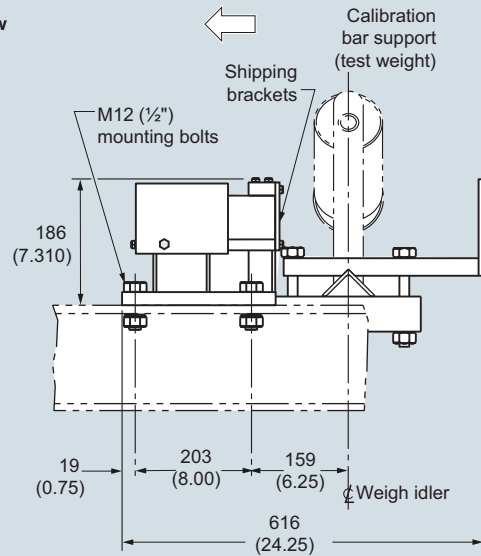
Front view



Heavy duty

Belt direction for all flat or inclined conveyors

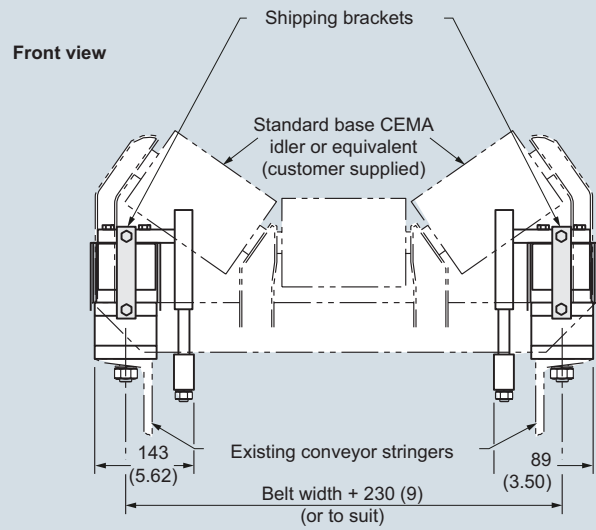
Side view



Note:

(2) approach and (2) retreat idlers should be aligned with the weigh idler to within 0.8 (+1/3) to 0 (0).

Front view



4

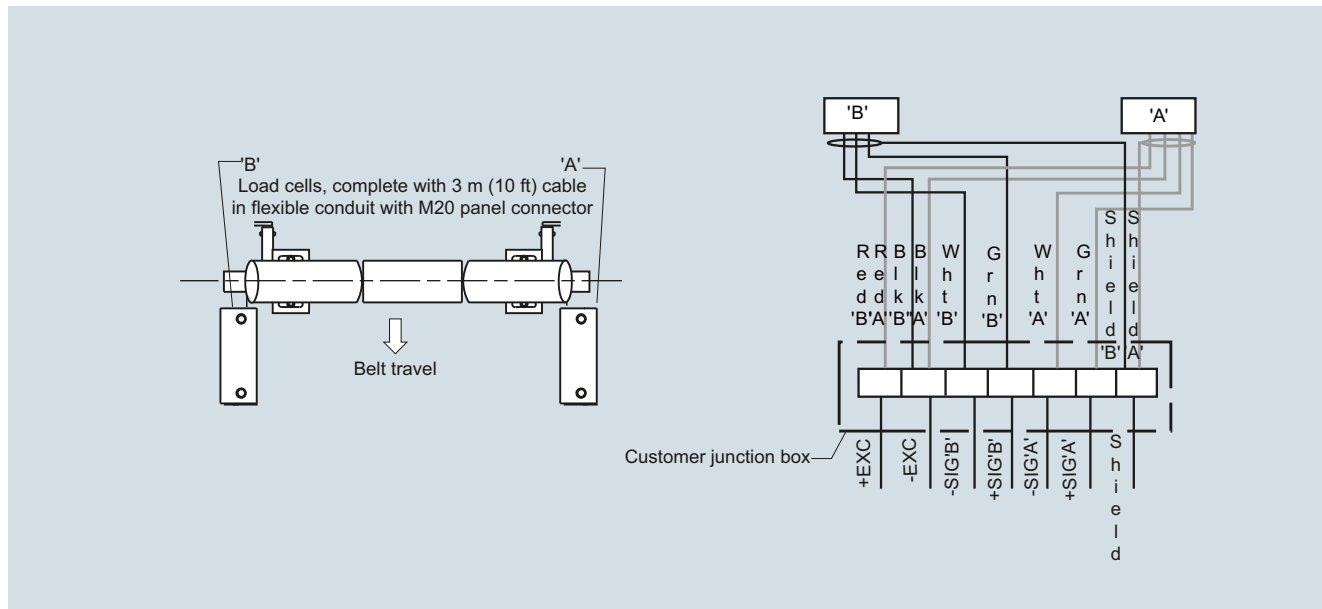
MUS, dimensions in mm (inch)

Belt Scales

Milltronics belt scales

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Schematics



MUS connections