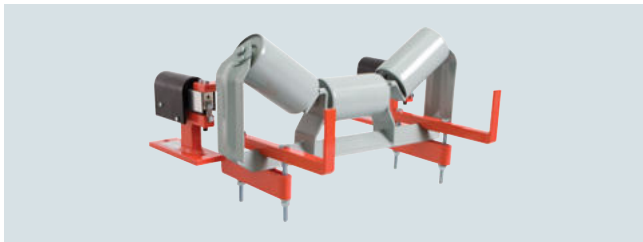


Overview



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, SIWAREX WT241, WP241, or 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.

Belt Weighing

Belt scales

Milltronics MUS

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 ²⁾
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)

Milltronics MUS	
Load cell	
Construction	Nickel plated alloy steel Strain gauge protection: silicon
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
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, EAC, CMC, KCC

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 (http://www.automation.siemens.com/aspa_app) for consideration of higher values.

³⁾ Review by Siemens required (http://www.automation.siemens.com/aspa_app).

Selection and ordering data	Article No.	Article No.
<p>Milltronics MUS Belt scale</p> <p>Accuracy is $\pm 2\%$ of totalization over 25 ... 100 % operating range with capacity up to 5 000 t/h (5 512 STPH).</p> <p>➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</p>	➤ 7MH7123-0	
<p>Scale construction</p> <p>Standard for belt width up to 1 000 mm (42 inch), nickel plated steel load cells</p> <p>Heavy-duty for belt width up to 1 524 mm (60 inch), nickel plated steel load cells</p>	1 2	
<p>Load cell capacity</p> <p><u>Standard Duty Scale Load Cell</u></p> <p>20 kg (44.1 lb)¹⁾</p> <p>30 kg (66.1 lb)¹⁾</p> <p>50 kg (110.2 lb)¹⁾</p> <p>75 kg (165.3 lb)¹⁾</p> <p>100 kg (220.4 lb)¹⁾</p> <p>Not specified²⁾</p> <p><u>Heavy-Duty Scale Load Cell</u></p> <p>50 kg (110.2 lb)³⁾</p> <p>100 kg (220.4 lb)³⁾</p> <p>150 kg (330.7 lb)³⁾</p> <p>200 kg (440.9 lb)³⁾</p> <p>300 kg (661.4 lb)³⁾</p> <p>500 kg (1 102.3 lb)³⁾</p>	<p>A A</p> <p>A B</p> <p>A C</p> <p>A D</p> <p>A E</p> <p>X X</p> <p>B A</p> <p>B B</p> <p>B C</p> <p>B D</p> <p>B E</p> <p>B F</p>	<p>Spare parts</p> <p><u>Standard Duty Scale Load Cell</u></p> <p>20 kg (44.1 lb) A5E00826934</p> <p>30 kg (66.1 lb) A5E00826935</p> <p>50 kg (110.2 lb) A5E00826936</p> <p>75 kg (165.3 lb) A5E00826938</p> <p>100 kg (220.5 lb) A5E00826939</p> <p><u>Heavy-Duty Scale Load Cell</u></p> <p>50 kg (110.2 lb) A5E00826941</p> <p>100 kg (220.5 lb) A5E00826942</p> <p>150 kg (330.7 lb) A5E00826943</p> <p>200 kg (440.9 lb) A5E00826944</p> <p>300 kg (661.4 lb) A5E00826945</p> <p>500 kg (1 120.3 lb) A5E00826946</p> <p>Rock Guard, MUS Standard Duty Scale, spare 7MH7723-1DM</p> <p>Conduit replacement kit 7MH7723-1NA</p> <p>Spare load cell hardware kit A5E44809390</p>
<p>Fabrication</p> <p>C5-M rated polyester painted mild steel</p>	1	
<p>Further designs</p> <p>Please add "-Z" to article no. and specify order code(s).</p> <p>Stainless steel tag [69 x 38 mm (2.7 x 1.5 inch)], Measuring-point number / identification (max. 27 characters), specify in plain text.</p> <p>Application Eng. reference number (max. 15 characters), specify in plain text.</p>	<p>Order Code</p> <p>Y15</p> <p>Y31</p> <p>C11</p>	<p>Calibration weights</p> <p>Milltronics flat bar calibration weights, see page 4/53.</p> <p>Note: calibration accessories should be ordered as a separate item on the order.</p> <p>1) For use with scale construction option 1 only.</p> <p>2) Only for quotation purposes, not a valid ordering option.</p> <p>3) For use with scale construction option 2 only.</p>
<p>Operating instructions</p> <p>All literature is available to download for free, in a range of languages, at http://www.siemens.com/weighing/documentation</p>		

Belt Weighing

Belt scales

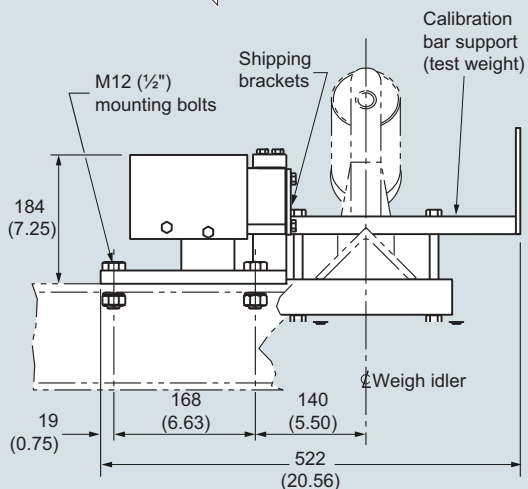
Milltronics MUS

Dimensional drawings

Standard duty

Belt direction for all flat or inclined conveyors

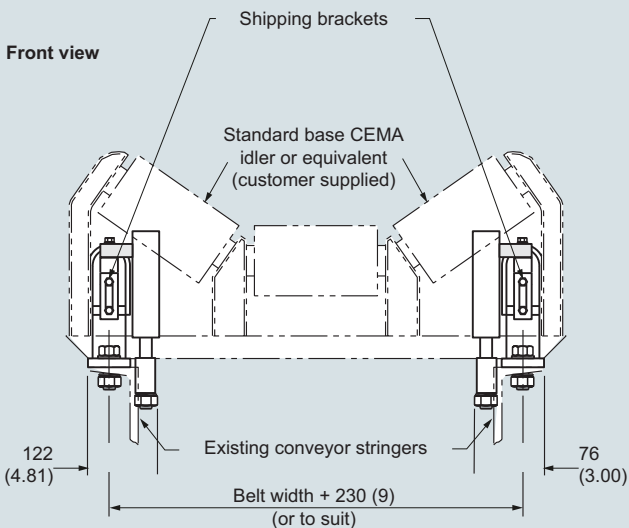
Side view



Note:

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

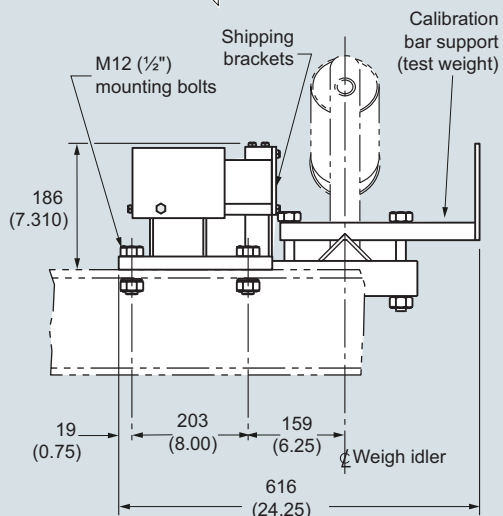
Front view



Heavy duty

Belt direction for all flat or inclined conveyors

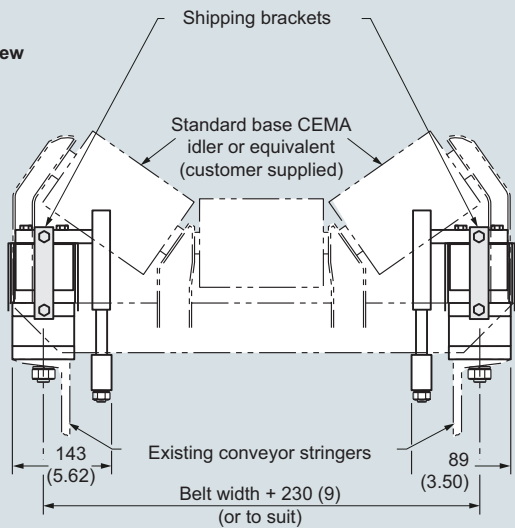
Side view



Note:

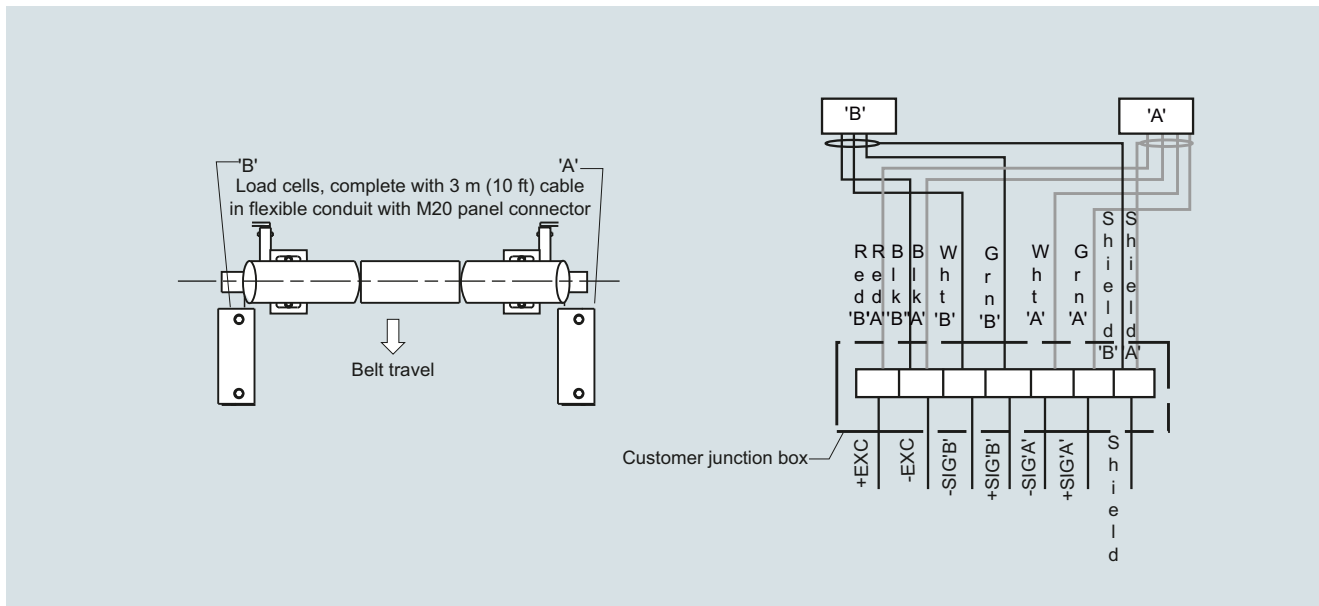
(2) approach and (2) retreat idlers should be aligned with the weigh idler to within 0.8 (+1/3) to 0 (0).

Front view



MUS, dimensions in mm (inch)

Circuit diagrams



MUS connections