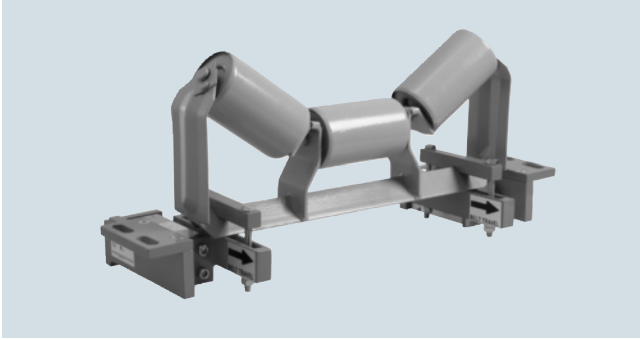


Overview

Milltronics MCS is a compact, rugged, modular, heavy-duty belt scale for use in mobile crushers and aggregate screening plants.

Idler not included with belt scale.

Benefits

- Rugged design
- Low profile
- Easy retrofit
- Low cost
- Stainless steel load cells

Application

Milltronics MCS provides continuous, in-line weighing at minimal cost. The stainless steel load cells ensure long-term, consistent, reliable measurement. The modular construction and easy assembly of the MCS ensures quick delivery to meet even the tightest of schedules.

Operating with Milltronics BW500, or SIWAREX FTC microprocessor-based integrators, the MCS provides indication of flow rate, total weight, belt load, and belt speed of bulk solids materials on a belt conveyor.

To complete the weighing system, include a speed sensor to monitor conveyor belt speed for input to the integrator. On mobile crushing equipment, the TASS speed sensor is a compact, rugged speed sensor designed for use with the MCS.

Belt Scales

Milltronics belt scales

Milltronics MCS

Technical specifications

Milltronics MCS	
Mode of operation	
Measuring principle	Strain gauge load cells measuring load on belt conveyor idlers
Typical application	Mobile crusher systems
Measurement accuracy	
Accuracy ¹⁾	<ul style="list-style-type: none"> • $\pm 0.5 \dots 1$ % of totalization over 25 ... 100 % operating range, application dependent • ± 2 % of totalization over 25 ... 100 % operating range on mobile crusher applications
Repeatability	± 0.1 %
Belt design	
Belt width	<ul style="list-style-type: none"> • Up to 1 600 mm (60 inch CEMA) width • Refer to the dimensional drawing
Belt speed	Up to 4 m/s (800 fpm) ²⁾
Capacity	
	Up to 2 400 t/h (2 640 STPH) at maximum belt speed
Conveyor incline	
	<ul style="list-style-type: none"> • $\pm 20^\circ$ from horizontal, fixed incline • Up to $\pm 30^\circ$ with reduced accuracy³⁾
Idlers	
Idler profile	<ul style="list-style-type: none"> • Flat to 35° • To 45° with reduced accuracy³⁾
Idler diameter	100 ... 150 mm (4 ... 6 inch)
Idler spacing	0.6 ... 1.2 m (2.0 ... 4.0 ft)
Load cell	
Construction	17-4 PH (1.4568) stainless steel construction with 304 (1.4301) stainless steel cover
Degree of protection	IP67, IP65 on hazardous approved models
Cable length	3 m (10 ft)
Excitation	10 V DC nominal, 15 V maximum
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	25, 50, 100, 250, 500 lb stainless steel
Overload	150 % of rated capacity, ultimate 300 % of rated capacity
Temperature	<ul style="list-style-type: none"> • $-50 \dots +75$ °C ($-58 \dots +167$ °F) operating range • $-40 \dots +65$ °C ($-40 \dots +150$ °F) compensated

Milltronics MCS	
Weight	Up to 20 kg (44 lb), 10 kg (22 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
Approvals	<ul style="list-style-type: none"> • CSA/FM Class II, Div. 1, Groups E,F,G and Class III • ATEX II 2D, Ex tD A21 IP65 T90 °C • GOST-R Ex • IEC Ex, Ex tD A21 IP65 T90 °C • CE, RCM, GOST-R, RTN

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.

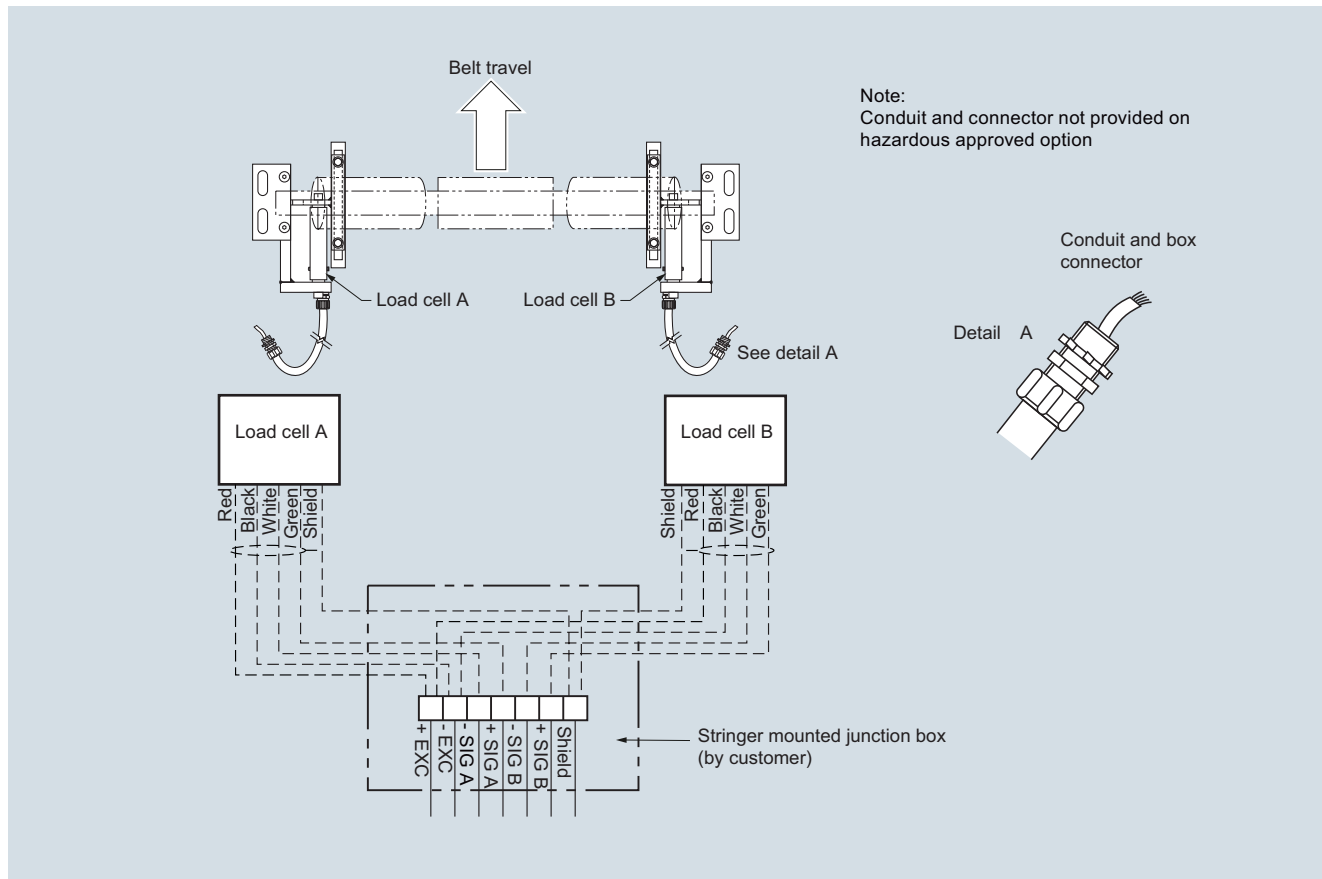
³⁾ Review by Siemens application engineer required.

Selection and ordering data	Article No.	Order Code
Milltronics MCS belt scale A compact, rugged, modular, heavy-duty belt scale for use in mining and aggregate screening plants ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7MH7125-	
	0	
Scale construction Standard duty, CE, RCM Hazardous Duty CSA/FM Class II, Div. 1, Groups E,F,G and Class III, ATEX II 2D, IECEx, CE, RCM	1 2	
Load cell capacity 50 lb (22.7 kg) (use not recommended for mobile crushers) 100 lb (45.5 kg) (use not recommended for mobile crushers) 250 lb (113.6 kg) 500 lb (226.8 kg) 25 lb (11.3 kg) (use not recommended for mobile crushers) Not specified ¹⁾	AA AB AC AD AE BB	
Fabrication Polyester painted mild steel Polyester painted mild steel, for use with flat bar or MWL calibration	1 2	
		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
		Y15 Y31 C11
		Operating instructions MCS belt scale, multi-language <u>Belt Scale Application Guidelines</u> • English • French • German • Spanish Hazardous location certificates Note: The operating instructions should be ordered as a separate item on the order. This device is shipped with the Siemens Milltronics manual DVD containing the complete operating instructions library.
		Article No. A5E33071768 7ML1998-5GA01 7ML1998-5GA11 7ML1998-5GA31 7ML1998-5GA21 7ML1998-5KH81
		Spare parts <u>Stainless steel load cell</u> [17-4 PH (1.4568) stainless steel construction with 304 (1.4301) stainless steel cover] 25 lb (11.3 kg) 50 lb (22.7 kg) 100 lb (45.4 kg) 250 lb (113.4 kg) 500 lb (226.8 kg) 25 lb (11.3 kg), CSA/FM/ATEX/IECEX 50 lb (22.7 kg), CSA/FM/ATEX/IECEX 100 lb (45.4 kg), CSA/FM/ATEX/IECEX 250 lb (113.4 kg), CSA/FM/ATEX/IECEX 500 lb (226.8 kg), CSA/FM/ATEX/IECEX Conduit replacement kit
		7MH7725-1DR 7MH7725-1DH 7MH7725-1DJ 7MH7725-1DK 7MH7725-1DS 7MH7725-1DQ 7MH7725-1DL 7MH7725-1DM 7MH7725-1DN 7MH7725-1DP 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 MCS calibration arm c/w idler clip (holds up to two 8.2 kg (18 lb) weights) Calibration weight, 18 lb (8.2 kg) Calibration weight, 6 lb (2.7 kg) Milltronics flat bar calibration weights, see page 4/59. Note: Calibration accessories should be ordered as a separate item on the order.
		7MH7723-1HA 7MH7723-1FR 7MH7723-1FS 7MH7726-1AD 7MH7724-1AA 7MH7724-1AB

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆

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

Schematics



MCS connections