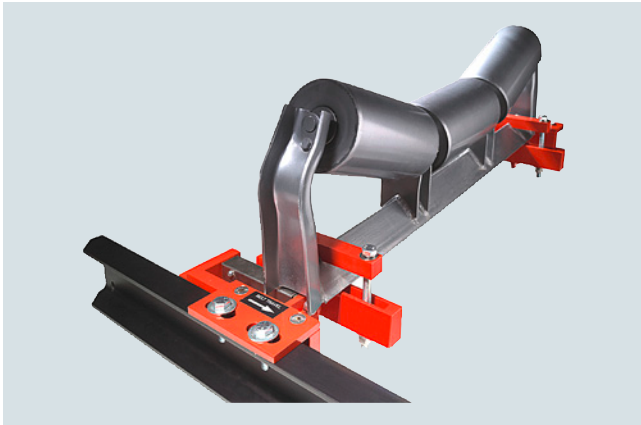


Belt Weighing

Belt scales

Milltronics MCS

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.

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, SIWAREX WT241, WP241, or 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.

Benefits

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

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 outline dimension section
Belt speed	Up to 4 m/s (800 fpm) ²⁾
Capacity	Up to 2 400 t/h (2 640 STPH) at maximum belt speed ²⁾
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 Strain gauge protection: polybutadiene
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 • EAC Ex • IEC Ex, Ex tD A21 IP65 T90 °C • CE, RCM, EAC, KCC, 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 (http://www.automation.siemens.com/aspa_app) for consideration of higher values.

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

Belt Weighing

Belt scales

Milltronics MCS

Selection and ordering data

Milltronics MCS Belt scale

Accuracy is $\pm 0.5 \dots 1$ % of totalization over 25 ... 100 % operating range with capacity up to 2 400 t/h (2 640 STPH).

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

Scale construction

Standard duty, CE, RCM, EAC, KCC

Hazardous Duty
CSA/FM Class II, Div. 1, Groups E, F, G and Class III,
ATEX II 2D, IECEx, EAC Ex, CE, RCM, EAC, KCC

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 specified¹⁾

Fabrication

C5-M rated polyester painted mild steel

C5-M rated 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.

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

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

Operating instructions

All literature is available to download for free, in a range of languages, at:

<http://www.siemens.com/weighing/documentation>

Article No.

7MH7125-

0

1

2

A A

A B

A C

A D

A E

B B

1

2

Order Code

Y15

Y31

C11

Article No.

Spare parts

Stainless steel load cell

[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)

Spare load cell hardware kit

A5E01673047

A5E01135823

A5E01135824

A5E01135825

A5E01135826

A5E44809390

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 4/53.

7MH7723-1HA

7MH7723-1FR

7MH7723-1FS

7MH7726-1AD

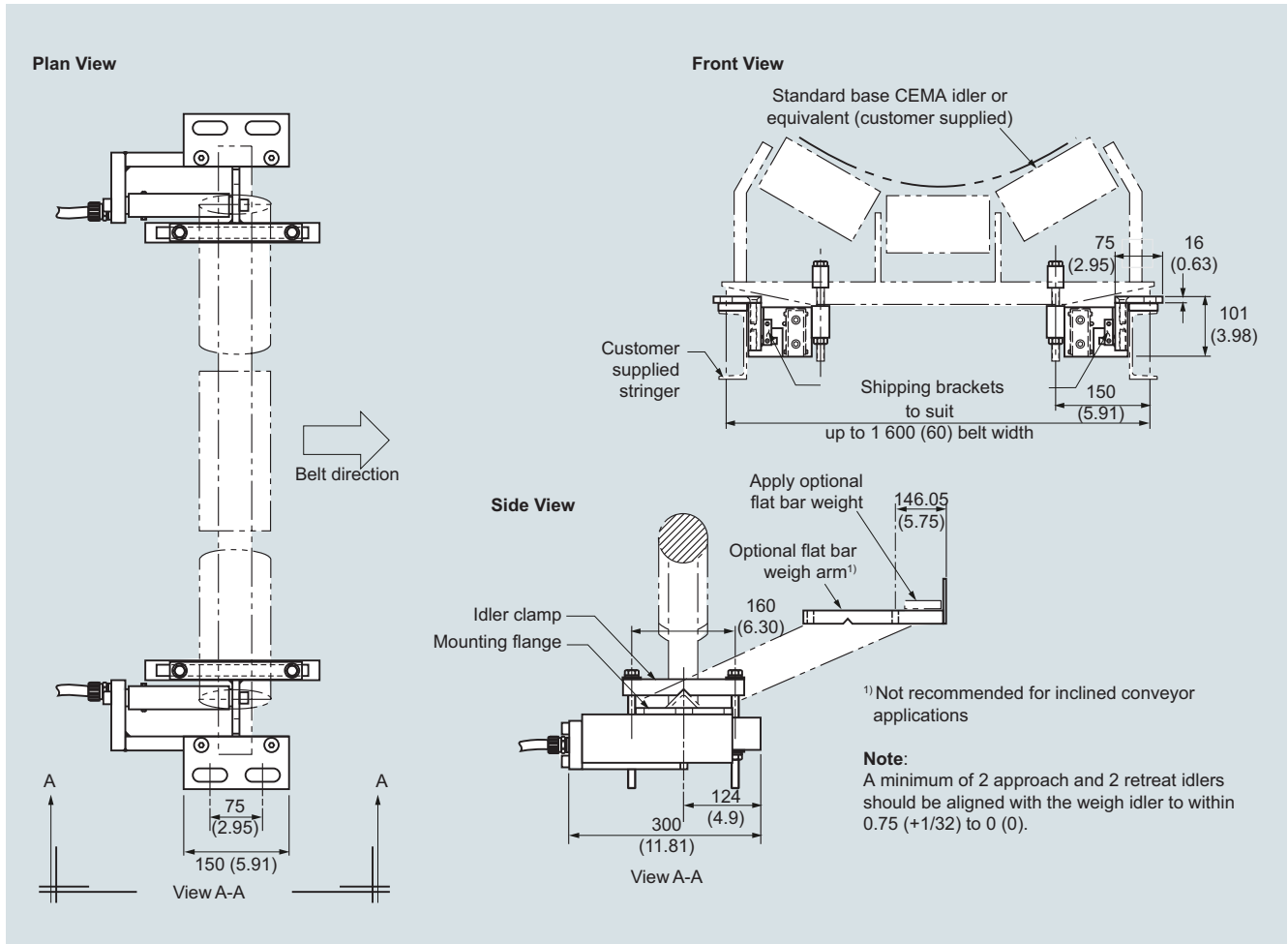
7MH7724-1AA

7MH7724-1AB

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

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

Dimensional drawings



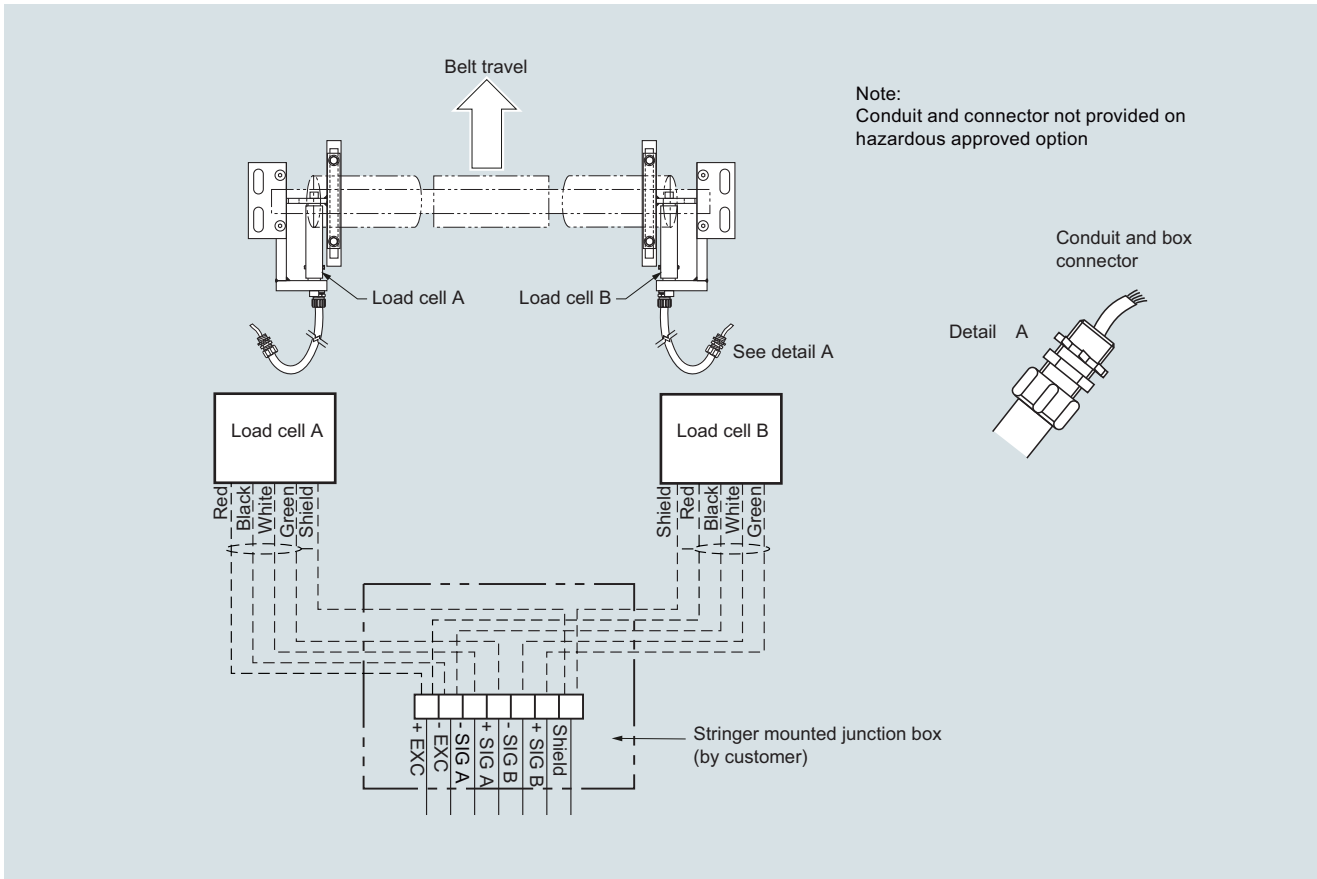
MCS, dimensions in mm (inch)

Belt Weighing

Belt scales

Milltronics MCS

Circuit diagrams



MCS connections

4