

Belt Weighing Speed Sensors

Milltronics RBSS

Overview



Milltronics RBSS is a high resolution, wheel-driven return belt speed sensor.

Benefits

- Rugged design
- IP65 rated
- Easy, low cost installation
- Accurate belt speed detection

Application

Milltronics RBSS monitors conveyor belt speed, with the output signal transmitted by cable connection to the integrator (Milltronics BW100, BW500, or SIWAREX FTC).

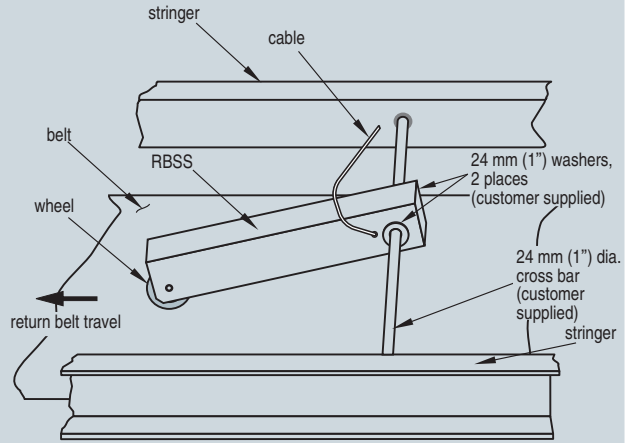
Easily installed close to the belt scale assembly, the RBSS provides a signal generated as the wheel on the sensor rotates on the return belt. To secure this cost-effective unit in place, position a cross bar between stringers - either just before or after a return belt idler, or use the optional mounting bracket. The weight of the RBSS ensures positive rotation of the wheel in the middle of the return belt, and pulses from the magnetic sensor are generated by the rotation of the 60 toothed speed sprocket driven by the wheel.

The RBSS output can be applied to any Milltronics belt scale integrator.

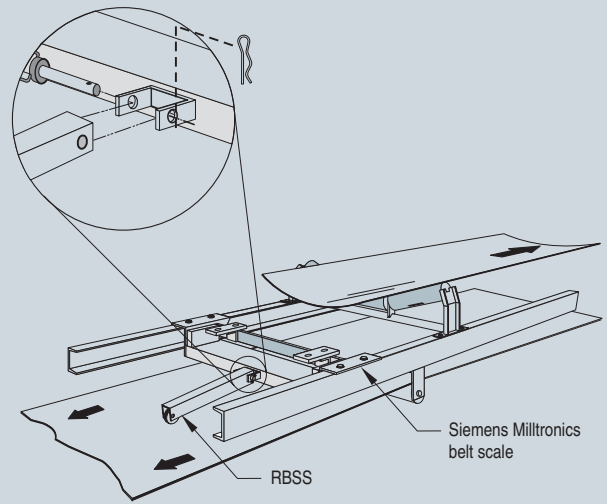
Design

Installation

RBSS Standard Mounting



RBSS with Optional Mounting Bracket



RBSS installation

Technical specifications		Selection and Ordering data	Order No.
Mode of operation		Milltronics RBSS Speed Sensor A high resolution wheel-driven return belt speed sensor	C) 7MH7134-
Measuring principle	Proximity sensor provides pulse to integrator		
Typical application	Aggregate belt conveyors	Model 60 pulses per revolution	2
Input	Wheel rotation 2 ... 450 rpm, bi-directional	Fabrication Standard, polyester painted mild steel	A
Output	<ul style="list-style-type: none"> 60 pulses per revolution, 2 ... 450 Hz, 150.4 pulses/m (4.58 pulses/ft) RBSS: open collector sinking output, max. 17 mA RBSS IS: load current, 0 ... 15 mA 	Mounting options With mounting kit	B
Rated operating conditions		Approvals CE, C-TICK, ATEX II 2 G, EEx ia IIC and CSA/FM Class I, Div. 1, Groups A, B, C and D, Class II Div. 1, Groups E, F and G ¹⁾ CE, C-TICK	2 3
Ambient temperature	<ul style="list-style-type: none"> RBSS: -40 ... +105 °C (-40 ... +220 °F) RBSS IS: -25 ... +100 °C (-14 ... +212 °F) 	Switch isolator Not required 115 V AC ²⁾ 230 V AC ²⁾	0 1 2
Degree of protection	IP65	Instruction manual RBSS Instruction Manual, Multi-language Note: The instruction manual should be ordered as a separate item on the order.	C) 7ML1998-5GX63
Design		This device is shipped with the Siemens Milltronics manual CD containing the complete instruction manual library.	
Trailing arm	Painted mild steel	Spare parts	
Sensor wheel	127 mm (5") diameter, polyurethane tread	Wheel, 127 dia-polyurethane, sealed bearing	C) 7MH7723-1FX
Power supply	<ul style="list-style-type: none"> RBSS: 5 ... 30 V DC, 10 mA RBSS IS: 5 ... 25 V DC from IS Switch Isolator 	Mounting kit, spare	C) 7MH7723-1AU
Interconnection wiring (to integrator)	<ul style="list-style-type: none"> RBSS: 3 m, 3 conductor 22 AWG shielded cable - 300 m (1000 ft) maximum cable run RBSS IS: 2 m, 2 conductor 26 AWG PVC covered cable - 300 m (1000 ft.) maximum cable run to IS switch isolator - 300 m (1000 ft.) maximum cable run from IS switch isolator and integrator 	Proximity Switch	C) 7MH7723-1GA
Approvals		Switch, inductive, NJ0.8-5GM-N (Approvals option 2) ²⁾ P & F Switch Isolator, 115 V AC ²⁾ P & F Switch Isolator, 230 V AC ²⁾	C) 7MH7723-1AS
RBSS	CE, C-TICK ¹⁾	Wheel and shaft, 152 mm dia. ³⁾ 60 tooth gear ³⁾	C) 7MH7723-1EB C) 7MH7723-1EC
RBSS IS (with suitable IS switch isolator or Switch Amplifier) ²⁾	<ul style="list-style-type: none"> ATEX II 2 G EEx ia IIC T6 CSA/FM Class I, Div. 1, Groups A, B, C, and D, Class II, Div. 1, Groups E, F, and G (system approval) CE, C-TICK²⁾ 	Bearing (two required) ³⁾	C) 7MH7723-1EN C) 7MH7723-1EQ C) 7MH7723-1ER
Proximity Switch Approval Ratings (Pepperl+Fuchs #NJ0.8-5GM-N)	<ul style="list-style-type: none"> ATEX II 2 G EEx ia IIC T6 CSA/FM Class I, Div. 1, Groups A, B, C, and D, Class II, Div. 1, Groups E, F, and G (system approval) 		
Optional Switch Isolator (required for RBSS IS) ³⁾			
Pepperl+Fuchs #KFA5-SOT2-Ex2 or #KFA6-SOT2-Ex2	<ul style="list-style-type: none"> ATEX II (1) G [EEx ia] IIC CSA/FM: Class 1, Div. 1, Groups A, B, C, and D. Class II, Div. 1, Groups E, F, and G 		

¹⁾ EMC performance available upon request.

²⁾ Approvals for RBSS IS are based on internally mounted NAMUR slotted proximity switch (Pepperl+Fuchs #NJ0.8-5GM-N) and use of suitable IS Switch Isolator (Amplifier). Please see RBSS instruction manual for more information.

³⁾ Approval ratings for the Proximity Switch and IS Switch Isolator are the property of Pepperl+Fuchs. Copies of these Approval Certificates may be obtained at <http://www.siemens.com/processautomation>.

¹⁾ Approvals option 2 requires use of Switch Isolator to interface with the belt-scale integrator.

²⁾ Required with RBSS IS

³⁾ For use with old style RBSS PBD-51033452

⁴⁾ Subject to export regulations AL: N, ECCN: EAR99

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Dimensional drawings

