

Thermo Scientific Ramsey Micro-Tech 9105

Weighbelt feeder controller

Features

- Weighbelt Feeder controller
- State-of-the-art LCD graphic display with four line display
- Self-diagnostics, alpha numeric alarm messages
- Built-in USB for information upload and download
- Multiple language interface
- Improved communication capabilities
- Automatic zero and span calibration
- Auto zero tracking
- Audit trail
- Alarms and failure detection
- Available in panel-mount and field-mount versions



The Thermo Scientific Ramsey Micro-Tech 9105 weighbelt feeder controller is specifically designed to accommodate a variety of weighing applications including food, chemical, mineral processing and coal mining.

Back by over 40 years of experience designing and manufacturing weighbelt feeders, the Thermo Scientific Ramsey Micro-Tech 9105 weighbelt feeder controller is capable of handling applications from the lightest of flow rates to the most demanding industrial applications to help improve process efficiency by providing vital information for the management and operation of your business.

Used with Thermo Scientific low capacity, mid-range and heavy-duty weighbelt feeder systems, this controller incorporates the weighing integrator and PID/P.E.I.C. control logic into one device. The microprocessor-based 9105 controller integrates the load cell signal from a scale/weighbridge and the input from a speed sensor to provide a true weight and a total weight fed. The electronics also provide output signals and improved communication for greater control and blending purposes.

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Thermo Scientific Ramsey Micro-Tech 9105 Weighbelt Feeder Controller

General Specifications

Material	Field Mount: Reinforced fiberglass housing, NEMA 4X, IP66, dust and watertight Panel Mount: Chromate mild steel chassis, front panel IP65, DIN 43700
Dimensions	Field Mount: 432 mm (17.01 in) x 360 mm (14.18 in) x 167 mm (6.59 in) Panel Mount: 308 mm (12.11 in) x 102 mm (4.00 in) x 202 mm (7.95 in)
Weight	Field Mount: 9 kg (20 lb); Panel Mount: 2.5 kg (5.5 lb)
HMI or Instrument Front	77 mm x 58 mm viewable LCD graphic display for easy reading, continuous backlit for ease of viewing indoors and outdoors; Available menu languages include English, German, Italian and Spanish
Control Modes (standard)	PID: Proportional 5-500 band, Integral 0.01-10.0 min repetition rate, Derivative 0.0-10.0 min repetition rate; Periodic Error Integrating Control (P.E.I.C.): Integral 0.01-10.0 min repetition rate, Delay 1-100 seconds; Two independent control loops: One control feed rate and one for additional device

Environmental Specifications

Storage Temperature	-30°C to +70°C (-22°F to +158°F)
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
Environmental Tolerances	Relative humidity 80% maximum up to +31°C (+88°F) decreasing linearly to 50% at +40°C (+104°F) Altitude up to 2000 m (6,561 ft); Field Mount suitable for outdoor mounting

Electrical Specifications

Nominal Voltage	Field Mount: 100-240 VAC; Panel Mount: 24 VDC +10%, -15% (user supplied)
Nominal Frequency	Field Mount: 50/60 Hz; Panel Mount: 24 VDC only, optional AC module available
Power Consumption	50 VA maximum
Load Cell Excitation Power Supply	5 VDC $\pm$ 10%, 90 mA, minimum load impedance (58 ohms)
Load Cell	Load cell input circuits (2 each); Number: Up to six (6) 350-ohm load cells in parallel; Cable distance: 61 m (200 ft) or less without sense, or 914 m (3000 ft) with sense; Sensitivity: 0.5mV/V to 3.5 mV/V (keyboard selectable); Input Impedance: 1 M-ohm minimum; Maximum Usable Signal: 114% of 3 mV/V; Internal A/D counts: (3 mV/V): 6,440,000, one open collector output for pulse total (default) or alarms
Outputs	One open collector for pulse output (default) or alarms

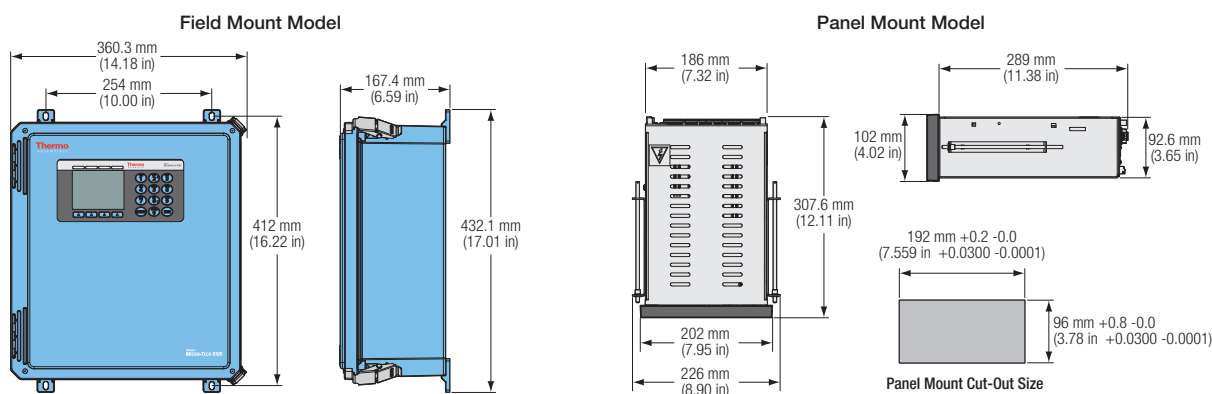
Communications Specifications

Standard Serial Interface	RS-232C provides support for modem; RS-485, 2- and 4-wire multi-drop
Communication Protocols	Modbus RTU, Allen Bradley DF-1, Siemens
Ethernet	Ethernet/IP and Modbus/TCP
Built-in USB Port	Configuration and data storage
Expansion Slots (5)	Optional 4-20 mA Out Board (0 to 20 mA or +4 to 20 mA); available in single channel or dual channel Optional Input/Output Expansion Boards: Relay output board (4 outputs); Opto-22 output board (4 outputs); DC input board (3 inputs); Opto-22 input board (3 inputs) Optional Digital Input/Output Board (8 inputs/8 outputs) Optional Analog Input/Output Board (2 inputs/2 outputs)

Certifications

Approvals	cCSAus, CE
Pending Approvals	SIL-2, Tick Mark, GOST, and additional ATEX classifications

Dimensional drawings for Thermo Scientific Ramsey Micro-Tech 9105 weighbelt feeder controller



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