



Thermo Scientific Ramsey Flex belt conveyor scale integration solution

The Thermo Scientific™ Ramsey™ Flex solution is for belt conveyor scale management, designed from the ground up to meet industrial requirements for bulk material handling. Incorporating three integrator designs and two digitizers, it offers engineers the flexibility to design robust, fit-for-purpose weighing systems optimally matched to business requirements. With a range of features for enhanced operability and maintenance Ramsey Flex makes it easy to access the information required to operate your plant reliably, on site or remotely.

Key features

- Available in panel mount, field mount and blind (no HMI) mount versions
- State-of-the-art, high-brightness, 7" capacitive touch screen HMI
- Intuitive, easy-to-use web-based user interface
- Multi-language support including Brazilian Portuguese and Simplified Chinese
- Robust 316 stainless steel enclosure
- Premium remote digitizers – single or quad versions
- Advanced health diagnostics including individual load cell monitoring
- Broad operating temperature range: -30 to 55 °C (integrator); -40 to +70 °C (digitizer)
- Natively compatible with MODBUS, ETHERNET I/P, PROFINET and optional PROFIBUS
- Capability to control two scales with one integrator via CANbus (or standard non-twisted pair cables, if required)
- Accessible via networked PC, mobile device or tablet.



The Ramsey Flex solution:

Ramsey Flex provides the intelligence to the weighing system allowing accurate production monitoring, inventory tracking and controlled product load-out.



Panel mount with touchscreen HMI

for centralized operation from
a control room



Field mount with touchscreen HMI

for at-line interaction



Blind without HMI

for a cost-efficient set-up for remote
access or harsh environments

Ramsey Flex digitizers take the output signal from weighbridge load cells and speed sensor to the electronic integrator, providing a more robust and reliable signal than junction boxes. Using a quad digitizer enables the individual monitoring and balancing of up to four load cells.

Ramsey Flex integrators convert the input from the digitizer into material flow and total conveyed mass.

They also provide power to the digitizer and include features for calibration, operation, and diagnostics.



Single Digitizer

for one load cell/load cell pair input

Use Ramsey Flex with any of these Thermo Scientific belt scales to optimize your weighing systems:

- Ramsey IDEA
- Ramsey Series 14
- Ramsey Series 17
- Ramsey Series 20

Installation upgrades: Ramsey Flex integrator and digitizer replace the existing Thermo Scientific scale integrator and junction box. Works with most belt scale carriage / weighbridges using analog load cells and a digital speed sensor. Thermo Fisher Scientific recommends CANbus cable between integrator and digitizer for optimum performance in high noise, high interference applications. Consult factory for upgrading non-Thermo Scientific branded scales.



Quad Digitizer

for four load cell/multiple load cell input

Ramsey Flex Integrator

Enclosures	- Stainless Steel 316, 1.6 mm enclosure - Field mount with HMI, blind or panel mount - IP66 rating (Dust and Water Tight) - Integrator weight 5 kg (11 lb)
Temperature	- Operating Temperature Integrator -30 to 55 °C (-22 to 131 °F) - Storage Temperature Integrator -30 °C to 80 °C (-22 to 176 °F)
Electronics	- Arm Cortex A7 792 MHz Microprocessor - Internal 32 GB Storage uSD Card - Load Cell Sensor 24 Bit 100 Hz Sigma Delta - Screen 7 Inch (17.5 cm) WSVGA 1024x600 Colour 900 Nits Capacitive Touch - Screen-less blind version for harsh environments - LED indicators for maintenance (internal) - Real Time Clock Battery CR1220
Power Supply	24 VDC or 110-230 VAC 50/60 Hz, 15 W - Wide voltage tolerance range (+/-10%) - Isolation/Circuit Breaker to be provided by installer
Inputs	- Two analog inputs configurable for current (4-20 mA or 0-20 mA) or voltage (1-5 V or 0-5 V) - Four optically isolated 24 V @12 mA digital inputs
Outputs	- Two analog outputs configurable for current (4-20 or 0-20 mA) or voltage (1-5 V or 0-5 V) - Four optically isolated 24 V @100 mA digital push pull outputs - Two serial ports (RS232/RS485)
Bus Interfaces	- MODBUS RTU, MODBUS TCP, ETHERNET/IP, PROFINET, Optional PROFIBUS - Integrator supports up to two digitizers via CANbus 10-1000 m CANbus cable length or non-STP 4-core shielded cable for low noise/interference applications
Regulatory Marks	cCSAus, CE, ROHS

Ramsey Flex Digitizer

Enclosures	- Stainless Steel 316, 1.6 mm enclosure - Digitizer weight 2 kg (4 lb)
Power Supply	Self-powered over CANbus from Integrator
Connectivity	- Single Digitizer accommodates one load cell or load cell pair - Quad Digitizer accommodates up to four load cells or four load cell pairs - Speed sensor/opto pulse sensor input - Two digitizers can connect to one integrator
Temperature	- Operating Temperature Digitizer -40 to +70 °C (-40 to 158 °F) - Storage Temperature Digitizer -40 °C to 80 °C (-40 to 176 °F)
Regulatory Marks	cCSAus, CE, ROHS

Find out more at thermofisher.com/bulkweighing