



IT5 BELT

W&M Approved Terminal for Belt Scales

The weighing terminal **IT5 BELT** continuously captures the quantity of material conveyed over a beltweigher.

IT5 BELT connects to a beltweigher structure with one load receptor with one or several load cells.

The A/D converter provides fast update rates together with excellent weighing performance and high immunity against electromagnetic interference.

IT5 BELT operates as stand-alone unit or in combination with a PLC or SCADA system. It can be configured for the simple capturing of quantities, but also for complex batching applications with preset target and adjustable preact correction.

Connection of pulse wheel

IT5 BELT provides a configurable interface for a pulse wheel to capture the belt speed. It can use incremental encoders with push-pull or open collector output. Inductive sensors may be used in applications that are not subject to verification requirements. As an alternative, operation without sensors is also possible for installations that are not subject to verification.

Approved applications

IT5 BELT can be used for installations that are subject to legal control in accordance with OIML R50. In approved mode, up to 1,000,000 counter values are saved in the internal storage.

Counters

IT5 BELT has three counters, e.g. for captured quantity, shift total and total quantity. Two counters can be reset by the operator, the total quantity only by service.

PLC interface

IT5 BELT can be connected to a PLC via the optional analog output, quantity pulse output, digital I/Os or fieldbus (Ethernet/IP, Profibus DP, Profinet or Modbus TCP over Ethernet).

Data transmission

Configurable data output for simple interfacing, transmission in continuous mode or on request.

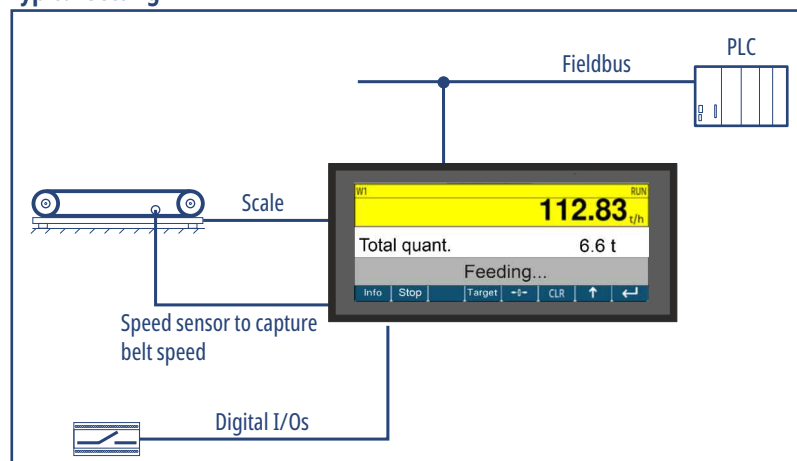
External

Up to three freely configurable inputs and up to four freely configurable outputs.

Count pulse

For the connection of external counters.

Typical Setting



Weighing module for belt scales

IT5 BELT enables interfacing to a beltweigher with one or several analog strain gauge load cells (overall impedance 43–3,300 Ohm), W&M approved resolution of 10,000 d, internal resolution 524,000 d. Update rate 50–800/sec. Accuracy classes 0.5, 1 or 2.

Connection of pulse wheel

IT5 BELT provides a configurable interface for a pulse wheel (frequency range 2–8,000 Hz, min. 30 pulses/m) to measure the belt speed. Incremental encoders with push-pull or open collector output (10 V) are supported. Inductive sensors may be used for non-approved operation. As an alternative, also operation without sensors is possible for applications that are not subject to legal control, e.g. for conveyors running at constant speed.

Display and operation

Bright 4.6" color screen to indicate feed rate or fed quantity and scale status. 2 additional display lines (switchable between feed rate, counters for fed quantity and total quantity, belt speed, belt load; in batching mode also target and remaining quantity) as well as operator entries. One additional line to display the assignment of function keys. Touchscreen with function keys and numeric keys to enter batch target and parameters.

Calibration of beltweigher by entry of load cell and sensor data. Verification or fine adjustment through comparison of conveyed quantity on a reference scale.

Interfaces

Optional interfaces for connection to supervisory control system, protocol printer or remote display via RS232, 20mA (passive), RS485, USB or Ethernet. Format / protocol selectable for the transmission of conveyed quantity and/or feed rate. Alternatively, transmission on request with additional commands to reset counters or to set the scale to zero.

Optional IOX-module with 2 digital inputs and 4 digital outputs or 4 digital inputs and 2 digital outputs, optoisolated, 24 V DC, 500 mA.

Each digital output can be configured for one of the signals:

- Ready to start
- Batching active
- Pre-signal (for batching))
- Done
- Zero setting
- Error (negative logic)
- Quantity pulse
- Operation running
- Warning
- Watchdog (timed)

Each digital input can be configured for one of the signals:

- Release start
- Start/Stop feeding
- Set scale to zero
- Reset batch counter
- Reset shift counter
- Request data transmission / release print.

Optional analog output 0–20 mA, 4–20 mA, 0–10 V or 2–10 V, 32,000 divisions, for analog output of feed rate. Optional fieldbus to connect Ethernet/IP, Profinet, Profibus DP or Modbus TCP.

Data words from PLC / host system

- Feed rate
- Counter for batch total and total quantity
- Belt load and speed
- I/O status
- Process status.

Data words from PLC / host system

- Start, stop, release
- Set zero, reset counters
- Batch target weight and preact.

Electrical connection

110–240 V AC, 50/60 Hz or
12–24 V DC with integrated power supply.

Operating temperature

–10 °C (+14 °F) to +40 °C (+104 °F) at max. 95 % relative humidity, non-condensing.

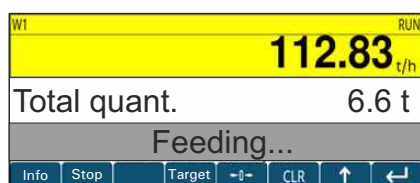
Calibration Technische Angaben:

Installation



- Plastic housing, front protected to IP20 or IP54 with optional sealing frame
- Panel-mount installation
- Dimensions W x H x D:
145 x 72 x 130 mm
- Cutout in panel:
136,2 x 66,2 mm

Batching mode



- Display of feed rate and quantity
- Display of operational and process status

Entries / configuration



- User-friendly input menus
- Comprehensive configuration options, e.g. for feeding parameters

Directives: 2014/30/EU, 2014/32/EU,
2014/35/EU

Norms: EN 45501, OIML R 76-1,
EN 61000-6-2, EN 61000-6-4,
NAMUR NE21, EN 62368-1,
OIML R 50



ETL certified in accordance
with UL 62368-1 and
CSA C22.2 No. 62368-1



EMI compliance with
mit FCC Teil 15



Other certificates
on demand

EtherNet/IP®

Modbus®

