INTECONT® Tersus for Measuring Systems

- **Compact weighing electronics for continuous measuring systems**

- **High resolution colour LCD-Display**

- **User language selectable and loadable**

- **Optimal communication structures for fieldbuses and Ethernet-Networks**

- **EasyServe PC program for convenient commissioning and service**

- **High operating convenience, automatic calibration programs**

- **Optional legal-for-trade variant**

Application

The INTECONT Tersus weighing electronics is specially designed for weighing in continuous production processes. It is the right solution whenever material flows have to be measured and acquired with high accuracy with the use of

- Belt weighers (MULTIBELT®)

- Solids flow meters (MULTISTREAM®) [in 2012]

- Coriolis mass flow meters (MULTICOR®) [in 2012]

This also covers special applications, e.g. legal-for-trade weighing or use in the hazardous area [in 2012].

The INTECONT Tersus weighing electronics is primarily designed for applications with a need for convenient and elaborate display, control and monitoring, in addition to basic measuring functions. The weighing electronics ensures repeatability and transparency of the production process.

Equipment

The electronics is supplied as front-of-panel mounting unit or with an optional wall-mounting housing for installation at site. The system is operated via an ergonomically styled keyboard organised into operating and service functions.
The colour LCD-display shows clearly measuring values and status information. Equipped with appropriate communication module, INTECONT Tersus optimally fits into any automated environment. The Ethernet network connection is included in the basic equipment.

Operating principle

Although the INTECONT Tersus functions vary with every scale type, the basic equipment is always the same:

- System accuracy for weighing tasks better than 0.05 %

- Manual and/or automatic zero setting

- Full feed/dribble feed control for accurate batching

- High electromagnetic compatibility

- Galvanically isolated outputs

- Totalizing counter pulses

- Fail-safe data memory

- Integrated diagnostics and self-testing functions

- Preset with default values for easy and quick commissioning

- User language in German, English, Italian, Spanish and French. More languages loadable including Chinese or Russian (Cyrillic)

- Automatic calibration programs, theoretical span calibration without auxiliaries

- Configurable and selectable display modes

- Simulation mode for testing and learning

- Status, event, calibration and quantity reports

Weighing functions

As a function of mechanical system used, the actual feed rate is acquired using:

- Belt load and belt speed (belt weighers)

- Reactive force (solids flow meters)

- Direct mass flow measurement on the Coriolis principle (mass flow meters)

In addition to the comprehensive basic equipment, the following weighing functions are available:

- Belt weighers

  - Accurate belt speed measurement

  - Belt influence compensation (BIC)

  - Belt run monitoring

  - Shifting of weighing to point of discharge

  - Legal-for-trade variant (upon request)

- Solids Flow Meters

  - Adaption to varying measuring chute characteristics

- Coriolis Mass Flow Meters

  - Accurate speed and torque acquisition

Dimensions (mm)

INTECONT Tersus
for Front-of-Panel Mounting
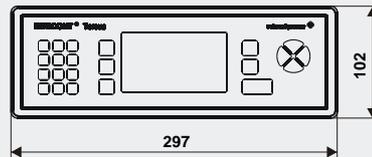
Panel cut-out
282 + 0,5 x 88 + 0,5
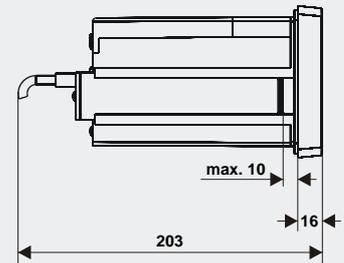
Wall-mounting Housing

Selected in accordance with application
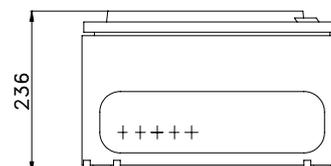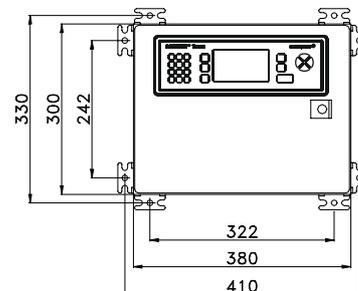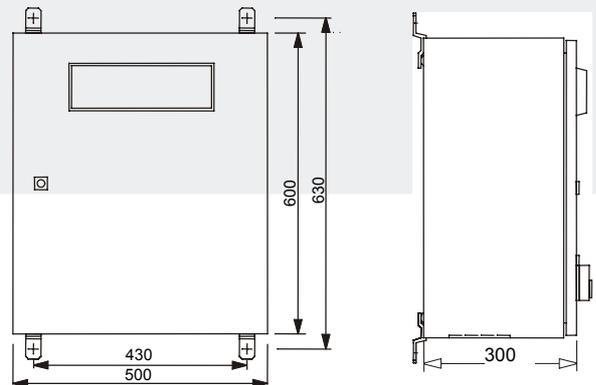
Technical Data

Display	Graphical LCD display, adjustable brightness
Keyboard	22 keys
Power supply	24 VDC +50 % / -25 %, max. 20 VA
Temperatures	Operating temperature: -40 °C … +60 °C Storage temperature: -40 °C … +80 °C Legal-for-trade operating temperature: -10 °C … +40 °C
Load cell input	Power supply: 6 VAC Load cell impedance: R min 80 Ω Cable length: max. 1000 m
Housing	Panel mount, optional clamps for IP65
Binary inputs	5 x Optocoupler 18 … 36 VDC, typ. 5 mA 1 x NAMUR and 1 x NAMUR/Power 0,04 … 3000 Hz
Binary outputs	8 x Relays, max. 230 V, 8 A ohm. / 1 A inductive load
Pulse output	1 x Optocoupler for the totalizing counter 24 V, 0,1 A, max. 10 Hz
Analog outputs	2 x 0(4) … 20 mA, load max. 500 Ω
Analog input	0(4) … 20 mA, input impedance 100 Ω, or 0 … 10 V
Serial Connections	Interface 1: EasyServe Interface 2: Printer Interface 3: Large display
Power supply VNT0650 Internal (optional)	85 … 264 VAC / 24 VDC, 1,1 A
Fieldbus (optional)	Selectable: Modbus, PROFIBUS DP, DeviceNet, Ethernet/IP
Analog board (optional) VEA 20451	2 Analog outputs 0(4 … 20 mA, load max. 500 Ω, potential free, common reference 2 Analog inputs 0(4) … 20 mA, input impedance 100 Ω, potential free, common reference

Wall housing	Wall housing IP65, 380 mm x 300 mm x 236 mm Netzteil 85 … 264 VAC / 24 VDC, 2 A
Power supply	85 … 264 VAC / 24 VDC, 2 A, Panel mount unit
Power supply	85 … 264 VAC / 24 VDC, 1,25 A, Tabletop device
Event printer	Printer with serial interface RS232 and system cable
Large displays	Selectable: VLD 20100 (LED, 100 mm); VLZ 20045 (LCD, 45 mm); VLZ 20100 (LCD, 100 mm)

Equipment supplied

Designation	Type	Material number
Front-of-panel unit with software VBW 20650 for beltweigher		
Front-of-panel unit	VEG 20650	V082002.B01
Front-of-panel unit with option Modbus		V082002.B02
Front-of-panel unit with option PROFIBUS		V082002.B03
Front-of-panel unit with option DeviceNet		V082002.B04
Front-of-panel unit with option Ethernet/IP		V082002.B05
Front-of-panel unit with software VBW 20660 for legal-for-trade beltweigher	VEG 20650	
Front-of-panel unit		V082002.B31
Front-of-panel unit with option Modbus		V082002.B32
Front-of-panel unit with option PROFIBUS		V082002.B33
Front-of-panel unit with option DeviceNet		V082002.B34
Front-of-panel unit with option Ethernet/IP		V082002.B35
Communication modules		
Modbus	VSS 28020	V081902.B01
PROFIBUS	VPB 28020	V081901.B01
DeviceNet	VCB 28020	V081903.B01
Ethernet/IP (software activation key)	VET 20700	V040035.B01
Options		
Power supply for assembly inside the device	VNT0650	V082050.B01
Analog board with 2 analog inputs and 2 analog outputs	VEA 20451	V054098.B01
Protection class IP65 to front panel (set of clamps)		V082039.B01
Software		
EasyServe	VPC 20150	E144541.01
Large displays		
Large display 5-digit, LED, 100 mm digit height	VLD 20100	V090252.B01
Large display 6-digit, LCD, 45 mm digit height	VLZ 20045	V067304.B01
Large display 5-digit, LCD, 100 mm digit height	VLZ 20100	V066611.B01

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