

## INTECONT Tersus

### Mass flow rate measurement

- Maximum reliability
- Legal-for-trade ability accuracy
- Automated commissioning and adjustment
- Cost-effective compact system



### Application

The control electronics INTECONT Tersus are specifically used for technical weighing tasks in continuous process sequences. It is conceived for recording highly accurate bulk solids flows.

Application

- MULTIBELT belt weighers (also suitable for legal-for-trade)
- MULTISTREAM solids flow equipment
- MULTICOR Coriolis mass flow meters

Custom models are for applications in explosion hazard areas. The control electronics is primarily for cases where the operator needs convenient and comprehensive display, control and monitoring functions in the electronics themselves - in addition to the basic technical measuring functions.

Proven industrial quality guarantees a long lifetime and high levels of accuracy.

### Equipment

The electronics are supplied as a front-of-panel unit or with a wall-mounted housing for installation on site. The controls are operated using ergonomic menus - divided into operation and service functions. Measured values and additional information are available from the colored display.

Fitted with the corresponding communication module, the INTECONT Tersus connects optimally via fieldbuses to automation structures. The Ethernet network connection is included in the standard features.

## Function

The functions of the INTECONT Tersus differ depending on the scale type. However, the standard features are always the same:

- Device accuracy for weighing tasks better than 0.05 %
- Manual and/or automatic zeroing
- Rough/fine controls for precise backlash
- High electromagnetic compatibility
- Galvanically separated exits
- Feed quantity impulses
- Power-failure-proof data storage
- Integrated diagnostic and self-test functions
- Dialog language in German, English, Italian, Spanish and French or other loadable languages, including Chinese or Russian (Cyrillic)
- Factory settings for easy, quick connection
- Automatic adjustment programs, self-starting taring
- Maintenance interval input with signaling
- Status, event, adjustment and quantity protocols
- Simulation operation for test and learning purposes possible

## Scale-specific functions

The actual feedrate is calculated corresponding to the mechanics used:

- Belt load and belt speed for belt weighers
- Reaction force for solids flow meters
- Direct mass current measurement using coriolis force for mass flow meters

Alongside the extensive standard features, the following scale-specific characteristic features are realized:

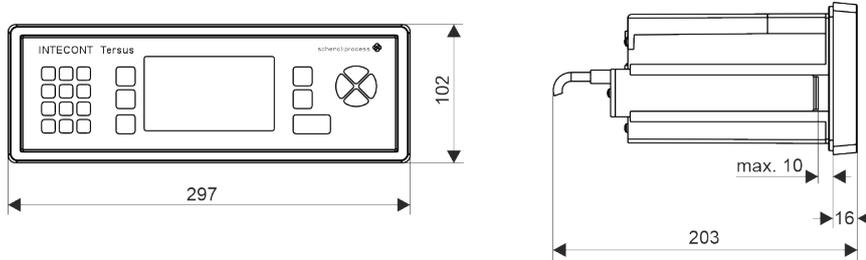
- Belt weigher
  - Precise belt speed measurement
  - Belt influence compensation (BIC)
  - Monitoring of the belt creep and belt loop creep
  - Movement of the weighing at the discharge point
  - Legal-for-trade ability (please enquire separately)
- MULTISTREAM Solids flow feeder
  - Adjustment to the measuring chute characteristic curve
- Coriolis mass flow meters
  - Precise rotational speed and torque measurement

## Technical Data

Display	TFT graphic display with adjustable brightness	
Keyboard	22 buttons	
Supply voltage	24 VDC +50 % / -25 %, max. 20 VA	
Temperature range	Operating temperature:	
	Standard device:	-25 °C ... +60 °C
	Suitable for legal-for-trade and ATEX device:	-20 °C ... +40 °C
	Storage temperature (all units):	-40 °C ... +80 °C
Scale connection	Power supply:	12 V alternating voltage
	Load cell impedance:	R <sub>min.</sub> 80 Ω
	Cable length:	max. 1000 m
Housing	Operating panel rack model IP54, optional bracket for IP65	
	Protect keyboard and display against longer, direct sunlight.	
Binary inputs	5 x optocouplers 18 ... 36 VDC, typ. 5 mA	
	1 x NAMUR and 1 x NAMUR/voltage 0.04 ... 3000 Hz	
Binary outputs	8 x relays, max. 230 V, 8 A ohm / 1 A inductive	
Pulse output	1 x optocoupler for totalizing counter 24 V, 0.1 A, max. 10 Hz	
Analog outputs	2 x 0(4) ... 20 mA, load max. 500 Ω, galvanically isolated	
Analog input	Current 0(4) ... 20 mA, input impedance 100 Ω, galvanically separated, or voltage 0 ... 10 V	
Serial interfaces	Interface 1: EasyServe / Interface 2: Printer / Interface 3: Large display	
VNT0650 power supply	90... 264 VAC / 24 VDC	
Internal (optional)		
Fieldbus (optional)	Can be selected from: Modbus-RTU, PROFIBUS DP, DeviceNet, Modbus-TCP, EtherNet/IP, PROFINET IO	
Analog signal card	2 Analog outputs 0(4) ... 20 mA, load max. 500 Ω, galvanically isolated, common potential	
(optional) VEA 20451	2 analog inputs 0(4) ... 20 mA, input impedance 100 Ω, galvanically isolated, common potential	
ATEX	Optional approval for use in explosive atmospheres (zone 22) at the frontal side	

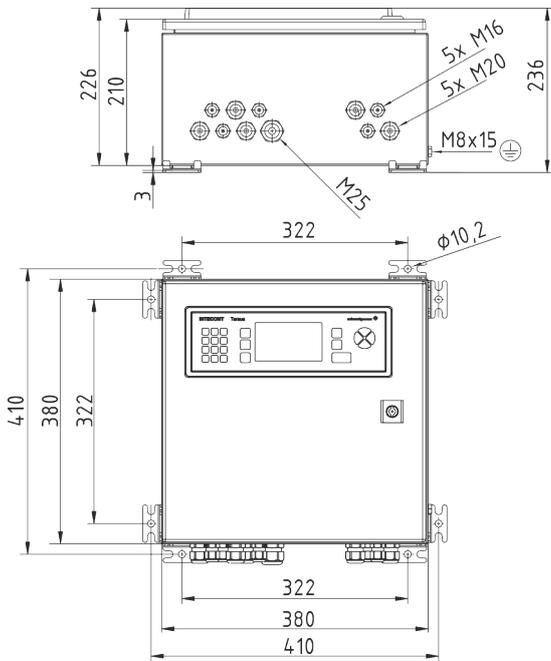
## Dimensions

### Front-of-panel unit

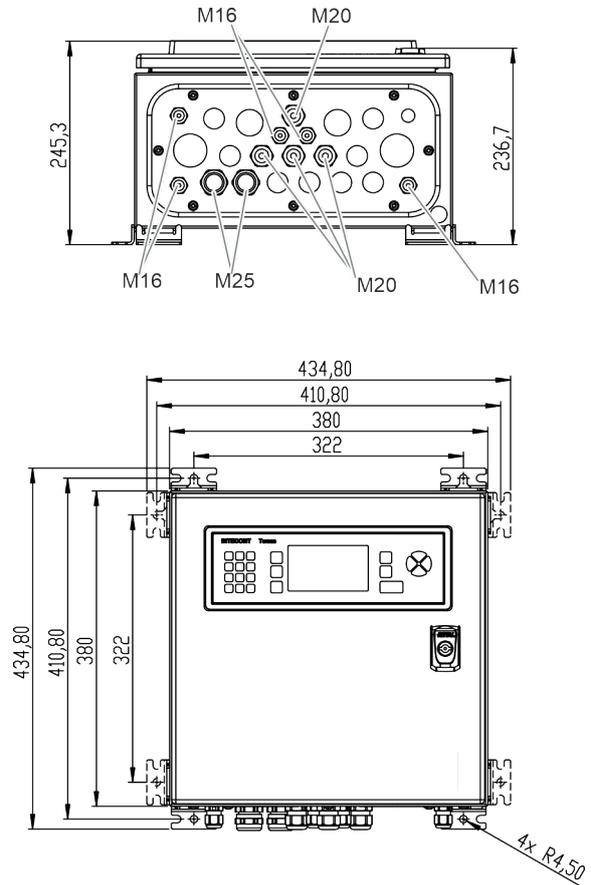


Panel cutout:  $282^{+0.5} \times 88^{+0.5}$  [mm]

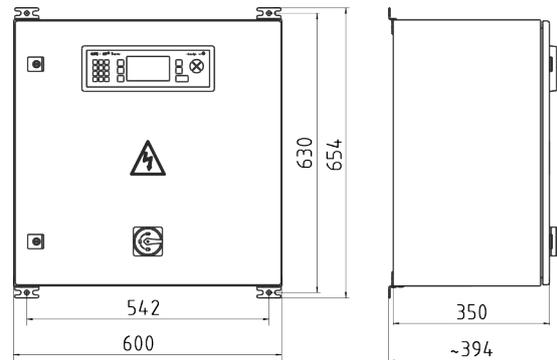
### Stainless steel housing (Ex-zone 22)



### Wall-mounted housing standard



## Wall-mounted housing for expansions



## Type code

ITE:	aa.	bb.	cc.	dd.	ee.	ff
Product name	Software	Housing	Fieldbus	Input/output extension	Power supply	Proximity sensors supply
INTECONT Tersus	BW: Belt weigher BWLFT: Legal-for-trade belt weigher MC: Coriolis mass flow meter IF: MULTISTREAM solids flow meter					
		EG: Panel mount unit EG3D: Panel mount unit for frontal installation in Ex zone 22				
			O: Standard Modbus TCP SS: Modbus-RTU PB: PROFIBUS DP PN: PROFINET IO CB: DeviceNet EI: EtherNet/IP			
				O: No extension EA: Extension VEA 20451		
					O: No internal power supply NT: Internal power supply VNT0650	
						No specification: Standard [3G] [3D] Ex-i: Ex-i-supply for sensors in Ex zone 2 or 22
<b>Example:</b> ITE:BW.EG.PB.0.0 =	INTECONT Tersus for control of a belt weigher in a standard installation housing with a PROFIBUS fieldbus interface					

## Basic Devices

Type code	Material number
ITE:BW.EG.0.0.0	V082002.B01
ITE:BWLFT.EG.0.0.0	V082007.B01
ITE:MC.EG.0.0.0	V082004.B01
ITE:IF.EG.0.0.0	V082005.B01

## Extensions, accessories

Wall-Mounted Housing	Wall-mounted housing IP65 incl. power supply unit 90 ... 264 VAC / 24 VDC Also available in stainless steel design
Power supply, external, desk-top model	90 ... 264 VAC / 24 VDC
Event printer	Printer with serial RS232 interface and system cable
Large displays	Selectable from: VLD 20100 (LED, 100 mm); VLZ 20045 (LCD, 45 mm); VLZ 20100 (LCD, 100 mm)
Control cabinets and device frames	Control cabinets and device frames for multiple INTECONT Tersus with or without in-feed

## Accessories

Designation	Type	Material Number
<b>Fieldbuscommunication modules</b>		
Modbus-RTU	VSS 28020	V081902.B01
PROFIBUS DP (Slave)	VPB 28020	V081901.B01
DeviceNet	VCB 28020	V081903.B01
EtherNet/IP activation	VET 20700	V064721.B06
PROFINET IO (Slave)	VPN 28020	V097103.B01
<b>Further Options</b>		
Installed power supply	VNT0650	V082050.B01
Analog signal card with 2 analog inputs and 2 analog outputs	VEA 20451	V054098.B01
Operating panel installation kit for protection class IP65 for device front	-	V082039.B01
Service-Software EasyServe	VPC 20150	E144541.01
<b>Large displays</b>		
Large 5-digit display, LED, 100 mm digit height	VLD 20100	V090252.B01
Large 6-digit display, LCD, 45 mm digit height	VLZ 20045	V067304.B01
Large 5-digit display, LCD, 100 mm digit height	VLZ 20100	V066611.B01

