

INTECONT Tersus Mass flow rate feeding

- Maximum reliability
- Legal-for-trade ability accuracy
- Automated commissioning and adjustment
- Affordable 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 and for their precise feeding.

Application

- MULTIBELT belt weighers (also suitable for legal-for-trade)
- Weighfeeder MULTIDOS
- Coriolis mass flow meters and mass flow feeders MULTICOR
- Loss-in-weight feeder
- MULTISTREAM solids flow and feeding devices

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 of weighfeeders
- Loss in weight of the bulk solids in the vessel per unit time for loss-in-weight feeders
- Coriolis force for mass flow feeders
- Deflection force with MULTISTREAM

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

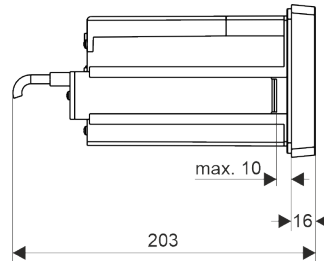
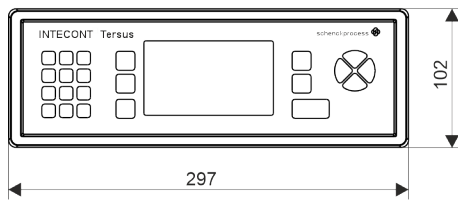
- Weighfeeder
 - Precise belt speed measurement
 - Belt influence compensation (BIC)
 - Monitoring of the belt creep and belt loop creep
 - Movement of the weighing at the discharge point
- Loss-in-weight feeder
 - Adaptive fuzzy interference peak blanker
 - Filling controls time-dependent and/or weight dependent
 - Adaptive adjustment of the control loop to the material characteristics
- Coriolis mass flow feeder
 - Precise rotational speed and torque measurement
 - Manual and automatic zeroing
 - Prefeeder control
- MULTISTREAM Solids flow feeder
 - Adjustment to the measuring chute characteristic curve
 - Controls for various material feeders

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 _{min.} 80 Ω
	Cable length:	max. 1000 m
Housing	Operating panel rack model IP54, optional bracket for IP65	
	Protect the keyboard and display from prolonged, 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)	Low-voltage side: PELV according to EN 60204-1	
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	

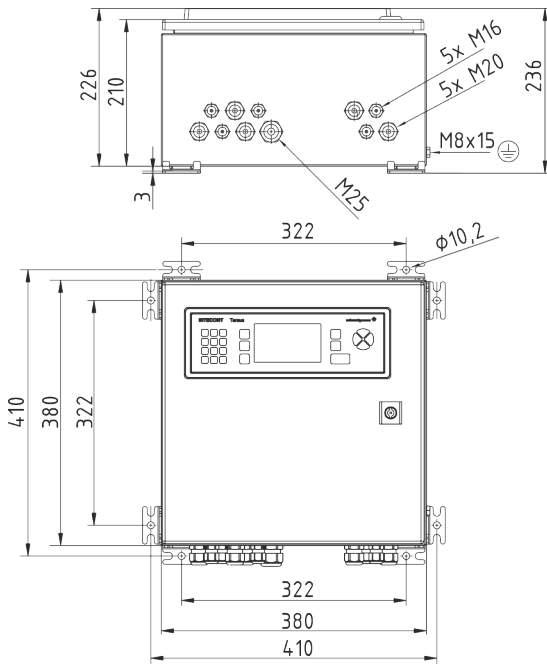
Dimensions

Front-of-panel unit

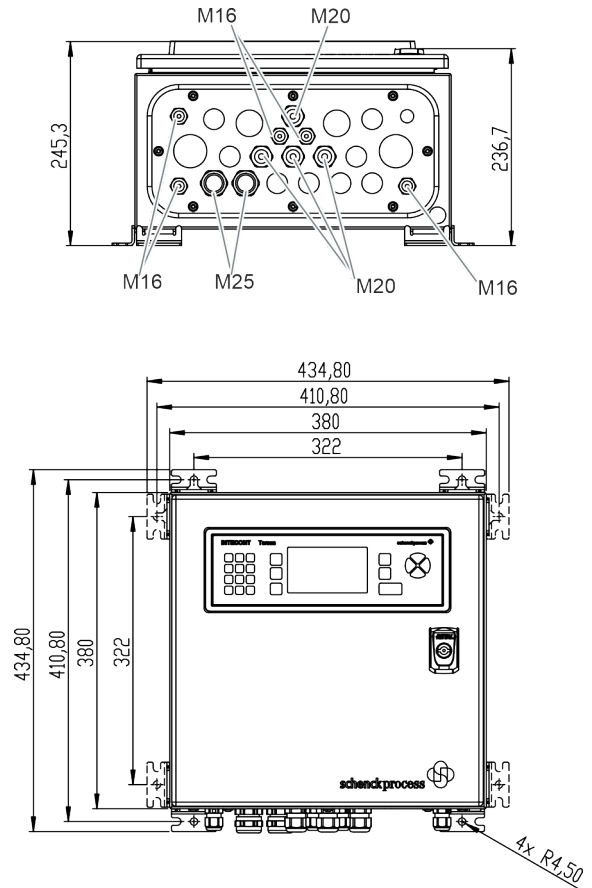


Panel cutout: $282^{+0.5} \times 88^{+0.5}$ [mm]

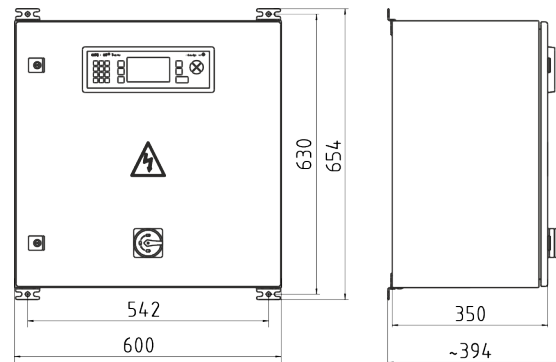
Stainless steel housing (Ex-zone 22)



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	WF: Weighfeeder LW Loss-in-weight feeder MC: MC: Coriolis mass flow feeder IF: MULTISTREAM Solids flow feeder BW: Belt weigher BWLFT: Legal-for-trade belt weigher					
		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			
				0: No extension EA: Extension VEA 20451		
					0: 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
Example: ITE:WF.EG.PB.0.0 =						INTECONT Tersus for control of a weighfeeder in a standard installation housing with a PROFIBUS fieldbus interface

Basic Devices

Type code	Material number
ITE:WF.EG.0.0.0	V082001.B01
ITE:LW.EG.0.0.0	V082003.B01
ITE:MC.EG.0.0.0	V082004.B01
ITE:IF.EG.0.0.0	V082005.B01
ITE:BW.EG.0.0.0	V082002.B01
ITE:BWLFT.EG.0.0.0	V082007.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
Fieldbuscommunication modules		
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
Further Options		
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
Large displays		
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



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