

INTECONT® PLUS for Feeding Systems



- Compact measuring, control, and supervisory electronics for continuous feed applications
- Integrated display and control panel
- Optimal communication structures thanks to modular fieldbus technology
- EasyServe PC program for convenient commissioning and service
- Enhanced operating reliability through diagnostics and self-testing functions
- High operating convenience, automatic calibration programs

Application

Designed for feeding duties in continuous processes, the INTECONT® PLUS measuring, control, and supervisory electronics is specially suited for single feeders and small gangs controlled by a host system. The system is the right choice whenever bulk solids have to be fed with high accuracy with the use of

- belt weighers (MULTIBELT®) or weigh belts with controlled prefeeders
- weighfeeders (MULTIDOS®)
- Coriolis mass flow feeders (MULTICOR®)
- loss-in-weight feeders (discharge and fill weighing with MECHATRON® / AccuRate)

without expensive control of the feeder environment. The system can also be used in special applications, i.e. in the hazardous area.

The measuring, control, and supervisory electronics is specially economical if the feed system is controlled locally in normal mode or from the display and control panel in a central control room.

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. A luminescent, anti-glare two-line display ensures easy reading of results. Equipped with appropriate communication module, INTECONT PLUS optimally fits into any automated environment.

Operating Principle

Although the INTECONT PLUS functions vary with every scale type, the basic equipment is always the same.

- System accuracy for weighing tasks better than 0.05%
- Precise speed acquisition
- Optimal feed control for accurate batching via an adaptive control circuit
- High electromagnetic compatibility
- Galvanically isolated outputs
- Fail-safe data memory (EEPROM)
- Integrated diagnostics and self-testing functions (SPC)
- Preset with default values for easy and quick commissioning
- AUTO calibration (automatic calibration programs), theoretical span calibration without auxiliaries
- Totalising pulse (level and pulse width set by parameter)
- Simulation mode for testing and learning
- Status, event, calibration and quantity reports
- Dialog in German, English, Italian, Spanish and French.

Weighing Functions

The difference of set and actual feed rates, determined by comparison, forms the control output to the feeder control circuits. As a function of feeder type, a corresponding control signal is transferred to the speed-controlled weigh belt, the controllable discharge unit of the loss-in-weight feeder or the controllable feed unit of the Coriolis mass flow feeder.

The control circuit exactly controls the actual feed rate for setpoint.

The actual feed rate is acquired using

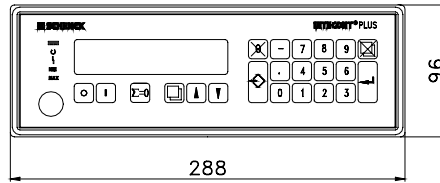
- Measured variables, i.e. belt speed and belt load with weighfeeders
- Loss in weight in the hopper per unit time with loss-in-weight feeders
- Direct mass flow measurement on the Coriolis principle (mass flow feeders).

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

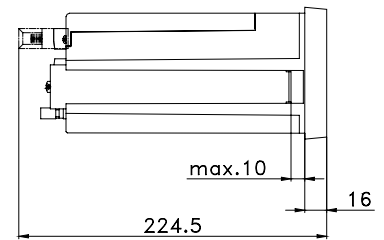
- Weighfeeders
 - Control for point of discharge
 - Automatic belt run monitoring (belt slip, belt skew)
 - Belt influence compensation (BIC)
- Loss-in-weight feeders
 - Adaptive fuzzy disturbance auto elimination
 - Fill control as a function of time and/or weight
 - Adaptive control adjustment to material properties
- Coriolis mass flow feeders
 - Manual and automatic zero setting
 - Prefeeder control

Dimensions (mm)

INTECONT PLUS for Front-of-Panel Mounting

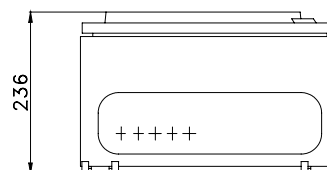
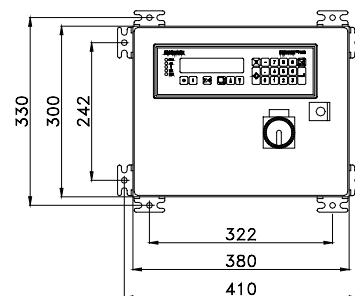
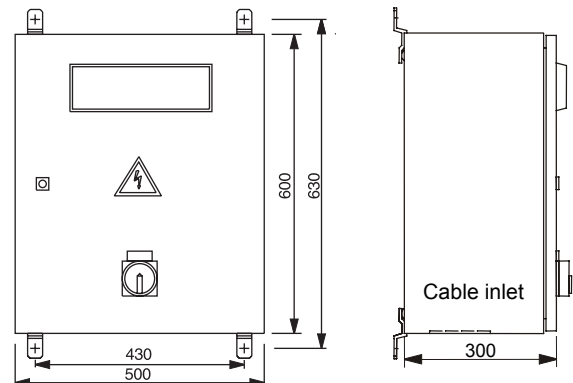


Panel cut-out
282 + 0.5 x 88 + 0.5



Wall-mounting Housing

Selected in accordance with frequency inverter output and design



Technical Data

Base Unit

Display	Clear text fluorescent display, 2 lines with 20 digits each, 6 mm character height
Power supply	24 VDC +30% / -25% Consumption 20 VA
Ambient conditions	Operating temperature -25° to 45°C (tested to -40°C) Humidity Class F (DIN 40040) EMC (OIML, IEC 801, EN 45501) Spark protection (EN 55011, VDE 871-B) conform to CE regulations
Protection	Front-of-panel mounting housing Front protected to IP 65
Measuring inputs	Speed (RPM) input (NAMUR level 0.04 - 3000 Hz) Load cell input (R _{min} 80 Ω) Analog input, galvanically non-isolated for external setpoint 0...20mA) Belt circuit pulse (NAMUR level)
Control inputs	3 potential-free digital inputs (24 V, 5 mA)
Outputs	3 relay outputs (max. 230 V, 8 A ohmic load, 1 A inductive load) 1 analog output (potential-free, 0/4 ... 20 mA, max. 11 V) 1 pulse output for totalising counter (24 V / 100 mA)
Interfaces	RS-232 for Service PC

I / O Expansion (Option)

Control inputs	2 potential-free digital inputs (24 V / 5 mA)
Outputs	5 relay outputs (max. 230 V, 8 A ohmic load, 1 A inductive load) 1 analog output (potential-free, 0/4 ... 20 mA, max. 11 V)
Interfaces	RS-232 for printer

Communication Modules (Option)

Model	VSS 021 V	Modbus, 3964 R (S5)
	VPB 020 V	Profibus DP
	VCB 020 V	Device Net
	VET 020 V	Ethernet MODBUS/TCP
	VET 022 V	Ethernet/IP

Additional Equipment

Control cubicles and racks	Control cubicles and racks for accommodation of several INTECONT PLUS with or without power supply 600 mm x 600 mm x 2000 mm 800 mm x 400 mm x 2000 mm
Wall-mounting housing with drive unit and power supply for accommodation of INTECONT PLUS	Wall-mounting housing protected to IP 54 (Nema 4) for drive units and power supply 230V / 400V (see figure)
Power supply, 85 ... 264 V	24 V, 2 A, panel-mounting unit
Power supply, 85 ... 264 V	24 V, 1,25 A, desk-top unit
Local control unit	Local/Automatic modes, Start/Stop, speed setpoint
Analog display	0 - 100%, panel-mounting unit 4 - 20 mA, 96mm x 24 mm
Pulse counter, non-resettable	8-digit 52 mm x 28 mm
Pulse counter, resettable	6-digit 52 mm x 28 mm
Event printer	dot matrix printer with serial interface RS-232 (V 24) and system cable
DC isolator	DC isolation amplifier for analog outputs
Emergency Stop switch	Emergency Stop switch for max. 1.5 kW connected load
Special Scale / Weighing Electronics interconnecting cable	Indicate length in your order

Variants VEG 206XY

X = 0 : No I/O expansion
 = 1 : With I/O expansion

Y = 0 : No communication module
 Y = 1 : Communication module Modbus, 3964 R
 Y = 2 : Communication module Profibus DP
 Y = 3 : Communication module Device Net
 Y = 4 : Communication module Ethernet MODBUS/TCP
 Y = 5 : Communication module Ethernet/IP

Options

Control cubicles or racks with/without power supply for max. 2 INTECONT PLUS

Wall-mounting housing with drive units up to 3 kW and power supply

Power supply: desk-top, panel-mounting units

Local control unit

Analog display

Pulse counter, non-resettable

Pulse counter, resettable

Event printer

DC isolator

Emergency Stop switch
