

## INTECONT® PLUS For Feeding Systems



- Compact measuring, control and supervisory system for continuous feed applications
- Enhanced operating reliability through diagnostics and self-testing functions
- Application specific functionality
- Integrated display and control panel
- High operating convenience, automatic calibration programs
- Serial interfaces; protocols via 3964(R) or MODBUS

### Application

The INTECONT® PLUS measuring, control and supervisory System is especially designed to perform feeding tasks in continuous processes. The system is suited for use with feed systems operating as a single scale or a smaller group of feeders controlled by a host system. Thus providing the correct solution for applications which require material to be fed accurately, with no need for elaborate control of the scale environment, it can be used in conjunction with

- Belt weighers (MULTIBELT) or weigh belts with controlled prefeeder
- Weighfeeders (MULTIDOS)
- Coriolis Mass Flow Meters (MULTICOR)
- Loss-in-weight feeders (discharge and fill weighing with MULTIFEED / AccuRate).

The system is equally suitable for special applications, e.g. hazardous area use.

The INTECONT® PLUS measuring, control and supervisory system is the optimum economic solution whenever a feed system is to be controlled with the use of the integrated display and control panel.

### Equipment

The system is supplied as front-of-panel mounting unit or with a wall-mounting housing for local installation. Operation is via an ergonomically styled keyboard, structured to provide operating and service functions. A luminescent, anti-glare two-line display ensures easy reading of results. For connection to EDP systems, serial interfaces (3964(R) or MODBUS) are available. Commercial printers can be connected via RS232 interface.

### Operating Principle

The INTECONT® PLUS functionality varies depending on the type of scale used. However, all variants have the following common features:

- System accuracy better than 0.05% (DIN 43782)
- Exact speed measurement
- Optimum feed control for accurate batching through adaptive control loop
- High electromagnetic compatibility
- Galvanically isolated outputs
- Fail-safe data memory (EEPROM)
- Integrated diagnostics and self-testing functions (SPC)
- Factory presettings for simple and quick commissioning
- Auto calibration (automatic calibration programs), computational span calibration without auxiliaries
- Flow rate pulse (level and pulse width set by parameter)
- Status, event, calibration and quantity reports
- Simulation mode for testing and training.

## Weighing Functions

The actual feed rate is compared to the setpoint, with the difference being used as a control signal. Depending on the type of scale, this control signal is transferred to the speed-controlled weighfeeder drive, loss-in-weight feeder discharge unit or Coriolis mass flow meter prefeeder.

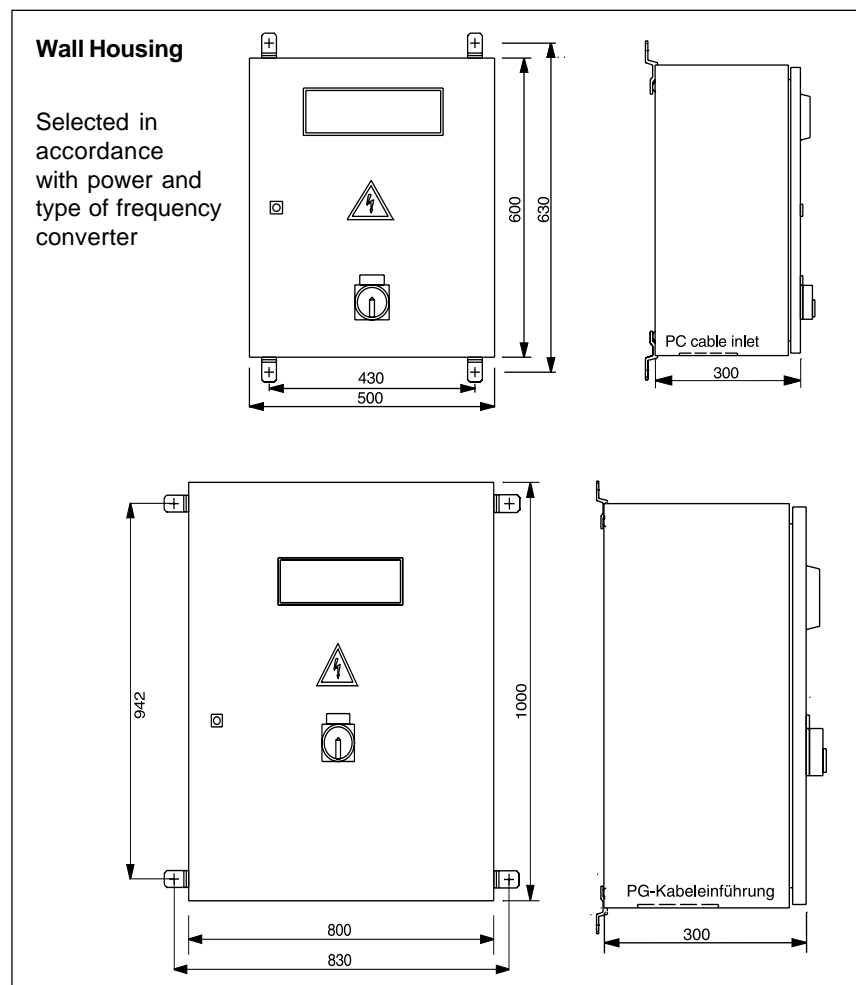
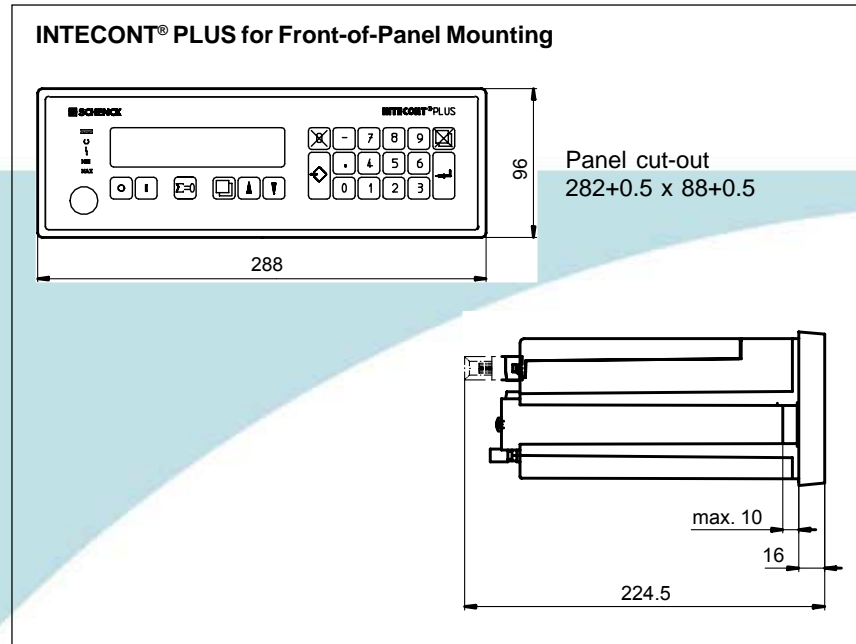
The control loop ensures that the actual feed rate is matched to the selected setpoint. Actual feed rate is acquired with the use of

- Belt speed and belt load (weighfeeders)
- Loss in weight of material in hopper per unit time (loss-in-weight feeders)
- Direct mass flow measurement using the Coriolis force (mass flow meters).

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

- Weighfeeders
  - shift of feeding for point of discharge
  - Automatic belt run monitoring
  - Belt influence compensation (BIC)
- Loss-in-Weight Feeders
  - Adaptive fuzzy disturbance auto elimination system
  - Time- or weight-dependent fill control
  - Adaptive control adjustment to material characteristics
- Coriolis Mass Flow Meters
  - Manual and automatic zero setting
  - Prefeeder control

## Dimensions (mm)



**INTECONT® PLUS, FIP 403 - Technical Data**

<b>Display</b>	Clear text fluorescent display, 2 lines with 20 digits each, 6 mm character height
<b>Power supply</b>	24 VDC +30% / -20% Consumption 20 VA
<b>Ambient conditions</b>	Operating temperature - 40° to + 45°C Humidity Class F (DIN 40040) EMC (OIML, IEC 801, EN 45501) Spark protection (EN 55011, VDE 871-B) conforms to CE regulations
<b>Protection</b>	Front-of-panel mounting housing Front protected to IP 65
<b>Inputs</b>	Speed (RPM) input (NAMUR level 0.04 - 2500 Hz) Load cell input ( $R_{min}$ 80 $\Omega$ ) Analog input (galvanically non-isolated for external setpoint 0...20mA) Belt circuit pulse (NAMUR level) 3 digital inputs (galvanically isolated, safety separated; 24 V, 5 mA release and taring contacts)
<b>Outputs</b>	Pulse output (Totalizing counter 24V/0,1A, max. 10Hz) 2 analog outputs (feed rate/load 0/4...20 mA) 8 digital outputs (Galvanically isolated, safety separated; 230 V, 8 A ohm./ 1 A induct.; limit values, ready, prefeeder, drive, deviation)
<b>Interfaces</b>	Printer RS 232 3964(R) interface module (RS422) MODBUS interface module (RS422 or RS485)

**Options - Technical Data**

<b>Control cubicles and device frames</b>	Control cubicles and device frames for accommodation of maximum 2 INTECONT® PLUS  600 mm x 600 mm x 2000 mm 800 mm x 400 mm x 2000 mm
<b>Wall housing with power unit and power supply for INTECONT PLUS accommodation</b>	Wall housing protected to IP 54 (Nema 4) for power units up to 3 kW with 230 V / 400 V power supply 500 mm x 300 mm x 600 mm 800 mm x 300 mm x 1000 mm <small>All parts finish mounted and wired. Circuit diagrams included in documentation.</small>
<b>Power supply, 120 V</b>	120 V / 24 V, 1 A (for plug socket)
<b>Power supply, 230 V</b>	230 V / 24 V, 1 A (for plug socket)
<b>Local control box with changeover device and system cable</b>	ON/OFF switch (IP65) for feeder drive to support maintenance work. Complete with changeover device (control loop) for connection of control unit and system cable
<b>Analog display</b>	0-100%, front-of-panel mounted 4 - 20 mA, 96 mm x 24 mm
<b>Pulse counter, non-resettable</b>	6-digit, non-resettable 52 mm x 28 mm
<b>Pulse counter, resettable</b>	6-digit, resettable in manual 52 mm x 28 mm
<b>Event printer</b>	9-dot matrix printer with serial interface RS 232 (V 24) and system cable
<b>S5 interface module via 3964(R)</b>	FSP 0010 - program module for Siemens S5 (110U / 115U / 135U) for serial interfacing <small>Data are made available in data module. User prerequisite: CP524 or equivalent</small>
<b>S5 interface module via MODBUS</b>	FSP 0011 - program module for Siemens S5 (115U / 135U) for serial interfacing <small>Data are made available in data module. User prerequisite: CP524 or equivalent</small>
<b>DC isolator</b>	DC isolation amplifier for setpoint and/or actual feed rate (analog input), supply voltage 24VDC or 24VAC
<b>Emergency Stop switch</b>	Emergency stop switch for max. 1.5 KW power consumption
<b>Special interconnecting cable</b>	Length to be specified in your order <small>(as standard, we supply 20 m)</small>

## **INTECONT® PLUS Variants**

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### **INTECONT® PLUS - FIP403**

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With MODBUS or 3964(R) interface module, 24 VDC suitable for weighfeeders, loss-in-weight feeders or Coriolis mass flow meters

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## **Options**

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Control cubicles or device frames with/without supply for max. 2 INTECONT® PLUS

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Wall housing with power unit up to 3 KW and 230 V / 400 V power supply

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Power supply, 120 V (for plug socket)

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Power supply, 230 V (for plug socket)

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Local control box with changeover device and system cable

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Analog display

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Pulse counter, non-resettable

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Pulse counter, resettable

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Event printer

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S5 interface module via 3964(R)

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S5 interface module via MODBUS

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DC isolator

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Emergency Stop switch

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Special scale/electronics interconnecting cable

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The  Group

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