

# Flow Transmitter PD 340 Series

High Precision  
Flow Transmitter  
for Sanitary applications



PROCES-DATA A/S

## Introduction

# Flow Transmitter PD 340 Series

The PD 340 Flow Transmitter is an electromagnetic precision meter for the volumetric measurement of liquids that are electrically conductive. The transmitter can be used in applications where a hygienic design is required. The rugged construction of the transmitter makes it suitable for installations where solid particles are present in the liquid.

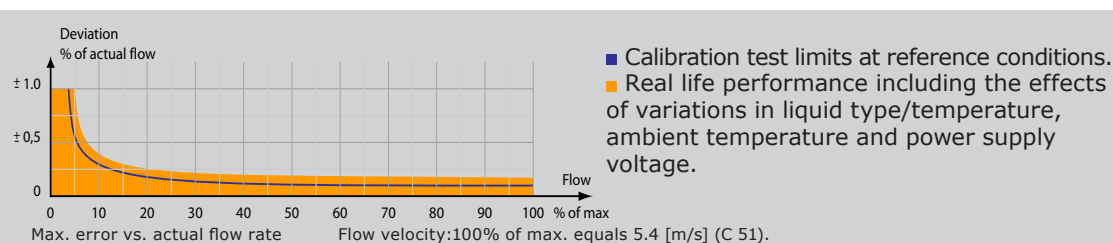
## Advantages

- Suitable for sanitary applications - Designed especially for the food industry.
- No moving parts - No maintenance.
- Robust and compact design - Easy to mount, even in difficult applications.
- Factory configured to suit customer requirements - Makes installation easy and saves time and money.
- Constructed to be independent of variations in flow profile - High accuracy, even if the viscosity or the liquid changes. Change between different media, such as milk, cream, and liquids containing solids, without any need for recalibration.
- Optimised for high accuracy and linearity. Using the linearising function, it is possible to measure within a 1:100 turn down range. Therefore, the meter can normally be chosen to have the same size as the diameter of the pipe work, and the cost of installation and any pressure drop can be minimised.
- Volumetric measurement in m<sup>3</sup>, litres, U.S. gallons etc.

## Functions

- Pulse and 4-20 mA outputs.
- Batch control function.
- Built-in PI flow controller.
- Simple display connection. (PD 210)
- **P-NET** IEC 61158 Fieldbus communication.
- Two built-in counters for totalising the volume flow.
- Inputs for temperature sensor and digital signal.

## Specifications



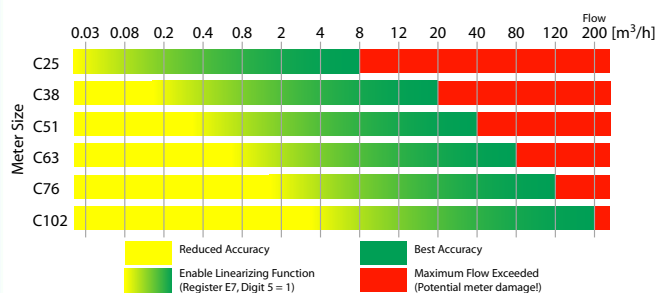
- Flow measurement error: See the graph above
- Current output error: As per the graph, plus  $\pm 0.3\%$  of current output range
- Linearity: See the graph
- Repeatability: Max. 0.5 x error, (see the graph)
- Liquid temperature:  $-30\text{ }^{\circ}\text{C}$  to  $100\text{ }^{\circ}\text{C}$
- Liquid pressure: Max. 10 bar
- Liquid conductivity: Min.  $5\text{ }\mu\text{S/cm}$
- Power supply: 24V AC  $\pm 15\%$  or 24V DC  $\pm 15\%$
- Power consumption: Max. 6 W

## Approvals

- 3-A - Authorization No.: 1382
- MID 2004/22/EC - Evaluation Certificate number TC7204).



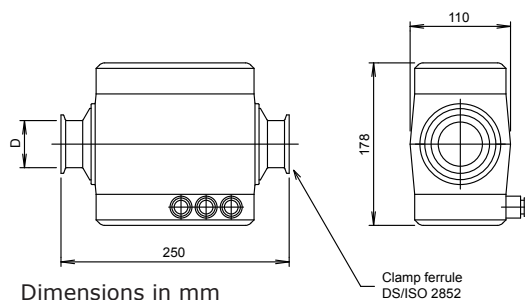
## Selection guide



When selecting the meter size, use the diagram to the left and observe the following guidelines:

- Flow Transmitter with a pipe dimension equal to the rest of the piping system should be selected.
- If optimum measurement accuracy is of primary concern, the smallest possible transmitter should be chosen, while still observing that the maximum flow rate must never be exceeded.

## Mechanical



Meter size	Nom. size D in mm	Max. flow m <sup>3</sup> /h	Weight in kg
C 25	25	8	5
C 38	38	20	5
C 51	51	40	5
C 63	63	80	5
C 76	76	120	5
*C 102	102	200	10.5

(\* Other mechanical dimension)



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# Display Unit PD 210

Display Unit for  
Flow Transmitter PD 340 Series



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## Display Unit PD 210

### Introduction

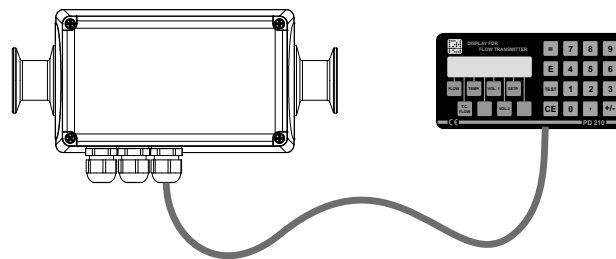
The PD 210 is a local display unit that connects directly to a PD 340 Flow Transmitter. With this device it is possible to display the flow rate, volume counters, temperature, setpoint etc. Furthermore, the PD 210 display may also be used to change setpoint values, pre-set counters and to perform the entire configuration of the Flow Transmitter.

### Functions

- **Instantaneous value, flow:** The unit displays the actual flow rate, e.g. in m<sup>3</sup>/h.
- **Accumulative Counter:** The unit displays the total volume, e.g. in m<sup>3</sup>.
- **Pre-set Counter:** Before commencing a measurement, a SET-point is firstly entered, and the pre-set counter is reset manually. When the required volume has been reached, OUTPUT2 provides a stop signal.
- **Instantaneous value, temperature:** The display unit shows the actual temperature in °C.
- **Configuration and calibration:** The PD 210 display unit may be used to carry out the full configuration of a Flow Transmitter.
- **Fault finding:** The flow transmitter is equipped with a comprehensive test system that is able to reveal faults arising from improper use of the transmitter, or from a malfunction of the transmitter during use.

### Connection

- The Display Unit PD 210 is connected to the Flow Transmitter using a 2-wire cable.
- The cable enables data to be exchanged between the Flow Transmitter and the display unit, and it also provides power for the module.
- The cable length may be up to 100 m.



- The Display Unit PD 210 can be mounted directly on the Terminal Box of the PD 340 and still be operated conveniently.

This mounting style can be ordered as an option when ordering the PD 340 and the PD 210. The PD 340 Flow Transmitter will then be delivered as one complete device, as shown.



### Mechanical

- The PD 210 is intended for fixed installations e.g. on a panel.
- Operational Ambient Temperature: -20°C to + 50°C.
- The unit is built into a case of NORYL PPO and sealed to IP 65.

