Product Data Sheet
2022-2023

Flow Computer

PEK175

General Description

PEK175 is an electronic counter that can be used for measurement, control and automation of liquid products. It is compatible with almost any type of flow meter and its typical applications include tank truck, rail car or barge loading in petrochemical plants, custody transfer applications and truck deliveries.

General Description

The shape and dimensions of PEK175 have been designed:

- To allow the counter to be mounted directly on the PD meter by means of a dedicated support and electrical wiring to pulses emitters
- To allow remote mounting
- To allow easy access for maintenance purposes by making the electronics completely accessible once the cover has been removed
- To have an “all in one “unit without need of an additional box for power supply, relays, barriers etc.

Special features

Compatibility with almost any type of flow meter

PEK175 can be connected to:

- One volumetric PD meter provided with pulses emitters
- Mass flow meter or any meter as long as it provides pulses proportional to the measured quantity.

Simple modular construction

The basic electronics consists of three pc-boards plugged into a specifically designed rack which can be removed in few seconds. Updating and upgrading can be performed by simply replacing or adding pc-boards.

User friendly

Instructions guide the user through all operations with extremely simple functions.

Self-diagnosis

Of all functions, both of the unit and of the externally linked devices, with detailed information.

Self-diagnosis

Suitable for use in industrial environments:

- High protection rating (IP66) against penetration of liquids and/or solids.
- Push buttons commands and outputs are completely solid state
- Optical decoupling of signals
- Heating device with thermostat
- Electronic boards are mounted on internal anti-shock supports.

Safety and security

Parameters with metric relevance are protected by a “hardware key” and by seals. Passwords with different access levels allow only authorized personnel to enter diagnostic functions and working parameters.

Broad communication capability

PEK175 works as an intelligent terminal for supervision and automation systems, to which it can be linked via serial communication line. Further lines are available for devices such as injectors, density meters or dedicated printers.

Functions

Read out

- Information is clearly shown on a screen with graphic back-lighted display.
- Resettable totalizers of delivered observed volume
- Resettable totalizers of delivered standard (compensated) volume
- Preset quantity
- Instantaneous and average flow rate
- Instantaneous and average temperature
- Diagnostic information and I/O status

Quantities are displayed with the measurement unit programmed by the user.
PEK175 Blending is designed for the blending of two different products: for this specific application the PEK175 is used with two different meters and data is simultaneously shown on the display in the corresponding data field.
During programming instructions are displayed to guide the user through the procedure.

Pre-setting (batch control) of the delivered volume

Thanks to a two stage or multistep valve flow rate can be set at fixed values.
Auxiliary outputs can also be provided for pump control.

Flow rate measure

Continuous read out of instantaneous or average value in the selected engineering units.
Programmable alarm for minimum and maximum flow rate.

Temperature volume compensation

- Temperature detection via Pt100 thermo resistance
- Reference temperature can be programmed (typically 15°C or
- 60°F for petroleum products)
- Calculation method: according to ASTM S. 1250, API Standard
- D2540 e IP200 code.
- Product temperature range: –40°C ÷ +200°C
- Density range @ 15°C: 500 ÷ 1100 kg/m3
- Display and setting of:
- Observed quantity
- Compensated base quantity
- Mass

Real time clock

Date, hour, minutes, seconds are automatically updated and can be easily sent to a computer or a printer.

Data storage

Programmed parameters and delivery data are stored into a permanent memory with events and alarms.
The internal battery allows to PEK175 to work in standalone mode in the event of power failure.

Technical specifications

Mechanical characteristics

Housing material: Aluminum casting
Dimensions: 275 x 226 x 258 mm
Weight: 20 Kg
Cable entries: 1” NPT & 3/4” NPT

Environment

- Ambient operating temperature: -25 ~ +55°C
- Storage temperature: -25 ~ +65°C

Housing protection

- Humidity: 5 ~ 95%UR with condensation
- ATEX for Ex environment: II 2 G Ex d IIC T6 Gb
- Mechanical Protection: IP65

Others

- Main Power Supply: 115 ~ 230 VAC (-15/+10%), 50/60 Hz
- Display: LCD backlighted graphic display
- Key-pad: 19 numeric and functional keys. Actuation via solid state sensors

Pars Electronic Kish

Unit, No. 20, Qavam pour Alley, North
Sheikh Bahai St, Tehran, Iran

Tel: +9821-88613511
Fax: +9821-88602547
info@parsek.org
www.parsek.org