

Certified according to DIN EN ISO 9001

Technical Datasheet

Starting from version: V06-12



VTC / VIC local display
with integrated frequency- and analoge output

Description

The VTC / VIC are compact local displays with integrated carrier frequency or inductive pickup and with current and frequency outputs. They can be adjusted to any flow meter, as the k- factor is freely adjustable.

The 20 point linearization provides the possibility to use also strongly nonlinear meters with high accuracy. There are 3 banks for storing up to 3 different linearization curves which can be selected via the keyboard or the control inputs.

The VTC / VIC can be used as a loop powered 4-20mA unit (2 wire operation) or with an additional digital output (3 wire operation) for flow or limit.

The VTC has a built in temperature sensor for measuring the medium temperature.

The VTC / VIC have a graphic display with backlight (only non-Ex versions with PP output in 3 wire operation).

The units have a proprietary KEM interface or USB or HART.


For fast test setups in the lab and easy setup of individual parameters, the PC based control SW EasyControl for WINDOWS ® XP and VISTA is available free of charge.

Features (version dependent)

- Ex-Approval
- 360°C turnable housing
- Temperature measurement
- 3 x 20 points linearisation
- Graphic display
- Fast setup
- Integrated interface
- Programming and visualisation via KEM „Easy Control“ possible
- Normalized frequency output
- Control inputs
- 2 Status-LEDs

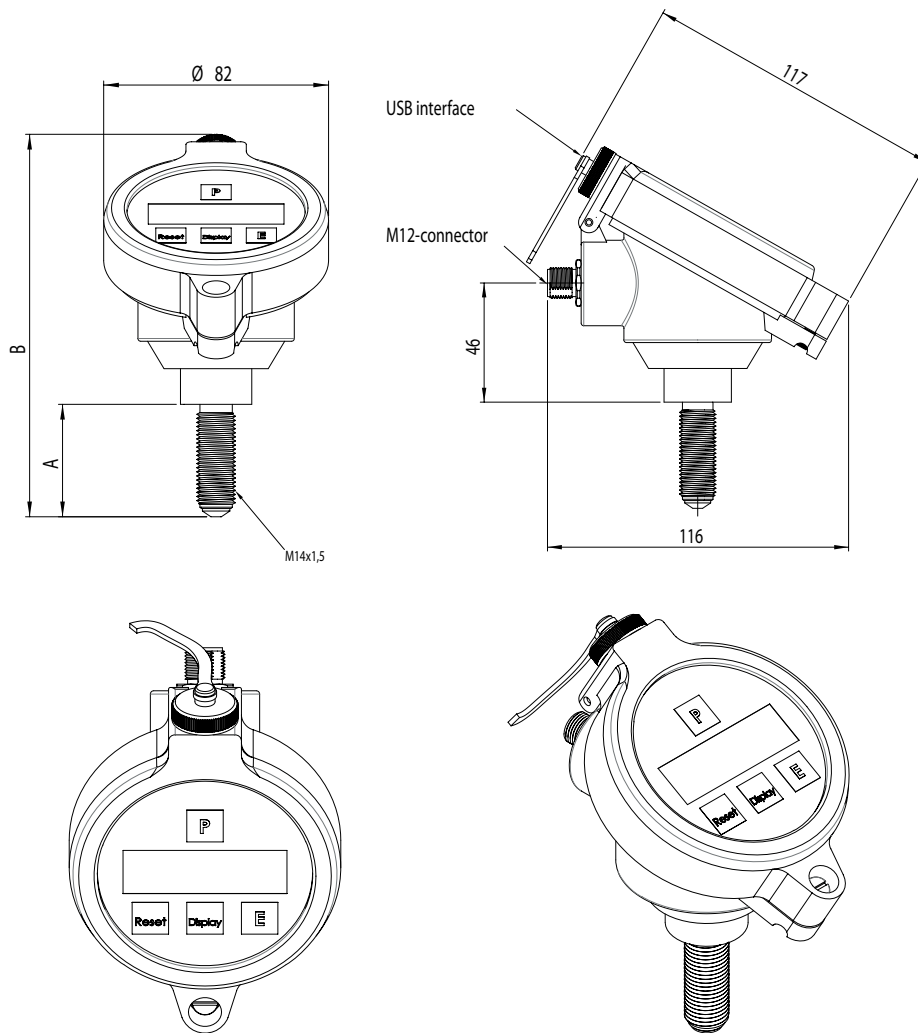
Technical Data

General	
Display	Intelligent LCD grafik display 132*32 dot view 15*50 mm
Backlight	yellow/green (not for NAMUR or EX available)
Operation	4-keys
Frequency range	VTC: 1-3.000 Hz (typical 0,5 to 5.000 Hz) VIC: 7-3.000 Hz (typical 5 to 5.000 Hz)
Media temperature	-20 to +120°C for VTC (distance between flow meter and amplifier > 25 mm) -20 to +150°C for VIC (distance between flow meter and amplifier > 65 mm)
Ambient temperature	-20°C to +50°C
Electrical connection	Version K: screw clamping strips for the cable gland (M20*1.5) Version 8: M12 plug connector (A-coded)
Pin assignment	Version dependent (see wiring diagramm)

EMC	according to EN 61000-6-4 and EN 61000-6-2
Ex-Approval	ATEX  II 2G Ex ia IIC T4 Gb
Analogue output	
Type	4-20 mA, 2-wire (passive)
Supplier	15 to 30 V
Load	< 400 Ohm (at 24 V)
Resolution	12 Bit
Temp.Drift	< 100 ppm/K
Linearity	± 0.05% F.S.
Sensor material	Stainless steel 1.4104 (AISI 430 F)
Digital output	
Quantity	1
Output type	Version N: NAMUR according to DIN19234 Version P: Push/Pull (I _{max} 20 mA U _b max 30 V)
Output mode	a) direct frequency b) normalized frequency (1.2 - 1000 Hz) c) divider with programmable pulse time d) batch e) limit (actual value or temperature)
Temperature sensor (VTC only)	
Measuring range	0°C up to +150°C
Accuracy	± 0.5% of actual flow
Housing	
Sensor housing material	Stainless steel 1.4104 (AISI 430 F)
Housing material	Aluminium
Turnable display	360°
Weight	400 g
Dimensions	see attachment
Protection class	IP 65 (higher on request)
Control Inputs	
Quantity	2 (1 for version with cable gland and Push Pull output)
Level	active high at U _{in} > 3 V related to PIN 3
Internal resistance	3.3k
Programmable function	Totalizer reset, Hold, switch to linearisation tables

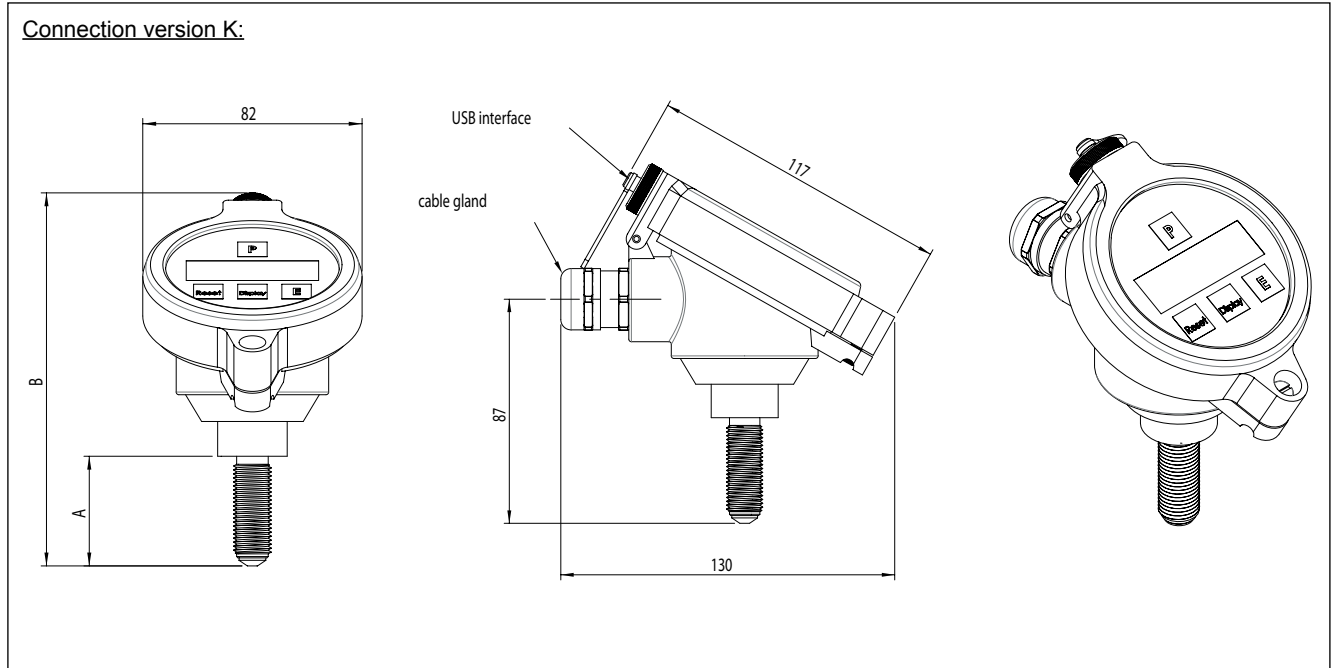
Dimensional Drawing (mm)

Connection version 8:

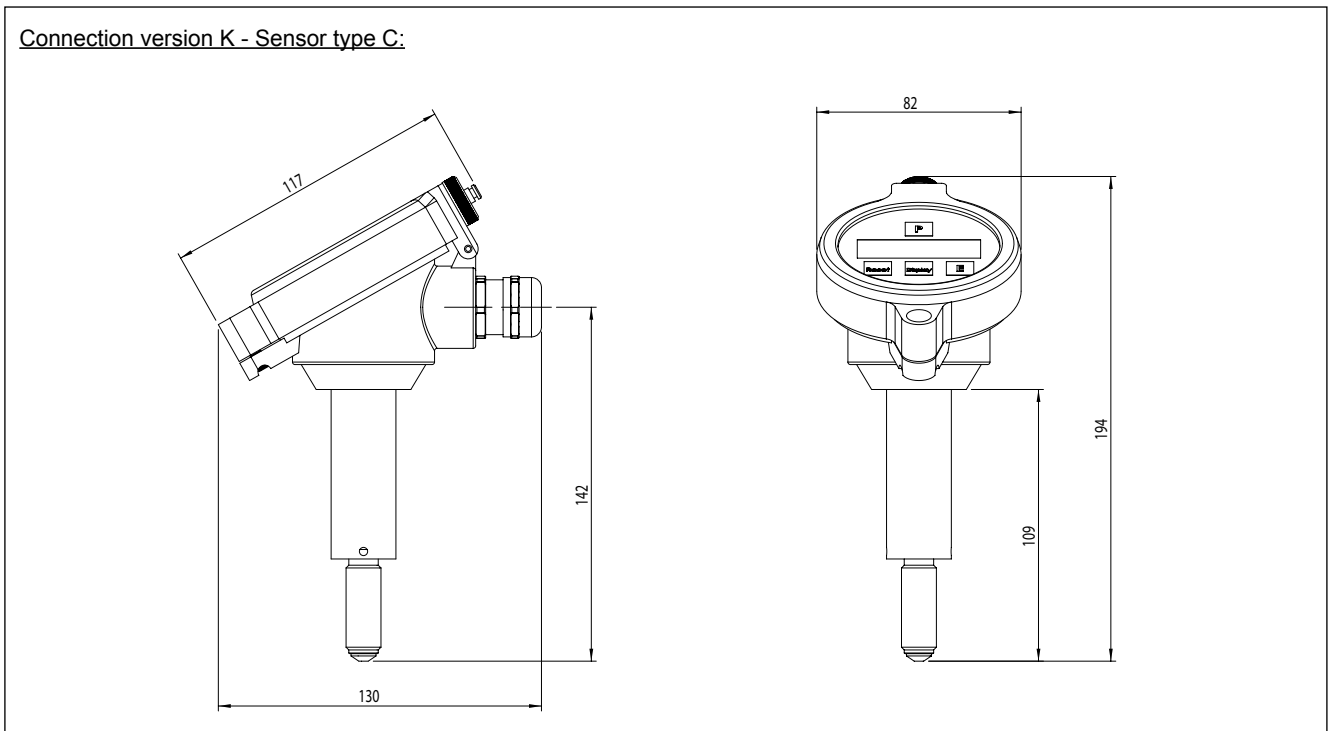


Sensor type	A	B
K or R	42	139
L or S	76	173

Dimensional Drawing (mm)

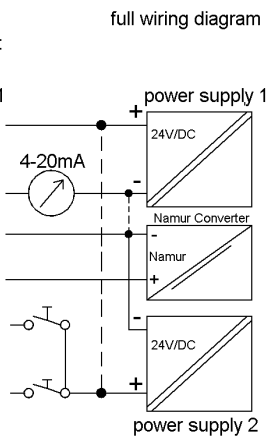
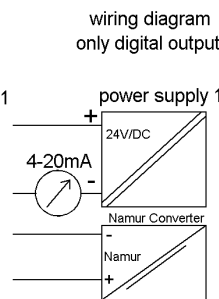
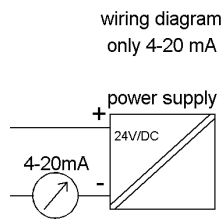
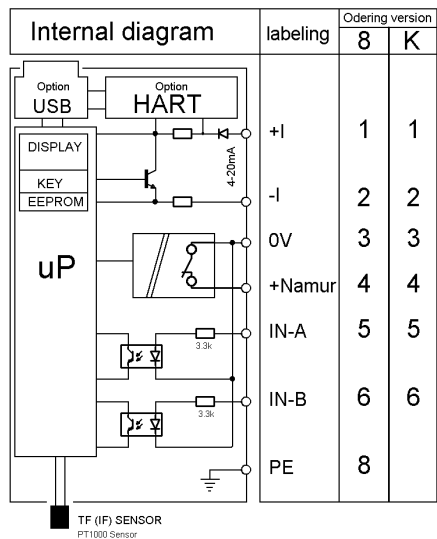
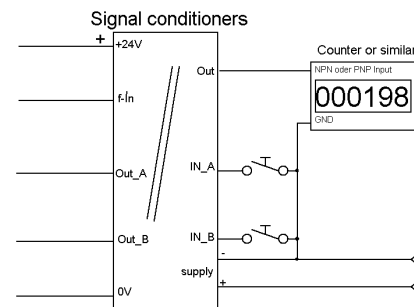
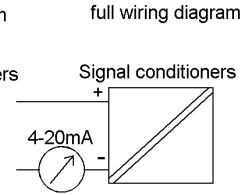
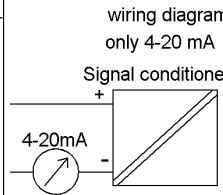
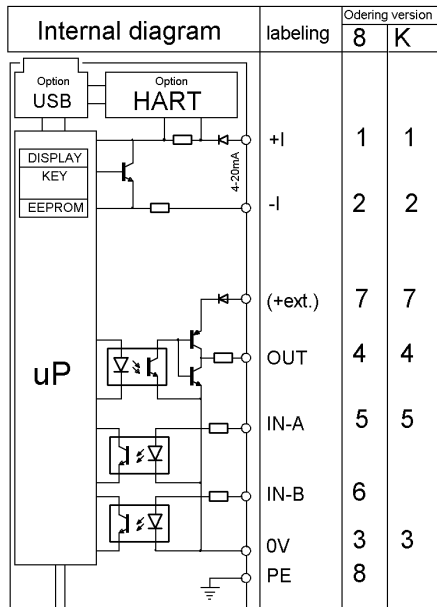


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Wiring Diagramm VTC / VIC

with push/pull output (Ex and no Ex)



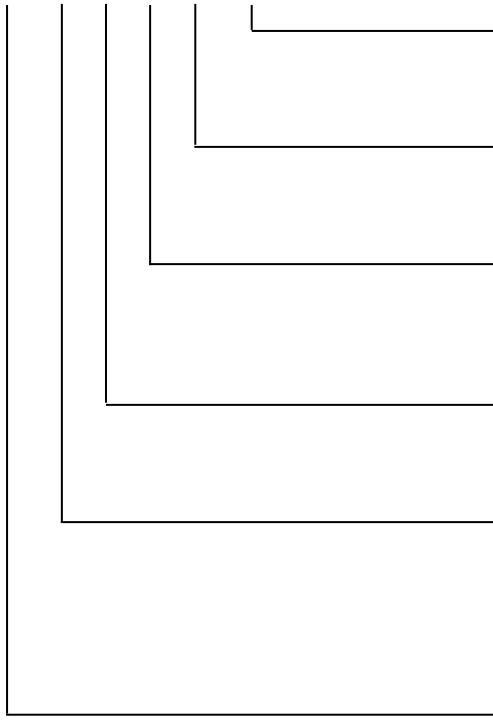
Note: connect " - - - " if you use only power supply 1

Note:

- Always supply pin 1 and 2.
- When the V*C **** - Ex please follow the related rules for hazardous areas.
- No backlight for Ex versions or versions with NAMUR available.

Ordering Information VTC / VIC

A - B - C - D - E - F
V°C - K - 8 - H - P - Ex



Example

F = Ex-proof

Ex = Ex-Version Ex i (no backlight for Ex)
 Exn = for zone II 3G

E = Digital Output

P = Push / Pull output
 N = NAMUR output

D = Interface

H = HART-Interface
 U = USB-Interface (do not use in hazardous areas!)
 N = KEM Interface

C = Connection version

K = Cable gland
 8 = 8 pin connector

B = Mechanical sensor

K = short version for ZHM 02 - ZHM 04 and HM-Series
 L = long version for ZHM 02 - ZHM 07 and HM-Series (higher temp.)
 R = short version for ZHM 01, SRZ-Series and LFM-Series
 S = long version for ZHM 01, SRZ-Series and LFM-Series
 C = long version for HMC-Series (OEM special)

A = Pickup-System

T = Carrier frequency (lower frequency readings, not for AL meters)
 I = Inductive (AL or higher temperature media)

Installation Examples



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