

Certified according to DIN EN ISO 9001

Technical Datasheet



VTC / VTG local display
with integrated frequency- and analogue output

Description

Compact Local Display unit with integrated carrier-frequency amplifier and temperature sensor for measuring volumetric flow.

All necessary measuring results and parameter for the application could directly be viewed on the VTC / VTG graphic display and changed by using the 4 soft keys.

Depending on the selected control mode (ext. drive, medium temperature, fixed allocation) the VTC / VTG is equipped with the feature improving the measuring accuracy by using 3 linearization databases, which are going to linearize the measuring signal.

Alternatively this function can be used with an USB or HART interface. It creates the possibility to save the input and archiving of parameter and their measuring results. During a pure loop-powered function mode (4-20 mA) the actual value (flow) will be digitalized on a dimensional current loop based on the programming.

In case the VTC / VTG will be connected in a three-wired function mode the LCD backlight will be activated and an additional programmable carrier-frequency amplifier output will be available. The 360° rotatability combined with the tilted 25° front display of VTC / VTG are going to grant a good handling and reading precision in different installation conditions.

Depending on the version the electrical connection could either be a M12 flange plug or a screw terminal, which emerges after opening the front cover.

Features

- 10 point linearization
- Graphic display
- USB and HART interface

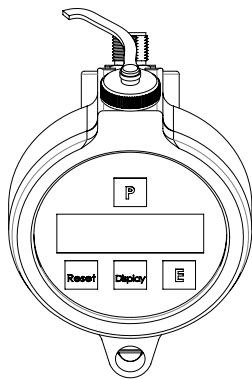
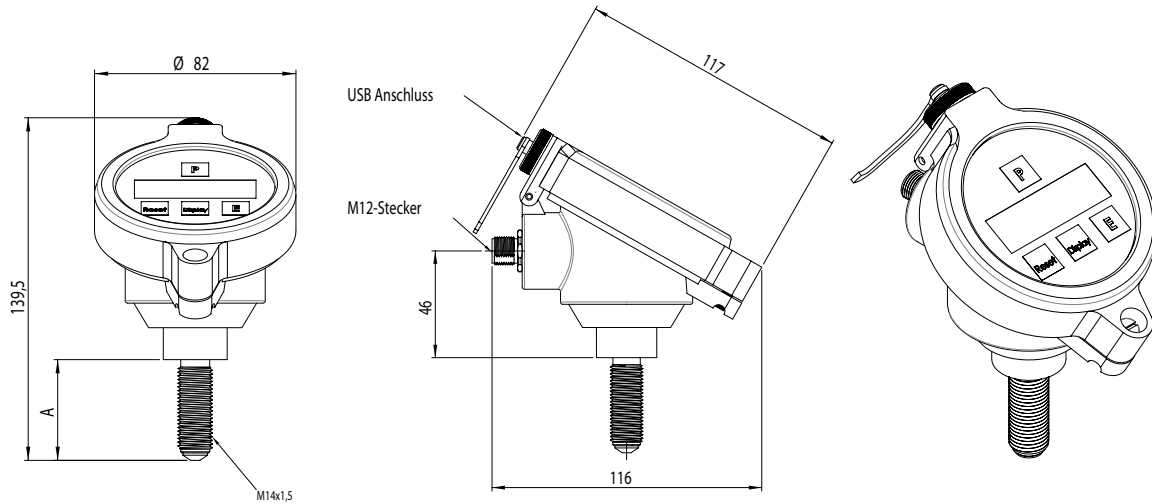
Technical Data

General	
Display	Intelligent LCD grafik display 132*32 dot view 15*50 mm
Backlight	yellow/green (only with 3-wire Push/Pull, not for NAMUR or EX available)
Operation	4-keys
Frequency range	0,1 - 3,000Hz
Ambient temperature	-20°C up to +70°C (for EX -20°C up to +50°C)
Media temperature	-20°C up to +120°C
Electrical connection	Version K: screw clamping strips for the cable gland (M20*1.5) Version 5: 5pin. M12 plug connector (A-coded) Version 8: 8pin. M12 plug connector (A-coded)
EMC	according to EN 50 081-2 and EN 50 082-2
Analogue output	
Power supply	15 V+ (load *20 mA) controlled
Load	< 400 Ω
Resolution	12 Bit
Temperature drift	0.05% p. 10K
Linearity	± 0.05% of full scale
Material	Stainless steel 1.4104

Pulses frequency output	
Number	1
Versions	Version N: NAMUR according to DIN19234 Version P: Push/Pull (Imax 20 mA Ub max 30 V)
Programmable function	a) direct frequency b) normal frequency (1.2 - 1000 Hz) d) batch e) limit (actual value or temperature)
Housing	
Sensor housing material	Stainless steel 1.4104
Housing material	Aluminium
Turnable display	360°; not for Ex-versions
Weight	400 g
Dimensions	see attachment
Protection class	IP 68
Temperature sensor (not for Ex-versions)	
Measuring range	0°C up to +150°C
Accuracy	± 0.5% of actual flow
Interface (just one possible; not for Ex-versions)	
Standard	Adaptor „CON.USB.WT“ for Remote Software „KEM EasyControl“
Option H	HART 7
Option U	USB
Inputs	
Internal resistance	3.3k
Programmable function	Totalizer reset, Hold, change to internal linearization tables

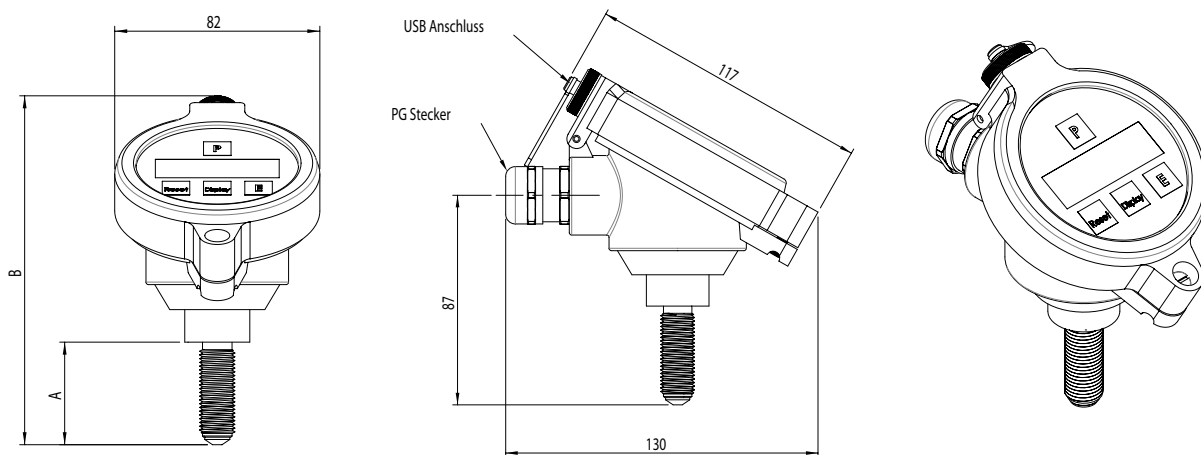
Dimensional Drawing (mm)

Version 5 and 8:

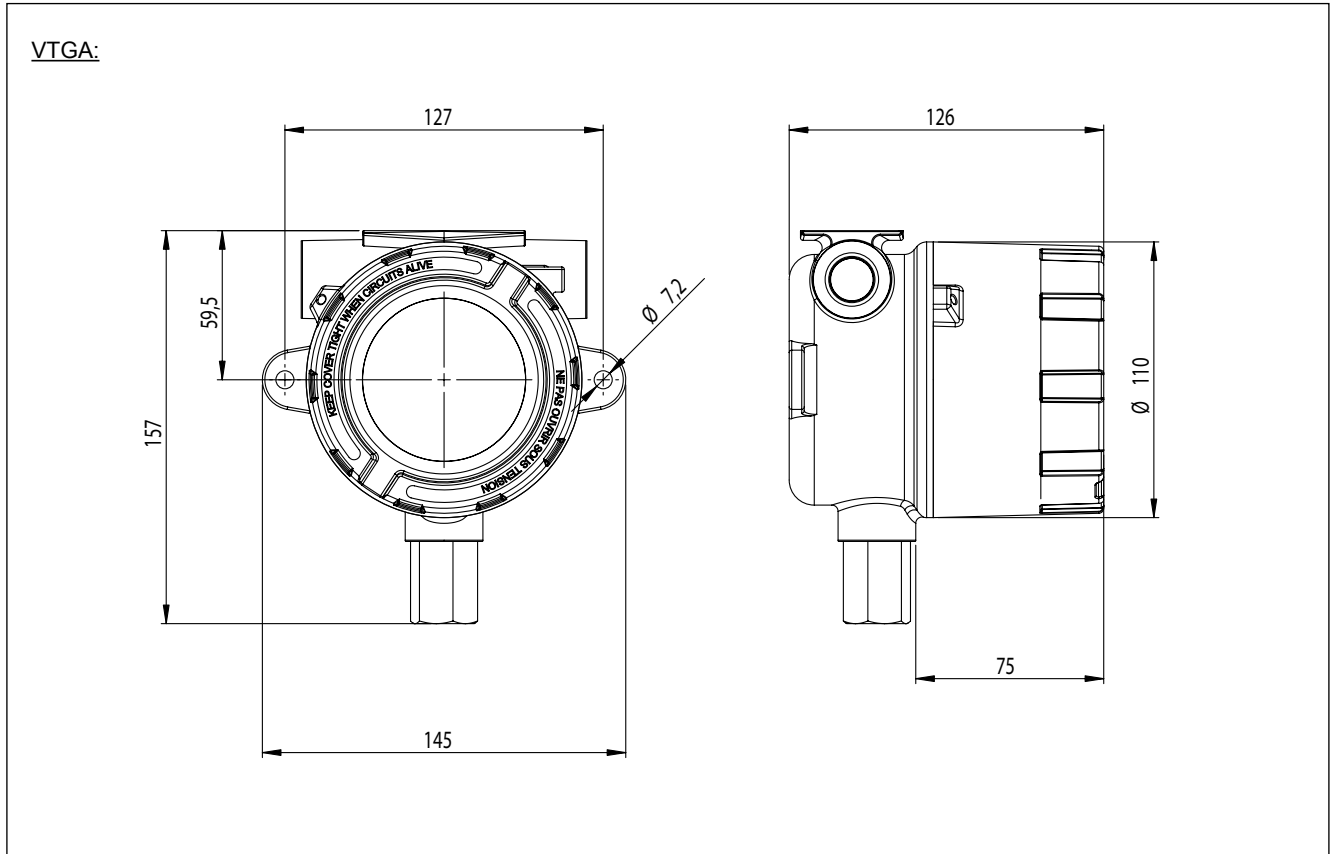


Type	A	B
K or R	42	139
L or S	76	173

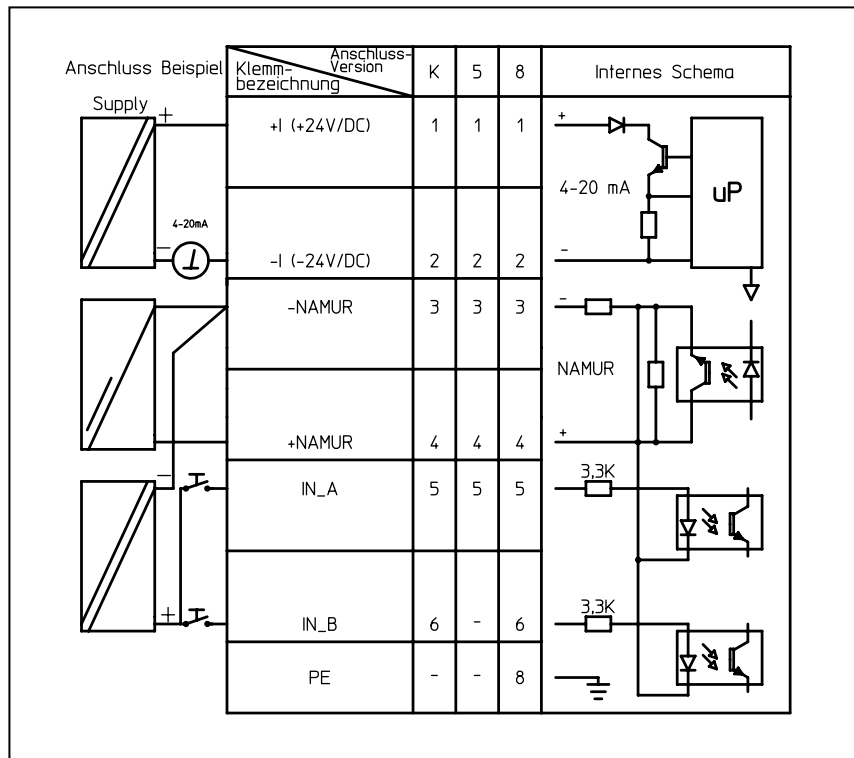
Version K:



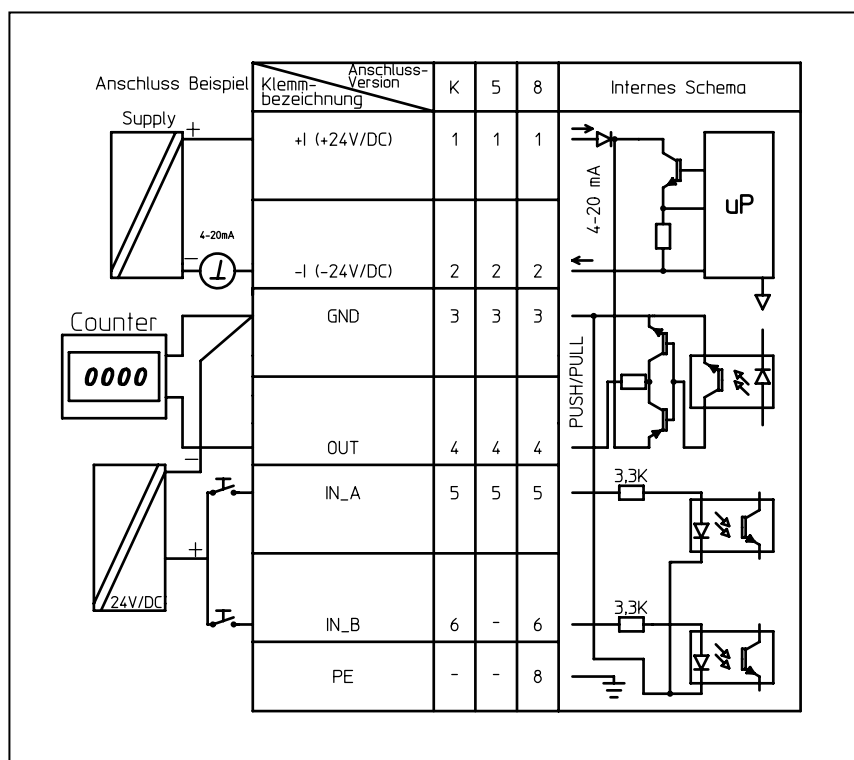
Dimensional Drawing (mm)



Connector occupancy NAMUR



Connector occupancy Push Pull



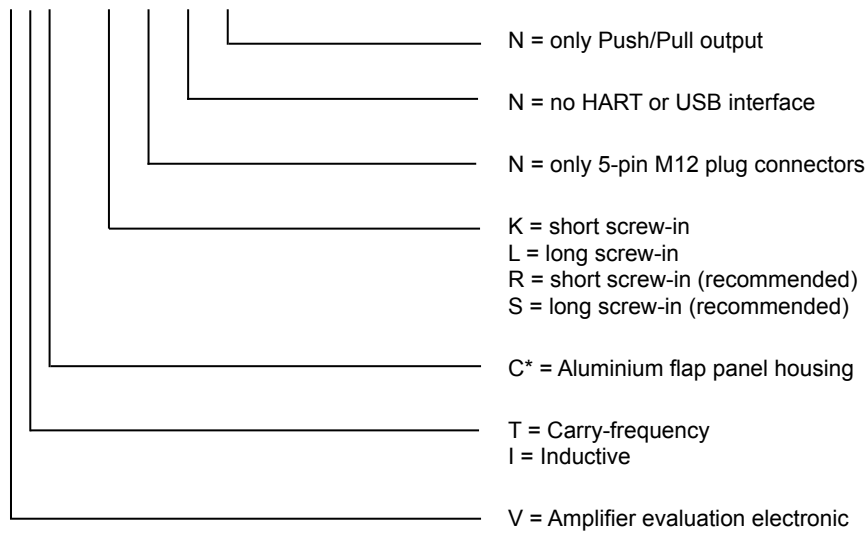
Ordering Information VTC

VTC* - K - S - H - P

	P	= Push/Pull output
	N	= NAMUR output (galvanical free)
	H	= with HART-interface
	U	= with USB-interface / no Ex i 3G (not suitable for Ex zone!)
	N	= without interface
	K	= cable fitting
	8	= 8-pin plug
	5	= 5-pin plug
	K	= short screw-in
	L	= long screw-in
	R	= short screw-in (recommended)
	S	= long screw-in (recommended)
	C*	= Aluminium flap panel housing
	GA	= Ex d housing (only Exi and Ed)
	GS	= Ex d housing stainless steel (only Exi and Ed)
	GM	= VTM housing with glass panel
	T	= Carry-frequency
	I	= Inductive
	V	= Amplifier evaluation electronic

Ordering Information VTC “light”

VTC* - K - X - X - X



Notes

The following has to be adhered to:

- a. Installation instructions for electrical devices.
Installation instructions for associated intrinsically-safe devices.
The »Special conditions for safe use« as per EC-Type Examination Certificate
- b. The amplifier has to be installed in a way that the max. ambient temperature does under no circumstances exceed +60°C (consider self heating).
- c. With cables care should be taken, that the max inductivity and capacity of the respective voltage or gas group are not exceeded.
- d. Exceeding or falling below the regular measuring range will cause invalid frequency output signals.
- e. Shielded cables are to be used as connecting lines.
- f. Generally, supplied units have to be connected by an expert according to EMC stipulation.
- g. Flammable media may only be used as measuring medium when they do not build an explosive atmosphere permanently or for a longer period of time. In addition, the amount of air and oxygen contained must be low enough to ensure the danger of explosion can definitely be excluded. The local display unit has to be included in repeated pressure tests.

Examples



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