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Küppers Elektromechanik GmbH

Certified according to DIN EN ISO 9001

Technical Datasheet

Starting from version: V06-12

VTG / VIG local display

for wall mount with integrated frequency- and analog output

Description

The VTG / VIG are compact local wall mount 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 VTG / VIG 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 VTG / VIG 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)

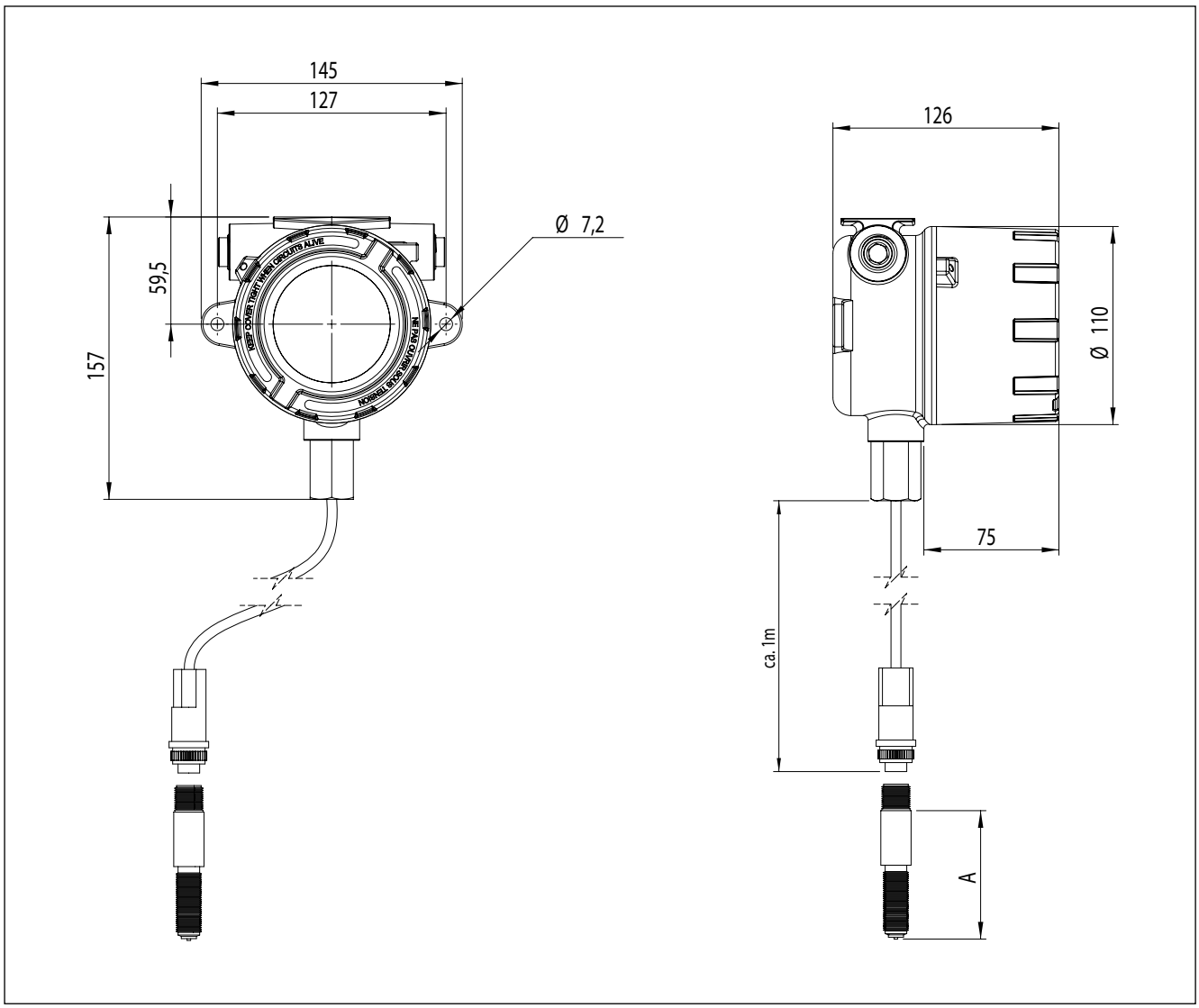
- Ex-Approval
- Stainless steel or aluminum housing
- 3 x 20 points linearisation
- Graphic display
- Fast setup
- Integrated interface
- Programming and visualisation via KEM „Easy Control“ possible
- Normalized frequency output
- Control inputs
- 2 Status-LEDs

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	VTG: 1-3.000 Hz (typical 0,5 to 5.000 Hz) VIG: 7-3.000 Hz (typical 5 to 5.000 Hz)		
Media temperature	-20 to +120°C for VTG (distance between flow meter and amplifier > 25 mm) -20 to +150°C for VIG (distance between flow meter and amplifier > 65 mm)		
Ambient temperature	-20°C to +50°C		
Electrical connection	Internal screw type terminals, cable gland for 7 -13 mm cable		
Pin assignment	**Digital output:**	**„P“**	**“N”**
		1 = +I 2 = -I 3 = OV 4 = DIG.OUT 5 = IN_A 7 = +24 V	1 = +I 2 = -I 3 = OV 4 = + NAMUR 5 = IN_A 6 = IN_B
EMC	according to EN 61000-6-4 and EN 61000-6-2		
Ex-Approval	ATEX ⟨Ex⟩ II 2G Ex ia IIC T4 Gb		

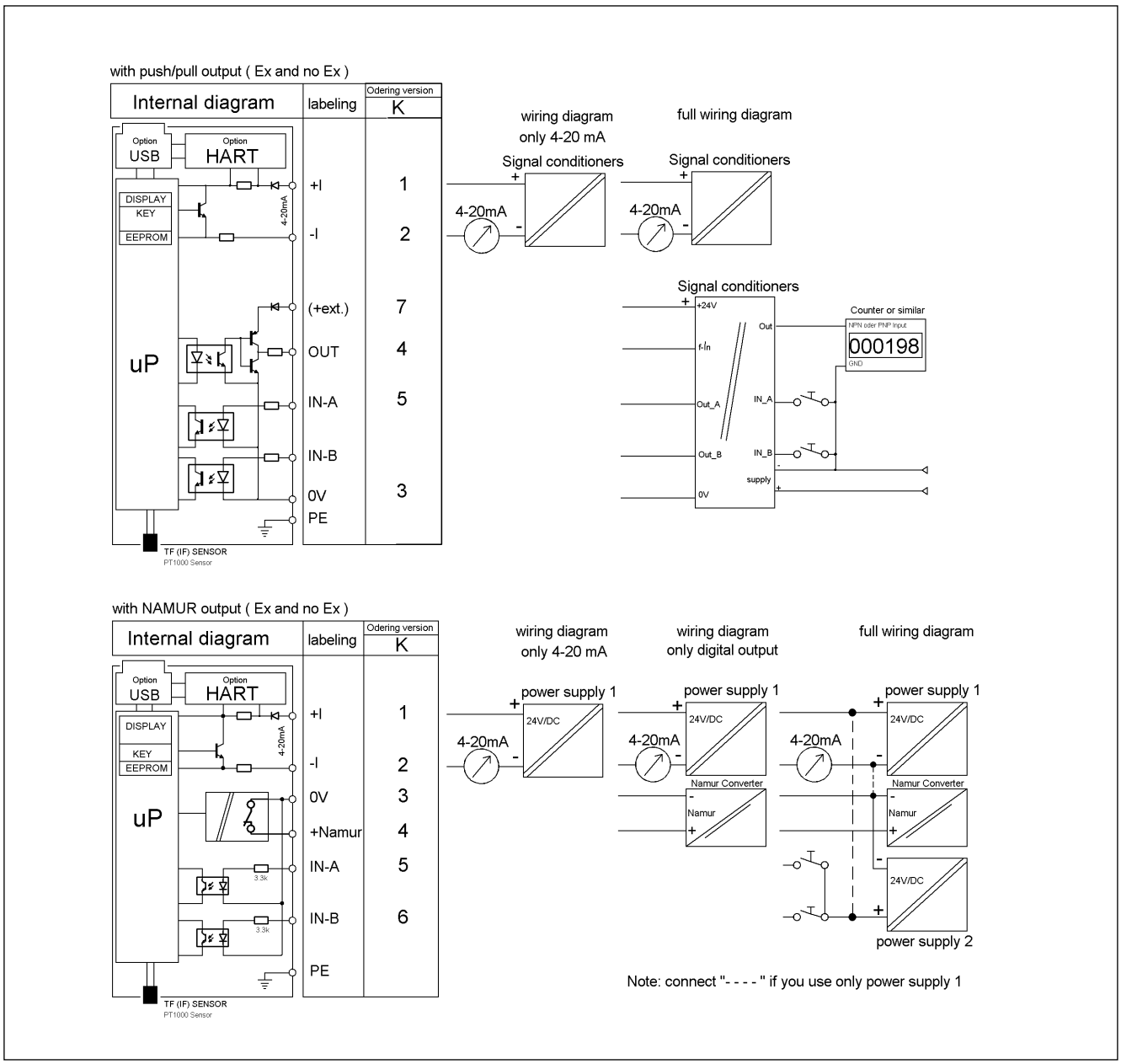
Analog output	
Type	4-20 mA, 2-wire (passive)
Supplier	15 to 30 V
Load	< 400 Ohm (at 24 V)
Resolution	12 Bit
Temp.Drift	< 100 ppm/K
Linearity	± 0.05% F.S.
Sensor material	Stainless steel 1.4104 (AISI 430 F)
Digital output	
Quantity	1
Output type	Version N: NAMUR according to DIN19234 Version P: Push/Pull (Imax 20 mA Ub 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)
Housing	
Sensor housing material	Stainless steel 1.4104 (AISI 430 F)
Housing material	VTG: Aluminium VIG: Stainless Steel DIN 1.4401 (AISI 316)
Turnable display	360°
Weight	VTG: 1,5 kg VIC: 3,4 kg
Dimmensions	see attachement
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 Uin > 3 V realated to PIN 3
Internable resistance	3.3k
Programmable function	Totalizer reset, Hold, switch to linearisation tables

Dimensional Drawing (mm) - VTG / VIG



Type	A
K or R	72
L or S	100

Wiring Diagramm VTG / VIG



Note:

a. Always supply pin 1 and 2.

b. When the V*G **** - Ex please follow the related rules for hazardous areas.

c. No backlight for Ex versions or versions with NAMUR available.

Typenschlüssel VTG / VIG

A	- B	- C	- D	- E	- F	-G
V*G	- *	- K	- K	- H	- P	- Ex

Example

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

F = Digital Output
P = Push / Pull output
N = NAMUR output

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

D = Connection version
K = Cable gland

C = Mechanical sensor
K = short version for ZHM 02 - ZHM 04 and HM-Series
L = long version for ZHM 02 - ZHM 07 and HM-Series
R = short version for ZHM 01, SRZ-Serie and LFM-Series
S = long version for ZHM 01, SRZ-Serie and LFM-Series
C = long version for HMC-Series

B = Housing
A = Aluminum
S = Stainless steel

A = Pickup-System
T = Carrier frequency
I = Inductive

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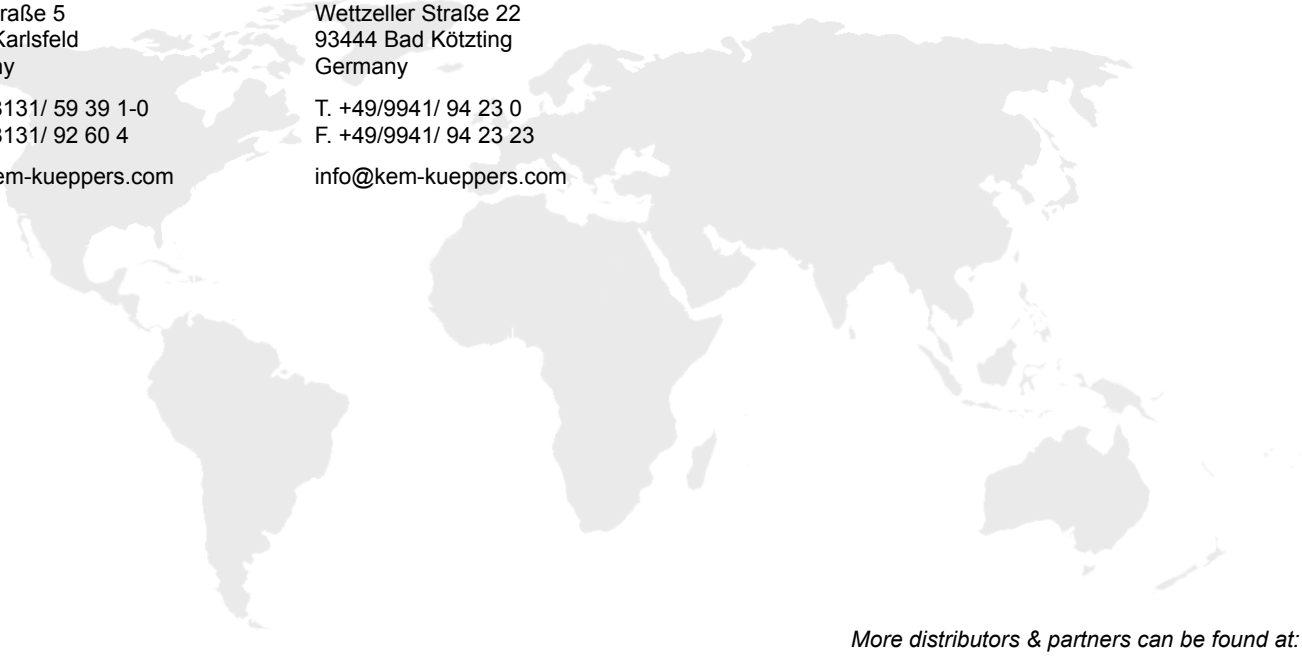

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