



VTM Local Display Unit with frequency and analogue output

The VTM is a programmable local display with integral carrier-frequency pickup and amplifier for KEM flow meters. It serves the evaluation of flow volumes.

Measuring results are indicated in an 8 digit LCD display with 14 segments.

The pulse output provides a flow-proportional frequency signal or scaled volume pulse in accordance with programming.

Optionally the measuring signal may be scaled in a 4-20 mA current loop.



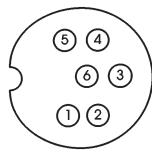
The display is available in two different arrangements to fit various installing positions and may optionally be equipped with a protective cover (cf. picture). The electronic housing is slewable by 360°, in addition the display unit may be positioned in steps of 90°. These features guarantee for an excellent readability independent of the installing position.

For electrical connection a 6-pin plug or a junction box with 6 internal terminals is provided.

Technical Data

General

LCD display:	8 digits (14 segments), digit height 7 mm for real-time value, totals and programming, sleuable in steps of 90° after loosening the fixing screws
ambient temperature:	–40 up to +70 °C
medium temperature:	–40 up to +120 °C with a distance of at least 25 mm between flow meter and electronic housing
electrical connection:	6-pin amphenol plug or junction box with 6 internal terminals and adjustable PG7–PG9 cable sleeve (pin connections are identical)



1 = UB
2 = frequency output 3-wire
3 = 0 V
4 = -IA
5 = +IA
6 = shield

Ex-protection:	EEExiaIICT4, safety-relevant data as per Ex-certificate
protection class:	IP 65
housing:	aluminium AlMgSiPb, blue anodised, sleuable by 360°

Frequency output/divider

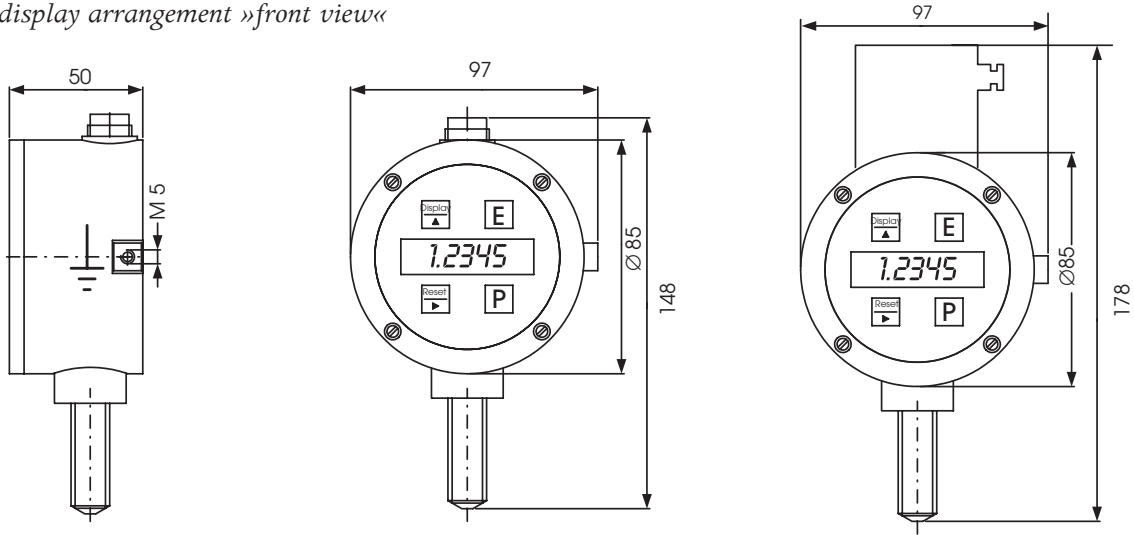
operating mode:	3-wire
supply voltage:	8–30 V DC controlled, Ex-protected versions: 12–30 V DC
quiescent current (IR):	< 25 mA
signal output:	push/pull I _{max} : 20 mA
	<i>1. frequency output:</i>
	f _{max} : 3,000 Hz
	duty cycle: approx. 1:1
	<i>2. divider:</i>
	pulse width: 1 ms, 20 ms, 50 ms
	f _{max} : 500 Hz

Analogue output

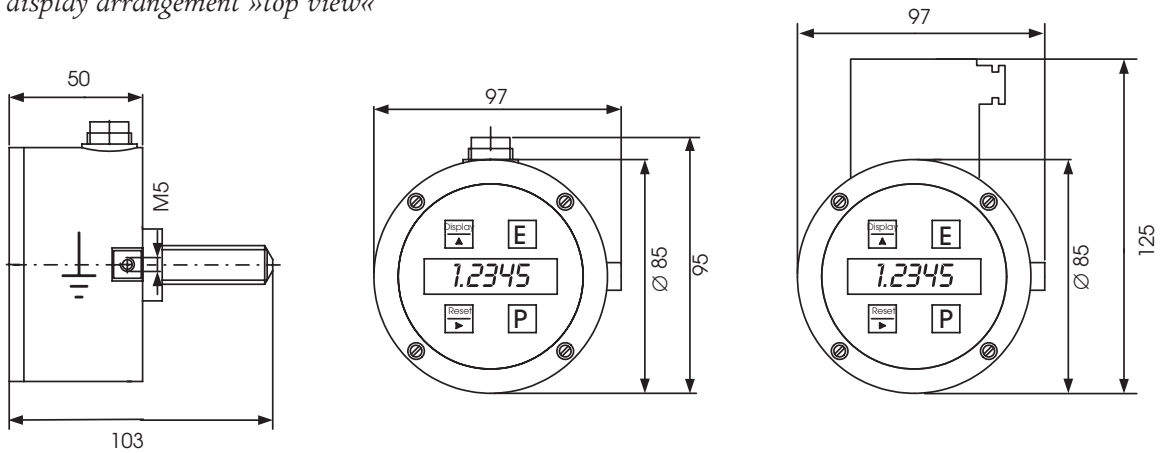
operating mode:	2-wire (4–20mA)
supply voltage:	14–30 V DC controlled $U_B = (R_{load} \times 20 \text{ mA}) + 14 \text{ V}$
load:	< 800 Ω
resolution:	12 bit (3,9 μA)
time constant:	< 0.2–3 s (programmable)
signal output:	4–20 mA

Dimensional drawings (mm)

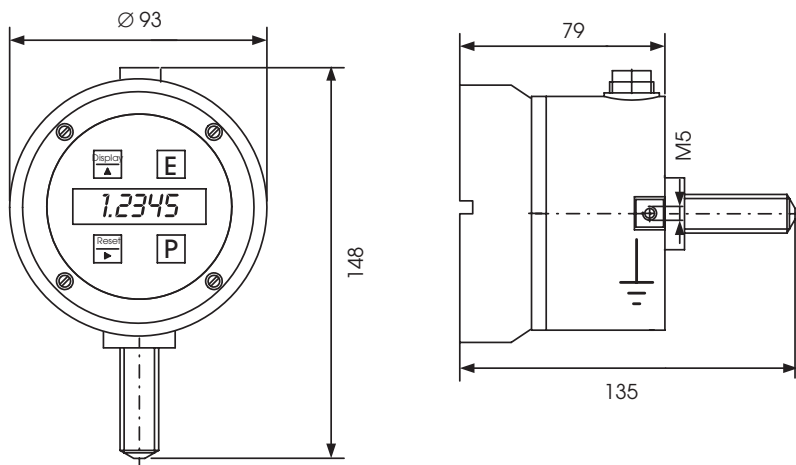
display arrangement »front view«



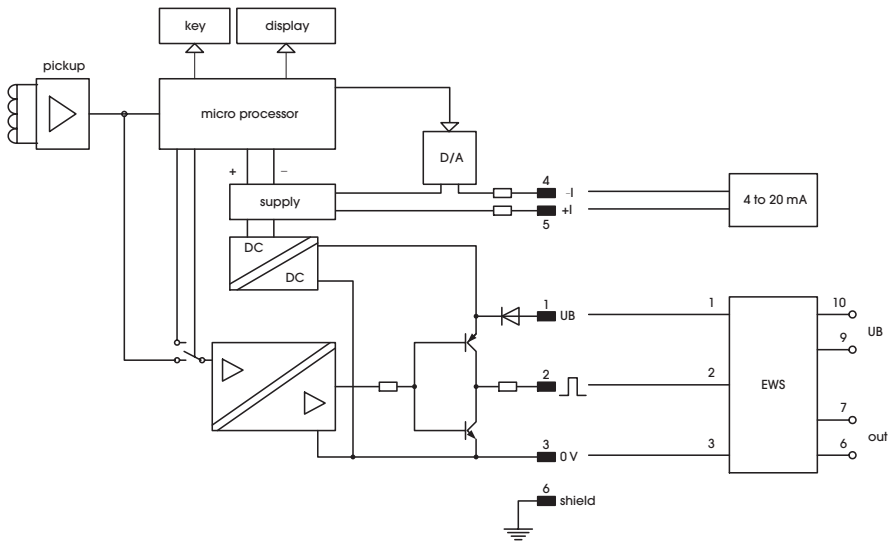
display arrangement »top view«



arrangements »front view« and »top view« with protective cover



Signal flow and connection



Ordering Information

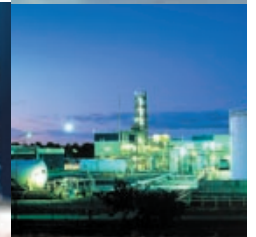
VTM * * * * * Ex

- Ex-protection Ex = Ex-protected version, EExiaIICT4
- electrical connection K = junction box
S = plug
- cover S = protective cover with glass window
0 = none
- pickup K = for ZHM 02 to 04 and HM series
R = for ZHM 01, 01/1 and 01/2 as well as SRZ series
S = centre pickup for ZHM series
- display arrangement F = front view
D = top view
- signal output U = frequency output/divider
A = analogue output, 4 to 20 mA
B = frequency output/divider and analogue output



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- Flowmeters
- Measurement systems for moisture and thickness



0076
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Pentronic's laboratory is accredited for temperature calibration in the range of -80°C to 1200°C with uncertainties down to $\pm 0,003^\circ\text{C}$.

