Küppers Elektromechanik GmbH

Certified according to DIN ISO 9001

User´s Manual

VTB Local Display

Battery powered

1 GENERAL INFORMATION

1.1 FEATURES

The VTB is a programmable local display with integrated RF-pickup und amplifier for KEM flow meters. It has a seven digit LCD-display showing actual volumetric flow.

1.2 SAFETY

1.2.1 General Safety

All statements regarding safety of operation and technical data in this manual will only apply if the unit is operated correctly in accordance with this manual.

The data for Ingress Protection (IP 66) will only apply if all connectors are caped properly with the corresponding counterpart with the same or better IP rating. Cable glands must be populated with cables with the specified diameter and closed properly.

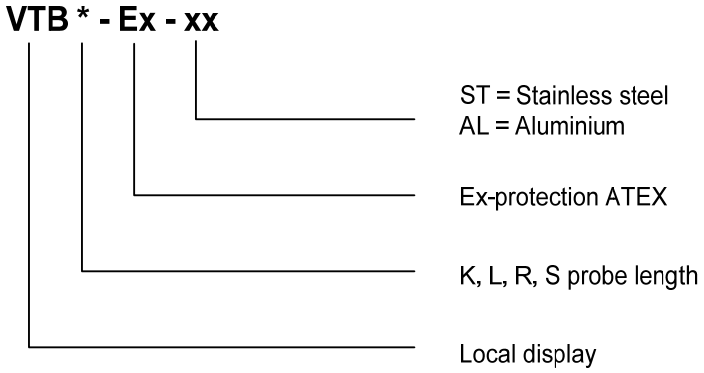
During operation all openings of the housing must be closed unless otherwise noted in this manual.

National and international installation requirements have to be followed.

1.2.2 Special requirements for Ex installtion

Do not open the housing during installation in Ex areas!

1.2.3 Ordering codes



1.2.4 Accessoires

Ordering code	Description

2 GETTING STARTED

UNPACKING

Verify that you have received the following items:

VTB local display
user´s manual

2.2 OPERATING ELEMENTS

Pushing the button <P> or <S> you can switch between the following modes:

RATE
TOTAL
ACC.TOTAL

Pushing both buttons at the same time the reset mode will start showing an additional window.

2.3 PROGRAMMING

Keep left button pushed during seven seconds
Choose the correct mode with the left or right button (<P> or <S>)
Select with both buttons the programming mode (<P> and<S>)
Change the actual configuration with left or right button (<P> or<S>)
Confirm the selected configuration be pushing both buttons and exit the mode.(<P> and <S>).
Push the left buttons for 3 seconds and exit the programming mode. (<P>)

1 TOTAL Resettable counter

You can choose the units for the counter
unit: *the following units can be selected:*
L – M3 – UKGAL – USGAL – Ukbbl – Usbbl – OILbbl

The display has seven digits
dec: the following configuration can be selected
0000000 – 111111.1 – 22222.22 – 3333.333

2 AC.TOT Not resettable counter

You can choose the units for the not resettable counter
unit: the following units can be selected
L – M3 – UKGAL – USGAL – UKbbl – USbbl – OILbbl
0000000 – 111111.1 – 22222.22 – 3333.333

3 RATE Actual flow

You can choose the units for the volumetric display
unit: the following can be selected
L – M3 – UKGAL – USGAL – UKbbl – USbbl – OILbbl

You can choose the time units as well
t.unit: the following units can be used
MIN – HR – SEC

The actual flow is calculated by the incoming pulses from the flow meter
dec: the following configuration can be selected
0000000 – 111111.1 – 22222.22 – 3333.333

The actual flow is calculated by the incoming pulses from the flow meter. For getting a more stable display it is possible to accumulate up to 255 pulses until the display will change.
PLS
1 – 255

Cut-OFF Time frequencies below this value will be cut off, and the display will show 0
cut
0,1 – 999,9

4 METER

The K-factor shows the ratio between the number of pulses and the volumetric unit (see also 4.2)
fact
to 999999

You can choose volumetric unit for the K-factor
dec: the following units can be selected
00000000 – 111111.1 – 22222.22 – 3333.333
444.4444 – 55.55555 – 6.666666

5 OTHER

type	**VTB**	Type of device
soft	**03.06.02**	Software
serial no.	**0123456**	Serial No.

3 INSTALLATION

NOTE

All installations must be carried out by qualified service personnel.

3.1 ELECTRICAL

Make sure that the VTB and carry-frequency coil are connected and fixed properly before applying power to the flow meters.

ELECTRICAL

Improper grounding and shielding may lead to bad EMC behavior or danger to your health!

4 SERVICE AND MAINTENANCE

4.1 SERVICE

The lifetime of the batteries is approx. five years. This needs to be done by KEM KUEPPERS. Please send the instrument to our service department. You will find the address on our homepage: www.kem-kueppers.com.

4.2 TROUBLE SHOOTING

In the unlikely case of an unexpected malfunction please first check the following items:

No display

Cables connected properly?
➔ Connect the missing cables

Output frequency too low

All cables properly connected?
➔Reconnect the loose cables
Actual viscosity of the medium too low?
➔ Check the viscosity at the actual temperature
Increased leakage due to longer use with abrasive media?

Output frequency too high or unstable

Most probably EMC problems
Shield and ground properly connected?
➔ Connect shield properly. If necessary, try additional means of grounding and shielding

4.3 MAINTENANCE

In case of malfunction, please contact your nearest dealer or directly KEM.
For the addresses see chapter 5.6

5 IMPORTANT INFORMATION

5.1 WARRANTY

KEM warrants material and production for a period of 18 months after installation and start up, max. 24 months from delivery date.

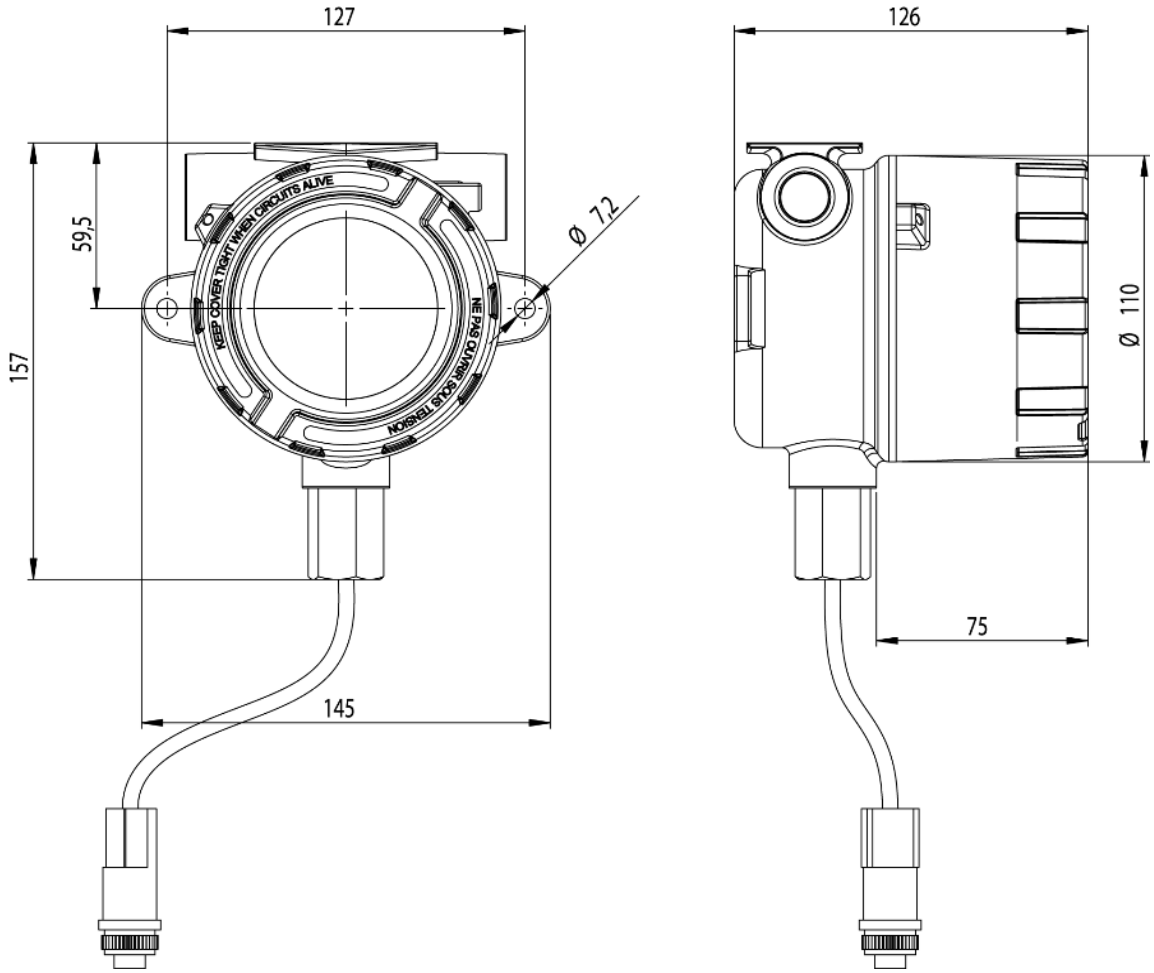
5.2 DECLARATION OF CONFORMITY

See separate sheet

5.3 TECHNICAL DATA

General	
LCD-Display	7 digits, height 11 mm, showing actual flow, totalizer
Ambient temperature	–0 to +50°C
Medium temperature	–40 to +120°C
Ex-proven to ATEX 100a	Ex II 2G Exd [ia] IIC T4, BVS 10 ATEX E 054.
Protection class	IP 66
Housing	Aluminum, stainless steel
Weight	ca. 3.750g
Life cycle battery	Approx. 5 years
Threads	3x ½ inch NPT

5.4 DIMENSIOAL DRAWINGS (MM)



5.5 WEEE AND ROHS

The unit described herein is not subject to the WEEE directive and the corresponding national laws.

At the end of life forward the unit to a specialised recycling company and do not dispose it of f as domestic waste.

The unit described herein fully complies with the RoHS directive.

5.6 CONTACT

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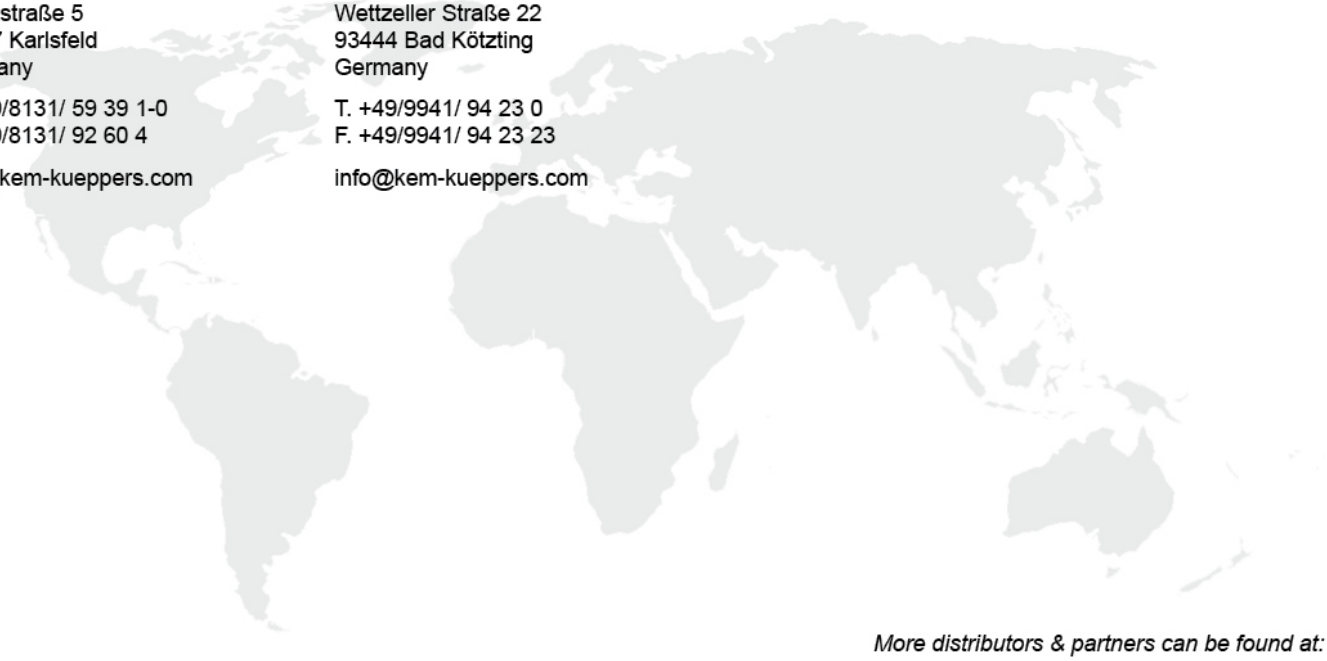

More distributors & partners can be found at:
www.kem-kueppers.com

Your local partner:

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info@kem-kueppers.com