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## Description

The local converters type WT.02 / WI.02 are passive 4-20 mA sensors with carrier-frequency-input stage (WT.02) or inductive input stage (WI.02).

The carrier frequency converters WT.02 are recommended for low flow due to the low lower cut off frequency (typically < 0,5 Hz).

The inductive converters WI.02 are recommended for higher medium temperatures (up to 150°C).

In addition to the analogue output the sensors provide a galvanically isolated open collector output, which can be used either as a switch or frequency output. The frequency output is freely scaleable. This scaleable output allows for a calibration to the volume flow independent of the type of flow meter.

The W\*.02 have an interface integrated in the M12 sensor plug. The interface adapter and remote software KEM »EasyControl« allow for programming the operating parameters and to read the input frequency and temperature.

Both analogue and frequency output can be linearized with up to 10 points. When ordered with a flow meter the W\*.02 output will be adjusted to this meter.

## Options

- Temperature measurement
- Temperature compensation of the linearisation (various characteristic curves)
- Adjustment of operation mode


## Features:

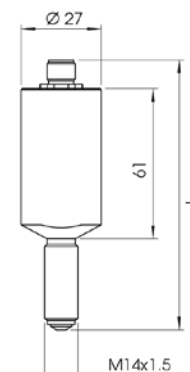
- Built in Interface
- Linearization of Current and Frequency Output

Accessories	
CON.USB.WT:	USB-adapter for W*.02 with output plug to loop through the analogue and frequency output. In the remote mode the W*.02 can be powered via the USB interface or via an external power supply.
Easy Control:	Remote software for WINDOWS®, VISTA and 7 (for WINDOWS® XP SP3 or N.NET-framework is required).
Other adapters and drivers on request.	



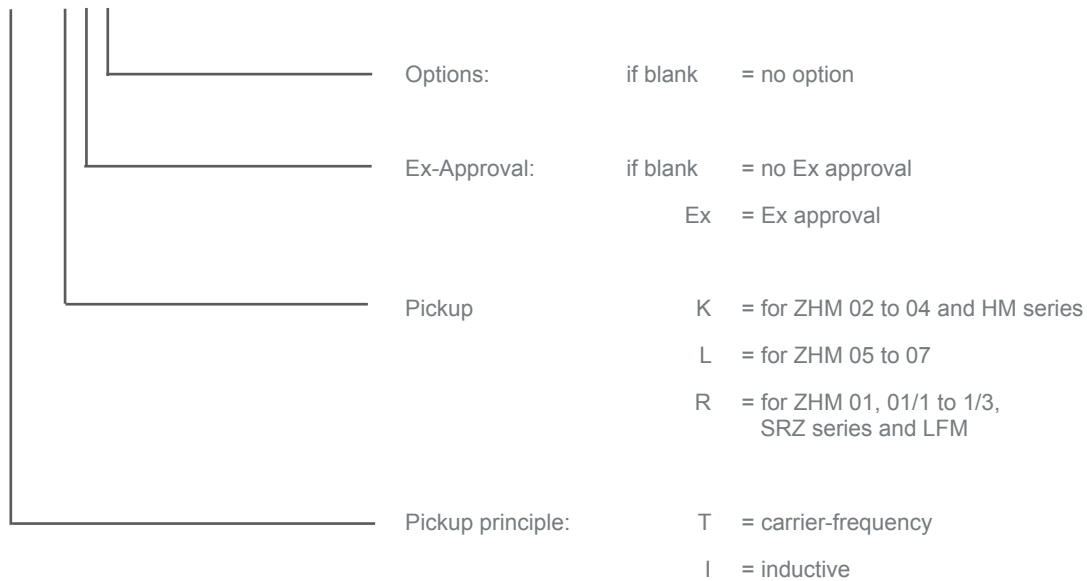
## Technical Data

<b>Analogue signal</b>	
Type	4-20 mA, 2-wire (passive)
Resolution	5 $\mu$ A
Supply voltage	12-30V, regulated
Allowable load	(UB -12V) / 20 mA, max. 800 $\Omega$
Operating modes	ON (frequency proportional current) OFF (supply current 4 mA independent of frequency)
<b>Digital output</b>	
Type	open collector, potential free
Protective resistor	1,600 $\Omega$
Frequency range	1-5,000 Hz
Operating modes	OFF (frequency output disabled) 1:1 (output frequency = input frequency) CORR (scaleable output frequency) SW (switch output)
<b>Further specifications</b>	
Measuring frequency	WT: 1-3,000 Hz (typ. 0.5 up to 5,000 Hz) WI: 7-3,000 Hz (typ. 5 up to 5,000 Hz)
Response time	250 ms (for input frequencies > 5 Hz)
Temperature drift	< 100 ppm/K
Connection	M12; 5-pin 1 = +I 2 = -I 3 = emitter (digital ground) 4 = collector (frequency output) 5 = remote input
Ambient temperature	-20 to +50°C
Medium temperature	-20 to +120°C (WT.02) with a distance of at least 25 mm between flow meter and electronic housing -20 to +150°C (WI.02) with a distance of at least 65 mm between flow meter and electronic housing
Dimensions	see drawing L = 117 mm (form K,R) L = 156 mm (form L)
Material	stainless steel
Protection class	IP 65
Ex-approval	 II 2G Ex ia IIC T4



## Ordering Information

W\*.02-\*.\*\*



## Identification

KEM Küppers Elektromechanik GmbH

CE 0123 Ex II 2G Ex ia IIC T4

BVS 09 ATEX E ...

W\*.02-\*.\*\* Ser.Nr. ...

$-40^{\circ}\text{C} \leq \text{TA} \leq +50^{\circ}\text{C}$

$U_i = 30\text{V}$ ,  $I_i = 120\text{ mA}$ ,  $P_i = 850\text{m W}$

## Safety-Related Data

$U_i = 30\text{V}$   
 $I_i = 120\text{ mA}$   
 $P_i = 850\text{ mW}$

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