

# WESAN WB E

ELECTRONIC METER | WOLTMAN

**DIEHL**  
Metering



## APPLICATION

Fully electronic bulk water meter for installation at a transition from a vertical to a horizontal pipe (e.g. in a well).

## FEATURES

- ▶ Calibratable and exchangeable measuring insert
- ▶ Electronic sensor control for recording flow rate
- ▶ Lithium battery, lifetime 12 years
- ▶ Optical ZVEI interface equipped as standard
- ▶ Adjustable reading date for billing
- ▶ Rotatable integrator
- ▶ Single-line 7-digit display for easy meter reading
- ▶ Outstanding long-term accuracy even under extreme loads
- ▶ Measuring range for small flow rates considerably larger than specified for metrological class

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## ELECTRONIC - BASIC FEATURES

WESAN WB E	
Ambient class	OIML R49 class C / MID E2 + M1
Protection class	IP 54 or IP 68
Interfaces standard	Optical ZVEI
Interfaces optional*	M-Bus, L-Bus, pulse

\* Possible combinations

- M-Bus / pulse
- L-Bus / forward pulse
- only M-Bus (IP54, standard delivery without M-Bus cable)

Note: HYDRO-SET Software for configuration of meters, readout of measured values and printout of meter logs. Available under [www.diehl.com/metering](http://www.diehl.com/metering) (Products - downloads)

## DISPLAY

WESAN WB E	
Display indication	LCD, 7-digit
Unit	m <sup>3</sup> /h - l/h - m <sup>3</sup> - l
Total values	9,999.999 - 999,999.9 - 99,999.99 - 9,999.999
Values displayed	Flow rate

## VOLUME - / PULSE OPEN COLLECTOR

WESAN WB E		
Max. frequency	Hz	90
Max. input voltage	V	30
Max. input current	mA	27
Max. voltage drop at active output	V/mA	2/27
Max. current through inactive output	µA/V	5/30
Max. reverse voltage without destroying outputs	V	6
Pulse duration	ms	5.5
Min. pulse pause	ms	5.5

## SUPPLY VOLTAGE

WESAN WB E			
Operating voltage	UN	VDC	3.0 (lithium battery)
Battery lifetime			12 years
Nominal power	PN	µW	30

## INTERFACES - OVERVIEW

WESAN WB E	
Optical	ZVEI interface for communication, M-Bus protocol
M-Bus	According to EN 1434-3. Data reading and parametrization are via two wires with polarity reversal protection.
L-Bus	Interface for the radio module IZAR RADIO EXTERN
Pulse	Output for volume (open collector)

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## PULSE INTERFACE - SPECIFICATION

WESAN WB E		
DN 50 - 100   Pulse rates	l/pulse	Decadic 1 ... 1000
DN 50 - 100   Display		1 digit after comma
DN 50 - 100   Pulse value 1	l/pulse	1 (factory setting)
DN 50 - 100   Pulse value 2	l/pulse	100 (factory setting)
DN 150   Pulse rates	l/pulse	Decadic 10 ... 10000
DN 150   Display		0 digits after comma
DN 150   Pulse value 1	l/pulse	10 (factory setting)
DN 150   Pulse value 2	l/pulse	1000 (factory setting)
Pulse variants		Two forward pulses (factory settings); one forward and one backward pulse; pulse and direction signal

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## GENERAL

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Temperature range	°C	0 ... 30
Temperature safety	°C	0 ... 50
Ambient operating temperature	°C	0 ... 55
Ambient storage temperature	°C	0 ... 55
Nominal pressure	PN bar	16*

\* See also special versions.

## TECHNICAL DATA

Nominal diameter	DN	mm	50	80	100	150	200
Nominal flow rate (DIN ISO 4064)	$Q_n$	m <sup>3</sup> /h	15	40	60	150	250
Permissible continuous load (DMDE)	$Q_n$	m <sup>3</sup> /h	25	55	90	200	300
Maximum flow rate (short-term)	$Q_{max}$	m <sup>3</sup> /h	50	110	180	350	600
Transition flow rate	$Q_t$	m <sup>3</sup> /h	1	1.2	1.5	5	20
Minimum flow rate	$Q_{min}$	m <sup>3</sup> /h	0.2	0.25	0.3	0.8	4
Starting flow rate		l/h	60	90	90	150	370
Flow rate at 0.1 bar pressure loss		m <sup>3</sup> /h	25	50	78	250	295

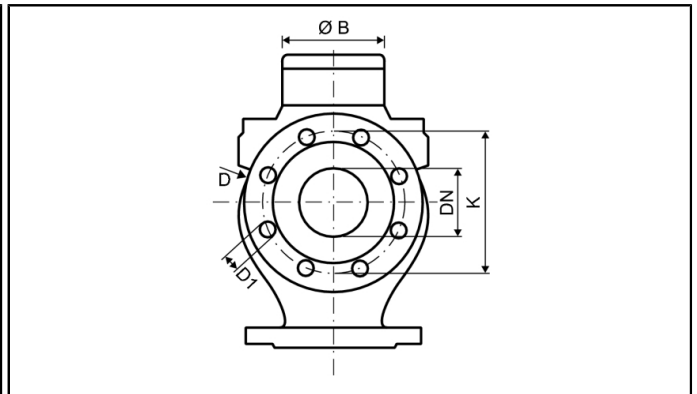
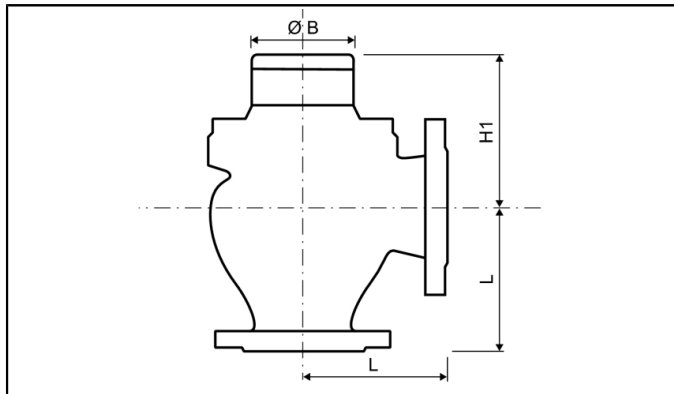
## APPROVAL

Nominal diameter	DN	mm	50	80	100	150	200
National			6.132 / 96.12	6.132 / 96.12	6.132 / 96.12	6.132 / 92.06	6.132 / 92.06
Metrological class			B•H	B•H	B•H	B•H	B•H

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## DIMENSIONS

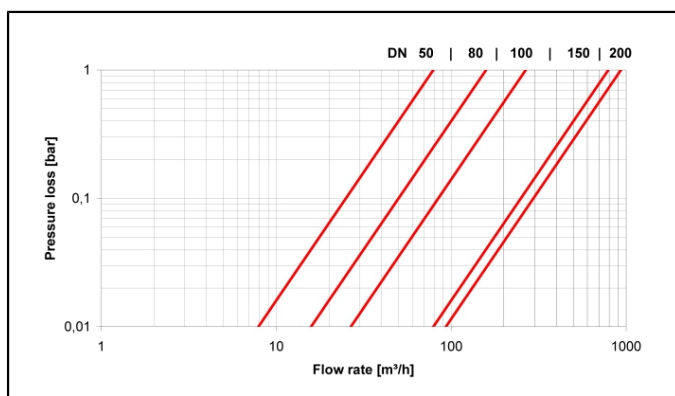


Nominal diameter	DN	mm	50	80	100	150	200
Overall length (DIN 28537)	L	mm	150	180	200	250	300
Overall length (DIN 28637)	L	mm	-	165	180	220	260
Flange diameter	D	mm	165	200	220	300	360
Hole circle diameter	K	mm	125	160	180	240	295
Number of screwholes		pcs	4	8 / 4	8	8	8 / 12
Screwhole diameter	D1	mm	18	18	18	23	23
Height	H1	mm	124	140	149	219	264
Height to remove measuring insert		mm	260	320	330	485	586
Meter width		mm	173	222	222	310	352
Diameter	Ø B	mm	110	110	110	110	110
Weight		kg	14.2	26.6	33.3	71.5	130

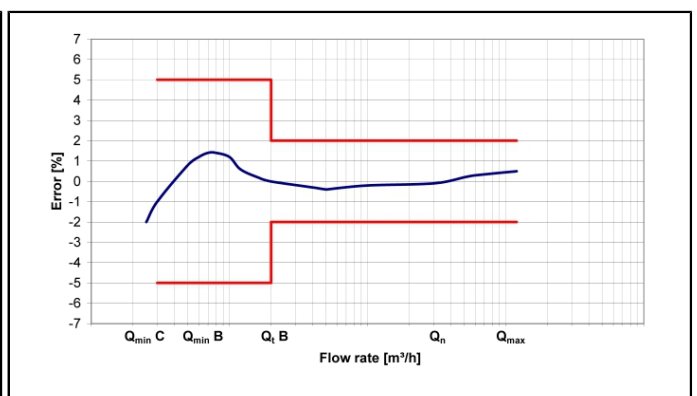
## SPECIAL VERSIONS

- Versions with different nominal pressure on request
- Special flange holes
- For other media
- For different pulse values

## PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph