

WESAN WPV E

ELECTRONIC METER | WOLTMAN

DIEHL
Metering



APPLICATION

Meter for measuring heavily fluctuating flow rates.

FEATURES

- ▶ Calibratable and exchangeable measuring insert in one unit, suitable for calibration comprising: measuring insert as main meter, switch-over valve, measuring capsule as bypass meter
- ▶ Electronic sensor control for recording flow rate
- ▶ Lithium battery, lifetime up to 12 years
- ▶ Optical ZVEI interface equipped as standard
- ▶ Adjustable reading date for billing
- ▶ Rotatable integrator
- ▶ Single-line 7-digit display for easy meter reading
- ▶ Ideal design of housing and housing cover prevents sedimentation, stagnant water and air pockets
- ▶ Bypass line integrated in housing cover. No risk of sedimentation or corrosion.
- ▶ No measuring errors in the switch-over range
- ▶ In order to secure a safe switch-over the WESAN WPV E needs a minimum ingoing pressure of 0.6 bar

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ELECTRONIC - BASIC FEATURES

WESAN WPV 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 (Products - downloads)

DISPLAY

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

VOLUME - / PULSE OPEN COLLECTOR

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

INTERFACES - OVERVIEW

WESAN WPV 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 WPV E	
Pulse rates	l/pulse Decadic 1 ... 1000
Display	1 digit after comma
Pulse value 1	l/pulse 1 (factory setting)
Pulse value 2	l/pulse 100 (factory setting)
Pulse variants	Two forward pulses (factory settings); one forward and one backward pulse; pulse and direction signal

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GENERAL

		WESAN WPV E	
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*
Display range	0.05 l ... 999,999 m ³		
Approval	National 6.152 / 98.14		
Metrological class	B		

* See also special versions.

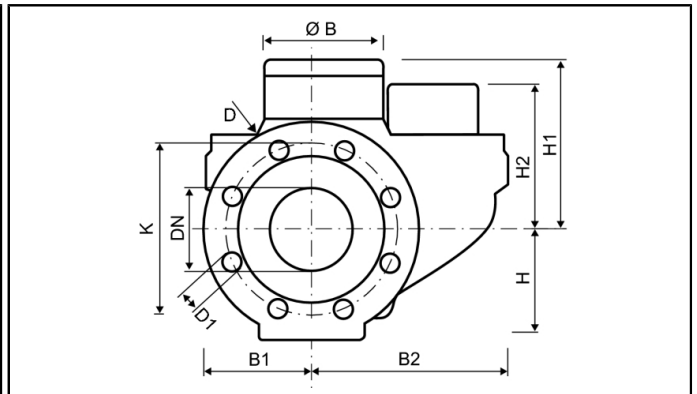
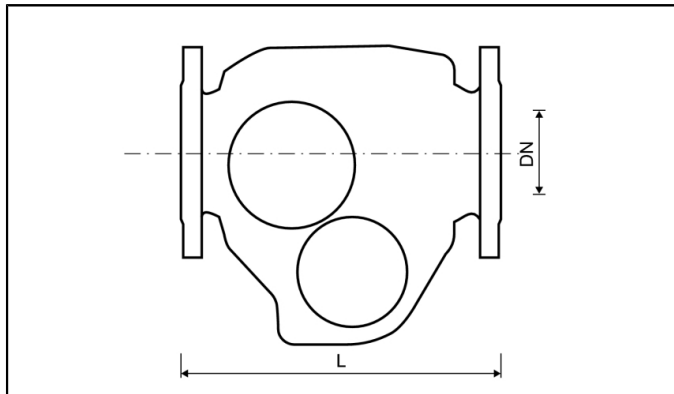
TECHNICAL DATA

Nominal diameter	DN	mm	50	80	100
Nominal flow rate (DIN ISO 4064)	Q _n	m ³ /h	15	40	60
Permissible continuous load (HY)	Q _n	m ³ /h	35	120	230
Maximum flow rate (short-term)	Q _{max}	m ³ /h	90	200	300
Transition flow rate	Q _t	m ³ /h	0.0375	0.375	0.0375
Minimum flow rate	Q _{min}	m ³ /h	0.02	0.02	0.02
Starting flow rate		l/h	15	15	15
Nominal flow rate bypass meter	Q _n	m ³ /h	2.5	2.5	2.5
Switch-over flow rate rising		m ³ /h	2.2	2.3	2.3
Switch-over flow rate falling		m ³ /h	1	1.5	1.5

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DIMENSIONS

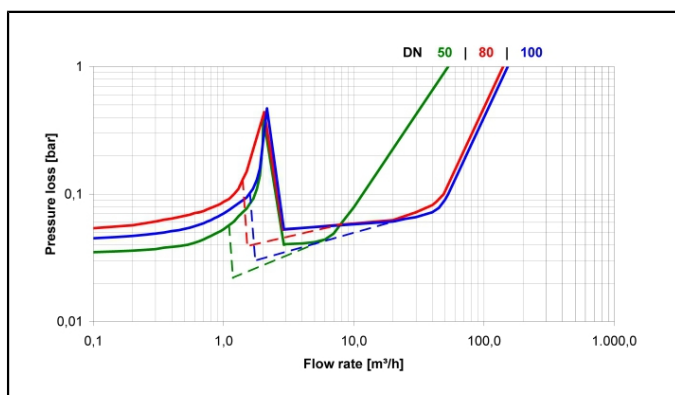


	DN	mm	50	80	100
Nominal diameter	DN	mm	50	80	100
Overall length (DIN 19625)	L	mm	270	300	360
Overall length (DIN ISO 4064)	L	mm	-	300	350
Flange diameter	D	mm	165	200	220
Hole circle diameter	K	mm	125	160	180
Number of screwholes		pcs	4	8 / 4	8
Screw hole diameter	D1	mm	18	18	18
Height	H	mm	75	101	101
Height	H1	mm	130	140	140
Height	H2	mm	136	146	146
Height to remove measuring insert		mm	245	280	280
Width	B1	mm	85	100	110
Width	B2	mm	160	180	180
Diameter	Ø B	mm	110	110	110
Weight of complete meter		kg	17.4	25.5	29
Weight of measuring insert		kg	6.3	9.3	9.3

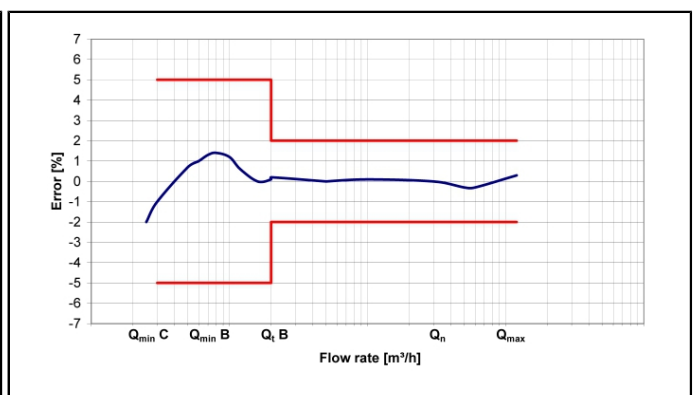
SPECIAL VERSIONS

- Versions with different nominal pressure on request
- Special flange holes on request

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph