Bulk Ultrasonic Smart Water Meter

ZLink bulk ultrasonic water meter is designed with high accuracy and a wide range of sizes, suitable for applications as key meters in water supply network, DMA flow meter and district aggregate meter.

With durable materials, Zlink bulk meter is trustworthy for water measurement in industrial and agricultural processes especially under harsh conditions.

Combining with various IoT technologies, ZLink Bulk helps the operator enhance communication coverage and data collection across the water supply network, which paves the way towards intelligent water utility infrastructure and smart city.
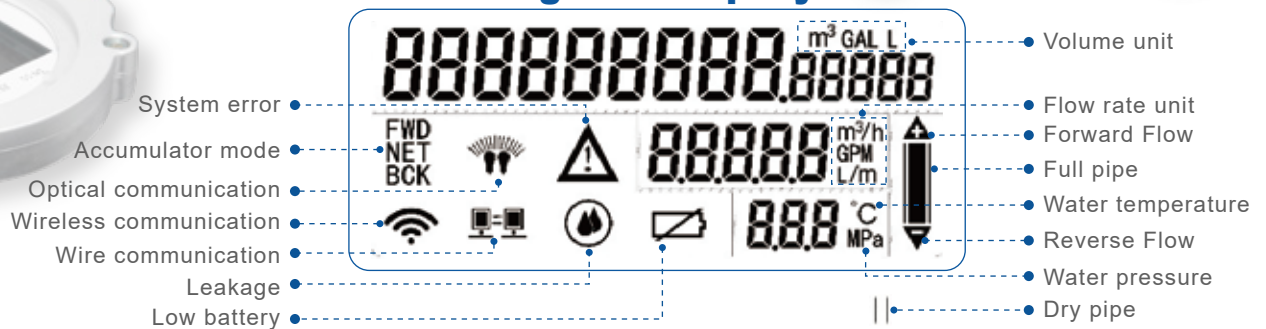
- Wide Measurement range of Q3/Q1= R500
- Ultralow starting flow rate avoids apparent losses
- Flexible flanges ensures ease of field installation
- Bi-directional flow measurement prevents water tamper
- Friendly big LCD displays cumulative volume, instantaneous flow and rich information of alarms
- No wearing parts, excellent long-term stability and reliability
- Integrated with pressure monitoring (Optional)
- Vacuuming Electron cavity to prevent glass fogging.
- Battery powered with lifetime of more than 10 years
- Supports a wide range of communication technologies like wireless GPRS, RS485, NB-IoT, etc.
- Protection level: Submersible-IP68
- Leakage detection and dry pipe detection
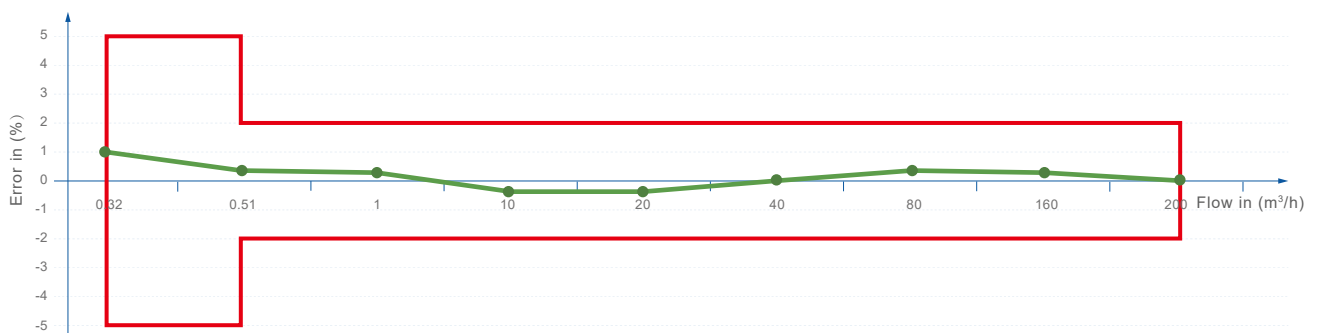
Digital Display

Label	
System error	Volume unit
Accumulator mode	Flow rate unit
Optical communication	Forward Flow
Wireless communication	Full pipe
Wire communication	Water temperature
Leakage	Reverse Flow
Low battery	Water pressure
	Dry pipe

Display segments: 88888888.88888 m³ GAL L
FWD NET BCK 88888 m³/h GPM L/m 8.8.8 °C MPa

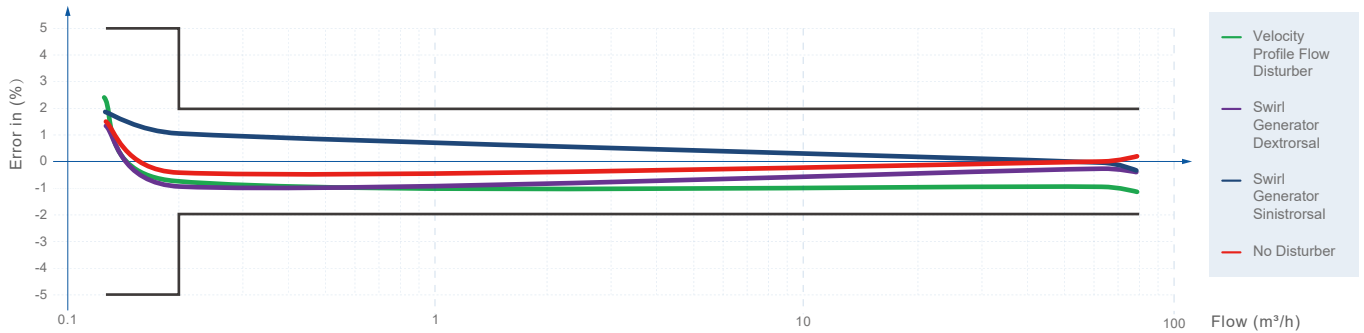## Communication interface

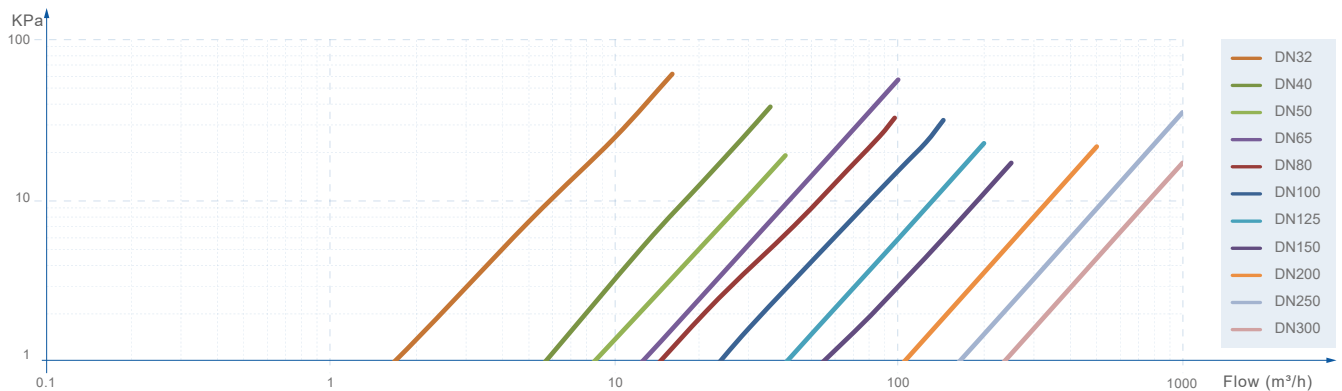|	
Pulse	Optocoupler high speed pulse, suitable for pulse verification Hall pulse, suitable for the field detection of cumulative volume
4-20mA	4-20mA current loop output corresponding instantaneous flow，The upper limit of flow corresponding to 20mA can be limited
RS485	Low power RS485 communication mode, adopts standard Modbus protocol
M-bus	EN13757 protocol, bus communication
NB-IoT	With narrow band of 180kHz, It can be directly deployed in GSM, UMTS or LTE network to enable smooth upgrade in future
GPRS	2G/3G/4G wireless remote communication, no concentrator is needed for data collection

Typical Error Graph

DN100 Performance Curve

Error in (%) vs Flow in (m³/h)

Y-axis (Error in (%)): 5, 4, 3, 2, 1, 0, -1, -2, -3, -4, -5

X-axis (Flow in (m³/h)): 0.32, 0.51, 1, 10, 20, 40, 80, 160, 200

DN80 U0D0 Testing Error Curve

Legend:
- Velocity Profile Flow Disturber
- Swirl Generator Dextrorsal
- Swirl Generator Sinistrorsal
- No Disturber

Y-axis: Error in (%)
X-axis: Flow (m³/h)

Head Loss Curve

Legend:
- DN32
- DN40
- DN50
- DN65
- DN80
- DN100
- DN125
- DN150
- DN200
- DN250
- DN300

Y-axis: KPa
X-axis: Flow (m³/h)

Technical Specification

Available Size	DN50-DN600
Standard	ISO4064/EN14154
Q3/Q1=R	500
Precision Class	Class 2
Pressure Loss	Δp16
Maximum Working Pressure	1.6MPa
Resolution of cumulative volume	0.0001~ 999999999.99999 m3
Working Environment	Temperature:-25~55℃, Humidity≤100%(RH)
Liquid Temperature Class	T30/T50
Flow profile sensitivity class	U0D0
Climate and mechanical environment safety level	O
Electromagnetic environment class	E2
Power supply	3.6V lithium batteries, Up to 10 years
Protection class	IP68
Construction	Materials: Cast Iron - epoxy coated / stainless steel Connections: flanges
Data Storage	For errors, alarms and measuring values, data logging capabilities to record up to 14*24 hourly, 366* daily, 72* monthly value
Communication interfaces	1.M_BUS 2.RS485 3.Pulse 4.NB-IoT 5.4-20mA 6.GPRS

Performance Parameter

Meter Size (mm)	Dynamic	Overload flow rate	Permanent flow rate	Transitional flow rate	Minimum flow rate	Starting flow rate (l/h)
DN (mm)	R	Q4 (m³/h)	Q3 (m³/h)	Q2 (m³/h)	Q1 (m³/h)	Q0 (L/h)
50		78.75	63	0.2016	0.126	7
65		78.75	63	0.2016	0.126	12
80		125	100	0.32	0.2	18
100		200	160	0.512	0.32	28
125		200	160	0.512	0.32	44
150	500	312.5	250	0.8	0.5	64
200		500	400	1.28	0.8	113
250		787.5	630	2.016	1.26	177
300		1250	1000	3.2	2	254
400		2000	1600	5.12	3.2	452
500		3125	2500	8	5	707
600		5000	4000	12.8	8	1018

Installation Dimension

Nominal Diameter (mm)	Dimension (mm)		Flange size (mm)			Sealing surface		Weight (kg)
	L Length	H Height	D Outer Diameter	K Hole Distance	Hole diameter x holes	d	f	
DN50	200 or 270	253	165	125	18 x 4	99	2	11.2 or 13.2
DN65	200	263	185	145	18 x 4	118	2	14.3
DN80	225 or 300	270	200	160	18 x 8	132	2	16.5 or 18.5
DN100	250 or 360	280	220	180	18 x 8	156	2	20.3 or 23.3
DN125	250	295	250	210	18 x 8	184	2	25.4
DN150	300	313	285	240	22 x 8	231	2	30.5
DN200	350	360	340	295	22 x 8	266	2	43.5
DN250	450	410	395	350	22 x 12	319	2	66.6
DN300	500	445	445	400	22 x 12	370	2	86.3
DN400	600	570	565	515	26 x 16	480	2	127.5
DN500	600	680	670	620	26 x 20	582	2	155.9
DN600	800	790	780	725	30 x 20	682	2	276.7