HYDROMETER

SHARKY 775

COMPACT ENERGY METER | ULTRASONIC

HYDRUS

ULTRASONIC METER

IZAR@NET

SOFTWARE

DIEHL
Metering

smart in solutions

SHARKY 775

HYDROMETER

COMPACT ENERGY METER | ULTRASONIC

APPLICATION

The ultrasonic compact energy meter can be used for measuring the energy consumption in heating / cooling application for billing purposes.

FEATURES

- Approval for ultrasonic meter with dynamic range of 1:250 (q_i:q_p) in class 2
- Improved power consumption --> longer battery lifetime
- Approved according MID in class 2 and 3 and PTB K7.2 (cooling)
- High long term stability, tested and verified at independent AGFW test
- Insensitive against dirt
- Versatile possibility of power supply
- Integrated Radio, Real Data or Open Metering Standard (868 or 434 MHz)
- Inidividual remote reading (AMR) with add on modules Plug & Play
- Extensive readable data memory
- 2 communication ports (e. g. M-Bus + Radio)
- Significantly improved radio performance

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GENERAL

	SHARKY
Application	heating - cooling - heating/cooling
Approval	MID (DE-10-MI004-PTB013) and PTB K7.2 (cooling)
Mounting position flow sensor	any position
Protection class flow sensor	heating: IP 54; cooling, heating/cooling: IP 68
Battery supply	3.6 VDC - A-cell max. 11 years lifetime; 3.6 VDC- D-cell max. 20 years lifetime
Mains supply	24 VAC; 230 VAC
Temperature sensor type	Pt 100 or Pt 500 with 2-wire leads; Ø 5.2 / 6 mm or direct sensor
Cable length of temperature sensor	Pt 100: 2 m; Pt 500: 2 / 3[1] / 5 m
Volume measuring cycle	with mains unit: ⅛ s; with A-cell battery: 2 s; with D-cell battery: 1 s

1: only for meters with PTB K7.2 approval

CALCULATOR - BASIC FEATURES

		SHARKY
Ambient class		class E1 + M1
Ambient temperature	°C	5 ... 55
Ambient storage temperature	°C	-25 ... +70
Protection class		IP 54
Communication		2 communication slots (e. g. M-Bus + M-Bus; 2 primary adresses, 1 secondary adress)
Integrated Radio		Optional
Interfaces standard		Optical ZVEI interface
Interfaces optional		2 slots for modules with M-Bus, L-Bus, RS232, RS485, pulse output, pulse input, combined pulse in-/output or analogue output
Temperature range heatmeter	°C	5 ... 130 / 150
Temperature range cooling meter and heating/cooling meter	°C	5 ... 50 / 5 ... 105
Extensive readable data memory		Monthly memory[1]; historical LOG memory; event memory

1: programmable storage interval (daily, weekly, monthly, ...)

CALCULATOR - INTEGRATED RADIO

	SHARKY
Frequency band	868 or 434 MHz
Type of radio telegram	Real Data or Open Metering Standard (OMS)
Transmission data updating	Online - no time delay between value measurement and data transmission
Data transmission	Unidirectional
Sending interval	12 ... 20 s; depending on length of telegram (duty cycle)

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DISPLAY

	SHARKY
Display indication	LCD, 8-digit
Units	MWh - kWh - GJ - Gcal - MBtu - gal - GPM - °C - °F - m³ - m³/h
Total values	99,999,999 - 9,999,999.9 - 999,999.99 - 99,999.999
Values displayed	Energy - Power - Volume - Flow rate - Temperature and more

INTERFACES

	SHARKY
Optical	ZVEI interface, for communication and testing, M-Bus protocol
M-Bus	Configurable telegram, according to EN1434-3. Data reading and parametrization are via two wires with polarity reversal protection.
L-Bus	Adapter for external radio module; configurable telegram, according to EN1434-3. Data reading and parametrization are via two wires with polarity reversal protection.
RS232	Serial interface for communication with external devices. A special data cable is required. M-Bus protocol.
RS485	Serial interface for communication with external devices. Power supply with 12V ± 5V. M-Bus protocol.
Pulse output	Module with 2 Open Collector pulse outputs (potential-free), 4 Hz (pulse width 125 ms), 100 Hz (pulse width ≥ 5 ms), ratio: pulse duration / pulse break ~ 1:1. Configurable via IZAR@SET software.
Pulse input	Module with 2 pulse inputs, max. 20Hz. Configurable via IZAR@SET software. Data can be transferred remotely.
Combined pulse in-/output	Module with 2 pulse inputs and 1 pulse output. Configurable via IZAR@SET software.
Analogue output	Module for 4 ... 20 mA with 2 programmable passive outputs, programmable value in case of error.

TEMPERATURE INPUT

			SHARKY
Sensor current		mA	Pt 100 peak < 8; rms < 0.015, Pt 500 peak < 2; rms < 0.012
Measuring cycle	T	s	with mains unit: 2 s; with A-cell battery: 16 s; with D-cell battery: 4 s
Starting temperature difference	$\Delta\Theta$	K	0.125
Min. temperature difference	$\Delta\Theta_{min}$	K	3
Max. temperature difference	$\Delta\Theta_{max}$	K	177
Absolute temperature measuring range	Θ	°C	1 ... 180

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TECHNICAL DATA FLOW SENSOR

Nominal flow rate	q_p	m^3/h	0.6	0.6	0.6	1.5	1.5	1.5
Nominal diameter	DN	mm	15	20	20	15	20	20
Overall length	L	mm	110	130	190	110	130	190
Starting flow rate		l/h	1	1	1	2.5	2.5	2.5
Minimum flow rate	q_i	l/h	6	6	6	6	6	6
Maximum flow rate	q_s	m^3/h	1.2	1.2	1.2	3	3	3
Overload flow rate		m^3/h	2.5	2.5	2.5	4.6	4.6	4.6
Operating pressure	PN	bar	16[1]	16[1]	16[1]	16[1]	16[1]	16[1]
Pressure loss at q_p	Δp	mbar	85	85	85	75	75	75
Temp. range heating		°C	5 ... 130	5 ... 130	5 ... 130	5 ... 130	5 ... 130	5 ... 130
Temp. range cooling		°C	5 ... 50	5 ... 50	5 ... 50	5 ... 50	5 ... 50	5 ... 50
Temp. range heating/cooling		°C	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105
Flow resistance coefficient	Zeta		21.3	67.5	67.5	4.3	13.6	13.6

Nominal flow rate	q_p	m^3/h	2.5	2.5	3.5	3.5	6	6
Nominal diameter	DN	mm	20	20	25	32	25	32
Overall length	L	mm	130	190	260	260	260	260
Starting flow rate		l/h	4	4	7	7	7	7
Minimum flow rate	q_i	l/h	10	10	35	35	24	24
Maximum flow rate	q_s	m^3/h	5	5	7	7	12	12
Overload flow rate		m^3/h	6.7	6.7	18.4	18.4	18.4	18.4
Operating pressure	PN	bar	16[1]	16[1]	16[1]	16[1]	16[1]	16[1]
Pressure loss at q_p	Δp	mbar	100	100	44	44	128	128
Temp. range heating		°C	5 ... 130	5 ... 130	5 ... 150	5 ... 150	5 ... 150	5 ... 150
Temp. range cooling		°C	5 ... 50	5 ... 50	5 ... 50	5 ... 50	5 ... 50	5 ... 50
Temp. range heating/cooling		°C	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105
Flow resistance coefficient	Zeta		4	4	2.8	7.4	2.8	7.4

Nominal flow rate	q_p	m^3/h	10	10	15	25	40	60
Nominal diameter	DN	mm	40	40	50	65	80	100
Overall length	L	mm	200	300	270	300	300	360
Starting flow rate		l/h	20	20	40	50	80	120
Minimum flow rate	q_i	l/h	40[3]/100	40[3]/100	60[3]/150	100[3]/250	160	240[3]/600[4]/1200[5]
Maximum flow rate	q_s	m^3/h	20	20	30	50	80	120
Overload flow rate		m^3/h	24	24	36	60	90	132
Operating pressure	PN	bar	16[1]	16[1]	25[2]	25[2]	25[2]	16/25[2]
Pressure loss at q_p	Δp	mbar	95	95	80	75	80	75
Temp. range heating		°C	5 ... 150	5 ... 150	5 ... 150	5 ... 150	5 ... 150	5 ... 150
Temp. range cooling		°C	5 ... 50	5 ... 50	5 ... 50	5 ... 50	5 ... 50	5 ... 50
Temp. range heating/cooling		°C	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105
Flow resistance coefficient	Zeta		3.8	3.8	3.5	3.4	3.4	3.8

1: Also available in PN 25 bar
2: Also available in PN 40 bar
3: Only for horizontal installation
4: Only in rising or falling pipes or tilted installation
5: Only up side down installation

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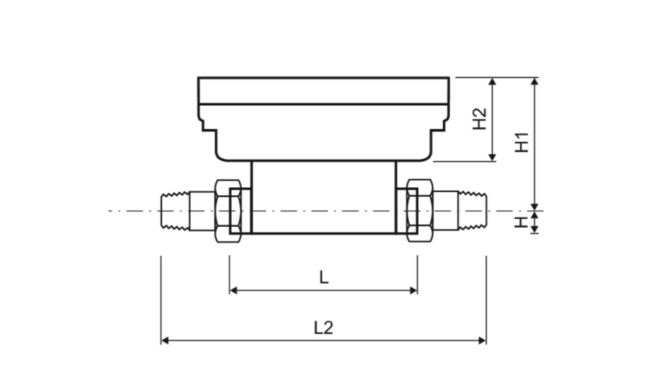
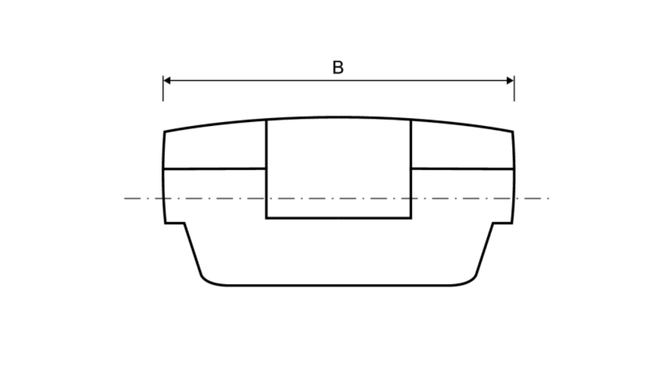
DIMENSIONS THREAD VERSION





Nominal flow rate	qp	m³/h	0.6	0.6	0.6	1.5	1.5	1.5
Nominal diameter	DN	mm	15	20	20	15	20	20
Overall length	L	mm	110	130	190	110	130	190
Overall length with coupling	L2	mm	190	230	290	190	230	290
Length of calculator	L1	mm	150	150	150	150	150	150
Height	H	mm	14.5	18	18	14.5	18	18
Height	H1	mm	82	84	84	82	84	84
Height of calculator	H2	mm	54	54	54	54	54	54
Width of calculator	B	mm	100	100	100	100	100	100
Connection thread on meter		Inch	G¾B	G1B	G1B	G¾B	G1B	G1B
Connection thread of coupling		Inch	R½	R¾	R¾	R½	R¾	R¾
Weight		kg	0.76	0.85	0.96	0.76	0.85	0.96

Nominal flow rate	qp	m³/h	2.5	2.5	3.5	3.5	6	6
Nominal diameter	DN	mm	20	20	25	32	25	32
Overall length	L	mm	130	190	260	260	260	260
Overall length with coupling	L2	mm	230	290	380	-	380	-
Length of calculator	L1	mm	150	150	150	-	150	-
Height	H	mm	18	18	23	-	23	-
Height	H1	mm	84	84	88.5	-	88.5	-
Height of calculator	H2	mm	54	54	54	-	54	-
Width of calculator	B	mm	100	100	100	-	100	-
Connection thread on meter		Inch	G1B	G1B	G1¼B	-	G1¼B	-
Connection thread of coupling		Inch	R¾	R¾	R1	-	R1	-
Weight		kg	0.85	0.96	1.5	-	1.5	-

Nominal flow rate	qp	m³/h	10	10	15	25	40	60
Nominal diameter	DN	mm	40	40	50	65	80	100
Overall length	L	mm	200	300	270	300	300	360
Overall length with coupling	L2	mm	340	440	-	-	-	-
Length of calculator	L1	mm	150	150	-	-	-	-
Height	H	mm	33	33	-	-	-	-
Height	H1	mm	94	94	-	-	-	-
Height of calculator	H2	mm	54	54	-	-	-	-
Width of calculator	B	mm	100	100	-	-	-	-
Connection thread on meter		Inch	G2B	G2B	-	-	-	-
Connection thread of coupling		Inch	R1½	R1½	-	-	-	-
Weight		kg	2.4	3	-	-	-	-

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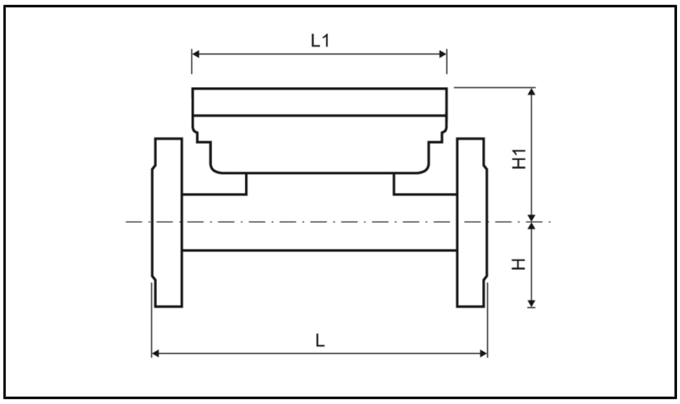
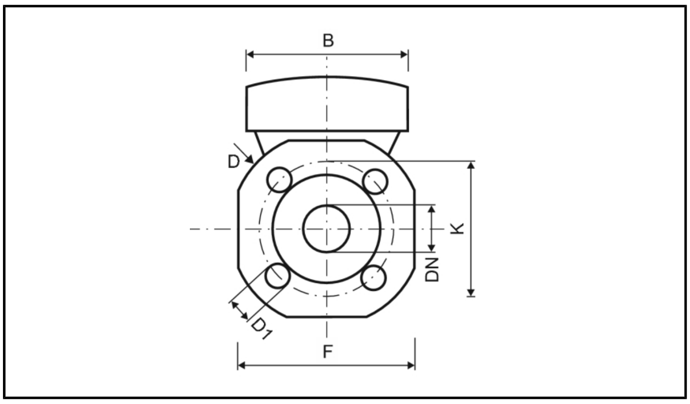
DIMENSIONS FLANGE VERSION





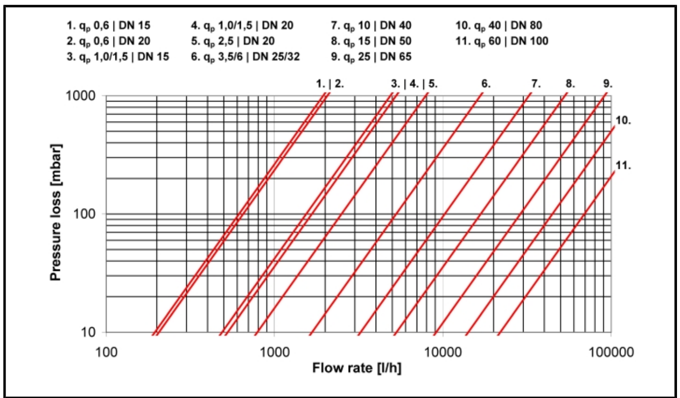
Nominal flow rate	q_p	m³/h	0.6	0.6	0.6	1.5	1.5	1.5
Nominal diameter	DN	mm	15	20	20	15	20	20
Overall length	L	mm	110	130	190	110	130	190
Length of calculator	L1	mm	-	-	150	-	-	150
Height	H	mm	-	-	47.5	-	-	47.5
Height	H1	mm	-	-	84	-	-	84
Height of calculator	H2	mm	-	-	54	-	-	54
Width of calculator	B	mm	-	-	100	-	-	100
Flange dimension	F	mm	-	-	95	-	-	95
Flange diameter	D	mm	-	-	105	-	-	105
Hole circle diameter	K	mm	-	-	75	-	-	75
Screwhole diameter	D1	mm	-	-	14	-	-	14
Number of screwholes		pcs	-	-	4	-	-	4
Weight		kg	-	-	2.75	-	-	2.75

Nominal flow rate	q_p	m³/h	2.5	2.5	3.5	3.5	6	6
Nominal diameter	DN	mm	20	20	25	32	25	32
Overall length	L	mm	130	190	260	260	260	260
Length of calculator	L1	mm	-	150	150	150	150	150
Height	H	mm	-	47.5	50	62.5	50	62.5
Height	H1	mm	-	84	88.5	88.5	88.5	88.5
Height of calculator	H2	mm	-	54	54	54	54	54
Width of calculator	B	mm	-	100	100	100	100	100
Flange dimension	F	mm	-	95	100	125	100	125
Flange diameter	D	mm	-	105	114	139	114	139
Hole circle diameter	K	mm	-	75	85	100	85	100
Screwhole diameter	D1	mm	-	14	14	18	14	18
Number of screwholes		pcs	-	4	4	4	4	4
Weight		kg	-	2.75	3.5	4.8	3.5	4.8

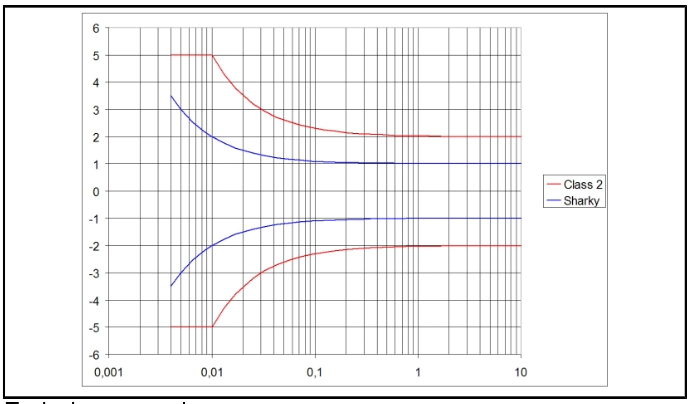
Nominal flow rate	q_p	m³/h	10	10	15	25	40	60
Nominal diameter	DN	mm	40	40	50	65	80	100
Overall length	L	mm	200	300	270	300	300	360
Length of calculator	L1	mm	-	150	150	150	150	150
Height	H	mm	-	69	73.5	85	92.5	108
Height	H1	mm	-	94	99	106.5	114	119
Height of calculator	H2	mm	-	54	54	54	54	54
Width of calculator	B	mm	-	100	100	100	100	100
Flange dimension	F	mm	-	138	147	170	185	216
Flange diameter	D	mm	-	148	163	184	200	235
Hole circle diameter	K	mm	-	110	125	145	160	180[1]/190
Screwhole diameter	D1	mm	-	18	18	18	19	19[1]/22
Number of screwholes		pcs	-	4	4	8	8	8
Weight		kg	-	6.8	7.6	9.6	11.2	17

1: values for PN16 housing

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

AQUARIUS S / RS / P

SINGLE-JET METER

HYDROMETER

APPLICATION

For measuring consumption in apartments and buildings for billing purposes

FEATURES

- Single-jet impeller meter of fully dry-running design with magnetic coupling
- Modularity with the HYDROMETER system world
- Excellent starting flow rate
- Low pressure loss
- Installation position: horizontal, vertical, riser pipe, downpipe
- Compact design
- Rotatable counter
- Shield against static magnetic fields according to VDDW standard and EN 14154
- Working pressure 10 bar according to DIN 2401
- Protection class IP 54

AQUARIUS S / RS / P

SINGLE-JET METER

GENERAL

			AQUARIUS S / RS / P
Medium temperature range cold water		°C	0 ... 30
Medium temperature range warm water		°C	0 ... 90
Nominal pressure	PN	bar	10
Display range			0.1 l ... 9,999 m³/h
EC type approval EO 6 30 °C			D 98 / 6.131.09
EC type approval EO 6 90 °C			D 98 / 6.331.93
Metrological class			A/B•H
Protection class			IP 54

Note:
HYDROMETER single-jet impeller meters are delivered calibrated in accordance with the calibration regulations. (AQUARIUS S with 10 l/pulse cannot be calibrated.)

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Subject to technical adjustments · 25.11.2009

AQUARIUS S / RS / P

SINGLE-JET METER

VERSIONS

AQUARIUS S

AQUARIUS RS

AQUARIUS P

Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	80
AQUARIUS S - radio segment retrofittable			•
AQUARIUS RS - radio segment mounted			•
AQUARIUS P - pulse output		l/pulse	10 / 100

Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	110
AQUARIUS S - radio segment retrofittable			•
AQUARIUS RS - radio segment mounted			•
AQUARIUS P - pulse output		l/pulse	10 / 100

Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	130
AQUARIUS S - radio segment retrofittable			•
AQUARIUS RS - radio segment mounted			•
AQUARIUS P - pulse output		l/pulse	-

Nominal flow rate	**Q_n**	**m³/h**	**2.5**
Overall length	L	mm	130
AQUARIUS S - radio segment retrofittable			•
AQUARIUS RS - radio segment mounted			•
AQUARIUS P - pulse output		l/pulse	10 / 100

Note:
AQUARIUS S: radio segment IZAR RS 868 or 434 MHz retrofittable
AQUARIUS RS: with mounted and configured radio segment IZAR RS 868 or 434 MHz
AQUARIUS P: pulse output by reed switch, cable length 2 m LiYY 2x0.25 mm², contact rating 24 V ~ 0.2 A, max. cable length 20-50 m (depending on electrical perturbation). Switching amplifier have to be used at a longer distance.

AQUARIUS S / RS / P

SINGLE-JET METER

TECHNICAL DATA

Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	80
Nominal diameter	DN	mm	15
Maximum flow rate (short-term)	Q_{max}	m³/h	3
Transition flow rate horizontal	Q_t	l/h	120
Transition flow rate any position	Q_t	l/h	150
Minimum flow rate horizontal	Q_{min}	l/h	30
Minimum flow rate any position	Q_{min}	l/h	60
Starting flow rate horizontal		l/h	8
Starting flow rate any position		l/h	14
Pressure loss at Q_n		bar	0.19

Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	110
Nominal diameter	DN	mm	15
Maximum flow rate (short-term)	Q_{max}	m³/h	3
Transition flow rate horizontal	Q_t	l/h	120
Transition flow rate any position	Q_t	l/h	150
Minimum flow rate horizontal	Q_{min}	l/h	30
Minimum flow rate any position	Q_{min}	l/h	60
Starting flow rate horizontal		l/h	8
Starting flow rate any position		l/h	14
Pressure loss at Q_n		bar	0.19

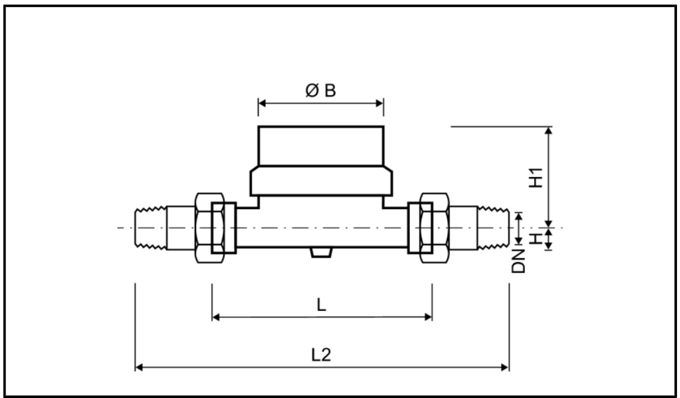
Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	130
Nominal diameter	DN	mm	15
Maximum flow rate (short-term)	Q_{max}	m³/h	3
Transition flow rate horizontal	Q_t	l/h	120
Transition flow rate any position	Q_t	l/h	150
Minimum flow rate horizontal	Q_{min}	l/h	30
Minimum flow rate any position	Q_{min}	l/h	60
Starting flow rate horizontal		l/h	8
Starting flow rate any position		l/h	14
Pressure loss at Q_n		bar	0.19

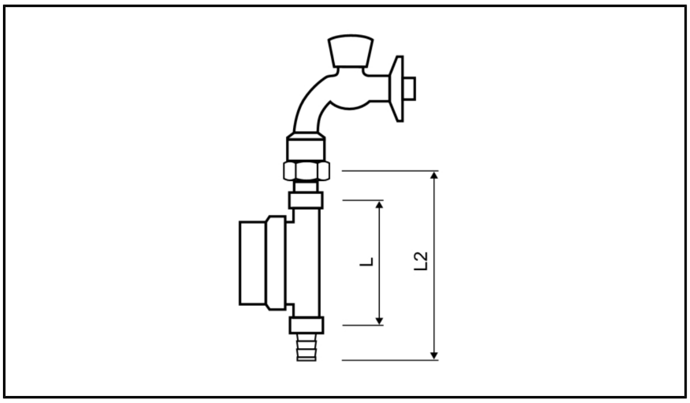
Nominal flow rate	**Q_n**	**m³/h**	**2.5**
Overall length	L	mm	130
Nominal diameter	DN	mm	20
Maximum flow rate (short-term)	Q_{max}	m³/h	5
Transition flow rate horizontal	Q_t	l/h	200
Transition flow rate any position	Q_t	l/h	250
Minimum flow rate horizontal	Q_{min}	l/h	50
Minimum flow rate any position	Q_{min}	l/h	100
Starting flow rate horizontal		l/h	12
Starting flow rate any position		l/h	18
Pressure loss at Q_n		bar	0.25

AQUARIUS S / RS / P

SINGLE-JET METER

DIMENSIONS





Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	80
Overall length with coupling	L2	mm	160
Overall length with tap coupling	L2	mm	138
Connection thread on meter		Inch	G¾B
Connection thread of coupling		Inch	R½
Height	H	mm	14
Height (AQUARIUS S / P)	H1	mm	52
Height (AQUARIUS RS)	H1	mm	69
Diameter	Ø B	mm	64
Weight without coupling		kg	0.58
Weight with coupling		kg	0.4

Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	110
Overall length with coupling	L2	mm	190
Overall length with tap coupling	L2	mm	168
Connection thread on meter		Inch	G¾B
Connection thread of coupling		Inch	R½
Height	H	mm	14
Height (AQUARIUS S / P)	H1	mm	52
Height (AQUARIUS RS)	H1	mm	69
Diameter	Ø B	mm	64
Weight without coupling		kg	0.64
Weight with coupling		kg	0.44

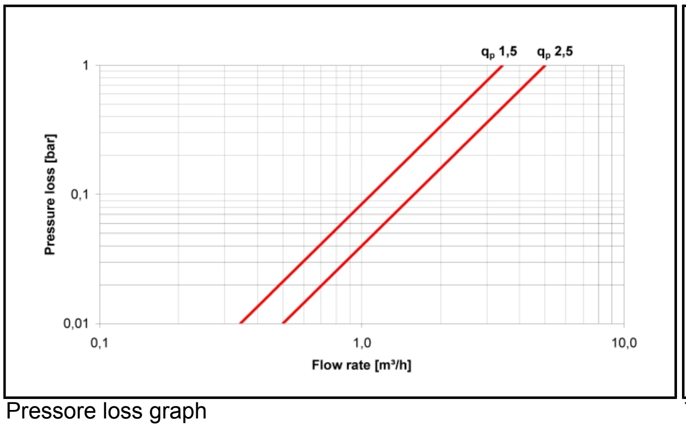
Nominal flow rate	**Q_n**	**m³/h**	**1.5**
Overall length	L	mm	130
Overall length with coupling	L2	mm	210
Overall length with tap coupling	L2	mm	188
Connection thread on meter		Inch	G¾B
Connection thread of coupling		Inch	R½
Height	H	mm	14
Height (AQUARIUS S / P)	H1	mm	52
Height (AQUARIUS RS)	H1	mm	69
Diameter	Ø B	mm	64
Weight without coupling		kg	0.72
Weight with coupling		kg	0.54

Nominal flow rate	**Q_n**	**m³/h**	**2.5**
Overall length	L	mm	130
Overall length with coupling	L2	mm	228
Overall length with tap coupling	L2	mm	-
Connection thread on meter		Inch	G1B
Connection thread of coupling		Inch	R¾

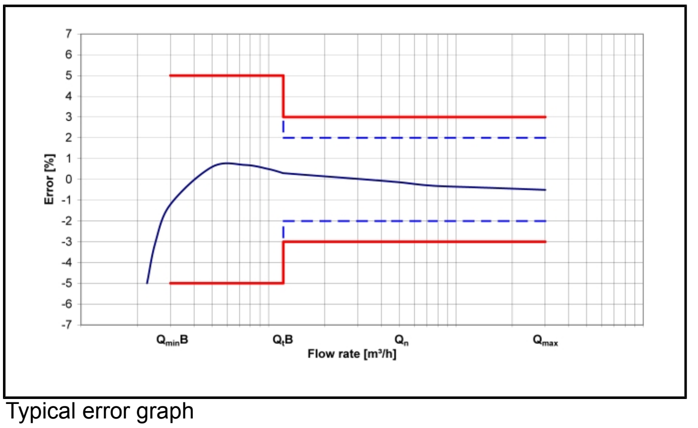
AQUARIUS S / RS / P

SINGLE-JET METER

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressore loss graph



Typical error graph

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CORONA E / FLYPPER

HYDROMETER

ELECTRONIC METER | MULTI-JET

APPLICATION

Fully electronic compact water meter with impeller scanning for recording volume. Highly accurate recording of all billing data at medium temperatures up to 90 °C.

FEATURES

- Electronic sensor control for recording flow rate
- Lithium battery, lifetime 10 years
- Optical ZVEI interface equipped as standard
- Adjustable reading date for billing
- Rotatable integrator
- Single-line 7-digit display for easy meter reading

CORONA E / FLYPPER

ELECTRONIC METER | MULTI-JET

ELECTRONIC - BASIC FEATURES

	CORONA E / FLYPPER
Ambient class	OIML R49 class C / MID E2 + M1
Protection class	IP 54 (hot water) / IP 68 (cold water)
Interfaces standard	Optical ZVEI
Interfaces optional	M-Bus, L-Bus, pulse

Note: HYDRO-SET Software for configuration of meters, readout of measured values and printout of meter logs. Available under www.hydrometer.de (Products - downloads)

DISPLAY

	CORONA E / FLYPPER
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

		CORONA E / FLYPPER
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

			CORONA E / FLYPPER
Operating voltage	UN	VDC	3.0 (lithium battery)
Battery lifetime			10 years
Nominal power	PN	µW	30

INTERFACES - OVERVIEW

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

CORONA E / FLYPPER

ELECTRONIC METER | MULTI-JET

PULSE INTERFACE - SPECIFICATION

		CORONA E / FLYPPER
Pulse rates	l/pulse	Decadic 0.1 ... 100
Pulse value 1	l/pulse	0.1 (factory setting)
Pulse value 2	l/pulse	1 (factory setting)
Pulse variants		Two forward pulses; one forward and one backward pulse; pulse and direction signal

Note: In the field the pulse values can be configured as desired in the specified value range.

CORONA E / FLYPPER DN 15 - 20

ELECTRONIC METER | MULTI-JET

GENERAL

			DN 15 - 20
Temperature range		°C	5 ... 90
Ambient operating temperature		°C	0 ... 55
Ambient storage temperature		°C	-20 ... 55
Nominal pressure	PN	bar	16
Mounting position			In any position, also overhead
Approval - Q_3 2.5 T30			MID (DE-07-MI001-PTB008)
Approval - Q_3 2.5 T90			MID (LNE 12552)
Approval - Q_3 4 T30/T90			MID (LNE 13629)

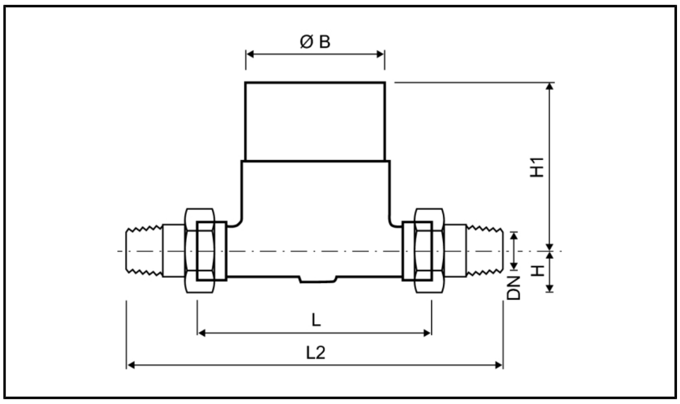
TECHNICAL DATA

Nominal flow rate	Q_3	m³/h	2.5	2.5	2.5	4	4	4
Nominal flow rate	Q_n	m³/h	1.5	1.5	1.5	2.5	2.5	2.5
Overall length	L	mm	110	130	165	105	130	190
Overload flow rate	Q_4	m³/h	3.125	3.125	3.125	5	5	5
Transition flow rate	Q_2	l/h	32	32	32	40	40	40
Minimum flow rate	Q_1	l/h	20	20	20	25	25	25
Maximum flow rate (short-term)	Q_{max}	m³/h	3	3	3	5	5	5
Transition flow rate	Q_t	l/h	22.5	22.5	22.5	37.5	37.5	37.5
Minimum flow rate	Q_{min}	l/h	15	15	15	25	25	25
Starting flow rate		l/h	3 - 4	3 - 4	3 - 4	5 - 6	5 - 6	5 - 6
Pressure loss at Q_3	Δp	mbar	615	615	615	242	242	242
Flow rate at 0.1 bar pressure loss		m³/h	0.962	0.962	0.962	1.607	1.607	1.607

CORONA E / FLYPPER DN 15 - 20

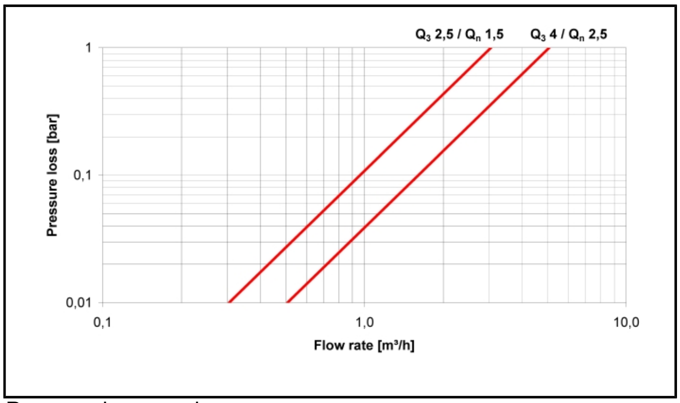
ELECTRONIC METER | MULTI-JET

DIMENSIONS

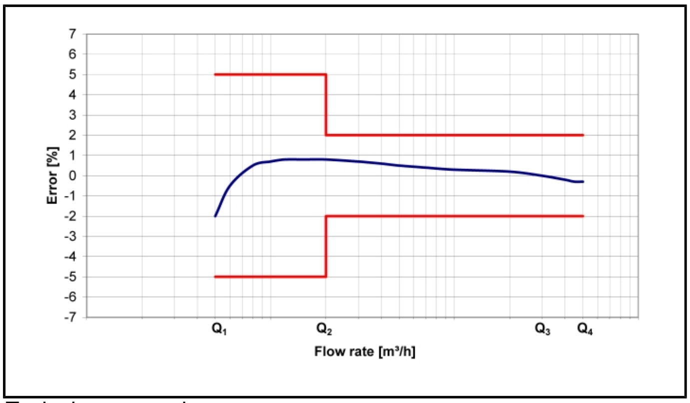


Nominal flow rate	Q_3	m³/h	2.5	2.5	2.5	4	4	4
Nominal flow rate	Q_n	m³/h	1.5	1.5	1.5	2.5	2.5	2.5
Overall length	L	mm	110	130	165	105	130	190
Nominal diameter	DN	mm	15	15	15	20	20	20
Overall length with coupling	L2	mm	186	206	241	181	206	266
Connection thread on meter		Inch	G¾B	G¾B	G¾B	G1B	G1B	G1B
Connection thread of coupling		Inch	R½	R½	R½	R¾	R¾	R¾
Height	H	mm	20	20	20	20	20	20
Height	H1	mm	75	75	75	75	75	75
Diameter	Ø B	mm	62	62	62	62	62	62
Weight without coupling		kg	0.8	1	1.3	0.8	1	1.5
Weight with coupling		kg	1	1.2	1.5	1.3	1.5	2

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

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CORONA E / FLYPPER DN 25 - 40 | HORIZONTAL

ELECTRONIC METER | MULTI-JET

GENERAL

			DN 25 - 40 | HORIZONTAL
Temperature range		°C	5 ... 90
Ambient operating temperature		°C	0 ... 55
Ambient storage temperature		°C	-20 ... 55
Nominal pressure	PN	bar	16
Mounting position			Horizontal
Approval			EN 1434 (22.52 / 06.02)

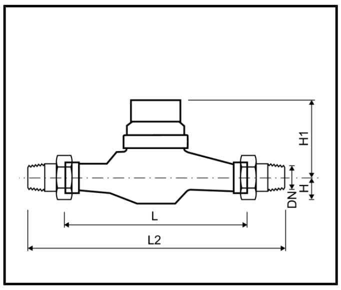
TECHNICAL DATA

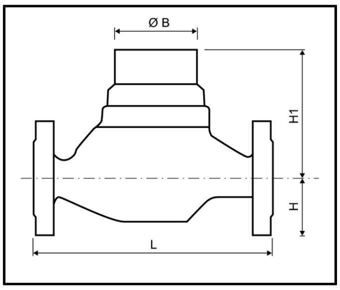
Nominal diameter	DN	mm	25	25	32	40
Nominal flow rate	Q_n	m³/h	6	6	6	10
Overall length	L	mm	175	260	260	300
Maximum flow rate (short-term)	Q_{max}	m³/h	12	12	12	20
Transition flow rate	Q_t	l/h	480	480	480	800
Minimum flow rate	Q_{min}	l/h	90	90	90	160
Starting flow rate		l/h	20	20	20	45
Flow rate at 1 bar pressure loss (30 °C)		m³/h	12	12	12	24

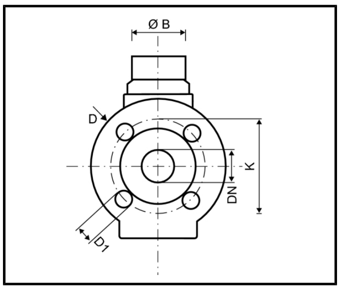
CORONA E / FLYPPER DN 25 - 40 | HORIZONTAL

ELECTRONIC METER | MULTI-JET

DIMENSIONS

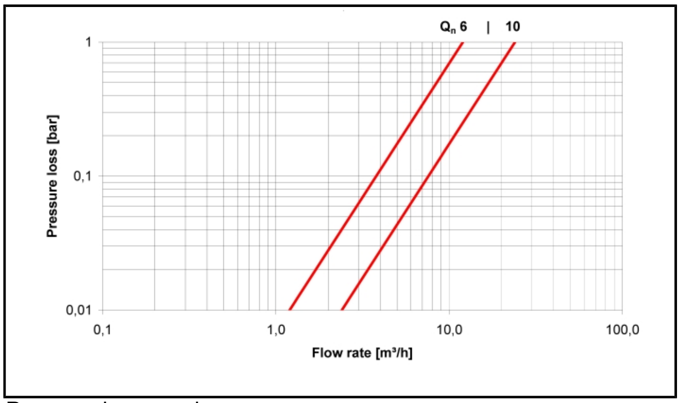




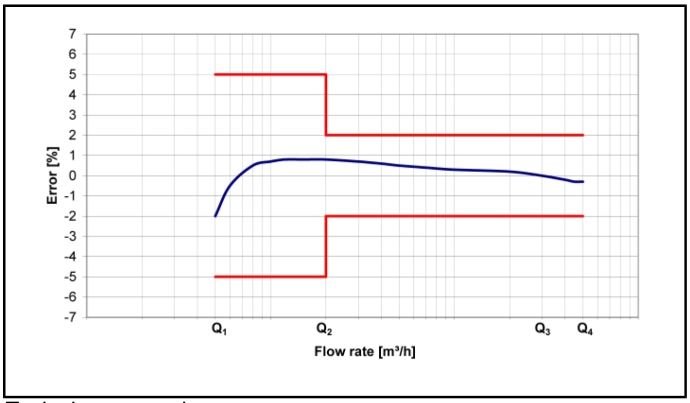


Nominal diameter	DN	mm	25	25	32	40
Nominal flow rate	Q_n	m³/h	6	6	6	10
Overall length	L	mm	175	260	260	300
Overall length with coupling	L2	mm	293	378	378	438
Connection thread on meter		Inch	G1¼B	G1¼B	G1½B	G2B
Connection thread of coupling		Inch	R1	R1	R1	R1½
Flange diameter	D	mm	-	115	-	150
Hole circle diameter	K	mm	-	85	-	110
Number of screwholes		pcs	-	4	-	4
Screwhole diameter	D1	mm	-	18	-	18
Height	H	mm	45	45	45	50
Height	H1	mm	110	110	110	125
Diameter	Ø B	mm	62	62	62	62
Weight without coupling		kg	1.4	2.9	2.9	5.1
Weight with coupling		kg	2.1	3.6	3.6	6.0
Weight with flanges		kg	-	4.9	-	8.6

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

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CORONA E / FLYPPER DN 25 - 40 | VERTICAL

ELECTRONIC METER | MULTI-JET

GENERAL

			DN 25 - 40 | VERTICAL
Temperature range		°C	5 ... 90
Ambient operating temperature		°C	0 ... 55
Ambient storage temperature		°C	-20 ... 55
Nominal pressure	PN	bar	16
Mounting position			Rising pipe, downpipe
Approval			EN 1434 (22.52 / 06.02) / MID (DE-09-MI004-PTB001)

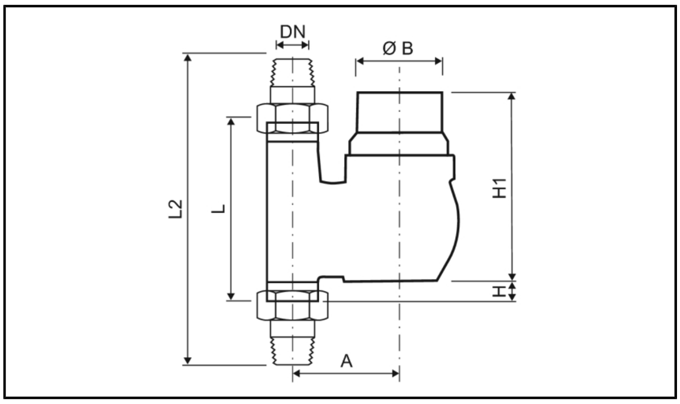
TECHNICAL DATA

Nominal diameter	DN	mm	25	32	40
Nominal flow rate	Q_n	m³/h	6	6	10
Maximum flow rate (short-term)	Q_{max}	m³/h	12	12	20
Transition flow rate	Q_t	l/h	480	480	800
Minimum flow rate	Q_{min}	l/h	90	90	160
Starting flow rate		l/h	20	20	45
Flow rate at 1 bar pressure loss (30 °C)		m³/h	12	12	22

CORONA E / FLYPPER DN 25 - 40 | VERTICAL

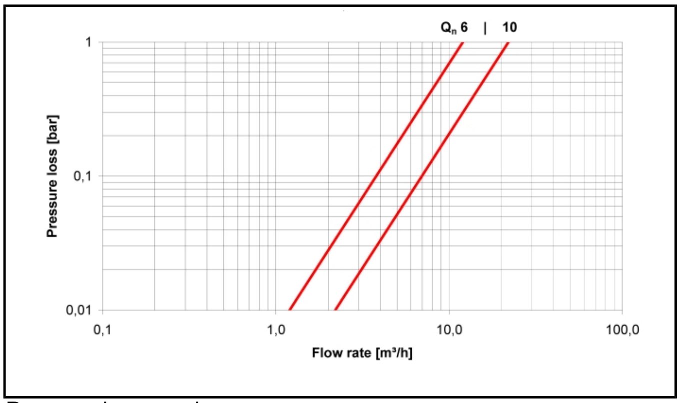
ELECTRONIC METER | MULTI-JET

DIMENSIONS

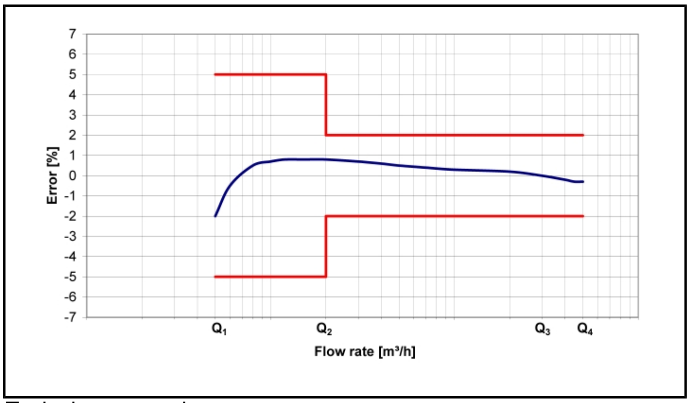


Nominal diameter	DN	mm	25	32	40
Nominal flow rate	Q_n	m³/h	6	6	10
Overall length	L	mm	150	150	200
Overall length with coupling	L2	mm	268	268	338
Connection thread on meter		Inch	G1¼B	G1½B	G2B
Connection thread of coupling		Inch	R1	R1	R1½
Height	H	mm	31	31	21
Height	H1	mm	161	161	191
Diameter	Ø B	mm	62	62	62
Width	A	mm	146	146	185
Weight without coupling		kg	3.1	3.1	5.5
Weight with coupling		kg	3.7	3.7	6.7

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

HYDRUS

HYDROMETER

ULTRASONIC METER

APPLICATION

Static ultrasonic water meter for accurate measuring and recording for all applications of water supply.

FEATURES

- Real data communication, open metering telegram
- Long-term stability under difficult conditions
- Unlimited system capability
- Leak and pipe burst detection
- Higher performance than class D requirements
- No calming sections required
- No measurement of air
- Insensitive against sedimentation
- Mounting in any installation position
- Suitable for outdoor installation
- Displaying of error and alarm codes

HYDRUS
ULTRASONIC METER

GENERAL

			HYDRUS
Medium temperature range		°C	1 ... 50
Temperature safety		°C	1 ... 90
Ambient operating temperature		°C	1 ... 70
Ambient storage temperature		°C	-20 ... +50
Nominal pressure	PN	bar	16
Power supply			One or two 3.6 VDC lithium batteries
Battery lifetime			Up to 12 years (one battery), up to 16 years (two batteries)
Interfaces			Optical, radio 434 or 868 MHz, M-Bus, L-Bus, pulse
Data storage			For events and for consumption values
Approval			MID LNE 14586, OIML R49, EN 14154, TVO, KTW
Dynamic range (Q_3/Q_1) - Q_3 1.6 m³/h	R		160 / 250
Dynamic range (Q_3/Q_1) - Q_3 2.5 - 4 m³/h	R		160 / 250 / 400
Protection class			IP 68
Ambient class			B

TECHNICAL DATA DISPLAY

	HYDRUS
Display indication	LCD, 8-digit
Unit	m³/h - l/h - m³ - l - °C - F - h - d
Values displayed	Volume- flow - mediums temperature - display test - current error and alarm status - date - primary and secondary address - radio signal ON/OFF - battery lifetime - accounting day - error hour counter - pulse values

TECHNICAL DATA

Nominal flow rate	Q_3	m³/h	1.6	1.6	1.6	1.6	1.6	2.5	2.5
Nominal diameter	DN	mm	15	15	15	20	20	15	15
Overall length	L	mm	110	134	165	130	190	110	165
Overload flow rate	Q_4	m³/h	2	2	2	2	2	3.125	3.125
Transition flow rate	Q_2	m³/h	9.6	9.6	9.6	9.6	9.6	16	16
Minimum flow rate	Q_1	l/h	6	6	6	6	6	10	10
Starting flow rate		l/h	2	2	2	2	2	3	3
Pressure loss at Q_3		bar	0.6	0.6	0.6	0.25	0.25	0.33	0.33

Nominal flow rate	Q_3	m³/h	2.5	2.5	4	4	4	4
Nominal diameter	DN	mm	20	20	20	20	20	25
Overall length	L	mm	130	190	130	154	190	175
Overload flow rate	Q_4	m³/h	3.125	3.125	5	5	5	5
Transition flow rate	Q_2	m³/h	16	16	25.6	25.6	25.6	25.6
Minimum flow rate	Q_1	l/h	10	10	16	16	16	16
Starting flow rate		l/h	3	3	5	5	5	5
Pressure loss at Q_3		bar	0.25	0.25	0.3	0.3	0.3	0.25

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Subject to technical adjustments · 19.11.2009

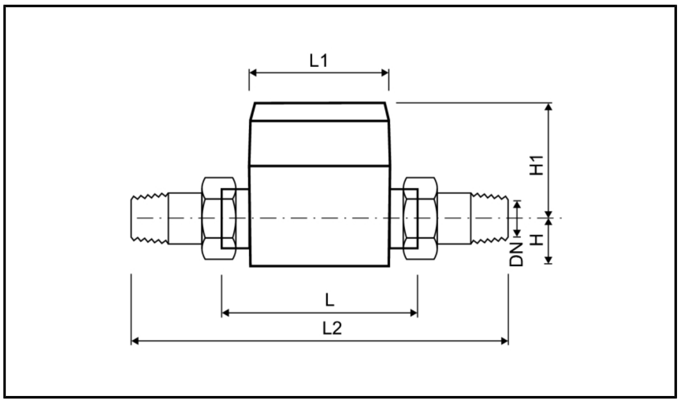
HYDRUS

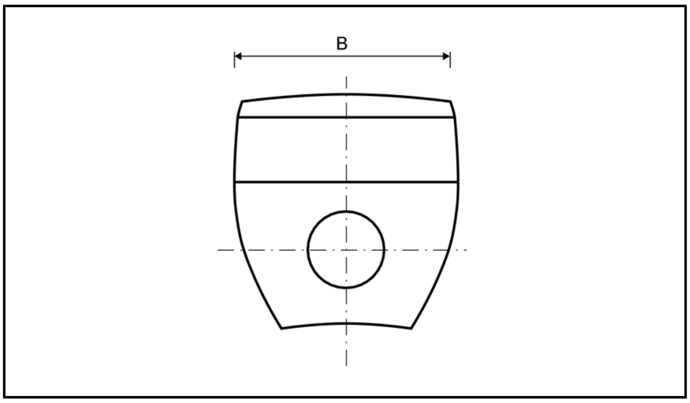
ULTRASONIC METER

INTERFACES

	HYDRUS
Optical	For configuration of display and radio telegram, for testing optical test pulses, to switch to the various displays
Radio	434 or 868 MHz, real data telegram (configurable)
M-Bus	Automatic baud rate detection, configurable telegram, cable length 1.5 m
L-Bus	In combination with radio, cable length 1.5 m
Pulse	Two configurable pulse outputs, cable length 1.5 m

DIMENSIONS





Nominal flow rate	Q_3	m^3/h	1.6	1.6	1.6	1.6	1.6	2.5	2.5
Nominal diameter	DN	mm	15	15	15	20	20	15	15
Overall length	L	mm	110	134	165	130	190	110	165
Overall length with coupling	L2	mm	186	210	240	225	290	186	240
Counter length	L1	mm	88	88	88	88	88	88	88
Connection thread on meter		Inch	G¾B	G¾B	G¾B	G1B	G1B	G¾B	G¾B
Connection thread of coupling		Inch	R½	R½	R½	R¾	R¾	R½	R½
Height	H	mm	32	32	32	34	34	32	32
Height	H1	mm	67	67	67	65	65	67	67
Counter width	B	mm	94	94	94	94	94	94	94
Weight without coupling		kg	0.8	0.9	1	0.9	1.1	0.8	1
Weight with coupling		kg	1	1.1	1.2	1.3	1.5	1	1.2

Nominal flow rate	Q_3	m^3/h	2.5	2.5	4	4	4	4
Nominal diameter	DN	mm	20	20	20	20	20	25
Overall length	L	mm	130	190	130	154	190	175
Overall length with coupling	L2	mm	225	290	225	250	290	295
Counter length	L1	mm	88	88	88	88	88	88
Connection thread on meter		Inch	G1B	G1B	G1B	G1B	G1B	G1¼B
Connection thread of coupling		Inch	R¾	R¾	R¾	R¾	R¾	R1
Height	H	mm	34	34	34	34	34	34
Height	H1	mm	65	65	65	65	65	65
Counter width	B	mm	94	94	94	94	94	94
Weight without coupling		kg	0.9	1.1	0.9	0.9	1.1	1.1
Weight with coupling		kg	1.3	1.5	1.1	1.3	1.5	1.7

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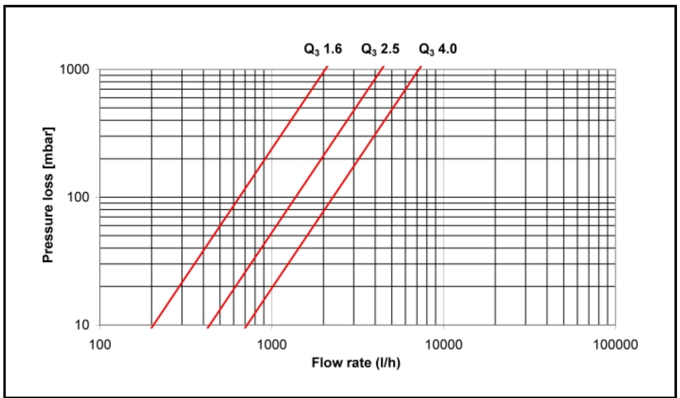
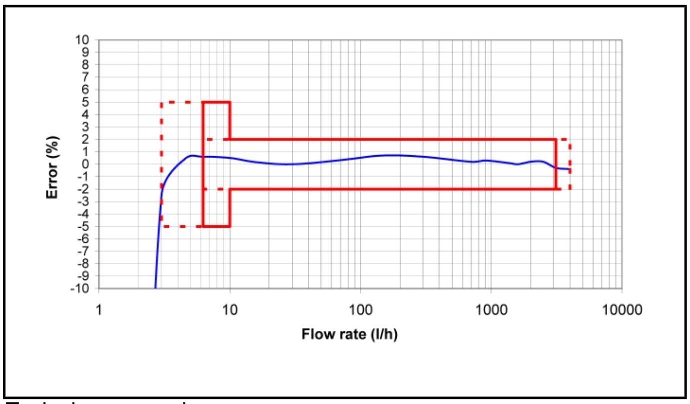
PRESSURE LOSS GRAPH | TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

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IZAR RADIO SEGMENT

HYDROMETER

RADIO | RADIO MODULE

APPLICATION

Radio segment for the single-jet water meter AQUARIUS S. Usable for optimum reading with difficult access.

FEATURES

- Simple installation
- Transmission of meter data by radio to mobile or stationary receivers
- Subassembly and programming on the water meter AQUARIUS S possible ex works
- Retrofitable on site
- On-site-programming using IrDa interface
- Storage and transmission of up to three due date values
- Battery powered with a typical lifetime of 12 years

IZAR RADIO SEGMENT

RADIO | RADIO MODULE

PRINCIPLE OF OPERATION

The IZAR RADIO SEGMENT consists of an eletronic unit, which receives and saves meter information in the form of pulses. The radio module sends the meter number, meter reading and various items of operating information every 128 sec. The data can be received by a mobile or static receiver.

Mobile: The IZAR POCKET pocket PC collects the data in walk-by or walk-in mode in conjunction with the HYDROMETER BLUETOOTH RECEIVER. The data for the reading route is sent directly to the central PC.

Static: HYDROMETER RECEIVER (M-Bus, LAN, WLAN, GPRS) collects and saves the data and transfers it cyclically to a control centre (e.g. IZAR CENTER, web server).

TECHNICAL DATA

	IZAR RADIO SEGMENT
Versions / frequency band	868.95 MHz or 434.475 MHz
Modulation	FSK
Transmission power	7 mW
Transmission mode	Unidirectional
Radio range	Up to 300 m depending on ambient conditions
Programming interface	Optical IrDa
Approval in compliance with standard	EN 300220 R&TTE, EN 301489 R&TTE, EN 60950 Safety & Health, EN 61 000 EMC
Power supply	Lithium battery 3V
Battery lifetime	12 years typically
Data update	Permanent
Sending interval	128 s

AMBIENT CONDITIONS

		IZAR RADIO SEGMENT
Operating temperature	°C	0 ... 40
Storage temperature	°C	0 ... 40
Humidity	%	0 ... 93
Protection class		IP 54

OPTICAL INTERFACE

	IZAR RADIO SEGMENT
Programmable values	Radio on/off, serial number, meter index, medium, due date
Readable values	Remaining battery lifetime, history of 12 monthly values

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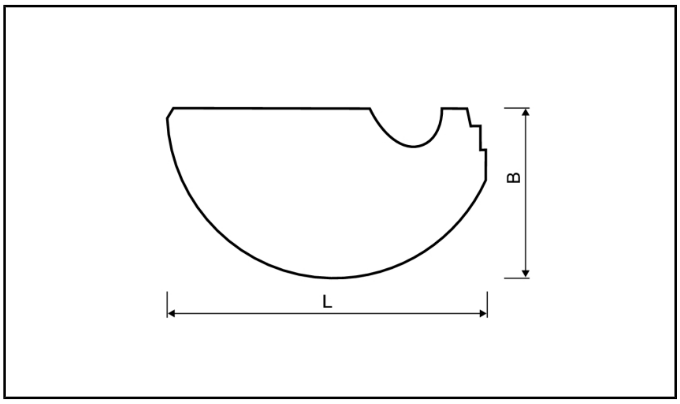
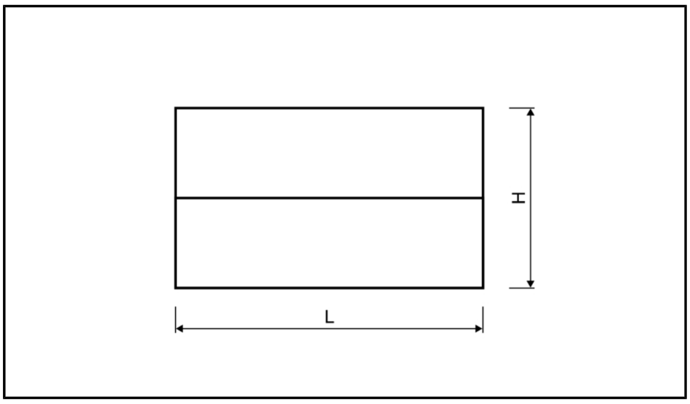
IZAR RADIO SEGMENT

RADIO | RADIO MODULE

DIMENSIONS





IZAR RADIO SEGMENT			
Length	L	mm	64
Width	B	mm	38
Height	H	mm	39

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M-BUS RECEIVER

RADIO RECEIVER

APPLICATION

The M-BUS RECEIVER is used for stationary reading of HYDRO-RADIO consumption meters. Remote reading and data logging of these meters will be done in combination with an IZAR CENTER M-Bus master.

FEATURES

- Radio receiver for capturing HYDRO-RADIO data telegrams
- Available in 868 MHz and 434 MHz version
- No M-Bus cabling from consumption meter to M-Bus master necessary
- Two-wire M-Bus interface for direct connection to an IZAR CENTER communication central
- Powered through M-Bus interface, no external power supply necessary
- HYDRO-RADIO meters and standard M-Bus meters may be used simultaneously in one system
- Internal memory for buffering the last received radio telegram from up to 500 consumption meters

M-BUS RECEIVER

RADIO RECEIVER

PRINCIPLE OF OPERATION

The M-BUS RECEIVER receives radio telegrams from HYDRO-RADIO meters and is storing them into its internal memory. Each time a new radio telegram is received, the M-BUS RECEIVER is deleting the old one from that meter. The M-BUS RECEIVER can only be used in combination with an IZAR CENTER M-Bus master. Here it is possible to do an interval reading of the M-BUS RECEIVER like it is done with a normal M-Bus meter. The data stored in the IZAR CENTER memory can be transferred to the HYDRO-RADIO software.

GENERAL

	868 / 434 MHz
Versions	2 different versions for receiving 868 or 434 MHz radio telegrams
Housing	Light-grey plastic housing with wall mounting support
Protection	Terminal protection cap may be sealed
Communication speed	2400 and 9600 baud
Range of reception	Up to 400 m outdoor or up to 30 m indoor
Configuration	Via IZAR CENTER software and hardware
Antenna	Internal antenna, invisible
Indicators	2 LED indicators for: valid radio telegram received and invalid radio telegram received
Installation	Up to 3 / 6 / 12 M-Bus Receivers may be connected to one IZAR CENTER 60 / 120 / 250

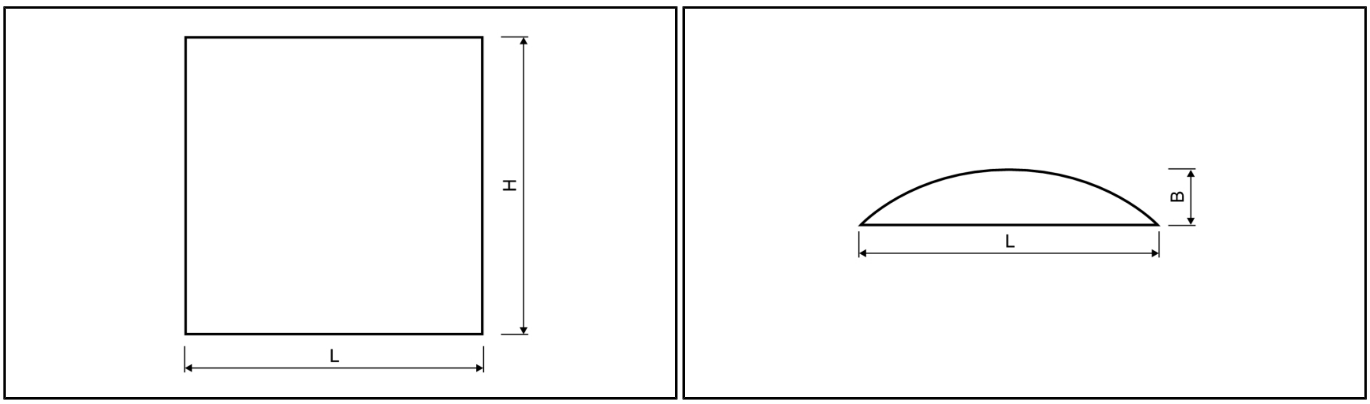
TECHNICAL DATA

		868 / 434 MHz
Power supply		via M-Bus
Weight	g	150
Protection class		IP 44

AMBIENT CONDITIONS

		868 / 434 MHz
Operating temperature	°C	0 ... 60
Humidity	%	10 ... 70

DIMENSIONS



			868 / 434 MHz
Length	L	mm	120
Width	B	mm	35
Height	H	mm	120

HYDROMETER

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Subject to technical adjustments · 27.11.2009

IZAR CENTER

M-BUS MASTER

HYDROMETER

APPLICATION

The IZAR CENTER as an M-Bus level converter is able to do readings of M-Bus meters with very high resolution (up to 1 minute possible) and over vast distances (5 km and more by using repeaters). The reading of HYDRO-RADIO meters is possible by using the HYDROMETER M-BUS RECEIVER.

FEATURES

- 60, 120 or 250 M-Bus devices connectable to one IZAR CENTER
- Automatic transmission of meter data via internet connection using integrated LAN interface or external analog/GSM/GPRS modem
- Automatic meter identification by searching the M-Bus network
- Fast and standardized up-to-date communication interfaces
- (Remote) reading and configuration via USB, RS232/modem or LAN interface
- Alarm functionality on consumption and on instantaneous values with notification (email, SMS)
- Compact housing with rail-mounting possibility
- M-Bus master and level converter in one device. IZAR CENTER (without memory) can also be used as M-Bus repeater (amplifier)
- Cascadable to connect more devices or to build up larger M-Bus networks
- Also available as pre-configured system with or without modem in IP 65 or IP 66 installation housing

IZAR CENTER

M-BUS MASTER

PRINCIPLE OF OPERATION

The IZAR CENTER is sending out a request to the connected meters. This action could be initiated manually by the user or automatically by the IZAR CENTER. For automatic reading an IZAR CENTER with memory is required to program general or meter indvidual reading intervalls. The meter is responding to that request by giving its values to the IZAR CENTER. The meter data is stored in an inbuilt memory and can be transmitted automatically to a meter reading software (e.g. HYDRO-RADIO Software).

GENERAL

	With / without memory
Interfaces	USB, Ethernet LAN, RS232 (for PC, modem), M-Bus output and M-Bus repeater input
Housing	Light-grey rail mount housing with fuse profile made of heat resistent plastic
M-Bus transmission speeds	300, 600, 1200, 2400, 4800, 9600 baud; autobaud detection on RS232

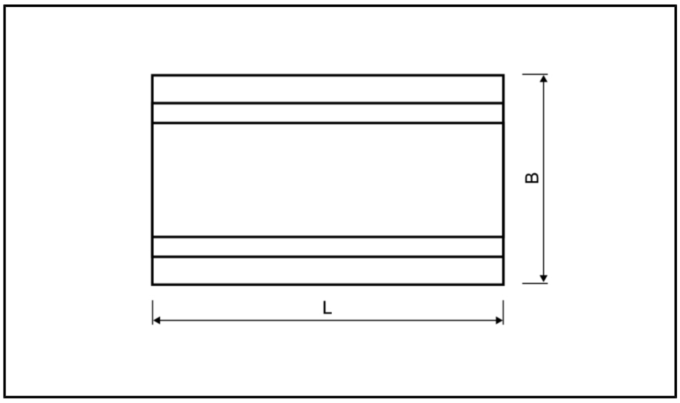
TECHNICAL DATA

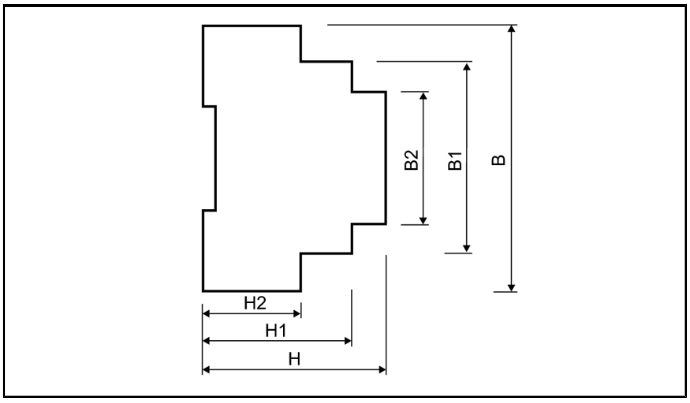
		With / without memory
Power supply	V AC	110 ... 230
Frequency	Hz	50 ... 60
Weight	g	500
Protection class		IP 20

AMBIENT CONDITIONS

		With / without memory
Humidity	%	10 ... 90
Temperature range	°C	- 20 ... 70

DIMENSIONS





			With / without memory
Length	L	mm	157,5
Width	B	mm	86
Width	B1	mm	59
Width	B2	mm	42
Height	H	mm	60
Height	H1	mm	49
Height	H2	mm	32

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Subject to technical adjustments · 23.10.2009

IZAR CENTER

M-BUS MASTER

VERSIONS

Memory	without	with
M-Bus level converter	•	•
M-Bus master functionality	-	•
M-Bus repeater functionality	•	-
256 MByte mass storage integrated	-	•
Device list to manage up to 1,000 meters	-	•
Data ring memory for 500,000 device readouts	-	•
Programmable automatic meter readout	-	•
Parallel readout of memory and reading of meters	-	•
Setting of individual reading intervals and retries	-	•
Automatic transmission of meter data to FTP server	-	•
Use alternate FTP server if upload fails	-	•
Alarm functionality with notification (Email, SMS)	-	•
Control M-Bus devices on alarm (e.g. switch a valve)	-	•

ZUBEHÖR

Modems	Article number
Analog modem	544 003 04
GSM/GPRS modem	3005787

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IZAR RADIO RECEIVER GPRS, LAN, WLAN

RADIO RECEIVER

APPLICATION

The receivers are used for automatic, stationary remote meter reading in residential areas with single-family and multi-family houses, high-rise buildings, offices and industrial buildings and facilities.

FEATURES

- Receiving of meter data via 868/434 MHz
- Memory for up to 1000 radio telegrams
- Cyclic transmission of meter data via GPRS, LAN or WLAN to an operation center
- FTP transmission interval every 1 up to 999 hours
- Data format xml
- Configuration via Bluetooth (GPRS) or HTML surface (LAN,WLAN)
- Integrated power supply for 100 up to 240 alternating voltage
- Housing prepared for wall mounting

DIEHL
Metering

smart in solutions

IZAR RADIO RECEIVER GPRS, LAN, WLAN

RADIO RECEIVER

TECHNICAL DATA LAN

Radio Frequency	MHz	868	434	868	434	868	434	868	434
Antenna		Internal	Internal	External	External	Internal	Internal	External	External
Power Connector		CEE 7/7	CEE 7/7	CEE 7/7	CEE 7/7	BS 1363	BS 1363	BS 1363	BS 1363

TECHNICAL DATA WLAN

Radio Frequency	MHz	868	434	868	434	868	434	868	434
Antenna		Internal	Internal	External	External	Internal	Internal	External	External
Power Connector		CEE 7/7	CEE 7/7	CEE 7/7	CEE 7/7	BS 1363	BS 1363	BS 1363	BS 1363

TECHNICAL DATA GPRS

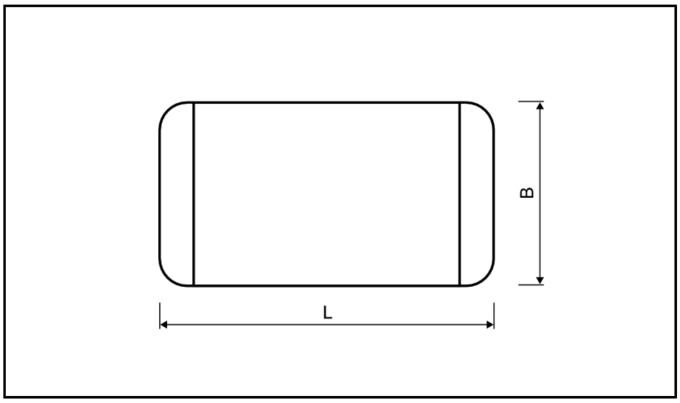
For all models with external antenna connector is a dual-band as well as an ISM-band antenna included.

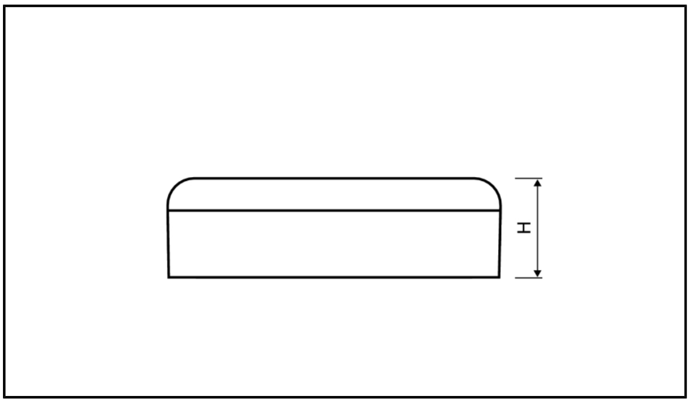
Radio Frequency	MHz	868	434	868	434	868	434	868	434
Antenna		Internal	Internal	External	External	Internal	Internal	External	External
Power Connector		CEE 7/7	CEE 7/7	CEE 7/7	CEE 7/7	BS 1363	BS 1363	BS 1363	BS 1363

AMBIENT CONDITIONS

Operating temperature	°C	-20 ... +55
Storage temperature	°C	-20 ... +70
Protection class		IP33 (LAN); IP65 (WLAN,GPRS)

DIMENSIONS





Length	L	mm	200
Width	B	mm	110
Height	H	mm	60

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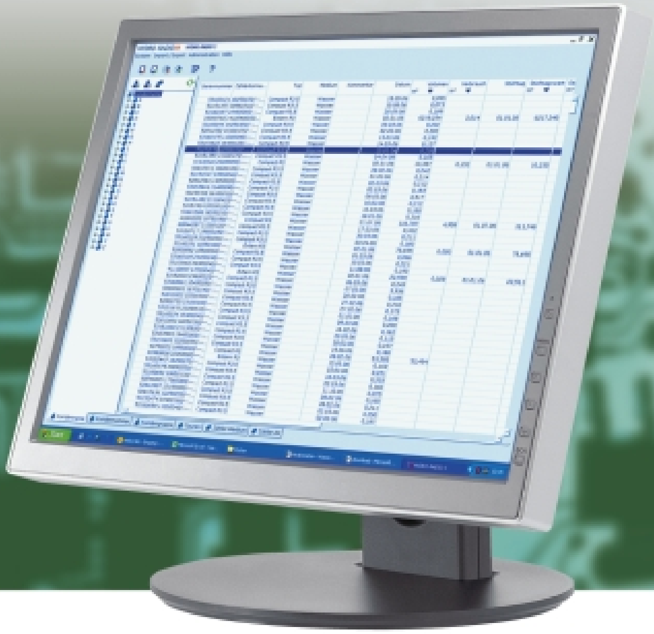
IZAR@NET

SOFTWARE

HYDROMETER



APPLICATION

IZAR@NET is an energy data management software, that is able to do automatic readings of M-Bus and Fixed radio networks. Additionally it is possible to manage tours and data of Walk-by and Drive-by meter readings. With specific adaptions data can e.g. be automatically exported into a billing software system.

FEATURES

- One software for managing radio and wired M-Bus reading systems
- Reading and remote reading of all types of resource meters in one system (water, energy, electricity, gas meters)
- Modular concept: software can be adapted to individual needs
- Possibility of software upgrades in the field
- Editing and visualisation of meter data in tables and diagrams
- Collecting meter data for consumption, flow and status monitoring
- Archiving of all meter data in a powerful Oracle® SQL database
- Modern client-server structure: software can be used simultaneously by several persons
- Possibility of alarm monitoring and actions

IZAR@NET
SOFTWARE

MORE FEATURES

	IZAR@NET
Meter replacement	Handling of manual meter replacements or replacements controlled by billing system
User interface	User friendly Windows-based user interface
Configuration possibilities	Individual table views with analysis function
Adaption possibilities	Fast access to key functions by adapting the toolbar and creating own buttons
Manual changes	Manual entry and changing of meters and meter counts
Data reduction	Wizard for data reduction (daily, weekly, monthly, yearly)
Data backup	Possibility to do data security backups

SYSTEM REQUIREMENTS

	IZAR@NET
Operating system	Microsoft Windows® (Windows 2003 Server, Windows XP SP2, Windows Vista Business Edition)
CPU	min. 2 GHz
Main memory	512 MB (1024 MB recommended)
Hard disk space	min. 4 GB
File system	NTFS
Screen resolution	min. 1024 x 768
Interfaces	2 free USB connectors
Drives	CD-ROM
Network connection	TCP/IP with static IP (no DHCP)

VERSIONS

	IZAR@NET
IZAR@NET 60	Software version for reading up to 60 measuring points
IZAR@NET 250	Software version for reading up to 250 measuring points
IZAR@NET 1000	Software version for reading up to 1000 measuring points
IZAR@NET 5000	Software version for reading up to 5000 measuring points
IZAR@NET unlimited	Software version for reading an unlimited amount of measuring points

NOTE: Orders for an IZAR@NET version must include at least one of the following basic modules. With other basic or additional modules the software can be adapted to your individual needs.
In general, for software training and installation you need the professional support from our service team.

BASIC MODULES

	IZAR@NET
IZAR@NET WALK & DRIVE	Supports direct USB connection to a HYDRO-/IZAR POCKET device and the organisation of Walk-by / Drive-by tours for reading / management of radio meters and customer data.
IZAR@NET FIXED	Supports data download from an FTP server that was uploaded via Ethernet LAN or GPRS from a fixed installed data concentrator (IZAR RECEIVER LAN/WLAN/GPRS or M-Bus Master IZAR CENTER).
IZAR@NET M-BUS	Supports direct connection via USB, RS232, Ethernet LAN or analog/ GSM modem connection to an IZAR CENTER M-Bus master. Possibility to do on demand meter readings or readout of IZAR CENTER Memory data.

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Subject to technical adjustments · 01.12.2009

IZAR@NET
SOFTWARE

ADDITIONAL MODULES

	IZAR@NET
IZAR@NET GRAPHIC & ANALYSIS	Illustration of up to 6 meter counts in a bar or line graph diagram for consumption monitoring. 3 diagrams can be displayed in one window, also with the possibility of an online mode. There is no limit to the number of windows.
IZAR@NET ALARM	Automatic creation of meter alarms for Fixed Network and M-Bus installations, visualisation on screen or transmission via SMS / email.
IZAR@NET MAPS	Visualisation of readings on a map via export to Google Earth® (Requirement: Google Earth® has already been installed before).
IZAR@NET IMPORT/ EXPORT	Interface for import and export of meter and customer data e.g. from/ to a billing software system (ASCII, Excel®, ODBC database connection).
IZAR@NET VIRTUAL METERS	Calculations of virtual meter values, e.g. summarize all sub meters from one building to one virtual main meter.
IZAR@NET EXTENDED DATABASE	Extension of limited (4 GB) Oracle® Express Edition (incl. in IZAR@NET) to unlimited Oracle® Standard Edition One database. Allows additionally a higher database performance.

NOTE: There is a standard adaption included in IZAR@NET MAPS and IZAR@NET IMPORT/EXPORT. Any specific adaptions required will be executed by our support team.
In case of specific adaptions software updates have to be executed by our support team.
The Oracle® Express Edition limit of meter data (4 GB) would be reached with the following configuration examples:
- Walk-by installation: 18,000 HYDROMETER SHARKY heat meters or 100,000 CORONA E water meters; reading interval: once per month; data storage: 10 years
- Fixed network installation: 3,000 HYDROMETER SHARKY heat meters or 17,000 CORONA E water meters; reading interval: once per day; data storage: 2 years
- M-Bus installation: 125 HYDROMETER SHARKY heat meters or 700 CORONA E water meters; reading interval: every 15 minutes; data storage: 0.5 years

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Wie is Warmtemeterservice?

Warmtemeterservice B.V. (in het kort WMS) is gespecialiseerd in het meten en verdelen van energie en met name warmte. WMS bestaat sinds 1 april 1988 en is momenteel een toonaangevend bedrijf in de branche, niet in omvang of omzet, maar zeer zeker in kennis, mogelijkheden en gedrevenheid. Door onze inzet voor de branche is WMS zelfs toonaangevend in Europa.

WMS is sinds oktober 2009 officieel dealer voor Hydrometer producten in Nederland en vanaf haar oprichting reeds licentiehouder voor Brunata. Met deze twee leveranciers beschikken we over een groot assortiment aan producten die zich op één of andere manier sterk onderscheiden van anderen.

Er worden meetsystemen geleverd in nagenoeg elk marktsegment; voor kleine installaties maar ook voor grote industrieën. Van eenvoudige meetsystemen tot uiterst geavanceerde.

De Brunata groep is een van de grotere dienstverleners op het gebied van het opnemen van meterstanden en het maken van afrekeningen. In totaal worden, in Europa, door de Brunata groep ruim 20 miljoen meters opgenomen. Brunata verwerkt via BrunataNet dagelijks zo'n 2,5 miljoen meterstanden.

Hydrometer uit Duitsland, behorend tot de Diehl groep, is een van de grotere producenten op het gebied van warmte- en watermeters, zodat we ook alle mogelijkheden hebben om energiebedrijven en waterleidingbedrijven in hun behoeftes te voorzien.

Warmtemeters

De warmtemeters worden door ons geleverd in vele soorten en maten. Warmtemeters zijn leverbaar van Qp 0,6 m³/h t/m Qp 600 m³/h of zelfs nog groter.

De Hydrometer Sharky775 is momenteel qua mogelijkheden de beste ultrasonore slimme warmtemeter. Deze warmtemeter is uitermate geschikt voor WKO of stadsverwarming mede vanwege zijn lange batterij levensduur van maar liefst 20 jaar.

Diensten

De dienstverlening is voor ons de meest belangrijke tak van sport. Door ons worden meterstanden opgenomen met als doel het verrekenen van kosten op basis van individueel gemeten verbruiken.

Daarnaast willen wij de dienstverlening zoveel mogelijk laten aansluiten op de wensen van de opdrachtgever. In feite moet een opdrachtgever het gehele traject van stook- en servicekosten aan ons kunnen uitbesteden. Volledige ontzorging dus.

Onze nieuwste vorm van dienstverlening is dan ook het incasseren van de maandvoorschotten en het factureren van de eindafrekening. Deze diensten hebben overigens voornamelijk betrekking op gebouwen met blokverwarming, WKO-installaties of warmtepompen.

WMS biedt via Brunata ook de mogelijkheid tot meterverificatie op eigen geaccrediteerde testbanken.

Warmtemeterservice B.V.

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Web www.wms.nl / www.brunata.nl

Antwoordformulier:

Voor aanvullende informatie of een vrijblijvende prijsopgave kunt u contact met ons opnemen via onderstaand telefoonnummer, de mail, via onze website of door dit formulier in te vullen en te faxen of op te sturen:

Naam contactpersoon : ______________________________

Telefoon nummer: ______________________________

Emailadres: ______________________________

Bedrijfsnaam: ______________________________

Bezoek adres: ______________________________

Postcode: _______ ____ Plaats: ______________________________

Postadres: ______________________________

Postcode: _______ ____ Plaats: ______________________________

Telefoon: ____________________ Fax: ____________________

Ja, ik wil graag meer weten!

☐ Adviseer mij telefonisch via ____________________ / ____________________
☐ Ik wens een afspraak met een vertegenwoordiger of adviseur!
☐ Anders, namelijk:

____

____

____

____

Brunata WMS

Warmtemeterservice B.V.

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