

SCYLAR INT 8

CALCULATOR

HYDROMETER



APPLICATION

Energy calculator for universal use in systems for heating and cooling measuring. Highly accurate recording of all billing data in local and district heating / cooling systems.

FEATURES

- ▶ Can be used for heating, cooling or combined heating / cooling
- ▶ Approved according MID
- ▶ Suitable for 2 and 4 wire temperature sensor connection
- ▶ Power save mode
- ▶ NOWA test capability
- ▶ Programmable history memory (daily, weekly, monthly)
- ▶ IZAR@SET parameterization software on Windows basis guarantees optimum adaption to the user specific needs
- ▶ individual remote reading (AMR) with add on modules Plug & Play
- ▶ Integrated Radio, Real Data or Open Metering Standard (868 or 434 MHz)
- ▶ 2 Communication ports (e. g. M-Bus + Radio)
- ▶ Significantly improved radio performance
- ▶ RS485 Interface
- ▶ 2 passive analogue outputs for 4 ... 20mA

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GENERAL

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Application	heating - cooling - heating/cooling
Approval	MID
Protection class	IP 54
Battery supply	3.6 VDC; A cell; 11 years lifetime; 3.6 VDC; D cell; 20 years lifetime
Mains supply	24 VAC; 230 VAC / 0.15W
Volume pulse input frequency	max. 200 Hz; pulse durance > 3ms
Pulse value	I/pulse 0.01 ... 10,000 ¹
Temperature sensor type	Pt 100 or Pt 500 with 2- or 4- wire leads; Ø 5.2 / 6mm
Cable length of temperature sensor	Pt 100: 2m; Pt 500: 2/5/10m
Measuring cycle Volume	s 2
Measuring cycle Flow	s 8

¹: depending on size of flow sensor

BASIC FEATURES

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Ambient class	class E1 + M1
Ambient temperature	°C 0 ... 55
Ambient storage temperature	°C -25 ... +70
Communication	2 communication slots (e. g. M-Bus + M-Bus; 2 primary addresses, 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

INTEGRATED RADIO

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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)

DISPLAY

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Display indication	LCD, 8-digit
Units	MWh - kWh - GJ - Gcal - MBtu - gal - GPM - °C - °F - m³
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

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INTERFACES

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Optical	ZVEI interface, for communication and testing, M-Bus protocol, 2400 baud
M-Bus	Configurable telegram, according to EN1434-3, data reading and parametrization are via two wires with polarity reversal protection, auto baud detect (300 and 2400 baud), 2 M-Bus with 2 primary addresses
RS232	Serial interface for communication with external devices, a special data cable is required, M-Bus protocol, 300 and 2400 baud
RS485	Serial interface for communication with external devices, power supply with 12 V \pm 5 V, M-Bus protocol, 2400 baud
Pulse output	Module with 2 Open Collector pulse outputs (potential-free), 4 Hz (pulse width 125 ms), 100 Hz (pulse width \geq 5 ms), ratio: pulse duration / pulse break \sim 1:1, configurable via IZAR@SET software.
Pulse input	Module with 2 pulse inputs, max. 20 Hz, 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, needed for leak detection.
Analogue output	Module for 4 ... 20 mA with 2 programmable passive outputs, programmable value in case of error.

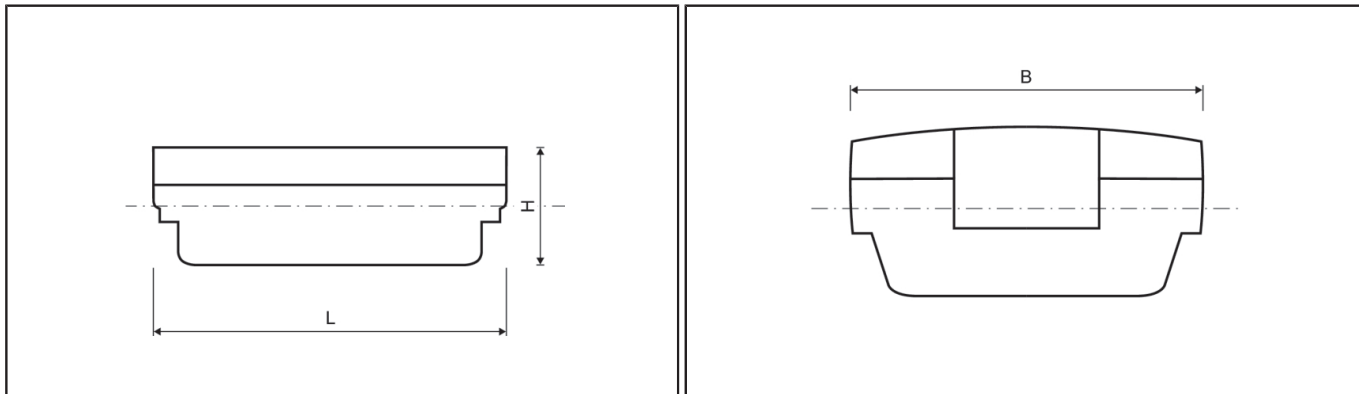
TEMPERATURE INPUT

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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	$^{\circ}\text{C}$	-20 ... 190

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DIMENSIONS



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Overall length	L	mm	150
Width of calculator	B	mm	100
Height	H	mm	54

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Subject to technical adjustments