SCYLAR INT 8

CALCULATOR

DIEHL
Metering

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
- Measurement accuracy fulfills the requirements according to EN 1434
- Suitable for 2 and 4 wire temperature sensor connection
- Improved power consumption --> longer battery lifetime
- Approved according to MID and PTB K 7.2 (cooling)
- 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
- Optional with integrated radio, Real Data or Open Metering Standard (868 or 434 MHz)
- 3 communication interfaces (e. g. M-Bus + M-Bus + Radio)
- 2 passive analogue outputs for 4 ... 20 mA
- Significantly improved radio performance

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GENERAL

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Application		Heating - cooling - heating with cooling tariff
Approval		MID (DE-10-MI004-PTB004) and PTB K7.2 for cooling (22.75/11.02)
Protection class		IP 54
Battery supply		3.6 VDC A-cell 10 years lifetime; 3.6 VDC D-cell 16 years lifetime
Mains supply		24 VAC; 230 VAC / 0.15 W
Volume pulse input frequency		Max. 200 Hz; pulse durance > 3 ms
Pulse value	l/pulse	0.01 ... 10,000[1]
Temperature sensor type		Pt 100 or Pt 500 with 2- or 4- wire leads; Ø 5.2 / 6 mm
Cable length of temperature sensor		Pt 100; Pt 500: 1.9 / 4.9 / 9.9 m
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 E2 + M2
Ambient temperature	°C	0 ... 55
Ambient storage temperature	°C	-25 ... +60 (>35 °C max. 4 weeks)
Communication		3 communication interfaces (e. g. M-Bus + M-Bus + Int. Radio; 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 heating	°C	Θ: 0 ... 180 | ΔΘ: 3 ... 177
Temperature range cooling	°C	Θ: 0 ... 90 | ΔΘ: 3 ... 87
Temperature range heating with cooling tariff	°C	Θ: 0 ... 105 | ΔΘ: 3 ... 102

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	With A-cell: 180 s (10 years lifetime); with D-cell: 12 s (16 years lifetime); with mains unit: 12 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 - 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

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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 adresses
L-Bus	Adapter for external radio module, configurable telegram, according to EN13757-3, 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, 300 and 2400 baud
RS485	Serial interface for communication with external devices, power supply with 12 V ± 5 V, M-Bus protocol, 2400 baud
Pulse output	Module with 2 Open Collector pulse outputs (potential-free), output 1: 4 Hz (pulse width 125 ms), pulse or static conditions (e.g. errors), output 2: 200 Hz (pulse width ≥ 5 ms), ratio: pulse duration / pulse break ~ 1:1, configurable via IZAR@MOBILE 2 software.
Pulse input	Module with 2 pulse inputs, max. 20 Hz, configurable via IZAR@MOBILE 2 software, data can be transferred remotely.
Combined pulse in-/output	Module with 2 pulse inputs and 1 pulse output, configurable via IZAR@MOBILE 2 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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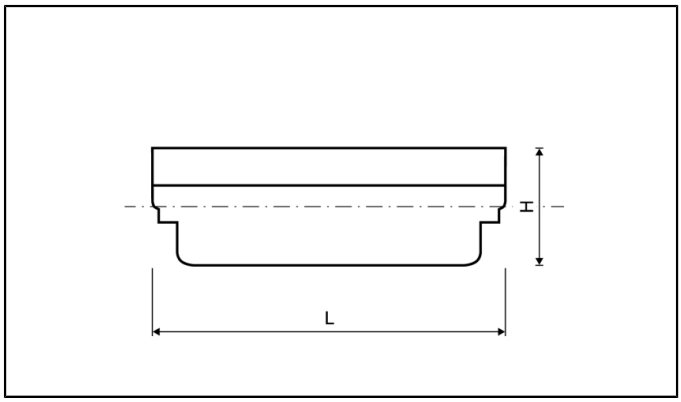
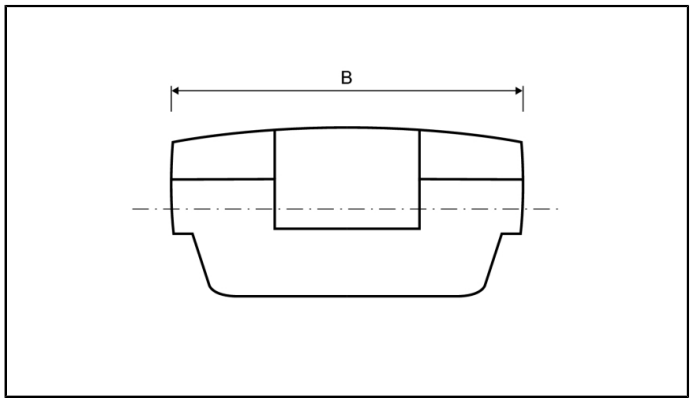
Sensor current		mA	Pt 100 peak < 8; rms < 0.015, Pt 500 peak < 2; rms < 0.012
Measuring cycle	T	s	With mains unit: 2 s; with A-cell battery: 16 s; with D-cell battery: 4 s
Starting temperature difference	$\Delta\Theta$	K	0.125
Min. temperature difference	$\Delta\Theta_{min}$	K	3
Max. temperature difference	$\Delta\Theta_{max}$	K	177
Absolute temperature measuring range	Θ	°C	-20 ... 190

DIMENSIONS





			SCYLAR INT 8
Overall length	L	mm	150
Width of calculator	B	mm	100
Height	H	mm	54

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