DIEHL
Metering

Instrumentteam PLUSS as
post@instrumentteampluss.no

SCYLAR INT 8

ENERGY CALCULATOR

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@MOBILE2 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 acc. Open Metering Standard (868 or 434 MHz) profile A and B
- 3 communication interfaces (e. g. M-Bus + M-Bus + Radio)
- 2 passive analogue outputs for 4 ... 20 mA
- Significantly improved radio performance

GENERAL

		SCYLAR INT 8
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 11 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
Calculation cycle	s	2

[1] Depending on size of flow sensor

BASIC FEATURES

		SCYLAR INT 8
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

	SCYLAR INT 8
Frequency band	868 or 434 MHz
Type of radio telegram	Open Metering Standard (OMS) profile A and B
Transmission data updating	Online - no time delay between value measurement and data transmission
Data transmission	Unidirectional T1 mode
Sending interval	With A-cell: 180 s (11 years lifetime); with D-cell: 12 s (16 years lifetime); with mains unit: 12 s; depending on length of telegram (duty cycle)

*Standard conditions of use and temperature. Theoretical life, with no guarantee.

DISPLAY

	SCYLAR INT 8
Display indication	LCD, 8-digit
Units	MWh - kWh - GJ - Gcal - MBtu - gal - GPM - °C - °F - m^3 - m^3/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

	SCYLAR INT 8
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.
NB-IoT*	Compatible in Slot 1 with internal antenna, with external D-Cell battery, 13+1 years battery lifetime with daily upload of 24 hourly values. Configurable with NFC connection via OTC App (AppStore Android).
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.

* Starting with August 1, 2025, only devices with firmware F04.006 or newer may be combined with NB-IoT modules with firmware 1.4.0 or newer, in order to ensure compliance with the essential requirements according to art. 3(3) d and art. 3(3) e of Directive 2014/53/EU ('RED Cybersecurity'). The firmware version can be read out with the OTC app.

TEMPERATURE INPUT

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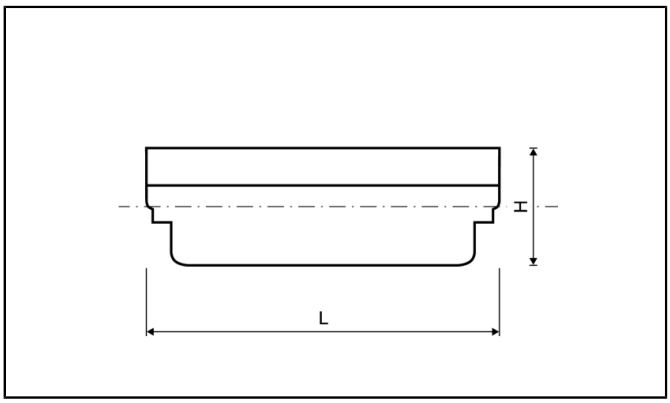
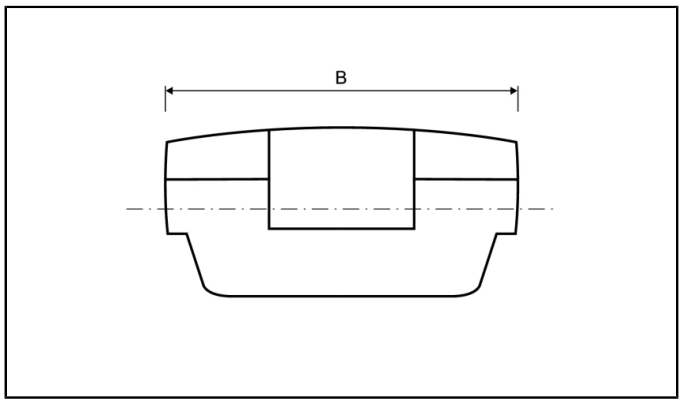
Sensor current		mA	Pt 100 peak < 8; rms < 0.015, Pt 500 peak < 2; rms < 0.012
Measuring cycle	T	s	With mains unit: 2 s; with A-cell battery: 16 s; with D-cell battery: 4 s
Starting temperature difference	$\Delta\Theta$	K	0.125
Min. temperature difference	$\Delta\Theta_{min}$	K	3
Max. temperature difference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

REACH

Information pursuant to Article 33 (1) of Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006:
This product series contains components with the following substances in a concentration of more than 0.1% weight by weight (w/w):
- Lead (CAS no.: 7439-92-1)
- 1,2-dimethoxyethane (CAS no.: 110-71-4)

Economic Actor Information

Applicable regulation and legal obligations for products may change.

DIEHL METERING monitors applicable regulation to ensure their products comply at the date of placing on the market.

Each economic actor making products available on the market thereafter must independently keep informed about the current applicable regulation.

For questions, please contact: metering-germany-info@diehl.com

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