

## Ultrasonic Cooling Meter Residential

Landis  
Gyr+  
manage energy better



Ultrasonic Cooling Meter

## ULTRACOLD T350 (2WR6...)

A customer tailored cooling meter  
designed for  
residential needs and easy billing

**Highest measurement accuracy**

ULTRACOLD®T350 measures flow rate by the ultrasonic dragging principle. Two transducers alternatively transmit ultrasonic signals in and against the direction of flow. The flow rate can be precisely calculated from the difference between the measured propagation times.

**Future-oriented**

Ultrasonic technology is an innovative, sensible and future-oriented basis for cold measurement in both economic and ecological terms.

The measuring tube of the ULTRACOLD®T350 has a robust all-metal design and is fitted with the special internal profile Dura-Surface™. Interfering reflections in the measurement channel are filtered out from the outset.

That makes the meter more resistant to dirt deposits.

The advantages are obvious: technical superiority and no wearing parts. It is the excellent reliability that counts.

**Long-life service and simple low-cost inspection and recalibration**

Ultrasonic measurement requires no mechanical moving part or straight pipe sections and can be installed any way around. The measuring tube itself has a robust all-metal design. The cooling meter is insensitive to small particles in the water and operates silently.

**Reliable operation**

ULTRACOLD®T350 features enormous measurement dynamics. For this reason, the volume measuring units can be loaded up to twice the nominal load qp. The response limit remains at a constant low level during the entire calibration period.

## Enter a whole new world

Our ULTRACOLD®T350 (2WR6...) cooling meters are not only precise, allowing easy billing, but also reliable, long-lasting and low in cost for demand in building services technology. T350 cooling meters offer you numerous benefits – without mechanical moving parts, which are not required for ultrasonic measurement.



### Performance Features

- High measuring accuracy and -reliability due to proven ultrasonic technology
- Nonwearing – requires no mechanical moving parts
- Measuring range of flow: 1:100 acc. to EN 1434
- Total range: 1:500
- Any mounting orientation, mounting in return or in flow
- No straight lengths of pipe or flow strengtheners required
- Yearly set day
- 15 monthly values
- Battery operated up to 11 years
- 24 V AC/DC external supply as special version
- Optical interface acc. to IEC870 (M-Bus)
- Modules: Pulse Output or M-Bus
- Self-diagnostics



## Technical Data

Approval	EN 1434 Class 2/3	
Protection class	IP 65/ 67	
Display LCD	7-digit	
Physical units	kWh/ MWh or MJ/ GJ	
Temperature range	(C°)	5-105
Nominal pressure	PN (bar)	PN16, PN25
Max. Diff. of Temp.	(K)	80
Min. Diff. of Temp.	(K)	3
Switch-off limit	(K)	0.2

Nominal flow rate	qp (m³/h)	0.6	1.5	2.5
Max. Flow	qs(l/h)	1200	3000	5000
Min. Flow	qi(l/h)	6*	15*	25*
Operating limit	(l/h)	2.4	6	10
Mounting length	(mm)	110 /190	110/ 190	130/ 190
Thread connection		G¾ /G1	G¾/ G1	G¾ /G1
Pressure drop at mounting length 110	qp (mbar)	150	150	-
Pressure drop at mounting length 130	qp (mbar)	-	160	200
Pressure drop at mounting length 190	qp (mbar)	150	160	200

\* in Germany: multiply value by 2

## Communication

**M-Bus**, with 1.5m cable connected, with galvanic isolation

- Voltage: 50V max.
- Current: 1.3 M-Bus load
- Addressing: primary or secondary
- Permitted mean frequency of reading: once with 3h @ 2400 bd, once with 24h @ 300 bd

**Pulse output** for energy or volume. with 2m cable connected, with galvanic isolation

- Pulse significance: 1 pulse per kWh or MJ respective  
1 pulse per 100 Liter
- Pulse length: 100ms
- Energy/ Volume: specify in order or change with software UltraAssist
- Voltage: max 30 V
- Current: max 30 mA
- Classification: OB (acc. to EN 1434-2)
- Voltage drop: ca. 1,3V at 20 mA
- Dielectric strength: 500 V<sub>eff</sub> against ground

**Stored meter readings**

You will receive stored meter readings on a set day of your choice or at the end of the month. The readings for the last 15 months for cooling, volume and missing times are shown on a practical, configured display.

**Generously sized display**

The displays are clearly structured and easy-to-understand, divided into an easily accessible customer area and a service area. Instantaneous values, set day values and monthly values can be shown. Display of all consumption values facilitates traceability and billing.

**Tailored selection – the temperature sensor**

ULTRACOLD®T350 works with permanently connected Pt 500 temperature sensors. We can supply not only the standard sensor Direct Short M10 x 27.5 mm for direct installation but also 5.2 x 45 mm sensors for pockets – with cable length of 1.5 m or 5m. Installation accessories are available for the flow sensor whereas the return sensor is already mounted in the volume measuring unit.

**Future-proof communication**

With the M-Bus communication you are connected to the world and can collect data from anywhere via modem M-Bus/RS232 or TCP/IP.

## Manage energy better

Landis+Gyr is the leading global provider of integrated energy management products tailored to energy company needs and unique in its ability to deliver true end-to-end advanced metering solutions. Today, the Company offers the broadest portfolio of products and services in the electricity metering industry, and is paving the way for the next generation of smart grid.

Landis+Gyr, an independent growth platform of the Toshiba Corporation (TKY:6502) and 40% owned by the Innovation Network Corporation of Japan, operates in 30 countries across five continents, and employs 5,000 people with the sole mission of helping the world manage energy better.

More information is available at [www.landisgyr.com](http://www.landisgyr.com).

### Landis+Gyr in short

- 5000 employees worldwide
- Operations on all five continents
- Broadest portfolio of products and services in the industry
- 25 years of smart metering experience
- 1000 AMM systems delivered
- 300 million energy meters produced
- Largest relevant engineering capacity in the industry
- 65 years of direct load management experience
- 25 million load management receivers produced
- ISO certified for quality and environmental processes
- World leader in integrated energy management solutions
- Committed to improved energy efficiency and environmental conservation
- Solid and established partner network

### Landis+Gyr AG

Theilerstrasse 1  
6301 Zug  
Switzerland

Tel. +41 41 935 6000  
Fax +41 41 935 6601  
[info@landisgyr.com](mailto:info@landisgyr.com)

[www.landisgyr.eu](http://www.landisgyr.eu)

### Landis+Gyr GmbH

Humboldtstr. 64  
D-90459 Nuremberg  
Germany

Phone +49 911 723 7036  
Fax +49 911 723 7301  
[info-nbg.de@landisgyr.com](mailto:info-nbg.de@landisgyr.com)