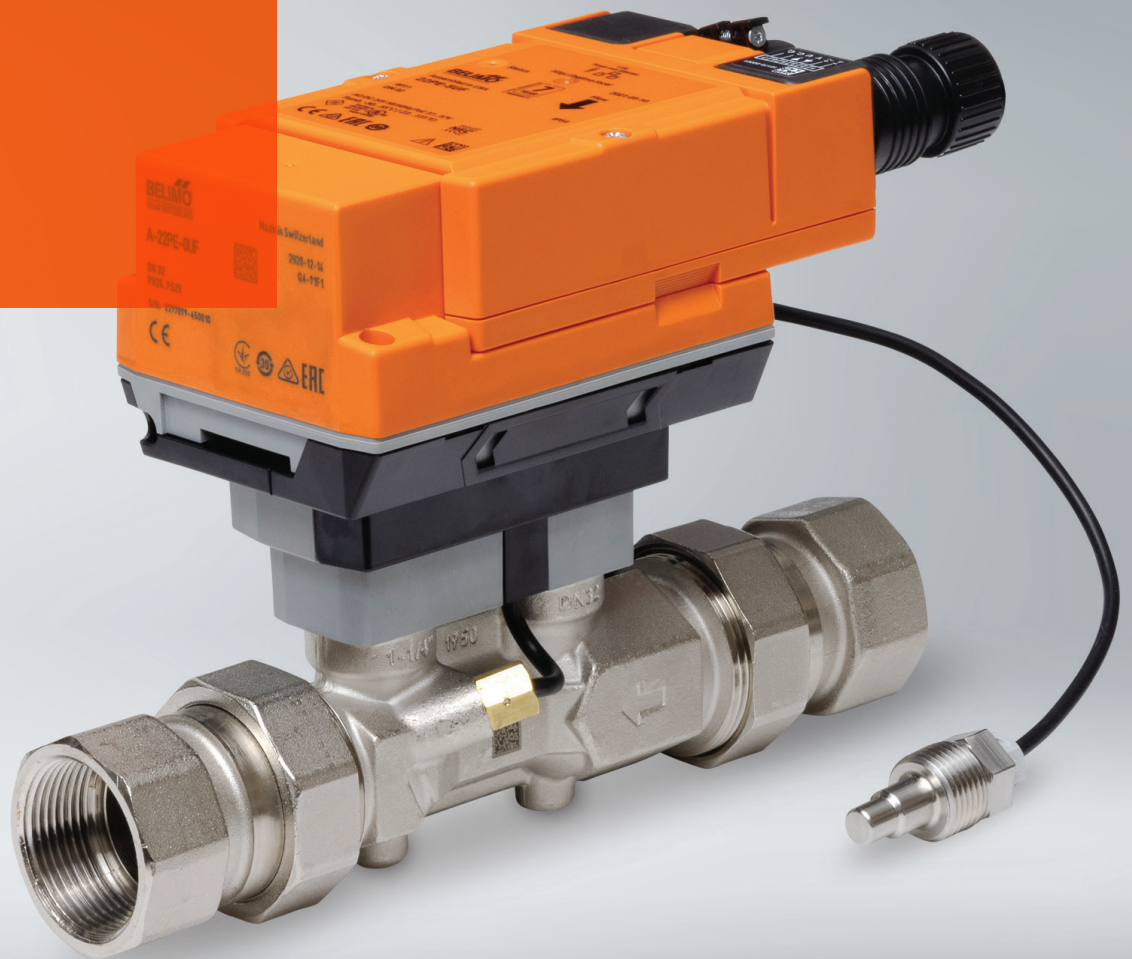


**Energy Management  
and Billing Made  
Easy**



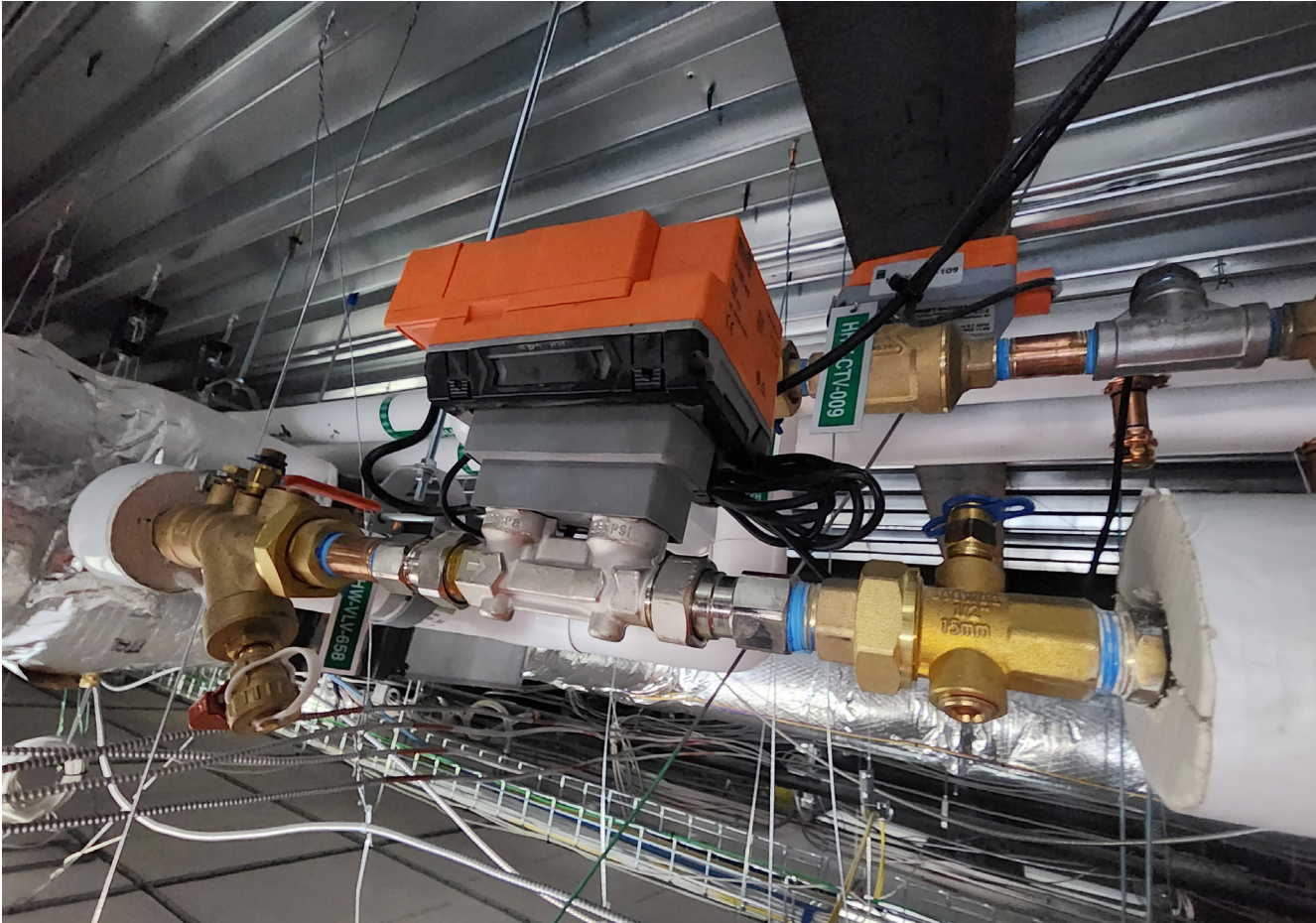
## **Belimo Thermal Energy Meters**



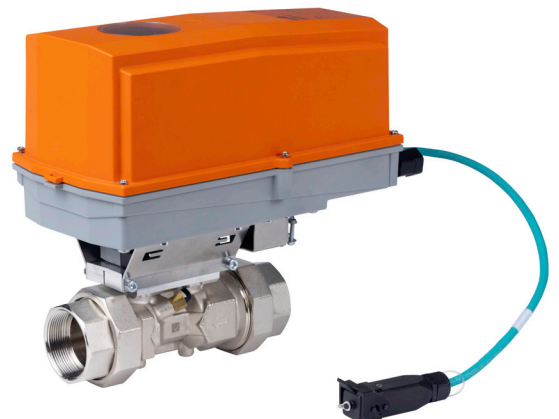
Discover the advantages  
[www.belimo.us](http://www.belimo.us)

**BELIMO**

# Rethink thermal energy management



Accurate measurement for heating and cooling allows building operators to adopt a cost recovery strategy through tenant billing. Measurement Canada approves Belimo's thermal energy meters under AV2478C and CSA900/EN1434 standards for efficient, transparent tenant billing. Thermal energy meters equipped for IoT-based billing provide the proper flow and energy measurement. The patented glycol compensation algorithm automatically selects the glycol concentration, ensuring reliable performance and eliminating manual input and inaccuracies.



# Accuracy and reliability

Belimo's thermal energy meters provide the proper flow and energy measurement needed in today's market.



## Seamless Integration

Compatible with major building automation systems, the meters are suitable for use in any HVAC application.



## Glycol Compensation

The patented glycol compensation algorithm automatically selects the glycol concentration, ensuring reliable performance and eliminating manual input and inaccuracies.



## High Quality Metering

Designed to EN1432/MID and equipped for IoT-based billing, Belimo's thermal energy meters provide the proper flow and energy measurement.

"Our installers like the innovative design of Belimo's sensor range and have told us that using them reduces their installation time compared to competitive products."

**Brian Dutt, President**  
**Controls & Equipment, Moncton,**  
**New Brunswick, Canada**



# Innovation for peace of mind

## IoT-based billing

Thermal energy meters offer Ethernet connectivity to support remote IoT metering and billing (PEC version only).



## Glycol compensation

Energy meters are equipped with a patented glycol compensation algorithm that automatically selects the correct glycol concentration to provide proper flow and energy measurement, ensuring reliable measurement and eliminating manual input and inaccuracy.



## Seamless integration

With BACnet/IP & MSTP and Modbus TCP & RTU (always on board), the thermal energy meter can be integrated directly into the building management system (BMS).



## Optional Power over Ethernet (PoE)

The thermal energy meter can connect with one standard Ethernet cable providing power and data transmission simplifying installation.

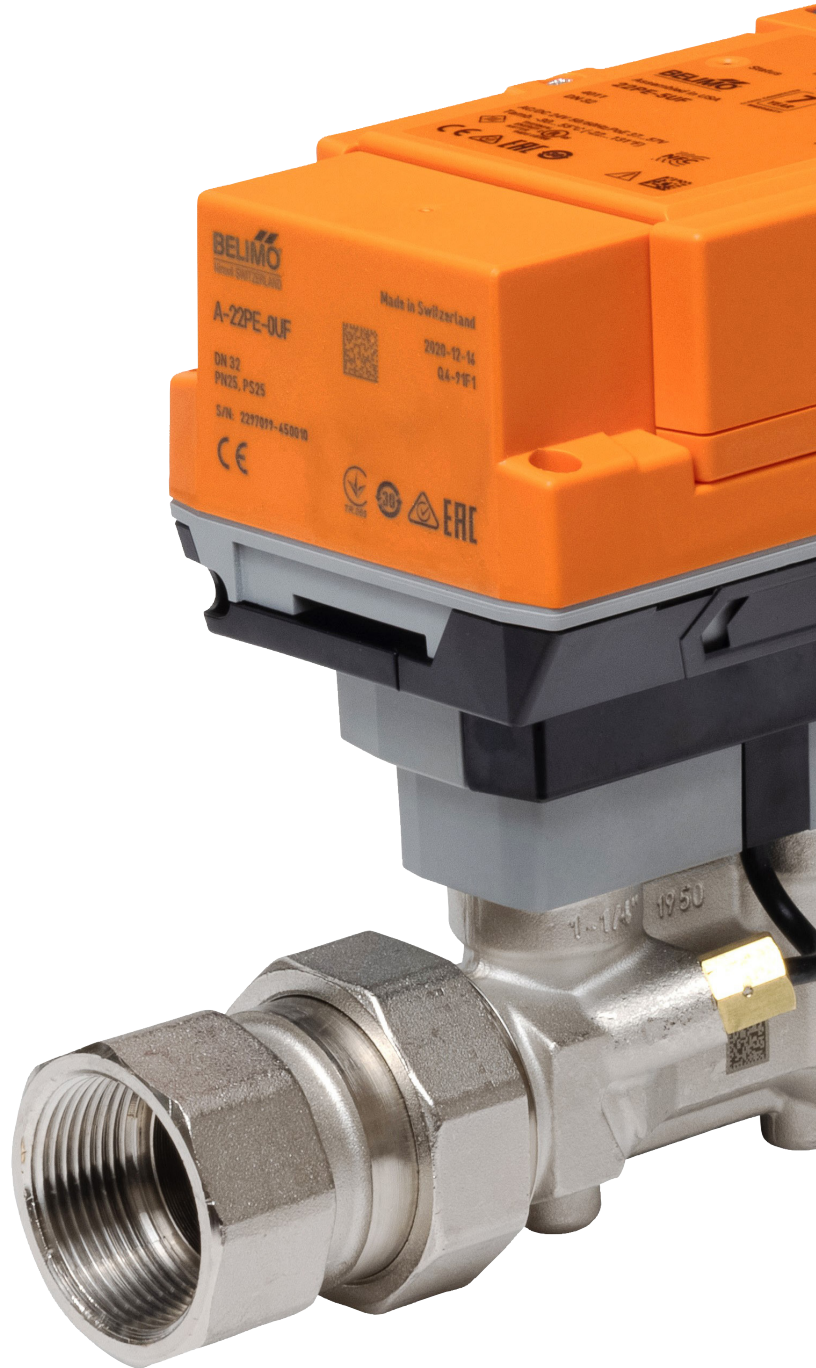


## Built-in Data Logger

Captures the energy, flow, and operational data for up to 14 months for further system optimization and efficiency.



5-year warranty



**Digital Access**

Easily set or adjust parameters using NFC and the Belimo Assistant App or a web server.

**Certified Metering**

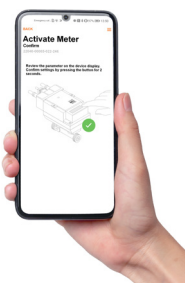
The Thermal Energy Meter meets the requirements in Canada and EN1434 standard.

**Modular Design**

The Thermal Energy Meter consists of a replaceable sensor module and connected temperature sensors, and houses the metering and logic functionality. Data communication capabilities via Bus and NFC.

**Energy Monitoring**

The thermal energy data is accurately measured and logged. The meter also identifies areas for optimization when detected.

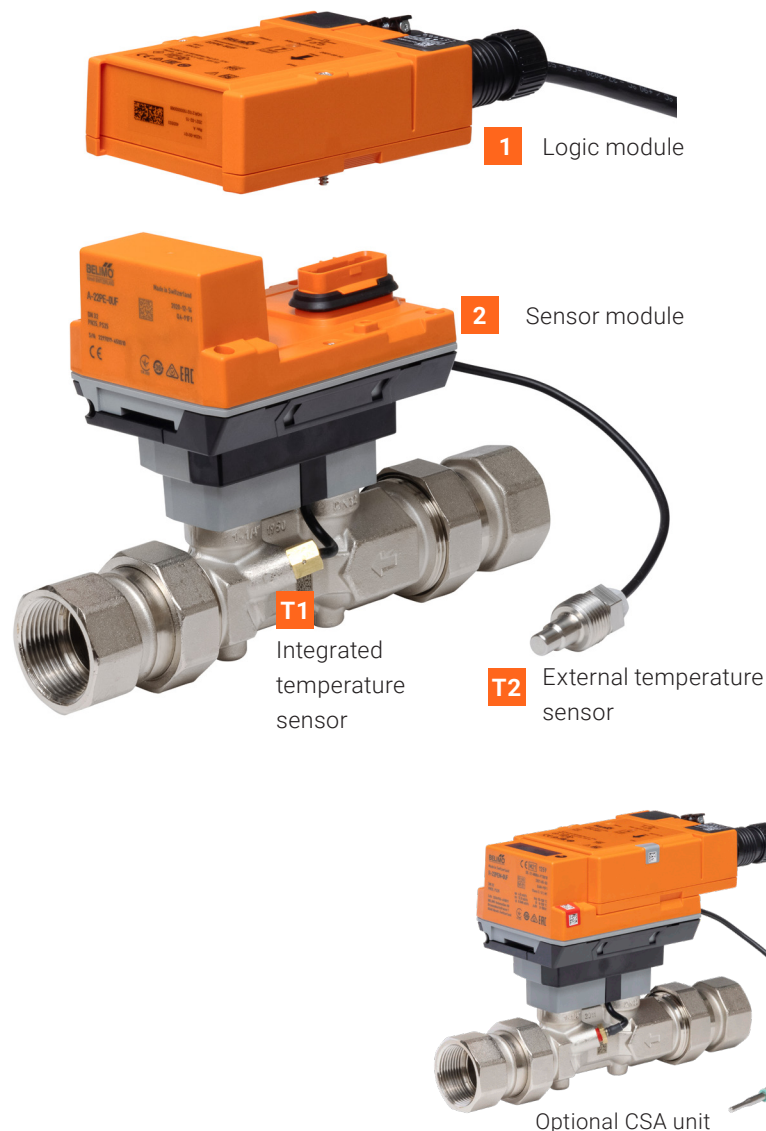
**Easy interaction through NFC**

Quick data access, field adjustable, commissioning and troubleshooting with the Belimo Assistant App and a smartphone.



## Thermal Energy Meters

Accurate measurement for heating and cooling allows building operators to adopt a cost recovery strategy through tenant billing. Designed to EN1434/MID and equipped for IoT-based billing, Belimo's thermal energy meters provide the proper flow and energy measurement. The patented glycol compensation algorithm automatically selects the glycol concentration, ensuring reliable performance and eliminating manual input and inaccuracies. Thermal energy meters are designed for chillers, boilers, commercial/multi-tenant energy metering, and monitoring applications such as commercial units, condominiums, apartments, or central plant systems.






### FEATURES

- Multi-point wet calibrated to ensure accuracy and repeatability.
- $\pm 2\%$  accuracy (NIST traceable) of reading and  $\pm 0.5\%$  repeatability for accurate and precise measurement.
- IoT capability allows for remote meter reading and data utilized for billing.
- Power over Ethernet (PoE) utilized for both data and power simplifies installation, reducing the need for additional transformers and wiring.
- Utilize ultrasonic technology with patented automatic glycol compensation algorithm to provide accurate and repeatable flow measurements of water and water/glycol mixtures without drift.
- Thermal heat transfer energy data is transparent allowing users to view and document system performance during commissioning and over time.
- Field configuration via the Belimo Assistant App and a smartphone for easy field adjustments.
- Seamless system integration analog feedback and Modbus RTU and Modbus TCP, BACnet MS/TP and BACnet/IP. (M-Bus possible with G-22PEM-A01 converter)
- Optional CSA unit with calibration certificate, cloud capabilities, and onboard display.

### PRODUCT SERIES

Thermal Energy Meters  
(Volumetric Flow and Energy Consumptions)

# Thermal energy meters at a glance

Application	Type code	Output signal	Measured values	Media	Pipe size	Body pressure rating	Features		Measurement range
		Analog (0...10 V) (0.5...10 V) (2...10 V)	Flow & Thermal Energy	Water/glycol (<60%)	Inches [mm]	360 psi	Alarm	Display	Max. GPM
	22PE-5UC	■	■	■	½" [15]	■			6.6
	22PE-5UD	■	■	■	¾" [20]	■			11.0
	22PE-5UE	■	■	■	1" [25]	■			15.4
	22PE-5UF	■	■	■	1¼" [32]	■			26.4
	22PE-5UG	■	■	■	1½" [40]	■			44.0
	22PE-5UH	■	■	■	2" [50]	■			66.0
	22PE-5UHH	■	■	■	2" [50]	■			100
	22PEC-5UC	■	■	■	½" [15]	■	■	■	6.6
	22PEC-5UD	■	■	■	¾" [20]	■	■	■	11
	22PEC-5UE	■	■	■	1" [25]	■	■	■	15.4
	22PEC-5UF	■	■	■	1¼" [32]	■	■	■	26.4
	22PEC-5UG	■	■	■	1½" [40]	■	■	■	44
	22PEC-5UH	■	■	■	2" [50]	■	■	■	66.0
	22PE-5XUCN	■	■	■	½" [15]	■			6.6
	22PE-5XUDN	■	■	■	¾" [20]	■			11
	22PE-5XUEN	■	■	■	1" [25]	■			15.4
	22PE-5XUFN	■	■	■	1¼" [32]	■			26.4
	22PE-5XUGN	■	■	■	1½" [40]	■			44
	22PE-5XUHN	■	■	■	2" [50]	■			66.0
	22PE-5XUHK	■	■	■	2" [50]	■			100

Optional heater model with thermostat temperature control for NEMA 4 models: add T to end of part number i.e. 22PE-5XUCNT

Optional heater model with hydrostat humidity control for NEMA 4 models: add H to end of part number i.e. 22PE-5XUCNH

# Exceptional service

At Belimo, we continually invest in new technologies that increase customer value by improving occupant comfort, energy efficiency, simplified installation, and maintenance-free operation. Our sales team is available to consult and provide insight and advice on how to achieve the best solution to help increase your system performance. Belimo will continue to focus on providing you with exceptional product availability, fast delivery times, and world-class customer service and technical support. We remain dedicated to continuously improve our standards and are committed to providing you with the highest value possible.

Whatever your HVAC application, our global network of support experts are on hand and ready to assist.



Global support



Tested quality



On-time delivery



Extensive service



Complete product range



## Belimo Americas

USA, Latin America, and the Caribbean: [www.belimo.us](http://www.belimo.us)

Canada: [www.belimo.ca](http://www.belimo.ca), Brazil: [www.belimo.com.br](http://www.belimo.com.br)

Belimo Worldwide: [www.belimo.com](http://www.belimo.com)

