CS611

SMART VALVE WITH ELECTROMAGNETIC THERMAL ENERGY METER

THERMAG VALVE

MID
MI-004

Water with Glycol & other additives – High accuracy and repeatability – Compact body – Automatic hydronic balance

ISONRG®
Managing energy

THERMAG VALVE **OVERVIEW**

The new **ISONRG CS611** is a 2-way electronic control valve with an integrated **Electromagnetic Thermal Energy Meter**.
It delivers precise energy control and accurate billing, fully compliant with **EN1434** and **MID directive 2014/32/EU** standards.
The CS611 ensures reliable measurement and management of energy consumption in **heating and cooling** systems, making it ideal for both new and existing buildings.
It easily connects with all Building Management Systems (BMS) and IoT platforms, offering excellent connectivity and performance.

KEY FEATURES

- **2014/32/EU MID MI004**
- **MI004 approved also for Water and Glycol mixture**
- **All-In-One device in a single body easy to install**
- **Can operate as an ePICV or eDPCV**
- **Electromagnetic flowmeter for better performance**
- **Flow measurement uncertainty better than ±0,8% r.v.**

Actuator

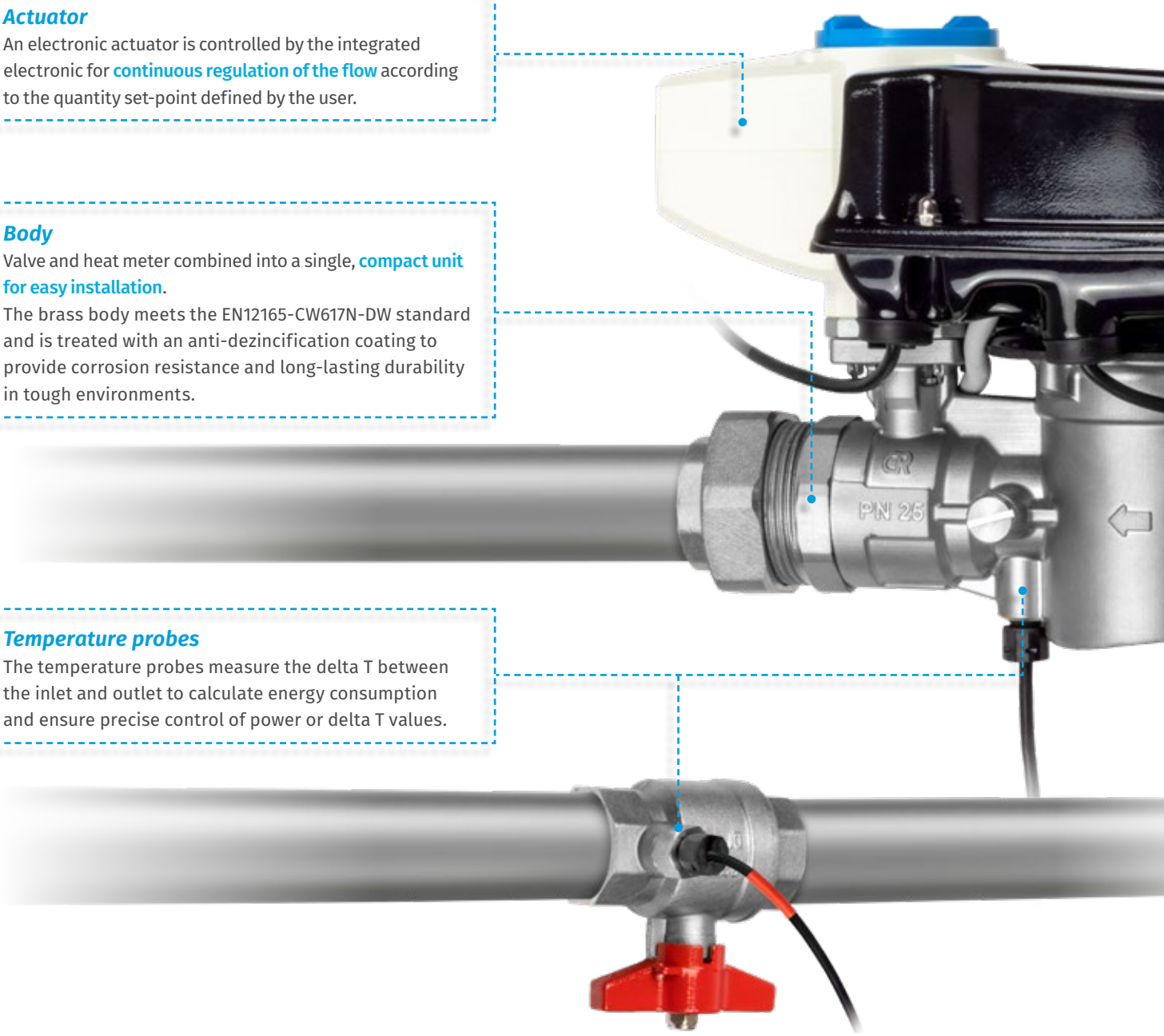
An electronic actuator is controlled by the integrated electronic for **continuous regulation of the flow** according to the quantity set-point defined by the user.

Body

Valve and heat meter combined into a single, **compact unit for easy installation**.
The brass body meets the EN12165-CW617N-DW standard and is treated with an anti-dezincification coating to provide corrosion resistance and long-lasting durability in tough environments.

Temperature probes

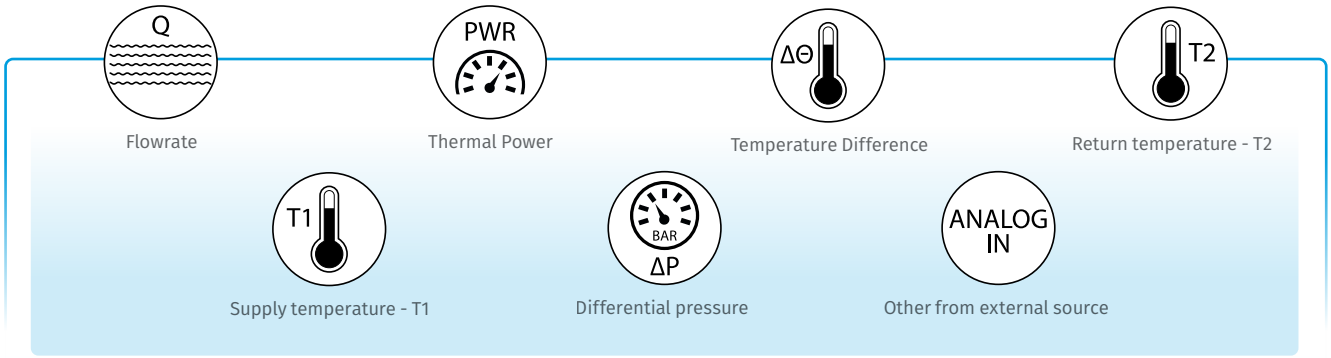
The temperature probes measure the delta T between the inlet and outlet to calculate energy consumption and ensure precise control of power or delta T values.

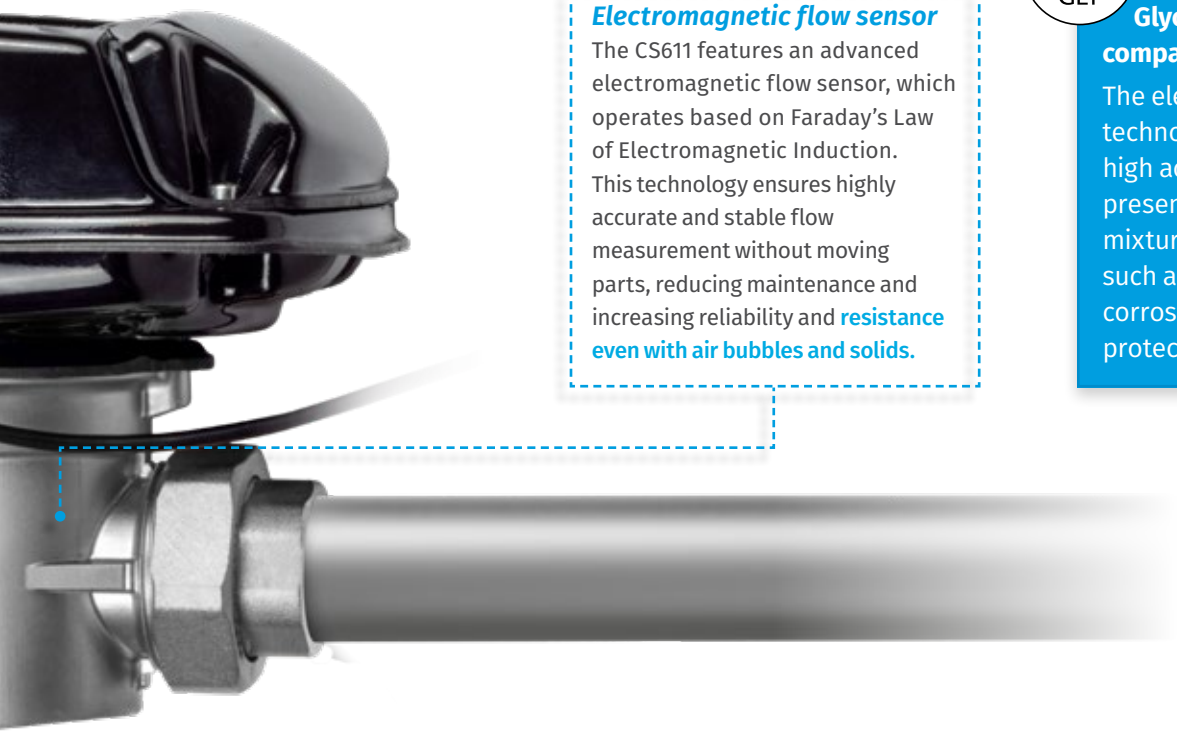


CONTROL FUNCTIONS

The new THERMAG VALVE can have different and **freely programmable regulation variables** which are used to keep control according to a precise command hierarchy.

Variables and set points can be programmed by the user or the **BMS** to meet specific application requirements.





Electromagnetic flow sensor

The CS611 features an advanced electromagnetic flow sensor, which operates based on Faraday's Law of Electromagnetic Induction. This technology ensures highly accurate and stable flow measurement without moving parts, reducing maintenance and increasing reliability and **resistance even with air bubbles and solids.**

GLY

Glycol and additives compatibility

The electromagnetic technology maintains high accuracy even in the presence of water and glycol mixtures or other additives, such as descaling agents, corrosion inhibitors, and protective film agents.

CS611 I/O MODULES AND CERTIFICATIONS

PROTOCOLS	BACnet, Modbus, PULSES, 4-20mA, 0-10V
CERTIFICATIONS	MID MI-004, EN1434

Size (mm)	Connection	Qp (m3/h)	L (mm)
15	G1/2"	1,5	177
20	G3/4"	2,5	182
25	G1"	3,5	212
32	G1"1/4	6,0	216
40	G1"1/2	10	271
50	G2"	15	275

THE BENEFITS OF CHOOSING CS611

THERMAG VALVE

Measurement Repeatability Its electromagnetic flow sensor provides reliable measurements with outstanding repeatability, ensuring consistent control and system performance.

Glycol Compatibility Both the valve and electromagnetic flow sensor are **unaffected by glycol or other additives** that may alter fluid density and viscosity, ensuring stable and accurate measurement in various conditions.

Compact Body By integrating the valve and the flow sensor into a single, compact unit, the CS611 simplifies installation and optimizes space utilization.

Accurate Control The built-in temperature, flow, and thermal power sensors enable precise control and dynamic adjustments, enhancing overall HVAC&R system performance.

Energy Efficiency Thanks to its precise measurements, the CS611 can continuously optimize system operation in real time, **reducing energy waste** and **improving efficiency**.

Intelligent Communication The CS611 supports standard communication protocols such as **BACnet** and **Modbus** over both **RS485** and **Ethernet IP**, enabling the integration with automation systems.

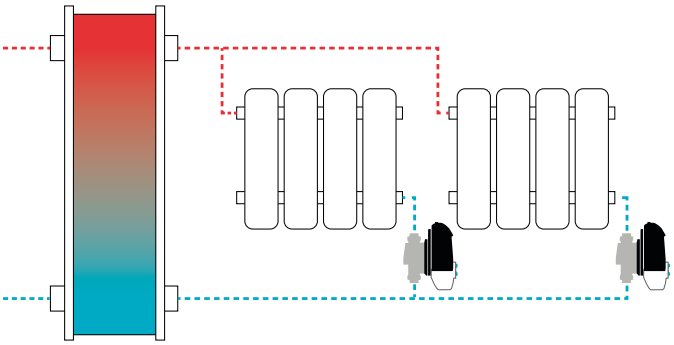
Remote Monitoring Its remote monitoring capabilities allow operators to analyse performance data, streamline maintenance, and ensure continuous, reliable system management.

Operational Cost Savings By maintaining optimal flow and temperature ranges, the CS611 helps to improve equipment performance, reduce operational costs, and **extend system life**.

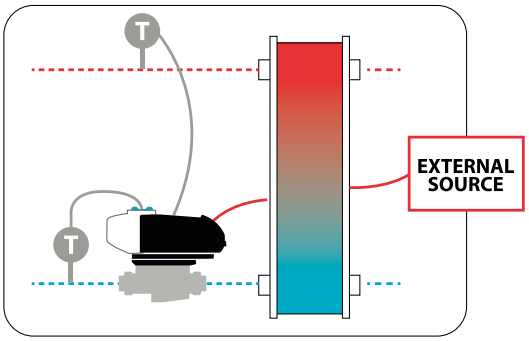
Quick Setup function enables fast and easy configuration of key parameters via keypad before MID sealing.

MI004 Compliance The MID (Measuring Instrument Directive) standard applies to the entire instrument, including mixtures of water and glycol in different concentrations.

APPLICATIONS



Automatically managing the **hydronic balance** in new and existing buildings, operating in both ePICV or eDPCV functionalities.



To **control delta T**, flow, or power in a system, or to maintain a **constant third parameter** such as indoor temperature, data center cooling bath temperature, and others.

ISOIL Industria s.p.a.
Cinisello Balsamo - Milan (Italy)
Via Fratelli Gracchi, 27
tel. +39 0266027.1 - fax +39 026123202
sales@isoil.it

ISOIL INDUSTRIA *The solutions that count*