enelsan

We Measure

ELECTROMAGNETIC AND ULTRASONIC CALORIMETERS

Flow

Pressure

Level

Temperature

Datalogger

Control and Automation

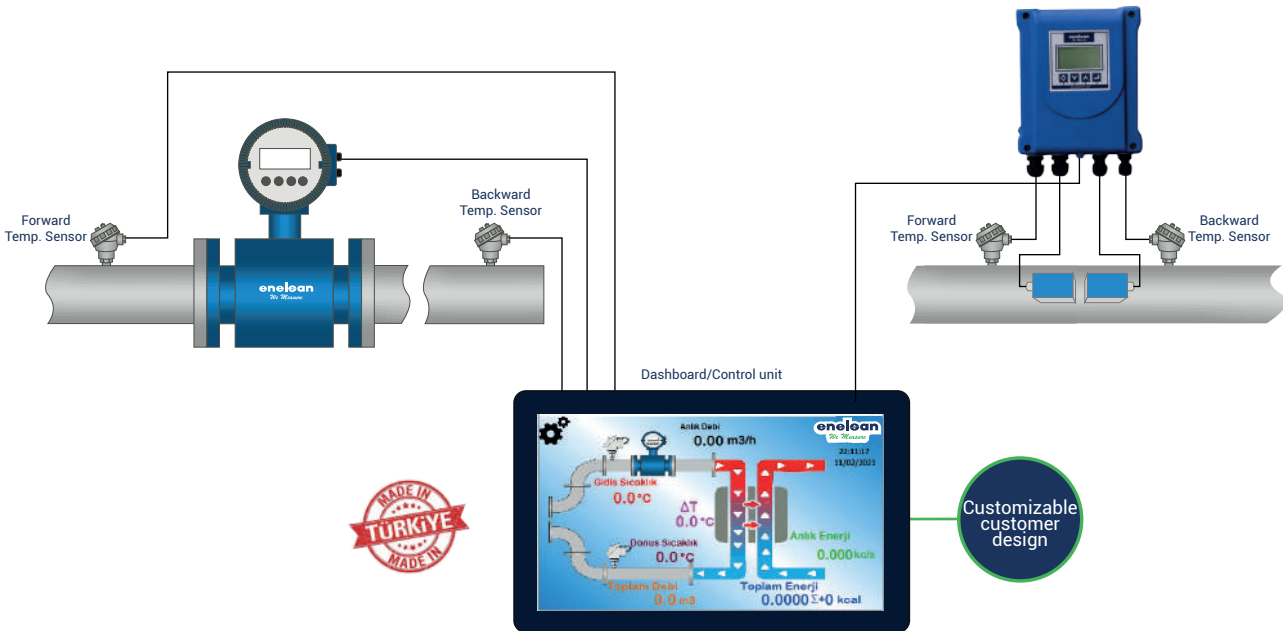# ELECTROMAGNETIC AND ULTRASONIC CALORIMETERS

Calorimeters are used devices which used to measure the energy consumption in heating and cooling systems. Electromagnetic or ultrasonic flowmeters measures the flow in the system and the control unit calculates the temperature difference between the forward and backward line temperature sensors. Then it automatically shows the energy consumption and efficiency of the system. The control unit converts this data to RS232, RS485 and Ethernet outputs and allows reporting by storing these values in its memory.

Electromagnetic Flowmeter Technical Specifications

Measuring Range	0,3 ... 15 m/s
Accuracy	±0,5% or ±0,25% (TURKAK Accredited)
Process Temperature	Ebonite -10°C ... 60°C / Teflon -20°C ... +150°C
Process Pressure	PN10, PN16, PN40, PN63, PN100
Power Supply	85-265 VAC 50 Hz veya 24VDC, Battery Operated
Output	Pulse, Frequency, RS485 MODBUS, 4...20mA, (Opt. HART)
Protection Class	IP67 / Opt. IP68

Ultrasonic Flowmeter Technical Specifications

Measuring Range	0.3 ... 15 m/s
Accuracy	±0,5% (of M.V.)
Process Temperature	-40...+110°C (Standard) -40...+160°C (Optional)
Power Supply	24 VDC, 220 VAC
Output	4-20 mA, Pulse, RS485 MODBUS
Protection Class	IP67, IP68
Pipe Sizes	DN20...DN6000 (With different sensor types)

Forward Temp. Sensor — Backward Temp. Sensor — Dashboard/Control unit — Customizable customer design — MADE IN TÜRKİYE

Temperature Sensor Technical Specifications

Measuring Range	-50...600 °C
Accuracy	±0,1 °C
Measuring Element	Class A PT100 (2, 3, 4 wires)
Output	PT100
Protection Class	IP68 DIN B from cast aluminum head
Process Connection	G1/4"...G1" male thread
Options	Thermowell, Neckpipe

Control UnitTechnical Specifications

Power Supply	220 VAC 50 Hz
Input	3x Universal Input (Frequency, Thermo Element, 4...20mA, 0...10V)
Output	1x RS485 MODBUS, Ethernet
Measuring Element	Class A PT100 (2, 3, 4 wires)
Display/Protection Class	4,3" or 7" touch panel / IP67
Dimensions	200mm x 309mm x 167mm wall mounted
Internal Datalogging	USB Connection

Calories can be calculated in the following units.

Giga Joule (GJ)	Kwh
Kilocalories (KC)	BTU