

DIGITAL THERMOMETER

Digital, Sensitive, Battery-Powered and
with LCD-Screen Thermometer,
MODEL ETRANS T09

ETTRANS – T09 Datasheet

Precise Measurement,
Ultimate Control

www.enelsan.com



Temperature Transmitter

MODEL Etrans- T09



Application Areas

Mechanical Engineering and Plant Cultivation
Pumps and Compressors
Hydraulics and Pneumatics
Service Solutions
Industrial Processes
Load Capacity Measurement

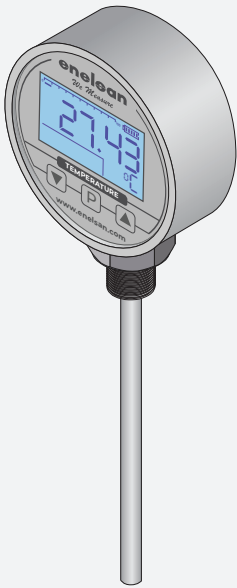
Features

- Accuracy Standard $\pm 0.5\%$ (for PT100)
- Operating Temperature $-40^{\circ}\text{C} \dots +85^{\circ}\text{C}$ ($-40^{\circ}\text{F} \dots +185^{\circ}\text{F}$)
- Temperature Measurement Range $-200^{\circ}\text{C} \dots +850^{\circ}\text{C}$
- Operating Connection Material Stainless Steel 316L

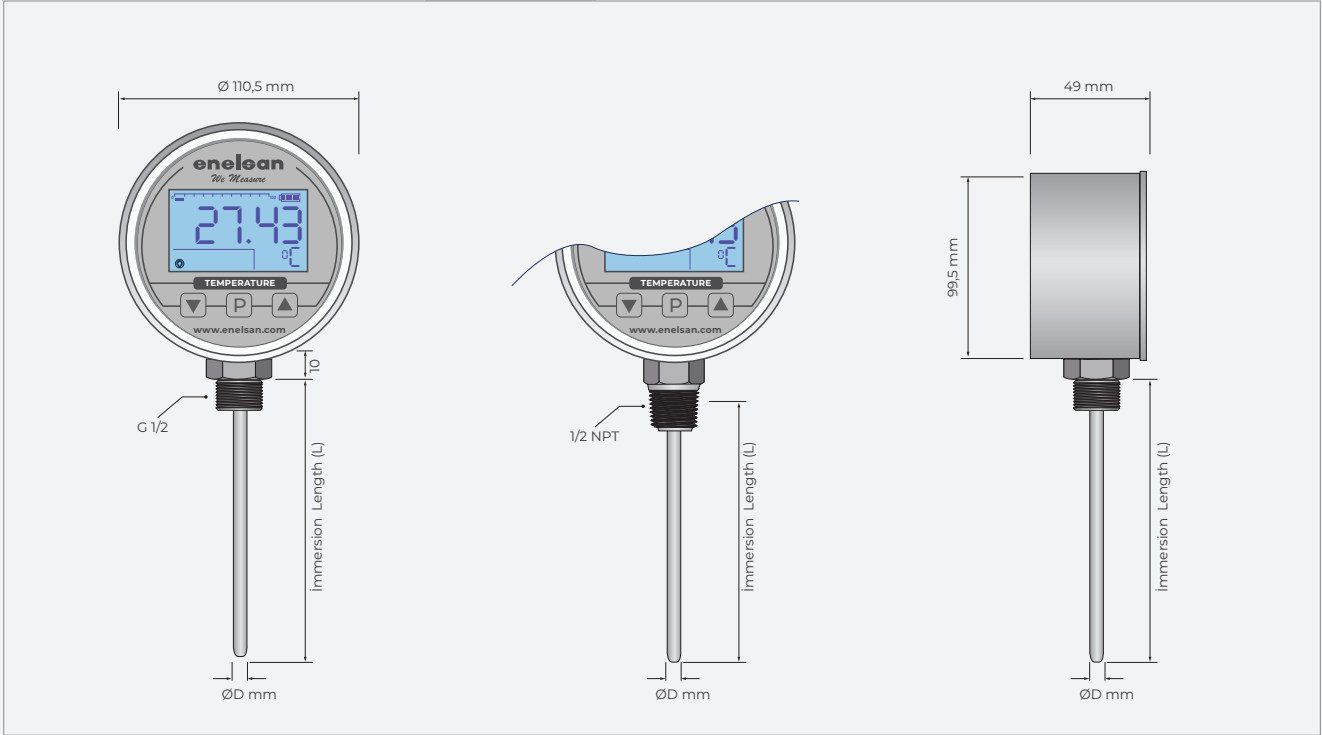
Description

The Etrans T09 Digital Thermometer is a compact, battery-powered device designed for high-precision temperature measurements. Its large, backlit digital display allows for easy reading of temperature values, and its user-friendly menu interface ensures practical use. The hermetically sealed sensor structure ensures accurate results even in harsh environmental conditions. Powered by a 3.6V lithium battery, the Etrans T09 offers energy independence thanks to its long battery life and can be used reliably in mobile applications.

The Etrans T09 caters to a wide range of applications, including industrial processes, HVAC systems, food production, energy facilities, and laboratory applications. It offers long-lasting performance with high measurement accuracy, minimal maintenance requirements, and a durable stainless steel body. Its modular design makes battery replacement easy, providing users with both an economical and sustainable solution. Developed with Enelsan engineering, the T09 combines digital technology with reliable measurement quality.



Structure



Product Specifications

Body	Stainless steel (316L) housing
Type	Digital, battery-powered, screen-equipped temperature indicator
Screen Type	5-digit LC (Liquid Crystal) display
Screen Format	5-digit, large and high-contrast characters
Screen Units	°C, °F, °K (user selectable)
Reading Sensitivity	0.001 / 0.1 resolution (selectable from the settings menu)
Visual Feedback	Alarm, minimum and maximum measurement indicators and outputs
Menu and Interface	Easy-to-use, intuitive keypad interface and menu navigation
Energy Management	The screen has an automatic shutdown (sleep mode) function to conserve battery life.
Modular structure	The battery or electronic components can be easily replaced (modular design)

Temperature Transmitter

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Internal structure Features

Temperature Sensor System	PT100 embedded in stainless steel housing
Heat Transfer Medium	Platinum Chip Temperature Sensor (Class B/Class A)
Supply Voltage	3.6 VDC (Lithium 26500 Battery)

Sleep Mode	Description	Power Consumption	Note
-	-	~8000 µA	Normal Measurement Mode
0	LCD screen is off and measurement is stopped	~1.4 µA	A fast measurement of 30 ms is performed once every 3 seconds.
1	Product is in Deep-Sleep Mode. No measurement	~0.9 µA	When the product wakes up, all units restart. The product waits in storage mode with the battery attached.

* Average current consumption calculations were performed using a 3.6VDC Lithium Battery.

Battery Type	Life Cycle
3.6 VDC Lithium 26500 8500 mAh Battery	87,600 hours and above (~10 years)*
4.2 VDC Lithium-ion 18650 3200 mAh Battery	43,800 hours and above (~5 years)*

* The fact that the battery discharges on its own has been overlooked. The battery capacity has been calculated based on ideal ambient temperatures.

Physical Structure and Materials

Body (Outer Housing)	316L Stainless Steel
Gasket	Standard NBR 70
Mounting Connection	G ¼ B, G ½ B, ¼" NPT, ½" NPT options
Study Material	Stainless Steel
Dış Muhafaza Materyali	Stainless Steel
Korumalı Yapı	Condensation-proof internal design

Internal Structure Features

Temperature Sensor System	PT100 embedded in stainless steel housing
Heat Transfer Medium	Platinum Chip Temperature Sensor (Class B/Class A)
Specializations	Fault detection function
Reference Accuracy	±0.5% (for PT100)
Long-Term Commitment	0.05 % of URL / year
Operating Temperature (Sensor)	-200 °C ...+850 °C
Ambient Temperature (Device Body)	-40°C...+85°C (-40°F...+185°F)
Outputs Alarm Output 1: Alarm Output 2:	NPN, max. 80Vdc, max. 50mA, short-circuit protected
	NPN, max. 80Vdc, max. 50mA, short-circuit protected
Selectable Units	°C - °F - °K
Protection class	IP65 – Dustproof and splash-proof

Advantages:

■ Condensation-protected, Platinum Chip Temperature Sensor, high reference accuracy: ±0.5 ■ IP65-rated enclosure, stainless steel design ■ Direct mounting ■ Best repeatability and long-term stability from product to product ■ Modular design for replaceable battery or electronics ■ 5-Digit Backlit LCD Display ■ 3.6Vdc 26500 Lithium Battery Power Source	■ Selectable measurement units ■ Battery life: 10 years and above ■ NPN output ■ Minimum and maximum measurement recording ■ Function monitoring from the measurement cell to the electronics ■ Seamless and independent system integration ■ Convenient, easy-to-use screen and menu design
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Temperature Transmitter

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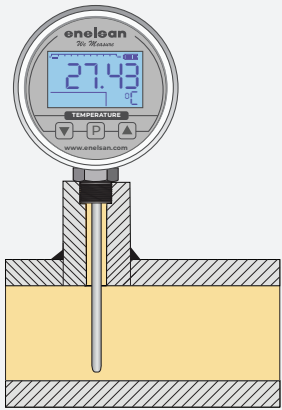
Mounting types

- Direct process connection installation (e.g., pipe, tank, system connection)

Installation Method

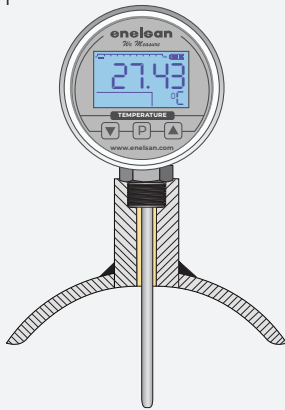
Pipeline installation

90°



Pipeline installation

90°



Standard mounting directions



Standard
(DRM at 6 o'clock)



Left
(DRM at 9 o'clock)

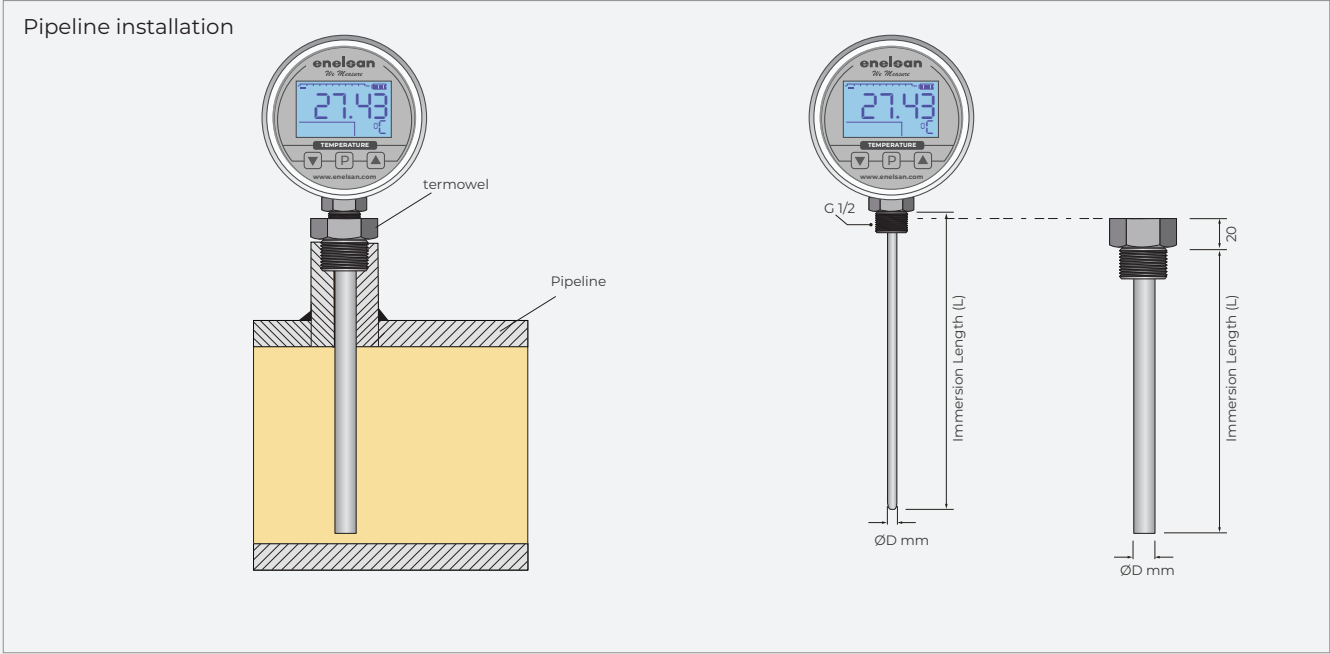


Top
mounting



Left
(DRM at 3 o'clock)

Termowell Installation Methods



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Screen



Temperature Properties

Static Operating Temperature				C/F
Dynamic Operating Temperature Min + Max		Min	Max	C/F
Maximum Negative Temperature				
Max. High Temperature				

Installation Features

Standard (DRM at 6 o'clock)	
Left (DRM at 9 o'clock)	
Right (DRM at 3 o'clock)	
Private (Upon request)	
Work Connection	

Contact us

Enelsan Istanbul Office Address
Şerifali, Barbaros Cd. No: 60, 34775 Ümraniye/İstanbul

Enelsan Factory 1 Address
Çerkeşli OSB Mahallesi İmes 4 Bulvarı No: 11 Dilovası/Kocaeli

Enelsan Factory 2 Address
Çerkeşli OSB Mahallesi İmes 14. Cadde No: 17 Dilovası/Kocaeli

Phone: +90 262 754 63 13
Fax: +90 262 754 93 93
sales@enelsan.com