



## E-MST27 SERIES MINIATURE TEMPERATURE TRANSMITTER



### DESCRIPTION

The E-MST27 Series Miniature Temperature Transmitters are products used in the industry, designed using a microprocessor and integrated with temperature sensors along with the transmitter.

They are particularly preferred in all processes suitable for use, especially in the food sector. These transmitters convert temperature values into a standard 4-20 mA signal.

The configuration of the transmitter unit can be easily configured by the user in any desired way, without the need for any power supply, by connecting to a PC via the E-IB14 communication unit using a USB interface on the PC, and with the converter configuration program loaded on the PC.

### STANDARD WORKING LIMITS

Inputs	Min.	Max.
PT - 100	-50°C	200°C

### TECHNICAL SPECIFICATIONS

Operating Voltage	10 - 30 V DC
Voltage Drop	10 V DC
Power Consumption	0.5 VA (When operating voltage is 24 VDC)
Sensor Type	Resistance Thermometer (Pt-100)
Measurement Range	Between -50 °C and 200 °C
Measurement Accuracy	±0.25 °C
Error Signal	Sensor Break
Output Type	4 - 20 mA (2 wire)
Output Accuracy	±0.1 % Full Scale
EMC Immunity	≥ ± 0.5% Full Scale
Load Resistance	[Voperating(min) - 10] x 50 Ω
Operating Temperature	Between -20 °C and 85 °C (*)
Storage Temperature	Between -30 °C and 85 °C
Protection Class	IP 67

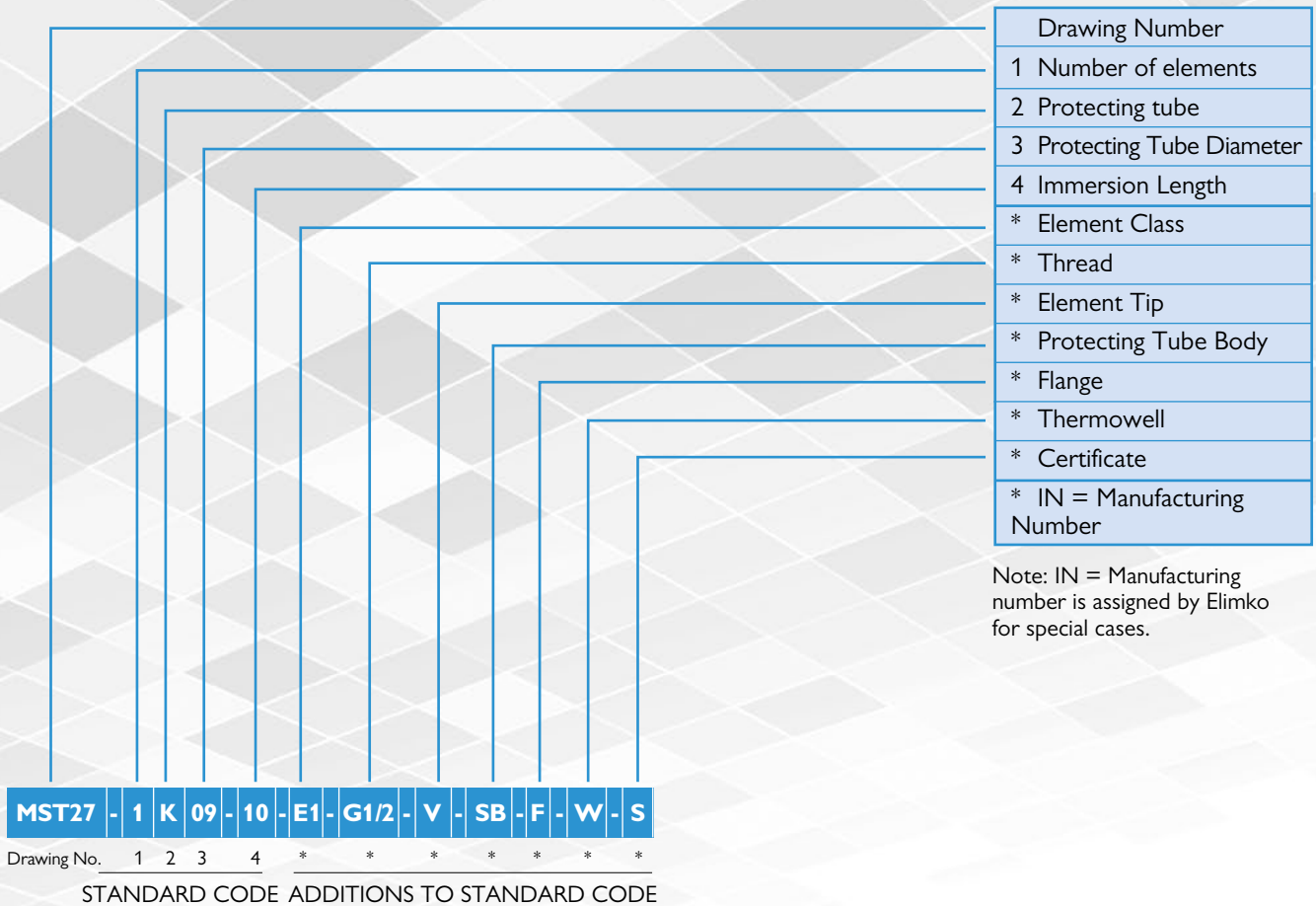
\* The temperature of the converter section should not exceed 85 °C.



Compliance with EC Directives

- Electromagnetic Compatibility Directive EN 61326

# ELIMKO MST27 CODING



## STANDARD CODE

It is coded with digits and letters containing the drawing number and 4 separate pieces of information.

## ADDITIONS TO STANDARD CODE

In addition to the technical specifications contained in the standard codes, the required features are listed in the "ADDITIONS TO STANDARD CODE". These features are given below. In this section only needed features are written. See examples.

## SPECIAL CASES

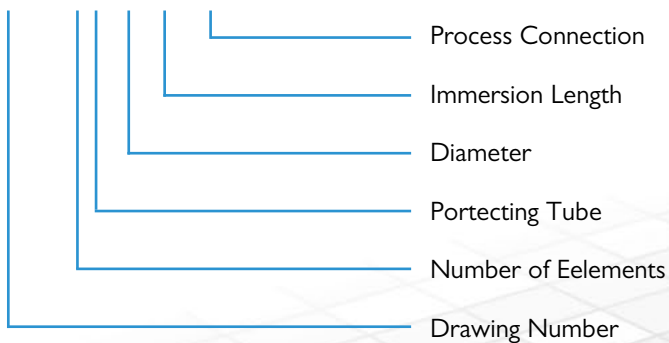
Additional features which are not fully defined with "STANDARD CODE" and "ADDITIONS TO STANDARD CODE" are coded with special drawing number. This code is expressed with IN=Manufacturing number.

Drawing Number	MST27	
1- Element Number	(1) Single Element	First column shows sensing element number.
2- Protecting Tube	D St-35.8 P 1.4301 (304) E 1.4401 (316) H 1.4404 (316L) J 1.4541 (321) K 1.4571 (316 Ti) N 310S T Teflon	
3- Protecting Tube Diameter (mm)	02 08 03 09 04 10 05 11 06 12  Note: These sizes are in mm	In 3. digit, the material of protecting tube is given by selecting in accordance with the process.

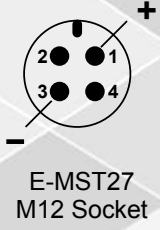
4- Immersion Length (cm)	05 35 10 50 16 71 18 100 25 Note: These sizes are in cm	In 4. digit, the immersion length is given. In order to ensure an accurate measurement, immersion length should be at least 6 or 10 times of the protecting tube diameter.
* Element Class	E1 Pt-100 - Ceramic - A class E2 Pt-100 - Ceramic - B class E3 Pt-100 - Film - A class E4 Pt-100 - Film - B class	
* Thread	G1 1NPT M10x1 G½ ½NPT M12x1 G¼ ¼NPT M12x1.5 G⅛ ⅛NPT M27x2 ... ..	If there is a thread, it is indicated by the letters in the standard. Note: Some of these field standards are written. All standards are in production. Specify your request.
* Element Tip	H Air slot UA Open ended I Needle type V Vibrations resistant HD Air hole	Details of the E-MST27 end point are given with their codes. In standards, the tip is closed.
* Protecting Tube Body	SB Bar Stock PSB Half Pipe - half full	Protecting tube can be machined from pipe and bar stock material. If the protecting tube is a pipe, no letters written.
* Flange	F Flange exists. Flange codes valid. Note: For other connection parts, please contact Elimko.	If there is an "F" in the code, it indicates the presence of a flange. Please refer to the catalog for flange details.
* Thermowell	W Thermowell exists. Thermowell codes are valid.	If there is an "W" in the code, it indicates the presence of a thermowell. Please refer to the catalog for thermowell details.
* Certificate	S Calibration certificate	Note: Please refer to Elimko for your certificate.

## **SAMPLE CODING**

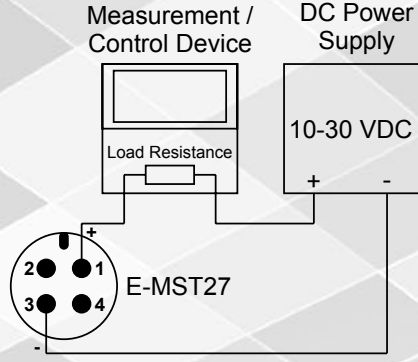
### **E-MST27- 1 P 06-10-G1/2**



## ■ WIRING DIAGRAM



Pin No	Descriptions
1	+ (positive)
2	No Connection**
3	- (negative)
4	No Connection**



(\*\*) Pins 2 and 4 of the M12 socket are used for the configuration of the transmitter and should not have any external connections. Connecting to these pins can potentially damage the device.

## ■ DIMENSIONS

