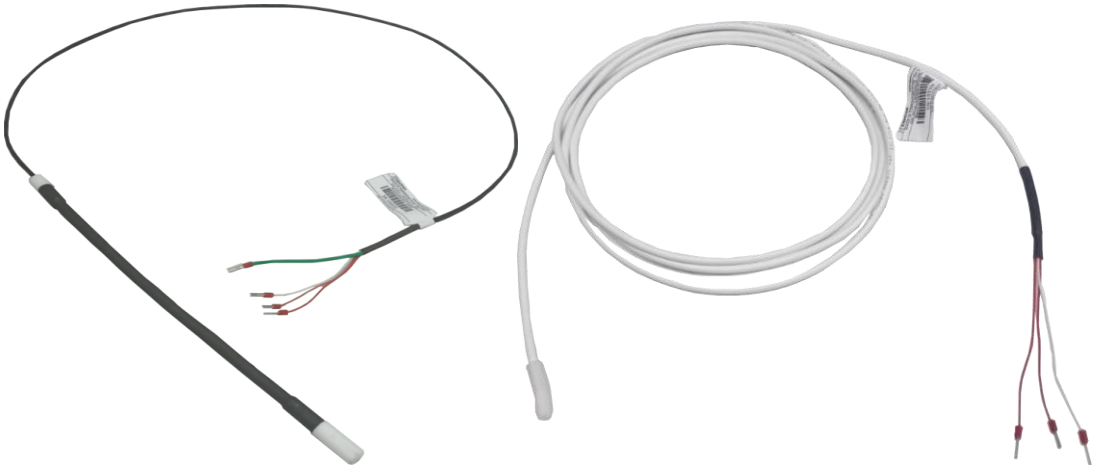
Electron



Flexible Temperature Sensor – STFE

Technical Catalog

INDÍCE

INTRODUCTION

The PT100 temperature sensor is built to strict quality standards, designed to work in dry and oil transformers, machine furnaces. Meets the levels of requirements, support and reliability according to IEC, DIN, IEEE, ABNT.

It is ideal for installations subject to inclement weather and electrical disturbances. The principle of measurement is to evaluate the variation of electrical resistance with temperature using the temperature coefficient of pure platinum is 0.385 Ohm/K. as per IEC 751 (DIN 43760). IEC data are valid for nominal resistance values of 100 ohms at 0°C. This standard also defines tolerance classes A and B in the range of – 200 to 850 °C.

KEY FEATURES STFE PT-100

Technical Data of PT-100 RTD Temperature Sensor – PTFE	
Material do bulbo	• Stainless steel 6 x 45 mm. • PTFE 6 x 45 mm. • PTFE 8 x 70 mm. • PTFE 11 x 45 mm. • Silicone 8 x 30 mm. • According to the drawing.
Cable insulation	Silicone or PTFE.
Cable length	by customer need, with or without shielding.
Sensor terminals	3 wires.
isolation	2, 10, or 15 KV.
Precision	0.03 °C.
Interchangeability	± 0.06%, ± 0.2°C.
Stability	Excellent.
Sensitivity	0.39% / °C.
Linearity	Excellent.
Coefficient (α)	Positive.
Noise sensitivity	Very low.
Warranty	1 year.

DIMENSIONS

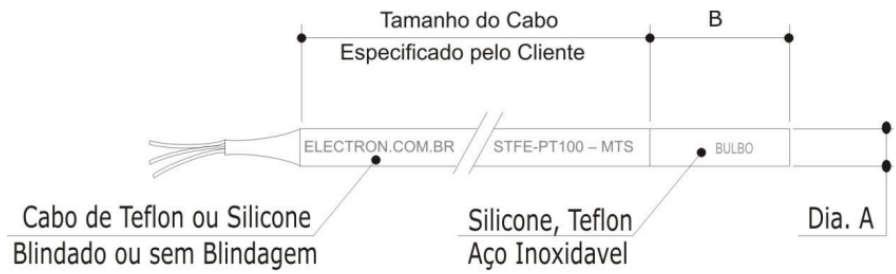


Figure 1 – Technical drawing of PTFE-21221 sensor.

Link de página para download arquivo de desenho em **DWG**:
https://electron.com.br/site/produtos/rtd-pt100-2/

CONNECTION DIAGRAM STFE PT-100 SENSOR

Due to its high precision, the PT-100 3-wire sensor is widely used in the market, as the possibility of measurement error due to the cable is greatly reduced due to the compensation principle of the third terminal of the sensor. PT-100 wire is widely applied in industries, for monitoring electrical machines, motors, dry type transformers, MCCs, etc.

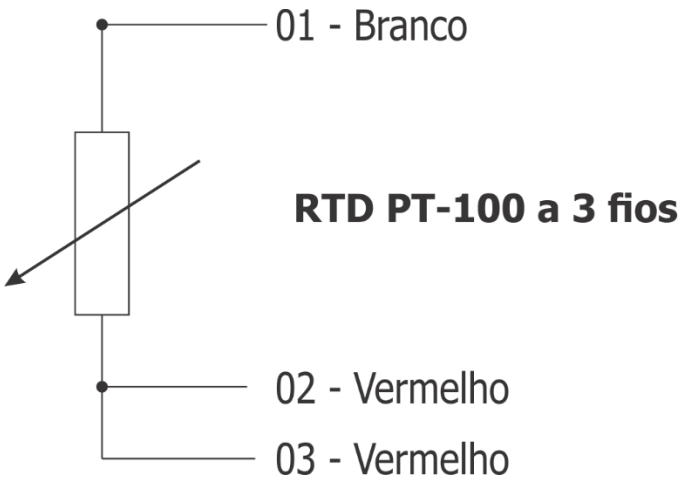


Figure 2 – STFE Sensor Connection Diagram.

Link de página para download de tabela de conversão de Resistência (Ohms) x Temperatura (°C):
https://electron.com.br/site/produtos/rtd-pt100-2/

ENSAIO DE TIPO REALIZADOS

Applied voltage: 2 KV / 60 Hz / 1 min.
Applied voltage: 10 KV / 60 Hz / 1 min.
Applied voltage: 15 KV / 60 Hz / 1 min.

ETIQUETA DE INFORMAÇÕES DO SENSOR STFE PT-100

The STFE Flexible Temperature Sensor from Electron do Brasil, contains a label attached around the cable, near the terminals, with important information that aims to facilitate its identification and characteristics.

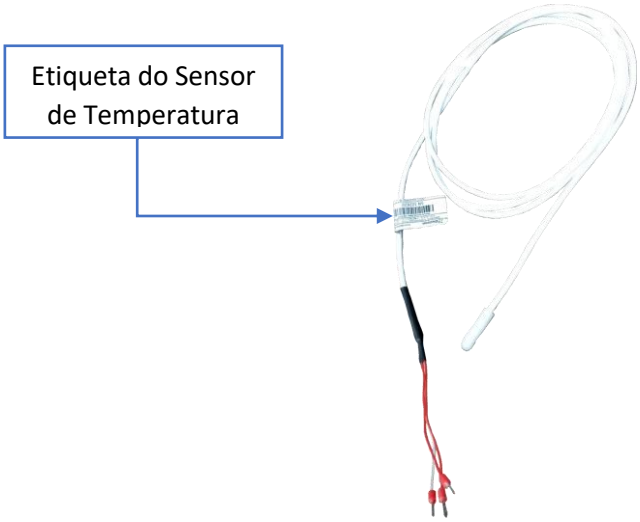


Figure 3 - Location of the STFE-61211 Sensor Label.

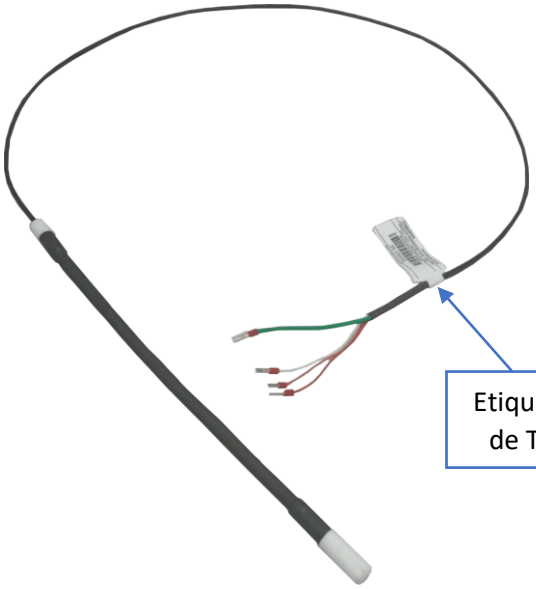


Figura 4 – Localização da Etiqueta do Sensor STFE-41323.

Figure 5 – STFE-41232 Sensor Label Details.

DETAIL FOR SENSOR INSULATION TEMPERATURE LIMITS ABOVE 10 KV

For sensors with insulation from 10 kV, it should be considered that the permissible temperature limit of the bulbs and the limit of the flexible insulation applied between the bulbs are different, as illustrated in Figure 6.

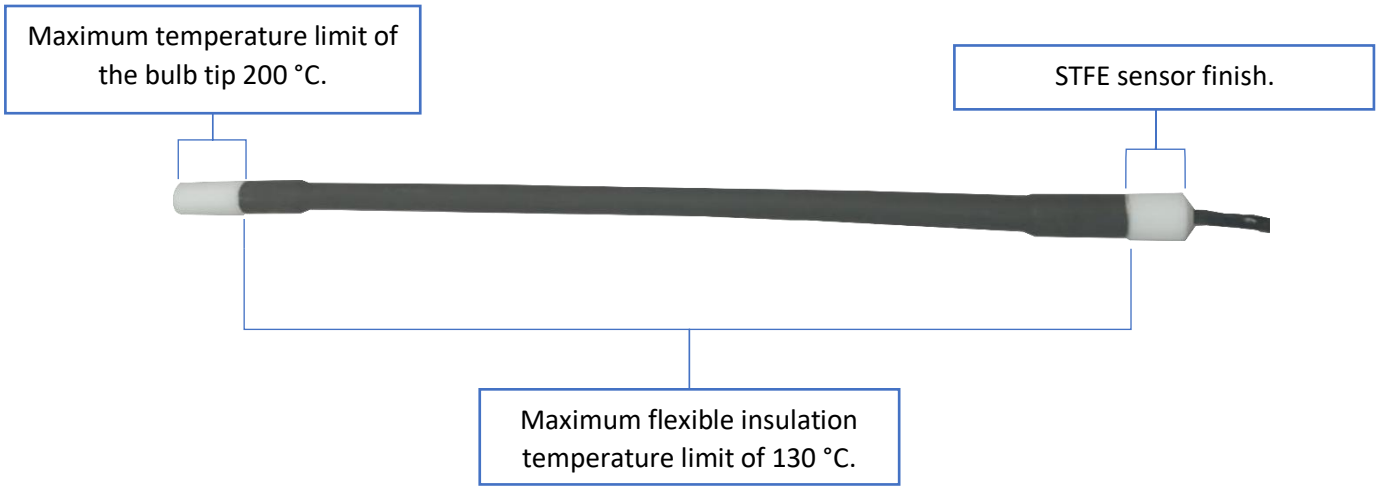


Figure 6 – Temperature limits of the insulation and temperature sensor bulbs with 10 KV isolation.

ORDER SPECIFICATION STFE SENSOR PT-100

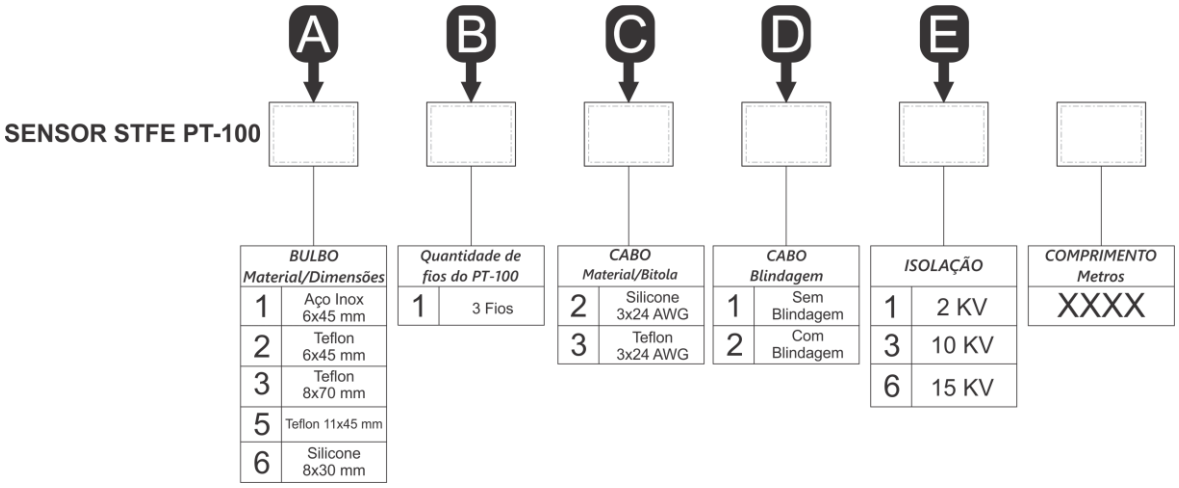


Figure 7 – Illustration of product specification code .

Link para a página de especificação de compra do produto:
https://electron.com.br/site/produtos/rtd-pt100-2/

REFERENCE EXAMPLE FOR ORDER SPECIFICATION – STFE PT-100

As illustrated in Figura 8 and Figure 9, the physical characteristics of the product are determined through the product code, represented by Figure 7. In Examples 1 and 2, each letter represents one of the five numeric characters that make up the product specification code. For each of these characters, there are one or more selection options for the specification of the purchase order for the manufacture of the product.

Example 1:

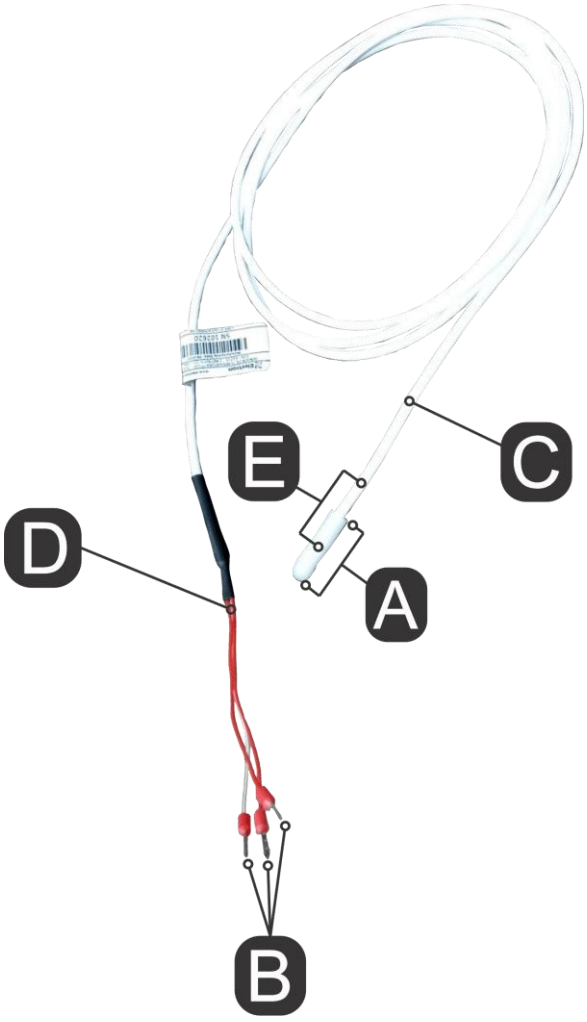


Figura 8 – Ilustração de itens para especificação,
CÓDIGO: 61211 – 2 Metros de comprimento.

A = 6 (Silicone Bulb 8x30 mm).
B = 1 (PT-100 to 3 wires. 1 white and 2 red).
C = 2 (Silicone – 3x24 AWG).
D = 1 (Without shielding mesh and terminal for grounding).
E = 1 (2 KV Insulation).
Length = 2 Meters.

Example 2:

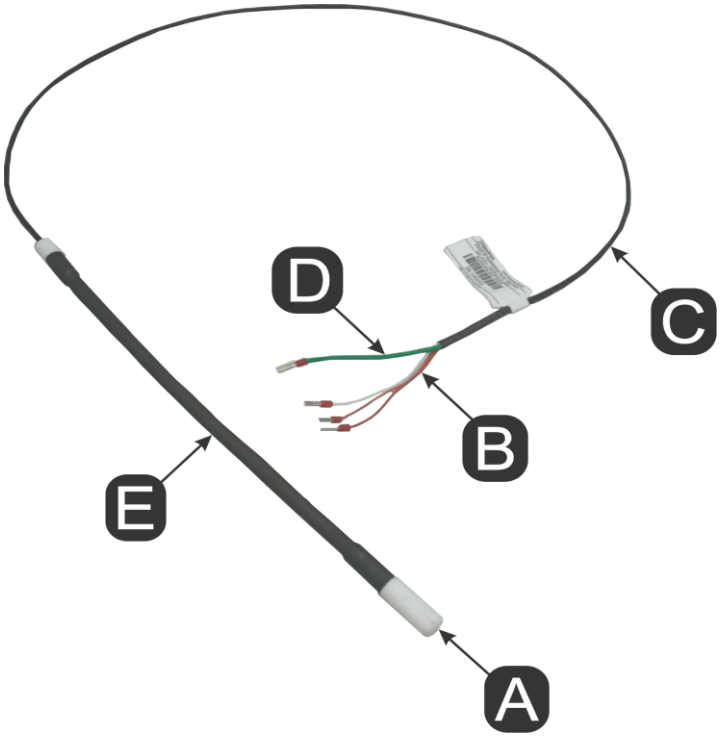


Figure 9 – Illustration of items for specification,
CODE: 412323 – 1 Meter long.

A = 4 (Bulb of material specified by the designer).
B = 1 (PT-100 to 3 wires. 1 white and 2 red).
C = 1 (Teflon – 3x24 AWG).
D = 2 (With shielding mesh and terminal for grounding).
E = 3 (10 KV isolation, as shown Figure 6).
Length = 1 Meter.

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