ELEKTRON ERMA-STRMEC

ELECTRONICS
REGULATION
MEASUREMENT
AUTOMATION

**INSTRUCTIONS**

# Straight thermocouples 0-1600 °C

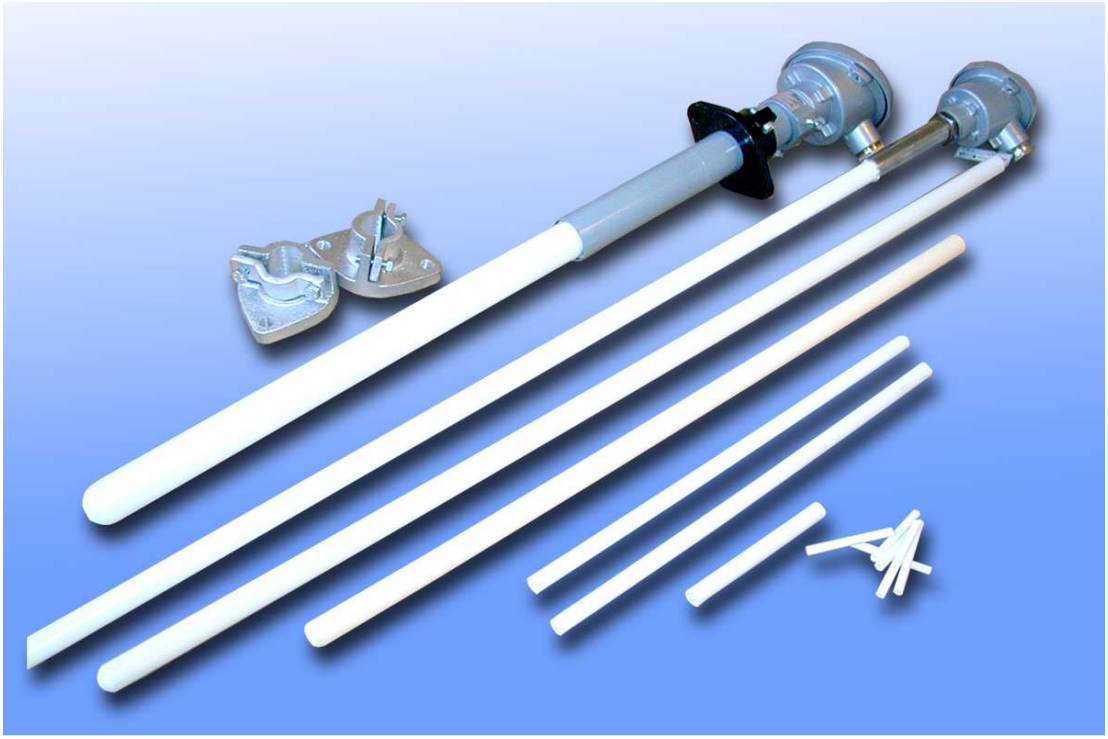
TA

**ORDER NUMBERS**
- **TA1x.xx.xx**

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Hrvatska





**Basic characteristics:**

- Operating temperature 0 - 1200 °C; 0 - 1600 °C
- Connection head type A
- Dimensions 500 - 3000 mm
- With one or two measuring elements
- **With replacable measuring insert**
- Available with transmitter ( 4-20mA)
- Thermocouples according to DIN EN 60584 or DIN 43710.

# 1 DESCRIPTION

The main purpose of TA thermocouples is to measure the temperature of gases. The most common applications are measuring of temperature in furnaces for hardening of metal, measuring of temperature in kilns for brick production, furnaces for ceramics, the temperature of flue gases in the boiler chimneys, and various air chambers. Thermocouple (elements) are according to DIN EN 60584 or DIN 43710.

# 1 TECHNICAL DATA

## 1.1 STRAIGHT THERMOCOUPLE TO 1200 °C

| | | |
|---|---|---|
| **Connection head** | Tip A | |
| **Measuring element** | Fe-CuNi | |
| | Ni-CrNi | |
| **External protective tube** | W.Nr.1.4841 | ∅ 22 x 2 mm |
| | W.Nr.1.4762 | ∅ 22 x 2 mm |
| | W.Nr.1.4301 | ∅ 22 x 2 mm |
| **Internal protective tube** | Ker 610 ∅ 15 x 2 mm | |
| **Operating temperature** | 800 °C | |
| | 1200 °C | |
| **Standard lenghts [L]** | L = 500 mm | |
| | L = 710 mm | |
| | L = 1000 mm | |
| | L = 1400 mm | |
| | L = 2000 mm | |
| | L = 3000 mm just to 1100 °C | |
| **Performance** | Single | |
| | Dual | |
| **Thickness of the thermocouple** | 2 or 3 mm | |

## 1.2 STRAIGHT THERMOCOUPLE TO1600 °C

| | | |
|---|---|---|
| **Connection head** | Tip A | |
| **Measuring element** | Pt10Rh-Pt tip S 0.35 | |
| | Pt10Rh-Pt tip S 0.5 | |
| **External protective tube** | Ker 610 | ∅ 10 x 1.5 mm |
| | Ker 610 | ∅ 16 x 2 mm |
| | Ker 610 | ∅ 24 x 2.5 mm |
| | Ker 710 | ∅ 15 x 2.5 mm |
| | Ker 710 | ∅ 24 x 3 mm |
| **Internal protective tube** | Ker 610 | ∅ 10 x 1.5 mm |
| | Ker 610 | ∅ 16 x 2 mm |
| | Ker 610 | ∅ 24 x 2.5 mm |
| | Ker 710 | ∅ 15 x 2.5 mm |
| | No protection tube | |
| **Operating temperature** | 1500 °C | |
| | 1600 °C | |
| **Standard lenghts [L]** | L = 500 mm | |
| | L = 710 mm | |
| | L = 1000 mm | |
| | L = 1400 mm | |
| **Performance** | Single | |
| | Dual | |

# 2 ORDER NUMBERS

## 2.1 STRAIGHT THERMOCOUPLE TO 1200 °C

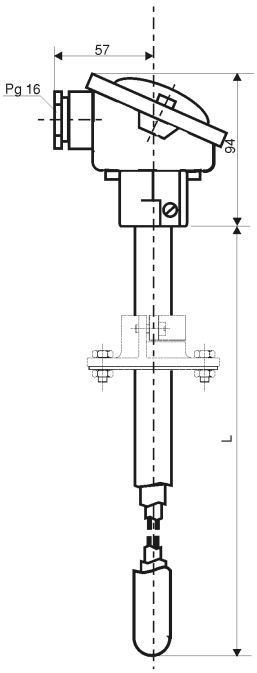
| Large flat thermocouples | TA | x | x | x | x | x | x |
|---|---|---|---|---|---|---|---|
| **Connection head** | Tip A | 1 | | | | | |
| **Type of sensor** | Fe-CuNi ∅ 3 | | A | | | | |
| | Ni-CrNi ∅ 3 | | B | | | | |
| **External protective tube** | W.Nr.1.4841 ∅ 22 x 2 | | | 3 | | | |
| | W.Nr.1.4762 ∅ 22 x 2 | | | 4 | | | |
| | W.Nr.1.4301 ∅ 22 x 2 | | | 5 | | | |
| **Sheath tube** | without protection | | | | 3 | | |
| | Ker 610 ∅ 16 x 2 | | | | 4 | | |
| **Length measurement works (L)** | 500 mm | | | | | 2 | |
| | 710 mm | | | | | 3 | |
| | 1000 mm | | | | | 4 | |
| | 1400 mm | | | | | 5 | |
| | 2000 mm | | | | | 6 | |
| | 3000 mm | | | | | 7 | |
| **Number of thermoelements** | Single | | | | | | 1 |
| | Dual | | | | | | 2 |

## 2.2 STRAIGHT THERMOCOUPLE TO 1600 °C

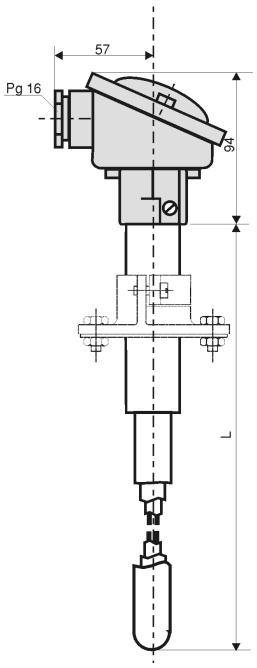
| Large flat thermocouples | TA | x | x | x | x | x | x |
|---|---|---|---|---|---|---|---|
| **Connection head** | Tip A | 1 | | | | | |
| **Type of sensor** | Pt10Rh-Pt ∅ 0.35 | | 5 | | | | |
| | Pt10Rh-Pt ∅ 0.5 | | 6 | | | | |
| **External protective tube** | Ker 610 ∅ 16 x 2 | | | A | | | |
| | Ker 610 ∅ 24 x 2.5 | | | B | | | |
| | Ker 710 ∅ 15 x 2.5 | | | C | | | |
| **Internal protective tube** | Ker 610 ∅ 10 x 1.5 | | | | 1 | | |
| | Ker 710 ∅ 10 x 2 | | | | 2 | | |
| | without protection | | | | 3 | | |
| | Ker 610 ∅ 16 x 2 | | | | 4 | | |
| **Length measurement works (L)** | 500 mm | | | | | 2 | |
| | 710 mm | | | | | 3 | |
| | 1000 mm | | | | | 4 | |
| **Number of thermoelements** | Single | | | | | | 1 |
| | Dual | | | | | | 2 |

# 3 DIMENSIONS

STRAIGHT Thermocouple to1200 °C




STRAIGHT Thermocouple to1600 °C




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