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Temperature probe for the plastics industry

Type 404452

General application

Temperature probes Type 404452 are used to measure melt temperature on extruders in the plastics industry. The measurement is converted into an electrical signal. Either thermocouples or resistance thermometers can be used. A probe tip thermally insulated with ceramic can be supplied for particularly accurate temperature measurement. The probe tip is available in different lengths in order to ensure a fast response.




Technical data

Parts in contact with the plastic
for temperatures 0 – 350°C ("843")
stainless steel, Mat. Ref. 1.4541
tip stainless steel, Mat. Ref. 1.4545
for temperatures 0 – 400°C ("848")
stainless steel, Mat. Ref. 1.4435
tip stainless steel, Mat. Ref. 1.4545 with
ceramic insulation

Classification
for tolerance "1"
resistance thermometer
0 +400°C, Class B, ±0.8°C at 100°C
for tolerance "2"
resistance thermometer
0 +400°C, Class A, ±0.35°C at 100°C
for tolerance "8"
thermocouple
-40 to +750°C, Class 2 ±2.5°C

Protection
IP65 to EN 60 529

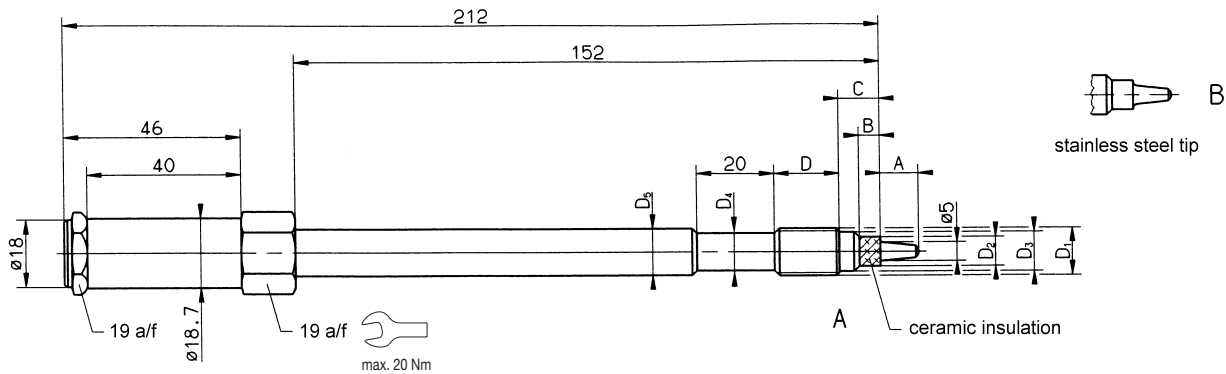
Mounting
(male thread)
("591") M18 x 1.5
("592") J-20 UNF-2A  max. 20 Nm

Electrical connection
Lemosa round connector Type 2S 302 or
Lemosa Type 2S 304

Operating position
unrestricted

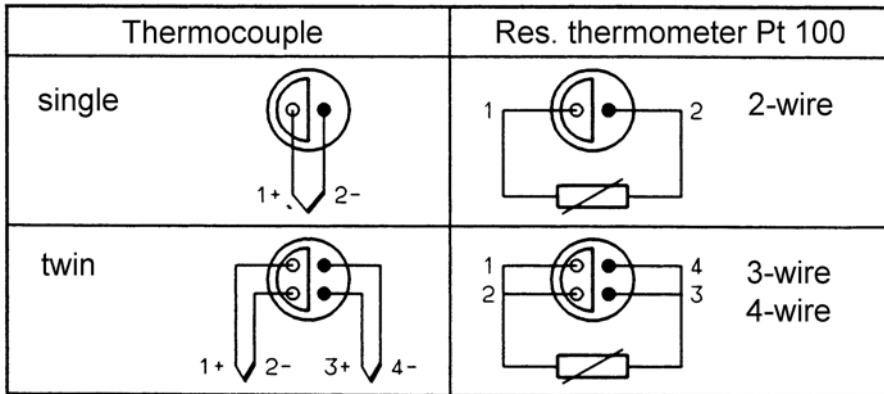
Weight
300 g approx.

Dimensions



D ₁	D ₂	D ₃	D ₄	D ₅	A	B	C	D	a/f
1/2"-20 UNF 2A	ø 7.8 ⁰ _{-0.05}	ø 10 ⁰ _{-0.05}	ø 10 ⁰ _{-0.5}	ø 12.5 ⁰ _{-0.5}	see Ordering details "Probe tip length"	5.6 ⁰ _{-0.1}	10.8	17	17 (19)
M 18 x 1.5	ø 10 ⁰ _{-0.05}	ø 16 ⁰ _{-0.1}	ø 16 ⁰ _{-0.5}	ø 16		5.6 ⁰ _{-0.25}	14	20	19

Terminal connections



Ordering details

Basic type

404452 Temperature probe for the plastics industry

Operating temperature

843 0 – 350°C, stainless steel version

848 0 – 400°C, stainless steel version with extra ceramic insulation

Measuring insert

001 resistance thermometer Pt 100, 3-wire ISO 751

003 resistance thermometer Pt 100, 2-wire ISO 751

011 resistance thermometer Pt 100, 4-wire ISO 751

040 thermocouple Fe-Con J IEC 584-1

042 thermocouple Fe-Con L DIN 43 710

043 thermocouple NiCr-Ni K IEC 584-1

Tolerance

1 Class B (this is standard for resistance thermometer sensor)

2 Class A (to special order for resistance thermometer sensor)

8 Class 2 ±2.5°C (only for thermocouple sensor)

Mounting

591 M18 x 1.5

592]-20 UNF-2A

Probe tip length

0 0 mm

5 5 mm

10 10 mm

15 15 mm

20 20 mm

25 25 mm

Electrical connection

43 Lemosa plug size 2

404452 / - - - - - **Ordering code**