Temperature-measuring transducer 4-20mA, Pt100, 2- / 3- or 4-wire

for head and rail case mounting

Panel-mounted-resistance thermometer with measuring transducer RT420

RT420 - advantages:

- **low-price and robust (complete sealed - no pots, therefore vibration resistant and long time stable)**
- **freely programmable - extreme wide measuring range of -200 to 850°C (measuring span already from >=25°C)**
- **selectable probe connection as 2- / 3- or 4-wire**
- **high accuracy (0.1%)**
- **large ambient temperature range (-40 ... +85°C)**
- **error message in case of sensor damage or sensor short-circuit**
- **functional warranty 5 years**

RT420 / WE *1

head transmitter, set by our works

Rail adapter upcharge:

for snap-on the RT420 to top-hat rail

RT420 - SG / WE *1

set by our works and mounted in snap-on rail housing

*1 **= Ordering data required:**

1. **required probe connection (2- / 3- or 4-wire)**
2. **measuring range from / to** (max. range: -200 ... +850°C)

Order exampley: RT420 / WE, 4-wire, 0...50°C
RT420-SG / WE, 3-wire, -50...+150°C

RT420 with rail adapter

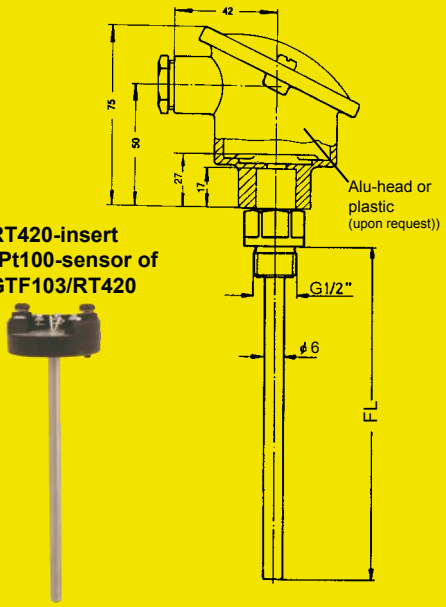
GTF103 / RT420 (p.r.t. page 96)

Panel-mounted resistance thermometer

Pt100 cpl. with measuring transducer RT420 - transducer and Pt100 can be taken out in form of an insert. (Price valid for standard length 100mm and temperature range as to customers specification between -50 ... +400°C)

Special designs upon request - please contact us!

GTF103/RT420



RT420-insert with Pt100-sensor of a GTF103/RT420

Specification:

Measuring range: -200 ... +850°C, universally programmable
Measuring span: 25 to 1050 K
Zero shift: -200 ... +825°C
Resolution: 14 bit
Sensor connection: 2-, 3- or 4-wire connection
Meas. current: < 0,3 mA
Perm. resistance of connection cable: max. 20 Ohm / wire
Compensation for cable error: ±0,02 K / Ohm (at 3-wire)
Sensor monitoring: monitoring for sensor damage and short-circuit
Meas. cycle: < 700 ms
Linearisation: linear to temperature acc. to IEC/DIN/EN 60 751-2
Accuracy: ±0.25°C or ±0.1% of meas. span
Temperature effect: < ±0.01% / 1K

Analog output: 4…20 mA, 2-wire technology
Accuracy output: <0.1% of signal span
Auxiliary energy: V_s 8 … 35 V DC (max. ripple factor: 3Vss @ 50/60Hz)
Perm. burden R_A: $R_A \leq (V_s - 8\,V) / 0{,}023\,A$ [R_A in Ohm, V_s in V]
Effect of aux. energy: ±0.01 % / V
Power-on time: 10 s
Damping: adjustable from 0 to 30 s
Output limits: programmable, 3.5 mA, 23 mA
Signal for sensor damage: programmable, 3.5mA or 23mA
Operating temperature: -40 … +85 °C
Relative humidity: 0... 98 %RH, (non condensing)
Storage temperature: -55 … +90 °C
Electromagnetic compatibility (EMC):
conforming to CE acc. to DIN EN 61326
Housing: housing suitable for head mounting
Dimensions: Ø 44 mm x 19 mm
IP rating: Housing: IP40,
connection terminals: IP10
Electric connection: via screw-type terminals
Weight: approx. 35 g

Design type ...-SG (snap-on rail housing)
Dimensions: approx. 22.5 x 78 x 105 mm
Electric connection: via screw-type terminals
Weight: approx. 110 g

Accessories:

Programming tool for RT420

The configuration set contains: configuration software, connection cable RS 232-C, battery plug, connection cable and operating manual

For easy storage management at customers site (customer programmability - all ranges and wiring options can be fully utilised)