

# Ex - Transmitter for Connection Heads

Configurable transmitter for resistance thermometers type APAQ-HRFX

# Datasheet 84.5

Transmitter

**Description:** 4...20 mA Transmitter for the installation into B connection heads  
Execution with configurable easurement range : The range can be configured coarsely with solder pads. The finetuning is done with the potiometers

**Inputs :** Platinum- RTD's acc. to DIN IEC 751  
three- wire technique

**Output:** 4...20 mA two- wire technique  
(see connection diagramm)

**Load:** 
$$R_B = \frac{U_B - 6,5 V}{0,0216 A}$$

$R_B$  = Load resistance  
 $U_B$  = Supply Voltage

## Behaviour for probe - ruptuture :

Current raises over 21,6 mA or falls below 3,5 mA

## Behaviour for probe - shortcut :

Current falls below 3,5 mA

**Response Time :** 10 - 90 % about 0,2 s

**Offset adjustment range :** -50...+50 °C

**Span adjustment range :** +50...500 °C

**Characteristic :** temperaturelinear

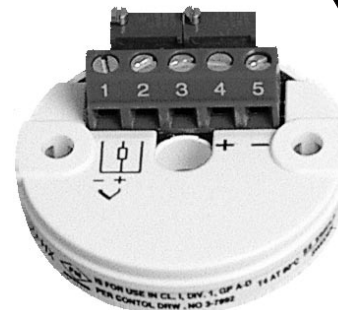
**Basic error :** 0,2 % FS

**Ambient Temperature Limits :** - 40 ... + 85 °C

**Supply limits :** 8,5 - 30 V DC

**Clamps :** Screw- clamps diameter Ø 2,5 mm<sup>2</sup>

**Housing :** Diameter 45 mm suitable for connection heads type B according to DIN 43 729



## Ex Data :

### Statement of conformity :

Approval Demko 03 ATEX 135011X  
CE 0539 - II 1G EEx ia IIB

### Supply - / Signal - Current loop :

**Protection class :** intrinsically safe EEx ia IIB

**Nominal Current :** 4...20 mA

**Maximum Voltage :** 30 V DC

**Maximum Current :** 100 mA

**Maximum Power :** 700 mW

**Inner Capacity :** 30 nF

**Inner Inductivity :** 10 µH

### Input Current Loop :

**Protection class :** intrinsically safe EEx ia IIB

**Maximum Voltage :** 30 V

**Maximum Current :** 100 mA

**Maximum Power :** 300 mW

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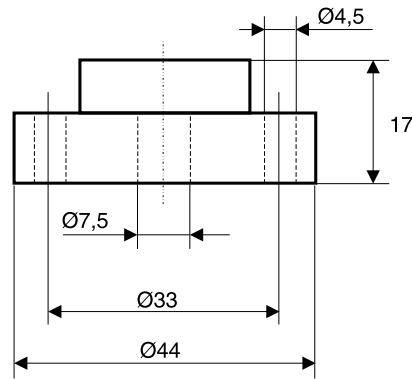
Transmitter

Measuring ranges	
Ordering - code	F G
- 200 ... + 200 °C	4 1
- 200 ... + 50 °C	4 2
- 50 ... + 50 °C	4 9
0 ... + 60 °C	5 8
0 ... + 100 °C	6 0
0 ... + 200 °C	6 3
0 ... + 300 °C	6 5
0 ... + 400 °C	6 7
Special - range	9 9

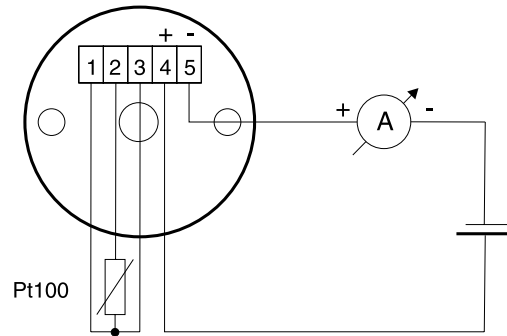
Please declare special ranges in plain language - see bottom

Behaviour on Probe Rupture	
Ordering - code	J
Current > 21,6 mA	1
Current < 3,5 mA	2

## Dimensions :



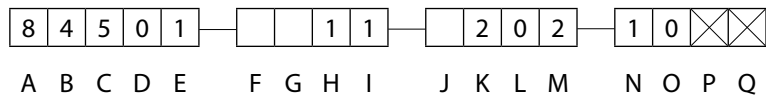
## Connection :



## Ordering-code :

for ordering please fill out all empty digits in the order code on the right.

The code numbers for all free digits you find in the charts above.



## For ordering please declare in plain language :

Special ranges (Min. - Measuring range 10 K) :

.....°C to .....°C correspond to 4...20 mA