

APAQ-H is a family of multirange 2-wire temperature transmitters for Pt100 or Thermocouple input. Designed for highest reliability and excellent industrial performance. The "low profile" housing is extremely durable and facilitates easy connections and adjustments.

- Rangeable with solderpads and potentiometers
- Temperature linear output for Pt100 (APAQ-HRF/-HRFX)
- $m V$ linear output for T/C (APAQ-HCF/-HCFX)
- Consistent sensor break function
- Easy wiring, large center hole
- Moulded electronics for high protection


## Specifications:

|  | APAQ-HRF/-HRFX | APAQ-HCF/-HCFX |
| :--- | :--- | :--- |
| Input | Pt100 ${ }^{1 /}, 3-$ wire connection | T/C J, L, T, K, N |
| Adjustments | $50 / 100 / 150 / 200 / 300 / 400 / 500^{\circ} \mathrm{C}$ | 10 to 50 mV continuously |
| Span | $100 / 200 / 300 / 400 / 600 / 800 / 1000^{\circ} \mathrm{F}$ | Temperature ranges acc to datasheet |
|  | $\pm 10 \%$ | $\pm 10 \%$ |
| Fine adjustment | -50 to $+50^{\circ} \mathrm{C}$ | $\pm 10 \%$ of span |
| Zero | -60 to $+120^{\circ} \mathrm{F}$ |  |
|  | $4-20 \mathrm{~mA}$ | $4-20 \mathrm{~mA}$ |
| Output | Temperature linear output | mV linear output |
| Linearization | No | No |
| Galvanic isolation |  |  |
| Power supply | 6.5 to 32 VDC | 6.5 to 32 VDC |
| APAQ-HRF/-HCF | 8.5 to 30 VDC | 8.5 to 30 VDC |
| APAQ-HRFX/-HCFX | Upscale, Downscale | Upscale, Downscale |
| Sensor failure |  | II 1 G EEx ia IIB T4-T6 |
| Intrinsic safety | II 1 G EEx ia IIB T4-T6 | Class I, Div. 1, Gr.A-D |
| APAQ-HRFX/-HCFX ATEX: | Class I, Div. 1, Gr.A-D | -40 to $85^{\circ} \mathrm{C} /-40$ to $+185^{\circ} \mathrm{F}$ |
| APAQ-HRFX/-HCFX FM: | -40 to $85^{\circ} \mathrm{C} /-40$ to $+185^{\circ} \mathrm{F}$ | $\pm 0.5 \%$ to $\pm 1.0 \%$ of temperature span |
| Operating Temperature | $\pm 0.15 \%$ of temperature span | DIN B or larger |
| Typical accuracy | DIN B or larger |  |
| Connection head |  |  |

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| ${ }^{11} \mathrm{IEC} 60751, \alpha=0.00385$ |

## Input connections

APAQ-HRF/-HRFX


## APAQ-HCF/-HCFX



## Output connections



## Output load diagram

$\mathrm{R}_{\mathrm{LOAD}}(\Omega)$

$\begin{array}{llllllll}4 & 8 & 12 & 16 & 20 & 24 & 28 & 32\end{array} 36$
Supply voltage U (V DC)
$\mathrm{R}_{\text {LOAD }}=(\mathrm{U}-6.5) / 0.025$ (APAQ-HRF/-HCF)
$R_{\text {LOAD }}^{\text {LOAD }}=(\mathrm{U}-8.5) / 0.025$ (APAQ-HRFX/-HCFX)
Dimensions

$\mathrm{mm} /$ inches

## Ordering information

| APAQ-HRF | 70APHRF001 |
| :--- | :--- |
| APAQ-HRFX (ATEX) | 70APHRFX01 |
| APAQ-HRFX (FM) | 70APHRFX11 |
| APAQ-HCF | 70APHCF001 |
| APAQ-HCFX (ATEX) | 70APHCFX01 |
| APAQ-HCFX (FM) | 70APHCFX11 |
| Configuration | 70CAL00001 |

