

- Universal transmitter for (RTD, T/C, resistance, voltage) settable via HART-protocol



PERFORMANCE :

- Universal settings with HART-protocol for various input signals (2-Wire)
- Galvanic isolation
- An internal temperature sensor for active temperature compensation
- 12.5 mm width



Technical data

INPUT :

| | Type | Measurement ranges | Min. meas. Ranges |
|---|---------------------------------|------------------------------------|-------------------|
| RTD | Pt100 | -200°C to 850°C (-328°F to 1562°F) | 100°C |
| | Pt500 | -200°C to 250°C (-328°F to 482°F) | 100°C |
| | Pt1000 | -200°C to 250°C (-328°F to 482°F) | 100°C |
| | Cu50 | -50°C to 150°C (-58°F to 302°F) | 50°C |
| | Cu100 | -50°C to 150°C (-58°F to 302°F) | 50°C |
| | *Ni100 | -60°C to 180°C (-76°F to 356°F) | 50°C |
| *Ni500 | -60°C to 180°C (-76°F to 356°F) | 50°C | |
| *Ni1000 | -60°C to 150°C (-76°F to 302°F) | 50°C | |
| Resistance(Ω) | Resistance(Ω) | 0 to 400 Ω | 50 Ω |
| | | 0 to 2000 Ω | 100Ω |
| | | 0 to 10000 Ω | 1000Ω |
| *α = 5000ppm/K or 6180ppm/K Connection type: 2-, 3- or 4-wire connection Sensor current: 0.5 mA | | | |
| Thermocouples(T/C) | B(PtRh30-PtRh6) | 0 to 1820 (32 to 3308) | 500°C |
| | E(NiCr-CuNi) | -270 to 1000°C (-454 to 1832°F) | 100°C |
| | J(Fe-CuNi) | -210 to 1200°C (-346 to 2192°F) | 100°C |
| | K(NiCr-Ni) | -270 to 1372°C (-454 to 2501°F) | 100°C |
| | N(NiCrSi-NiSi) | -270 to 1300°C (-454 to 2372°F) | 100°C |
| | R(PtRh13-Pt) | -50 to 1768°C (-58 to 3214.4°F) | 500°C |
| | S(PtRh10-Pt) | -50 to 1768°C (-58 to 3214.4°F) | 500°C |
| | T(Cu-CuNi) | -270 to 400°C (-454 to 752°F) | 100°C |
| Voltage (mV) | Millivolt transmitter(mV) | -10 to 75mV | 15mV |
| | | -100 to 100mV | 15mV |
| | | -100 to 500mV | 50mV |
| | | -100 to 2000mV | 100mV |

OUTPUT :

| | |
|-------------------------------------|---|
| Output signal | 4 to 20 mA (HART) |
| Signal on alarm | Downscale Linear drop to 3.8 mA |
| | Upscale Linear rise to 20.8 mA |
| | Sensor break; sensor open-circuit 3.8 mA |
| Load | max.(V _s -7.5)/0.0208 A |
| Linearisation/transmission behavior | Temperature linear, resistance linear, voltage linear |
| Galvanic isolation | 2 KV AC (input/output) |



POWER SUPPLY

| | |
|--|-----------------|
| Supply voltage (V_s) (polarity protected) | 12.0V to 45 VDC |
|--|-----------------|



PERFORMANCE CHARACTERISTICS

| | |
|--------------------------------|---|
| Response time | 1s |
| Reference operating conditions | Calibration temperature : 23°C(73.4°F)±5K |
| Switch on delay | ≤ 5s |
| Self stability configuration | 0 to 2% |
| Filter configuring | 0 to 160 μ A |
| Resolution | 0.3 μ A |



| | Input | Type | Measurement accuracy |
|------------------------|------------------------|---------------------|-----------------------|
| Maximum measured error | RTD | Pt100, Ni100 | 0.50°C or 0.10% |
| | | Pt500, Ni500 | 0.1°C or 0.25% |
| | | Pt1000, Ni1000 | 0.1°C or 0.2% |
| | | Cu50 | 0.50°C or 0.1% |
| | | Cu100 | 0.6°C or 0.15% |
| Maximum measured error | Thermocouple(T/C) | K, J, T, E | 0.1°C or 0.12% |
| | | N | 1.5°C or 0.12% |
| | | S, B, R | 3.0°C or 0.12% |
| Maximum measured error | Resistance(Ω) | 0 to 400 Ω | 0.2 Ω or 0.12% |
| | | 0 to 2000 Ω | 3.0 Ω or 0.18% |
| | | 0 to 10000 Ω | 15 Ω or 0.3% |
| Maximum measured error | Voltage (mV) | -10 to 75mV | 30mV or 0.12% |
| | | -100 to 100mV | 30mV or 0.12% |
| | | -100 to 500mV | 50mV or 0.12% |
| | | -100 to 2000mV | 80mV or 0.12% |

PERFORMANCE CHARACTERISTICS

| | |
|-------------------------------|------------------------------|
| Operating Ambient temperature | -40 to 85°C (-40°F to 185°F) |
| Degree of protection | IP 20 |

OTHERS

| Model No. | Micron 100 HD (Hart Dinrail) | Micron 100 HH (Hart head Mounted) |
|------------|------------------------------|-----------------------------------|
| Dimensions | 12.5(W) X99(H) X112.5(D) mm | Dia. 44 mmX22.5(H) mm |
| Materials | PA 66 -FR | Housing : PC, Potting : epoxy |
| Weight | Approx. 90 g | Approx. 33.5g |
| Mounting | Din Rail Mounted | Head Mounted |

Specifications are subject to change without prior notice.

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