

STANDARD SPECIFICATIONS

Pressure Measurement

Pressure Ranges

Standard ranges which can be calibrated to any acceptable intermediate span/pressure unit:-

- 0 - 10 psi gauge or absolute
- 0 - 30 psi gauge or absolute
- 0 - 100 psi gauge or absolute
- 0 - 300 psi gauge or absolute
- 0 - 1000 psi gauge or absolute
- 0 - 3000 psi sealed gauge or absolute
- 0 - 10,000 psi sealed gauge or absolute
- 0 - 20,000 psi sealed gauge or absolute

Range Adjustment

Full 4 - 20mA output change for any user span setting within Upper Range Limit (URL) as below:

RTX 1000H: 1 - 100% URL

e.g. RTX 1000 H: 30 psi device can be adjusted down to a span of 0.3 psi (100:1 down ranging)

Zero offset - for absolute configurations:

RTX 1000H: 0 - 99% URL

For gauge configuration, the zero (4mA) output can be set anywhere within the range below:

RTX 1000H: -15 psi to 99% URL

e.g. 30 psi gauge device can be set 4-20mA for -15 to 15 psi. Down ranged to 3 psi span, 4-20mA can be set anywhere within range to a zero offset of 26 psi, e.g. calibrated range of 26 psi to 30 psi.

Overpressure

Rated pressure can be exceeded by the following multiples without degrading performance:

- 6x URL for 10 psi range
- 4x URL (2000 psi max) for ranges 30 psi to 1000 psi
- 2x URL (13,000 psi max) for ranges 3000 psi to 10,000 psi
- 2900 psi max for range 20,000 psi

Pressure Containment

High pressure application as below may damage sensor but process media leakage will not occur:

- 10x URL for 10 psi gauge range
- 6x URL (3000 psi max) ranges 30 to 1000 psi gauge
- 3000 psi for ranges up to 1000 psi absolute
- 20,000 psi for ranges 3000 to 10,000 psi sealed gauge or absolute
- 30,000 psi for range 20,000 psi sealed gauge or absolute

Process Media

Any liquid, gas or vapor compatible with Hastelloy C276 diaphragm and 316 stainless steel or Hastelloy C276 body. NACE MR-01-75 compliant. NB. 20,000 psi range: compatible with Inconel 625.

Output Current

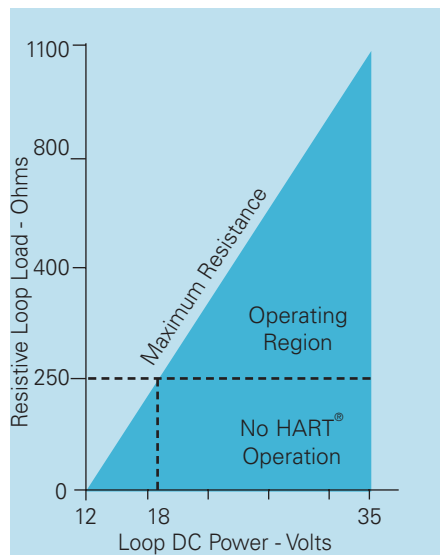
4 - 20mA (2 wire configuration).
 RTX 1000 H:- HART® digital signal superimposed.

Failure Mode (NAMUR NE 43 compliant)

If pressure is applied outside upper or lower range settings, output saturates at Under Range 3.8 mA Over Range 20.5mA. Display flashes out of range.

In the event of failure, output will be driven to <3.6mA or >21mA (user configurable) and, if installed, the display will confirm the alarm status.

Transmitter Supply Voltage



Performance

Accuracy - RTX 1000H:

For calibrated Span \geq 10% URL: 0.075% Span including non-linearity, hysteresis and repeatability.
 For calibrated Span < 10% URL:
 (0.025% + 0.005 [URL/Span])% Span

Long Term Stability

At standard reference conditions, maximum calibration change 0.2% URL over a 5 year period.

Time Response

100 ms time constant (63% response to step change in pressure with damping set to 0.1 sec).

Operating Temperature Ranges

Ambient -40° to 185°F*
 Process -40° to 250°F*
 Compensated -40° to 185°F*
 *(LCD option 4° to 160°F)

Temperature Effects - RTX 1000H:

-40 to 185°F, maximum output deviation from room temperature calibration at 72°F:
 0.1% configured span+0.2% reading+0.1% URL
 (Reading expressed as % of configured span).

Mounting Position Effect

Negligible effect for ranges < 10 psi, the 'g' offset effect can be adjusted via zero controls.

Vibration Resistance

Negligible effect at 5g from 5Hz to 2kHz.

Humidity Limit

0-100% RH.

Damping

RTX 1000H: Adjustable 0.1 to 30 seconds.

Physical

Electrical Connections

1/2 - 14 NPT, PG13.5 Female conduit entry or M20.

Process Connections

Ranges up to 10,000 psi: 1/2 NPT Female, 1/2 NPT Male 20,000 psi range 13/16" - 16 UN Female with 60° cone (9/16" AE medium tube autoclave fitting).

Electrical Housing

Low copper aluminium alloy with epoxy painted coating or stainless steel with aluminium bronze end caps. Sealed to NEMA 4X (IP 67).

Shipping Weight

Aluminium Housing: 2.7 lbs (without options)
 Stainless Steel Housing: 6 lbs (without options).

Hazardous Area Approvals

(F) FM and CSA

Intrinsically Safe: Class I Division 1 Groups A,B,C,D
 Class II Division 1 Groups E,F,G
 Class III
 Explosion Proof: Class I Groups A,B,C,D
 Class II Groups E,F,G
 Class III
 Division 2: Class I Div 2 Groups A,B,C,D
 Class II Div 2 Groups F, G
 Class III Div 2 Groups F, G

(O) Safe Area: Category 1 Pressure Accessory to Pressure Equipment Directive (PED) 97/23/EC.
 'Maximum Span' range is equivalent to maximum working pressure (Ps) as referred to in the PED.

(I) ATEX Intrinsically Safe Approval

II 1G EEx ia IIC T4 (Ta = 80°C)
 EEx ia IIC T5 (Ta = 40°C)
 to ATEX directive 94/9/EC

(D) ATEX Flameproof Approval

II 2G, II 1D EEx d IIC T5 (Ta = 80°C)

(N) ATEX Type N

II 3G, II 1D EEx nI IIC T4 (Ta = 80°C)
 EEx nI IIC T5 (Ta = 40°C)

All options compliant with EMC Directive 89/336/EEC EMC Emissions: EN 50081-1, EN 55022 EMC Immunity: EN 61000-6-2: 1999

CE Conformity

EMC Emissions: EN50081-1, EN55022
 EMC Immunity: EN61000-6-2: 1999
 PED: Pressure accessory, Category 1 Certification: CE Marked.

OPTIONS

- (A) Digital indicator:
 RTX 1000H: Graphic display
 RTX 1000A: 5 Digit LCD Indicator.
- (B) Mounting bracket for 2" pipe/panel, supplied in 316 stainless steel.
- (C) Material traceability for pressure containment parts to EN10204 3.1b.

CALIBRATION STANDARDS

Products manufactured by GE Druck are calibrated against precision calibration equipment which is traceable to International Standards.

Continuing development sometimes means specification changes without notice.