2-wire HART transmitter

6335A

- RTD, TC, Ohm, or mV input
- Extremely high measurement accuracy
- HART 5 protocol
- Galvanic isolation
- 1- or 2-channel version

Application
- Linearized temperature measurement with Pt100...Pt1000, Ni100...Ni1000, or TC sensor.
- Difference or average temperature measurement of 2 resistance or TC sensors.
- Conversion of linear resistance variation to a standard analog current signal, for instance from valves or Ohmic level sensors.
- Amplification of a bipolar mV signal to a standard 4...20 mA current signal.
- Connection of up to 15 channels to a digital 2-wire signal with HART communication.

Technical characteristics
- Within a few seconds the user can program PR6335A to measure temperatures within all ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 2-, 3- and 4-wire connection.
- The 6335A has been designed according to strict safety requirements and is thus suitable for application in SIL installations.
- A limit can be programmed on the output signal.
- Continuous check of vital stored data for safety reasons.
- Sensor error detection according to the guidelines in NAMUR NE89.

Mounting / installation
- Mounted vertically or horizontally on a DIN rail. Using the 2-channel version up to 84 channels per metre can be mounted.
- Configuration via standard HART communication interfaces or by PR 5909 Loop Link.
- The 6335A can be mounted in zone 2, 22 / Class I, Division 2, Groups A, B, C, D.

Applications

- RTD to 4...20 mA
- TC to 4...20 mA
- Resistance to 4...20 mA
- mV to 4...20 mA
- Difference or average RTD, TC or mV
Environmental Conditions
- Operating temperature: -40°C to +85°C
- Storage temperature: -40°C to +85°C
- Calibration temperature: 20...28°C
- Relative humidity: < 95% RH (non-cond.)
- Protection degree: IP20

Mechanical specifications
- Dimensions (HxWxD): 109 x 23.5 x 104 mm
- Weight (1 / 2 channels): 145 / 185 g
- DIN rail type: DIN EN 60715/35 mm
- Wire size: 0.13...2.06 mm² AWG 26...14 stranded wire
- Screw terminal torque: 0.5 Nm

Common specifications
- Supply voltage: 8.0...35 VDC
- Internal power dissipation, 1 / 2 ch.: 19 mW...0.8 / 1.6 W
- Isolation voltage test / working: 1.5 kVAC / 50 VAC
- Response time (programmable): 1...80 s
- Voltage drop: 8.0 VDC
- Warm-up time: 30 s
- Programming: Loop Link & HART
- Accuracy: Better than 0.05% of selected range
- Signal dynamics, input: 22 bit
- Signal dynamics, output: 16 bit
- Effect of supply voltage change: < 0.005% of span / VDC
- EMC immunity influence: < 0.1% of span
- Extended EMC immunity: NAMUR NE21, A criterion, burst.

Input specifications
- Common input specifications
  - Max. offset: 50% of selected max. value
- RTD input
  - RTD type: Pt100...1000, Ni100...1000, lin. R
  - Cable resistance per wire: 5 Ω (up to 50 Ω per wire is possible with reduced measurement accuracy)
  - Sensor current: Nom. 0.2 mA
  - Effect of sensor cable resistance: < 0.002 Ω / Ω
  - Sensor error detection: Yes
- Linear resistance input
  - Linear resistance min.: 0 Ω, max.: 7000 Ω
  - TC input
  - Cold junction compensation (CJC): < ±0.1°C
  - Sensor error detection: Yes

Output specifications
- Current output
  - Signal range: 4...20 mA
  - Min. signal range: 16 mA
  - Load (@ current output): ≤ (Vs - 8) / 0.023 [Ω]
  - Load stability: ≤ 0.01% of span / 100 Ω
  - Sensor error indication: Programmable 3.5...23 mA
  - NAMUR NE43 Upscale/Downscale: 23 mA / 3.5 mA

Common output specifications
- Updating time: 440 ms
- of span: = of the presently selected range

Observed authority requirements
- EMC:
  - 2014/30/EU
- ATEX:
  - 2014/34/EU
  - 2011/65/EU
  - TR-CU 020/2011
- RoHS:
  - 2011/65/EU
- EAC:
  - TR-CU 012/2011
- Approvals
  - ATEX:
  - KEMA 09ATEX0148 X
  - KEMA Ex
  - CSA:
  - Min. 125003
  - c FM us:
  - FM17US0013X
  - EAC Ex:
  - RU C-DK.HA65.B.00355/19
  - SIL:
  - Hardware assessed for use in SIL applications

Order

<table>
<thead>
<tr>
<th>Type</th>
<th>Version</th>
<th>Galvanic isolation</th>
<th>Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>6335</td>
<td>Zone 2, 22 / Div. 2</td>
<td>A 1500 VAC</td>
<td>Single : A</td>
</tr>
</tbody>
</table>

Note: Please remember to order CJC connectors type 5910 (channel 1) and 5913 (channel 2) for TC inputs with an internal CJC.