





































































### 4.3 Non-Ex devices

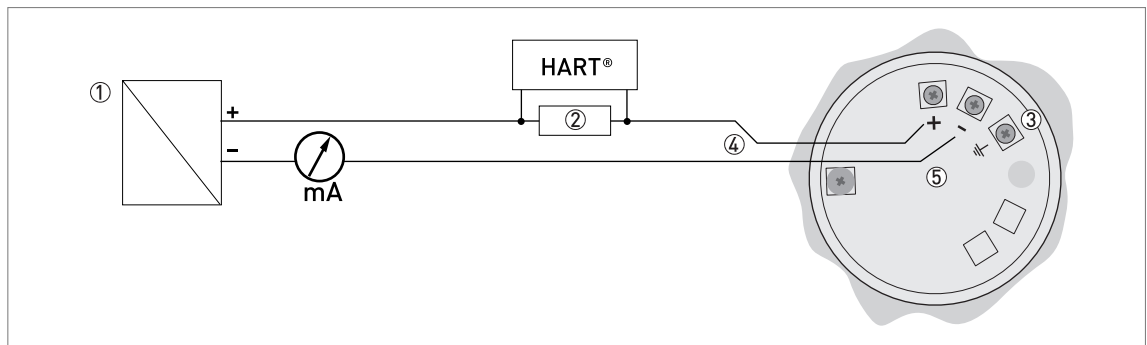


Figure 4-3: Electrical connections for non-Ex devices

- ① Power supply
- ② Resistor for HART® communication (typically 250 ohms)
- ③ Optional connection to the grounding terminal
- ④ Output: 12...30 VDC for an output of 21.5 mA at the terminal
- ⑤ Device

### 4.4 Devices for hazardous locations

*For electrical data for device operation in hazardous locations, refer to the related certificates of compliance and supplementary instructions (ATEX etc.). This documentation can be downloaded from the website.*

## 4.5 Networks

### 4.5.1 General information

The device uses the HART® communication protocol. This protocol agrees with the HART® Communication Foundation standard. The device can be connected point-to-point. It can also have a polling address of 1 to 63 in a multi-drop network.

The device output is factory-set to communicate point-to-point. To change the communication mode from **point-to-point** to **multi-drop**, refer to "Network configuration" in the handbook.

### 4.5.2 Point-to-point connection

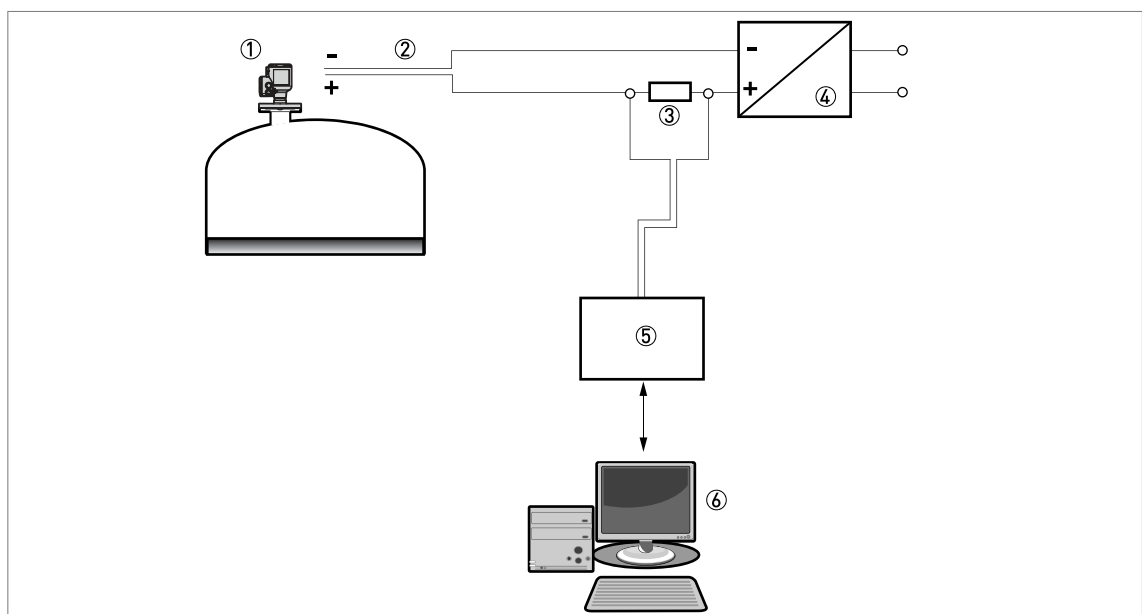


Figure 4-4: Point-to-point connection (non-Ex)

- ① Address of the device (0 for point-to-point connection)
- ② 4...20 mA + HART®
- ③ Resistor for HART® communication (typically 250 ohms)
- ④ Power supply
- ⑤ HART® converter
- ⑥ HART® communication software

### 4.5.3 Multi-drop networks

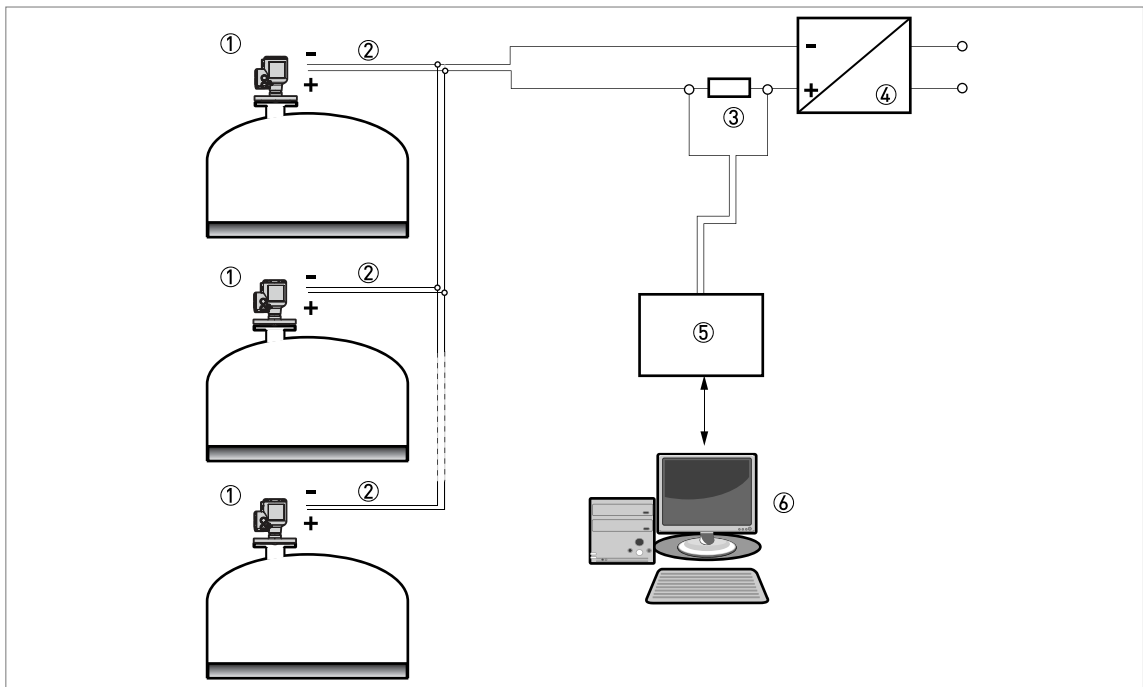


Figure 4-5: Multi-drop network (non-Ex)

- ① Address of the device (each device must have a different address in multidrop networks)
- ② 4 mA + HART®
- ③ Resistor for HART® communication (typically 250 ohms)
- ④ Power supply
- ⑤ HART® converter
- ⑥ HART® communication software

### 5.1 Order code

Make a selection from each column to get the full order code.

S80P	4	D	<b>Senator S80P Radar - 80 GHz radar (FMCW) level transmitter for powders and dusty atmosphere (up to 40 barg (580 psig) and 150°C (302°F))</b>
			<b>Regional directives</b> 1 Europe 2 China 3 USA 4 Canada 5 Brazil 6 Australia A Russia B Kazakhstan C Belarus W Worldwide
			<b>Ex approvals</b> 0 Without 1 ATEX II 1/2 G Ex ia IIC T6...T3 Ga/Gb + II 1/2 D Ex ia IIIC T85°C...T150°C or T85°C...T200°C Da/Db 2 ATEX II 1/2 GD Ex db ia IIC T6...T3 Ga/Gb + II 1/2 D Ex ia tb IIIC T85°C...T150°C or T85°C...T200°C Da/Db 3 ATEX II 3 G Ex ic IIC T6...T3 Gc + II 3 D Ex ic IIIC T85°C...T150°C or T85°C...T200°C Dc 4 ATEX II 3 G Ex nA T6...T3 Gc 5 NEPSI Ex ia IIC T6...T3 Ga/Gb + Ex iaD 20/21 T85°C...T150°C or T85°C...T200°C IP6X 6 NEPSI Ex d ia IIC T6...T3 Ga/Gb + Ex iaD tD A20/A21 T85°C...T150°C or T85°C...T200°C IP6X A cQPSus IS CL I/II/III DIV 1 GP A-G + CL I Z0 AEx ia/Ex ia IIC T6...T3 Ga + Z20 AEx ia/Ex ia IIIC T85°C...T150°C or T85°C...T200°C Da B cQPSus XP-IS/DIP CL I DIV 1 GP A-G + CL I Z1 AEx db ia/Ex db ia IIC T6...T3 Gb + Z21 AEx ia tb/Ex ia tb IIIC T85°C...T150°C or T85°C...T200°C Db C cQPSus NI CL I/II/III DIV 2 GP A-G + CL I Z2 AEx nA/Ex nA IIC T6...T3 Gc K IECEx Ex ia IIC T6...T3 Ga/Gb + Ex ia IIIC T85°C...T150°C or T85°C...T200°C Da/Db L IECEx Ex d ia IIC T6...T3 Ga/Gb + Ex ia tb IIIC T85°C...T150°C or T85°C...T200°C Da/Db M IECEx Ex ic IIC T6...T3 Gc + Ex ic IIIC T85°C...T150°C or T85°C...T200°C Dc
			<b>0 Construction</b> 0 Without 4 ASME B31.3
			<b>Converter version (Housing material / IP class)</b> 2 C / Compact version (aluminium housing – IP66/68 0.1 barg) 3 C / Compact version (stainless steel housing – IP66/68 0.1 barg) ③
<b>S80P</b>	<b>4</b>	<b>D</b>	<b>0</b> <b>Order code (complete this code on the pages that follow)</b>











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