

Overview



The SITRANS RD150 is a remote display for 4 to 20 mA and HART devices.

Benefits

- Ease of use through 4 button menu driven display
- Backlit display
- HART communications
- Flexible mounting options
- Plastic, stainless steel or aluminum housings up to IP68
- Full configuration of connected sensors with optional USB Communicator and PC
- Support for multiple HART sensors with HART Multi-drop

Application

The versatile SITRANS RD150 can be installed remotely from your instrument, providing 4/20 mA or multiple HART variable readings in a safe and convenient location.

Easy to use, 4 button, menu driven, display for configuration of HART instruments via standard HART commands and full configuration of connected instruments via USB and computer.

- Key Applications: remotely displays process variables in level, flow, pressure, temperature, and weighing applications, in a 4 to 20 mA HART loop.

SITRANS RD150

Selection and ordering data

| | | Article No. | | | | | | | | | |
|---|--|------------------------------|---|--|--|--|--|---|---|---|---|
| SITRANS RD150 Display Remote digital display with configuration for process instruments. HART or 4 to 20 mA loop display, metal and plastic field mount enclosures. | | 7ML5742- ● ● ● ● ● - ● ● ● ● | | | | | | | | | |
| Click on the Article No. for the online configuration in the PIA Life Cycle Portal. | | | | | | | | | | | |
| Approvals | | | | | | | | | | | |
| Ordinary Locations/General Purpose (Non-Ex), CE, UKCA | | 0 | A | | | | | | | | |
| ATEX II 1G, Ex ia IIC T6...T1 Ga ⁴⁾ | | 0 | C | | | | | | | | |
| UKEX II 1G, Ex ia IIC T6...T1 Ga ⁴⁾ | | | | | | | | | | | |
| ATEX II 2G Ex db IIC T6 Gb ⁹⁾¹⁰⁾ | | 0 | F | | | | | | | | |
| UKEX II 2G Ex db IIC T6 Gb ⁹⁾¹⁰⁾ | | | | | | | | | | | |
| IECEX Ex ia IIC T6...T1 Ga, Gb ⁴⁾ | | 0 | J | | | | | | | | |
| IECEX Ex db IIC T6 Gb ⁹⁾¹⁰⁾ | | 0 | M | | | | | | | | |
| cCSA _{US} (IS) Class I, Div. 1, Groups A, B, C, D ¹²⁾ | | 0 | N | | | | | | | | |
| cCSA _{US} (XP) Class I, Div. 1, Groups A, B, C, D ⁹⁾¹¹⁾ | | 0 | R | | | | | | | | |
| Electronics | | | | | | | | | | | |
| Two-wire 4 ... 20 mA/HART | | | | | | | | | A | | |
| Two-wire 4 ... 20 mA without HART | | | | | | | | | B | | |
| Housing | | | | | | | | | | | |
| Plastic ¹⁾⁴⁾⁶⁾ | | | | | | | | 0 | | | |
| Aluminum ²⁾⁴⁾⁷⁾ | | | | | | | | 1 | | | |
| Stainless steel (precision casting) ²⁾⁴⁾⁷⁾ | | | | | | | | 2 | | | |
| For panel mounting (72 x 72 mm) ³⁾⁵⁾⁸⁾ | | | | | | | | 3 | | | |
| Housing protection | | | | | | | | | | | |
| IP66/IP67 NEMA 4X | | | | | | | | 0 | | | |
| IP66/IP68 NEMA 6P (0.2 bar) | | | | | | | | 1 | | | |
| IP40 NEMA 2 | | | | | | | | 2 | | | |
| IP40 Type 1 | | | | | | | | 3 | | | |
| Cable entry | | | | | | | | | | | |
| M20 x 1.5/Cable gland PA black (ø5 ... 9 mm), standard | | | | | | | | | | 0 | |
| M20 x 1.5/Cable gland brass nickel plated (ø6 ... 12 mm) | | | | | | | | | | 1 | |
| M20 x 1.5/Blind plug | | | | | | | | | | 2 | |
| M20 x 1.5/Threaded fitting brass nickel-plated; for shielded cable (ø9 ... 13 mm) | | | | | | | | | | 3 | |
| ½" NPT/Blind plug | | | | | | | | | | 4 | |
| ½" NPT/Cable gland PA black (ø5 ... 9 mm) | | | | | | | | | | 5 | |
| ½" NPT/Threaded fitting brass nickel plated (ø6 ... 12 mm) | | | | | | | | | | 6 | |
| ½" NPT/Threaded fitting brass nickel plated; for shielded cable (ø9 ... 13 mm) | | | | | | | | | | 7 | |
| Without | | | | | | | | | | 8 | |
| Display | | | | | | | | | | | |
| Without | | | | | | | | | | | A |
| Mounted | | | | | | | | | | | B |
| Mounting | | | | | | | | | | | |
| For wall mounting with aluminum or stainless steel housing | | | | | | | | | | | A |
| For carrier rail and wall mounting with plastic housing | | | | | | | | | | | B |
| For carrier rail with aluminum or stainless steel housing | | | | | | | | | | | C |
| For tube mounting (29 ... 60 mm) incl. mounting material | | | | | | | | | | | D |
| For panel mounting | | | | | | | | | | | E |
| Certificates | | | | | | | | | | | |
| None | | | | | | | | | | | 0 |
| 3.1 Certificate/Instrument with test data | | | | | | | | | | | 1 |
| Quality and Test plan | | | | | | | | | | | 2 |

Selection and ordering data (continued)

| Selection and ordering data | Article No. |
|---|-------------|
| Operating Instructions | |
| All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation | |
| Accessories | |
| USB communicator | A5E35192015 |
| SITRANS LG/SITRANS RD150 sensor display module | A5E34143449 |

- 1) Available only with Housing protection option 0.
 2) Available only with Housing protection option 1.

- 3) Available only with Housing protection option 2.
 4) Available only with Cable entry options 0, 2, 4, and 5.
 5) Available only without Cable entry option 8.
 6) Available only with Carrier rail and Tube mount Mounting options.
 7) Available only with Wall mount, Carrier rail with aluminum or stainless steel housing, and Tube mount Mounting options.
 8) Available only with Panel mounting option.
 9) Available only with Housing options 1 and 2.
 10) Available only with Cable entry options 2, 3, 4, and 7.
 11) Available only with Cable entry options 2, 3, 4, 6, and 7.
 12) Not available with Cable entry option 1.

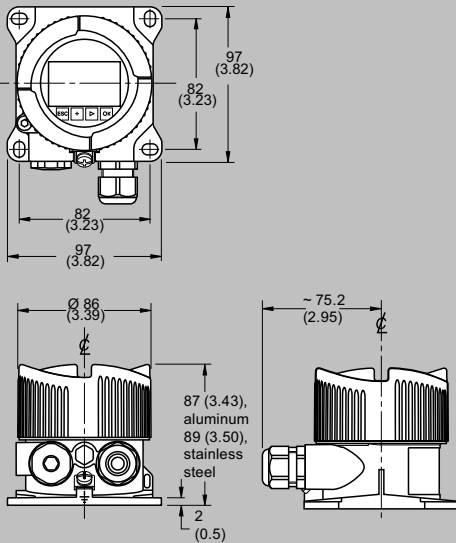
Technical specifications

| SITRANS RD150 | |
|--|--|
| Mode of operation | |
| Measuring principle | Analog to digital conversion |
| Measuring range | 3.5 ... 22.5 mA |
| Measuring points | HART multi-drop support |
| Accuracy | ± 0.1 % of 20 mA |
| Rated operating conditions | |
| Without display and adjustment module | -40 ... +80 °C (-40 ... +176 °F) |
| With display and adjustment module | -20 ... +70 °C (-4 ... +158 °F) |
| Storage temperature | -40 ... +80 °C (-40 ... +176 °F) |
| Design | |
| Weight | |
| • Plastic housing | 0.35 kg (0.772 lb) |
| • Aluminum housing | 0.7 kg (1.543 lb) |
| • Stainless steel housing | 2.0 kg (4.409 lb) |
| Material (enclosure) | |
| • Plastic housing | Plastic PBT (Polyester) |
| • Aluminum housing | Aluminum die-casting AlSi10Mg, powder-coated (basis: Polyester) |
| • Stainless steel housing | 316L precision casting, blasted |
| Degree of protection | |
| • Plastic housing | IEC 60529 IP66/IP 67, NEMA Type 4X |
| • Housing for panel mounting (mounted) | IEC 60529 IP40, NEMA Type 1 |
| • Aluminum/stainless steel housing | IEC 60529 IP66/IP68 (0.2 bar), NEMA Type 6P |
| Power supply | |
| External loop power supply | 35 V DC max. |
| Display | |
| Number of digits | 5 |
| Digit size | 7 x 13 mm (0.28 x 0.51 inch) |
| Certificates and approvals | See the online PIA configuration tool for details. |
| Options | |
| Mounting | <ul style="list-style-type: none"> • Panel Mounting • Carrier rail mounting • Pipe mounting |

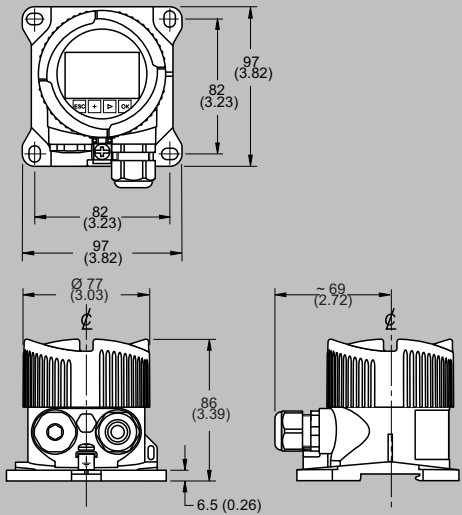
SITRANS RD150

Dimensional drawings

SITRANS RD150, aluminum/stainless steel housing

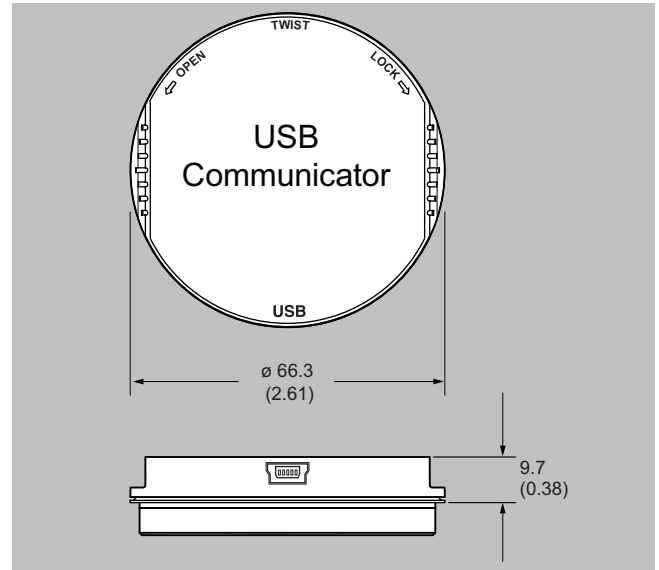


SITRANS RD150, plastic housing



SITRANS RD150, dimensions in mm (inch)

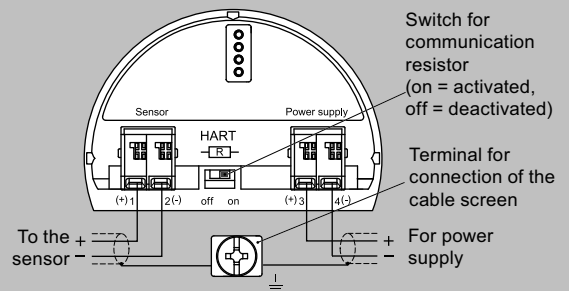
Dimensional drawings (continued)



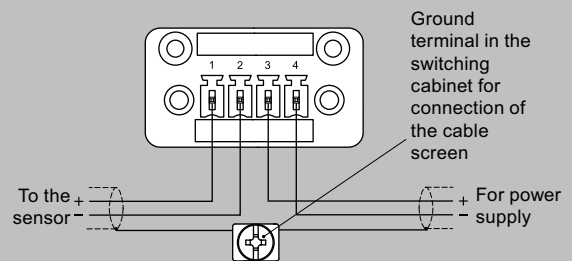
USB Communicator, dimensions in mm (inch)

Circuit diagrams

Standard housing with 2 wire device



Panel mount



SITRANS RD150 connections