

Supplementary Components

Displays

SITRANS RD200

Overview



The SITRANS RD200 is a universal input, panel mount remote digital display for process instrumentation.

Benefits

- Easy setup and programming via front panel buttons or remotely using RD software
- Display readable in sunlight
- Universal input: accepts current, voltage, thermocouple and RTD signals
- Single or dual 24 V DC transmitter power supply
- Analog to Modbus RTU conversion as standard feature
- Two optional relays for alarm indication or process control applications
- Linear or square root function supported
- Meter Copy feature to reduce setup time, cost and errors
- RD software supports remote configuration, monitoring and logging for up to 100 displays
- Other features include: 4 to 20 mA analog output option, pump alternation control, and optional NEMA 4 and 4X field enclosures
- Large display option for improved visibility at greater distances

Application

The RD200 is a universal remote display for level, flow, pressure, temperature, weighing, and other process instruments.

Data can be remotely collected, logged and presented from as many as 100 displays on your local computer using the free downloadable RD software.

The display accepts a single input of current, voltage, thermocouple, and RTD. This makes the RD200 an ideal fit for use with most field instruments.

The RD200 can be set up as a standard panel mount, or combined with optional enclosures to allow it to house up to 6 displays.

Key Applications

Tank farms, pump alternation control, local or remote display of level, temperature, flow, pressure and weighing instrument values, PC monitoring and data logging with RD software.

Technical specifications

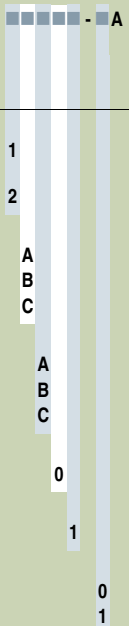
Mode of operation	
Measuring principle	Analog to digital conversion
Measuring points	<ul style="list-style-type: none"> • 1 instrument • Remote monitoring of 100 instruments with PC and RD software
Input	
Measuring range	<ul style="list-style-type: none"> • Current • Voltage • Thermocouple temperature
<ul style="list-style-type: none"> • 4 ... 20 mA, 0 ... 20 mA • 0 ... 10 V DC, 1 ... 5 V, 0 ... 5 V • Type J: -50 ... +750 °C (-58 ... +1 382 °F) • Type K: -50 ... +1 260 °C (-58 ... +2 300 °F) • Type E: -50 ... +870 °C (-58 ... +1 578 °F) • Type T: -180 ... +371 °C (-292 ... +700 °F) • Type T, 0.1 resolution: -180.0 ... +371 °C (-199.9 ... +700 °F) • 100 Ω RTD: -200 ... +750 °C (-328 ... +1 382 °F) 	
<ul style="list-style-type: none"> • RTD temperature 	
Output signal	
Output	<ul style="list-style-type: none"> • PDC output • 4 ... 20 mA (optional) • Modbus RTU
Relays	2 SPDT Form C relays, rated 3 A at 30 V DC or 3 A at 250 V AC, non-inductive, auto-initializing (optional)
Communications	<ul style="list-style-type: none"> • RS 232 with PDC or Modbus RTU • RS 422/485 with PDC or Modbus RTU
Accuracy	
4 ... 20 mA optional output	± 0.1 % FS ± 0.004 mA
Process input	± 0.05 % of span ± 1 count, square root: 10 ... 100 % FS
Thermocouple temperature input	<ul style="list-style-type: none"> • Type J: ± 1 °C (± 2 °F) • Type K: ± 1 °C (± 2 °F) • Type E: ± 1 °C (± 2 °F) • Type T: ± 1 °C (± 2 °F) • Type T, 0.1 Resolution: ± 1 °C (± 1.8 °F)
RTD temperature input	<ul style="list-style-type: none"> • 100 Ω RTD: ± 1 °C (± 1 °F)
Rated operating conditions	
Ambient conditions	
Storage temperature range	-40 ... +85 °C (-40 ... +185 °F)
Operating temperature range	-40 ... +65 °C (-40 ... +149 °F)
Design	
Weight	269 g (9.5 oz) (including options)
Material (enclosure)	<ul style="list-style-type: none"> • 1/8 DIN, high impact plastic, UL94V-0, color: gray • Optional plastic, steel and stainless steel (Type 304, EN 1.4301) NEMA 4 enclosures
Degree of protection	Type 4X, NEMA 4X, IP65 (front cover); panel gasket provided

Electrical connection	
mA output signal	2-core copper conductor, twisted, shielded, 0.82 ... 3.30 mm ² (18 ... 12 AWG), Belden 8 760 or equivalent is acceptable
Electrical connection and relay connection	Copper conductor according to local requirements, rated 3 A at 250 V AC
Power supply	
Input voltage option 1	85 ... 265 V AC, 50/60 Hz; 90 ... 265 V DC, 20 W max.
Input voltage option 2	12 ... 36 V DC; 12 ... 24 V AC, 6 W max.
Transmitter power supply	One or two isolated transmitter power supplies (optional)
• Single power supply	One 24 V DC ± 10 % at 200 mA max.
• Dual power supplies	Two 24 V DC ± 10 % at 200 mA and 40 mA max.
External loop power supply	35 V DC max.
Output loop resistance	<ul style="list-style-type: none"> • 24 V DC, 10 ... 700 Ω max. • 35 V DC (external), 100 ... 1 200 Ω max.
Displays and controls	
Display	<ul style="list-style-type: none"> • 14 mm (0.56 inch) high LED • 2X option for 30.5 mm (1.2 inch) high, red LED • Numeric range from -1 999 ... +9 999 • 4 digits, automatic lead zero blanking • 8 intensity levels
Memory	<ul style="list-style-type: none"> • Non-volatile • Stores settings for minimum of 10 years if power is lost
Programming	<ul style="list-style-type: none"> • Primary: front panel • Secondary: meter copy or PC with SITRANS RD software
Certificates and approvals	
CE, UL, cUL	
Options	
Enclosures	Plastic, steel and stainless steel (Type 304, EN 1.4301) NEMA 4 and 4X enclosures
Mounting	<ul style="list-style-type: none"> • 2 inch (5.08 cm) pipe mounting kit (zinc plated seal) • 2 inch (5.08 cm) pipe mounting kit (stainless steel, Type 304, EN 1.4301)

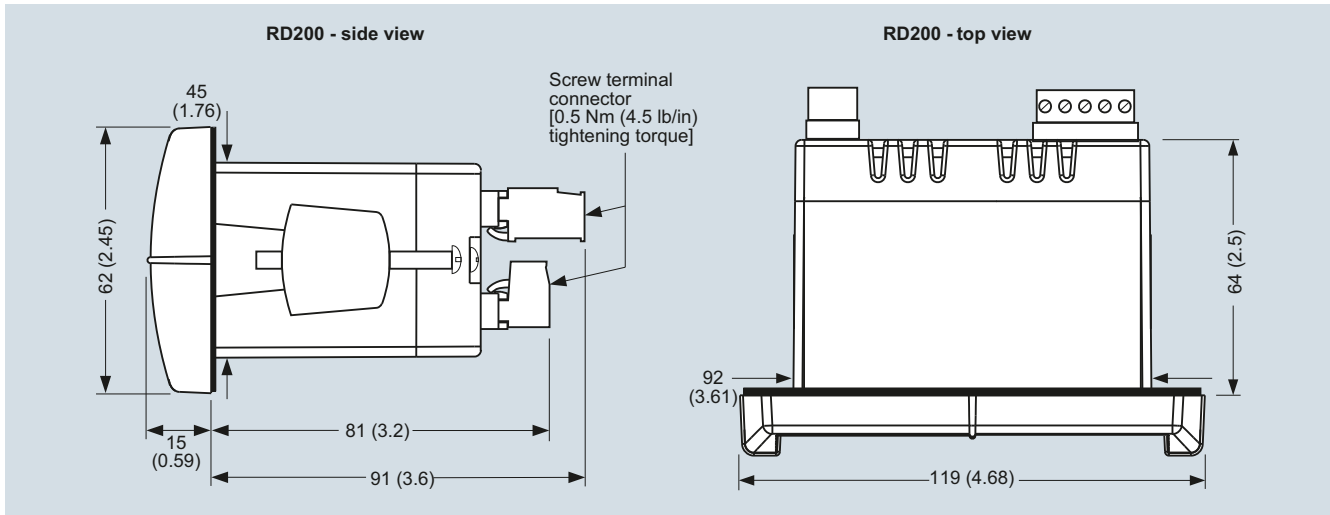
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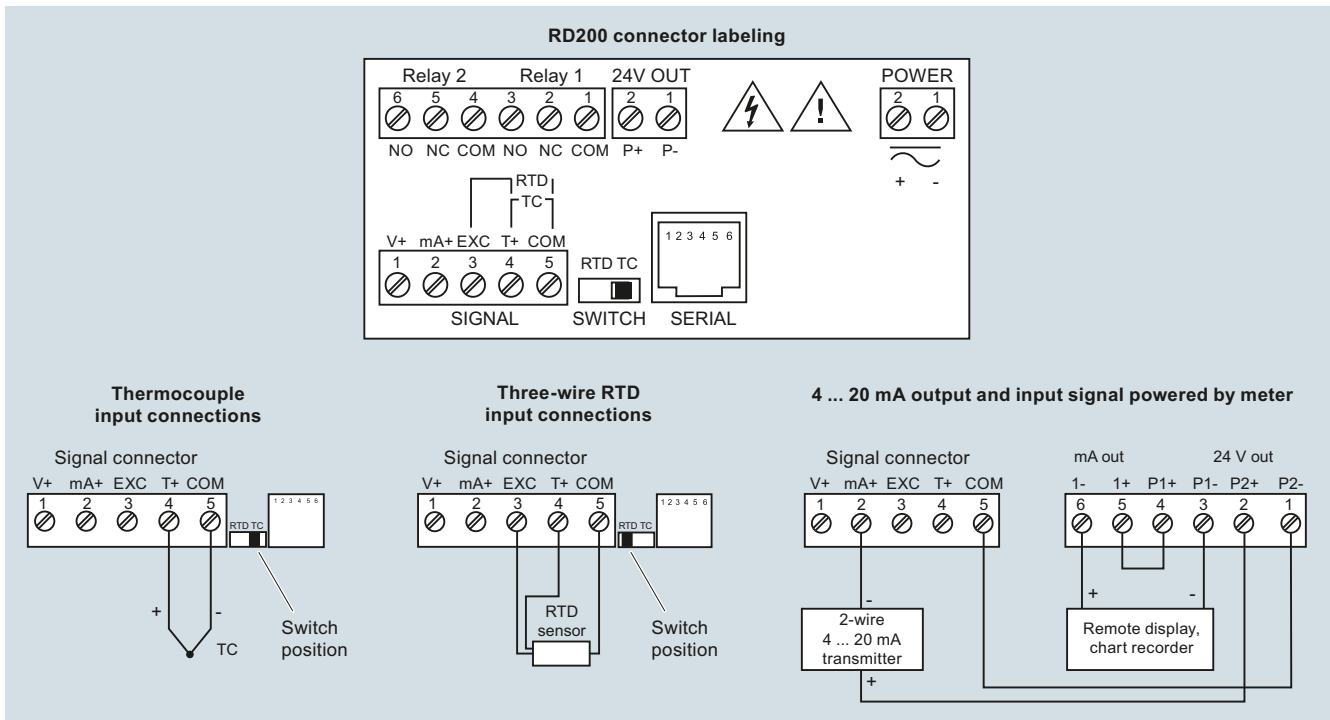
Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS RD200 A universal input, panel mount remote digital display for process instrumentation. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5740- 	Accessories SITRANS RD200 copy cable 2.1 m (7 ft) SITRANS RD200 RS 232 serial adapter (copy cable included) SITRANS RD200 RS 422/485 serial adapter (copy cable included) RS 232 to RS 422/485 isolated converter RS 232 to RS 422/485 non-isolated converter SITRANS RD200 RS 232 and RS 485 isolated multi-input adapter board USB to RS 422/485 isolated converter USB to RS 422/485 non-isolated converter USB to RS 232 converter RD Software CD for 1 ... 100 displays Low cost polycarbonate plastic enclosure for 1 display 2 inch (5.08 cm) pipe mounting kit (zinc plated seal) only available with 7ML1930-1CF 2 inch (5.08 cm) pipe mounting kit (stainless steel, Type 304, EN 1.4301) only available with 7ML1930-1CF	7ML1930-1BR 7ML1930-1BS 7ML1930-1BT 7ML1930-1BU 7ML1930-1BV 7ML1930-1BW 7ML1930-1BX 7ML1930-1BY 7ML1930-6AK 7ML1930-1CC 7ML1930-1CF 7ML1930-1BP 7ML1930-1BQ
Input voltage 85 ... 265 V AC, 50/60 Hz; 90 ... 265 V DC, 20 W max. ▶ 1 12 ... 36 V DC; 12 ... 24 V AC, 6 W max. ● 2		Thermoplastic enclosure For use with 1 display For use with 2 displays For use with 3 displays For use with 4 displays For use with 5 displays For use with 6 displays Stainless steel enclosure (Type 304, EN 1.4301)	7ML1930-1CG 7ML1930-1CH 7ML1930-1CJ 7ML1930-1CK 7ML1930-1CL 7ML1930-1CM
Transmitter supply None ● A Single 24 V DC transmitter supply ¹⁾ ▶ B Dual 24 V DC transmitter supply ¹⁾²⁾ ▶ C		Steel enclosure For use with 1 display For use with 2 displays For use with 3 displays For use with 4 displays For use with 5 displays For use with 6 displays	7ML1930-1CU 7ML1930-1CV 7ML1930-1CW 7ML1930-1CX 7ML1930-1CY 7ML1930-1DA
Output None ▶ A 2 relays ● B 4 ... 20 mA output ● C			
Communication Modbus enabled ▶ 0			
Approvals CE, UL, cUL ● 1			
Display Size Standard ▶ 0 2X option for 30.5 mm (1.2 inch) high, red LED ▶ 1			
¹⁾ Available with input voltage option 1 only ²⁾ Available with output option C only ● We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 9/5 in the appendix. ▶ Available ex stock when configured with the following options only: Input voltage: 1, Transmitter supply: B, Output: A, Communication: 0. For details see page 9/5 in the appendix.			
Selection and Ordering data Operating Instructions English 7ML1998-5JS01 Spanish 7ML1998-5JS21 German 7ML1998-5JS31 Note: The Operating Instructions should be ordered as a separate line item. This device is shipped with the Siemens Level and Weighing manual DVD containing Quick Starts and Operating Instructions.			
Other Operating Instructions SITRANS RD Enclosures, English 7ML1998-5JX01 SITRANS RD Enclosures, German 7ML1998-5JX31 SITRANS RD Serial communications accessories, English A5E31979195 SITRANS RD Serial communications accessories, German A5E31979197 SITRANS RD Software, English 7ML1998-5JW01 SITRANS RD Software, German 7ML1998-5JW31			

Dimensional drawings



SITRANS RD200, dimensions in mm (inch)

Schematics



SITRANS RD200 connections