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SITRANS RD100

Overview

The SITRANS RD100 is a 2-wire loop powered, NEMA 4X enclosed remote digital display for process instrumentation.

Benefits

- Easy setup
- Approved for hazardous locations
- NEMA 4X, IP67 impact-resistant enclosure
- Simple two-step calibration
- Two modes of input allow for easy servicing, with no interruption of loop required

Application

The RD100 is very versatile. It can be installed indoors or outdoors, in hot or cold environments, and in safe or hazardous areas.

It has been approved by FM and CSA as Intrinsically Safe and non-incendive, and operates from -40 to +85 °C (-40 to +185 °F), adding only 1 V to the loop.

The RD100 has a large 1 inch (2.54 cm) high display making it easy to read.

Calibration consists of a quick, two-step process involving the adjustment of only two non-interacting potentiometers.

Key Applications

Remotely displays process variables in level, flow, pressure, temperature and weighing applications, in a 4 to 20 mA loop.

Technical specifications

Mode of operation	
Measuring principle	Analog to digital conversion
Measuring range	4 … 20 mA
Measuring points	1 instrument only
Accuracy	± 0.1 % of span ± 1 count
Rated operating conditions	
Ambient conditions	
• Operating temperature range	-40 … +85 °C (-40 … +185 °F)
Design	
Weight	340 g (12 oz)
Material (enclosure)	Impact-resistant glass filled polycarbonate body and clear polycarbonate cover
Degree of protection	NEMA 4X, IP67
Power supply	
External loop power supply	30 V DC max.
Display	• 1 inch (2.54 cm) high LCD • Numeric range from -1 000 … +1 999
Certificates and approvals	
Hazardous	
• Intrinsically Safe	• CSA/FM Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G T4 • CSA/FM Class I, Zone 0, Group IIC
• Non-incendive	• CSA/FM Class I, Div. 2, Groups A, B, C, D • CSA/FM Class II and III, Div. 2, Groups F and G
Options	
Mounting	• 2 inch (5.08 cm) pipe mounting kit (zinc plated or stainless steel) • Panel mounting kit

Selection and Ordering data		Article No.
SITRANS RD100 A 2-wire loop powered, NEMA 4X enclosed remote digital display for process instrumentation. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		**7ML5741-** **A A 0 0 - 0**
Conduit hole location (½ inch)		
None	▶⬟	**1**
Bottom	▶⬟	**2**
Rear	⬟	**3**
Top	⬟	**4**

▶ Available ex stock. For details see page 9/5 in the appendix.
⬟ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ⬟. For details see page 9/5 in the appendix.

Selection and Ordering data	Article No.
Operating Instructions	
English	**7ML1998-5JU01**
French	**7ML1998-5JU11**
German Note: The Operating Instructions should be ordered as a separate line item. This device is shipped with the Siemens Milltronics manual DVD containing Quick Starts and Operating Instructions.	**7ML1998-5JU31**
Accessories	
Panel mount kit	**7ML1930-1BN**
2 inch (5.08 cm) pipe mounting kit (zinc plated seal)	**7ML1930-1BP**
2 inch (5.08 cm) pipe mounting kit (stainless steel, Type 304, EN 1.4301)	**7ML1930-1BQ**

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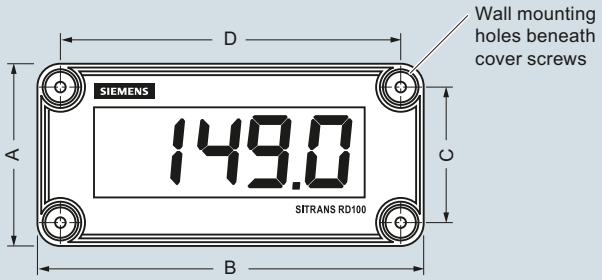
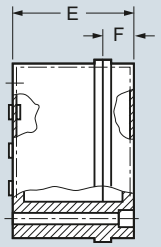
Dimensional drawings

RD100 - front view



RD100 - side view

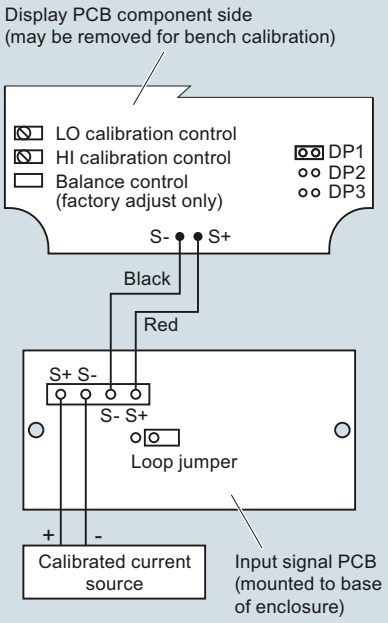


A: 80 (3.15)
B: 140 (5.51)
C: 60 (2.36)
D: 120 (4.72)
E: 65 (2.56)
F: 20 (0.79)

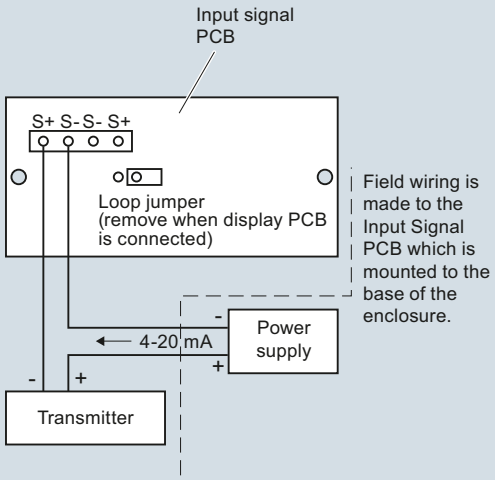
SITRANS RD100, dimensions in mm (inch)

Schematics

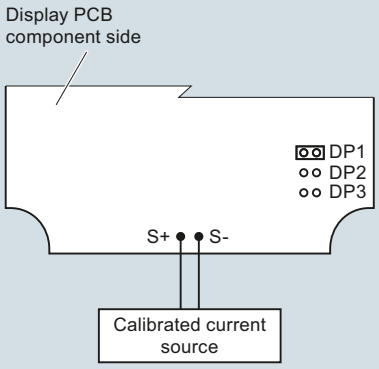
Calibrator connected to input signal PCB



Control loop connected to input signal PCB



Calibrator connected to display PCB



The display PCB may be removed from the enclosure for bench calibration. Loop jumper must be installed on input signal PCB to maintain loop.
Refer to RD100 instruction manual for more details.

SITRANS RD100 connections