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Level measurement – Ultrasonic transmitters

SITRANS Probe LU

Overview



SITRANS Probe LU is a 2-wire loop powered ultrasonic transmitter for level, volume and flow monitoring of liquids in open channels, storage vessels, and simple process vessels.

Benefits

- Continuous level measurement up to 12 m (40 ft) range
- · Easy installation and simple start-up
- Programming using infrared Intrinsically Safe handheld programmer, SIMATIC PDM or HART Communicator
- Communication using HART or PROFIBUS PA
- ETFE or PVDF transducers for chemical compatibility
- Patented Sonic Intelligence signal processing
- Auto False-Echo Suppression for fixed obstruction avoidance
- Level to volume or level to flow conversion

Application

The SITRANS Probe LU is ideal for level monitoring in the water and wastewater industry, chemical storage vessels, and small bulk hoppers.

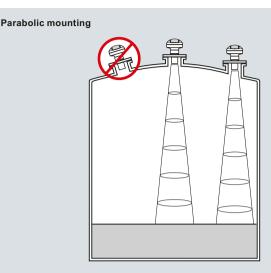
The range of SITRANS Probe LU is 6 or 12 m (20 or 40 ft). Using Sonic Intelligence, Auto False Echo Suppression for fixed obstruction avoidance, and accuracy of 0.15 % of range or 6 mm (0.25 inch), the Probe LU provides unmatched reliability.

The Probe LU offers two communications options: HART or PROFIBUS PA (Profile version 3.0, Class B).

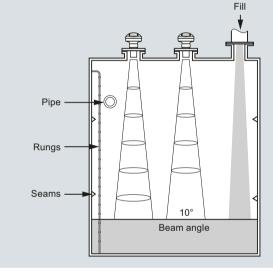
The transducer on the Probe LU is available as ETFE or PVDF to suit the chemical conditions of your application. As well, for applications with varying material and process temperatures, the Probe LU incorporates an internal temperature sensor to compensate for temperature changes.

 Key Applications: chemical storage vessels, filter beds, liquid storage vessels





Flat mounting and beam angle



SITRANS Probe LU mounting

Level measurement Continuous level measurement – Ultrasonic transmitters

SITRANS Probe LU

Technical specifications

Mode of operation	
Measuring principle	Ultrasonic level measurement
Typical application	Level measurement in storage vessels and simple process vessels
Inputs	
Measuring range • 6 m (20 ft) model • 12 m (40 ft) model	0.25 6 m (10 inch 20 ft) 0.25 12 m (10 inch 40 ft)
Frequency	54 kHz
Outputs	
mA/HART	
• Range	4 20 mA
Accuracy	± 0.02 mA
PROFIBUS PA	Profile 3, Class B
Performance	
Resolution	≤ 3 mm (0.12 inch)
Accuracy	± the greater of 0.15 % of range or 6 mm (0.24 inch)
Repeatability	≤ 3 mm (0.12 inch)
Blanking distance	0.25 m (10 inch)
Update time	≤5 seconds
 4/20 mA/HART version 	\leq 5 seconds at 4 mA
PROFIBUS version	≤ 4 seconds at 15 mA current loop
Temperature compensation	Built-in to compensate over temperature range
Beam angle	10°
Rated operating conditions	
Ambient conditions	
Location	Indoor/outdoor
 Ambient temperature 	-40 +80 °C (-40 +176 °F)
Relative humidity/ingress protec- tion	Suitable for outdoor
 Installation category 	L
Pollution degreeMedium conditions	4
- Temperature at flange or threads	-40 +85 °C (-40 +185 °F)
- Pressure (vessel)	0.5 bar g (7.25 psi g)
Design	
Material (enclosure)	PBT (Polybutylene Terephthalate)
Degree of protection	Type 4X/NEMA 4X, Type 6/ NEMA 6/IP67/IP68 enclosure
Weight	2.1 kg (4.6 lb)
Cable inlet	2 x M20x1.5 cable gland or 2 x ½" NPT thread or 1 x M20 x 1.5 and 1 x ½" NPT
Material (transducer)	ETFE (Ethylene Tetrafluoroethylene) or PVDF (Polyvinylidene Fluoride)

Process connection	
Threaded connection	2" NPT [(Taper), ANSI/ASME B1.20.1]
	R 2" [(BSPT), EN 10226] or G 2" [(BSPP), EN ISO 228-1]
 Flange connection 	3 inch (80 mm) universal flange
Other connection	FMS 200 mounting bracket (see page 4/204) or customer supplied mount
Display and Controls	
Interface	Local: LCD display with bar graph Remote: Available via HART or PROFIBUS PA
Configuration	Using Siemens SIMATIC PDM (PC) or HART handheld commu- nicator or Siemens infrared handheld programmer
Memory	Non-volatile EEPROM
Power supply	
4 20 mA/HART	Nominal 24 V DC with 550 Ω maximum; maximum 30 V DC 4 20 mA
PROFIBUS PA	12, 13, 15, or 20 mA depending on programming (General Purpose or Intrinsically Safe version)
	per IEC 61158-2
Certificates and Approvals	
General	CSA _{US/C} , FM, CE, C-TICK
Marine (only applies to HART	
communication option)	 Lloyd's Register of Shipping ABS Type Approval
communication option)	
communication option) Hazardous	ABS Type Approval
communication option) Hazardous • Intrinsically Safe (Europe)	ABS Type Approval ATEX II 1G EEx ia IIC T4 CSA/FM T4, Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1,
communication option) Hazardous • Intrinsically Safe (Europe) • Intrinsically Safe (USA/Canada) • Intrinsically Safe (Australia/New	ABS Type Approval ATEX II 1G EEx ia IIC T4 CSA/FM T4, Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III ANZEx Ex ia IIC T4, Tamb = -40 +80 °C
communication option) Hazardous • Intrinsically Safe (Europe) • Intrinsically Safe (USA/Canada) • Intrinsically Safe (Australia/New Zealand)	• ABS Type Approval ATEX II 1G EEx ia IIC T4 CSA/FM T4, Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III ANZEx Ex ia IIC T4, Tamb = -40 +80 °C (-40 +176 °F) IP67, IP68
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communication option) Hazardous Intrinsically Safe (Europe) Intrinsically Safe (USA/Canada) Intrinsically Safe (Australia/New Zealand) Intrinsically Safe (International) Intrinsically Safe (Brazil) Non-incendive (USA) Handheld Programmer Intrinsically Safe Siemens handheld	• ABS Type Approval ATEX II 1G EEx ia IIC T4 CSA/FM T4, Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III ANZEx Ex ia IIC T4, Tamb = -40 +80 °C (-40 +176 °F) IP67, IP68 IECEx TSA 04.0020X Ex ia IIC T4 INMETRO Br-Ex ia IIC T4 FM T5: Class I, Div. 2, Groups A,B,C, D
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communication option) Hazardous Intrinsically Safe (Europe) Intrinsically Safe (USA/Canada) Intrinsically Safe (Australia/New Zealand) Intrinsically Safe (International) Intrinsically Safe (Brazil) Non-incendive (USA) Handheld Programmer Intrinsically Safe Siemens handheld programmer Approvals for handheld program- mer	ABS Type Approval ATEX II 1G EEx ia IIC T4 CSA/FM T4, Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III ANZEx Ex ia IIC T4, Tamb = -40 +80 °C (-40 +176 °F) IP67, IP68 IECEx TSA 04.0020X Ex ia IIC T4 INMETRO Br-Ex ia IIC T4 FM T5: Class I, Div. 2, Groups A,B,C, D Infrared receiver IS model with ATEX EEx ia IIC T4 CSA/FM Class I, Div. 1, Groups A, B, C, D

4

Level measurement Continuous level measurement – Ultrasonic transmitters

8

SITRANS Probe LU

Selection and Ordering data	Order No.
SITRANS Probe LU 2-wire, loop powered ultrasonic transmitter for level, volume and flow monitoring of liquids in open channels, storage vessels, and simple process vessels.	7ML5221-
Enclosure/Cable Inlet Plastic (PBT), 1 x M20x1.5 and 1 x ½" NPT (no cable glands supplied) Plastic (PBT), 2 x M20x1.5 (includes 1 general purpose cable gland: 7ML1930-1AM) Plastic (PBT), 2 x ½" NPT (no cable glands supplied)	0 1 2
Range/Transducer material 6 meter (20 ft), ETFE 6 meter (20 ft), PVDF Copolymer 12 meter (40 ft), ETFE 12 meter (40 ft), PVDF Copolymer	A B C D
Process connection 2" NPT [(Taper), ANSI/ASME B1.20.1] R 2" [(BSPT), EN 10226] G 2" [(BSPP), EN ISO 228-1]	A B C
Communication/Output 4 20 mA, HART PROFIBUS PA	1
Approvals General Purpose, FM, CSA, CE, C-TICK, KCC	1
FM, Class I, Div. 2 ¹⁾ Intrinsically Safe, CSA/FM Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III ²⁾ Intrinsically Safe, ATEX II 1G <u>FEx</u> ia IIC T4, INMETRO, CE, C-TICK, KCC ²⁾	4 5 6
Intrinsically safe, ATEX II 1 G EEx ia IIC T4, ANZEx, IECEx, INMETRO, CE, C-TICK, KCC ³⁾	7

Intrinsically safe, CSA/FM Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1 Group E, F, G; Class III T4³

Available with Enclosure/Cable Inlet option 2 only.
 Available with communication option 2 only.

³⁾ Available with communication option 1 only.

Further designs Please add "-Z" to Order No. and specify Order code(s). Stainless steel tag [69 × 50 mm (2.71 × 1.97 inch)]: Measuring-point number/identification (max. 27 characters) specify in plain text V15 Operating Instructions for HART/mA device Order No. English TML 1998-5hT02 French TML 1998-5hT02 Additional Multi-language Quick Start manual This device is shipped with the Siemens Millitonics manual CD containing the complete ATEX Quick Start and Operating Instructions thorupet ATEX Quick Start and Operating Instructions bhould be ordered as a separate item on the order. TML 1998-5JB02 Additional Multi-language Quick Start manual This device is shipped with the Siemens Millitonics manual CD containing the complete ATEX Quick Start and Operating Instructions should be ordered as a separate item on the order. TML 1998-5JB02 Additional Multi-language Quick Start manual This device is shipped with the Siemens Millitonics manual CD containing the complete ATEX Quick Start and Operating Instructions library. TML 1998-5QV81 Accessories TML 1998-5QV81 Handheld programmer, Intrinsically Safe, EEx ia TML 1830-2AH Handheld programmer, Infrared, Intrinsically Safe, PROFIBUS PA TML 1830-2AJ HAFT modem/US8 TML 1830-1DT (for use with PC and SIMATIC PDM) TML 1830-1DT YI PT locknut, plastic TML 1830-1DT	Selection and Ordering data	Order code
code(s).Y15Stainless steel tag (69 x 50 mm (2.71 x 1.97 inch)): Measuring-point number/identification (max. 27 characters) specify in plain textV15Operating Instructions for HART/mA device EnglishOrder No.FrenchTML 1998-5HT02German Note: The Operating Instructions should be ordered as a separate item on the order.TML 1998-5HT02Additional Multi-language Quick Start manual This device is shipped with the Siemers Millitronics manual CD containing the complete ATEX QuickTML 1998-5QR81German Note: The Operating Instructions should be ordered as a separate item on the order.TML 1998-5JB02Additional Multi-language Quick Start manual This device is shipped with the Siemers Millitronics manual CD containing the complete ATEX QuickTML 1998-5JB02Mote: The Operating Instructions should be ordered as a separate item on the order.TML 1998-5JB02Additional Multi-language Quick Start manual This device is shipped with the Siemers Millitronics manual CD containing the complete ATEX QuickTML 1998-5QV81Jart and Operating Instructions library.TML 1998-5QV81AccessoriesTML 1830-2AH TML 1830-2AJHandheld programmer, Intrared, Intrinsically Safe, PROFIBUS PATML 1830-2AJ TML 1830-2AJHART modem/JSB (for use with PC and SIMATIC PDM)TMF4997-1DBY NPT locknut, plasticTML 1830-1BU TML 1830-1BU2' NPT locknut, plasticTML 1830-1BU TML 1830-1BU2' NPT locknut, plasticTML 1830-1BU TML 1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML 1830-1AM TML 1830-1AD		
Measuring-point Tumber/identification (max. 27 characters) specify in plain textOrder No.Coperating Instructions for HART/mA device EnglishOrder No.French7ML1998-5HT02French7ML1998-5HT02German Note: The Operating Instructions should be ordered as a separate item on the order.7ML1998-5HT32Additional Multi-language Quick Start manual This device is shipped with the Stemens Millironics manual CD containing the complete ATEX Quick Start and Operating Instructions should be ordered as a separate item on the order.7ML1998-5JB32Operating Instructions for PROFIBUS PA device English7ML1998-5JB32German Note: The Operating Instructions should be ordered as a separate item on the order.7ML1998-5JB32Additional Multi-language Quick Start manual This device is shipped with the Stemens Millironics manual CD containing the complete ATEX Quick Start and Operating Instructions library.7ML1998-5QW81Additional Multi-language Quick Start manual This device is shipped with the Stemens Millironics manual CD containing the complete ATEX Quick Start and Operating Instructions library.7ML1988-2AHAccessories7ML1830-2AH7ML1830-2AHHandheld programmer, Infrared, Intrinsically Safe, EEx ia Handheld programmer, Infrared, Intrinsically Safe, PROFIBUS PA7ML1830-1DTHART modem/USE (for use with PC and SIMATIC PDM)7MF4997-1DBProbe LU, nock nut, plastic7ML1830-1BT2' NPT locknut, plastic7ML1830-1BT2' SPT locknut, plastic7ML1830-1BU2' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPT7ML1930-1AM </td <td></td> <td></td>		
EnglishTML 1998-5HT02FrenchTML 1998-5HT12GermanNote: The Operating Instructions should be ordered as a separate item on the order.Additional Multi-language Quick Start manual This device is shipped with the Siemens Militronics manual CD containing the complete ATEX Quick Start and Operating Instructions should be ordered as a separate item on the order.Operating Instructions for PROFIBUS PA device EnglishTML 1998-5JB02German Note: The Operating Instructions should be ordered as a separate item on the order.TML 1998-5JB02Additional Multi-language Quick Start manual This device is shipped with the Siemens Militronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.TML 1998-5JB02Additional Multi-language Quick Start manual This device is shipped with the Siemens Militronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.TML 1998-5QW81AccessoriesTML 1998-5DW31Handheld programmer, Intrinsically Safe, EEx ia Handheld programmer, Infrared, Intrinsically Safe, PROFIBUS PATML 1830-2AH TML 1830-2AJHART modem/RS 232 (for use with PC and SIMATIC PDM)TML 1830-1DT TML 1830-1DT2' NPT locknut, plasticTML 1830-1DT TML 1830-1BT3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML 1930-1AM TML 1930-1AM3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML 1930-1AM4'0 + 60'C (-4' + 176 °F)TML 1930-1AMOne metallic cable gland M20x1.5, rated 4'0 + 176 °F)TML 1930-1AMOne metallic cable gland M20x1	Measuring-point number/identification	Y15
FrenchTML1998-5HT11GermanNote: The Operating Instructions should be orderedAdditional Multi-language Quick Start manualTML1998-5HT32This device is shipped with the Siemens MilltronicsTML1998-5QR81manual CD containing the complete ATEX QuickTML1998-5QR81GermanNote: The Operating Instructions should be orderedNote: The Operating Instructions should be orderedTML1998-5JB32GermanNote: The Operating Instructions should be orderedNote: The Operating Instructions should be orderedTML1998-5JB32Mathela Ruguage Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX QuickTML1998-5JB32Mathela Pogrammer, Intrinsically Safe, EEx ia Handheld programmer, Intrinsically Safe, EEx ia Handheld programmer, Infrared, Intrinsically Safe, PROFIBUS PATML5830-2AH TML5830-2AJHART modem/RS 232 (for use with PC and SIMATIC PDM)TMF4997-1DAPARFIDS PATML1830-1DT TML1830-1DT2' NPT locknut, plasticTML1830-1BT TML1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2'' NPTTML1830-1BU TML1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2'' SSPTTML1930-1AQ TML1930-1ADOne metallic cable gland M20x1.5, rated for -20+80 °C (-4+176 °F)TML1930-1AD TML1930-1ADOne metallic cable gland M20x1.5, rated for -20+80 °C (-4+176 °F)TML1930-1AQOne metallic cable gland M20x1.5, rated -4+80 °C (-4+176 °F)TML1930-1AQOne metallic cable gland M20x1.5, rated -4+80 °C (-4+176	Operating Instructions for HART/mA device	Order No.
German Note: The Operating Instructions should be ordered as a separate item on the order.TML1998-5HT32Additional Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.TML1998-5QR81Operating Instructions for PROFIBUS PA device EnglishTML1998-5JB02German Note: The Operating Instructions should be ordered as a separate item on the order.TML1998-5JB32Additional Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.TML1998-5JB32AccessoriesTML1998-5JB32Handheld programmer, Intrinsically Safe, EEx ia Handheld programmer, General Purpose approvals HART modem/ISS 232 (for use with PC and SIMATIC PDM)TMF4997-1DAHART modem/ISS 232 (for use with PC and SIMATIC PDM)TML1830-1DT2' NPT locknut, plasticTML1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2'' NPTTML1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2'' SBT1TML1930-1AMMulti-1930-1AQTML1930-1AP4.0	English	7ML1998-5HT02
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This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions for PROFIBUS PA deviceEnglishTML1998-5JB02German Note: The Operating Instructions should be ordered as a separate item on the order.TML1998-5JB32Additional Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.TML1998-5QV81Additional Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.TML5830-2AHAccessoriesTML5830-2AHHandheld programmer, Infrared, Intrinsically Safe, PROFIBUS PATML5830-2AJHART modem/RS 232 (for use with PC and SIMATIC PDM)TMF4997-1DAPAFT modem/USB (for use with PC and SIMATIC PDM)TML1830-1DT2' NPT locknut, plasticTML1830-1DD3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML1930-1AMOne General Purpose polymeric cable gland M20x1.5, rated for -20 +80 °C (-4 +176 °F)TML1930-1ADOne metallic cable gland M20x1.5, rated -0 +80 °C (-40 +176 °F) with integrated shield connection (available for PROFIBUS PA)TML1930-1AQProbe LU, rock guard/sunshiel kit, 304 SSSITRANS RD100 Remote display - see Chapter 7TML1930-1GHStrRANS RD200 Remote display - see Chapter 7	Note: The Operating Instructions should be ordered	7ML1998-5HT32
English German Note: The Operating Instructions should be ordered as a separate item on the order.7ML1998-5JB32Additional Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.7ML1998-5QV81Accessories7ML5830-2AH 7ML1830-2ANHandheld programmer, Intrinsically Safe, EEx ia Handheld programmer, General Purpose approvals Handheld programmer, Infrared, Intrinsically Safe, PROFIBUS PA7ML5830-2AJ 7ML5830-2AJHART modem/RS 232 (for use with PC and SIMATIC PDM)7MF4997-1DAPART modem/USB (for use with PC and SIMATIC PDM)7MF4997-1DB2" NPT locknut, plastic7ML1830-1DT2" SPT locknut, plastic7ML1830-1BT3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" NPT7ML1830-1BU3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" BSPT7ML1830-1AMOne General Purpose polymeric cable gland M20x1.5, rated for -20 +80 °C (-4 +176 °F)7ML1930-1AMOne metallic cable gland M20x1.5, rated -40 +80 °C (-40 +176 °F) for General Purpose or ATEX EEx e installations (available for HART only)7ML1930-1AQOne metallic cable gland M20x1.5, rated -40 +80 °C (-40 +176 °F) for General Purpose or ATEX EEx e installations (available for PART only)7ML1930-1AQProbe LU, rock guard/sunshield kit, 304 SS7ML1930-1AQSITRANS RD100 Remote display - see Chapter 77ML1930-1GHSITRANS RD200 Remote display - see Chapter 77ML5750- 1AA00-0SITRANS RD500 web, datalogging, alarming, ethernet, and modem supp	This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick	7ML1998-5QR81
ArmTML 1998-5JB32Note: The Operating Instructions should be ordered as a separate item on the order.TML 1998-5QV81Additional Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick 	Operating Instructions for PROFIBUS PA device	
Note: The Operating Instructions should be ordered as a separate item on the order.TML1998-SQV81Additional Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.TML1998-SQV81AccessoriesTML5830-2AH TML1830-2ANHandheld programmer, Intrinsically Safe, EEx ia Handheld programmer, Ceneral Purpose approvalsTML5830-2AH TML5830-2AJHandheld programmer, Infrared, Intrinsically Safe, PROFIBUS PATML5830-2AJHART modem/RS 232 (for use with PC and SIMATIC PDM)TMF4997-1DBHART modem/USB (for use with a PC and SIMATIC PDM)TMF4997-1DB2' NPT locknut, plasticTML1830-1DT2' BSPT locknut, plasticTML1830-1DT3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML1830-1BUOne General Purpose polymeric cable gland M20x1.5, rated for -20 +80 °C (-4 +176 °F)TML1930-1APOne metallic cable gland M20x1.5, rated -40 +80 °C (-40 +176 °F) for General Purpose or ATEX EEx e installations (available for HART only)TML1930-1AQOne metallic cable gland M20x1.5, rated -40 +80 °C (-40 +176 °F) with integrated shield connection (available for PROFIBUS PA)TML1930-1AQProbe LU, rock guard/sunshield kit, 304 SSTML1930-1AQSITRANS RD100 Remote display - see Chapter 7TML5750- 1AA00-0SITRANS RD500 web, datalogging, alarming, ethernet, and modem support for instrumentation - see Chapter 7TML5750- 1AA00-0Spare PartsSpare Parts	English	7ML1998-5JB02
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.AccessoriesTML5830-2AHHandheld programmer, Intrinsically Safe, EEx ia Handheld programmer, General Purpose approvalsTML1830-2ANHandheld programmer, Infrared, Intrinsically Safe, PROFIBUS PATML5830-2AJHART modem/RS 232 (for use with PC and SIMATIC PDM)TMF4997-1DAHART modem/USB (for use with a PC and SIMATIC PDM)TMF4997-1DB2' NPT locknut, plasticTML1830-1DT2' BSPT locknut, plasticTML1830-1DQ3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2' NPTTML1830-1BU3' ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2'' BSPTTML1830-1BUOne General Purpose polymeric cable gland M20x1.5, rated for -20 +80 °C (-4 +176 °F)TML1930-1APOne metallic cable gland M20x1.5, rated -40 +80 °C (-40 +176 °F) with integrated shield connection (available for PROFIBUS PA)TML1930-1AQProbe LU, rock guard/sunshield kit, 304 SSTML1930-1AQSITRANS RD100 Remote display - see Chapter 7TML1930-1GHSITRANS RD200 Remote display - see Chapter 7TML5750- 1AA00-0Spare PartsSpare Parts	Note: The Operating Instructions should be ordered	7ML1998-5JB32
Handheld programmer, Intrinsically Safe, EEx ia Handheld programmer, General Purpose approvals Handheld programmer, Infrared, Intrinsically Safe, PROFIBUS PATML 5830-2AH TML 1830-2AJHandheld programmer, Infrared, Intrinsically Safe, PROFIBUS PATML 5830-2AJHART modem/RS 232 (for use with PC and SIMATIC PDM)TMF4997-1DAHART modem/USB (for use with a PC and SIMATIC PDM)TMF4997-1DB2" NPT locknut, plasticTML 1830-1DT2" BSPT locknut, plasticTML 1830-1DT3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" BSPTTML 1830-1BT3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" BSPTTML 1830-1ADOne General Purpose polymeric cable gland M20x1.5, rated for -20 +80 °C (-4 +176 °F)TML 1930-1AM40 +80 °C (-40 +176 °F) for General Purpose or ATEX EEx e installations (available for HART only)TML 1930-1ADOne metallic cable gland M20x1.5, rated -40 +80 °C (-40 +176 °F) with integrated shield connection (available for PROFIBUS PA)TML 1930-1ADProbe LU, rock guard/sunshield kit, 304 SSTML 1930-1ADSITRANS RD100 Remote display - see Chapter 7TML 1930-1GHSITRANS RD500 web, datalogging, alarming, ethernet, and modem support for instrumentation - ac Chapter 7TML 5750- TAA0-0Spare PartsSpare Parts	This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick	7ML1998-5QV81
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SITRANS RD100 Remote display - see Chapter 7 SITRANS RD200 Remote display - see Chapter 7 SITRANS RD500 web, datalogging, alarming, ethernet, and modem support for instrumentation - see Chapter 7 Spare Parts	-40 +80 °C (-40 +176 °F) with integrated shield	7ML1930-1AQ
SITRANS RD200 Remote display - see Chapter 7 7ML5750- SITRANS RD500 web, datalogging, alarming, ethernet, and modem support for instrumentation - see Chapter 7 7ML5750- 1AA00-0 Spare Parts 6	Probe LU, rock guard/sunshield kit, 304 SS	7ML1930-1GH
SITRANS RD500 web, datalogging, alarming, ethernet, and modem support for instrumentation - see Chapter 7 7ML5750- 1AA00-0 Spare Parts	SITRANS RD100 Remote display - see Chapter 7	
ethernet, and modem support for instrumentation - 1AA00-0 see Chapter 7 Spare Parts	SITRANS RD200 Remote display - see Chapter 7	
	ethernet, and modem support for instrumentation -	
Plastic lid 7ML1830-1KB	Spare Parts	
	Plastic lid	7ML1830-1KB

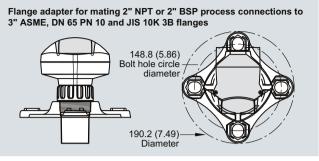
Level measurement Continuous level measurement – Ultrasonic transmitters

SITRANS Probe LU with FMS 200 mounting bracket

SITRANS Probe LU with optional mounting bracket

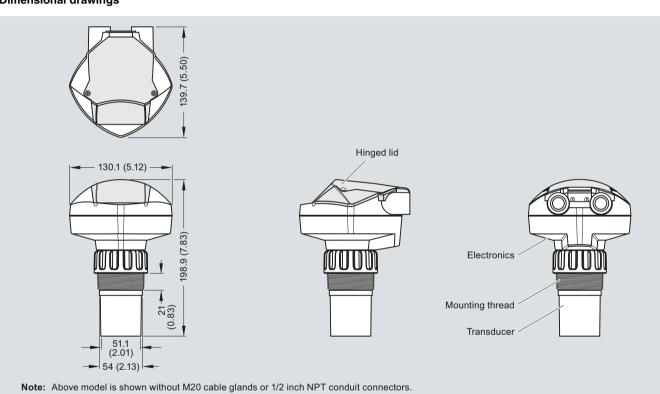
SITRANS Probe LU

Options



SITRANS Probe LU optional flange adapter, dimensions in mm (inch)

Dimensional drawings

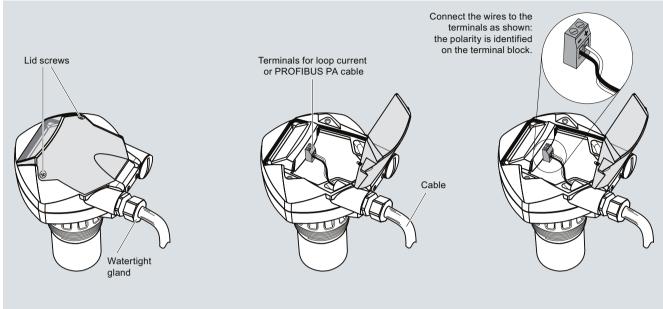


SITRANS Probe LU, dimensions in mm (inch)

© Siemens AG 2012 Level measurement Continuous level measurement — Ultrasonic transmitters

SITRANS Probe LU

Schematics



Note:

- HART model above is shown with M20 cable glands. 1/2" NPT threaded connection is also available.
- DC terminal shall be supplied from an SELV source in accordance with IEC-1010-1 Annex H.
- All field wiring must have insulation suitable for rated input voltages.
- Separate cables and conduit may be required to conform to standard instrumentation wiring practices or electrical codes.

SITRANS Probe LU connections