

Level Measurement

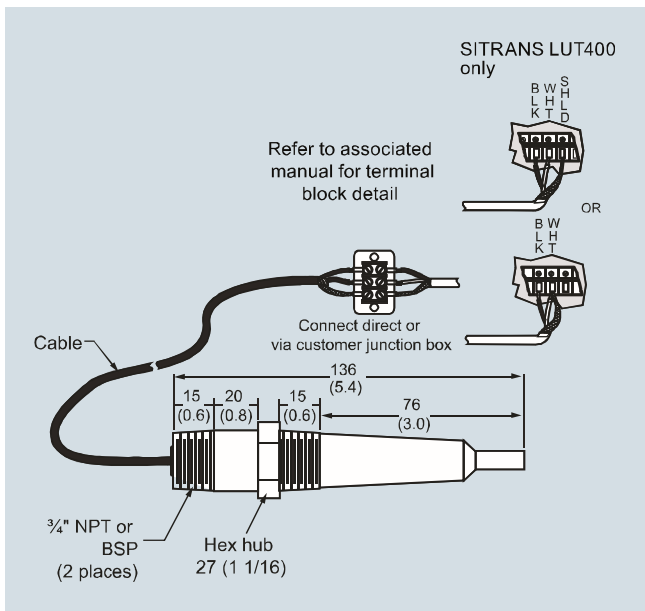
Continuous level measurement – Accessories for ultrasonic

TS-3 temperature sensor

Technical specifications	
Mode of operation	
Measuring principle	Temperature sensor
Input	
Measuring range	-40 ... +100 °C (-40 ... +212 °F)
Output	
Response time	
• Forced circulation (temperature variation: 63 %)	55 s
• Flange, forced circulation	90 s
• Natural convection	150 s
Rated operating conditions	
• Installation instructions	Mounted indoors/outdoors, but not exposed to direct sunlight
• Pressure	Max. 4 bar (60 psi/400 kPa)
Design	
Material (enclosure)	ETFE ¹⁾
Cable connection	2-core, 0.5 mm ² (20 AWG), shielded, silicone sheath
Process connection	¾" NPT [(Taper), ANSI/ASME B1.20.1] R ¾" [(BSPT), EN 10226], totally encapsulated
Certificates and approvals	
CE, IEC Ex, FM, CSA, ATEX	

¹⁾ ETFE is a fluoropolymer inert to most chemicals. For exposure to specific environments, check the chemical compatibility charts before installing the TS-3 in your application.

Dimensional drawings



TS-3 temperature sensor, dimensions in mm (inch)

Selection and Ordering data	Article No.
TS-3 temperature sensor	7ML1813-
TS-3 provides an input signal for temperature compensation of specific Siemens ultrasonic level controllers.	B
Compensation is essential in applications where variation in temperature of the sound medium is expected.	
Cable length	
1 m (3.28 ft)	1
5 m (16.40 ft)	2
10 m (32.81 ft)	3
30 m (98.43 ft)	4
50 m (164.04 ft)	5
70 m (229.66 ft)	6
90 m (295.28 ft)	7
Process connection	A
¾" NPT [(Taper), ANSI/ASME B1.20.1]	B
R ¾" [(BSPT), EN 10226]	
Approvals	3
CSA, FM	4
CE, ATEX, IEC Ex ¹⁾	
Operating Instructions	
English	7ML1998-5EM01
German	7ML1998-5EM31
Note: The Operating Instructions should be ordered as a separate line item on the order.	
This device is shipped with the Siemens Milltronics manual DVD containing ATEX Quick Starts and Operating Instructions.	
Accessories	
¾" NPT locknut, aluminum	7ML1930-1BE
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77 inch) for fastening on sensors	7ML1930-1BJ

¹⁾ Upper temperature rating of these approvals options is limited to 100 °C (212 °F)