

Level Measurement

Continuous level measurement – Radar transmitters

SITRANS LR400

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LR400	7ML5421-	SITRANS LR400	7ML5421-
4-wire, 24 GHz FMCW radar level transmitter for continuous monitoring of liquids and slurries in storage and process vessels including high temperature and high pressure, to a range of 50 m (164 ft); ideal for low dielectric media.		4-wire, 24 GHz FMCW radar level transmitter for continuous monitoring of liquids and slurries in storage and process vessels including high temperature and high pressure, to a range of 50 m (164 ft); ideal for low dielectric media.	
Order handheld programmer separately		Order handheld programmer separately	
Process temperature range		Approvals	
-40 °C ... +200 °C (-40 ... +392 °F), standard	0	General Purpose, CSA _{USC} , Industry Canada, FCC, CE and R&TTE	B
-40 °C ... +250 °C (-40 ... +482 °F), high temperature extension	1	ATEX II 2G EEx d IIC T6; CE, R&TTE; INMETRO Ex d IIC T6	E
Process connection		ATEX II 2G EEx dem IIC T6; CE, R&TTE; INMETRO Ex de mb II T6	F
Universal flange 3 inch/80 mm ¹⁾	A	ATEX II 2G EEx dem [ia] IIC T6; CE, R&TTE; INMETRO Ex de [ia] mb IIC T6 ³⁾	G
Universal flange 4 inch/100 mm ¹⁾	B	ATEX II 1/2 GD EEx d IIC T6; CE, R&TTE; INMETRO Ex d IIC T6 ²⁾	J
Universal flange 6 inch/150 mm ¹⁾	D	ATEX II 1/2 GD EEx dem IIC T6; CE, R&TTE; INMETRO Ex de mb IIC T6 ²⁾	K
DN 80, PN 16, Type A, flat faced	S	ATEX II 1/2 GD EEx dem [ia] II T6; CE, R&TTE; INMETRO Ex de [ia] mb IIC T6 ²⁾³⁾	L
DN 80, PN 40, Type B1, raised face	C	FM Class I, Div. 1, Groups B, C, D; Class II/III, Div. 1, Groups E, F, G; FCC ²⁾	T
DN 100, PN 16, Type A, flat faced	T	CSA Class I, Div. 1, Groups B, C, D; Class II/III, Div. 1, Groups E, F, G; FCC ²⁾	U
DN 100, PN 40, Type B1, raised face	G		
DN 150, PN 16, Type A, flat faced	U	Local operation	
3" ASME, 150 lb, raised face	E	Local Display Only. Handheld programmer not included (Order programmer separately)	2
3" ASME, 300 lb, raised face	F		
4" ASME, 150 lb, raised face	J		
4" ASME, 300 lb, raised face	K		
6" ASME, 150 lb, raised face	N		
JIS, DN 80 10K	Q		
JIS, DN 100 10K	R		
JIS, DN 150 10K	V		
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5, or EN 1092-1, or JIS B 2220 standard.)			
Antenna			
Horn antenna, long 93 mm (3.66 inch) diam. for 100 mm (4 inch) nozzles	D		
Horn antenna, short 74 mm (2.91 inch) diam. for 80 mm (3 inch) nozzles	K		
Antenna purging system			
None	0		
Purging system	1		
Note: Available with process connections B or D, and for area classification B only			
Process seal/gasket			
PTFE for -40 ... +250 °C (-40 ... +482 °F) flange temperatures	1		
FKM for -20 ... +200 °C (-4 ... +392 °F) flange temperatures ²⁾	3		
Output/communication			
4 ... 20 mA, HART	0		
PROFIBUS PA	1		
Power supply/cable inlet			
100 ... 230 V AC			
• 2 x M20x1.5	B		
• 2 x 1/2" NPT	C		
24 V DC			
• 2 x M20x1.5	E		
• 2 x 1/2" NPT	F		

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Further designs	
Please add "-Z" to Article No. and specify Order code(s).	
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]; Measuring-point number/identification (max. 27 characters); specify in plain text	Y15
Manufacturer's test certificate: M to DIN 55350, Part 18 and to ISO 9000	C11
Inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions	
English	Article No. 7ML1998-5FH06
German	7ML1998-5FH36
French	7ML1998-5FH16
Note: The Operating Instructions should be ordered as a separate line item on the order.	
Multi-language Quick Start manual This device is shipped with the Siemens Milltronics manual DVD containing the ATEX Quick Start and Operating Instructions library.	A5E32007509
Accessories	
Handheld programmer Intrinsically Safe, EEx ia	Article No. 7ML5830-2AJ
Long horn dust cover, PTFE	7ML1930-1AH
Short horn dust cover, PTFE	7ML1930-1AJ
HART modem/RS 232 (for use with a PC and SIMATIC PDM)	7MF4997-1DA
HART modem/USB (for use with a PC and SIMATIC PDM)	7MF4997-1DB
One metallic cable gland M20x1.5, rated -40 ... +80 °C (-40 ... +176 °F), HART (two required) ¹⁾	7ML1930-1AP
One metallic cable gland M20x1.5, rated -40 ... +80 °C (-40 ... +176 °F), PROFIBUS PA (two required) ¹⁾	7ML1930-1AQ
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	7ML5750- 1AA00-0
For applicable back up point level switch - see point level section on page 4/9	

¹⁾ Product shipped with plastic cable gland, rated to -20 °C.
If -40 °C rating required, then metallic cable gland is recommended.