

## Level Measurement

Continuous level measurement - Radar transmitters

### SITRANS LR250 Horn Antenna

#### Overview



SITRANS LR250 is a 2-wire, 25 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries in storage and process vessels including high temperature and pressure, to a range of 20 m (66 ft).

#### Benefits

- Graphical local user interface (LUI) makes operation simple with plug-and-play setup using the intuitive Quick Start Wizard
- LUI displays echo profiles for diagnostic support
- 25 GHz high frequency allows for small antennas for easy mounting in nozzles
- Insensitive to mounting location and obstructions, and less sensitive to nozzle interference
- Short blanking distance for improved minimum measuring range to 50 mm (2 inch) from the end of the antenna
- Communication using HART, PROFIBUS PA, or FOUNDATION Fieldbus
- Process Intelligence signal processing for improved measurement reliability and Auto False-Echo Suppression of fixed obstructions
- Programming using infrared Intrinsically Safe handheld programmer or over a network using SIMATIC PDM, Emerson AMS, or Field Device Tools such as PACTware or Fieldcare via SITRANS DTM
- Functional Safety (SIL 2). Device suitable for use in accordance with IEC 61508 and IEC 61511
- 3 mm (0.118 inch) accuracy in accordance with IEC 60770-1
- Suitable for API 2350

#### Application

SITRANS LR250 includes a graphical local user interface (LUI) that improves setup and operation by including an intuitive Quick Start Wizard, and echo profile displays for diagnostic support. Startup is easy using the Quick Start wizard with a few parameters required for basic operation.

The 25 GHz frequency creates a narrow, focused beam allowing for smaller horn antenna options and decreasing sensitivity to obstructions.

SITRANS LR250's unique design allows safe and simple programming using the Intrinsically Safe handheld programmer without having to open the instrument's lid.

SITRANS LR250 measures superbly on low dielectric media, and in small vessels, as well as tall and narrow vessels.

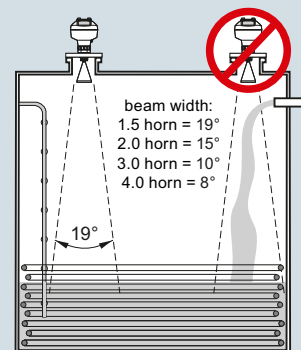
- Key Applications: liquid bulk storage tanks, process vessels, vaporous liquids, high temperatures, low dielectric media and applications with functional safety requirements

#### Configuration

##### Installation

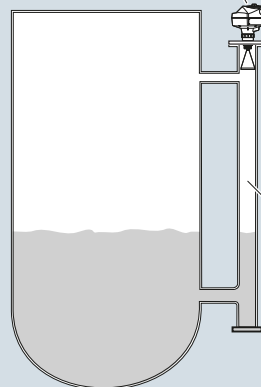
##### Note:

- Beam angle is the width of the cone where the energy density is half of the peak energy density.
- The peak energy density is directly in front of and in line with the horn antenna.
- There is a signal transmitted outside of the beam angle; therefore false targets may be detected.
- Use largest possible antenna.



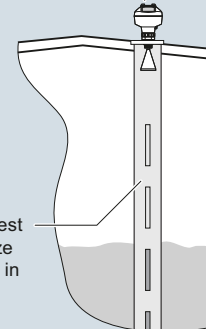
##### Mounting on bypass

Orient front or back of device toward vent.

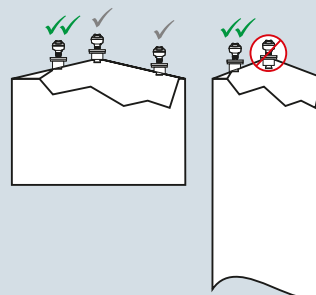


##### Mounting on stilling well

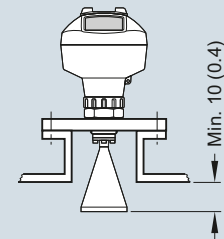
Orient front or back of device toward stillpipe slots.



##### Mounting on vessel



##### Mounting on a nozzle



SITRANS LR250 installation, dimensions in mm (inch)

### Technical specifications

<b>Mode of operation</b>		<b>Power supply</b>	
Measuring principle	Radar level measurement	4 ... 20 mA/HART	Nominal 24 V DC (max. 30 V DC) with max. 550 Ω
Frequency	K-band (25.0 GHz)	PROFIBUS PA	<ul style="list-style-type: none"> <li>• 15 mA</li> <li>• Per IEC 61158-2</li> </ul>
Minimum measuring range	50 mm (2 inch) from end of antenna	FOUNDATION Fieldbus	<ul style="list-style-type: none"> <li>• 20.0 mA</li> <li>• Per IEC 61158-2</li> </ul>
Maximum measuring range	20 m (65 ft), antenna dependent		
<b>Output</b>		<b>Certificates and approvals</b>	
HART	Version 5.1	General	CSA <sub>US/C</sub> , CE, FM, NE 21, RCM
<ul style="list-style-type: none"> <li>• Analog output</li> <li>• Accuracy</li> <li>• Fail-safe</li> </ul>	4 ... 20 mA ± 0.02 mA <ul style="list-style-type: none"> <li>• Programmable as high low or hold (loss of echo)</li> <li>• NE 43 programmable</li> </ul>	Radio	FCC, Industry Canada, and Europe ETSI EN 302-372, RCM
PROFIBUS PA	Profile 3.01	Hazardous	
<ul style="list-style-type: none"> <li>• Function blocks</li> </ul>	2 Analog Input (AI)	<ul style="list-style-type: none"> <li>• Explosion Proof (Brazil)</li> <li>• Increased Safety (Brazil)</li> <li>• Intrinsically Safe (Brazil)</li> <li>• Explosion Proof (Canada/USA)</li> <li>• Intrinsically Safe (Canada/USA)</li> <li>• Non-incendive (Canada/USA)</li> <li>• Flame Proof/Increased Safety (China)</li> <li>• Intrinsically Safe (China)</li> <li>• Non-sparking (China)</li> <li>• Intrinsically Safe (Europe)</li> <li>• Non-sparking (Europe)</li> <li>• Flame Proof (International/Europe)</li> <li>• Increased Safety (International/Europe)</li> <li>• Intrinsically Safe (International)</li> <li>• Explosion Proof (Russia/Kazakhstan)</li> <li>• Increased Safety (Russia/Kazakhstan)</li> <li>• Intrinsically Safe (Russia/Kazakhstan)</li> <li>• Marine</li> <li>• Functional Safety</li> </ul>	INMETRO Ex d ia mb IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da INMETRO Ex e ia mb IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da INMETRO Ex ia IIC T4 Ga, Ex ia ta IIIC T100 °C Da CSA/FM Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III T4 CSA/FM Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III T4 CSA/FM Class I, Div. 2, Groups A, B, C, D T5 NEPSI Ex d ia mb IIC T4 Ga/Gb, Ex e ia mb IIC T4 Ga/Gb, Ex ia d tD A20 IP67 T100 °C NEPSI Ex ia IIC T4 Ga, Ex iaD tD A20 IP67 T100 °C NEPSI Ex nA IIC T4 Gc ATEX II 1G Ex ia IIC T4 Ga ATEX II 1D Ex ia IIIC T100 °C Da ATEX II 3G Ex nA IIC T4 Gc IECEx/ATEX II 1/2 GD, 1D, 2D, Ex d mb ia IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da IECEx/ATEX II 1/2 GD, 1D, 2D, Ex e mb ia IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da IECEx/ATEX II 1 G Ex ia IIC T4 Ga, IECEx/ATEX II 1D Ex ia ta IIC T100 °C Da EAC Ex d EAC Ex e EAC Ex ia <ul style="list-style-type: none"> <li>• Lloyd's Register of Shipping</li> <li>• ABS Type Approval</li> <li>• Bureau Veritas</li> </ul> SIL-2 suitable in accordance with IEC 61508/61511
FOUNDATION Fieldbus	H1		
<ul style="list-style-type: none"> <li>• Functionality</li> <li>• Version</li> <li>• Function blocks</li> </ul>	Basic or LAS ITK 5.2.0 2 Analog Input (AI)		
<b>Performance (according to reference conditions IEC60770-1)</b>			
Maximum measured error	3 mm (0.118 inch)		
Influence of ambient temperature	< 0.003 %/K		
<b>Rated operating conditions</b>			
Installation conditions			
<ul style="list-style-type: none"> <li>• Location</li> </ul>	Indoor/outdoor		
Ambient conditions (enclosure)			
<ul style="list-style-type: none"> <li>• Ambient temperature</li> <li>• Installation category</li> <li>• Pollution degree</li> </ul>	-40 ... +80 °C (-40 ... +176 °F) I 4		
<b>Medium conditions</b>			
Dielectric constant $\epsilon_r$	> 1.6, antenna and application dependent		
Process temperature	-40 ... +200 °C (-40 ... +392 °F) (at process connection with FKM O-ring) -20 ... +200 °C (-4 ... +392 °F) (at process connection with FFKM O-ring)		
Process pressure	Up to 40 bar g (580 psi g), process connection and temperature dependent. See Pressure/Temperature curves for more information		
<b>Design</b>			
Enclosure			
<ul style="list-style-type: none"> <li>• Material</li> <li>• Cable inlet</li> </ul>	Aluminum, polyester powder-coated 2 x M20 x 1.5 or 2 x 1/2" NPT		
Degree of protection	Type 4X/NEMA 4X, Type 6/NEMA 6, IP67, IP68		
Weight	< 3 kg (6.6 lb) 3.75 mm (1 1/2 inch) threaded connection with 1 1/2" horn antenna		
Display (local)	Graphic local user interface including quick start wizard and echo profile display		
Antenna			
<ul style="list-style-type: none"> <li>• Material</li> <li>• Dimensions (nominal horn sizes)</li> </ul>	316L stainless steel [optional alloy N06022/2.4602 (Hastelloy C-22 or equivalent)] Standard 1.5 inch (40 mm), 2 inch (48 mm), 3 inch (75 mm), 4 inch (95 mm) horn, and optional 100 mm (4 inch) horn extension		
Process connections			
<ul style="list-style-type: none"> <li>• Process connection</li> <li>• Flange connection</li> </ul>	1 1/2", 2" or 3" NPT [(Taper), ANSI/ASME B1.20.1] R 1 1/2", 2" or 3" [(BSPT), EN 10226] G 1 1/2", 2" or 3" [(BSPP), EN ISO 228-1] 2", 3", 4" (ANSI 150, 300 lb), 50, 80, 100 mm (PN 16, 40, JIS 10K)		

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##### Programming

Intrinsically Safe Siemens handheld programmer	Infrared receiver
<ul style="list-style-type: none"> <li>• Approvals for handheld programmer</li> </ul>	IS model: ATEX II 1 GD Ex ia IIC T4 Ga Ex ia D 20 T135 °C T <sub>a</sub> = -20 ... +50 °C CSA/FM Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G, T6 T <sub>a</sub> = +50 °C IECEx SIR 09.0073
Handheld communicator	HART communicator 375/475
PC	<ul style="list-style-type: none"> <li>• SIMATIC PDM</li> <li>• Emerson AMS</li> <li>• SITRANS DTM (for connection into FDT such as PACTware or Fieldcare)</li> </ul>
Display (local)	Graphic local user interface including quick start wizard and echo profile displays

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
<b>SITRANS LR250 horn antenna</b>	<b>7ML5431-</b>	<b>SITRANS LR250 horn antenna</b>	<b>7ML5431-</b>
2-wire, 25 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries in storage and process vessels including high temperature and pressure, to a range of 20 m (66 ft) (antenna dependent). Ideal for small vessels and low dielectric media.	0 -	2-wire, 25 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries in storage and process vessels including high temperature and pressure, to a range of 20 m (66 ft) (antenna dependent). Ideal for small vessels and low dielectric media.	0 -
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.			
<b>Process Connection and Antenna Material</b>		<b>Flanged connection Hastelloy C</b>	
316L (1.4435 or 1.4404) stainless steel, PTFE emitter, FKM seal <sup>1)</sup>	0	2" Class 150 ASME B16.5 raised face <sup>4)</sup>	JA
316L (1.4435 or 1.4404) stainless steel, PTFE emitter, FFKM seal <sup>1)</sup>	1	3" Class 150 ASME B16.5 raised face <sup>4)</sup>	JB
Hastelloy C-22/2.4602 (or equivalent), PTFE emitter, FKM seal <sup>2)</sup>	2	4" Class 150 ASME B16.5 raised face <sup>4)</sup>	JC
Hastelloy C-22/2.4602 (or equivalent), PTFE emitter, FFKM seal <sup>2)</sup>	3	2" Class 300 ASME B16.5 raised face <sup>4)</sup>	JD
		3" Class 300 ASME B16.5 raised face <sup>4)</sup>	JE
		4" Class 300 ASME B16.5 raised face <sup>4)</sup>	JF
<b>Process Connection Type</b>		DN 50 PN 16 EN 1092-1 Type B1 raised face <sup>4)</sup>	KA
<b>Threaded connection 316L</b>		DN 80 PN 16 EN 1092-1 Type B1 raised face <sup>4)</sup>	KB
1½" NPT (ASME B1.20.1) (tapered thread) <sup>3)</sup>	AA	DN 100 PN 16 EN 1092-1 Type B1 raised face <sup>4)</sup>	KC
R 1½" [(BSPT), EN 10226-1] (tapered thread) <sup>3)</sup>	AB	DN 50 PN 40 EN 1092-1 Type B1 raised face <sup>4)</sup>	KD
G 1½" [(BSPP), EN ISO 228-1] (parallel thread) <sup>3)</sup>	AC	DN 80 PN 40 EN 1092-1 Type B1 raised face <sup>4)</sup>	KE
2" NPT (ASME B1.20.1) (tapered thread)	AD	DN 100 PN 40 EN 1092-1 Type B1 raised face <sup>4)</sup>	KF
R 2" [(BSPT), EN 10226-1] (tapered thread)	AE	50A 10K JIS B 2220 raised face <sup>4)</sup>	LA
G 2" [(BSPP), EN ISO 228-1] (parallel thread)	AF	80A 10K JIS B 2220 raised face <sup>4)</sup>	LB
3" NPT (ASME B1.20.1) (tapered thread)	AG	100A 10K JIS B 2220 raised face <sup>4)</sup>	LC
R 3" [(BSPT), EN 10226-1] (tapered thread)	AH	DN 50 PN 16 EN 1092-1 Type B1 raised face	MA
G 3" [(BSPP), EN ISO 228-1] (parallel thread)	AJ	DN 80 PN 16 EN 1092-1 Type B1 raised face	MB
<b>Flanged connection 316L</b>		DN 100 PN 16 EN 1092-1 Type B1 raised face	MC
2" Class 150 ASME B16.5, raised face	BD	DN 150 PN 16 EN 1092-1 Type B1 raised face	MD
3" Class 150 ASME B16.5, raised face	BE	DN 50 PN 40 EN 1092-1 Type B1 raised face	ME
4" Class 150 ASME B16.5, raised face	BF	DN 80 PN 40 EN 1092-1 Type B1 raised face	MF
2" Class 300 ASME B16.5, raised face	CD	DN 100 PN 40 EN 1092-1 Type B1 raised face	MG
3" Class 300 ASME B16.5, raised face	CE	DN 150 PN 40 EN 1092-1 Type B1 raised face	MH
4" Class 300 ASME B16.5, raised face	CF		
50A 10K JIS B 2220 flat face <sup>4)</sup>	FA	<b>Communication/Output</b>	
80A 10K JIS B 2220 flat face <sup>4)</sup>	FB	PROFIBUS PA <sup>6)</sup>	1
100A 10K JIS B 2220 flat face <sup>4)</sup>	FC	4 ... 20 mA, HART, start-up at < 3.6 mA	2
DN 50 PN 16 EN 1092-1 Type B1 raised face	GA	FOUNDATION Fieldbus <sup>6)</sup>	3
DN 80 PN 16 EN 1092-1 Type B1 raised face	GB		
DN 100 PN 16 EN 1092-1 Type B1 raised face	GC	<b>Enclosure/Cable inlet</b>	
DN 150 PN 16 EN 1092-1 Type B1 raised face	GD	Aluminum, Epoxy painted	
DN 50 PN 40 EN 1092-1 Type B1 raised face	HA	2 x ½" NPT	0
DN 80 PN 40 EN 1092-1 Type B1 raised face	HB	2 x M20 x 1.5	1
DN 100 PN 40 EN 1092-1 Type B1 raised face	HC	<b>Antenna</b>	
DN 150 PN 40 EN 1092-1 Type B1 raised face	HD	1½" horn <sup>3)</sup>	A
		2" horn (fits 2" ASME or DN 50 nozzles)	B
		3" horn (fits 3" ASME or DN 80 nozzles)	C
		4" horn (fits 4" ASME or DN 100 nozzles)	D
		1½" horn with 100 mm extension <sup>3)</sup>	E
		2" horn with 100 mm extension	F
		3" horn with 100 mm extension	G
		4" horn with 100 mm extension	H
		<b>Hastelloy C22 (or equivalent)</b>	
		2" horn (fits 2" ASME or DN 50 nozzles)	J
		3" horn (fits 3" ASME or DN 80 nozzles)	K
		4" horn (fits 4" ASME or DN 100 nozzles)	L
		2" horn (fits 2" ASME or DN 50 nozzles) with 100 mm extension	M
		3" horn (fits 3" ASME or DN 80 nozzles) with 100 mm extension	N
		4" horn (fits 4" ASME or DN 100 nozzles) with 100 mm extension	P

## Level Measurement

### Continuous level measurement - Radar transmitters

#### SITRANS LR250 Horn Antenna

Selection and Ordering data	Article No.
<b>SITRANS LR250 horn antenna</b>	<b>7ML5431-</b>
2-wire, 25 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries in storage and process vessels including high temperature and pressure, to a range of 20 m (66 ft) (antenna dependent). Ideal for small vessels and low dielectric media.	<b>0 -</b>
<b>Approvals</b>	
General Purpose: CE, CSA, FM, FCC, R&TTE, RCM	<b>A</b>
Intrinsically Safe: CSA/FM Class I, Div. 1, Groups A, B, C, D, Class II, Div. 1, Groups E, F, G, Class III T4 FCC, Industry Canada	<b>B</b>
Intrinsically Safe: IECEx/ATEX II 1 G Ex ia IIC T4 Ga, IECEx/ATEX II 1D Ex ia ta IIIC T100 °C Da, INMETRO Ex ia IIC T4 Ga, Ex ia ta IIIC T100 °C Da, CE, R&TTE, RCM	<b>C</b>
Non-incendive: CSA/FM Class I, Div. 2, Groups A, B, C, D T5, FCC, Industry Canada	<b>D</b>
Non Sparking: ATEX II 3G Ex nA IIC T4 Gc, CE, R&TTE, RCM	<b>E</b>
Increased Safety: IECEx/ATEX II 1/2 GD, 1D, 2D Ex e mb ia IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da, INMETRO Ex e ia mb IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da, CE, R&TTE, RCM <sup>4)</sup>	<b>F</b>
Flameproof: IECEx/ATEX II 1/2 GD 1D, 2D Ex d mb ia IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da, INMETRO Ex d ia mb IIC T4 Ga/Gb, Ex ia ta IIIC T100 °C Da, CE, R&TTE, RCM <sup>5)</sup>	<b>G</b>
Explosion proof: CSA/FM Class I, II, and III, Div. 1, Groups A, B, C, D, E, F, G, FCC, Industry Canada <sup>5)</sup>	<b>H</b>
Non Sparking: NEPSI Ex nA IIC T4 Gc	<b>K</b>
Intrinsically Safe: NEPSI Ex ia IIC T4 Ga, Ex iaD tD A20 IP67 T100 °C	<b>L</b>
Flameproof: NEPSI Ex d ia mb IIC T4 Ga/Gb, Ex iaD tD A20 IP67 T100 °C <sup>5)</sup>	<b>M</b>
Increased Safety: NEPSI Ex e ia mb IIC T4 Ga/Gb, Ex iaD tD A20 IP67 T100 °C <sup>5)</sup>	<b>N</b>
<b>Pressure rating</b>	
Rating per Pressure/Temperature curves in manual	<b>0</b>
0.5 bar g (7.25 psi g) maximum <sup>7)</sup>	<b>1</b>

1) Available with process connection options AA ... HD and Antenna Versions A ... H only

2) Available with process connection options JA ... MH and Antenna Versions J ... P only

3) Available for Antenna versions A and E only, max. range 10 m (32.8 ft), dk > 3 and A and E only available for Process Connection options AA, AB, and AC

4) Applicable with communication option 2 only

5) Available with Approval options A, B, C, D, K, and L

7) Available with Process Connection and Antenna Material 0, 1, 2, and 3 only

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 10/11 in the appendix.

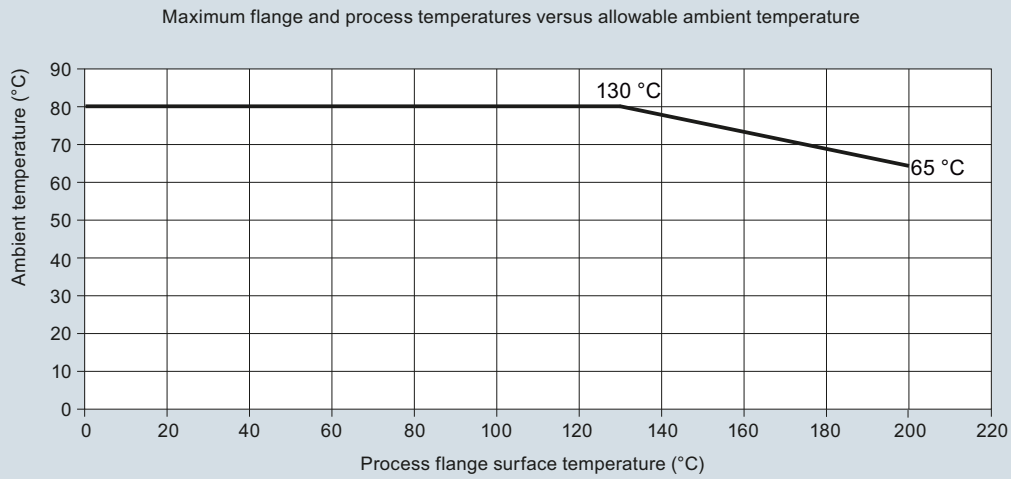


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### SITRANS LR250 Horn Antenna

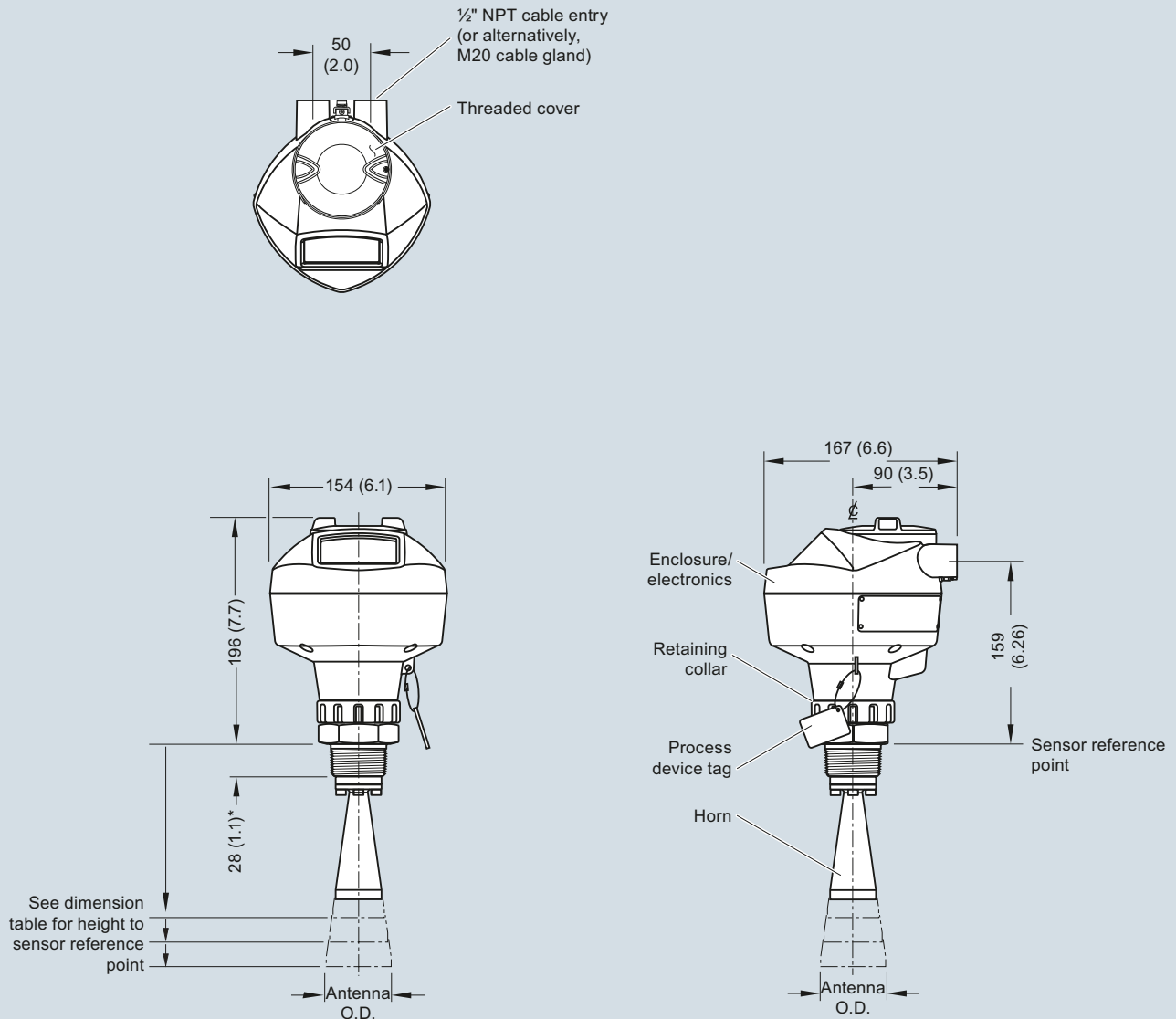
#### Characteristic curves



SITRANS LR250 ambient/process flange surface temperature curve

## Dimensional drawings

### Threaded Horn Antenna



\*28 mm (1.1) for 1.5 inch and 2 inch, 42 mm (1.65) for 3 inch

Antenna Type	Antenna O.D.	Height to sensor reference point			Beam angle	Measurement range
		1-1/2" threaded connection	2" threaded connection	3" threaded connection		
1.5" horn	39.8 (1.57)	135 (5.3)	N/A	N/A	19 degrees	10 m (32.8 ft)
2" horn	47.8 (1.88)	N/A	166 (6.55)	180 (7.09)	15 degrees	20 m (65.6 ft)
3" horn	74.8 (2.94)	N/A	199 (7.85)	213 (8.39)	10 degrees	20 m (65.6 ft)
4" horn	94.8 (3.73)	N/A	254 (10)	268 (10.55)	8 degrees	20 m (65.6 ft)

SITRANS LR250 Threaded Horn Antenna, dimensions in mm (inch)

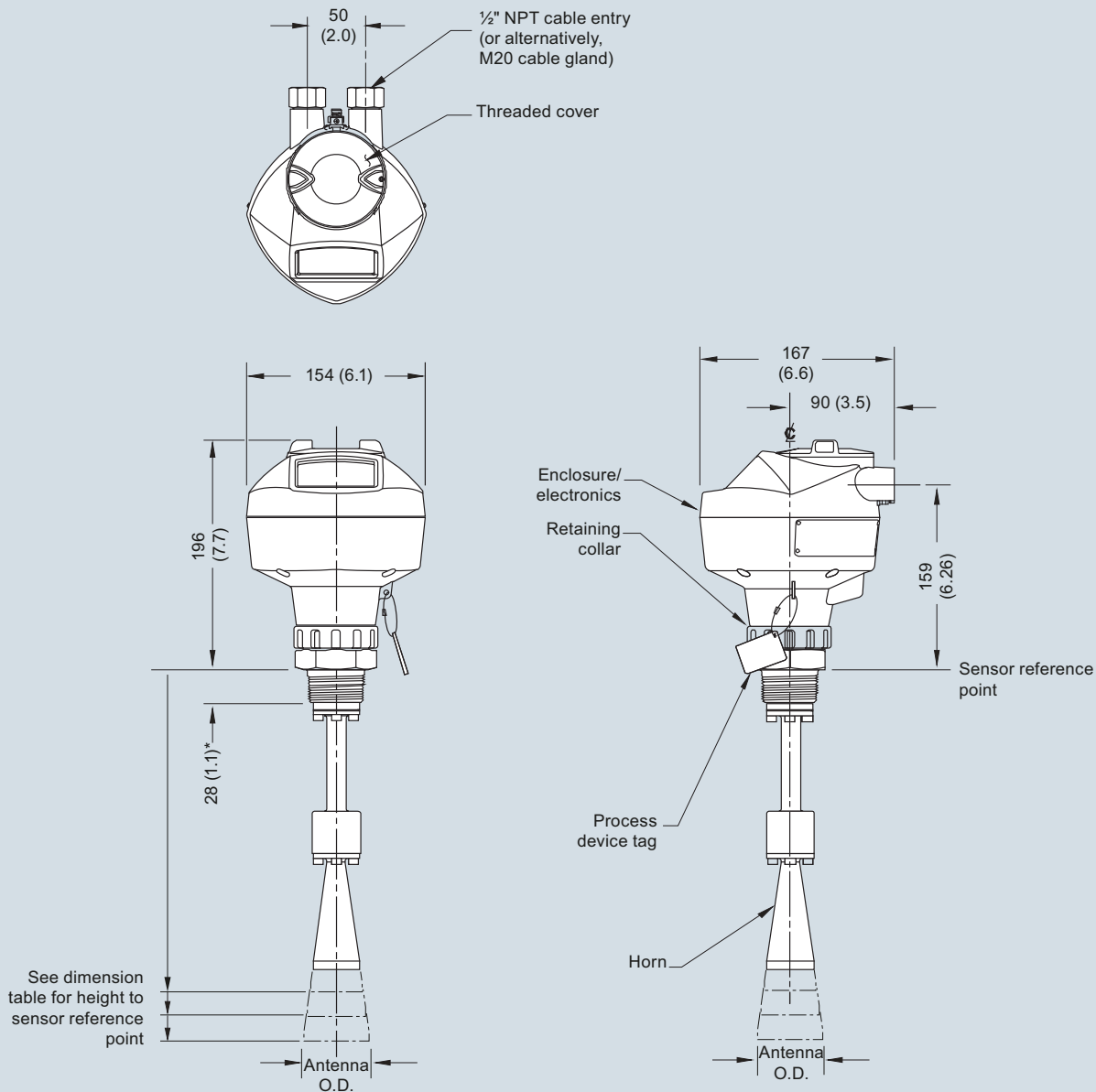


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### SITRANS LR250 Horn Antenna

#### Threaded Horn Antenna with Extension

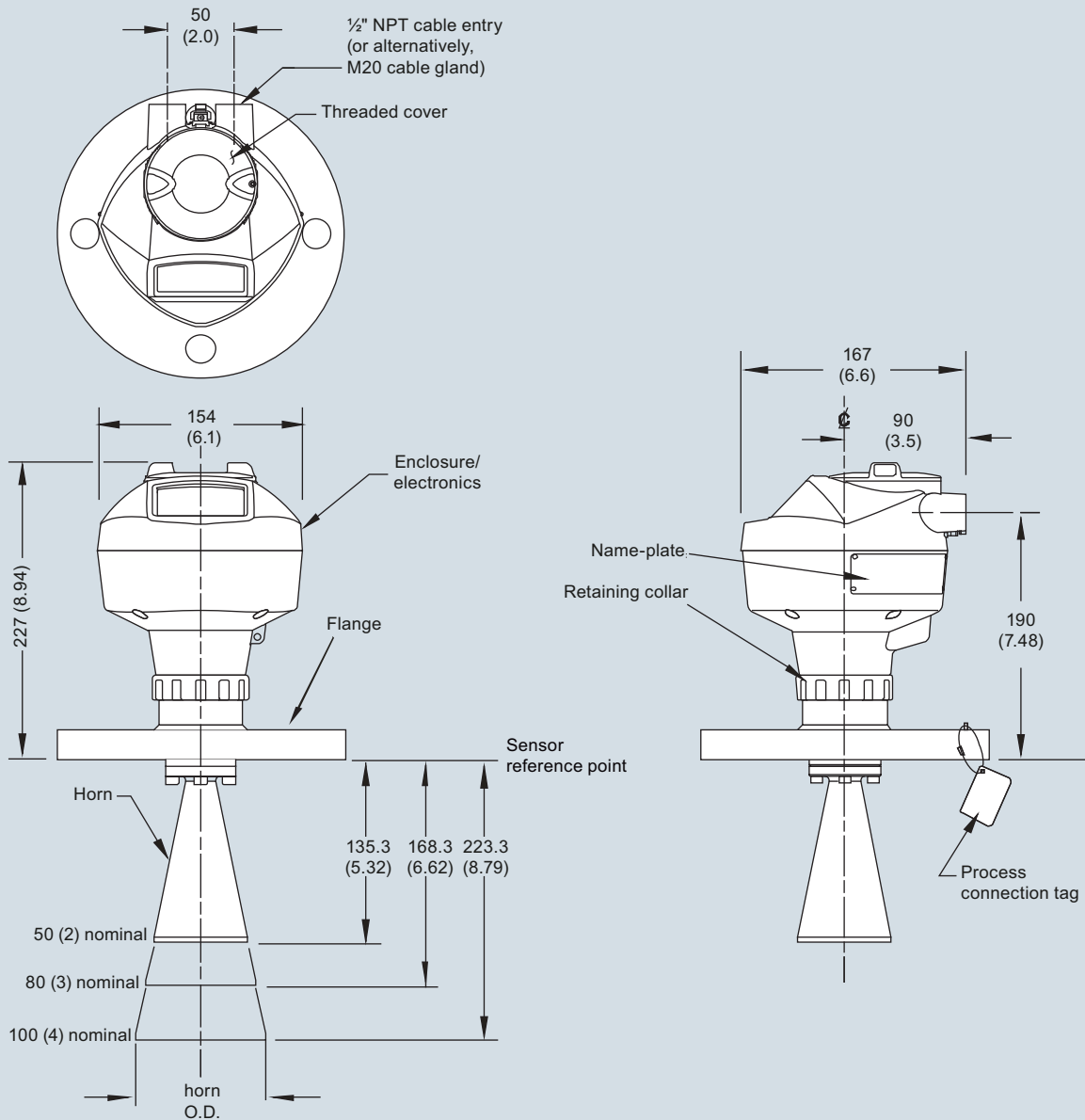


\*28 mm (1.1) for 1.5 inch and 2 inch, 42 mm (1.65) for 3 inch

Antenna Type	Antenna O.D.	Height to sensor reference point			Beam angle	Measurement range
		1-1/2" threaded connection	2" threaded connection	3" threaded connection		
1.5" horn	39.8 (1.57)	235 (9.3)	N/A	N/A	19 degrees	10 m (32.8 ft)
2" horn	47.8 (1.88)	N/A	266 (10.47)	280 (11.02)	15 degrees	20 m (65.6 ft)
3" horn	74.8 (2.94)	N/A	299 (11.77)	313 (12.32)	10 degrees	20 m (65.6 ft)
4" horn	94.8 (3.73)	N/A	354 (13.94)	368 (14.49)	8 degrees	20 m (65.6 ft)

SITRANS LR250 Threaded Horn Antenna with extension, dimensions in mm (inch)

**Flanged Horn**



Nominal Horn Size	Horn O.D.	Height to sensor reference point		Beam angle	Measurement range
		Stainless steel flange raised or flat-faced	Optional alloy flange		
50 (2)	47.8 (1.88)	135.3 (5.32)	138.3 (5.44)	15 degrees	20 m (65.6 ft)
80 (3)	74.8 (2.94)	168.3 (6.62)	171.3 (6.74)	10 degrees	20 m (65.6 ft)
100 (4)	94.8 (3.73)	223.3 (8.79)	226.3 (8.90)	8 degrees	20 m (65.6 ft)

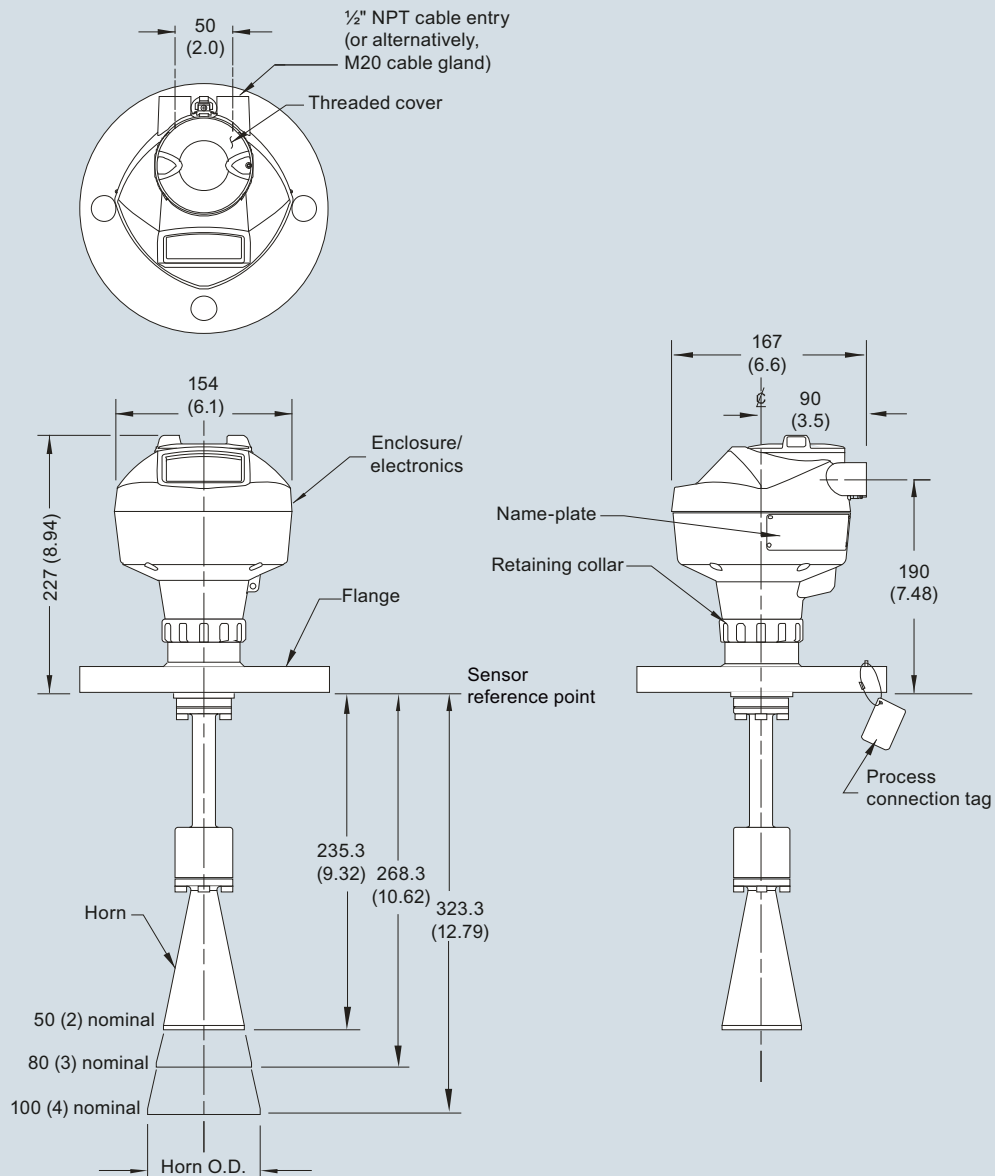
SITRANS LR250 Flanged Horn Antenna, dimensions in mm (inch)

## Level Measurement

Continuous level measurement - Radar transmitters

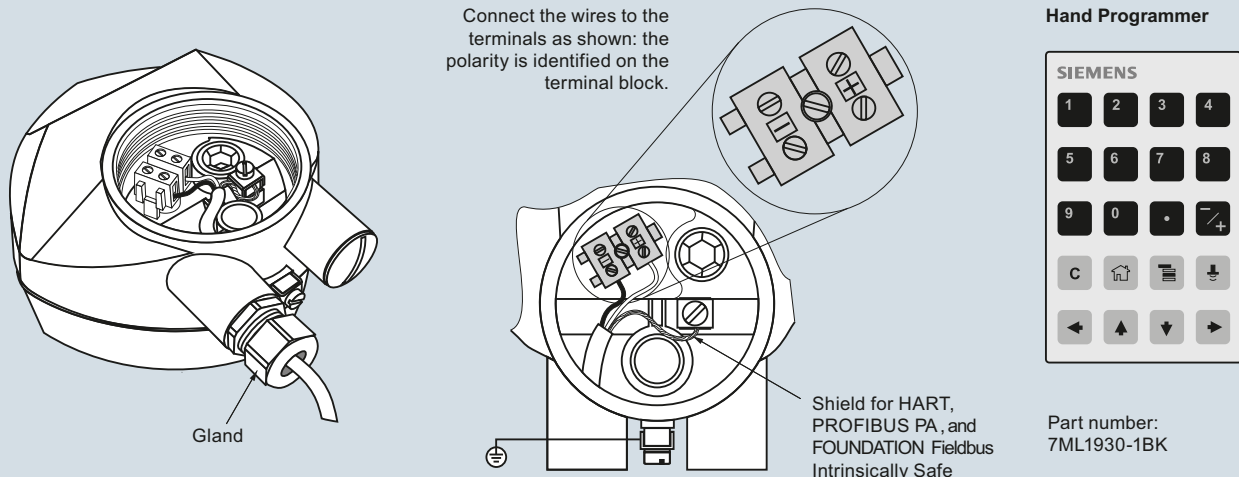
### SITRANS LR250 Horn Antenna

#### Flanged Horn with Extension



Nominal Horn Size	Horn O.D.	Height to sensor reference point		Beam angle	Measurement range
		Stainless steel flange raised or flat-faced	Optional alloy flange		
50 (2)	47.8 (1.88)	235.3 (9.26)	238.3 (9.38)	15 degrees	20 m (65.6 ft)
80 (3)	74.8 (2.94)	268.3 (10.56)	271.3 (10.68)	10 degrees	20 m (65.6 ft)
100 (4)	94.8 (3.73)	323.3 (12.73)	326.3 (12.85)	8 degrees	20 m (65.6 ft)

SITRANS LR250 Flanged Horn Antenna with extension, dimensions in mm (inch)

**Schematics**


Connect the wires to the terminals as shown: the polarity is identified on the terminal block.

Shield for HART, PROFIBUS PA, and FOUNDATION Fieldbus Intrinsically Safe versions only.

**Hand Programmer**

SIEMENS			
1	2	3	4
5	6	7	8
9	0	.	+
C	⏪	⏩	⏴
←	↑	↓	→

Part number:  
7ML1930-1BK

**Notes:**

1. DC terminal shall be supplied from a source providing electrical isolation between the input and output, to meet the applicable safety requirements of IEC 61010-1.
2. All field wiring must have insulation suitable for rated input voltages.
3. Use shielded twisted pair cable (14 ... 22 AWG) for HART version.
4. Separate cables and conduit may be required to conform to standard instrumentation wiring practices or electrical codes.



SITRANS LR250 connections


## Level Measurement

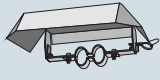

### Continuous level measurement - Radar transmitters

#### SITRANS LR250 Specials

#### Selection and ordering data

SITRANS LR250 Specials	Article No.
<b>NOTE:</b> <b>LR260 head can be supplied with any LR250 process connection or antenna as special order. For LR250, this means a stronger signal and longer measurement range is possible.</b>	
<b>SITRANS LR250 horn version enclosures (PROFIBUS PA models)</b>	
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option A, with PROFIBUS PA communication, no process connection	<b>A5E01156836</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option A, with PROFIBUS PA communication, no process connection	<b>A5E01156838</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option B, with PROFIBUS PA communication, no process connection	<b>A5E01156841</b>
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option C, with PROFIBUS PA communication, no process connection	<b>A5E01156843</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option C, with PROFIBUS PA communication, no process connection	<b>A5E01156844</b>
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option D, with PROFIBUS communication, no process connection	<b>A5E01156846</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option D, with PROFIBUS PA communication, no process connection	<b>A5E01156848</b>
<b>SITRANS LR250 horn version enclosures (FOUNDATION Fieldbus models)</b>	
SITRANS LR250 enclosure with board stack, NPT cable inlet, approval option B, with FOUNDATION Fieldbus communication, no process connection	<b>A5E03769538</b>
SITRANS LR250 enclosure with board stack, NPT cable inlet, approval option D, with FOUNDATION Fieldbus communication, no process connection	<b>A5E03769539</b>
SITRANS LR250 enclosure with board stack, M20 cable inlet, approval option E, with FOUNDATION Fieldbus communication, no process connection	<b>A5E03769543</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option C, with FOUNDATION Fieldbus communication, no process connection	<b>A5E02654608</b>
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option A, with FOUNDATION Fieldbus communication, no process connection	<b>A5E02653792</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option A, with FOUNDATION Fieldbus communication, no process connection	<b>A5E02653793</b>

SITRANS LR250 Specials	Article No.
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option C, with FOUNDATION Fieldbus communication, no process connection	<b>A5E02654606</b>
<b>SITRANS LR250 horn version enclosures (&lt; 3.6 mA start-up HART)</b>	
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option A, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E02956317</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option C, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E02956319</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option E, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E02956320</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option F, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E02956322</b>
SITRANS LR250 horn version enclosure with board stack, M20 cable inlet, approval option G, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E02956323</b>
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option A, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E03441096</b>
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option B, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E03441097</b>
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option D, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E03441098</b>
SITRANS LR250 horn version enclosure with board stack, NPT cable inlet, approval option H, with HART communication start-up at < 3.6 mA, no process connection	<b>A5E03441099</b>

SITRANS LR250 Specials	
	Article No.
<b>Sun shield for SITRANS LR250 enclosure, stainless steel</b>	 <b>A5E39142556</b>
<b>SITRANS LR250 horn antenna and extension kits</b>	
38 mm (1.5 inch) horn antenna kit, 1.5" process connections only	<b>A5E01151539</b>
100 mm (4 inch) horn antenna extension kit, 1.5" process connections only	<b>A5E01151553</b>
50 mm (2 inch) stainless steel 316L horn antenna kit	<b>A5E01151569</b>
75 mm (3 inch) stainless steel 316L horn antenna kit	<b>A5E01151571</b>
100 mm (4 inch) stainless steel 316L horn antenna kit	<b>A5E01151573</b>
100 mm (4 inch) horn antenna extension kit, 50 mm (2 inch), 75 mm (3 inch), and 100 mm (4 inch) process connection	<b>A5E01151577</b>
50 mm (2 inch) horn antenna kit, Hastelloy C-22	<b>A5E01151584</b>
75 mm (3 inch) horn antenna kit, Hastelloy C-22	<b>A5E01151585</b>
100 mm (4 inch) horn antenna kit, Hastelloy C-22	<b>A5E01151587</b>
5 Dupont 1Gr Polyback, PTFE grease kit	<b>A5E01151626</b>
SITRANS LR250 lid with O-ring	<b>A5E02465410</b>
<b>Ex-proof plugs</b>	
Ex-proof plugs kit, 1/2" NPT, qty 5	<b>A5E39979991</b>
Ex-proof plugs kit, M20, qty 5	<b>A5E39979992</b>