

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL100

Overview



SITRANS LVL100 is a compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low and demand applications, as well as pump protection. It is ideal for use in confined spaces.

Benefits

- Proven vibrating level switch technology for liquids
- Compact insertion length of 40 mm (1.57 inch) for confined space applications
- Available starting at 1/2" threaded process connections
- Fault monitoring for corrosion, loss of vibration, or line break to the piezo drive
- Integrated test function to confirm correct operation

Application

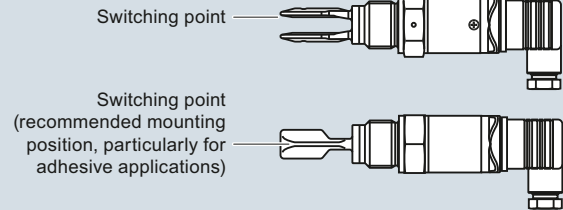
SITRANS LVL100 is a compact level switch designed for industrial use in all areas of process technology and can be used for material detection with liquids and slurries. With an insertion length of only 40 mm (1.57 inch), SITRANS LVL100 can be mounted in small pipes and confined space applications. It is virtually unaffected by the chemical and physical properties of the liquid. The LVL100 can be used in difficult conditions including turbulence, air bubbles, foam generation, buildup, or external vibration.

The tuning fork is piezoelectrically energized and vibrates at a mechanical resonance frequency of approximately 1 200 Hz. The vibration frequency changes when the tuning fork is covered by the medium. This change is detected by the integrated oscillator and converted into a switching command. The integrated electronics evaluate the level signal and output a switching signal to connected devices.

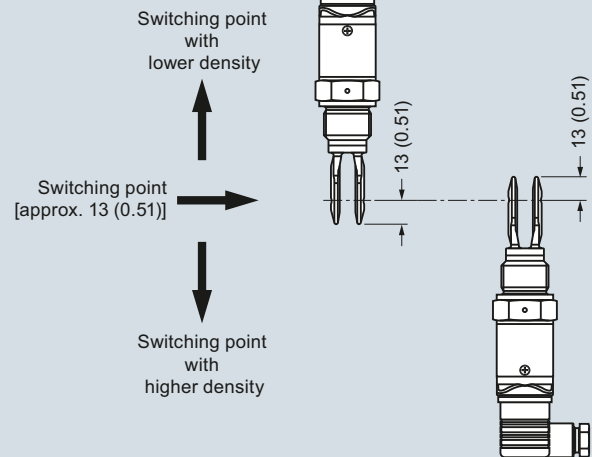
- Key Applications: for use in liquids and slurries, for level measurement, overflow, and dry run protection

Configuration

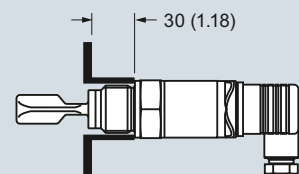
Horizontal mounting



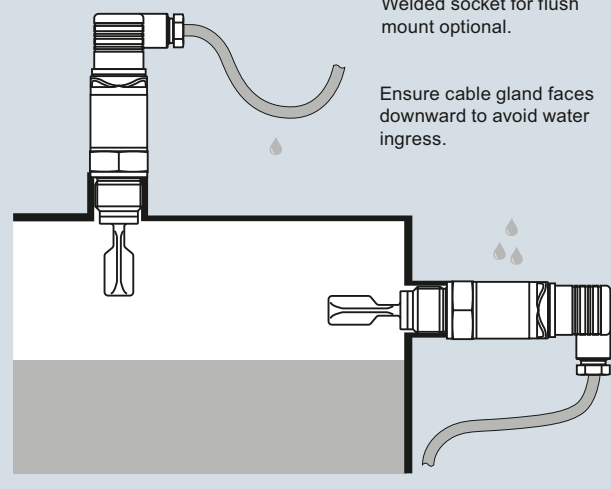
Vertical mounting



Horizontal mounting in viscous or adhesive applications



Moisture protection



SITRANS LVL100 installation, dimensions in mm (inch)

Technical specifications

Mode of operation	
Measuring principle	Vibrating point level switch
Input	
Measured variable	High and low and demand
Output	
Output options	<ul style="list-style-type: none"> • Contactless electronic switch • Transistor output PNP
Measuring accuracy	
Hysteresis	Approx. 2 mm (0.08 inch) with vertical installation
Switching delay	Approx. 500 ms (on/off)
Frequency	Approx. 1 100 Hz
Rated operating conditions	
Installation conditions	
• Location	Indoor/outdoor
Ambient conditions	
• Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)
• Installation category	III
• Pollution degree	2
Medium conditions	
• Temperature	
- Standard	-40 ... +100 °C (-40 ... +212 °F)
- High temperature option	-40 ... +150 °C (-40 ... +302 °F)
• Pressure (vessel)	-1 ... 64 bar g (-14.5 ... 928 psi g)
• Density	0.7 ... 2.5 g/cm ³ (0.025 ... 0.09 lb/in ³)
Design	
Material	
• Enclosure	316L and Plastic PEI
• Tuning fork	316L (1.4404 or 1.4435)
• Process connection (threaded)	316L (1.4404 or 1.4435)
• Process seal	Klingersil C-4400
Process connection	
• Pipe thread, cylindrical (ISO 228 T1)	G ½" A, G ¾" A, or G 1" A
• Pipe thread, tapered	½" NPT, ¾" NPT, or 1" NPT
• Hygienic fittings	Bolting DN 40 PN 40
	Tri-clamp 1", 1½", 2" PN 10
Degree of protection	IP65/Type 4/NEMA 4 (with DIN 43650 valve plug), IP66/67 or IP68 (with M12 connector)
Conduit entry	1 x M12 [IP66/IP67 or IP68 (0.2 bar)]
Weight (housing)	250 g (9 oz)
Power supply	
Supply voltage	20 ... 253 V AC, 50/60 Hz 20 ... 253 V DC
Power consumption	Max. 0.5 W
Certificates and approvals	
	<ul style="list-style-type: none"> • Overfill protection (WHG) • Shipping approvals

Level Measurement

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SITRANS LVL100

Selection and Ordering data

Article No.

SITRANS LVL100

Compact vibrating level switch for use in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. Ideal for use in confined spaces.

➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

Approvals

Without approvals

Shipping approvals⁵⁾Overfill protection (WHG)¹⁾

Process temperature

Standard -40 ... +100 °C (-40 ... +212 °F)²⁾Extended -40 ... +150 °C (-40 ... +302 °F)²⁾⁶⁾Hygienic applications -40 ... +150 °C (-40 ... +302 °F)³⁾

Process connection

Thread G $\frac{3}{4}$ " A PN 64/316LThread G $\frac{3}{4}$ " A PN 64/316L Ra < 0.8 µmThread $\frac{3}{4}$ " NPT PN 64/316LThread $\frac{3}{4}$ " NPT PN 64/316L Ra < 0.8 µm

Thread G1" A PN 64/316L

Thread G1" A PN 64/316L Ra < 0.8 µm

Thread 1" NPT PN 64/316L

Thread 1" NPT PN 64/316L Ra < 0.8 µm

Tri-Clamp 1" PN 16 DIN 32676/316L Ra < 0.8 µm

Tri-Clamp 1½" PN 16 DIN 32676/316L Ra < 0.8 µm

Tri-Clamp 2" PN 16 DIN 32676/316L Ra < 0.8 µm

Bolting DN 25 PN 40 DIN 11851/316L Ra < 0.8 µm

Bolting DN 40 PN 40 DIN 11851/316L Ra < 0.8 µm

Bolting DN 50 PN 25 DIN 11851/316L Ra < 0.8 µm

SMS DN 38 PN 6 316L Ra < 0.8 µm

Hygienic fitting with compression nut F40 PN 25/316L Ra < 0.8 µm

Thread G $\frac{1}{2}$ " (DIN 3852-A) PN 64 / 316LThread G $\frac{1}{2}$ " (DIN 3852-A) PN 64 / 316L Ra < 0.8 µm

Thread ½" NPT (ASME B1.20.1) PN 64/316L

Thread ½" NPT (ASME B1.20.1) PN 64/316L Ra < 0.8 µm

Thread R $\frac{3}{4}$ " PN 64, EN 10226-1/316L

R1 Thread R1 PN 64, EN 10226-1/316L

RF Thread R1 PN 64, EN 10226-1/316L (Ra < 0.8 µm)

Electronics

Contactless electronic switch 20 ... 250 V AC/DC⁴⁾

Transistor output PNP 10 ... 35 V DC

Housing

316L

Electrical connection/Protection

M12 x 1/IP67

According to DIN 43650 including plug/IP65

Acc. to DIN 43650 incl. plug with QuickOn connection/IP65

M12 x 1 incl. 5 m cable/IP68 (0.2 bar)

➤ 7ML5745-

A 0

1

2

3

A

B

C

A 0

A 1

A 2

A 3

A 4

A 5

A 6

A 7

A 8

B 0

B 1

B 2

B 3

B 4

B 5

B 6

C 0

C 1

C 2

C 3

D 0

D 1

D 2

D 0

D 1

D 2

1

2

1

A

B

C

D

Selection and Ordering data

Order code

Further designs

Please add "-Z" to Article No. and specify Order code(s).

Cleaning including certificate (oil, grease and silicone free)

W01

Identification Label, foil laser marking

Y16

Acceptance test Certificate 2.2 for material EN 10204

C15

3.1-Inspection Certificate for instrument with test data (EN 10204)

C25

Operating Instructions

All literature is available to download for free, in a range of languages, at <http://www.siemens.com/processinstrumentation/documentation>

Spare Parts

LVL100 Threaded Welded Socket

Article No.

G $\frac{3}{4}$ " A/316L with FKM Seal

7ML1930-1EE

G1" A/316L with FKM Seal

7ML1930-1EF

M27 x 1.5/316L with FKM Seal

7ML1930-1EG

G $\frac{3}{4}$ " A/316L with EPDM Seal

7ML1930-1EH

G1" A/316L with EPDM Seal

7ML1930-1EJ

M27 x 1.5/316L with EPDM Seal

7ML1930-1EK

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

¹⁾ Available with Electronics option 2 only.

²⁾ Available with process connection A0, A2, A4, A6, C0, C2, D0 and D1 only.

³⁾ Available with process connection A1, A3, A5, and A7 ... B6, C1, C3 and D2 only.

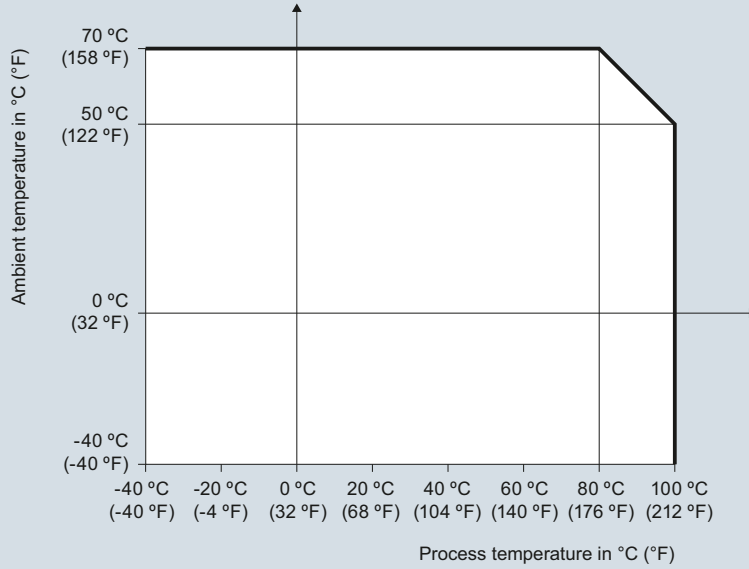
⁴⁾ Available with Electrical connection/Protection option B and C only.

⁵⁾ Available with Process Temperature options A and B only

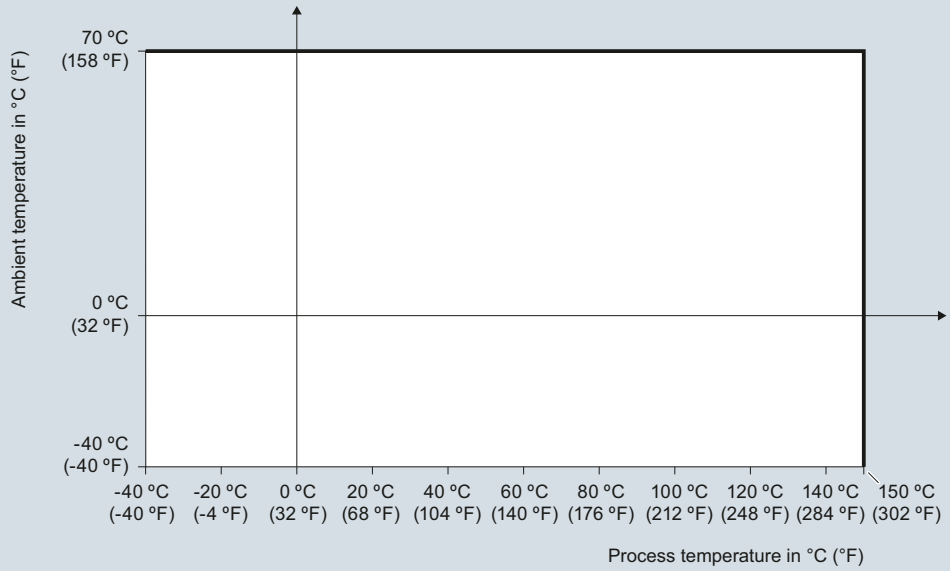
⁶⁾ Available with shipping approvals DNV and GL only

Characteristic curves

**Ambient temperature to process temperature dependency
(standard version)**



**Ambient temperature to process temperature dependency
(high temperature version)**



SITRANS LVL100 ambient temperature/process temperature derating curves

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Level Measurement

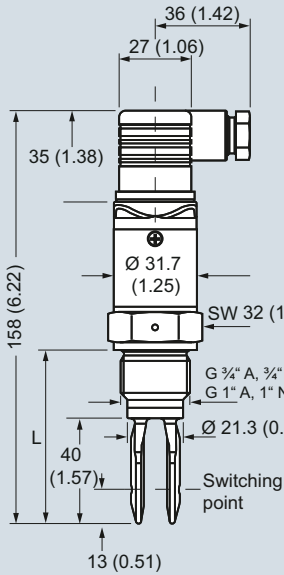
Point level measurement - Vibrating switches

SITRANS LVL100

Dimensional drawings

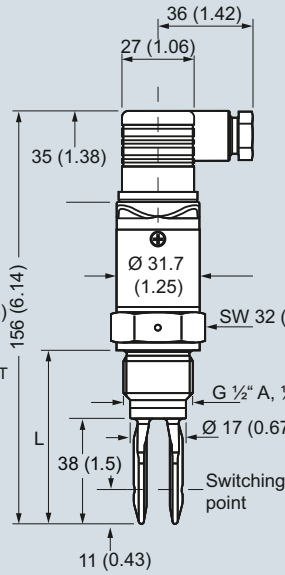
SITRANS LVL100 (standard)

Thread G 3/4", G 1" A
(DIN ISO 228/1),
3/4" NPT or 1" NPT
(valve plug ISO 4400)



L =
Length with G 3/4" A, 3/4" NPT: 66 (2.6)
Length with G 1" A, 1" NPT: 69 (2.7)

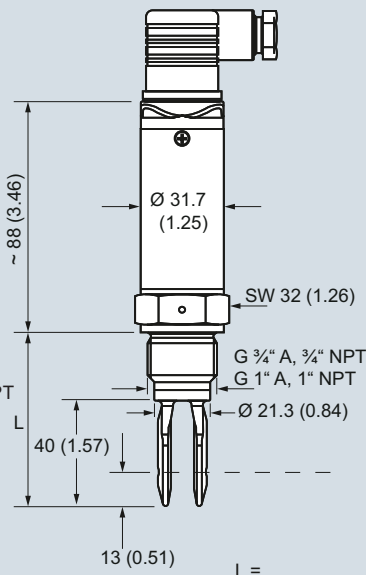
Thread G 1/2" A
(DIN ISO 228/1),
1/2" NPT
(valve plug ISO 4400)



L =
Length with G 1/2" A, 1/2" NPT: 62 (2.4)

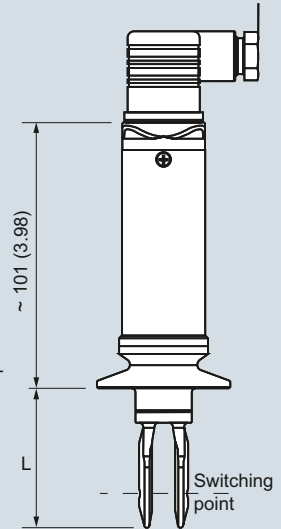
SITRANS LVL100 (extended high temperature)

Thread G 3/4" A, G 1" A
(DIN ISO 228/1),
3/4" NPT or 1" NPT
(valve plug DIN 43650)

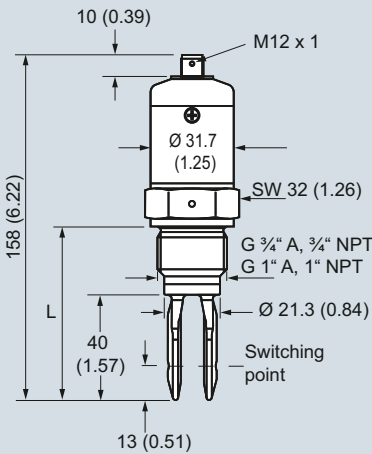


L =
Length with G 3/4" A, 3/4" NPT: 66 (2.6)
Length with G 1" A, 1" NPT: 69 (2.7)
Length with Tri-clamp: 53 (2.1)

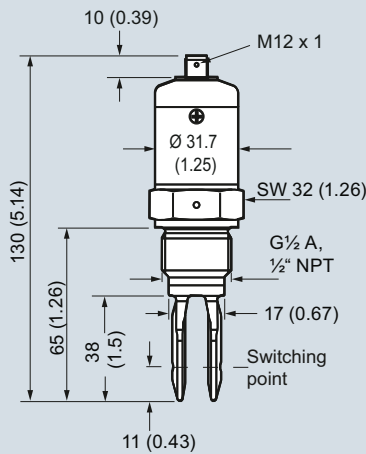
Tri-clamp (valve plug DIN 43650)



SITRANS LVL100 (standard with M12 connector)



L =
Length with G 3/4" A, 3/4" NPT: 66 (2.6)
Length with G 1" A, 1" NPT: 69 (2.7)

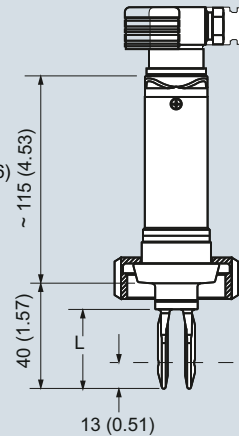


L =
Length with G 1/2" A, 1/2" NPT: 62 (2.4)

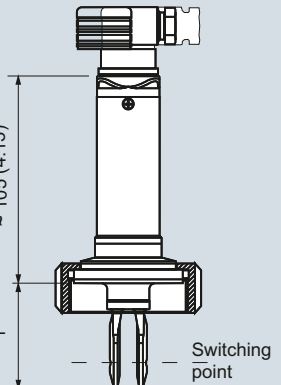
SITRANS LVL100 (extended, high temperature)

Bolting DIN 11851
(valve plug DIN 43650)

SMS 1145
(valve plug DIN 43650)

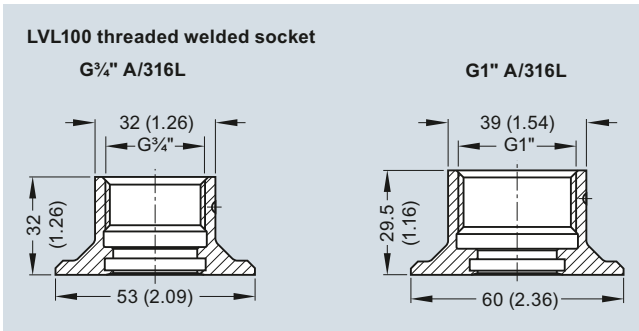


L =
Length with bolting: 53 (2.1)
Length with SMS 1145: 53 (2)



SITRANS LVL100, dimensions in mm (inch)

Options



SITRANS LVL100 welded socket, dimensions in mm (inch)

Level Measurement

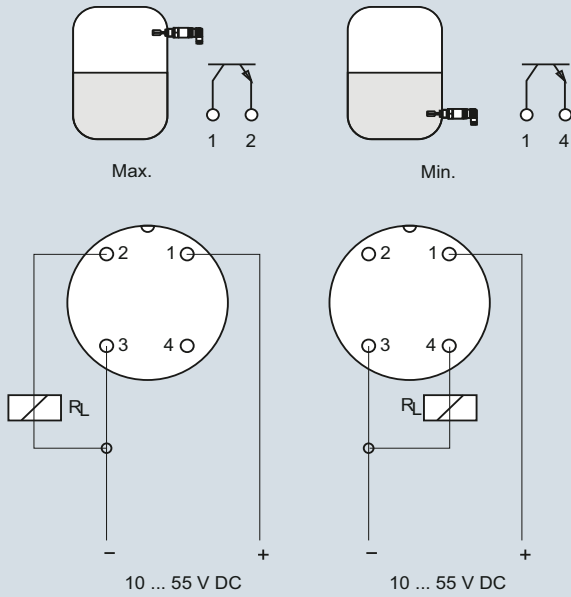
Point level measurement - Vibrating switches

SITRANS LVL100

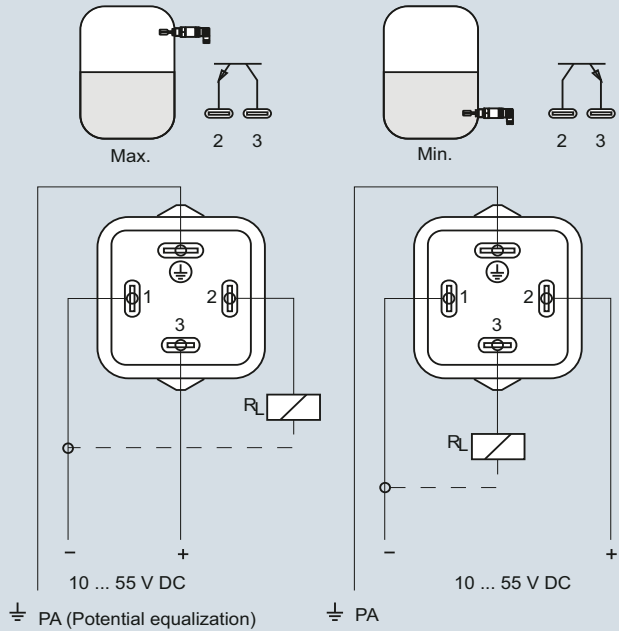
Schematics

4

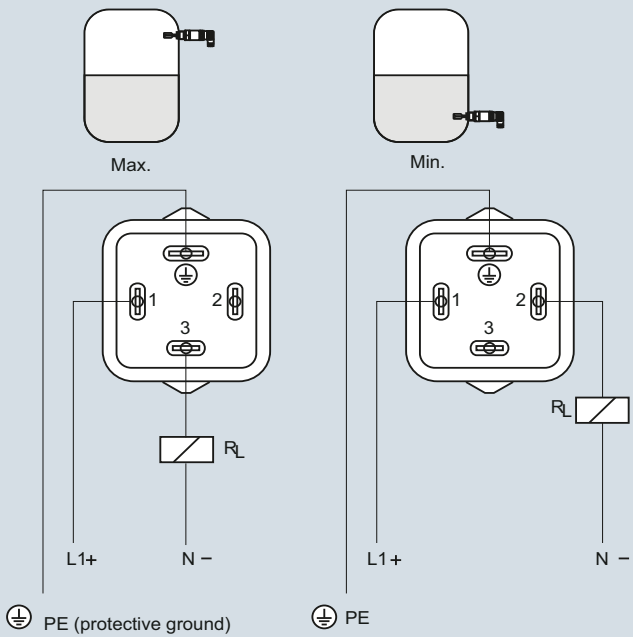
Transistor PNP (M12 x 1 plug connection)



Transistor PNP (with valve plug DIN 43650)



Contactless electronic switch (valve plug DIN 43650)



SITRANS LVL100 connections

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Overview



SITRANS LVL200 is a standard vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 applications.

Benefits

- Proven vibrating level switch technology for liquids
- Compact insertion length of 40 mm (1.57 inch) for confined space applications
- Fault monitoring for corrosion, loss of vibration or line break to the piezo drive
- Functional Safety (SIL 2). Device suitable for use in accordance with IEC 61508 and IEC 61511
- Hygienic process connections
- Suitable for API 2350

Application

SITRANS LVL200 is a level switch designed for industrial use in all areas of process technology and can be used with liquids and slurries. With a tuning fork insertion length of only 40 mm (1.57 inch), SITRANS LVL200 can be mounted in small pipes and applications with confined space. The LVL200 can be used to measure products with a minimum density of $> 0.5 \text{ g/cm}^3$ (0.018 lb/in^3). The LVL200 can be used in difficult conditions including turbulence, air bubbles, foam generation, buildup, or external vibration.

SITRANS LVL200 continuously monitors faults via frequency evaluation, providing early detection of strong corrosion or damage on the tuning fork, loss of vibration, or a line break to the piezo drive.

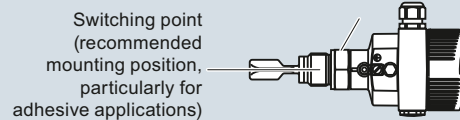
The tuning fork is piezoelectrically energized and vibrates at its mechanical resonance frequency of approximately 1 200 Hz. The vibration frequency changes when the tuning fork is covered by the medium. This change is detected by the integrated oscillator and converted into a switching command. The integrated electronics evaluate the level signal and output a switching signal, directly operating connected devices.

- Key Applications: for use in liquids and slurries, for level measurement, overflow, and dry run protection

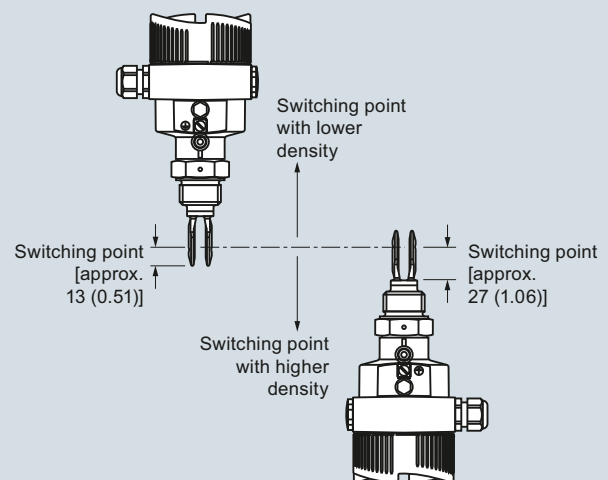
Configuration

Horizontal mounting

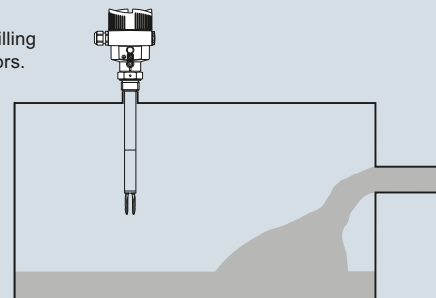
Marked with screwed version on top, with flange versions directed to the flange holes



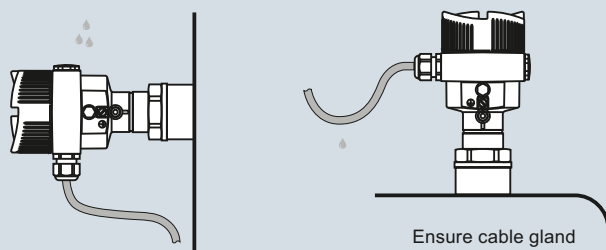
Vertical mounting



Mount away from filling openings or agitators.



Moisture protection



NOTE:
Welded socket for flush mount optional

Ensure cable gland faces downward to avoid water ingress.

SITRANS LVL200 installation, dimensions in mm (inch)

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200



Technical specifications

Mode of operation		Degree of protection	Type 4X/NEMA 4X/IP66/IP67
Measuring principle	Vibrating point level switch	Conduit entry	<ul style="list-style-type: none"> 1 x M20 x 1.5 (cable: \varnothing 5 ... 9 mm), 1 x blind stopper M20 x 1.5; attached 1 x M20 x 1.5 cable entry 1 x 1/2" NPT cable entry, 1 x blind stopper 1/2" NPT, 1 x 1/2" NPT cable entry 1 x M12 x 1; 1 x blind stopper M20 x 1.5
Input		Weight	<ul style="list-style-type: none"> Device weight (dependent on process fitting) Tube extension (extended version)
Measured variable	High and low and demand (via mode switch)	Power supply	<ul style="list-style-type: none"> Supply voltage Relay DPDT Contactless 2-wire NAMUR
Output		Operating voltage (characteristics according to standard)	<ul style="list-style-type: none"> 20 ... 253 V AC, 50/60 Hz, 20 ... 72 V DC [at U > 60 V DC] 20 ... 253 V AC, 50/60 Hz, 20 ... 253 V DC
Output options	<ul style="list-style-type: none"> Relay output (DPDT), 2 floating SPDTs Contactless electronic switch 2-wire Namur signal output Transistor (NPN/PNP) 10 ... 55 V DC 	Power consumption	<ul style="list-style-type: none"> Relay DPDT Contactless
Measuring accuracy		Operating voltage (characteristics according to standard)	<ul style="list-style-type: none"> IEC 60947-5-6, approx. 8.2 V Off-load voltage U₀ approx. 8.2 V Short-circuit current I_{sc} approx. 8.2 mA
Repeatability	0.1 mm (0.004 inch)	Current consumption	<ul style="list-style-type: none"> 1 ... 8 VA (AC), approx. 1.3 W (DC) 1 ... 8 VA (AC), approx. 1.3 W (DC) Domestic current requirement approx. 3 mA (via load circuit)
Hysteresis	Approx. 2 mm (0.08 inch) with vertical installation	Load current	<ul style="list-style-type: none"> Min. 10 mA Max. 400 mA [with I > 300 mA the ambient temperature can be max. 60 °C (140 °F)] Max. 4 A up to 40 ms (not WHG specified)
Switching delay	Approx. 500 ms (on/off)	Failure message	≤ 0.6 mA
Frequency	Approx. 1 200 Hz	Output	<ul style="list-style-type: none"> Floating transistor output, permanently shortcircuit-proof
Rated operating conditions		Blocking current	≤ 10 μA
Installation conditions	Indoor/outdoor	Certificates and approvals	
• Location	Indoor/outdoor	<ul style="list-style-type: none"> CE, CSA Overfill Protection WHG and VLAREM II FM (Non-Incendive) Class I, Div. 2, Groups A, B, C, D FM (Explosion-Proof) Class I, Div. 1, Groups A, B, C, D; (Dust Ignition-Proof) Class II, III, Div. 1, Groups E, F, G1 IECEx d IIC T6 ... T2 Ga/Gb EHEDG ATEX II 1/2G, 2G EEx d IIC T6 ATEX II 1G, 1/2G, 2G EEx ia IIC T6 Shipping approvals BR-Ex d IIC T6 ... T2 FDA, 3A, Ehedge SIL/IEC61508 Declaration of Conformity [SIL-2 (min/max detection)] 	
Ambient conditions			
• Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)		
• Installation category	III		
• Pollution degree	2		
Medium conditions			
• Temperature			
- LVL200S Standard	-50 ... +150 °C (-58 ... +302 °F)		
- LVL200S High temperature option	-50 ... +250 °C (-58 ... +482 °F)		
- LVL200E Standard: with 316L/Hastelloy	-50 ... +150 °C (-58 ... +302 °F)		
- LVL200E High temperature option: with 316L/Hastelloy	-50 ... +250 °C (-58 ... +482 °F)		
Pressure (vessel)	-1 ... 64 bar g (-14.5 ... 928 psi g)		
Density	0.7 ... 2.5 g/cm ³ (0.025 ... 0.09 lb/in ³); 0.5 ... 2.5 g/cm ³ (0.018 ... 0.09 lb/in ³) by switching over		
Design			
Material			
• Enclosure	Aluminum die-cast AISi10Mg, powder-coated, basis: Polyester Stainless steel housing, electro-polished 316L		
• Tuning fork	316L (1.4404 or 1.4435), Hastelloy		
• Extension tube [ø 21.3 mm (0.839 inch)]	316L (1.4404 or 1.4435), Hastelloy		
• Process connection: threaded	316L (1.4404 or 1.4435), Hastelloy		
• Process connection: flange	316L (1.4404 or 1.4435), 316L with Hastelloy, ECTFE, or PFA coating Klingersil C-4400		
• Process seal			
Process connection			
• Pipe thread, cylindrical (ISO 228 T1)	G 3/4" A, G 1" A		
• Pipe thread, tapered	3/4" NPT, 1" NPT, 1 1/2" NPT		
• Flanges	DIN from DN25, ANSI from 1"		
• Hygienic fittings	Bolting DN 40 PN 40, 1, 1 1/2, 2, 2 1/2" Tri-Clamp PN 10, conus DN 25 PN 40, Tuchenhagen Varivent DN 50 PN 10, SMS		

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LVL200, Standard	7ML5746-	SITRANS LVL200, Standard	7ML5746-
Compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	 A 0	Compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	 A 0
➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.			
Electronics			
Contactless electronic switch 20 ... 250 V AC/DC ¹¹⁾	1	Thread 1½" NPT, PN 64/Alloy C22 (2.4602)	A 27
Double relay (DPDT) 20 ... 72 V DC/20 ... 250 V AC	2	Thread G2" A, PN 64/316L	A 28
NAMUR signal ¹¹⁾	4	Thread M27 x 1.5, PN 64/316L	A 30
Transistor (NPN/PNP) 10 ... 55 V DC	5	Conus DN 25, PN 40/316L Ra < 0.3 µm	A 31
		Conus DN 25, PN 40/316L Ra < 0.8 µm	A 32
		Conus DN 25, PN 40/ECTFE (ZB3033) ⁴⁾	A 33
		Conus M52, PN 40/316L	A 34
		Conus M52, PN 40/316L Ra < 0.3 µm	A 35
		Conus M52, PN 40/316L Ra < 0.8 µm	A 36
		Tri-Clamp 1", PN 16/316L Ra < 0.3 µm	A 37
		Tri-Clamp 1", PN 16/Alloy C22 (2.4602)	A 38
		Tri-Clamp 1", PN 16/316L Ra < 0.8 µm	A 40
		Tri-Clamp 1½", PN 16/316L Ra < 0.3 µm	A 41
		Tri-Clamp 1½", PN 16/Alloy C22 (2.4602)	A 42
		Tri-Clamp 1½", PN 16/316L Ra < 0.8 µm	A 43
		Tri-Clamp 2", PN 16/316L Ra < 0.3 µm	A 44
		Tri-Clamp 2", PN 16/Alloy C22 (2.4602)	A 45
		Tri-Clamp 2", PN 16/316L Ra < 0.8 µm	A 46
		Tri-Clamp 2½", PN 10/316L Ra < 0.3 µm	A 47
		Tri-Clamp 2½", PN 10/316L Ra < 0.8 µm	A 48
		Tri-Clamp 3", PN 10/316L Ra < 0.3 µm	A 50
		Tri-Clamp 3", PN 10/316L Ra < 0.8 µm	A 51
		Bolting DN 32, PN 40 DIN11851/316L Ra < 0.3 µm	A 52
		Bolting DN 32, PN 40 DIN11851/316L Ra < 0.8 µm	A 53
		Bolting DN 25, PN 40 DIN11851/316L Ra < 0.3 µm	A 54
		Bolting DN 25, PN 40 DIN11851/316L Ra < 0.8 µm	A 55
		Bolting DN 40, PN 40 DIN11851/316L Ra < 0.3 µm	A 56
		Bolting DN 40, PN 40 DIN11851/316L Ra < 0.8 µm	A 57
		Bolting DN 40, PN 40 DIN11864-1 A/316L Ra < 0.8 µm ZB3052	A 58
		Bolting DN 50, PN 25 DIN11851/316L Ra < 0.3 µm	A 60
		Bolting DN 50, PN 25 DIN11851/316L Ra < 0.8 µm	A 61
		Bolting DN 50, PN 25 DIN11864-1 A/316L Ra < 0.8 µm ZB3052	A 62
		Hygienic w. compr. nut F40, PN 25/316L	A 63
		Hygienic w. compr. nut F40, PN 25/316L Ra < 0.3 µm	A 64
		Hygienic w. compr. nut F40, PN 25/316L Ra < 0.8 µm	A 65
		Varivent N50-40/316L Ra < 0.3 µm	A 66
		Varivent N50-40/316L Ra < 0.8 µm	A 67
		Varivent N125/100/316L Ra < 0.8 µm	A 68
		DRD flange, PN 40/316L ZB3007	A 70
		SMS DN 38/316L Ra < 0.8 µm ⁴⁾	A 71
		SMS DN 51, PN 6/316L Ra < 0.8 µm ⁴⁾	A 72
		Swagelok VCR screwing ZG2579, PN 64/316L	A 73
		Neumo biocontrol size 25, PN 16/316L Ra < 0.8 µm	A 74
		Neumo biocontrol size 50, PN 16/316L Ra < 0.8 µm ⁴⁾	A 75
		Neumo biocontrol size 65, PN 16/316L Ra < 0.8 µm	A 76
		Neumo biocontrol size 80, PN 16/316L Ra < 0.8 µm	A 77
		SÜDMO DN 50, PN 10/316L Ra < 0,8 µm	A 78
		Small flange DN 25, PN 1.5 DIN 28403/316L pol. Ra < 0.8 µm	A 80
		Small flange DN 40, PN 1.5 DIN 28403/316L pol. Ra < 0.8 µm	A 81
		Ingold connection, PN16 / 316L Ra < 0.8 µm (acc. to MB2523)	A 82
		Ingold connection, PN 16/Alloy C22 (2.4602)	A 83
		Terminal DN 33.7 PN 40 DIN11864-3-A-/316L BN2 Ra < 0.8 µm ⁴⁾	A 84
		Hygienic fl. DN 50 PN 16 DIN11864-2-A-/316L Ra < 0.8 µm	A 85
Process connection			
Thread G¾" A, PN 64/316L	A 00		
Thread G¾" A, PN 64/316L Ra < 0.8 µm	A 01		
Thread ¾" NPT, PN 64/316L	A 02		
Thread ¾" NPT, PN 64/316L Ra < 0.8 µm	A 03		
Thread ¾" NPT, PN 64/Alloy 400 (2.4360)	A 04		
Thread G¾" A, PN 64/Alloy C22 (2.4602)	A 05		
Thread ¾" NPT, PN 64/Alloy C22 (2.4602)	A 06		
Thread G1" A, PN 64/316L	A 07		
Thread G1" A, PN 64/316L ECTFE coated MB1982 ⁴⁾	A 08		
Thread G1" A, PN 64/ 316L PFA coated ⁴⁾	A 10		
Thread G1" A, PN 64/ Alloy 400 (2.4360)	A 11		
Thread G1" A, PN 64/ 316L Ra < 0.8 µm	A 12		
Thread 1" NPT, PN 64/ 316L	A 13		
Thread 1" NPT, PN 64/ 316L ECTFE coated MB1982 ⁴⁾	A 14		
Thread 1" NPT, PN 64 / 316L PFA-coated ⁴⁾	A 15		
Thread 1" NPT, PN 64 / Alloy 400 (2.4360)	A 16		
Thread 1" NPT, PN 64 / 316L Ra < 0.8 µm	A 17		
Thread G1" A, PN 64 / Alloy C22 (2.4602)	A 18		
Thread G1" A, PN 64/Alloy C22 (2.4602)	A 20		
Ra < 0.3 µm			
Thread G1½" A, PN 64/316L	A 21		
Thread G1½" A, PN 64/316L Ra < 0.8 µm	A 22		
Thread G1½" A, PN 64/Alloy C22 (2.4602)	A 23		
Thread 1" NPT, PN 64/Alloy C22 (2.4602)	A 24		
Thread 1½" NPT, PN 64/316L	A 25		
Thread 1½" NPT, PN 64/316L Ra < 0.8 µm	A 26		

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data

Article No.

SITRANS LVL200, Standard

Compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.

7ML5746-

- A 0

Flange DN 25, PN 6 Form C, DIN 2501/316L	A 8 6
Flange DN 25, PN 6 Form C, DIN 2501/PFA ⁴⁾	A 8 7
Flange DN 25, PN 40 Form C, DIN 2501/316L	A 8 8
Flange DN 25, PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 0 0
Flange DN 25, PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 0 1
Flange DN 25, PN 40 Form C, DIN 2501/PFA ⁴⁾	B 0 2
Flange DN 25, PN 40 Form C, DIN 2501/Enamelled ³⁾	B 0 3
Flange DN 25, PN 40 Form D, DIN 2501/316L	B 0 4
Flange DN 25, PN 40 Form F, DIN 2501/316L	B 0 5
Flange DN 25, PN 40 Form N, DIN 2501/316L	B 0 6
Flange DN 25, PN 40 Form N, DIN 2501/ Alloy C22 (2.4602)	B 0 7
Flange DN 25, PN 40 Form N, DIN 2501/ Alloy 400 (2.4360) solid	B 0 8
Flange DN 25, PN 40 V13, DIN 2501/316L	B 1 0
Flange DN 32, PN 40 Form C, DIN 2501/316L	B 1 1
Flange DN 32, PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 1 2
Flange DN 40, PN 6 Form C, DIN 2501/316L	B 1 3
Flange DN 40, PN 6 Form C, DIN 2501/ECTFE ⁴⁾	B 1 4
Flange DN 40, PN 40 Form C, DIN 2501/316L	B 1 5
Flange DN 40, PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 1 6
Flange DN 40, PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 1 7
Flange DN 40, PN 40 Form C, DIN 2501/PFA ⁴⁾	B 1 8
Flange DN 40, PN 40 Form C, DIN 2501/ Enamelled ³⁾	B 2 0
Flange DN 40, PN 40 Form F, DIN 2501/316L	B 2 1
Flange DN 40, PN 40 Form N, DIN 2501/316L	B 2 2
Flange DN 40, PN 40 Form E, DIN 2501/316L	B 2 3
Flange DN 40, PN 40 V13, DIN 2501/316L	B 2 4
Flange DN 50, PN 40 Form C, DIN 2501/316L	B 2 5
Flange DN 50, PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 2 6
Flange DN 50, PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 2 7
Flange DN 50, PN 40 Form C, DIN 2501/ ECTFE (ZB3108) ⁴⁾	B 2 8
Flange DN 50, PN 40 Form C, DIN 2501/PFA ⁴⁾	B 3 0
Flange DN 50, PN 40 Form D, DIN 2501/316L	B 3 1
Flange DN 50, PN 40 Form D, DIN 2501/ Alloy C22 (2.4602)	B 3 2
Flange DN 50, PN 40 Form F, DIN 2501/316L	B 3 3
Flange DN 50, PN 40 Form N, DIN 2501/316L	B 3 4
Flange DN 50, PN 40 Form N, DIN 2501/ Alloy C22 (2.4602)	B 3 5
Flange DN 50, PN 40 Form E, DIN 2501/316L	B 3 6
Flange DN 50, PN 40 V13, DIN 2501/316L	B 3 7
Flange DN 50, PN 40 R13, DIN 2501/316L	B 3 8
Flange DN 50, PN 64 Form F, DIN 2501/316L	B 4 0
Flange DN 50, PN 64 Form N, DIN 2501/ Alloy C22 (2.4602)	B 4 1
Flange DN 50, PN 64 Form C, DIN 2501/316L	B 4 2
Flange DN 50, PN 64 Form L, DIN 2501/316L	B 4 3
Flange DN 50, PN 100 Form E, DIN 2501/316L	B 4 4
Flange DN 50, PN 100 Form L, DIN 2501/316L	B 4 5
Flange DN 65, PN 40 Form C, DIN 2501/316L	B 4 6
Flange DN 65, PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 4 7
Flange DN 65, PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 4 8
Flange DN 65, PN 40 Form C, DIN 2501/PFA ⁴⁾	B 5 0
Flange DN 65, PN 40 Form F, DIN 2501/316L	B 5 1

Selection and Ordering data

Article No.

SITRANS LVL200, Standard

Compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.

7ML5746-

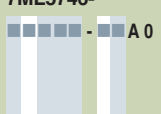
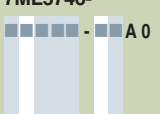
- A 0

Flange DN 65, PN 64 Form E, DIN 2501/316L	B 5 2
Flange DN 80, PN 40 Form C, DIN 2501/316L	B 5 3
Flange DN 80, PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 5 4
Flange DN 80, PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 5 5
Flange DN 80, PN 40 Form C, DIN 2501/PFA ⁴⁾	B 5 6
Flange DN 80, PN 40 Form C, DIN 2501/ Enamelled ³⁾	B 5 7
Flange DN 80, PN 40 Form F, DIN 2501/316L	B 5 8
Flange DN 80, PN 40 Form N, DIN 2501/316L	B 6 0
Flange DN 100, PN 16 Form C, DIN 2501/316L	B 6 2
Flange DN 100, PN 16 Form C, DIN 2501/ Alloy C22 (2.4602)	B 6 3
Flange DN 100, PN 16 Form C, DIN 2501/ECTFE ⁴⁾	B 6 4
Flange DN 100, PN 16 Form C, DIN 2501/PFA ⁴⁾	B 6 5
Flange DN 100, PN 16 Form C, DIN 2501/ Enamelled ³⁾	B 6 6
Flange DN 100, PN 16 Form D, DIN 2501/316L	B 6 7
Flange DN 100, PN 16 Form F, DIN 2501/316L	B 6 8
Flange DN 100, PN 16 Form N, DIN 2501/316L	B 7 0
Flange DN 100, PN 40 Form C, DIN 2501/316L	B 7 1
Flange DN 100, PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 7 2
Flange DN 100, PN 40 Form C, DIN 2501/PFA ⁴⁾	B 7 3
Flange DN 100, PN 40 Form C, DIN 2501/ Enamelled ³⁾	B 7 4
Flange DN 100, PN 40 Form F, DIN 2501/316L	B 7 5
Flange DN 100, PN 40 Form N, DIN 2501/316L	B 7 6
Flange DN 100, PN 40 V13, DIN 2501/316L	B 7 7
Flange DN 100, PN 64 Form E, DIN 2501/316L	B 7 8
Flange DN 100, PN 100 Form E, DIN 2501/316L	B 8 0
Flange DN 100, PN 100 Form L, DIN 2501/316L	B 8 1
Flange DN 125, PN 16 Form F, DIN 2501/316L	B 8 2
Flange DN 125, PN 40 Form C, DIN 2501/316L	B 8 3
Flange DN 125, PN 40 Form N, DIN 2512/ 316L	B 8 4
Flange DN 150, PN 16 Form C, DIN 2501/316L	B 8 5
Flange DN 150, PN 16 Form C, DIN 2501/ Alloy C22 (2.4602)	B 8 6
Flange DN 150, PN 16 Form C, DIN 2501/ECTFE ⁴⁾	B 8 7
Flange DN 150, PN 16 Form C, DIN 2501/PFA ⁴⁾	B 8 8
Flange DN 150, PN 16 Form D, DIN 2501/316L	C 0 0
Flange DN 150, PN 40 Form C, DIN 2501/316L	C 0 1
Flange DN 150, PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	C 0 2
Flange DN 150, PN 40 Form F, DIN 2501/316L	C 0 3
Flange DN 150, PN 40 Form N, DIN 2512/316L	C 0 4
Flange DN 200, PN 10 Form C, DIN 2501/ECTFE ⁴⁾	C 0 5
Flange DN 200, PN 16 Form C, DIN 2501/316L	C 0 6
Flange DN 25, PN 40 Form B1, EN 1092-1/316L	C 0 7
Flange DN 25, PN 40 Form B1, EN 1092-1/ Alloy C22 (2.4602)	C 0 8
Flange DN 25, PN 40 Form B1, EN/ 316L/ PFA ⁴⁾	C 1 0
Flange DN 25, PN 40 Form B1, EN 1092-1/ Enamelled ³⁾	C 1 1
Flange DN 25, PN 40 Form B2, EN 1092-1/316L	C 1 2
Flange DN 25, PN 40 Form F, EN 1092-1/316L	C 1 3
Flange DN 25, PN 63 Form B1, EN 1092-1/316L	C 1 4
Flange DN 25, PN 100 Form B2, EN 1092-1/316L	C 1 5
Flange DN 40, PN 40 Form B1, EN/ 316L	C 1 6
Flange DN 40, PN 40 Form B1, EN 1092-1/PFA ⁴⁾	C 1 7
Flange DN 40, PN 40 Form B2, EN/316L	C 1 8
Flange DN 50, PN 40 Form B1, EN/316L	C 2 0

Level Measurement

Point level measurement - Vibrating switches


SITRANS LVL200

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LVL200, Standard Compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5746- 	SITRANS LVL200, Standard Compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5746- 
Flange DN 50, PN 40 Form B1, EN 1092-1/Alloy C22 (2.4602)	C 2 1	Flange 2" 150 lb RF, ANSI B16.5/Alloy 400 (2.4360) ZB2977	C 7 4
Flange DN 50, PN 40 Form B1, EN 1092-1/Alloy 400 (2.4360) ZB2977	C 2 2	Flange 2" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 7 5
Flange DN 50, PN 40 Form B1, EN 1092-1/ECTFE ⁴⁾	C 2 3	Flange 2" 150 lb RF, ANSI B16.5/PFA ⁴⁾	C 7 6
Flange DN 50, PN 40 Form B1, EN/ 316L/PFA ⁴⁾	C 2 4	Flange 2" 150 lb RF, ANSI B16.5/Enamelled ³⁾	C 7 7
Flange DN 50, PN 40 Form B1, EN 1092-1/Enamelled ³⁾	C 2 5	Flange 2" 150 lb FF, ANSI B16.5/316L	C 7 8
Flange DN 50, PN 40 Form C, EN 1092-1/316L	C 2 6	Flange 2" 150 lb FF, ANSI B16.5/ECTFE ⁴⁾	C 8 0
Flange DN 50, PN 40 Form D, EN/316L	C 2 7	Flange 2" 150 lb SG (small groove), ANSI B16.5/316L	C 8 1
Flange DN 50, PN 40 Form D, EN 1092-1/Alloy C22 (2.4602)	C 2 8	Flange 2" 300 lb RF, ANSI B16.5/316L	C 8 2
Flange DN 50, PN 40 Form B2, EN 1092-1/316L	C 3 0	Flange 2" 300 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 8 3
Flange DN 50, PN 40 Form E, EN 1092-1/316L	C 3 1	Flange 2" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 8 5
Flange DN 80, PN 40 Form B1, EN 1092-1/316L	C 3 2	Flange 2" 300 lb RF, ANSI B16.5/PFA ⁴⁾	C 8 6
Flange DN 80, PN 40 Form B1, EN 1092-1/Alloy C22 (2.4602)	C 3 3	Flange 2" 300 lb RF, ANSI B16.5 Enamelled ³⁾	C 8 7
Flange DN 80, PN 40 Form B1, EN 1092-1/ECTFE ⁴⁾	C 3 4	Flange 2" 300 lb RJF, ANSI B16.5/316L	C 8 8
Flange DN 80, PN 40 Form B1, EN 1092-1/Enamelled ³⁾	C 3 5	Flange 2" 300 lb ST, ANSI B16.5/316L	D 0 0
Flange DN 80, PN 40 Form B2, EN 1092-1/316L	C 3 6	Flange 2" 300 lb LG (large groove), ANSI B16.5/316L	D 0 1
Flange DN 100, PN 16 Form B1, EN 1092-1/316L	C 3 7	Flange 2" 300 lb LT, ANSI B16.5/316L	D 0 2
Flange DN 100, PN 16 Form B1, EN 1092-1/Alloy C22 (2.4602)	C 3 8	Flange 2" 600 lb RF, ANSI B16.5/316L	D 0 3
Flange DN 100, PN 16 Form B1, EN 1092-1/Enamelled ³⁾	C 4 0	Flange 2" 600 lb RF, ANSI B16.5/Alloy 400 (2.4360) ZB2977	D 0 4
Flange DN 100, PN 40 Form B1, EN 1092-1/316L	C 4 1	Flange 2" 600 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 0 5
Flange DN 100, PN 40 Form B1, EN 1092-1/Enamelled ³⁾	C 4 2	Flange 2" 600 lb RJF, ANSI B16.5/316L	D 0 6
Flange DN 100, PN 40 Form C, EN 1092-1/316L	C 4 3	Flange 2" 600 lb LG, ANSI B16.5/316L	D 0 7
Flange DN 100, PN 63 Form B2, EN 1092-1/316L	C 4 4	Flange 2" 900 lb RJF, ANSI B16.5/316L	D 0 8
Flange DN 150, PN 16 Form B1, EN 1092-1/316L	C 4 5	Flange 2½" 150 lb RF, ANSI B16.5/316L	D 1 0
Flange DN 150, PN 16 Form B1, EN 1092-1/PFA ⁴⁾	C 4 6	Flange 2½" 300 lb RF, ANSI B16.5/316L	D 1 1
Flange DN 150, PN 40 Form B1, EN 1092-1/316L	C 4 7	Flange 3" 150 lb RF, ANSI B16.5/316L	D 1 2
Flange DN 150, PN 40 Form B1, EN 1092-1/ECTFE ⁴⁾	C 4 8	Flange 3" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 1 3
Flange DN 150, PN 40 Form B2, EN 1092-1/316L	C 5 0	Flange 3" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 1 4
Flange 1" 150 lb ANSI B16.5/316L	C 5 1	Flange 3" 150 lb RF, ANSI B16.5/PFA ⁴⁾	D 1 5
Flange 1" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 5 2	Flange 3" 150 lb RF, ANSI B16.5/Enamelled ³⁾	D 1 6
Flange 1" 150 lb RF, ANSI B16.5/Alloy 400 (2.4360) ZB2977	C 5 3	Flange 3" 150 lb FF, ANSI B16.5/316L	D 1 7
Flange 1" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 5 4	Flange 3" 150 lb FF, ANSI B16.5/ECTFE ⁴⁾	D 1 8
Flange 1" 150 lb RF, ANSI B16.5/PFA ⁴⁾	C 5 5	Flange 3" 150 lb FF, ANSI B16.5/PFA ⁴⁾	D 2 0
Flange 1" 150 lb RF, ANSI B16.5/Enamelled ³⁾	C 5 6	Flange 3" 300 lb RF, ANSI B16.5/316L	D 2 1
Flange 1" 300 lb RF, ANSI B16.5/316L	C 5 7	Flange 3" 300 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 2 2
Flange 1" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 5 8	Flange 3" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 2 3
Flange 1" 600 lb RF, ANSI B16.5/316L	C 6 0	Flange 3" 300 lb RF, ANSI B16.5/PFA ⁴⁾	D 2 4
Flange 1½" 150 lb RF, ANSI B16.5/316L	C 6 1	Flange 3" 300 lb RF, ANSI B16.5/Enamelled ³⁾	D 2 5
Flange 1½" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 6 2	Flange 3" 600 lb RF, ANSI B16.5/316L	D 2 6
Flange 1½" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 6 3	Flange 3½" 150 lb RF, ANSI B16.5/316L	D 2 7
Flange 1½" 150 lb RF, ANSI B16.5/PFA ⁴⁾	C 6 4	Flange 3½" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 2 8
Flange 1½" 150 lb RF, ANSI B16.5 Enamelled ³⁾	C 6 5	Flange 4" 150 lb RF, ANSI B16.5/316L	D 3 0
Flange 1½" 150 lb FF, ANSI B16.5/ECTFE ⁴⁾	C 6 6	Flange 4" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 3 1
Flange 1½" 300 lb RF, ANSI B16.5/316L	C 6 7	Flange 4" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 3 2
Flange 1½" 300 lb RF, ANSI B16.5/Alloy 400 (2.4360) ZB2977	C 6 8	Flange 4" 150 lb RF, ANSI B16.5/PFA ⁴⁾	D 3 3
Flange 1½" 300 lb RF, ANSI B16.5/ECTFE ³⁾	C 7 0	Flange 4" 150 lb RF, ANSI B16.5/Enamelled ³⁾	D 3 4
Flange 1½" 600 lb RF, ANSI B16.5/316L	C 7 1	Flange 4" 150 lb LT, ANSI B16.5/316L	D 3 5
Flange 2" 150 lb RF, ANSI B16.5/316L	C 7 2	Flange 4" 300 lb RF, ANSI B16.5/316L	D 3 6
Flange 2" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 7 3	Flange 4" 300 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 3 7
		Flange 4" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 3 8
		Flange 4" 300 lb RJF, ANSI B16.5/316L	D 4 0
		Flange 4" 300 lb LG, ANSI B16.5/316L	D 4 1
		Flange 4" 300 lb LT, ANSI B16.5/316L	D 4 2
		Flange 4" 600 lb RF, ANSI B16.5/316L	D 4 3
		Flange 4" 600 lb RJF, ANSI B16.5/316L	D 4 4
		Flange 6" 150 lb RF, ANSI B16.5/316L	D 4 5
		Flange 6" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 4 6

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data	Article No.
SITRANS LVL200, Standard Compact vibrating level switch for material detection in liquid and slurry applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5746- 
Flange 6" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 4 7
Flange 6" 150 lb RF, ANSI B16.5/PFA ⁴⁾	D 4 8
Flange 6" 150 lb RJF, ANSI B16.5/316L	D 5 0
Flange 6" 300 lb RF, ANSI B16.5/316L	D 5 1
Flange 8" 150 lb RF, ANSI B16.5/316L	D 5 2
Flange 8" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 5 3
Flange 1" BS.10 Table E/316L	D 5 4
Flange 1" BS.10 Table E/PFA ⁴⁾	D 5 5
Flange 1½" BS.10 Table E/316L	D 5 6
Flange 3½" BS.10 Table E/316L	D 5 7
Flange 4" BS.10 Table E/ECTFE ⁴⁾	D 5 8
Flange DN 40 10K, JIS/316L	D 6 0
Flange DN 50 10K, JIS/316L	D 6 1
Flange DN 80 10K, JIS/316L	D 6 2
Flange DN 100 10K, JIS/316L	D 6 3
Thread R1 PN 64, EN 10226-1/316L	D 6 5
Flange 2" 900 lb RF, ASME B16.5/316L	D 7 0
Adapter/Process temperature	
Without adapter/-50 ... +150 °C (-58 ... +302 °F)	1
With adapter/-50 ... +200 °C (-58 ... +392 °F)	2
With adapter/-50 ... +250 °C (-58 ... +482 °F)	3
With gas-tight leadthrough/-50 ... +150 °C (-58 ... +302 °F)	4
With gas-tight leadthrough/-50 ... +250 °C (-58 ... +482 °F)	5
Housing/Cable entry	
Aluminum IP66/IP67/M20 x 1.5	A
Aluminum IP66/IP67/½" NPT	B
316L stainless steel (electropolished) IP66/IP67/M20 x 1.5	C
316L stainless steel (electropolished) IP66/IP67/½" NPT	D
Aluminum IP66/IP67/M20 x 1.5 Special HARTING plug (bent) according to Tier One (ZB7555)	V

Selection and Ordering data	Order code
Further designs	
Please add "-Z" to Article No. and specify Order code(s).	
Cleaning including Certificate (oil, grease, and silicone free)	W01
Identification label (measurement loop) stainless steel; max. 40 characters, add in plain text. To add more than one line, use a comma "," for line break.	Y17
Identification Label (measurement loop) foil; max. 40 characters add in plain text. To add more than one line, use a comma "," for line break.	Y18
3.1-Inspection Certificate for material (EN 10204 NACE MR 0175) ¹⁰⁾	D07

Selection and Ordering data	Order code
2.2-Factory certificate for material (EN 10204) ¹⁰⁾	C15
Functional Safety (SIL 2). Device suitable for use in accordance with IEC 61508 and IEC 61511 ¹⁰⁾	C20
Dye penetration test, results confirmed via a 3.1 certificate/instrument (EN10204) ¹⁰⁾	C13
X-ray test + 3.1 certificate/instrument ¹⁰⁾	C14
Positive material identification test + 3.1 certificate/instrument ¹⁰⁾	C16
Roughness test + 3.1 certificate/instrument ¹⁰⁾	C18
3.1-Inspection Certificate for instrument with test data (EN 10204)	C25
Quality and test plan	C26
Pressure test + 3.1 certificate/instrument ¹⁰⁾	C31
Helium leak test + 3.1 certificate/instrument ¹⁰⁾	C32
Ferrite measuring accuracy to DIN32514-1 + 3.1 certificate/instrument ¹⁰⁾	C60
Pressure test according to Norsok + 3.1 certificate/instrument ¹⁰⁾	C61
Operating Instructions	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Spare Parts and Accessories	Article No.
Electronics module SITRANS LVL200 Relay	7ML1830-1NC
Electronics module SITRANS LVL200 Contactless	7ML1930-6AA
NAMUR spare electronics module	A5E35817107
LVL200 Threaded Welded Socket	
• G¾" A/316L with FKM Seal	7ML1930-1EE
• G1" A/316L with FKM Seal	7ML1930-1EF
• M27 x 1.5/316L with FKM Seal	7ML1930-1EG
• G¾" A/316L with EPDM Seal	7ML1930-1EH
• G1" A/316L with EPDM Seal	7ML1930-1EJ
• M27 x 1.5/316L with EPDM Seal	7ML1930-1EK

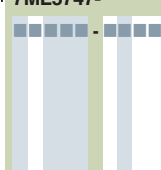
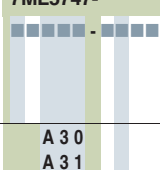
- 1) Only available with Adapter/Process temperature options 1, 3, 4, and 5
- 2) Only available with housing option B
- 3) Available with Adapter/Process temperature options 1, 2, and 4
- 4) Not in combination with Adapter/Process temperature options 2, 3, and 5
- 5) Not in combination with Adapter/Process temperature options 2, 4, and 5
- 8) Only available with Electronics options 4 and 5
- 9) Not in combination with Process Connection/Material options ECTFE Coated Probes
- 10) Listed Certificates are not available with all configurations please contact factory for more information
- 11) Not available with Electric Options 0, 1, 3, 4, 5, 6, and Housing/Protection/Cable Option V
- 12) Available with Housing/Protection/Cable options V
- 13) Approval option P is not available with PFA and ECTFE coating options

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

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5747- 	SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications. Thread M27 x 1.5 PN 64/316L Cyl. socket/316Ti/1.4581 ECTFE coated ZB2984 ⁴⁾ Conus DN 25 PN 40/316L Ra < 0.3 µm Conus DN 25 PN 40/316L Ra < 0.8 µm Conus DN 25 PN 40/ECTFE (ZB3033) ⁴⁾ Conus M52 PN 40/316L Conus M52 PN 40/316L Ra < 0.3 µm Conus M52 PN 40/316L Ra < 0.8 µm Tri-Clamp 1" PN 16/316L Ra < 0.3 µm Tri-Clamp 1" PN 16/Alloy C22 (2.4602) Tri-Clamp 1" PN 16/316L Ra < 0.8 µm Tri-Clamp 1½" PN 16/316L Ra < 0.3 µm Tri-Clamp 1½" PN 16/Alloy C22 (2.4602) Tri-Clamp 1½" PN 16/316L Ra < 0.8 µm Tri-Clamp 2" PN 16/316L Ra < 0.3 µm Tri-Clamp 2" PN 16/Alloy C22 (2.4602) Tri-Clamp 2" PN 16/316L Ra < 0.8 µm Tri-Clamp 2½" PN 10/316L Ra < 0.3 µm Tri-Clamp 2½" PN 10/316L Ra < 0.8 µm Tri-Clamp 3" PN 10/316L Ra < 0.3 µm Tri-Clamp 3" PN 10/316L Ra < 0.8 µm Bolting DN 32 PN 40 DIN11851/316L Ra < 0.3 µm Bolting DN 32 PN 40 DIN11851/316L Ra < 0.8 µm Bolting DN 25 PN 40 DIN11851/316L Ra < 0.8 µm Bolting DN 25 PN 40 DIN11851/316L Ra < 0.8 µm Bolting DN 40 PN 40 DIN11851/316L Ra < 0.3 µm Bolting DN 40 PN 40 DIN11851/316L Ra < 0.8 µm Bolting DN 40 PN 40 DIN11864-1 A/316L Ra < 0.8 µm ZB3052 Bolting DN 50 PN 25 DIN11851/316L Ra < 0.3 µm Bolting DN 50 PN 25 DIN11851/316L Ra < 0.8 µm Bolting DN 50 PN 25 DIN11864-1 A/316L Ra < 0.8 µm ZB3052 Hygienic w.compr.nut F40 PN 25/316L Hygienic w.compr.nut F40 PN 25/316L Ra < 0.3 µm Hygienic w.compr.nut F40 PN 25/316L Ra < 0.8 µm Varivent N50-40/316L Ra < 0.3 µm Varivent N50-40/316L Ra < 0.8 µm Varivent N125/100/316L Ra < 0.8 µm DRD flange PN 40/316L ZB3007 SMS DN 38/316L Ra < 0.8 µm ⁴⁾ SMS DN 51 PN 6/316L Ra < 0.8 µm ⁴⁾ Swagelok VCR screwing ZG2579 PN 64/316L Neumo biocontrol size 25 PN 16/316L Ra < 0.8 µm Neumo biocontrol size 50 PN 16/316L Ra < 0.8 µm Neumo biocontrol size 65 PN 16/316L Ra < 0.8 µm Neumo biocontrol size 80 PN 16/316L Ra < 0.8 µm SÜDMO DN 50 PN 10/316L Ra < 0.8 µm Small flange DN 25 PN 1.5 DIN 28403/316L pol. Ra < 0.8 µm Small flange DN 40 PN 1.5 DIN 28403/316L pol. Ra < 0.8 µm Ingold connection PN 16/316L Ra < 0.8 µm Collar clamp connection DN33,7 PN40 Form A, DIN11864-3/1.4435 (BN2, Ra < 0.8 µm) Collar flange DN50 PN16 Form A, DIN11864-2/316L (Ra < 0.8 µm) Flange DN 25 PN 6 Form C, DIN 2501/316L	7ML5747- 
Electronics Contactless electronic switch 20 ... 250 V AC/DC ¹³⁾ Double relay (DPDT) 20 ... 72 V DC/20 ... 250 V AC NAMUR signal ¹⁾¹³⁾ Transistor (NPN/PNP) 10 ... 55 V DC	1 2 4 5	A 30 A 31 A 32 A 33 A 34 A 35 A 36 A 37 A 38 A 40 A 41 A 42 A 43 A 44 A 45 A 46 A 47 A 48 A 50 A 51 A 52 A 53 A 54 A 55 A 56 A 57 A 58 A 60 A 61 A 62 A 63 A 64 A 65 A 66 A 67 A 68 A 70 A 71 A 72 A 73 A 74 A 75 A 76 A 77 A 78 A 80 A 81 A 82 A 83 A 84 A 85 A 86	
Approvals Without approvals ¹⁴⁾ Overfill protection (WHG) ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + WHG ⁸⁾ ATEX II 1/2G, 2G Ex d IIC T6 + WHG ⁵⁾⁹⁾ ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + shipping approvals ⁸⁾ ATEX II 1/2G, 2G Ex d IIC T6 + shipping approvals ⁵⁾⁹⁾ ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + ATEX II 1/2D IP6X T ⁸⁾¹¹⁾ IECEx Ex ia IIC T6 ⁸⁾ Shipping approvals ATEX II 3G Ex nA II T5 ... T1 X FM (IS) Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G ²⁾⁸⁾ FM (XP) Class I, Div. 1, Groups A, B, C, D; (DIP) Class II, III, Div. 1, Groups E, F, G ²⁾⁵⁾⁹⁾¹⁵⁾ FM (NI) Class I, Div. 2, Groups A, B, C, D ²⁾ IECEx d IIC T6 ... T2 Ga/Gb ⁵⁾⁹⁾ CSA(XP) Class I,II,III Div. 1, Groups A, B, C, D, E, F, G ⁵⁾⁹⁾ CSA(NI)Class I,II,III, Div. 2, Groups A, B, C, D, E, F, G BR-Ex d IIC T6 ... T2 ⁵⁾ CSA (IS) Class I, II, III Div. 1, Groups A, B, C, D, E, F, G ⁸⁾	A B C D E F G H K L N P Q R S T U V		
Process connection Thread G¾" A, PN 64/316L Thread G¾" A, PN 64/316L Ra < 0.8 µm Thread ¾" NPT, PN 64/316L Thread ¾" NPT, PN 64/316L Ra < 0.8 µm Thread ¾" NPT, PN 64/Alloy 400 (2.4360) Thread G¾" A, PN 64/Alloy C22 (2.4602) Thread ¾" NPT, PN 64/Alloy C22 (2.4602) Thread G1" A, PN 64/316L Thread G1" A, PN 64/316L ECTFE coated MB1982 ⁴⁾ Thread G1" A, PN 64/316L PFA coated ⁴⁾ Thread G1" A, PN 64/Alloy 400 (2.4360) Thread G1" A, PN 64/316L Ra < 0.8 µm Thread 1" NPT, PN 64/316L Thread 1" NPT, PN 64/316L ECTFE coated MB1982 ⁴⁾ Thread 1" NPT, PN 64/316L PFA coated ⁴⁾ Thread 1" NPT, PN 64/Alloy 400 (2.4360) Thread 1" NPT, PN 64/316L Ra < 0.8 µm Thread G1" A, PN 64/Alloy C22 (2.4602) Thread G1½" A, PN 64/316L Thread G1½" A, PN 64/316L Ra < 0.8 µm Thread G1½" A, PN 64/Alloy C22 (2.4602) Thread 1" NPT, PN 64/Alloy C22 (2.4602) Thread 1½" NPT, PN 64/316L Thread 1½" NPT, PN 64/316L Ra < 0.8 µm Thread 1½" NPT, PN 64/Alloy C22 (2.4602) Thread G2" A, PN 64/316L	A 00 A 01 A 02 A 03 A 04 A 05 A 06 A 07 A 08 A 10 A 11 A 13 A 14 A 15 A 16 A 17 A 18 A 20 A 21 A 22 A 23 A 24 A 25 A 26 A 27 A 28		

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5747-	SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5747-
Flange DN 25 PN 6 Form C, DIN 2501/PFA ⁴⁾	A 8 7	Flange DN 80 PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 5 3
Flange DN 25 PN 40 Form C, DIN 2501/316L	A 8 8	Flange DN 80 PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 5 4
Flange DN 25 PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 0 0	Flange DN 80 PN 40 Form C, DIN 2501/PFA ⁴⁾	B 5 5
Flange DN 25 PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 0 1	Flange DN 80 PN 40 Form F, DIN 2501/316L	B 5 6
Flange DN 25 PN 40 Form C, DIN 2501/PFA ⁴⁾	B 0 2	Flange DN 80 PN 40 Form N, DIN 2501/316L	B 5 7
Flange DN 25 PN 40 Form D, DIN 2501/316L	B 0 3	Flange DN 80 PN 40 Form N, DIN 2501/ Alloy C22 (2.4602)	B 5 8
Flange DN 25 PN 40 Form F, DIN 2501/316L	B 0 4	Flange DN 100 PN 16 Form C, DIN 2501/316L	B 6 0
Flange DN 25 PN 40 Form N, DIN 2501/316L	B 0 5	Flange DN 100 PN 16 Form C, DIN 2501/ Alloy C22 (2.4602)	B 6 1
Flange DN 25 PN 40 Form N, DIN 2501/ Alloy C22 (2.4602)	B 0 6	Flange DN 100 PN 16 Form C, DIN 2501/ECTFE ⁴⁾	B 6 2
Flange DN 25 PN 40 Form N, DIN 2501/ Alloy 400 (2.4360) solid	B 0 7	Flange DN 100 PN 16 Form C, DIN 2501/PFA ⁴⁾	B 6 3
Flange DN 25 PN 40 V13, DIN 2501/316L	B 0 8	Flange DN 100 PN 16 Form D, DIN 2501/316L	B 6 4
Flange DN 32 PN 40 Form C, DIN 2501/316L	B 1 0	Flange DN 100 PN 16 Form F, DIN 2501/316L	B 6 5
Flange DN 32 PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 1 1	Flange DN 100 PN 16 Form N, DIN 2501/316L	B 6 6
Flange DN 40 PN 6 Form C, DIN 2501/316L	B 1 2	Flange DN 100 PN 40 Form C, DIN 2501/316L	B 6 7
Flange DN 40 PN 6 Form C, DIN 2501/ECTFE ⁴⁾	B 1 3	Flange DN 100 PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 6 8
Flange DN 40 PN 40 Form C, DIN 2501/316L	B 1 4	Flange DN 100 PN 40 Form C, DIN 2501/PFA ⁴⁾	B 7 0
Flange DN 40 PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 1 5	Flange DN 100 PN 40 Form C, DIN 2501/ Enamelled ³⁾	B 7 1
Flange DN 40 PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 1 6	Flange DN 100 PN 40 Form F, DIN 2501/316L	B 7 2
Flange DN 40 PN 40 Form C, DIN 2501/PFA ⁴⁾	B 1 7	Flange DN 100 PN 40 Form N, DIN 2501/316L	B 7 3
Flange DN 40 PN 40 Form C, DIN 2501/Enamelled ³⁾	B 1 8	Flange DN 100 PN 40 V13, DIN 2501/316L	B 7 4
Flange DN 40 PN 40 Form F, DIN 2501/316L	B 2 0	Flange DN 100 PN 64 Form E, DIN 2501/316L	B 7 5
Flange DN 40 PN 40 Form N, DIN 2501/316L	B 2 1	Flange DN 100 PN 100 Form E, DIN 2501/316L	B 7 6
Flange DN 40 PN 40 Form E, DIN 2501/316L	B 2 2	Flange DN 100 PN 100 Form L, DIN 2501/316L	B 7 7
Flange DN 40 PN 40 V13, DIN 2501/316L	B 2 3	Flange DN 125 PN 16 Form F, DIN 2501/316L	B 7 8
Flange DN 50 PN 40 Form C, DIN 2501/316L	B 2 4	Flange DN 125 PN 40 Form C, DIN 2501/316L	B 8 0
Flange DN 50 PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 2 5	Flange DN 125 PN 40 Form N, DIN 2512/316L	B 8 1
Flange DN 50 PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 2 6	Flange DN 150 PN 16 Form C, DIN 2501/316L	B 8 2
Flange DN 50 PN 40 Form C, DIN 2501/ECTFE (ZB3108) ⁴⁾	B 2 7	Flange DN 150 PN 16 Form C, DIN 2501/ Alloy C22 (2.4602)	B 8 3
Flange DN 50 PN 40 Form C, DIN 2501/PFA ⁴⁾	B 2 8	Flange DN 150 PN 16 Form C, DIN 2501/ECTFE ⁴⁾	B 8 4
Flange DN 50 PN 40 Form D, DIN 2501/316L	B 3 0	Flange DN 150 PN 16 Form C, DIN 2501/PFA ⁴⁾	B 8 5
Flange DN 50 PN 40 Form D, DIN 2501/ Alloy C22 (2.4602)	B 3 1	Flange DN 150 PN 16 Form D, DIN 2501/316L	B 8 6
Flange DN 50 PN 40 Form F, DIN 2501/316L	B 3 2	Flange DN 150 PN 40 Form C, DIN 2501/316L	B 8 7
Flange DN 50 PN 40 Form N, DIN 2501/316L	B 3 3	Flange DN 150 PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 8 8
Flange DN 50 PN 40 Form N, DIN 2501/ Alloy C22 (2.4602)	B 3 4	Flange DN 150 PN 40 Form F, DIN 2501/316L	C 0 0
Flange DN 50 PN 40 Form E, DIN 2501/316L	B 3 5	Flange DN 150 PN 40 Form N, DIN 2512/316L	C 0 1
Flange DN 50 PN 40 V13, DIN 2501/316L	B 3 6	Flange DN 200 PN 10 Form C, DIN 2501/ECTFE ⁴⁾	C 0 2
Flange DN 50 PN 40 R13, DIN 2501/316L	B 3 7	Flange DN 200 PN 16 Form C, DIN 2501/316L	C 0 3
Flange DN 50 PN 64 Form F, DIN 2501/316L	B 3 8	Flange DN 25 PN 40 Form B1, EN 1092-1/316L	C 0 4
Flange DN 50 PN 64 Form N, DIN 2501/ Alloy C22 (2.4602)	B 4 0	Flange DN 25 PN 40 Form B1, EN 1092-1/ Alloy C22 (2.4602)	C 0 5
Flange DN 50 PN 64 Form C, DIN 2501/316L	B 4 1	Flange DN 25 PN 40 Form B1, EN/316L/PFA ⁴⁾	C 0 6
Flange DN 50 PN 64 Form L, DIN 2501/316L	B 4 2	Flange DN 25 PN 40 Form B1, EN 1092-1/ Enamelled ³⁾	C 0 7
Flange DN 50 PN 100 Form E, DIN 2501/316L	B 4 3	Flange DN 25 PN 40 Form B2, EN 1092-1/316L	C 0 8
Flange DN 50 PN 100 Form L, DIN 2501/316L	B 4 4	Flange DN 25 PN 40 Form F, EN 1092-1/316L	C 1 0
Flange DN 65 PN 40 Form C, DIN 2501/316L	B 4 5	Flange DN 25 PN 63 Form B1, EN 1092-1/316L	C 1 1
Flange DN 65 PN 40 Form C, DIN 2501/ Alloy C22 (2.4602)	B 4 6	Flange DN 25 PN 100 Form B2, EN 1092-1/316L	C 1 2
Flange DN 65 PN 40 Form C, DIN 2501/ECTFE ⁴⁾	B 4 7	Flange DN 40 PN 40 Form B1, EN/316L	C 1 3
Flange DN 65 PN 40 Form C, DIN 2501/PFA ⁴⁾	B 4 8	Flange DN 40 PN 40 Form B1, EN 1092-1/PFA ⁴⁾	C 1 4
Flange DN 65 PN 40 Form F, DIN 2501/316L	B 5 0	Flange DN 40 PN 40 Form B2, EN/316L	C 1 5
Flange DN 65 PN 64 Form E, DIN 2501/316L	B 5 1	Flange DN 50 PN 40 Form B1, EN/316L	C 1 6
Flange DN 80 PN 40 Form C, DIN 2501/316L	B 5 2	Flange DN 50 PN 40 Form B1, EN 1092-1/ Alloy C22 (2.4602)	C 1 7
		Flange DN 50 PN 40 Form B1, EN 1092-1/ Alloy 400 (2.4360) ZB2977	C 1 8
		Flange DN 50 PN 40 Form B1, EN 1092-1/ECTFE ⁴⁾	C 2 0

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5747-	SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5747-
Flange DN 50 PN 40 Form B1, EN/316L/PFA ⁴⁾	C 21	Flange 2" 150 lb FF, ANSI B16.5/ECTFE ⁴⁾	C 76
Flange DN 50 PN 40 Form B1, EN 1092-1/Enamelled ³⁾	C 22	Flange 2" 150 lb SG (small groove), ANSI B16.5/316L	C 77
Flange DN 50 PN 40 Form C, EN 1092-1/316L	C 23	Flange 2" 300 lb RF, ANSI B16.5/316L	C 78
Flange DN 50 PN 40 Form D, EN/316L	C 24	Flange 2" 300 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 80
Flange DN 50 PN 40 Form D, EN 1092-1/Alloy C22 (2.4602)	C 25	Flange 2" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 82
Flange DN 50 PN 40 Form B2, EN 1092-1/316L	C 26	Flange 2" 300 lb RF, ANSI B16.5/PFA ⁴⁾	C 83
Flange DN 50 PN 40 Form E, EN 1092-1/316L	C 27	Flange 2" 300 lb RJF, ANSI B16.5/316L	C 85
Flange DN 80 PN 40 Form B1, EN 1092-1/316L	C 28	Flange 2" 300 lb ST, ANSI B16.5/316L	C 86
Flange DN 80 PN 40 Form B1, EN 1092-1/Alloy C22 (2.4602)	C 30	Flange 2" 300 lb LG (large groove), ANSI B16.5/316L	C 87
Flange DN 80 PN 40 Form B1, EN 1092-1/ECTFE ⁴⁾	C 31	Flange 2" 300 lb LT, ANSI B16.5/316L	C 88
Flange DN 80 PN 40 Form B1, EN 1092-1/Enamelled ³⁾	C 32	Flange 2" 600 lb RF, ANSI B16.5/316L	D 00
Flange DN 80 PN 40 Form B2, EN 1092-1/316L	C 33	Flange 2" 600 lb RF, ANSI B16.5/Alloy 400 (2.4360) ZB2977	D 01
Flange DN 100 PN 16 Form B1, EN 1092-1/316L	C 34	Flange 2" 600 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 02
Flange DN 100 PN 16 Form B1, EN 1092-1/Alloy C22 (2.4602)	C 35	Flange 2" 600 lb RJF, ANSI B16.5/316L	D 03
Flange DN 100 PN 16 Form B1, EN 1092-1/Enamelled ³⁾	C 36	Flange 2" 600 lb LG, ANSI B16.5/316L	D 04
Flange DN 100 PN 40 Form B1, EN 1092-1/316L	C 37	Flange 2" 900 lb RJF, ANSI B16.5/316L	D 05
Flange DN 100 PN 40 Form B1, EN 1092-1/Enamelled ³⁾	C 38	Flange 2½" 150 lb RF, ANSI B16.5/316L	D 06
Flange DN 100 PN 40 Form C, EN 1092-1/316L	C 40	Flange 2½" 300 lb RF, ANSI B16.5/316L	D 07
Flange DN 100 PN 63 Form B2, EN 1092-1/316L	C 41	Flange 3" 150 lb RF, ANSI B16.5/316L	D 08
Flange DN 150 PN 16 Form B1, EN 1092-1/316L	C 42	Flange 3" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 10
Flange DN 150 PN 16 Form B1, EN 1092-1/PFA ⁴⁾	C 43	Flange 3" 150 lb RF, ANSI B16.5/Alloy 400 (2.4360) ZB2977	D 11
Flange DN 150 PN 40 Form B1, EN 1092-1/316L	C 44	Flange 3" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 12
Flange DN 150 PN 40 Form B1, EN 1092-1/ECTFE ⁴⁾	C 45	Flange 3" 150 lb RF, ANSI B16.5/PFA ⁴⁾	D 13
Flange DN 150 PN 40 Form B2, EN 1092-1/316L	C 46	Flange 3" 150 lb RF, ANSI B16.5/Enamelled ³⁾	D 14
Flange 1" 150 lb ANSI B16.5/316L	C 47	Flange 3" 150 lb FF, ANSI B16.5/316L	D 15
Flange 1"150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 48	Flange 3" 150 lb FF, ANSI B16.5/ECTFE ⁴⁾	D 16
Flange 1"150 lb RF, ANSI B16.5//Alloy 400 (2.4360) ZB2977	C 50	Flange 3" 150 lb FF, ANSI B16.5/PFA ⁴⁾	D 17
Flange 1" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 51	Flange 3" 300 lb RF, ANSI B16.5/316L	D 18
Flange 1"150 lb RF, ANSI B16.5/PFA ⁴⁾	C 52	Flange 3" 300 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 20
Flange 1" 150 lb RF, ANSI B16.5/Enamelled ³⁾	C 53	Flange 3" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 21
Flange 1" 300 lb RF, ANSI B16.5/316L	C 54	Flange 3" 300 lb RF, ANSI B16.5/PFA ⁴⁾	D 22
Flange 1" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 55	Flange 3" 300 lb RF, ANSI B16.5/Enamelled ³⁾	D 23
Flange 1" 600 lb RF, ANSI B16.5/316L	C 56	Flange 3" 600 lb RF, ANSI B16.5/316L	D 24
Flange 1½" 150 lb RF, ANSI B16.5/316L	C 57	Flange 3½" 150 lb RF, ANSI B16.5/316L	D 25
Flange 1½" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 58	Flange 3½" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 26
Flange 1½" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 60	Flange 4" 150 lb RF, ANSI B16.5/316L	D 27
Flange 1½" 150 lb RF, ANSI B16.5/PFA ⁴⁾	C 61	Flange 4" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 28
Flange 1½" 150 lb RF, ANSI B16.5 Enamelled ³⁾	C 62	Flange 4" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 30
Flange 1½" 150 lb FF, ANSI B16.5/ECTFE ⁴⁾	C 63	Flange 4" 150 lb RF, ANSI B16.5/PFA ⁴⁾	D 31
Flange 1½" 300 lb RF, ANSI B16.5/316L	C 64	Flange 4" 150 lb RF, ANSI B16.5/Enamelled ³⁾	D 32
Flange 1½" 300 lb RF, ANSI B16.5/Alloy 400 (2.4360) ZB2977	C 65	Flange 4" 150 lb LT, ANSI B16.5/316L	D 33
Flange 1½" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 66	Flange 4" 300 lb RF, ANSI B16.5/316L	D 34
Flange 1½" 600 lb RF, ANSI B16.5/316L	C 67	Flange 4" 300 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 35
Flange 2" 150 lb RF, ANSI B16.5/316L	C 68	Flange 4" 300 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 36
Flange 2" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	C 70	Flange 4" 300 lb RJF, ANSI B16.5/316L	D 37
Flange 2" 150 lb RF, ANSI B16.5/	C 71	Flange 4" 300 lb LG, ANSI B16.5/316L	D 38
Alloy 400 (2.4360) ZB2977		Flange 4" 300 lb LT, ANSI B16.5/316L	D 40
Flange 2" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	C 72	Flange 4" 600 lb RF, ANSI B16.5/316L	D 41
Flange 2" 150 lb RF, ANSI B16.5/PFA ⁴⁾	C 73	Flange 4" 600 lb RJF, ANSI B16.5/316L	D 42
Flange 2" 150 lb RF, ANSI B16.5/Enamelled ³⁾	C 74	Flange 5" 150 lb RF, ANSI B16.5/316L	D 43
Flange 2" 150 lb FF, ANSI B16.5/316L	C 75	Flange 6" 150 lb RF, ANSI B16.5/316L	D 44
		Flange 6" 150 lb RF, ANSI B16.5/Alloy C22 (2.4602)	D 45
		Flange 6" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 46
		Flange 6" 150 lb RF, ANSI B16.5/PFA ⁴⁾	D 47
		Flange 6" 150 lb RJF, ANSI B16.5/316L	D 48
		Flange 6" 300 lb RF, ANSI B16.5/316L	D 50

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5747-	SITRANS LVL200, Rigid extension Compact vibrating level switch for material detection in liquid applications such as overflow, high, low, and demand applications, as well as pump protection. For use in SIL-2 and hazardous applications.	7ML5747-
Flange 8" 150 lb RF, ANSI B16.5/316L	D 5 1	Rigid Extension 316L Ra ≤ 0.8 µm	
Flange 8" 150 lb RF, ANSI B16.5/ECTFE ⁴⁾	D 5 2	80 ... 500 mm	D 0
Flange 1" BS.10 Table E/316L	D 5 3	501 ... 1 000 mm	D 1
Flange 1" BS.10 Table E/PFA ⁴⁾	D 5 4	1 001 ... 1 500 mm	D 2
Flange 1½" BS.10 Table E/316L	D 5 5	1 501 ... 2 000 mm	D 3
Flange 3½" BS.10 Table E/316L	D 5 6	2 001 ... 2 500 mm	D 4
Flange 4" BS.10 Table E/ECTFE ⁴⁾	D 5 7	2 501 ... 3 000 mm	D 5
Flange DN 40 10K, JIS/316L	D 5 8	3 001 ... 3 500 mm	D 6
Flange DN 50 10K, JIS/316L	D 6 0	3 501 ... 4 000 mm	D 7
Flange DN 80 10K, JIS/316L	D 6 1	Rigid Extension 316L Ra ≤ 0.3 µm	
Flange DN 100 10K, JIS/316L	D 6 2	80 ... 500 mm	E 0
Thread R1 PN64, EN10226-1/316L ¹⁶⁾	D 6 5	501 ... 1 000 mm	E 1
Flange 2" 900 lb RF, ASME B16.5/316L	D 7 0	1 001 ... 1 500 mm	E 2
Adapter/Process temperature		1 501 ... 2 000 mm	E 3
Without adapter/-50 ... +150 °C	1	2 001 ... 2 500 mm	E 4
With adapter/-50 ... +200 °C	2	2 501 ... 3 000 mm	E 5
With adapter/-50 ... +250 °C	3	3 001 ... 3 500 mm	E 6
With gas-tight leadthrough/-50 ... +150 °C	4	3 501 ... 4 000 mm	E 7
With gas-tight leadthrough/-50 ... +250 °C	5	Rigid Extension Enamelled version	
Housing/Cable entry		80 ... 250 mm	F 0
Aluminum IP66/IP67/M20 x 1.5	A	251 ... 500 mm	F 1
Aluminum IP66/IP67/½" NPT	B	501 ... 750 mm	F 2
316L stainless steel (electropolished) IP66/IP67/M20 x 1.5 ¹⁰⁾	C	751 ... 1 000 mm	F 3
316L stainless steel (electropolished) IP66/IP67/½" NPT ¹⁷⁾	D	1 001 ... 1 250 mm	F 4
Aluminum IP66/IP67/M20 x 1.5 Special HARTING plug (bent) according to Tier One (ZB7555)	V	1 251 ... 1 500 mm	F 5
NOTE:		Rigid Extension Alloy C22 (2.4602)	
When selecting a Rigid Extension option, extension coating must match the process connection coating and the material and surface roughness type.		80 ... 500 mm	G 0
Rigid Extension 316L		501 ... 1 000 mm	G 1
80 ... 500 mm	A 0	1 001 ... 1 500 mm	G 2
501 ... 1 000 mm	A 1	1 501 ... 2 000 mm	G 3
1 001 ... 1 500 mm	A 2	2 001 ... 2 500 mm	G 4
1 501 ... 2 000 mm	A 3	2 501 ... 3 000 mm	G 5
2 001 ... 2 500 mm	A 4	3 001 ... 3 500 mm	G 6
2 501 ... 3 000 mm	A 5	3 501 ... 4 000 mm	G 7
3 001 ... 3 500 mm	A 6	Rigid Extension Alloy 400 (2.4360)	
3 501 ... 4 000 mm	A 7	80 ... 500 mm	H 0
Rigid Extension ECTFE coated		501 ... 1 000 mm	H 1
80 ... 500 mm	B 0	1 001 ... 1 500 mm	H 2
501 ... 1 000 mm	B 1	1 501 ... 2 000 mm	H 3
1 001 ... 1 500 mm	B 2	2 001 ... 2 500 mm	H 4
1 501 ... 2 000 mm	B 3	2 501 ... 3 000 mm	H 5
2 001 ... 2 500 mm	B 4		
2 501 ... 3 000 mm	B 5		
Rigid Extension PFA coated			
80 ... 500 mm	C 0		
501 ... 1 000 mm	C 1		
1 001 ... 1 500 mm	C 2		
1 501 ... 2 000 mm	C 3		
2 001 ... 2 500 mm	C 4		
2 501 ... 3 000 mm	C 5		
3 001 ... 3 500 mm	C 6		
3 501 ... 4 000 mm	C 7		

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Selection and Ordering data	Order code	Selection and Ordering data	Article No.
Further designs		Spare Parts and Accessories	
Please add "-Z" to Article No. and specify Order code(s).		Electronics module SITRANS LVL200 Relay	7ML1830-1NC
Cleaning including Certificate (oil, grease, and silicone free)	W01	Electronics module SITRANS LVL200 Contactless	7ML1930-6AA
Enter the total insertion length in plain text description, max. 4 000 mm (157.48 inch)	Y01	NAMUR spare electronics module	A5E35817107
Identification label (measurement loop) stainless steel: max. 40 characters, add in plain text. To add more than one line, use a coma "," for line break.	Y17	Lock fitting, unpressurized, G1" A/316L	7ML1930-1DQ
Identification Label (measurement loop) foil: max. 40 characters add in plain text. To add more than one line, use a coma "," for line break.	Y18	Lock fitting, unpressurized, 1" NPT/316L	7ML1930-1DR
3.1-Inspection Certificate for material (EN 10204 NACE MR 0175) ¹²⁾	D07	Lock fitting, unpressurized, G1 ... 1/2" A/316L	7ML1930-1DS
2.2-Factory certificate for material (EN 10204) ¹²⁾	C15	Lock fitting, unpressurized, 1 ... 1/2" NPT/316L	7ML1930-1DT
Functional Safety (SIL 2). Device suitable for use in accordance with IEC 61508 and IEC 61511 ¹²⁾	C20	Lock fitting, -1 ... 16 bar, G1" A/316L	7ML1930-1DU
Dye penetration test, results confirmed via a 3.1 certificate/instrument (EN 10204) ¹²⁾	C13	Lock fitting, -1 ... 16 bar, 1" NPT/316L	7ML1930-1DV
X-ray test + 3.1 certificate/instrument ¹²⁾	C14	Lock fitting, -1 ... 16 bar, G1 ... 1/2" A/316L	7ML1930-1DX
Positive material identification test + 3.1 certificate/instrument ¹²⁾	C16	Lock fitting, -1 ... 64 bar, G1" A/316L	7ML1930-1EA
Roughness test + 3.1 certificate/instrument ¹²⁾	C18	Lock fitting, -1 ... 64 bar, 1" NPT/316L	7ML1930-1EB
3.1-Inspection Certificate for instrument with test data (EN 10204)	C25	Lock fitting, -1 ... 64 bar, G1 ... 1/2" A/316L	7ML1930-1EC
Quality and test plan	C26	Lock fitting, -1 ... 64 bar, 1 ... 1/2" NPT/316L	7ML1930-1ED
Pressure test + 3.1 certificate/instrument ¹²⁾	C31		
Helium leak test + 3.1 certificate/instrument ¹²⁾	C32		
Ferrite measuring accuracy to DIN 32514-1 + 3.1 certificate/instrument ¹²⁾	C60		
Pressure test according to Norsok + 3.1 certificate/instrument ¹²⁾	C61		
Operating Instructions			
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation			
		¹⁾ Available with Adapter/Process temperature options 1, 3, 4, and 5 only ²⁾ Only available with housing option B ³⁾ Available with Adapter/Process temperature options 1, 2, and 4 ⁴⁾ Not in combination with Adapter/Process temperature options 2, 3, and 5 ⁵⁾ Not in combination with Adapter/Process temperature options 2, 4, and 5 ⁸⁾ Only available with Electronics options 4 and 5 ⁹⁾ Only valid with Rigid extension options less than 2 956 mm ¹⁰⁾ Only available with approval options A, B, C, H, N, V Note: when selecting a Rigid option, extension coating must match the process connection coating type. ¹¹⁾ Not in combination with Rigid Extension options ECTFE Coated Probes B0 ... B5 ¹²⁾ Listed Certificates are not available with all configurations please contact factory for more information ¹³⁾ Not available with Electric options 0, 1, 3, 4, 5, 6, and Housing/Protection/Cable option V ¹⁴⁾ Available with Housing/Protection/Cable option V ¹⁵⁾ Approval option P is not available with PFA and ECTFE coating options ¹⁶⁾ Only available for 316L extensions ¹⁷⁾ Only available with approval options A, B, C, N, Q, T, V	

Level Measurement

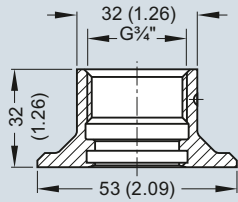
Point level measurement - Vibrating switches

SITRANS LVL200

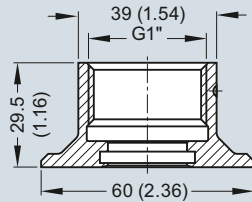
Options

LVL200 threaded welded socket

G $\frac{3}{4}$ " A/316L

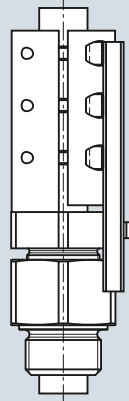


G1" A/316L

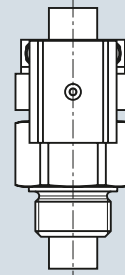


Lock fitting

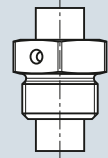
LVL200 extended
64 bar



LVL200 extended
16 bar



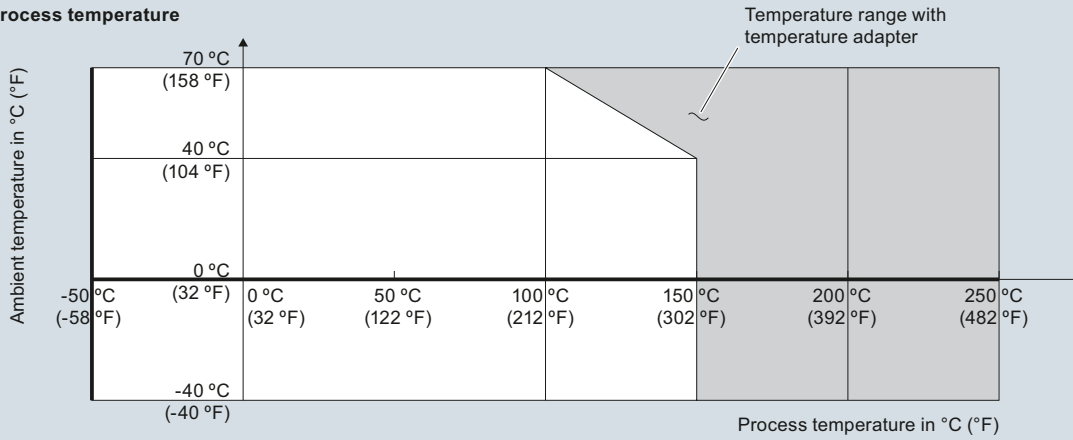
LVL200 extended
unpressurized



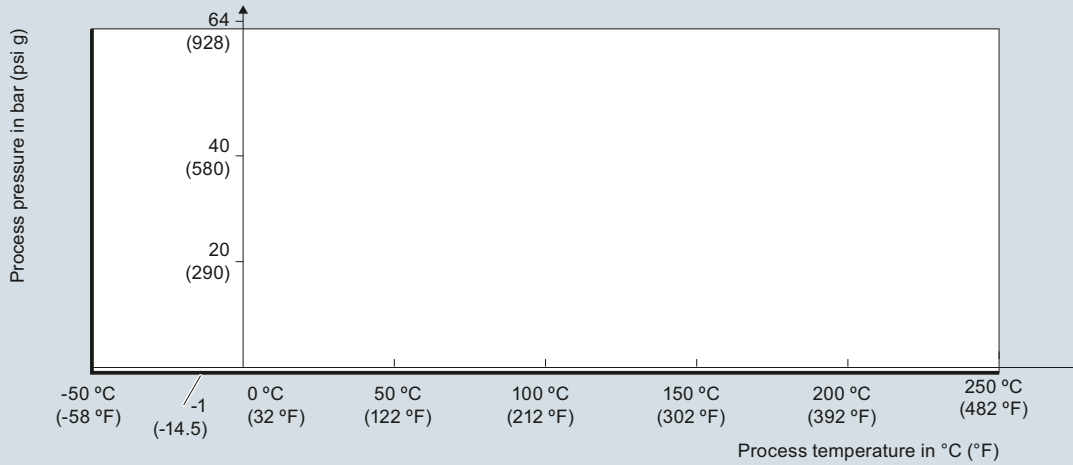
SITRANS LVL200 welded socket and lock fitting, dimensions in mm (inch)

Characteristic curves

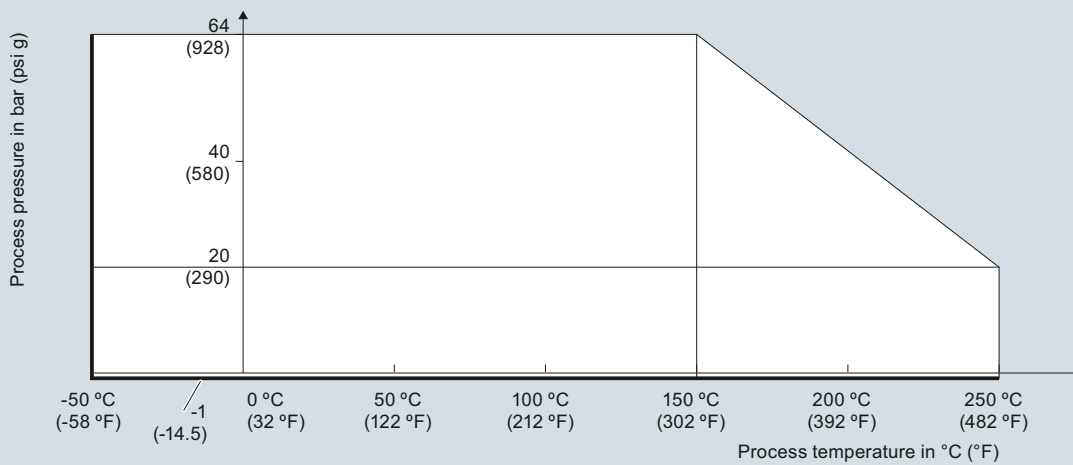
Ambient/Process temperature



Process pressure with switch position 0.7 g/cm³ (mode switch)



Process pressure with switch position 0.5 g/cm³ (mode switch)



SITRANS LVL200 process pressure/process temperature/ambient temperature derating curves

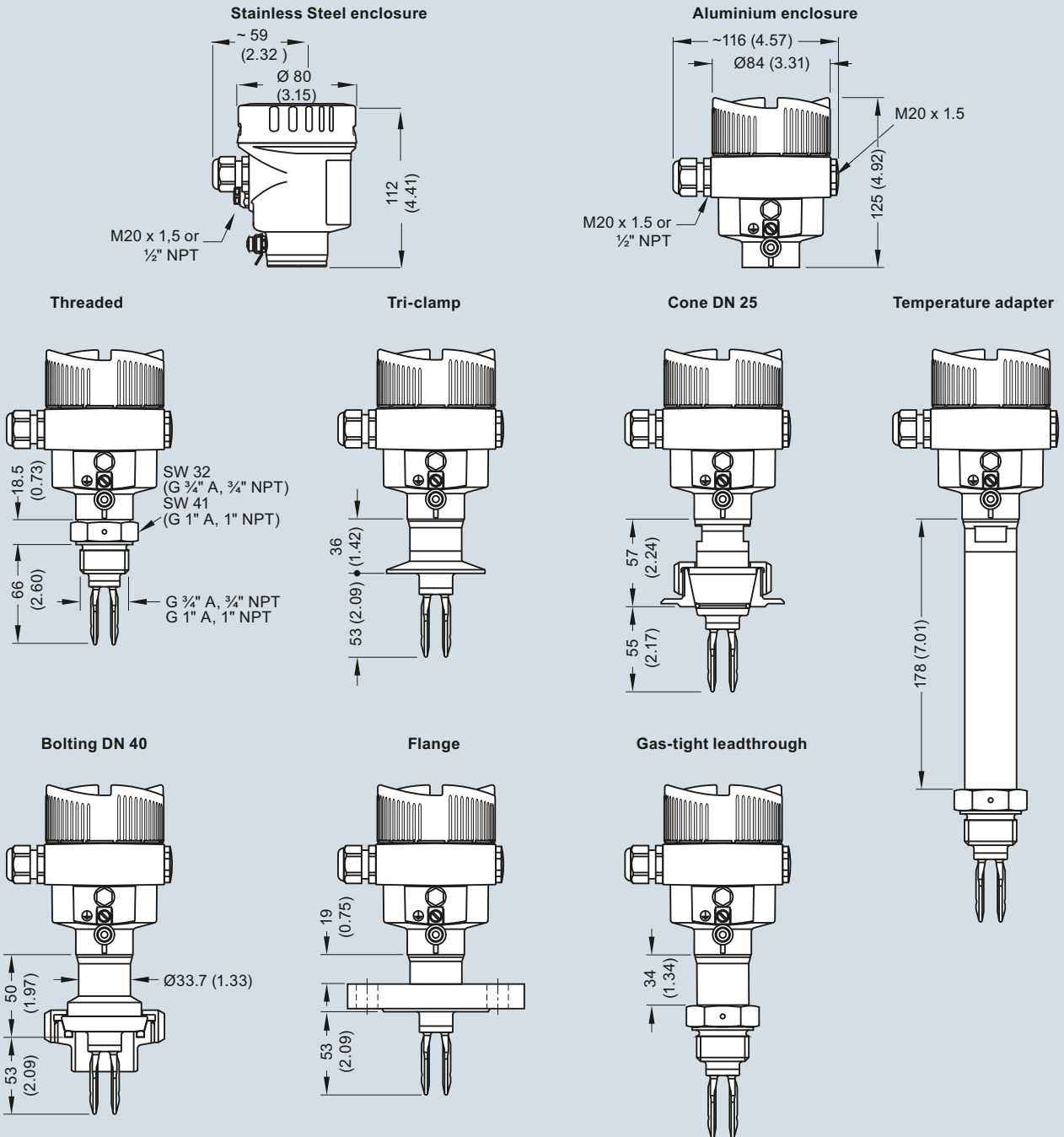
Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

Dimensional drawings

SITRANS LVL200 (Standard)



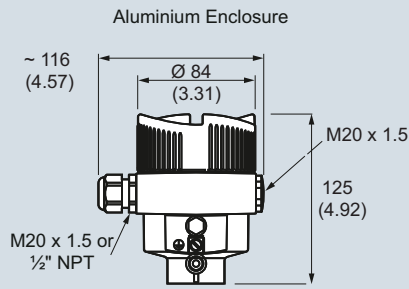
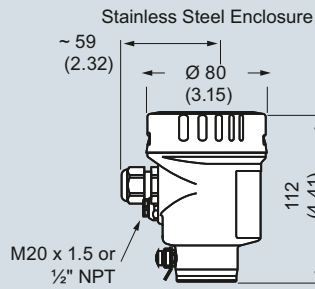
SITRANS LVL200 (standard), dimensions in mm (inch)

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVL200

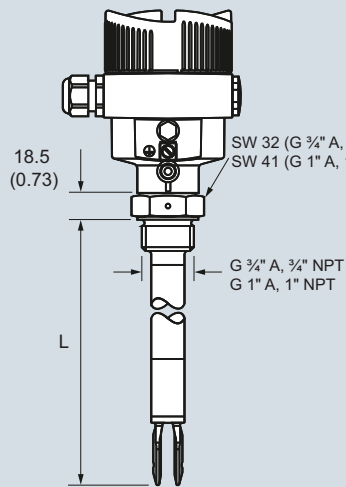
SITRANS LVL200 (Extended)



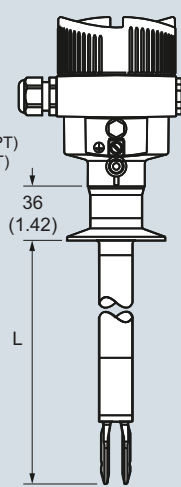
Sensor length (L)

316L, Alloy C22 (2.4602)	80 ... 6 000 mm (3.15 ... 236.2 inch)
Enamelled	80 ... 1 500 mm (3.15 ... 59.06 inch)
316L, ECTFE coated	80 ... 3 000 mm (3.15 ... 118.1 inch)
316L, PFA coated	80 ... 4 000 mm (3.15 ... 157.5 inch)

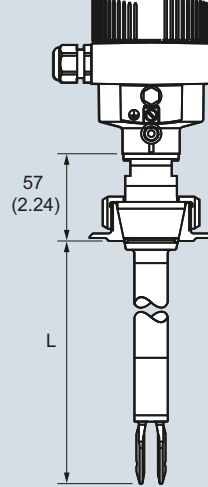
Threaded



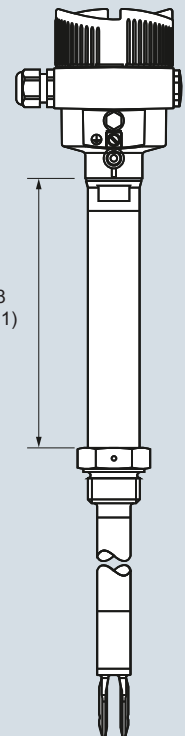
Tri-clamp



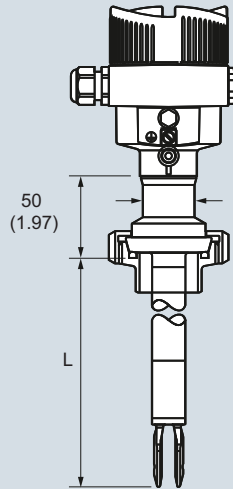
Cone DN 25



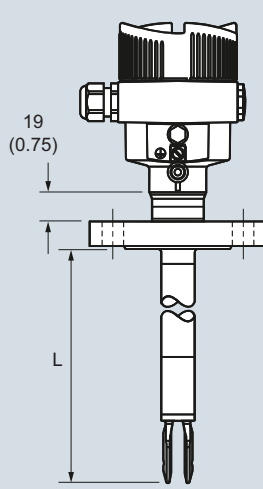
Temperature adapter



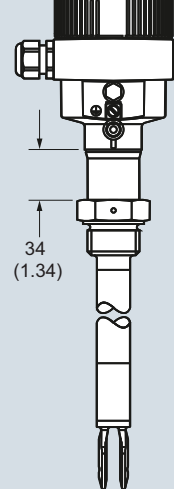
Bolting DN 40



Flanged



Gas-tight leadthrough



SITRANS LVL200 (extended), dimensions in mm (inch)

Level Measurement

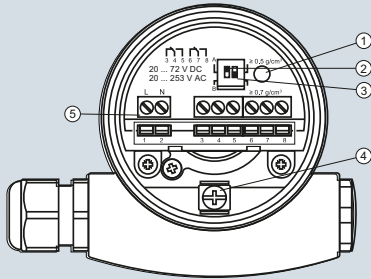
Point level measurement - Vibrating switches

SITRANS LVL200

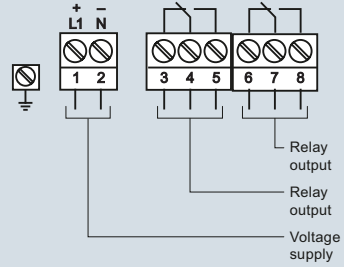
Schematics

4

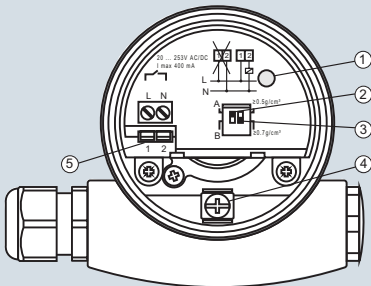
Relay (DPDT)



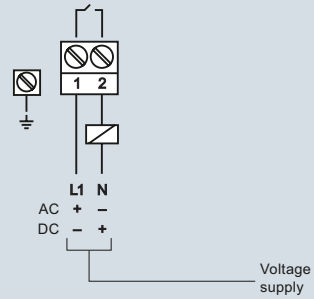
- ① Control lamp
- ② DIL switch for characteristics reversal
- ③ DIL switch for sensitivity adjustment
- ④ Ground terminal
- ⑤ Connection terminals



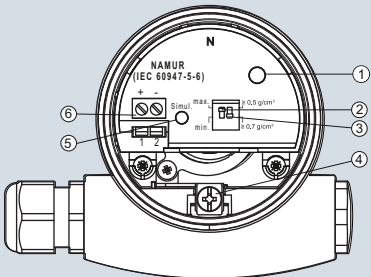
Contactless



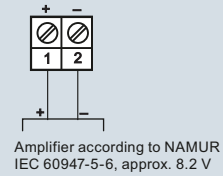
- ① Control lamp
- ② DIL switch for mode adjustment
- ③ DIL switch for switching point adaptation
- ④ Ground terminal
- ⑤ Connection terminals



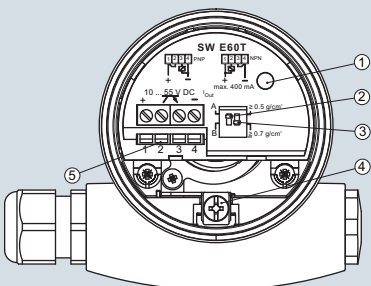
NAMUR



- ① Control lamp
- ② DIL switch for characteristics reversal
- ③ DIL switch for sensitivity adjustment
- ④ Ground terminal
- ⑤ Simulation key
- ⑥ Connection terminals

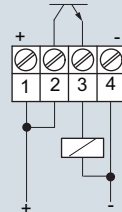


Transistor (NPN/PNP)

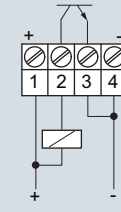


- ① Control lamp
- ② DIL switch for mode adjustment
- ③ DIL switch for switching point
- ④ Ground terminal
- ⑤ Connection terminals

PNP action



NPN action



SITRANS LVL200 connections

Overview



SITRANS LVS100 is a vibrating point level switch for material detection in bulk solids.

Benefits

- High resistance to mechanical forces
- Sliding sleeve options for adjustable insertion length and ease of cleaning
- Rotatable enclosure for ease of installation and wiring
- Suitable for point level detection of materials starting at a bulk density of 30 g/l (1.9 lb/ft³)
- Customer desired extensions up to 4 000 mm (157.48 inch)

Application

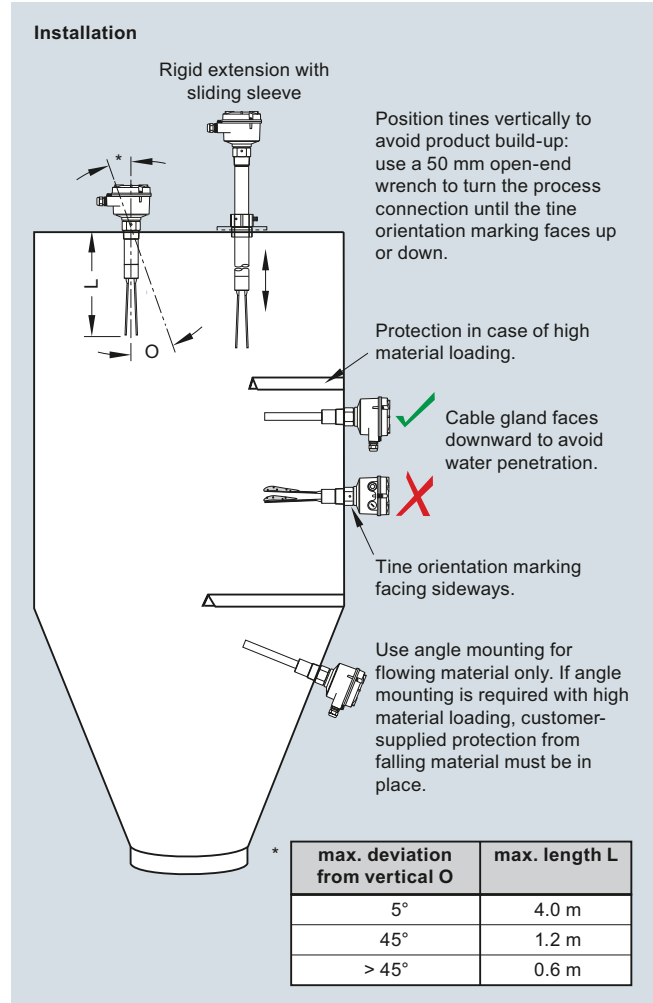
SITRANS LVS100 detects high, low or demand levels of dry bulk solids in bins, silos or hoppers.

SITRANS LVS100 has a compact design and can be top, side, or angle mounted. The vibrating fork design ensures the tines are kept clean. The unique design of the fork and crystal assembly eliminates false high level readings even if tines become damaged.

A signal from the electronic circuit excites a crystal in the probe causing the fork to vibrate. If the fork is covered by material, the change in vibration is detected by the electronic circuitry which causes the relay to change state after a one second delay. When the fork is free from material pressure, full vibration resumes and the relay reverts to its normal condition.

- Key Applications: dry bulk solids in bins, silos, hoppers

Configuration



SITRANS LVS100 installation, dimensions in mm (inch)

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS100


Technical specifications

Mode of Operation		Design	
Measuring principle	Vibrating point level switch	Material	Epoxy coated aluminum
Input		• Enclosure	
Measured variable	High, low and demand	Process connection	<ul style="list-style-type: none"> • Thread 1¼" NPT [(Taper), AN-SI/ASME B1.20.1], R 1½" [(BSPT), EN 10226] • Thread R 1½" [(BSPT), EN 10226], ½" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69 inch)] • Thread material: stainless steel 304 (1.4301) or 316L (1.4404) depending on configuration
Measuring frequency	200 Hz		
Output			
Relays	DPDT relay	Tine material	Stainless steel 316L (1.4404)
Relay delay	From loss of vibration: approximately 1 second From resumption of vibration: approximately 1 ... 2 s	Degree of protection	IP66/Type 4/NEMA 4
Signal delay	Probe uncovered to covered: approximately 1 s Probe covered to uncovered: approximately 1 ... 2 s	Conduit entry	2 x M20 x 1.5 or 2 x ½" NPT
Relay fail-safe	High or low, switch selectable	Weight	Standard version, no extensions: approx. 1.7 kg (3.7 lb)
Alarm output	Relay 8 A at 250 V AC, non-inductive Relay 5 A at 30 V DC, non-inductive	Power supply	<ul style="list-style-type: none"> • 19 ... 230 V AC, +10 %, 50 ... 60 Hz, 8 VA • 19 ... 40 V DC, +10 %, 1.5 W
Sensitivity		Certificates and approvals	
High or low, switch selectable		<ul style="list-style-type: none"> • CSA/FM General Purpose • CE • CSA/FM Dust Ignition Proof • RCM • ATEX II 1/2 D • IECex 	
Rated operating conditions			
Installation conditions			
• Location	Indoor/outdoor		
Ambient conditions			
• Ambient temperature	-40 ... +60 °C (-40 ... +140 °F)		
• Installation category	III		
• Pollution degree	2		
Medium conditions			
• Process temperature	-40 ... +150 °C (-40 ... +302 °F)		
• Max. threaded bushing temperature	60 °C (140 °F)		
• Max. enclosure surface temperature (Category 2D)	90 °C (194 °F)		
• Max. extension surface temperature (Category 1D)	150 °C (302 °F)		
• Pressure (vessel)	Max. 10 bar g (145 psi g) European Pressure Directive 2014/68/EU: Category 1		
Minimum material density	Approx. 30 g/l (1.9 lb/ft ³)		

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS100

Selection and Ordering data	Article No.	Selection and Ordering data	Order code
SITRANS LVS100, standard Vibrating point level switch for high or low level detection of bulk solids. Sensitivity > 30 g/l.	↗ 7ML5735- 	Further Designs Please add "-Z" to Art. No. and specify Order code(s).	
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		Total insertion length: Enter the total insertion length in plain text description, max. (50 mm increments) Signal bulb inserted in M20 cable gland ¹⁾	Y01 A20
Input Voltage DPDT Relay: 19 ... 230 V AC, 19 ... 40 V DC DPDT Relay: 19 ... 230 V AC, 19 ... 40 V DC (stocked version) ¹⁾³⁾	● 1 ● 2	Operating Instructions Multi-language Note: the Operating Instructions should be ordered as a separate line on the order. All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	Article No. 7ML1998-5FT63
Process temperature Up to 150 °C (302 °F)	● A	Spare Parts Replacement Electronics Module LVS100 DPDT Relay (19 ... 253 V AC, 19 ... 55 V DC) R 1½" [(BSPT), EN 10226] DIN 2999 thread, sliding sleeve 1½" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69 inch)]	7ML1830-1NS 7ML1830-1NT 7ML1830-1NU
Process connection Threaded R 1½" [(BSPT), EN 10226] 1¼" NPT [(Taper), ANSI/ASME B1.20.1] R 1½" [(BSPT), EN 10226] DIN 2999 thread, sliding sleeve - [min. length 500 mm (19.69 inch)] ²⁾ 1½" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69 inch)] ²⁾	● A ● B ● C ● D	¹⁾ Available only with Approval option A	
Extension length Stainless steel 316L (1.4404) Standard length, 170 mm (6.69 inch)	● 11		
Add Order code Y01 and plain text: "Insertion length ... mm" Stainless steel 304 (1.4301)			
● 300 ... 500 mm (11.81 ... 19.69 inch) ● 501 ... 1 000 mm (19.72 ... 39.37 inch) ● 1 001 ... 1 500 mm (39.41 ... 59.06 inch) ● 1 501 ... 2 000 mm (59.09 ... 78.74 inch) ● 2 001 ... 2 500 mm (78.78 ... 98.43 inch) ● 2 501 ... 3 000 mm (98.46 ... 118.11 inch) ● 3 001 ... 3 500 mm (118.15 ... 137.80 inch) ● 3 501 ... 4 000 mm (137.83 ... 157.48 inch)	● 12 ● 13 ● 14 ● 15 ● 16 ● 17 ● 18 ● 20		
Approvals CSA/FM General Purpose, CE, RCM CSA/FM Class II, Div. 1, Group E, F, G, Class III, ATEX II 1/2 D, RCM IEC-Ex Ex t IIIC T-- Da/Db IP6X EAC Ex ta/tb IIIC Da/Db	● A ● B ● C ● D		

¹⁾ Only available with the following configurations 7ML5735-2AA11-0AA0 or 7ML5735-2AB11-0AA0

²⁾ Not available with extension length options 11, 12

³⁾ Input voltage 2 not allowed with extension length 16,17,18 or 20

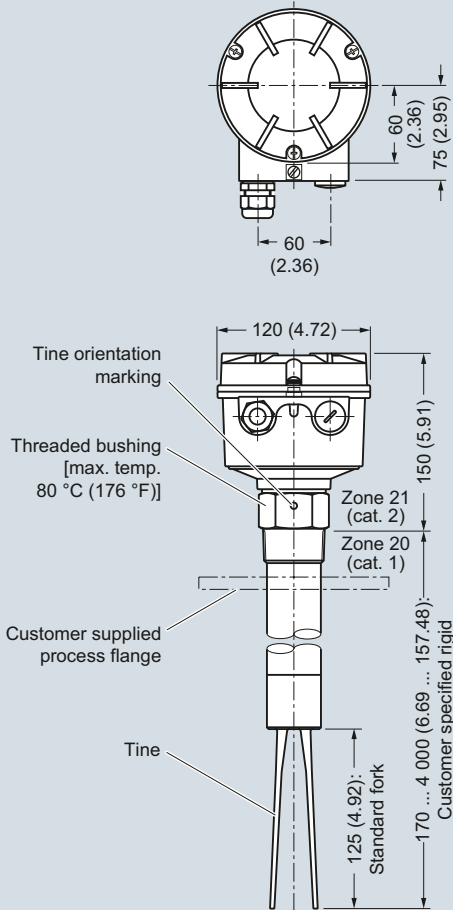
● We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 10/11 in the appendix.

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS100

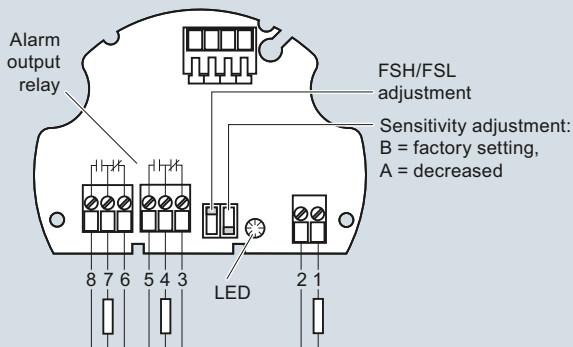
Dimensional drawings



SITRANS LVS100, dimensions in mm (inch)

Schematics

Universal voltage (DPDT relay)



AC: Terminal 1: L
Terminal 2: N
19 ... 230 V AC, +10 %, 50 ... 60 Hz, 8 VA

DC: Terminal 1: +
Terminal 2: -
19 ... 50 V DC, +10 %, 2 W

SITRANS LVS100 connections

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Overview



SITRANS LVS200 is a vibrating point level switch for high, low, or demand level detection of bulk solids.

Benefits

- High resistance to mechanical forces
- Strong vibration resistance to high bulk material loads
- Rotatable enclosure for convenient wiring
- Suitable for low density material: standard version, 20 g/l (1.3 lb/ft³); liquid/solid interface version, 50 g/l (3 lb/ft³) and low density option min. 5 g/l (0.3 lb/ft³)
- Customer desired extensions up to 20 000 mm (787 inch)
- Optional detection of solids within liquid
- Durable short fork option with 165 mm (6.5 inch) insertion length

Application

The standard LVS200 detects high, low, or demand levels of dry bulk solids in bins, silos, or hoppers. The liquid/solid interface version can also detect settled solids within liquids or solids within confined spaces such as feed pipes. It is designed to ignore liquids in order to detect the interface between a solid and a liquid.

A pipe extension version is available with either the standard or liquid/solid interface electronics and fork, separated by a customer supplied 1 inch pipe.

SITRANS LVS200 has an optional 4 to 20 mA output for monitoring buildup on the fork to determine when preventative maintenance should be performed in sticky applications.

The LVS200 has a compact design and can be top, side or angle mounted. The vibrating fork design ensures the tines are kept clean. The unique design of the fork and crystal assembly eliminates false high level readings even if tines become damaged.

A signal from the electronic circuit excites a crystal in the probe causing the fork to vibrate. If the fork is covered by material, the change in vibration is detected by the electronic circuitry which causes the relay to change state after a one second delay. When the fork is free from material pressure, full vibration resumes and the relay reverts to its normal condition.

- Key Applications: dry bulk solids in bins, silos, hoppers or settled solids within liquids (interface version)

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Technical specifications

Mode of operation		Medium conditions	
Measuring principle	Vibrating point level switch	<ul style="list-style-type: none"> Process temperature 	<ul style="list-style-type: none"> All except CSA Class II, Group G: -40 ... +150 °C (-40 ... +302 °F) CSA Class II, Group G: -40 ... +140 °C (-40 ... +284 °F), CSA temperature code T3B
Input		<ul style="list-style-type: none"> Max. threaded bushing temperature Max. enclosure surface temperature (Category 2D) Max. extension surface temperature (Category 1D) Pressure (vessel) 	<ul style="list-style-type: none"> 60 °C (140 °F) 90 °C (194 °F) 150 °C (302 °F) Max. 10 bar g (145 psi g) European Pressure Directive 2014/68/EU: Category 1
Output		<ul style="list-style-type: none"> Minimum material density 	<ul style="list-style-type: none"> Standard version: approx. 20 g/l (1.2 lb/ft³) Liquid/solid interface version: approx. 50 g/l (3 lb/ft³) Optional low density version: approx. 5 g/l (0.3 lb/ft³)
PNP		Open collector: Permanent load max. 0.4 A, short-circuit and overload protected Turn-on voltage: max. 50 V (reverse protection)	
2-wire without contact		Load current: <ul style="list-style-type: none"> Min. 10 mA Max. 500 mA permanent Max. 2A < 200 ms Max. 5A < 50 ms Voltage drop on the electronic module: max. 7 V with closed electric circuit Cut-off current with open electric circuit: max. 5 mA	
Relays		Design Material <ul style="list-style-type: none"> Enclosure Process connection	
<ul style="list-style-type: none"> Version with 1 relay Version with 2 relays 		Epoxy coated aluminum <ul style="list-style-type: none"> Thread 1½" NPT [(Taper), ANSI/ASME B1.20.1], R ½" [(BSPT), EN 10226], and flange options Optional sliding bushing with 2" NPT [(Taper), ANSI/ASME B1.20.1] or BSP thread Thread material: stainless steel 303 (1.4301) 	
Relay delay		Tine material Stainless steel 316L (1.4404), PTFE-coated tines are available upon special request	
<ul style="list-style-type: none"> From loss of vibration: approximately 1 second From resumption of vibration: approximately 1 ... 2 seconds 		Degree of protection IP65/Type 4/NEMA 4	
Signal delay		Conduit entry 2 x M20 x 1.5 or 2 x ½" NPT	
<ul style="list-style-type: none"> Probe uncovered to covered: approximately 1 second Probe covered to uncovered: approximately 1 ... 2 seconds 		Weight <ul style="list-style-type: none"> Standard version, no extensions: approx. 2.0 kg (4.4 lb) Solids/liquids version, no extensions: approx. 1.9 kg (4.2 lb) 	
Relay fail-safe		Power supply <ul style="list-style-type: none"> 19 ... 230 V AC, +10 %, 50 ... 60 Hz, 8 VA 19 ... 55 V DC, +10 %, 1.5 W 	
Alarm output		Certificates and approvals <ul style="list-style-type: none"> CSA/FM General Purpose CE CSA/FM Dust Ignition Proof RCM ATEX II 1/2 D CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, available only with power supply options 5 and 6 ATEX II 1G and 1/2 G Eex ia IIC; ATEX II 1D and 1/2 D, available only with power supply option 5 	
mA output			
<ul style="list-style-type: none"> Resolution 			
Sensitivity		High or low, switch selectable	
Rated operating conditions			
Installation conditions			
<ul style="list-style-type: none"> Location 		Indoor/outdoor	
Ambient conditions			
<ul style="list-style-type: none"> Ambient temperature Installation category Pollution degree 		-40 ... +60 °C (-40 ... +140 °F) III 2	

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

4

Selection and Ordering data	Article No.
SITRANS LVS200, standard SITRANS LVS200 is a vibrating point level switch for high, low, or demand level detection of bulk solids. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	↗ 7ML5731- - A 0
Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) ¹⁾	1
19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) ¹⁾	2
18 ... 50 V DC PNP ¹⁾	3
19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾	4
7 ... 9 V DC (requires NAMUR switch amplifier) NAMUR IEC 60947-5-6, 2-wire ²⁾	5
8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ³⁾	6
19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) basic version ⁴⁾⁵⁾	7
Process temperature Without temperature isolator	A
With temperature isolator	B
Separated enclosure - cable length 1.5 m (4.92 ft) [max. temperature process 150 °C (302 °F)/ max. temperature electronics 60 °C (140 °F)]	C
Separated enclosure - cable length 4.0 m (13.12 ft) [max. temperature process 150 °C (302 °F)/ max. temperature electronics 60 °C (140 °F)]	D
Process connection Threaded R 1½" [(BSPT), EN 10226]	A
1½" NPT [(Taper), ANSI/ASME B1.20.1]	B
G 2" [(BSPP), EN ISO 228-1], sliding sleeve [min. length 500 mm (19.69 inch)] ⁶⁾	C
2" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69 inch)] ⁶⁾	D
Flanged DN 100 PN 6, EN 1092-1 ⁷⁾	E
DN 100 PN 16, EN 1092-1	F
2" ASME 150 lb B16.5	G
3" ASME 150 lb B16.5	H
4" ASME 150 lb B16.5	J
2" Tri-clamp (DN 50) ISO 2852	K
Extension length Stainless steel 304 (1.4301) Standard length, 235 mm (9.25 inch)	11
Add Order code Y01 and plain text: "Insertion length ... mm" • 300 ... 500 mm (11.81 ... 19.69 inch)	12
• 501 ... 750 mm (19.72 ... 29.53 inch)	13
• 751 ... 1 000 mm (29.57 ... 39.37 inch)	14
• 1 001 ... 1 250 mm (39.41 ... 49.21 inch)	15
• 1 251 ... 1 500 mm (49.25 ... 59.06 inch)	16
• 1 501 ... 1 750 mm (59.09 ... 68.90 inch)	17
• 1 751 ... 2 000 mm (68.94 ... 78.74 inch)	18
• 2 001 ... 2 250 mm (78.78 ... 88.58 inch)	21
• 2 251 ... 2 500 mm (88.62 ... 98.43 inch)	22
• 2 501 ... 2 750 mm (98.46 ... 108.27 inch)	23
• 2 751 ... 3 000 mm (108.31 ... 118.11 inch)	24
• 3 001 ... 3 250 mm (118.15 ... 127.95 inch)	25
• 3 251 ... 3 500 mm (127.99 ... 137.80 inch)	26
• 3 501 ... 3 750 mm (137.83 ... 147.64 inch)	27
• 3 751 ... 4 000 mm (147.68 ... 157.48 inch)	28

Selection and Ordering data	Article No.
SITRANS LVS200, standard SITRANS LVS200 is a vibrating point level switch for high, low, or demand level detection of bulk solids. Stainless steel 316L (1.4404) Standard length, 235 mm (9.25 inch)	↗ 7ML5731- - A 0 31
Add Order code Y01 and plain text: "Insertion length ... mm" 300 ... 500 mm (11.81 ... 19.69 inch)	32
501 ... 750 mm (19.72 ... 29.53 inch)	33
751 ... 1 000 mm (29.57 ... 39.37 inch)	34
1 001 ... 1 250 mm (39.41 ... 49.21 inch)	35
1 251 ... 1 500 mm (49.25 ... 59.06 inch)	36
1 501 ... 1 750 mm (59.09 ... 68.90 inch)	37
1 751 ... 2 000 mm (68.94 ... 78.74 inch)	38
2 001 ... 2 250 mm (78.78 ... 88.58 inch)	41
2 251 ... 2 500 mm (88.62 ... 98.43 inch)	42
2 501 ... 2 750 mm (98.46 ... 108.27 inch)	43
2 751 ... 3 000 mm (108.31 ... 118.11 inch)	44
3 001 ... 3 250 mm (118.15 ... 127.95 inch)	45
3 251 ... 3 500 mm (127.99 ... 137.80 inch)	46
3 501 ... 3 750 mm (137.83 ... 147.64 inch)	47
3 751 ... 4 000 mm (147.68 ... 157.48 inch)	48
Material process connection/extension Stainless steel threads 304 (1.4301), flanges 321 (1.4541), Tri-clamp 304 (1.4301) ⁸⁾	1
Stainless steel 316L (1.4404) ⁹⁾	2
Approvals CSA/FM Dust Ignition Proof, RCM	A
ATEX II 1/2 D, RCM	B
CSA/FM General Purpose, RCM, CE	C
CE, RCM	D
CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, RCM	E
ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, RCM	F
IEC-Ex t IIIC Da/Db	G
EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	H
EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	J

- 1) Available with Approval options A ... D, G only
- 2) Available with Approval options D, E, F only
- 3) Available with Approval options B, D, G only
- 4) Available with configurations 7ML5731-7AA11-1BA0 or 7ML5731-7AB11-1AA0 only
- 5) Basic version is cost effective and offers fast delivery
- 6) Not available with extension length options 11, 12, 31, 32
- 7) Max. 6 bar (87 psi)
- 8) Available with option extension length 11 ... 28
- 9) Available with option extension length 31 ... 48

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

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

4

Selection and Ordering data	Order code	Selection and Ordering data	Article No.
<p>Further Designs</p> <p>Please add "-Z" to Article No. and specify Order code(s).</p>		<p>SITRANS LVS200, short fork for liquids/solids interface</p> <p>Vibrating point level switch for solids or solids within liquid interface applications, and high load applications with short insertion requirements</p> <p>➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</p>	<p>➤ 7ML5732-</p> <p>A 0</p>
<p>Total insertion length: Enter the total insertion length in plain text description, max. 4 000 mm (157.48 inch)</p>	Y01	<p>Power supply</p> <p>19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)⁶⁾</p>	1
<p>Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]: Measuring-point number/identification (max. 27 characters); specify in plain text</p>	Y14	<p>19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT)⁶⁾</p>	2
<p>Enhanced sensitivity > 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch)³⁾</p>	K05	<p>18 ... 50 V DC PNP⁶⁾</p>	3
<p>Enhanced sensitivity < 5 g/l via electronics, increased insertion length of 25 mm (0.98 inch), and increased aluminum fork width¹⁾³⁾</p>	G01	<p>19 ... 230 V AC/DC without contact, 2-wire loop powered⁶⁾</p>	4
<p>Signal bulb inserted in M20 cable gland²⁾</p>	A20	<p>8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire¹⁾</p>	5
<p>NAMUR 8/16 mA switch amplifiers available, contact factory for pricing</p>		<p>Process temperature</p> <p>Without temperature isolator</p> <p>With temperature isolator</p>	A B C
<p>Operating Instructions</p> <p>Multi-language</p> <p>Note: the Operating Instructions should be ordered as a separate line on the order.</p> <p>All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation</p>	<p>Article No.</p> <p>7ML1998-5FT63</p>	<p>Separated enclosure - cable length 1.5 m (4.92 ft) [max. temperature process 150 °C (302 °F)/max. temperature electronics 60 °C (140 °F)]</p> <p>Separated enclosure - cable length 4.0 m (13.12 ft) [max. temperature process 150 °C (302 °F)/max. temperature electronics 60 °C (140 °F)]</p>	D
<p>Spare Parts</p> <p>Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]</p>	7ML1830-1KL	<p>Process connection</p> <p><u>Threaded</u></p> <p>R 1½" [(BSPT), EN 10226]</p> <p>1½" NPT [(Taper), ANSI/ASME B1.20.1]</p> <p>G 2" [(BSPP), EN ISO 228-1], sliding sleeve [min. length 500 mm (19.69 inch)]²⁾</p> <p>2" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69 inch)]²⁾</p> <p><u>Flanged</u></p> <p>DN 100 PN 6, EN 1092-1³⁾</p> <p>DN 100 PN 16, EN 1092-1</p>	A B C D
<p>Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)]</p>	A5E35525363	<p>2" ASME 150 lb B16.5</p> <p>3" ASME 150 lb B16.5</p> <p>4" ASME 150 lb B16.5</p> <p>2" Tri-clamp (DN 50) ISO 2852</p>	E F G H J K
<p>Sliding sleeve, 2" BSP (ISO 228)</p>	7ML1830-1JM	<p>Extension length</p> <p>Stainless steel 304 (1.4301)</p> <p>Standard length, 165 mm (6.50 inch)</p>	11
<p>Sliding sleeve, 2" NPT (ASME B1.20.1)</p>	7ML1830-1JN	<p>Add Order code Y01 and plain text: "Insertion length ... mm"</p> <p>200 ... 500 mm (7.87 ... 19.69 inch)</p> <p>501 ... 750 mm (19.72 ... 29.53 inch)</p> <p>751 ... 1 000 mm (29.57 ... 39.37 inch)</p> <p>1 001 ... 1 250 mm (39.41 ... 49.21 inch)</p> <p>1 251 ... 1 500 mm (49.25 ... 59.06 inch)</p> <p>1 501 ... 1 750 mm (59.09 ... 68.90 inch)</p> <p>1 751 ... 2 000 mm (68.94 ... 78.74 inch)</p> <p>2 001 ... 2 250 mm (78.78 ... 88.58 inch)</p> <p>2 251 ... 2 500 mm (88.62 ... 98.43 inch)</p> <p>2 501 ... 2 750 mm (98.46 ... 108.27 inch)</p> <p>2 751 ... 3 000 mm (108.31 ... 118.11 inch)</p> <p>3 001 ... 3 250 mm (118.15 ... 127.95 inch)</p> <p>3 251 ... 3 500 mm (127.99 ... 137.80 inch)</p> <p>3 501 ... 3 750 mm (137.83 ... 147.64 inch)</p> <p>3 751 ... 4 000 mm (147.68 ... 157.48 inch)</p>	12 13 14 15 16 17 18 21 22 23 24 25 26 27 28
<p>Namur Isolator switch amplifier relay output KFD2-SR2-Ex1.W</p>	A5E35667901		
<p>Available ex stock</p> <p>For details see page 10/11 in the appendix.</p> <p>SITRANS LVS200, standard, power supply 7, process temperature A, process connection A, extension length 11, material process connection/extension 1, and approval B</p>	7ML5731-7AA11-1BA0		
<p>SITRANS LVS200, standard, power supply 7, process temperature A, process connection B, extension length 11, material process connection/extension 1, and approval A</p>	7ML5731-7AB11-1AA0		

1) Available only with power supply 1 and Approval C, D and with Process connection flange E ... J

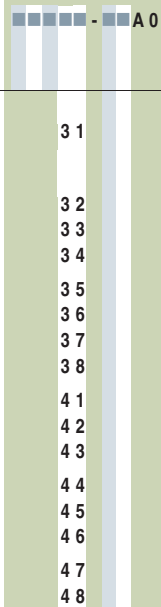
2) Available with Approval option D only

3) K05 and G01 are not available together

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200


Selection and Ordering data	Article No.	Selection and Ordering data	Order code
SITRANS LVS200, short fork for liquids/solids interface Vibrating point level switch for solids or liquids within liquid interface applications, and high load applications with short insertion requirements <u>Stainless steel 316L (1.4404)</u> Standard length, 165 mm (6.50 inch) <u>Add Order code Y01 and plain text: "Insertion length ... mm"</u> 200 ... 500 mm (7.87 ... 19.69 inch) 501 ... 750 mm (19.72 ... 29.53 inch) 751 ... 1 000 mm (29.57 ... 39.37 inch) 1 001 ... 1 250 mm (39.41 ... 49.21 inch) 1 251 ... 1 500 mm (49.25 ... 59.06 inch) 1 501 ... 1 750 mm (59.09 ... 68.90 inch) 1 751 ... 2 000 mm (68.94 ... 78.74 inch) 2 001 ... 2 250 mm (78.78 ... 88.58 inch) 2 251 ... 2 500 mm (88.62 ... 98.43 inch) 2 501 ... 2 750 mm (98.46 ... 108.27 inch) 2 751 ... 3 000 mm (108.31 ... 118.11 inch) 3 001 ... 3 250 mm (118.15 ... 127.95 inch) 3 251 ... 3 500 mm (127.99 ... 137.80 inch) 3 501 ... 3 750 mm (137.83 ... 147.64 inch) 3 751 ... 4 000 mm (147.68 ... 157.48 inch)	7ML5732-  A 0	Further Designs Please add "-Z" to Article No. and specify Order code(s). Total insertion length: Enter the total insertion length in plain text description, max. 4 000 mm (147.48 inch) Y01 Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]: Measuring-point number/identification (max. 27 characters); specify in plain text Y14 Signal bulb inserted in M20 cable gland ¹⁾³⁾ A20 Adjustable sensitivity (by potentiometer) for solids/liquids interface detection ¹⁾²⁾⁴⁾ G02	
Material process connection/extension Stainless steel threads 304 (1.4301), flanges 321(1.4541), Tri-clamp 304 (1.4301) ⁴⁾ Stainless steel 316L (1.4404) ⁵⁾	1 2	Operating Instructions Multi-language Note: the Operating Instructions should be ordered as a separate line on the order. All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	Article No. 7ML1998-5FT63
Approvals CSA/FM Dust Ignition Proof, RCM ATEX II 1/2 D, RCM CSA/FM General Purpose, RCM, CE CE, RCM IEC-Ex t IIIC Da/Db ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, CE, RCM EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	1 2 A B C D E F G H	Spare Parts Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)] A5E35525363 Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)] 7ML1830-1KM Sliding sleeve, 2" BSP (ISO 228) 7ML1830-1JM Sliding sleeve, 2" NPT (ASME B1.20.1) 7ML1830-1JN	

- 1) Available with Approval options B, D, E only
 2) Not available with extension length options 11,12, 31, 32
 3) Max. 6 bar (87psi)
 4) Available with option extension length 11 ... 28
 5) Available with option extension length 31 ... 48
 6) Power supply options 1, 2, 3, 4 not allowed with Approvals options F and H
- ◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 10/11 in the appendix.

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Selection and Ordering data	Article No.
SITRANS LVS200, pipe extension Vibrating point level switch for high or low levels of bulk solids Extended using 1" pipe extension (customer supplied) ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5733- 
Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) ¹⁾ 19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) ¹⁾ 18 ... 50 V DC PNP ¹⁾ 19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾ 7 ... 9 V DC (requires NAMUR switch amplifier) NAMUR IEC 60947-5-6, 2-wire ²⁾ 8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ³⁾	1 2 3 4 5 6
Process temperature Up to 150 °C (302 °F)	A
Process connection <u>Threaded</u> R 1½" [(BSPT), EN 10226] 1½" NPT [(Taper), ANSI/ASME B1.20.1] <u>Flanged</u> DN 100 PN 6, EN 1092-1 ⁴⁾ DN 100 PN 16, EN 1092-1 2" ASME 150 lb B16.5 3" ASME 150 lb B16.5 4" ASME 150 lb B16.5 2" Tri-clamp (DN 50) ISO 2852	A B C D E F G K
Process connection material Stainless steel threads 304 (1.4301), flanges 321 (1.4541), Tri-clamp 304 (1.4301) Stainless steel 316L (1.4404)	1 2
Extension length Customer supplied 1" pipe extension Length: 300 ... 3 800 mm (11.81 ... 149.61 inch)	1
Application type Dry bulk solids (125 Hz) Liquids/solids interface (350 Hz)	1 2
Approvals CSA/FM Dust Ignition Proof, RCM ATEX II 1/2 D, RCM CSA/FM General Purpose, RCM, CE CE, RCM CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, RCM ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, RCM IEC-Ex t IIIC Da/Db EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	A B C D E F G H J

¹⁾ Available with Approval options A, B, C, D, G only
²⁾ Available with approval options D, F, J and application type 1 only
³⁾ Available with Approval options B, D, G only
⁴⁾ Max. 6 bar (87 psi)



Selection and Ordering data	Order code
Further Designs Please add "-Z" to Article No. and specify Order code(s).	
Total insertion length: Enter the total insertion length in plain text description, max. 3 800 mm (149.61 inch)	Y01
Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]; Measuring-point number/identification (max. 27 characters); specify in plain text	Y14
Enhanced sensitivity > 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch) ⁵⁾	K05
Enhanced sensitivity < 5 g/l via electronics, increased insertion length of 25 mm (0.98 inch) and increased aluminum fork width ¹⁾⁴⁾⁵⁾	G01
Adjustable sensitivity (by potentiometer) for solids/liquids interface detection ²⁾³⁾⁴⁾	G02
Signal bulb inserted in M20 cable gland ²⁾⁶⁾	A20
Operating Instructions Multi-language Note: the Operating Instructions should be ordered as a separate line on the order. All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	Article No. 7ML1998-5FT63
Spare Parts Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KL
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)]	A5E35525363
Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KM
NAMUR Isolated switch amplifier Relay output KFD2-SR2-Ex1.W	A5E35667901

¹⁾ Available only with power supply 1 and Approvals C, D, and with Process connection flange C ... G
²⁾ Available with approval options D only
³⁾ Available with power supply option 1 only and application type 2
⁴⁾ Not available with option K05
⁵⁾ Available with Application type 1 only
⁶⁾ A20 not allowed with power supply options 4, 5, and 6

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS LVS200, cable extended Vibrating point level switch for high or low level detection of bulk solids materials ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	↗ 7ML5734- 	SITRANS LVS200, cable extended Vibrating point level switch for high or low level detection of bulk solids materials	7ML5734- 
Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) ¹⁾ 19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) ¹⁾ 18 ... 50 V DC PNP ¹⁾ 19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾ 7 ... 9 V DC (requires NAMUR switch amplifier) NAMUR IEC 60947-5-6, 2-wire ²⁾⁵⁾ 8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ³⁾	1 2 3 4 5 6	Approvals CSA/FM Dust Ignition Proof, RCM ATEX II 1/2 D, RCM CSA/FM General Purpose, RCM, CE CE, RCM CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class I, Aex ia IIC, CSA Class I, Ex ia IIC, RCM ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, RCM ⁶⁾ IEC-Ex t IIIC Da/Db EAC Ex ta/tb IIIC Da/Db, Ex ta IIIC Da EAC Ex Ga/Gb Ex ia IIC, 0Ex ia IIC Ga; Ex ta/tb IIIC Da/Db, Ex ta IIIC Da	A B C D E F G H J
Process temperature Up to 80 °C (176 °F)	A		
Process connection Threaded R 1½" [(BSPT), EN 10226] (1.4301/304) 1½" NPT [(Taper), ANSI/ASME B1.20.1] (1.4301/304) Flanged DN 100 PN 6, EN 1092-1 (1.4541/321) ⁴⁾ DN 100 PN 16, EN 1092-1 (1.4541/321) 2" ASME 150 lb B16.5 (1.4541/321) 3" ASME 150 lb B16.5 (1.4541/321) 4" ASME 150 lb B16.5 (1.4541/321)	A B C D E F G		
Extension length 750 ... 1 000 mm (29.5 ... 39.4 inch) [max. length 20 000 mm (787.4 inch), not with Power supply option 5 (max. 10 000 mm, 393.7 inch)] ⁸⁾ Add Order code Y01 and plain text: "Insertion length ... mm"	10		
1 001 ... 2 000 mm (39.41 ... 78.74 inch) 2 001 ... 3 000 mm (78.78 ... 118.11 inch) 3 001 ... 4 000 mm (118.15 ... 157.48 inch) 4 001 ... 5 000 mm (157.52 ... 196.85 inch) 5 001 ... 6 000 mm (196.89 ... 236.22 inch) 6 001 ... 7 000 mm (236.26 ... 275.59 inch) 7 001 ... 8 000 mm (275.63 ... 314.96 inch) ⁵⁾ 8 001 ... 9 000 mm (315 ... 354.33 inch) ⁵⁾ 9 001 ... 10 000 mm (354.37 ... 393.70 inch) ⁵⁾ 10 001 ... 11 000 mm (393.74 ... 433.07 inch) ⁵⁾⁶⁾ 11 001 ... 12 000 mm (433.11 ... 472.44 inch) ⁵⁾⁶⁾ 12 001 ... 13 000 mm (472.48 ... 511.81 inch) ⁵⁾⁶⁾ 13 001 ... 14 000 mm (511.85 ... 551.18 inch) ⁵⁾⁶⁾ 14 001 ... 15 000 mm (551.22 ... 590.55 inch) ⁵⁾⁶⁾ 15 001 ... 16 000 mm (590.59 ... 629.92 inch) ⁵⁾⁶⁾ 16 001 ... 17 000 mm (629.96 ... 669.29 inch) ⁵⁾⁶⁾ 17 001 ... 18 000 mm (669.33 ... 708.66 inch) ⁵⁾⁶⁾ 18 001 ... 19 000 mm (708.70 ... 748.03 inch) ⁵⁾⁶⁾ 19 001 ... 20 000 mm (748.07 ... 787.40 inch) ⁵⁾⁶⁾	11 12 13 14 15 16 17 18 20 21 22 23 24 25 26 27 28 30 31		
Application type Dry bulk solids (125 Hz) Liquid/solids interface (350 Hz) ⁷⁾	1 2		

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Selection and Ordering data	Order code
Further Designs	
Please add "-Z" to Article No. and specify Order code(s).	
Enter the total insertion length in plain text description, max. 20 000 mm (787.40 inch)	Y01
Stainless steel tag [100 x 45 mm (3.94 x 1.77 inch)]; Measuring-point number/identification (max. 27 characters); specify in plain text	Y14
Enhanced sensitivity > 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch) ⁵⁾	K05
Enhanced sensitivity < 5 g/l via electronics and increased insertion length of 25 mm (0.98 inch) and increased aluminum fork width ¹⁾⁴⁾	G01
Adjustable sensitivity (by potentiometer) for solids/liquids interface detection ²⁾³⁾⁴⁾	G02
Signal bulb inserted in M20 cable gland ²⁾⁶⁾	A20
Operating Instructions	
Multi-language	Article No. 7ML1998-5FT63
Note: the Operating Instructions should be ordered as a separate line on the order. All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Spare Parts	
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KL
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, two relay output (DPDT)]	A5E35525363
Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KM
NAMUR Isolated switch amplifier Relay output KFD2-SR2-Ex1.W	A5E35667901

1) Available only with power supply 1 and Approvals C, D, and with process connection flange C ... G

2) Available with Approval options D only

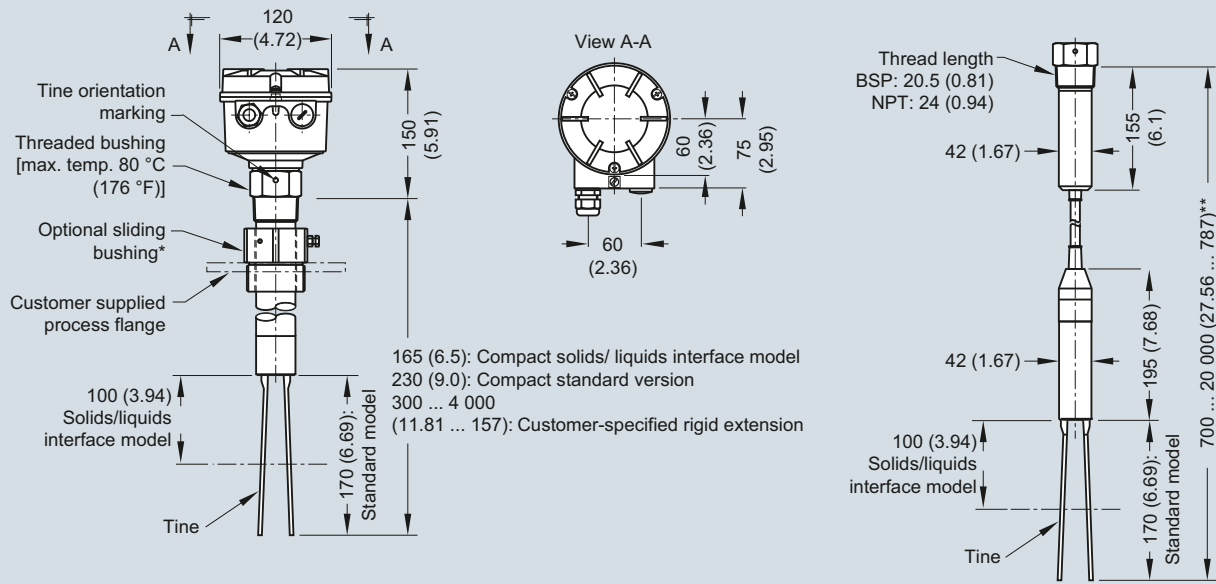
3) Available with power supply option 1 and application type 2 only

4) Not available with option K05

5) Available with Application type 1 only

6) A20 not allowed with power supply 4, 5, or 6

Dimensional drawings



Notes:

- * The clamping screws of the sliding bushing must be tightened to 10 Nm.
- ** Cable version with liquids/solids interface model option length to 7 000 mm (275.59 inch)
Cable version with NAMUR electronics length to 10 000 mm (393.7 inch) tightened to 10 Nm.
See manual for pipe extended version details. (Pipe is customer supplied.)

SITRANS LVS200, dimensions in mm (inch)

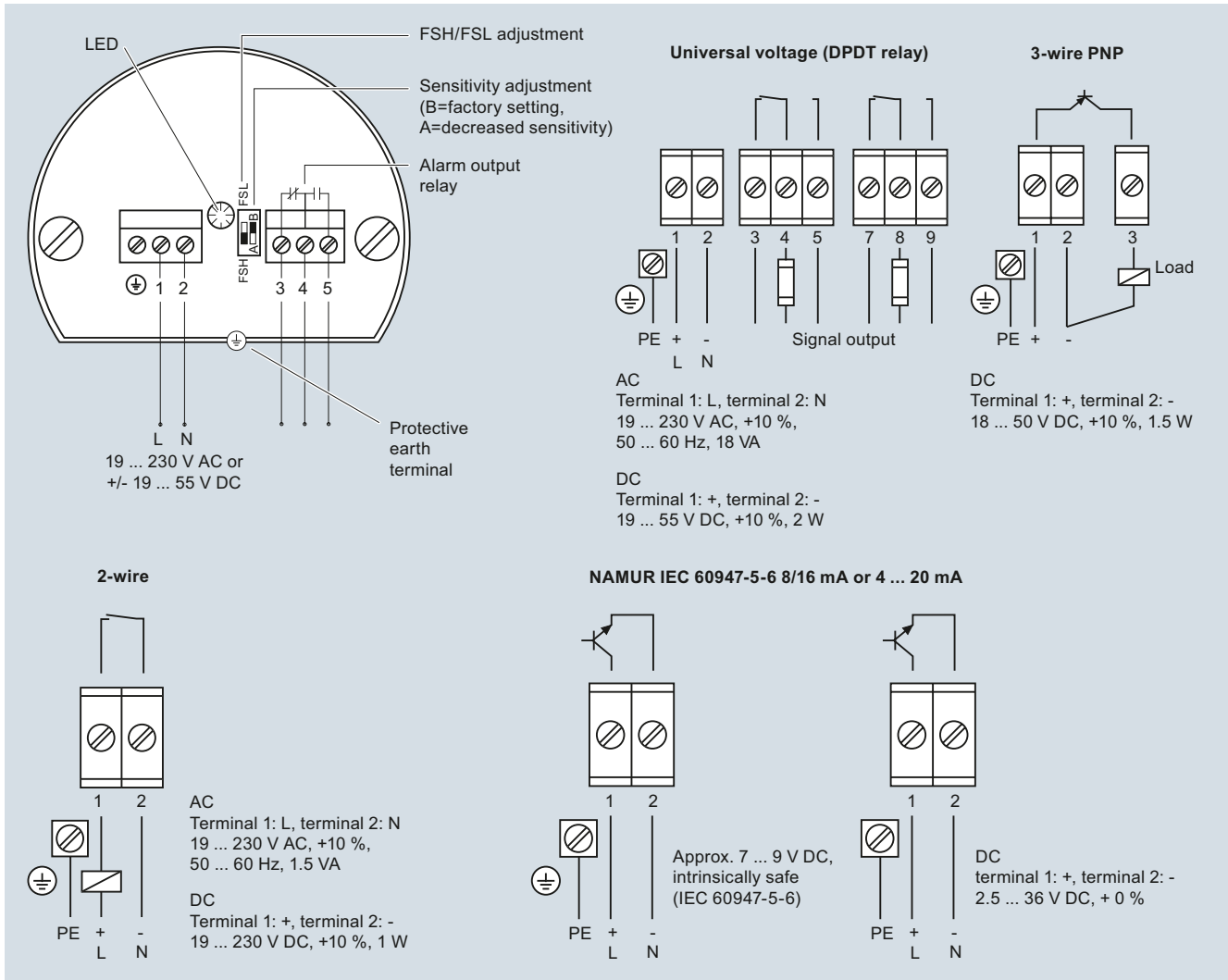
Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Schematics

4



SITRANS LVS200 connections