

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
- 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 20000 mm (787")
- Optional detection of solids within liquid
- Durable short fork option with 165 mm (6.5") 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" 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)

Technical specifications

Mode of operation	
Measuring principle	Vibrating point level switch
Input	
Measured variable	High, low and demand
Measuring frequency	<ul style="list-style-type: none"> • Standard 125 Hz • Liquid/solid interface and short fork version 350 Hz
Output	
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 Cutoff current with open electric circuit: max. 5 mA
Relays	SPDT relay DPDT relay
<ul style="list-style-type: none"> • Version with 1 relay • Version with 2 relays 	<ul style="list-style-type: none"> • From loss of vibration: approximately 1 second • From resumption of vibration: approximately 1 ... 2 seconds • Probe uncovered to covered: approximately 1 second • Probe covered to uncovered: approximately 1 to 2 seconds
Relay delay	
Signal delay	
Relay fail-safe	High or low, switch selectable
Alarm output	<ul style="list-style-type: none"> • Relay 8 A at 250 V AC, non-inductive • Relay 5 A at 30 V DC, non-inductive
mA output	8/16 mA or 4 ... 20 mA
<ul style="list-style-type: none"> • Resolution 4 ... 20 mA ± 0.1 mA 	
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

		Selection and Ordering data	Order No.
Medium conditions		SITRANS LVS200, standard SITRANS LVS200 is a vibrating point level switch for high, low or demand level detection of bulk solids.	7ML5731- - - - - - A0
• 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 	Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) 19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) 18 ... 50 V DC PNP	1 2 3
• Max. threaded bushing temperature	+80 °C (+176 °F)	19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾	4
• Max. enclosure surface temperature (Category 2D)	+90 °C (+194 °F)	7 ... 9 V DC (requires NAMUR switch amplifier) NAMUR IEC 60947-5-6, 2-wire ²⁾	5
• Max. extension surface temperature (Category 1D)	+150 °C (+302 °F)	8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire	6
• Pressure (vessel)	Max. 10 bar g (145 psi g) European Pressure Directive 97/23/EC: Category 1	19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) basic version ³⁾⁴⁾	7
• 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) 	Process temperature Without temperature isolator With temperature isolator Separated enclosure - cable length 1.5 m (4.92 ft) [max. temperature process +180 °C (+356 °F)/ max. temperature electronics +80 °C (+176 °F)] Separated enclosure - cable length 4.0 m (13.12 ft) [max. temperature process +180 °C (+356 °F)/ max. temperature electronics +80 °C (+176 °F)]	A B C D
Design		Process connection <u>Threaded</u> R 1½" [(BSPT), EN 10226] 1½" NPT [(Taper), ANSI/ASME B1.20.1] G 2" [(BSPP), EN ISO 228-1], sliding sleeve [min. length 500 mm (19.69")] ⁵⁾ 2" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69")] ⁵⁾ <u>Flanged</u> DN 100 PN 6, EN1092-1 (1.4541/321) DN 100 PN 16, EN1092-1 (1.4541/321)	A B C D E F
Material	Epoxy coated aluminum	2" ASME 150 lbs B16.5 (1.4541/321) 3" ASME 150 lbs B16.5 (1.4541/321) 4" ASME 150 lbs B16.5 (1.4541/321) Tri-clamp 2" Stainless steel 304 (1.4301)	G H J K
• Enclosure		Extension length <u>Stainless steel 304 (1.4301)</u> Standard length, 235 mm (9.25") ⁶⁾ <u>Add order code Y01 and plain text:</u> <u>"Insertion length ... mm"</u> • 300 ... 500 mm (11.81 ... 19.69") ⁶⁾ • 501 ... 750 mm (19.72 ... 29.53") ⁶⁾ • 751 ... 1000 mm (29.57 ... 39.37") ⁶⁾ • 1001 ... 1250 mm (39.41 ... 49.21") ⁶⁾ • 1251 ... 1500 mm (49.25 ... 59.06") ⁶⁾ • 1501 ... 1750 mm (59.09 ... 68.90") ⁶⁾ • 1751 ... 2000 mm (68.94 ... 78.74") ⁶⁾ • 2001 ... 2250 mm (78.78 ... 88.58") ⁶⁾ • 2251 ... 2500 mm (88.62 ... 98.43") ⁶⁾ • 2501 ... 2750 mm (98.46 ... 108.27") ⁶⁾ • 2751 ... 3000 mm (108.31 ... 118.11") ⁶⁾ • 3001 ... 3250 mm (118.15 ... 127.95") ⁶⁾ • 3251 ... 3500 mm (127.99 ... 137.80") ⁶⁾ • 3501 ... 3750 mm (137.83 ... 147.64") ⁶⁾ • 3751 ... 4000 mm (147.68 ... 157.48") ⁶⁾	11 12 13 14 15 16 17 18 21 22 23 24 25 26 27 28
Process connection	<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) 		
Tine material	Stainless steel 316Ti (1.4571), PTFE-coated tines are available upon special request		
Degree of protection	IP65/Type 4/NEMA 4		
Conduit entry	2 x M20x1.5 or 2 x ½" NPT		
Weight	<ul style="list-style-type: none"> Standard version, no extensions: approx. 2.0 kg (4.4 lbs) Solids/liquids version, no extensions: approx. 1.9 kg (4.2 lbs) 		
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 		
Certificates and approvals	<ul style="list-style-type: none"> CSA/FM General Purpose CE CSA/FM Dust Ignition Proof C-TICK ATEX II 1/2 D CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class 1, Aex ia IIC, CSA Class 1, Ex ia IIC, available only with power supply option 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 		

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Selection and Ordering data

SITRANS LVS200, standard

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

Stainless Steel 316TI (1.4571)

Standard length, 235 mm (9.25")⁷⁾

Add order code Y01 and plain text:

"Insertion length ... mm"

300 ... 500 mm (11.81 ... 19.69")⁷⁾

501 ... 750 mm (19.72 ... 29.53")⁷⁾

751 ... 1000 mm (29.57 ... 39.37")⁷⁾

1001 ... 1250 mm (39.41 ... 49.21")⁷⁾

1251 ... 1500 mm (49.25 ... 59.06")⁷⁾

1501 ... 1750 mm (59.09 ... 68.90")⁷⁾

1751 ... 2000 mm (68.94 ... 78.74")⁷⁾

2001 ... 2250 mm (78.78 ... 88.58")⁷⁾

2251 ... 2500 mm (88.62 ... 98.43")⁷⁾

2501 ... 2750 mm (98.46 ... 108.27")⁷⁾

2751 ... 3000 mm (108.31 ... 118.11")⁷⁾

3001 ... 3250 mm (118.15 ... 127.95")⁷⁾

3251 ... 3500 mm (127.99 ... 137.80")⁷⁾

3501 ... 3750 mm (137.83 ... 147.64")⁷⁾

3751 ... 4000 mm (147.68 ... 157.48")⁷⁾

Material process connection/extension

Stainless steel 304 (1.4301) ▶ 1

Stainless steel 316 T1 (1.4571) ▶ 2

Approvals

CSA/FM Dust Ignition Proof, C-TICK ▶ A

ATEX II 1/2 D, C-TICK ▶ B

CSA/FM General Purpose, C-TICK C

CE, C-TICK D

CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class 1, Aex ia IIC, CSA Class 1, Ex ia IIC, C-TICK⁸⁾ E

ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, C-TICK F

1) Available with approval options A to D only

2) Available with approval options E, F only

3) Available only with process temperature option A (process connection A with approval option B, or process connection B with approval option A), extension length 11 and material process connection 1

4) Basic version is cost effective and offers fast delivery

5) Not available with extension length options 11 and 12

6) Available with Material process connection/extension option 1 only

7) Available with Material process connection/extension option 2 only

8) Available with power supply option 5 and 6 only

▶ Available ex stock.

Order No.

7ML5731 -

3 1 A 0

3 2

3 3

3 4

3 5

3 6

3 7

3 8

4 1

4 2

4 3

4 4

4 5

4 6

4 7

4 8

Selection and Ordering data

Further Designs

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

Total insertion length: Enter the total insertion length in plain text description, max. 2000 mm (78.74")

Enhanced sensitivity > 5 g/l via electronics and increased fork length to 195 mm (7.68")

Enhanced sensitivity < 5 g/l via electronics, increased fork length to 195 mm (7.68"), and increased aluminum fork width (available only with universal voltage, SPDT, CE/FM and CSA General Purpose approvals)

Signal bulb inserted in M20 cable gland¹⁾

NAMUR 8/16 mA switch amplifiers

Operating Instructions

Multi-language

This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.

Spare Parts

Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]

Sliding sleeve, 2" BSP (ISO 228)

Sliding sleeve, 2" NPT [(Taper), ANSI/ASME B1.20.1]

Available ex stock

SITRANS LVS200, standard, power supply 7, process temperature A, process connection A, extension length 11, material process connection/extension 1, and approval B

SITRANS LVS200, standard, power supply 7, process temperature A, process connection B, extension length 11, material process connection/extension 1, and approval A

1) Available with approval options C, D only

Order code

Y01

K05

G01

A20

A15

Order No.

7ML1998-5FT62

7ML1830-1KL

7ML1830-1JM

7ML1830-1JN

7ML5731-7AA11-1BA0

7ML5731-7AB11-1AA0

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Selection and Ordering data	Order No.
SITRANS LVS200, short fork for liquids/solids interface Vibrating point level switch for solids or solids within liquid interface applications, and high load applications with short insertion requirements	7 ML 5 7 3 2 - A 0
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)	2
18 ... 50 V DC PNP	3
19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾	4
8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ²⁾	5
Process temperature Without temperature isolator	A
With temperature isolator	B
Separated enclosure - cable length 1.5 m (4.92 ft) [max. temperature process +180 °C (+356 °F)/max. temperature electronics +80 °C (+176 °F)]	C
Separated enclosure - cable length 4.0 m (13.12 ft) [max. temperature process +180 °C (+356 °F)/max. temperature electronics +80 °C (+176 °F)]	D
Process connection <u>Threaded</u> 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")]	C
2" NPT [(Taper), ANSI/ASME B1.20.1], sliding sleeve [min. length 500 mm (19.69")]	D
<u>Flanged</u> DN 100 PN 6, EN1092-1 (1.4541/321)	E
DN 100 PN 16, EN1092-1 (1.4541/321)	F
2" ASME 150 lbs B16.5 (1.4541/321)	G
3" ASME 150 lbs B16.5 (1.4541/321)	H
4" ASME 150 lbs B16.5 (1.4541/321)	J
Extension length <u>Stainless steel 304 (1.4301)³⁾</u> Standard length, 165 mm (6.50") ³⁾	1 1
<u>Add order code Y01 and plain text: "Insertion length ... mm"</u> 200 ... 500 mm (7.87 ... 19.69") ³⁾	1 2
501 ... 750 mm (19.72 ... 29.53") ³⁾	1 3
751 ... 1000 mm (29.57 ... 39.37") ³⁾	1 4
1001 ... 1250 mm (39.41 ... 49.21") ³⁾	1 5
1251 ... 1500 mm (49.25 ... 59.06") ³⁾	1 6
1501 ... 1750 mm (59.09 ... 68.90") ³⁾	1 7
1751 ... 2000 mm (68.94 ... 78.74") ³⁾	1 8
2001 ... 2250 mm (78.78 ... 88.58") ³⁾	2 1
2251 ... 2500 mm (88.62 ... 98.43") ³⁾	2 2
2501 ... 2750 mm (98.46 ... 108.27") ³⁾	2 3
2751 ... 3000 mm (108.31 ... 118.11") ³⁾	2 4
3001 ... 3250 mm (118.15 ... 127.95") ³⁾	2 5
3251 ... 3500 mm (127.99 ... 137.80") ³⁾	2 6
3501 ... 3750 mm (137.83 ... 147.64") ³⁾	2 7
3751 ... 4000 mm (147.68 ... 157.48") ³⁾	2 8
<u>Stainless Steel 316TI (1.4571)</u> Standard length, 165 mm (6.50") ⁴⁾	3 1
<u>Add order code Y01 and plain text: "Insertion length ... mm"</u> 200 ... 500 mm (7.87 ... 19.69") ⁴⁾	3 2
501 ... 750 mm (19.72 ... 29.53") ⁴⁾	3 3
751 ... 1000 mm (29.57 ... 39.37") ⁴⁾	3 4

Selection and Ordering data	Order No.
SITRANS LVS200, short fork for liquids/solids interface Vibrating point level switch for solids or solids within liquid interface applications, and high load applications with short insertion requirements	7 ML 5 7 3 2 - A 0
1001 ... 1250 mm (39.41 ... 49.21") ⁴⁾	3 5
1251 ... 1500 mm (49.25 ... 59.06") ⁴⁾	3 6
1501 ... 1750 mm (59.09 ... 68.90") ⁴⁾	3 7
1751 ... 2000 mm (68.94 ... 78.74") ⁴⁾	3 8
2001 ... 2250 mm (78.78 ... 88.58") ⁴⁾	4 1
2251 ... 2500 mm (88.62 ... 98.43") ⁴⁾	4 2
2501 ... 2750 mm (98.46 ... 108.27") ⁴⁾	4 3
2751 ... 3000 mm (108.31 ... 118.11") ⁴⁾	4 4
3001 ... 3250 mm (118.15 ... 127.95") ⁴⁾	4 5
3251 ... 3500 mm (127.99 ... 137.80") ⁴⁾	4 6
3501 ... 3750 mm (137.83 ... 147.64") ⁴⁾	4 7
3751 ... 4000 mm (147.68 ... 157.48") ⁴⁾	4 8
Material process connection/extension Stainless steel 304 (1.4301)	1
Stainless steel 316 TI (1.4571)	2
Approvals CSA/FM Dust Ignition Proof, C-TICK	A
ATEX II 1/2 D, C-TICK	B
CSA/FM General Purpose, C-TICK	C
CE, C-TICK	D
1) Available with approval options B, C, D only	
2) Available with approval option D only	
3) Available with material process connection/extension option 1 only	
4) Available with material process connection/extension option 2 only	

Selection and Ordering data	Order code
Further Designs Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: Enter the total insertion length in plain text description, max. 4000 mm (157.48")	Y01
Signal bulb inserted in M20 cable gland ¹⁾	A20
Operating Instructions Multi-language This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	Order No. 7ML1998-5FT62
Spare Parts 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 [(Taper), ANSI/ASME B1.20.1]	7ML1830-1JN
1) Available with approval options C, D only	

5

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Selection and Ordering data	Order No.
SITRANS LVS200, pipe extension Vibrating point level switch for high or low levels of bulk solids Extended using 1" pipe extension (customer supplied)	7ML5733 - A 0
Power supply 19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT) 19 ... 230 V AC, 19 ... 55 V DC, two relay outputs (DPDT) 18 ... 50 V DC PNP 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) 3)} 8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ⁴⁾	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, EN1092-1 (1.4541/321) DN 100 PN 16, EN1092-1 (1.4541/321) 2" ASME 150 lbs B16.5 (1.4541/321) 3" ASME 150 lbs B16.5 (1.4541/321) 4" ASME 150 lbs B16.5 (1.4541/321)	A B C D E F G
Process connection material Stainless steel 304 (1.4301) Stainless steel 316 T1 (1.4571)	1 2
Extension length Customer supplied 1" pipe extension Length: 300 ... 3800 mm (11.81 ... 149.61")	1
Application type Dry bulk solids (125 Hz) Liquids/solids interface (350 Hz)	1 2
Approvals CSA/FM Dust Ignition Proof, C-TICK ATEX II 1/2 D, C-TICK CSA/FM General Purpose, C-TICK CE, C-TICK CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class 1, Aex ia IIC, CSA Class 1, Ex ia IIC, C-TICK ⁵⁾ ATEX II 1G and 1/2G Eex ia IIC; ATEX II 1D and 1/2D, C-TICK ⁵⁾	A B C D E F

¹⁾ Available with approval options A to E only

²⁾ Available with application type 1 only

³⁾ Available with approval option C to F only

⁴⁾ Available with approval option D only

⁵⁾ Available with power supply option 5 only

Selection and Ordering data	Order code
Further Designs Please add "-Z" to Order No. and specify Order code(s). Total insertion length: Enter the total insertion length in plain text description, max. 4000 mm (157.48") Enhanced sensitivity > 5 g/l via electronics and increased fork length ... 195 mm (7.68") Signal bulb inserted in M20 cable gland ¹⁾ NAMUR 8/16 mA switch amplifiers	Y01 K05 A20 A15
Operating Instructions Multi-language This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	Order No. 7ML1998-5FT62
Spare Parts Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)] Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KL 7ML1830-1KM

¹⁾ Available with approval options C, D only

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Selection and Ordering data	Order No.
SITRANS LVS200, cable extended Vibrating point level switch for high or low level detection of bulk solids materials	7 ML 5 7 3 4 - - - - - - A 0
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)	2
18 ... 50 V DC PNP	3
19 ... 230 V AC/DC without contact, 2-wire loop powered ¹⁾	4
7 ... 9 V DC (requires NAMUR switch amplifier)	5
NAMUR IEC 60947-5-6, 2-wire ²⁾³⁾	
8/16 mA or 4 ... 20 mA; 12.5 ... 35 V DC, 2-wire ⁴⁾	6
Process temperature	
Up to +80 °C (+176 °F)	A
Process connection	
Threaded	
R 1½" [(BSPT), EN 10226]	A
1½" NPT [(Taper), ANSI/ASME B1.20.1]	B
Flanged	
DN 100 PN 6, EN1092-1 (1.4541/321)	C
DN 100 PN 16, EN1092-1 (1.4541/321)	D
2" ASME 150 lbs B16.5 (1.4541/321)	E
3" ASME 150 lbs B16.5 (1.4541/321)	F
4" ASME 150 lbs B16.5 (1.4541/321)	G
Extension length	
700 ... 1000 mm (19.7 ... 39.4") [max. length 20000 mm (787.4"), not with Power supply option 5 (max. 10000 mm, 393.7")]	1 0
Add order code Y01 and plain text: "Insertion length ... mm"	
1001 ... 2000 mm (39.41 ... 78.74")	1 1
2001 ... 3000 mm (78.78 ... 118.11")	1 2
3001 ... 4000 mm (118.15 ... 157.48")	1 3
4001 ... 5000 mm (157.52 ... 196.85")	1 4
5001 ... 6000 mm (196.89 ... 236.22")	1 5
6001 ... 7000 mm (236.26 ... 275.59")	1 6
7001 ... 8000 mm (275.63 ... 314.96")	1 7
8001 ... 9000 mm (315 ... 354.33")	1 8
9001 ... 10000 mm (354.37 ... 393.70")	2 0
10001 ... 11000 mm (393.74 ... 433.07")	2 1
11001 ... 12000 mm (433.11 ... 472.44")	2 2
12001 ... 13000 mm (472.48 ... 511.81")	2 3
13001 ... 14000 mm (511.85 ... 551.18")	2 4
14001 ... 15000 mm (551.22 ... 590.55")	2 5
15001 ... 16000 mm (590.59 ... 629.92")	2 6
16001 ... 17000 mm (629.96 ... 669.29")	2 7
17001 ... 18000 mm (669.33 ... 708.66")	2 8
18001 ... 19000 mm (708.70 ... 748.03")	3 0
19001 ... 20000 mm (748.07 ... 787.40")	3 1
Application type	
Dry bulk solids (125 Hz)	1
Liquid/solids interface (350 Hz) ⁵⁾	2

Selection and Ordering data	Order No.
SITRANS LVS200, cable extended Vibrating point level switch for high or low level detection of bulk solids materials	7 ML 5 7 3 4 - - - - - - A 0
Approvals	
CSA/FM Dust Ignition Proof, C-TICK	A
ATEX II 1/2 D, C-TICK	B
CSA/FM General Purpose, C-TICK	C
CE, C-TICK	D
CSA/FM IS Class I, II, III Div. 1, Groups A, B, C, D, E, F, G, FM Class 1, Aex ia IIC, CSA Class 1, Ex ia IIC, C-TICK ⁶⁾	E
ATEX II 1G and 1/2G Exe ia IIC; ATEX II 1D and 1/2D, C-TICK ⁶⁾	F
1) Available with approval options A to D only	
2) Available with approval options C to F only	
3) Cable length is limited to 10000 mm (393.70")	
4) Available with approval options C, D only	
5) Cable length is limited to 7000 mm (275.59")	
6) Available with power supply option 5 and application type 1 only	

Selection and Ordering data	Order code
Further Designs	
Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: Enter the total insertion length in plain text description, max. 4000 mm (157.48")	Y01
Enhanced sensitivity > 5 g/l via electronics and increased fork length to 195 mm (7.68")	K05
Signal bulb inserted in M20 cable gland ¹⁾	A20
NAMUR 8/16 mA switch amplifiers	A15
Operating Instructions	Order No. 7ML1998-5FT62
Multi-language This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Spare Parts	
Replacement Electronics Module (125 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KL
Replacement Electronics Module (350 Hz) [19 ... 230 V AC, 19 ... 55 V DC, one relay output (SPDT)]	7ML1830-1KM
1) Available with approval options C, D only	

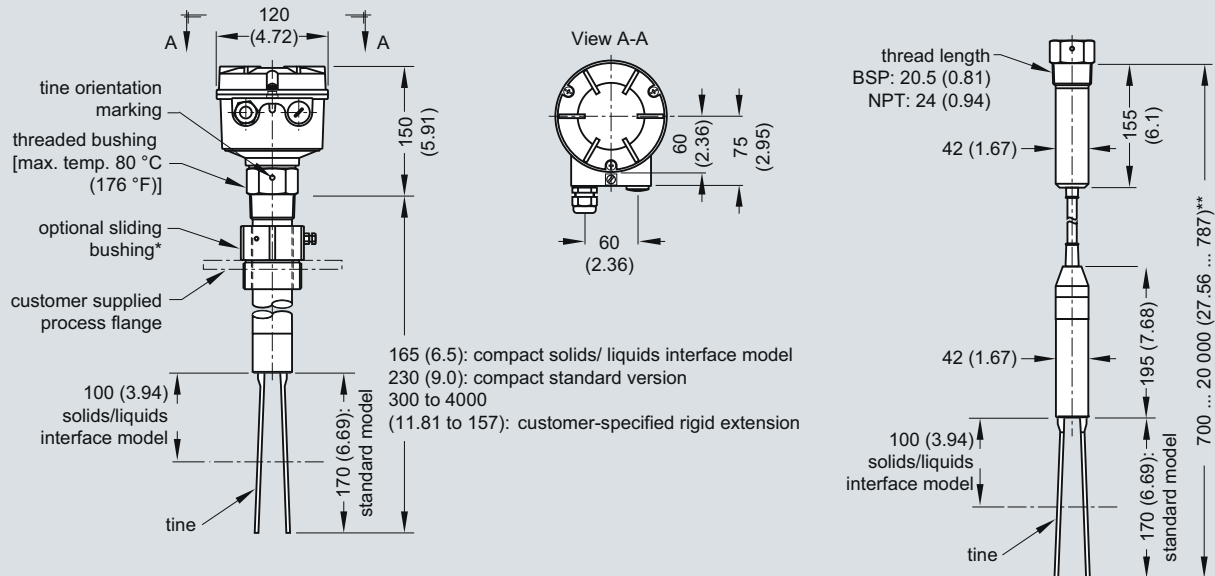
5

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

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 7000 mm (275.59")
Cable version with NAMUR electronics length to 10 000 mm (393.7") tightened to 10 Nm.
See drawing 23650563 for pipe extended version details. (Pipe is customer supplied.)

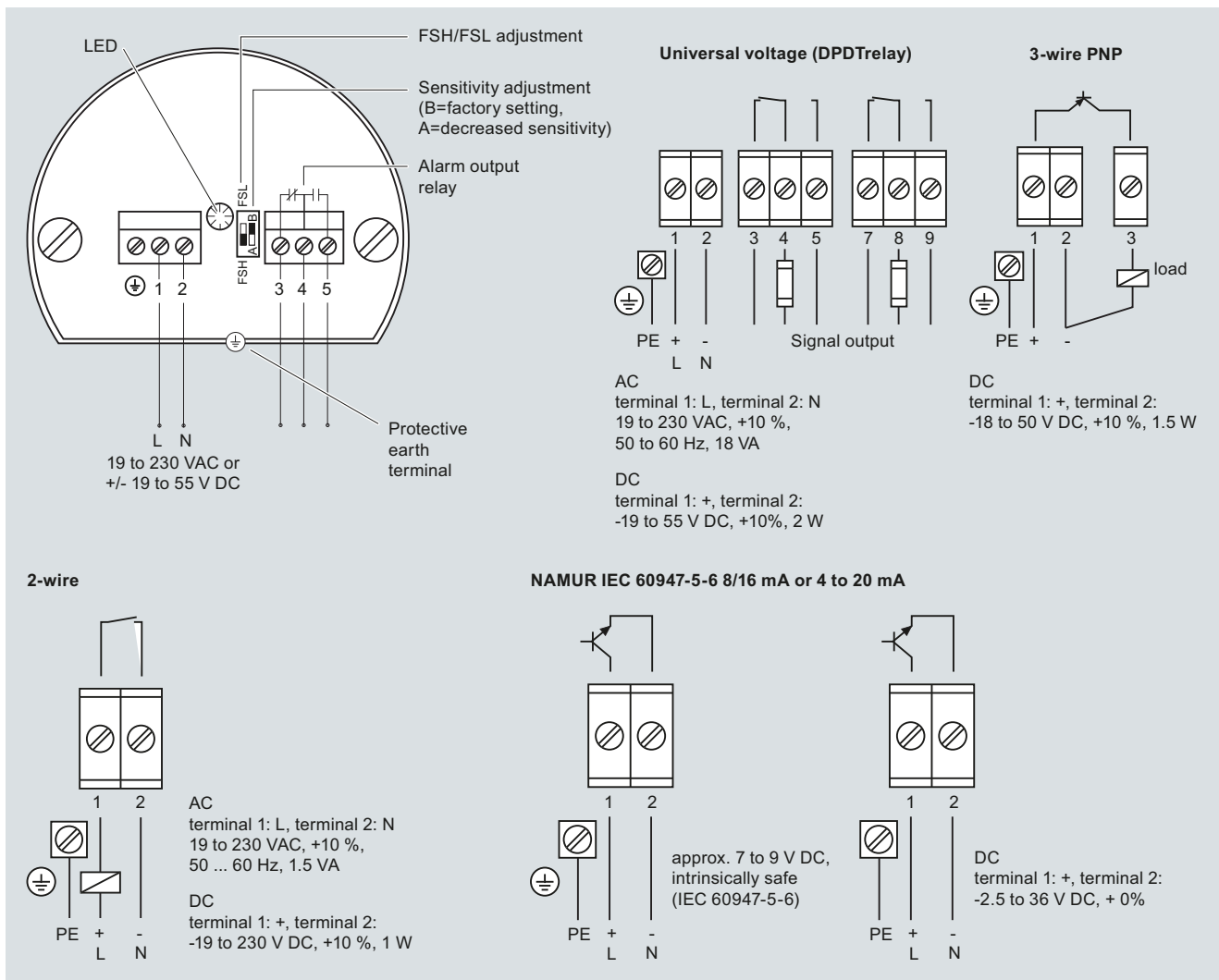
SITRANS LVS200, dimensions in mm (inch)

Level Measurement

Point level measurement - Vibrating switches

SITRANS LVS200

Schematics



SITRANS LVS200 connections