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Technical support

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Subject to change.

All dimensions in inches (mm).

All prices in USD.

8/23/2011

By publishing this selection list all other lists become invalid.

We assume no liability for typing errors.

Different variations to those specified are possible.

Please contact your sales agent.

Overview

Continuous level measurement of solids applications

Process

- Independent of bulk material properties
- Accurate measurement

Service

- Simple installation and commissioning
- Rope and tape version with long service life
- Low maintenance

Approvals

- Approval for use in Hazardous Areas

Mechanics

- Measurement range up to 100ft (30m)
- 1 1/2" process connection possible
- Aiming flange to be mounted directly on a flat silo roof
- Internal tape cleaner for difficult materials

Electronics

- Micro processor controlled measurement
- Diagnostic possibilities
- Output 4–20mA
- Two programmable Relays (can be used as Counting pulse output or as Failure / Upper stop position)



LevelMax
Rope version
Fig. with 4" universal
flange and PVC sensor
weight



LevelMax
Tape version
Fig. with thread connection
and stainless steel sensor
weight

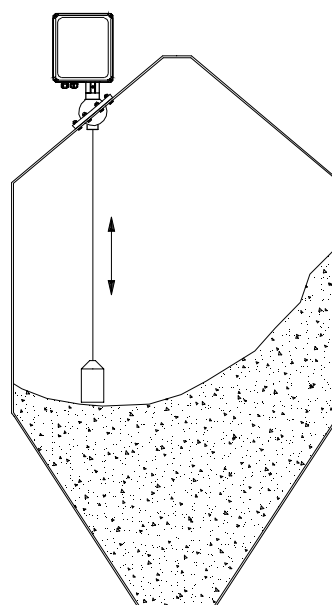
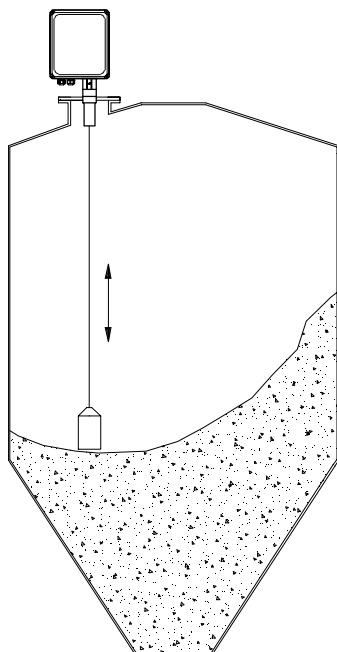


LevelMax
Rope version
Fig. with aiming flange and
stainless steel sensor weight

Specification / application

Process	Measurement range	50ft (15m) or 100ft (30m)
	Process temperature	176°F (80°C)
	Process overpressure	-3.0 .. + 3.0 psi (-0,2 .. +0,2 bar)
	Min. powder density	>300 g/l (18 lb/ft ³)
Electronics	Power supply	AC version 115V or 230V 50-60Hz DC version 20 .. 28V
	Output	4-20mA
		2 relays (optional)
Certificate	Dust Ignition Proof	FM Class II, III Div. 1

Solids measurement



Aiming flange
screwed directly
to the silo roof

LevelMax
Rope version
(fig. 4" universal flange
and PVC sensor weight)



LevelMax
Tape version
(fig. with thread connection
and stainless steel sensor
weight)



Dimensions see page 7

980.100000

- pos. 1 Basic type
 - C LevelMax Rope version
 - D LevelMax Tape version

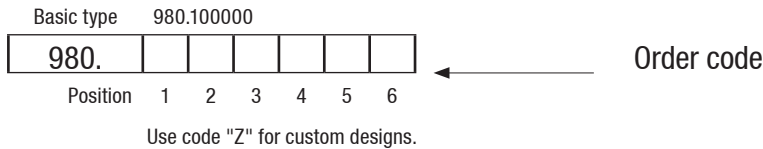
- pos. 2 Certificate
 - M FM general purpose
 - N FM Class II, III Div.1 Group E-G

- pos. 3 Measurement range
 - 1 50ft (15m)
 - 2 100ft (30m)

- pos. 4 Power supply
 - 1 230V 50-60Hz
 - 2 115V 50-60Hz
 - 3 20 .. 28V DC

- pos. 5 Process connection
 - B Thread NPT 1 1/2 inch tapered ANSI B1.20.1
 - X Flange DN100 PN16 (EN1092-1) and flange 4" 150lbs ANSI B16.5 (unit is fitting to this flange)
 - Y Flange 2" and flange 3" 150lbs ANSI B16.5 (unit is fitting to this flange)
 - W Aiming flange (to be mounted directly to the silo roof) ⁽⁴⁾

- pos. 6 Sensor weight ⁽¹⁾
 - Y without ⁽²⁾
 - A PVC ⁽³⁾
 - C Stainless steel



Example: 980.100000 DN22BC

⁽¹⁾ For use in Hazardous Locations: It must be ensured, that no static discharge from the material surface can occur. Sensor weights, which can be used in case of possible static discharge, on request.

⁽²⁾ Only for tape version. Including mounting set for sensor weight (see page P9: Sensor weights)

⁽³⁾ Does not fit through a 1 1/2 inch nozzle, must be mounted after fixing the unit to the silo

⁽⁴⁾ Mounting without a socket. Including fixing material (screws, sealing etc.)

Options / Accessories

Options

pos. 21	Weather protection cover
pos. 22	Internal heater
	Needed for: ambient temp. <-4°F (-20°C) or condense water inside silo or wet process atmosphere (Note: <-4°F (-20°C) with FM Class II available on request)
pos. 23	Length of socket pipe
	1 7.87" (200mm)
	2 19.7" (500mm)
	3 39.4" (1000mm)
pos. 24	Pin for sensor weight
	POM or stainless steel (in accordance to selected sensor weight material)
pos. 25	Relay output
	Two relays (selectable as "Counting pulse output" or as "Failure"/"Upper stop position")
pos. 36	Data Interface Module (15VDC) Data communications via RS485

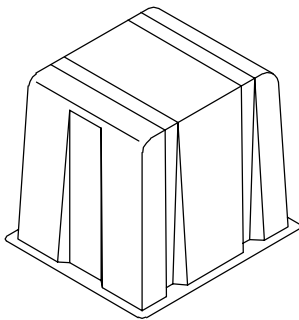
Accessories

Sealings for mounting the unit on a flange

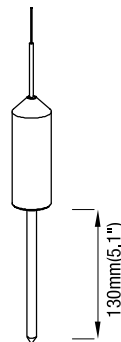
di300125	Flange sealing for DN100 PN16 / 4" (neoprene)
di300127	Flange sealing for 2" / 3" 150lbs (neoprene)

Adapter NPT 1 1/2" to NPT 3"

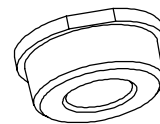
zu103100	Thread tapered ANSI B1.20.1, aluminum
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Weather protection cover

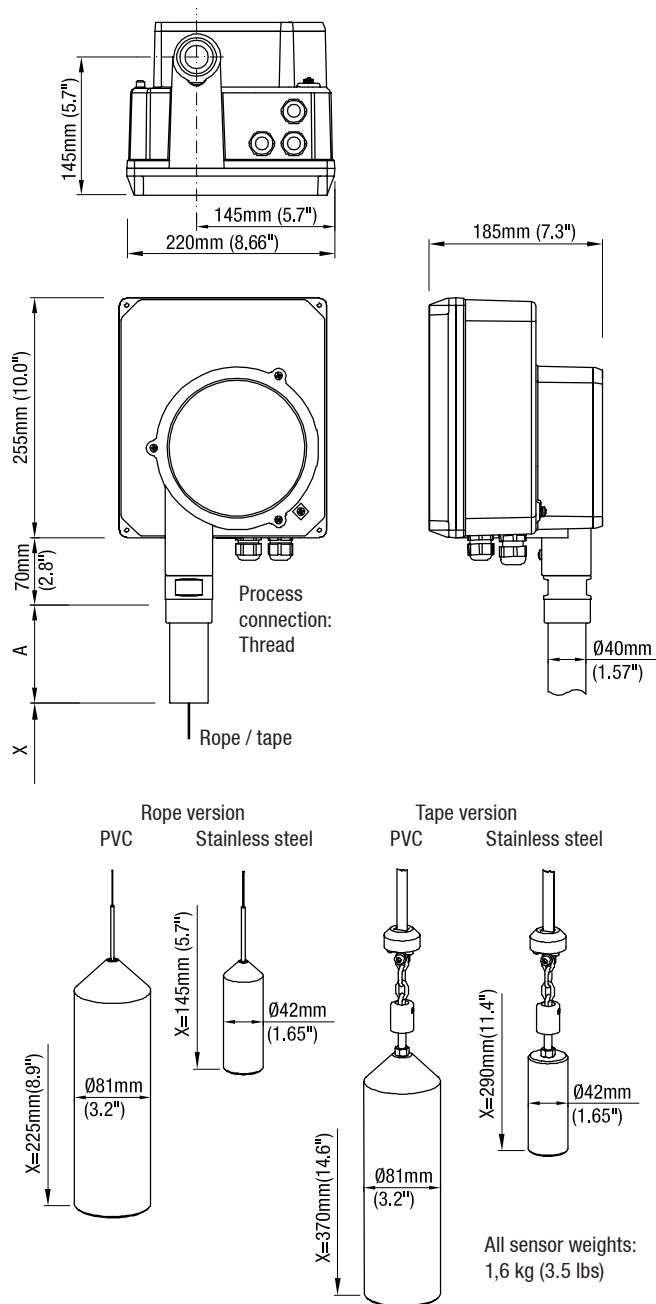


Pin for sensor weight
POM or 1.4305 (303)

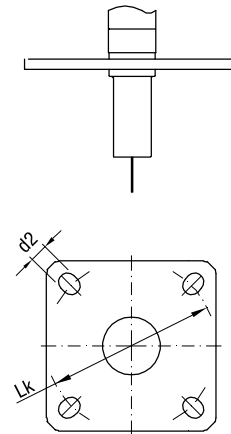


Adapter NPT 1 1/2" to NPT 3"

Dimensions and materials

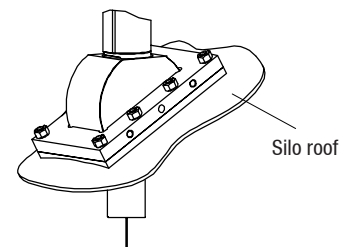


Process connection: Flange



Process connection: Aiming flange

To be screwed directly to the silo roof
0°–50° adjustable



Flange plate outside dimensions:
Width x Height: 120mm x 180mm (4.7"x7.1")

Dimensions

X = Length to bottom of sensor weight (in upper stop position)	
A = Length of socket pipe 100mm (3.9") Optional 200mm (7.9") / 500mm (19.7") / 1000mm (39.4")	
Flanges	
fitting to: DN100 PN16 / 4" 150lbs	Lk = 7.1–7.5" (180–190.5mm) slot d2 = 0.75" (19mm)
fitting to: 2" / 3" 150lbs	Lk = 4.75–6.0" (120.7–152.4mm) slot d2 = 0.19mm (0.75")
Rope	0.49" (1.25mm)
Tape	0.47x0.008" (12x0.2mm)

Materials

Housing outside	Aluminum, powder coated
Housing inside	Aluminum
Thread / Flange	Aluminum
Aiming flange	Aluminum / 1.4301 (301)
Rope	1.4301 (304)
Tape	1.4310 (301)

Spare parts

Roller

sl103239	Rope roller with 15m rope	.....
sl103240	Rope roller with 30m rope	.....
sb103239	Tape roller with 15m tape	.....
sb103240	Tape roller with 30m tape	.....

Sensor weights

All sensor weights are delivered incl. mounting set for proper fixing to the rope/tape and excl. rope/tape

For rope version:

sl103231	PVC without pin	.....
sl103232	PVC with pin	.....
sl103233	Stainless steel without pin	.....
sl103234	Stainless steel with pin	.....

For tape version:

sb103231	PVC without pin	.....
sb103232	PVC with pin	.....
sb103233	Stainless steel without pin
sb103234	Stainless steel with pin

Motor

gm103202	Motor
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Electronics

pl103690	230V 50–60Hz	4–20mA	without 2 Relays and without Internal Heater Control
pl103691	230V 50–60Hz	4–20mA	with 2 Relays and with Internal Heater Control ⁽¹⁾
pl103692	115V 50–60Hz	4–20mA	without 2 Relays and without Internal Heater Control	.....
pl103693	115V 50–60Hz	4–20mA	with 2 Relays and with Internal Heater Control ⁽¹⁾
pl103694	20 .. 28V DC	4–20mA	without 2 Relays and without Internal Heater Control	.....
pl103695	20 .. 28V DC	4–20mA	with 2 Relays and with Internal Heater Control ⁽¹⁾

Internal Heater ⁽²⁾

em100373	680 Ohms	For power supply 230V 50–60Hz	.....
em100374	220 Ohms	For power supply 115V 50–60Hz	.....
em100375	8.2 Ohms	For power supply 20 .. 28V DC	.....

⁽¹⁾ Implements the electronic components needed to control the Internal Heater (needed for option pos.22)

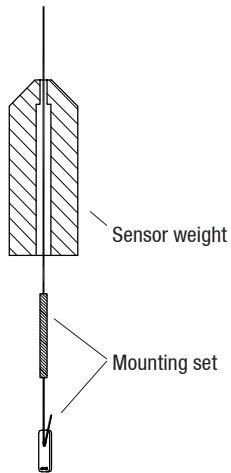
⁽²⁾ Used for replacement for already mounted heater.

Spare parts

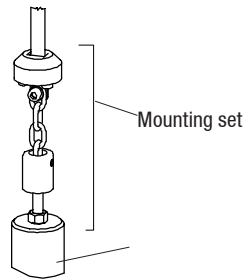
Sensor weights

All sensor weights are delivered including stated parts for proper fixing to the rope / tape

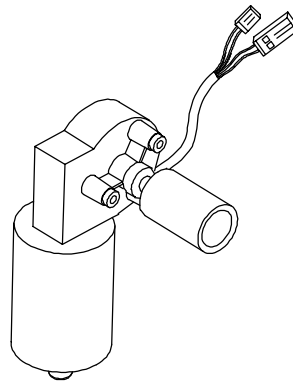
Rope version



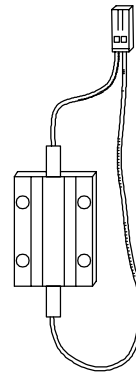
Tape version



Motor

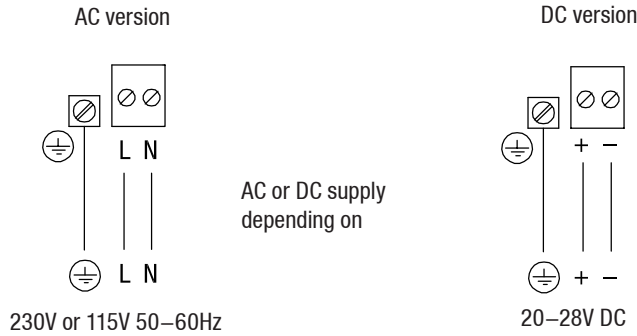


Internal heater

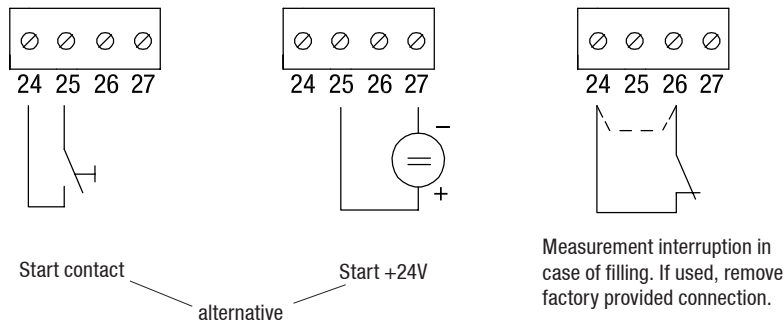


Electrical installation

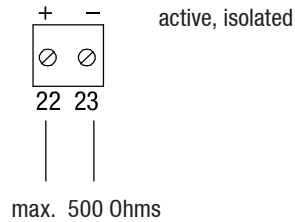
Power supply



Signal input: Start of measurement



Signal output: 0/4–20mA



Signal output: Relays (optional)

