MEASUREMENT AND CONTROL

Индикаторы уровня. Серия 1100. Описание.

По вопросам продаж и поддержки обращайтесь: sro@nt-rt.ru www.sor.nt-rt.ru

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Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

Казахстан (7273)495-231
Киргизия (996)312-96-26-47
Таджикистан (992)427-82-92-69

SOR
MEASUREMENT AND CONTROL

1100 Series
Magnetic Level Indicators

with vista™
200° VIEWING ANGLE
indicator

200° viewing angle

The VIEW Matters

Table of Contents

1100 Series Magnetic Level Indicator

The 1100 Series Magnetic Level Indicator (MLI) is a proven method to simplify measuring liquid levels. Not only does the 1100 Series give a visual indication, it also eliminates the need for armored sight glass instruments - simplifying piping systems and allowing for multiple measurements without unnecessary complications to the piping.

Industry Leading Indicator Design

The 1100 Series Magnetic Level Indicator is the most accurate and reliable gauge available. Including one of the widest, most visible indicating flag designs in the industry, the 1100 Series Magnetic Level Indicator can easily be read at a distance of 250 feet (76 meters) or more - *best in the industry*.

Decades of Chamber Design Experience

Not only does the 1100 Series provide the best visual indication in the world, we've also coupled our new float and indicator design with the SOR tried-and-true chamber design that was developed through years of experience and innovation. SOR has countless instrument chambers installed around the world that have been providing reliable service for more than 4 decades.

Along with one of the largest product portfolios in the industry, SOR has been able to blend all of these features to bring to you the easiest and most economical way to measure and control liquid levels in any application.

- Patented vista indicator with 200° viewing angle (U.S. Pat. No. 14/638,990)
- Forward viewing distance of 250 feet (76 meters) or more
- Chambers designed to ASME codes B31.1 and B31.3 guidelines (certified with CY & CZ option)
- 2 1/2" Schedule 40 316/316L stainless steel construction standard, Schedule 80 and other materials available
- ASME Section IX and AWS qualified welding process
- Full penetration welds with no extruded outlets (certified with CY & CZ option)
- No pressurized floats
- High visibility reflective scale
- 316/L SS flanges standard
- Full hydro test of floats @ 1.5 MAWP
- Interface detection capability
- NACE and CRN certifications available
- Dimensional drawings available at quotation
- Quick delivery
- Dependable operation for years of service
- 5 year warranty*

SOR is the best partner to make your design easier.

**1 year warranty for Model 1140 and Indicator*

Complete Level Solution

SOR makes it easy for you to find your complete level solution all from **one** supplier.

- No need to source parts from many different vendors
- No concern about everything fitting and operating together
- No issues with delivery time

ONE SOURCE. ONE SOLUTION. ONE CALL

With SOR, the solution is available from us – one source. You don't have to worry about everything fitting and operating together. All you have to do is select a magnetic level indicator, point level switch, magnetostrictive level transmitter or a guided wave radar that are designed to work seamlessly together to provide one of the most reliable solutions in the industry.

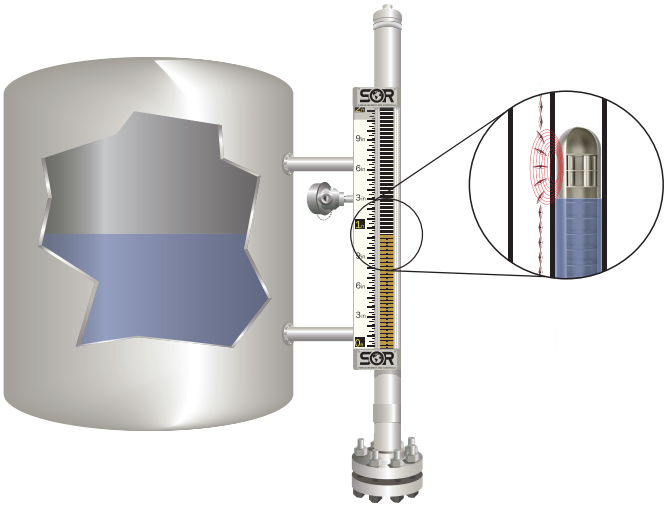
SOR One of the Best Machine Shops in America.

Our manufacturing facilities include more than 85,000 square feet of vertically integrated production capability and we are proud of having our Lenexa machine shop voted one of the top 10 in the United States by the American Machinist magazine. With decades of experience manufacturing floats and chambers, we have designs for thousands of unique applications around the world, including high pressure, high temperature and interface.

SOR is also dedicated to reducing product lead times and has LEAN initiatives in place to continuously improve the quality and delivery of products we provide to you. Just make one call to our customer service team and they will get you the answers you need.

Principals of Operation

The 1100 Series Magnetic Level Indicator provides visual indication of liquid level within a larger, primary process vessel.



- Once the MLI is mounted to the process vessel via the supplied process connections, the process liquid will flow freely up and down within the MLI chamber.
- A specially designed float is located inside the 1100 Series chamber and floats along with the process level. This float contains a powerful magnet that interacts with the non-invasive indicator assembly located on the outside of the chamber. This magnetic coupling between the float and the indicator allows the process level to be shown via the use of rotating flags housed inside the assembly.
- As the level rises and falls, these flags will change color and provide real time indication of the liquid level within the primary process vessel. The float will also interact with any attached switches or transmitters, supplying additional signal input to your control system.

Industries and Applications

1100 Series Magnetic Level Indicators are suitable for most industrial and commercial applications.

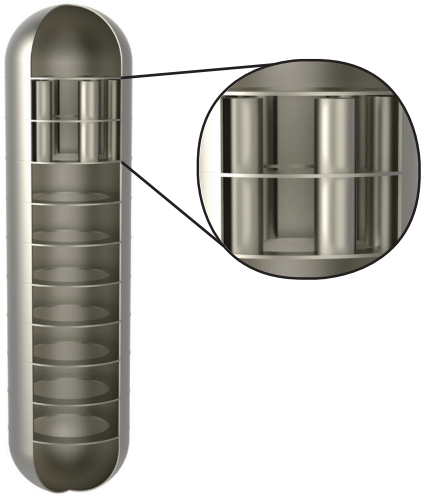
Chemical and petrochemical industries
- Refined products • Heat transfer fluids
- Solvents • Acids and caustics

Power generation
- Boilers • Feed water heaters
- Sight glass replacement

Oil and gas industries
- Offshore production
- Compressor packages
- Oil and water interface
- High and low pressure separators
- Gas condensate
- Glycol

Other
- Pulp and paper
- Food and beverage
- Pharmaceutical
- Industrial chemicals
- Waste water

Design Attributes

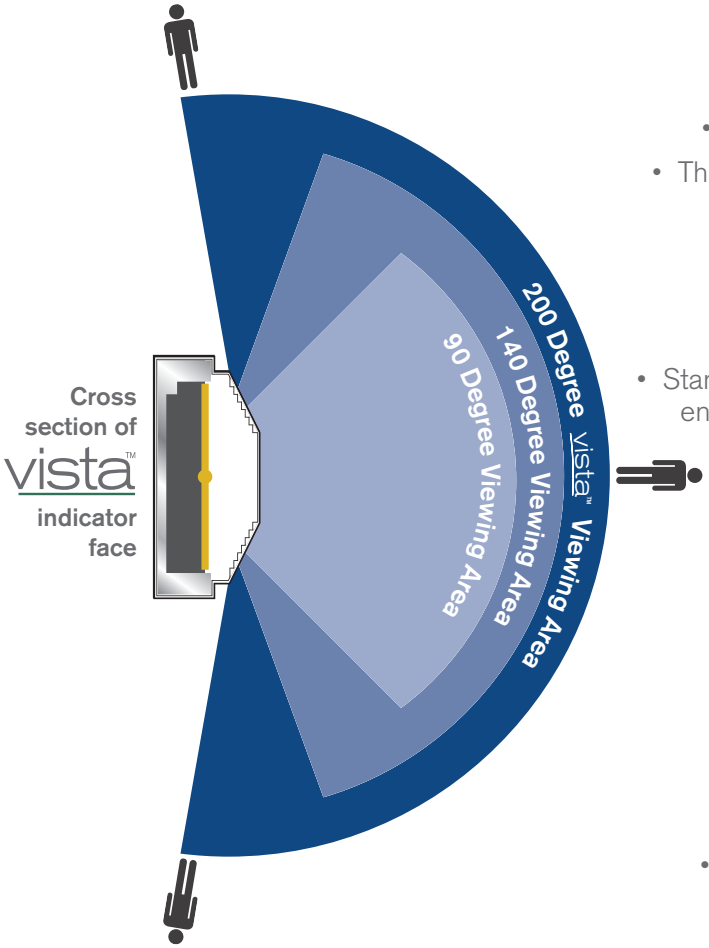


Basic Construction

- Highly configurable to meet the installation requirements of older tanks
- 2 1/2" Schedule 40 316/316L stainless steel construction standard, Schedule 80 and other materials available
- Designed to ASME B31.1 and B31.3 guidelines (certified with CY & CZ option)
- NACE option available

Standard Float Construction

- The SOR float sectional design has the strongest magnet pack available
- Each float is custom designed to meet the process temperatures, pressures and specific gravities
- The SOR float has been engineered to provide the most reliable float and indicator combination available
- The state-of-the-art sectional design, allows SOR to exceed the functional limits of traditional floats
- The SOR design is fully compatible with auxiliary equipment



Indicator

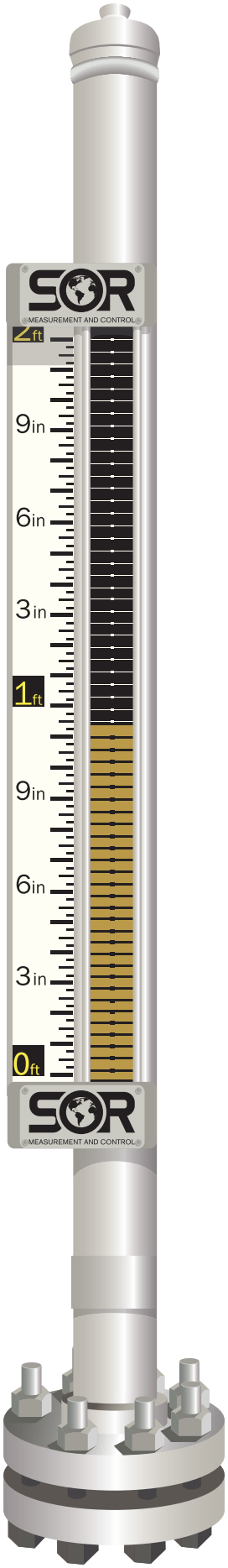
- SOR has designed and developed the patented vista™ indicator which provides the widest viewing angle in the industry (U.S. Pat. No. 14/638,990)
- Lateral viewing angle of 200°
- Forward viewing distance 250 feet (76 meters) or more
- The vista™ indicator is a unique innovation that provides the easiest, most reliable viewing of any indicator available
- A wide variety of indicator flag colors are available upon request (black/yellow is standard)

Measurement Scales

- Standard scales have a higher reflectivity index and excellent environmental resistance (reflective vinyl scale not available in metric units or for design temperatures above 450°F)
- Optional stainless steel, laser etched scales available (standard option for design temperatures above 450°F)
- Scales are available in English and Metric units
- Custom scales with volumetric, percentage or other special units are available upon request

Process Connections

- Full penetration welds available
- Welds are designed and manufactured to ASME B31.1 and B31.3 guidelines with CY & CZ option
- Outlets designed to ASME B31.1 and B31.3 guidelines (certified with CY & CZ option)
- No extruded outlets



Specifications

Process Capabilities

- **Pressure:** Full Vacuum to 5000 psi (345 bar)
- **Temperature:** -320°F to 1000°F (-196°C to 538°C)
- **Minimum Specific Gravity:** 0.35
- **Minimum Interface Difference:** 0.03 in specific gravity

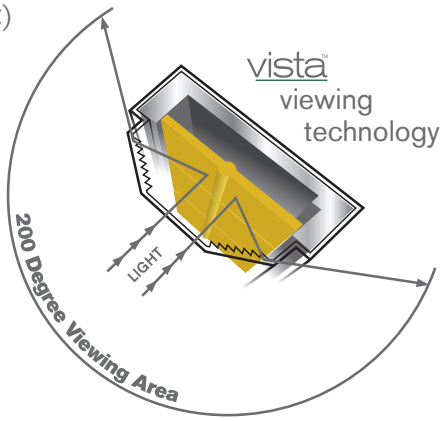
Materials of Construction

- **Chamber:** 316/L (Standard), 304L, 317, 321, 347 SS, Hastelloy B or C, Alloy 20, Titanium, Inconel 625 and other materials available upon request
- **Float:** Titanium (Standard), 316SS, or Monel

Indicators

- **Standard indicator:** yellow/black, custom colors available upon request

Glass	Max Temperature: 1000°F (538°C) Viewing Angle: 140°
Polycarbonate	Max Temperature: 450°F (232°C) Viewing Angle: 140°
vista™	Material: UV protection infused polycarbonate Max Temperature: 450°F (232°C) Viewing Angle: 200°



Switch Specifications

- SPDT, DPDT point level switches with high temperature housings available
- Agency listed explosion proof enclosures with terminal blocks available

Measuring Ranges

- Standard ranges from 6 in. (15.24 cm) to 19 ft. (5.79 m)
  For ranges larger than this, multiple units can be stacked.
- Custom ranges available

Tagging

- Standard MLI configurations come with 3 lines (62 characters & spaces per line) included for customer specified tagging information at no additional charge.

Testing and Documentation

- Radiographic Examination
- Liquid Dye Penetrant Examination
- Hydrostatic Examination
- Positive Material Identification Certification
- ASME B31.1, B31.3
- PED Certification available with 1140 model
- NACE MR0103
- CRN

Accessories

- Electrical Heat Tracing
- Steam Heat Tracing
- Flashing & Boiling Protection
- Non-destructive Test Certificates
- Vent & Drain Valves
- Insulation Blankets

Auxiliary Products

- Point Level Switches
- Magnetostrictive Transmitters
- Differential Pressure Transmitters
- Guided Wave Radar Transmitters

How to Order

Below is the SOR quick select model number tree that provides you with all of the options to configure and order a product for your application.

- You must select a designator for each component
- Reference tables, charts and additional information is provided throughout the catalog to help you make your selections, see pages noted in the tree

1 Model

Glass Indicator	1110
Polycarbonate Indicator	1120
vista Indicator	1130
Glass Indicator (PED available)	1140*

See page 9 for details

2 Float Material

Titanium *(standard opt., suitable for process temps ≤ 600 °F [316 °C])*	T
316SS	S

3 Design Temperature

XXXX

Please enter your maximum design temperature in °F. Round up to the nearest whole number.

4 Design Pressure

XXXX

Please enter your maximum design pressure in PSI. Round up to the nearest whole number.

5 Chamber Configuration

S	Sealed
B	Top Sealed/Bottom Flanged
T	Top Flanged/Bottom Sealed
F	Top/Bottom Flanged

See page 9 for diagrams

6 Process Connection Type

F	Flanged
S	Socket Weld
N	NPT

7 Connection Size

05	1/2 inch
75	3/4 inch
10	1 inch
15	1-1/2 inch
20	2 inch
25	2-1/2 inch
30	3 inch

8 Flange Type

XXX

Select from table on page 9

9 Specific Gravity

X.XX

Please enter your custom specific gravity. See page 10 for details

10 Center to Center Dimension

XXX

Please enter your Center to Center dimensions in inches. See page 10 for details

11 Accessories (Optional)

XX

Select from tables on pages 10 & 11

Example Model No.

1130 - T 250 - 342 - B N 75 - S30 - 0.70 - 96 - C2

**Model 1140 to be shipped through our manufacturing partner. PED certification (PD option) only available on 1140 model. Vista indicator on 1140 model available upon request*

Step 1: Model

1130-T 250-342-B N 75-S30-0.70-96-C2

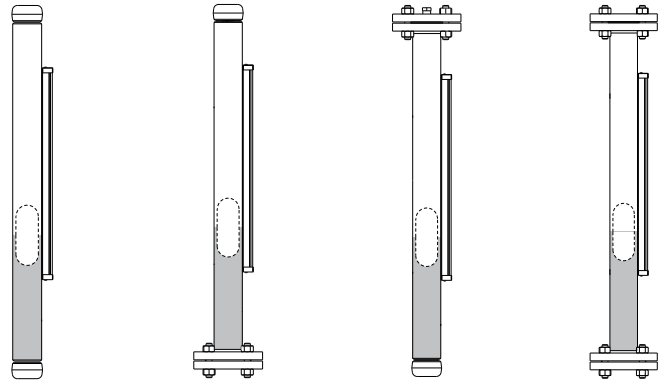
SOR offers three indicators: the traditional glass indicator, an impact resistant polycarbonate and the cutting edge vista™ design. Select the indicator that best suits your needs.

	1110 and 1140 Glass	1120 Polycarbonate	1130 vista™
Max temperature	1000°F (538°C)	450°F (232°C)	450°F (232°C)
Viewing angle	140°	140°	200°

Note: Standard indicator flag colors are black and yellow. Custom colors available upon request.

Step 5: Chamber Configuration

1130-T 250-342-B N 75-S30-0.70-96-C2



The 1100 Series is offered with side/side process connections as a standard. The 1100 Series can be configured to meet your application needs. Inquire about the many options available.

S	B	T	F	**Designator**
Top Sealed/ Bottom Sealed	Top Sealed/ Bottom Flanged	Top Flanged/ Bottom Sealed	Top Flanged/ Bottom Flanged	**Configuration**

Step 8: Flange Type

1130-T 250-342-B N 75-S30-0.70-96-C2

Select a flange type and rating from the table below. This selection will determine the flange type and rating for flanges on top and bottom of the chamber as well as the process connections.

Note: If the chamber configuration is sealed and the process connection type is socketweld or NPT, please select the corresponding designator.

Socketweld	SCW
NPT	NPT

Flange Type	ANSI Class	Designator
Slip-on	150# RF	S50
	300# RF	S30
	600# RF	S60
	900# RF	S90*
	1500# RF	S15*
	1500# RTJ	S1R*
	2500# RF	S25*
	2500# RTJ	S2R*

Flange Type	ANSI Class	Designator
Weldneck	150# RF	W50
	300# RF	W30
	600# RF	W60
	900# RF	W90*
	1500# RF	W15*
	1500# RTJ	W1R*
	2500# RF	W25*
	2500# RTJ	W2R*

*Options may change specifications and dimensions, contact customer service for more information.

How to Order

(continued)

Step 9: Specific Gravity Value

1130-T 250-342-B N 75-S30-0.70-96-C2

Each float is custom designed to operate to your specifications. To help identify each unit's capabilities, we've configured the specific gravity into the model string and mark each float with its specifications. Please enter your custom specific gravity.

Note: Minimum available specific gravity is 0.35.

Step 10: Center-to-Center Dimension

1130-T 250-342-B N 75-S30-0.70-96-C2

Every magnetic level indicator is customized to match your required dimensions. Please enter your center to center dimension in inches of the process connections. To enter center-to-center dimension in CM, select the "MC" accessory option.

Note: Standard center to center dimensions are 6 inches to 216 inches (18 feet).

Step 11: Accessories

1130-T 250-342-B N 75-S30-0.70-96-C2

SOR accessories are provided for customizing the magnetic level indicator. Place accessory designator(s) from the table at the end of the model number.

Accessory	Description	Designator
Insulation Blanket 	Insulation is recommended when indicators are to be used under extreme temperature conditions. Factory installed, removable insulation blankets are available in two configurations. 1. The standard blanket is for temperatures to 500˚F (260˚C) and consists of a 2 inch thick (compressed to 1"), 6# Cer-Wool HP enclosed in 3201-2-SS silicone coated fiberglass cloth. 2. For operating temperatures above 500˚F (260˚C), fiberglass material rated to 1100˚F (593˚C) is included on the contact surface of the blanket.	BL
Steam Heat Tracing*	A wide variety of heat tracing options are available. Heat tracing can be used for freeze protection or to maintain the process temperature of molten materials. Heat tracing is engineered to customer specifications and can be provided with controllers.	ST
Electrical Heat Tracing*		TR

Accessory	Description	Designator
Metric Dimensions	Scale and model number center-to-center dimensions are in metric units (cm)	MC
Custom Etched 316SS Scale	Scale can be marked to your specific requirements. For example, volume, percent, etc.	CS
Flashing Boiling Protection*	If a process can flash or boil, your level gauge needs to be protected from float damage. This is accomplished by using an oversized chamber and an insert that keeps the float aligned with the indicator. The flashed gasses will escape around the float, preventing high velocity damage. The SOR design has a non-welded insert that clamps between the chamber flanges, allowing the insert and indicator to be rotated for maximum viewing in tight installations.	FB
Special Configuration	"X" is used as a suffix to the model number for special requirements not keyed elsewhere in the model number by an "X". Each "X" must be identified in the text of the order or inquiry.	X

Accessory	Type	Size		Designator
Vent Connection	NPT	1/2"	Valve	V1**
			Plugged Connection	P1
		3/4"	Valve	V2**
			Plugged Connection	P2
		1"	Valve	V3**
			Plugged Connection	P3
	SW	1/2"	Valve	V4**
		3/4"	Valve	V5**
		1"	Valve	V6**
Drain Connection	NPT	1/2"	Valve	W1**
			Plugged Connection	Q1
		3/4"	Valve	W2**
			Plugged Connection	Q2
		1"	Valve	W3**
			Plugged Connection	Q3
	SW	1/2"	Valve	W4**
		3/4"	Valve	W5**
		1"	Valve	W6**
Inspection & Testing Certifications If any Inspecting & Testing Options are selected, App Data Sheet is required to be filled out (see page 14 for more information & options).	Compliance to NACE Certification MR0175/ISO 15156			NC
	Hydro Test Certificate			C2
	Inspection Report			C3
	Certificate of Compliance/Conformance			C4
	QA Test Report			C7
	Certificate of Conformance (power plant piping ASME 31.1)			CY
	Certificate of Conformance (petrochemical plant piping ASME 31.3)			CZ***
	Ultrasonic Examination			UT
	Mill Test Report			MR
	PED Certification (only available with the model 1140)			PD
	Dye Penetrant Certificate			PT
	Radiography Certificate			RT

*Options may change specifications and dimensions, contact customer service for more information.
**316SS Gate Valves are provided as a standard. If other type of material or valve is required, please consult factory.
***Fluid category must be provided. Different processes require different quality inspection procedures. Consult the factory for details.

Auxiliary Products

One of the greatest advantages of using a magnetic level indicator (MLI) is the extensive list of auxiliary equipment that can be coupled with it to provide an entire level measurement solution. Here are a few that are available to create your complete level solution. Contact your local SOR representative to learn more.

See App Data Sheet on following page to specify Auxiliary products.

<table>
<tr><th>Auxiliary Product*</th><th>Description</th><th colspan="3">Specifications</th></tr>
<tr><td rowspan="8">Point Level Switch*
  </td><td rowspan="8">• Movable magnetically coupled point level switches offer versatility as well as function. These switches strap to the outside of the MLI chamber and sense the magnetic float inside.
• Explosion proof conduit boxes available on request.</td><td>SPDT</td><td>Low Power</td><td>Low Power High Temperature</td></tr>
<tr><td>Power</td><td>25 Watts Max</td><td>25 Watts Max</td></tr>
<tr><td>Temperature</td><td>-50 to 300°F</td><td>-50 to 350°F</td></tr>
<tr><td>Dead band</td><td>½” (12.7 mm)</td><td>¾” (19 mm)</td></tr>
<tr><td>DPDT</td><td>Low Power</td><td>Low Power High Temperature</td></tr>
<tr><td>Power</td><td>25 Watts Max</td><td>25 Watts Max</td></tr>
<tr><td>Temperature</td><td>-50 to 300°F</td><td>-50 to 350°F</td></tr>
<tr><td>Dead band</td><td>¾” (19 mm)</td><td>1” (25.4 mm)</td></tr>
<tr><td>815DT Differential Pressure Transmitter*
  </td><td>The 815DT smart differential pressure transmitter is a feature rich transmitter with the versatility to meet the needs of any application. The stainless-steel construction makes it a rugged, compact instrument ideally suited for hazardous locations and hostile environments. With a variety of industry standard outputs, the 815DT is a low-cost solution to provide continuous output.</td><td colspan="3">Output Signal : HART 7 Communication Protocol with 4-20 mA Output, 1-5 VDC (Low-Power) Mode of Operation Output, Modbus RTU Serial Communications
Accuracy: +/- 0.10%
Turndown: 5 to 1
Approvals: FM and ATEX in U.S., Canada and Europe
Refer to CAT1587 for full specifications</td></tr>
<tr><td>Magnetostrictive Transmitter*</td><td colspan="4">Magnetostrictive transmitters offer an inexpensive option to provide a continuous output to a PLC or DCS. The magnetostrictive transmitter mounts to the outside of the chamber and is activated by the magnetic field of the MLI’s float. The SOR float flawlessly operates nearly every magnetostrictive transmitter on the market. SOR will either specify a transmitter for your application or integrate your preferred model.</td></tr>
<tr><td>Guided Wave Radar*</td><td colspan="4">Guided wave radar is designed to measure liquid level and liquid level interface using microwave pulses. Guided wave radar does not experience errors caused by temperature, pressure or specific gravity changes, making the technology less susceptible to measurement errors. Without any moving parts, guided wave radar is often the preferred technology of design and maintenance engineers all over the world.</td></tr>
<tr><td>Bypass Chamber or Bridle*
  </td><td colspan="4">Bridles allow for other ancillary instrumentation to be combined with the MLI, such as Guided Wave Radar (GWR). SOR has exceptional bridle manufacturing capabilities and can offer a wide selection of options and configurations. Bridles are built to your required specifications.</td></tr>
</table>

*Options may change specifications and dimensions, contact customer service for more information.

Application Data Sheet

PART 1: Magnetic Level Indicator

Date	Quantity

Company Name _____ Contact _____

Phone _____ E-mail _____

Special Tag #s (3 lines with 62 character/spaces per line available) _____

_____

_____

Process Conditions

Fluid Upper/Lower _____ Specific Gravity Upper/Lower _____

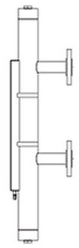
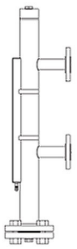
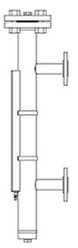
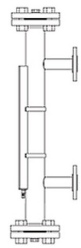
Operating Pressure _____ Design Pressure _____

Operating Temperature _____ Design Temperature _____

Area Classification _____

Chamber/Indicator Design

Chamber Type (select one)

❑	❑	❑	❑
			
Top Sealed Bottom Sealed	Top Sealed Bottom Flanged	Top Flanged Bottom Sealed	Top Flanged Bottom Flanged

Chamber Material (316/L SS Std.) _____

Process Connection Type/Rating _____

Process Connection Size _____

Vent/Drain Connection Size/Type _____

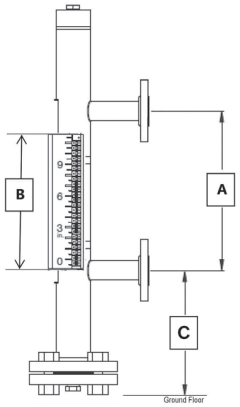
Float Material (Titanium Std.) _____

Dimensions (xxx.xxx)

A. Center to Center..... _____

B. Measuring Range..... _____

C. Ground Clearance.... _____



Scale Marking *(select one)*

❑ English

❑ Metric

❑ Percentage

Accessories *(mark as required add notes if necessary)*

Insulation Blanket ❑ _____

Steam Heat Tracing ❑ _____

Electrical Heat Tracing ❑ _____

Flashing/Boiling Protection ❑ _____

Inspection & Testing Certs ❑ _____

(see App Data Sheet Part 2)

Auxiliary Products ❑ _____

(see App Data Sheet Part 3)

Special (*specify in notes*) ❑ _____

_____

_____

Notes *(attach any sketches and special instructions)*

Application Data Sheet

PART 2: Inspection and Testing Certifications

❑ **PMI Report**	❑ **SOR Standard** Alloy verification of wetted parts using x-ray fluorescence (XRF) technology to positively identify the part material used post manufacturing. ❑ Customer specified alternate requirements_____
❑ **Hydrostatic Pressure Test**	❑ **SOR Standard** Process conforms to ASME Section V and is conducted per serial number. If valves are used, hydro testing will be done with valve open and ports plugged. ❑ Customer specified alternate requirements_____
❑ **Visual Inspection Report**	❑ **SOR Standard** Visual weld inspection by certified weld inspector per sales order line item. ❑ Customer specified alternate requirements_____
❑ **Factory Acceptance Test**	❑ **SOR Standard** Summary of testing schedule completed per sales order line item. ❑ Customer specified alternate requirements_____
❑ **Inspection Test Plan**	❑ **SOR Standard** Summary of all the testing processes that will be conducted per sales order line item. ❑ Customer specified alternate requirements_____
❑ **Mill Test Report**	❑ **SOR Standard** Certifies that the listed serial numbers were manufactured using the materials on the associated Certified Material Test Reports (CMTR). ❑ Customer specified alternate requirements_____
❑ **Dye Penetrant Examination**	❑ **SOR Standard** Certifies that the listed serial numbers were examined by visible liquid penetrant in accordance with ASME Section V, Article 6. ❑ Customer specified alternate requirements_____
❑ **NACE Compliance**	❑ **SOR Standard** SOR shall provide certification of compliance that the pressure boundary components of the listed serial numbers were manufactured to meet NACE MR0175/ ISO15156. ❑ Customer specified alternate requirements_____
❑ **Ferrite Test**	❑ **SOR Standard** Certifies the Ferrite Number (FN) of 20% of the welds per serial number is documented on associated weld map drawings. ❑ Customer specified alternate requirements_____
❑ **Radiographic Examination (X-Ray)**	❑ **SOR Standard** Certifies the 3rd party radiographic examination of 5% of welds per sales order line item by sample size in accordance with ASME Section V. ❑ Customer specified alternate requirements_____
❑ **Heat Treat**	❑ **SOR Standard** Certifies heat treatment was conducted to ASTM standards per sales order line item. ❑ Customer specified alternate requirements_____
❑ **Mag Particle Examination**	❑ **SOR Standard** Certifies that the listed serial numbers were examined by visible mag particle in accordance with ASME Section V. ❑ Customer specified alternate requirements_____
❑ **Ultrasonic Examination**	❑ **SOR Standard** Certifies that the listed serial numbers were examined by 3rd party ultrasonic examination in accordance with ASME Section V. ❑ Customer specified alternate requirements_____

Additional comments: _____

_____

Application Data Sheet

PART 3: Auxiliary Products

Auxiliary Products

Point Level Switch

Qty_____

Location_____

Type

❑ SPDT

❑ DPDT

Temperature Rating

❑ Standard (300°F/149°C)

❑ High Temp (350°F/177°C)

❑ Special_____

Rating

❑ General Purpose

❑ Explosion Proof (includes terminal block) Class I, Div 1 Groups B,C, D; Class II Div 1 Groups E, F, G

Magnetostrictive Transmitter

Output(s)_____

Accuracy_____

Supply Voltage_____

Agency

Certifying Body_____

Protection Type_____

Gas Group_____

Mounting Orientation

❑ Top Mount

❑ Bottom Mount

❑ 90° Bend, Housing on:

❑ Top OR ❑ Bottom AND ❑ Left OR ❑ Right

Guided Wave Radar Bridle*

Material (316/L SS Standard)_____

Instrument Connection Size_____

Instrument Connection Type/Rating_____

Drain Connection Size_____

Drain Connection Type/Rating_____

*If additional connections or non-GWR instrumentation is required, please sketch the bridle in the provided space and list all additional requirements. Consult factory for assistance.

Other_____

_____

_____

Sketch Bridle Here

Other Auxiliary Equipment

Examples: Differential Pressure Transmitter, Reed Chain Transmitter, etc.

Device Type_____

Part Number_____

Manufacturer_____

Specifications_____

Notes_____

_____

_____

MEASUREMENT AND CONTROL

По вопросам продаж и поддержки обращайтесь: sro@nt-rt.ru www.sor.nt-rt.ru

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Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
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Иваново (4932)77-34-06
Ижевск (3412)26-03-58
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Томск (3822)98-41-53
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