The SonoTracker™ Ultrasonic Level System. The system can monitor up to 16 vessels with transducers of various frequencies, and vessels of different heights and shapes and accurately measure the level of many different materials. It allows you to read levels from 1 foot to beyond 100 feet in solids, and additionally the same unit does open channel flow and differential level measurements.

## Features and Benefits

### Quick Config
Menu driven quick set up in less than 5 minutes.

### Modular Design
Configurable for number of sensors, relays, point level inputs, current loops, and PLC interfaces.

### Multiple Functions In One Unit
Solids and liquid level, open channel flow, and differential level measurement.Adjusts systems parameters and pre-calibrates unit without special software.

### Modular Design
Configurable for number of sensors, relays, point level inputs, current loops, and PLC interfaces.

### Multiple Functions In One Unit
Mix level, flow and DLD functions, different distance ranges, and solid as well as liquid applications.

### Continuous Non-Contact Level Measurement
No contamination of material, no lost parts or cables, no material build-up on sensing face.

### Sentry DSP™
Provides stable and accurate reading under process conditions.
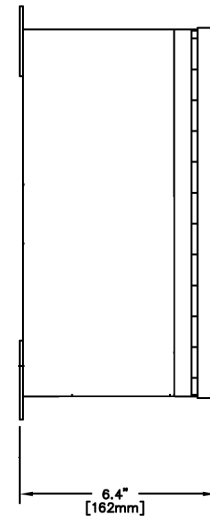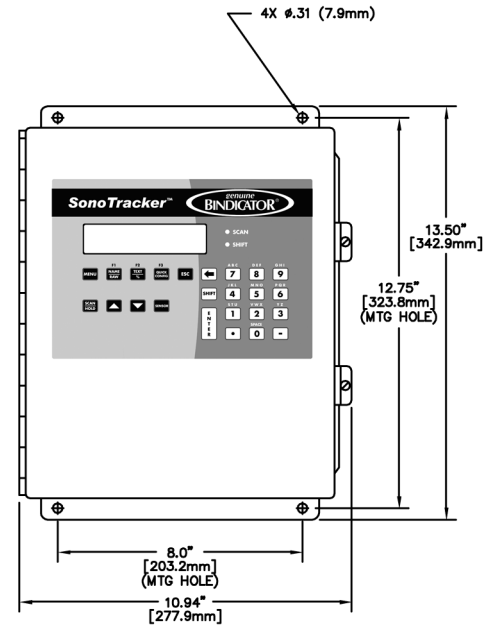
### NEMA-4X Enclosure
FRP or optional stainless steel offers the right protection for your environment.

### Built-in Optically Isolated Serial Port
Versatile interfacing for data collection, servicing and building large multi-vessel communications systems.

## How to Order

**SON** _ - _ - _ - _ - _ - _

**Slot 3 Card Options**
A = None
C = 5 Output Relay Card
D = 8 Output Relay Card
E = 2 Output Relays with 1-Channel 4-20mA Card (AC Power Only)
N = 4 Output Relays with 2-Channel 4-20mA Card (AC Power Only)
I = 2-Channel 4-20mA Output Card (AC Power Only)
H = 4-Channel 4-20mA Output Card (AC Power Only)
G = 8-Channel 4-20mA Output Card (AC Power Only)
ED = 2 Output Relays with 1-Channel 4-20mA Card (AC/DC)
ND = 4 Output Relays with 2-Channel 4-20mA Card (AC/DC)
M = RIO Card Multiple Vessel (1 Per Unit)
Q = Profibus DP Card
S = Point Level Input Card

**Slot 2 Card Options**
A = None
K = 2 Vessel Scanner Card
J = 4 Vessel Scanner Card
B = 8 Vessel Scanner Card
C = 5 Output Relay Card
D = 8 Output Relay Card
M = RIO Card Multiple Vessel (1 Per Unit)
Q = Profibus DP Card
S = Point Level Input Card

**Slot 1 Card Options**
A = None
K = 2 Vessel Scanner Card
J = 4 Vessel Scanner Card
B = 8 Vessel Scanner Card

**Heater ***
Y = Yes
N = No

**Enclosure Type**
A = NEMA 4X Fiberglass
B = NEMA 4X Stainless Steel

**Operating Voltage**
A = 110 VAC
B = 24 VDC
D = 230 VAC

**SonoTracker Level Monitor with Serial Output Isolator and Backlight Display**

*If heater is needed 110 or 230 VAC must be specified.

## Electrical Specifications

Transducer compatibility: Any frequency from 10 KHz to 45 KHz

Display: Large, back lit alphanumeric liquid crystal, two lines of 16 characters, user programmable IDs, selectable bar graph display or engineering units format

Programming and Parameter Entry: Integral 24-key sealed membrane tactile keypad

Set-up: Menu-driven prompts

Memory: Non-volatile RAM, common isolation parameter storage

Built-in Serial Communication: RS-422, RS-485, (optical isolation standard), 1200, 2400, 4800, 9600 or 19.2 K baud; designed for multi-drop single cable connection

Option cards* (A maximum of three plug-in option cards can be added)

Scanner options: For multiple channel expansion; available with 2, 4, or 8 relays; first scanner card must be full 8 to use a second scanner card; maximum of two scanner cards per SonoTracker™

PLC Interface option: Allen-Bradley RIO - 32 channel block transfer, 6 channel discreet transfers; Profibus-DP Slave

Relay Output option: Form "C" SPDT, programmable, 10 A 110 VAC, 8 A 230 VAC non-inductive, 10 A 30 VDC; available as plug in modules of 2, 4, 5 and 8 relays each

Point Level Input: 5V @ 5mA, voltage provided for contact inputs. This offers maximum protection for the process with fail-safe on disconnect. These point level input modules are compatible with the majority of the devices available on the market today, available as plug in module of 16 inputs

4-20 mA Output option: Isolated 600 ohms maximum or externally powered to 1000 ohms, 12 bit resolution; available as plug in modules of 2, 4 and 8 outputs with common isolation; must be installed in third option slot

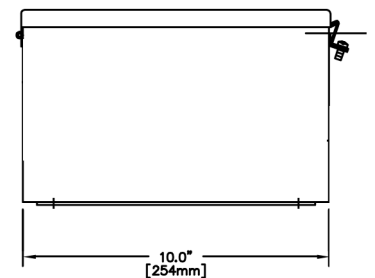Combi-Card option: One combi-card per unit; combinations are 2 relays, 1 current; or 4 relays, 2 currents

## Electrical:

Voltages: 110/230 VAC (+/- 10%), 50/60 Hz or 24 VDC

Power requirement: 20 VA

## Environmental:

Operating Temperature: -5° to 122° F (-20° to 50° C)

Storage Temperature: -22° to 140° F (-30° to 60° C)Humidity: 1% to 95% (non-condensing)

Enclosures: NEMA 4X fiberglass reinforced polyester (FRP) with 24-key, sealed elastomer keypad or NEMA 4X stainless steel. SonoTracker™ has NEMA 4X compression molded fiberglass, reinforced polyester and a silicon door gasket.

The range of sensors allows you to read levels from 1 foot to beyond 100 feet in solids. The BT-55 transducer has an extremely narrow beam angle, allowing it to be used in challenging applications. Additionally, the same unit does open channel flow and differential level measurements.

## How to Order

### Sensors

| Description | Order Number |
|---|---|
| BT-26 CPVC Sensor | SON200059 |
| BT-26 CPVC Sensor with TC | SON200064 |
| BT-26 Stainless Steel Sensor | SON200058 |
| BT-26 Stainless Steel Sensor with TC | SON200069 |
| BT-55 CPVC Sensor | SON200085 |
| BT-61 CPVC Sensor with TC | SON200074 |
| BT-61 CPVC Sensor | SON200084 |
| BT-101 CPVC Sensor with TC | SON200057 |
| BT-101 CPVC Sensor | SON200083 |

### Sensor Options

| Description | Order Number |
|---|---|
| Junction Box, NEMA 4x with 5 terminal connections | SON210027 |
| Isolation Mount | SON230032 |
| Conduit swivel explosion-proof | SON230052 |
| External temperature probe | SON230024 |

Non-pressurized flanges with standard ANSI 150 lb bolt hole configurations are available in 3″, 4″, 6″, and 12″.

Use part number 33-2074-01 for sensor cable and LUC036177 for temperature compenstation cable.

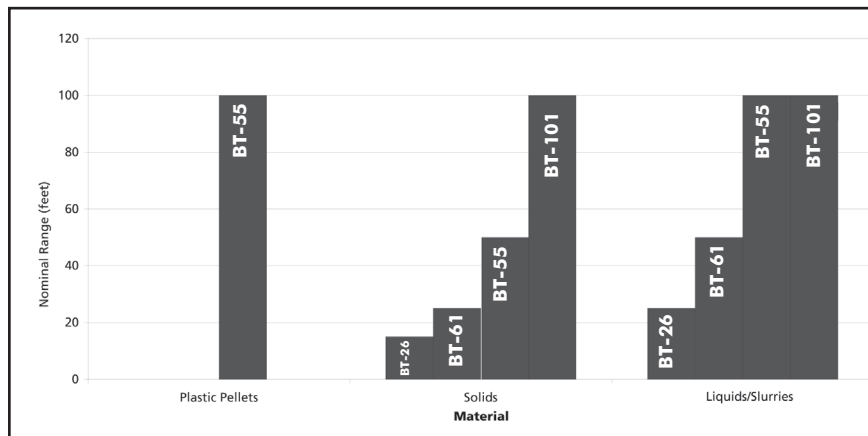## Features and Benefits

### Versatile
The transducers are designed for your specific application and environment.  Available in frequencies of 14kHz, 22kHz, 24 kHz and 43kHz to fit a variety of materials and distances.
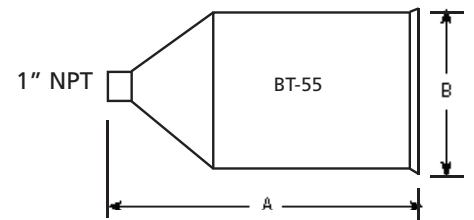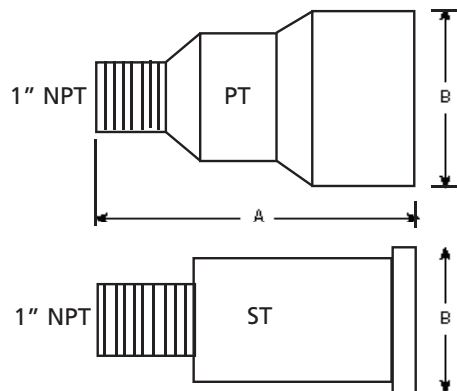
### Accurate
Our transducers have an accuracy of 1% of rated span in approved bulk solids applications and 0.25% of rated span in approved liquid applications.

## TRANSDUCER SPECIFICATIONS

| | NOMINAL RANGE LIQUIDS | NOMINAL RANGE SOLIDS | MINIMUM RANGE | TEMPERATURE RANGE | WEIGHT | FREQUENCY | BEAM ANGLE |
|---|---|---|---|---|---|---|---|
| BT-26PT | 25' (7.6m) | 15' (4.6m) | 12" (305mm) | -40° to 160°F (-40° to 71°C) | 1.2 lbs (0.5 kg) | 43KHz | 12° included |
| BT-26ST | 25' (7.6m) | 15' (4.6m) | 12" (305mm) | -40° to 230°F (-40° to 110°C) | 1.2 lbs (0.5 kg) | 43KHz | 12° included |
| BT-61PT | 50' (15.2m) | 30' (9.2m) | 24" (610mm) | -40° to 160°F (-40° to 71°C) | 3.1 lbs (1.4 kg) | 22KHz | 12° included |
| BT-55 | 100' (30.5m) | 50' grains 100' plastics | 24" (610mm) | -40° to 160°F (-40° to 71°C) | 13.0 lbs (5.9kg) | 24 KHz | 5° included |
| BT-101PT | 125' (38.1m) | 100' (30.5m) | 36" (914mm) | -40° to 160°F (-40° to 71°C) | 5.75 lbs (2.6 kg) | 14KHz | 12° included |



### TRANSDUCER MOUNTING DIMENSIONS

| | A | B |
|---|---|---|
| BT-26PT | 5.2" 132.1mm | 2.3" 58.41mm |
| BT-26ST | 5.5" 139.7mm | 2.5" 63.5mm |
| BT-61PT | 6.9" 175mm | 4.2" 107mm |
| BT-55 | 18.3" 463.6mm | 7.12" 180.8mm |
| BT-101PT | 9.2" 233.7mm | 5.5" 139.7mm |



genuine
**BINDICATOR**®

150 Venture Boulevard · Spartanburg, SC  29306
Tel: (800) 778-9242 · (864) 574-8060
Fax: (864) 574-8063    E-mail: sales@bindicator.com
www.bindicator.com