

LT-63X Series Auto-Cleaning, Submersible Turbidity Sensor

Product Description

The LT-63X series sensor platform (including the LT-631, LT-632 and LT-633) are submersible, waterproof, self-cleaning sensors utilize dual infrared detection technology to measure turbidity in the ranges of 0 to 4000 NTU. The sensor automatically compensates for disturbances caused by flow fluctuations, climate change, color change or changes in turbidity. The instrument design is virtually maintenance-free, and the self-cleaning capability of the sensor prevents deviations caused by air bubbles and suspended solids particulate.

It is powered by a 24 VDC/6W power supply and offers fully integrated 4-20 mA and RS-485 Modbus output signals for connection to any controller, PLC or DCS network. When clean, the unique Pyxis sensor design offers a stability of <0.1 NTU for up to 1-year without calibration. Additionally, this sensor platform can be accessed via the MA-CR Bluetooth/USB adapter for local display, diagnostics, auto-wiper programming, sensor cleaning and calibration when using the uPyxis APP for mobile or desktop devices. The LT-63X series sensor is ideal for use in raw water, surface water, storm water, process water and discharged water applications.

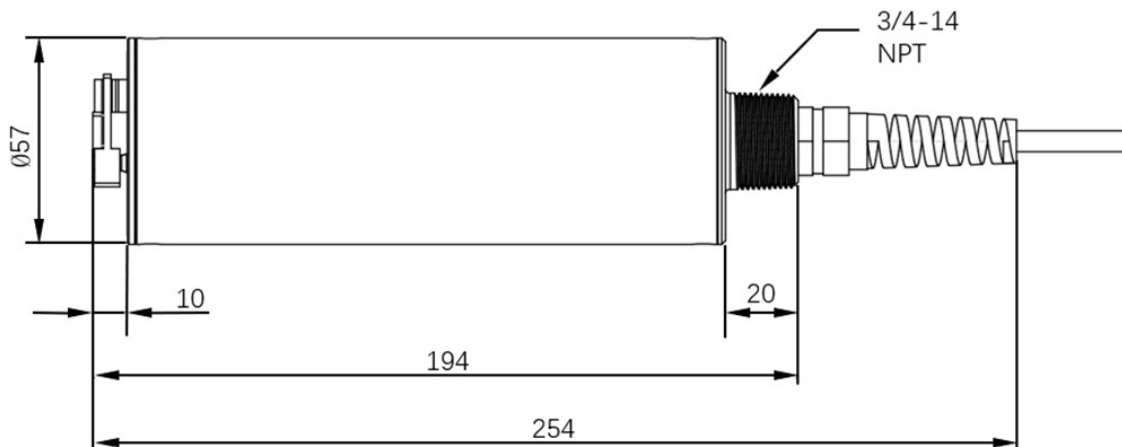
Features

- Resolution as low as 0.1 NTU
- Built-in transmitter, without preamplifier or meter head
- Combination 4-20mA isolated signal and RS-485 Modbus (RTU) output
- Simple / Wireless calibration using uPyxis Mobile or Desktop APPs and MA-CR Bluetooth Adapter
- Supports self-cleaning of sensor lens for dirty water applications
- Optional calibration with Pyxis Formazin calibration standards or field water samples
- ¾-inch MNPT Threaded For Fixed Submersion

Specifications

Item	LT-631	LT-632	LT-633
Part Number	53249	53250	10002
Parameter	Turbidity	Turbidity	Turbidity
Measurement Range	0.00–500.00NTU	0.00–1,000.00NTU	0.00–4,000.00NTU
Unit of Measure	NTU (<i>Nephelometric Turbidity Unit</i>)		
Lower Detection Limit	0.5NTU		
Precision	<100: ±2NTU or 2% of the Value, >100: ±10% of the Reading		
Accuracy	±2NTU or 3% of the Value		
Resolution	0.1NTU		
Response Time	T95<12 seconds		
Calibration Method	Field Tested Process Sample or Formazine Calibration Standard		
Dual Wavelengths	Dual Infrared Light Sources - ISO-7027 Compliant		
Method	Scattering		
Power Supply	22–26VDC, 6W		
Operating Temp.	32–122 °F (0–50 °C)		
Storage Temp.	-7–60 °C (20–140 °F)		
Outputs	Isolated 4-20mA Analog Output & Isolated RS-485 Modbus Digital Output		
Installation	Submersed Fixed Conduit ¾-inch MPNT Threaded Cable Fitting, Hoisting Chain or Cable		
Sensor Distance Install	From Bottom of Vessel (>15cm) / From Side of Vessel (>10cm)		
Material	316L Stainless Steel Body & Wiper Arm, PTFE Wiper Blade		
Weight	1,530g (3.3lbs)		
Operational Pressure	45psi (3.5Bar)		
Rating	IP-68 Fully Dustproof & Waterproof		
Regulation	CE / RoHS		
Dimension (LxWxH)	(254mm x 57mm x 57mm)		
Cable Length	33 feet (10m) IP-67 8-Pin Adapter , 4.9 feet (1.5m) Flying Lead IP-67 8-Pin adapter		

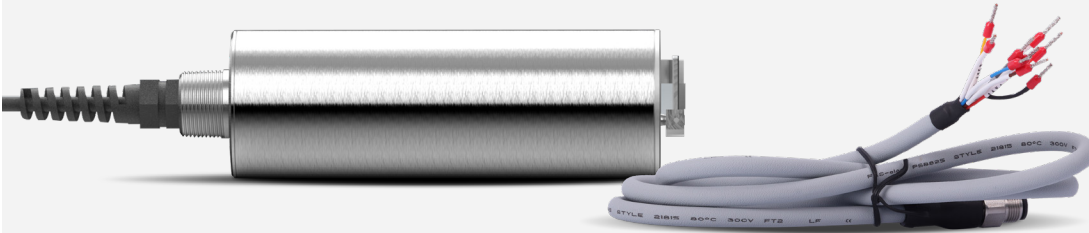
Dimensions



Standard Accessories

All the following are included in the LT-63X Package

- (1) LT-63X sensor with bulkhead terminated cable w/8-Pin Female Adapter (33 feet / 10m)
- (1) MA-1.5CR Flying Lead Cable w/8-Pin Male Adapter/Flying Lead (4.9 feet / 1.5m)
- (1) MA-CR Bluetooth® Adapter & (1) USB Adapter
- The full instrument manual is available for download at www.pyxis-lab.com/shop



Calibration Procedure via uPyxis® App

The LT-63X series sensor can be accessed via Bluetooth or USB from a mobile or desktop device using the uPyxis Mobile or Desktop Apps and the MA-CR Bluetooth/USB Adapter. The uPyxis Apps feature a live graphical display of the sensor value for turbidity as well as a sensor diagnostic, calibration function and wiper/cleaning iteration customization. After the sensor is properly cleaned it can then be calibrated for zero (clean water) and slope using sample water which has been tested for NTU.

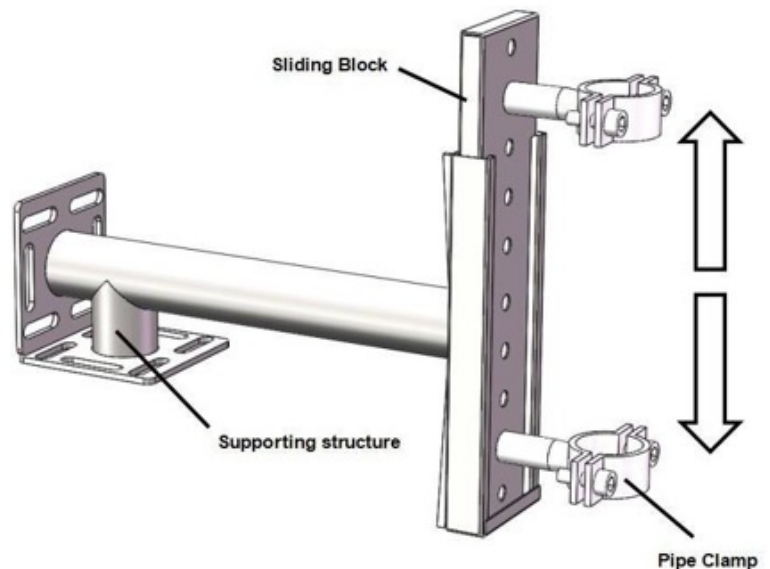
Contact service@pyxis-lab.com for support.



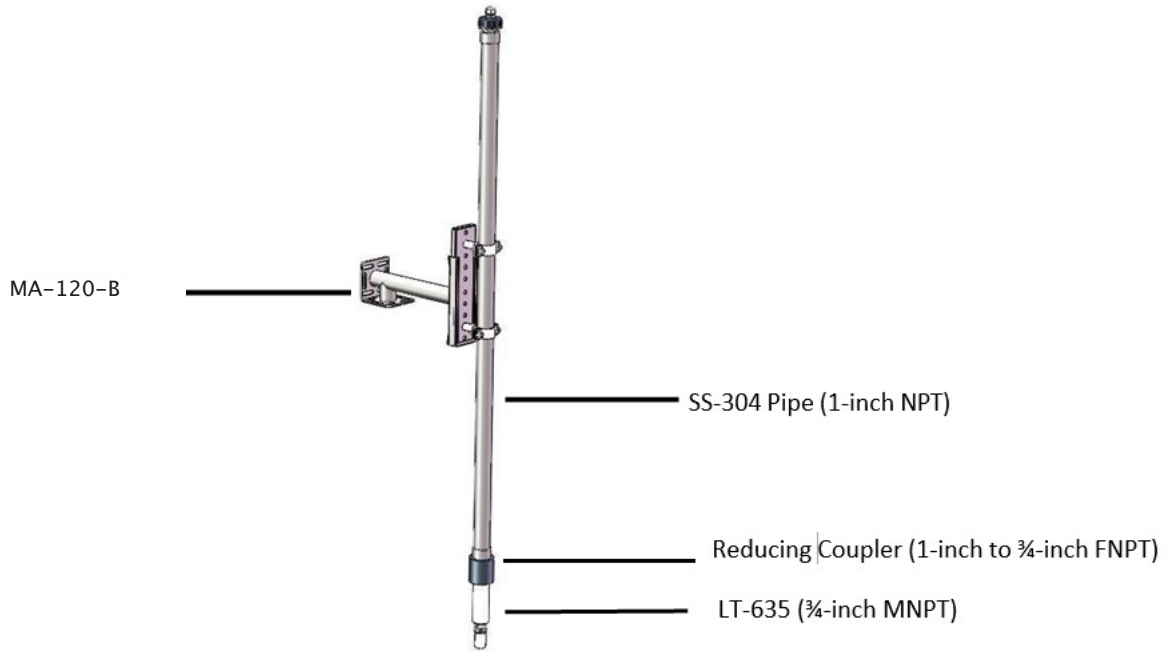
Fixed Installation with MA-120-B

The LT-63X series may be installed in a submersible/fixed application using the MA-120-B Submersion Adapter Mounting Bracket.

(P/N: 50783)

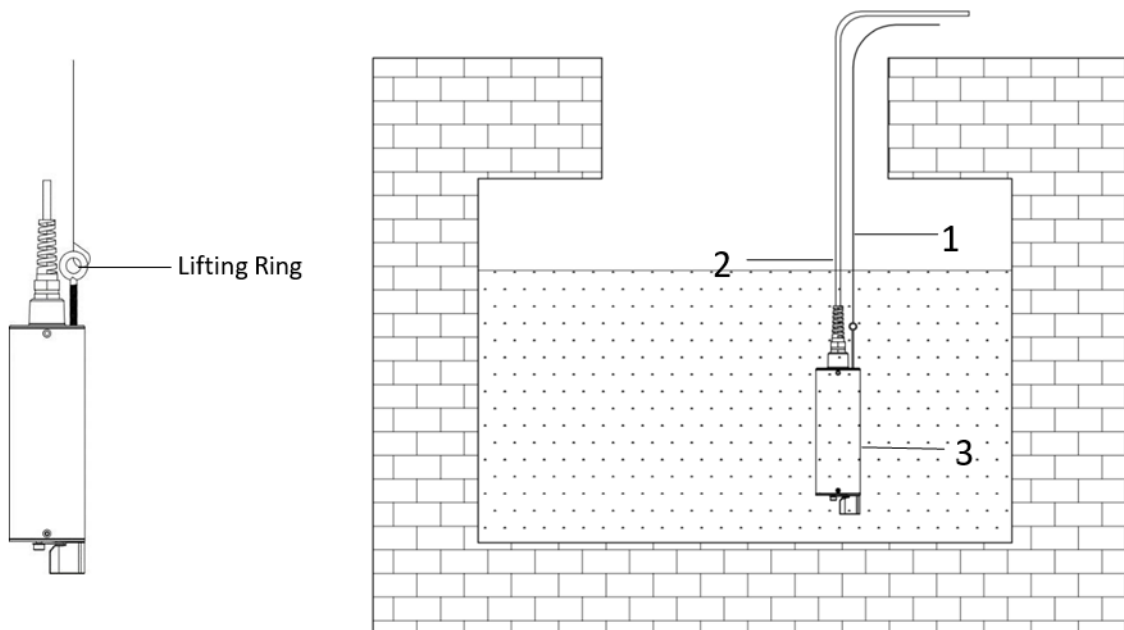


Fixed Installation with MA-120-B



Submersible Installation using Lifting Ring & Chain/Cable

The LT-63X Series sensor comes equipped with a lifting ring which allows the sensor to be lifted and lowered using a user provided chain or cable. This method of installation enables rapid retrieval and maintenance of the LT-63X Series.



¹Retention Chain/Cable

²Sensor Output Cable

³LT-63X Sensor

Order Information

LT-631 Submersible Turbidity Sensor
LT-632 Submersible Turbidity Sensor
LT-633 Submersible Turbidity Sensor

Part Number

53249
53250
10002

Optional/Replacement Accessories Information

LT-63X Replacement Wiper Blade
MA-CR Bluetooth® Adapter
MA-NEB USB Bluetooth® Adapter
UC-50 Micro-Display & Data Logging Terminal
UC-100A Display & Data Logging Terminal
MA-120-B Fixed Submerison Adapter Mounting Bracket
MA-50CR 50ft Extension Cable
MA-100CR 100ft Extension Cable
Pyxis Sensor Cleaning Kit

Part Number

50700-A50
MA-CR
MA-NEB
43007
43054
50783
50743
50744
SER-01