Ultra-Sonic RT-100 PRISM

RT-100 Ultra-Sonic Cleaning Module Quick Reference Guide

Product Description

The Pyxis Ultra-Sonic RT-100 Cleaning Module Kit (P/N – 56208) is a unique ultra-sonic vibration assembly specifically designed as an accessory for installation and use with the Pyxis RT-100 Prism Refractive Index sensor. The RT-100 Prism is an inline digital refractometer that measures the refractive index of a liquid sample and provides a direct reading of highly accurate concentration values for a wide variety of water and process related applications. Each RT-100 Prism is provided with a Tri-Clamp Flow Assembly for bypass flow installations, and contains a port specifically designed for the use of the Ultra-Sonic RT-100 Cleaning Module Kit. Ultrasonic cleaning can be highly effective at preventing the accumulation of tenacious or sticky deposits on the RT-100 sensor eye. This accessory is highly suited for continuous operation applications in water or process applications where sensor fouling or deposit buildup is of concern.

Figure 1.
Ultra-Sonic RT-100 Cleaning Module installed in
Tri-Clamp Flow Assembly

The working cycle of Ultra-Sonic RT-100 Cleaning Module can be programmed to 5-minute, 15-minute and 30-minute cycles directly through the display settings of the RT-100 unit itself. Each cleaning cycle time is approximately 5-seconds in duration.

The Ultra-Sonic RT-100 Cleaning Module is provided with a power supply and control box that works synchronously with the RT-100 as outlined in the System Connection section of this document.

Features

- 316L Stainless Steel Body
- 64-mm (2.5-inch) Sanitary Fitting Compatible
- Direct Insertion into Sanitary Port of the RT-100 Tri-Clamp Flow Assembly
- Insertion opposite side of RT-100 Optical Lens
- Periodic Timed Control via RT-100 Display Interface (5/15/30-minute increments: Default = 15)
- Operation Duration Per Period – 5 Seconds
- Power/Control Box Included (110-220VAC) powers both Ultra-Sonic Module and RT-100 Sensor
- Trigger Signal directed from RT-100 setting back to Power/Control Box then to Ultra-Sonic Module
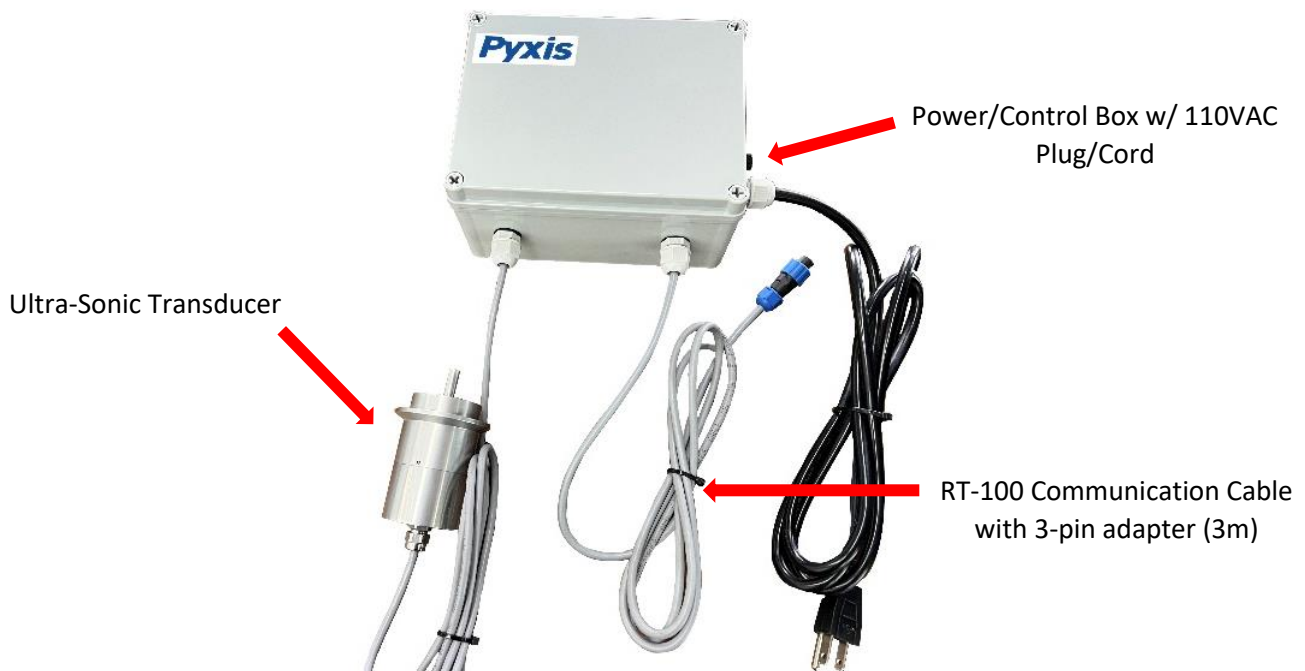- RT-100 refractive index override prevents ultra-sonic transducer operation when no liquid is seen

Specifications

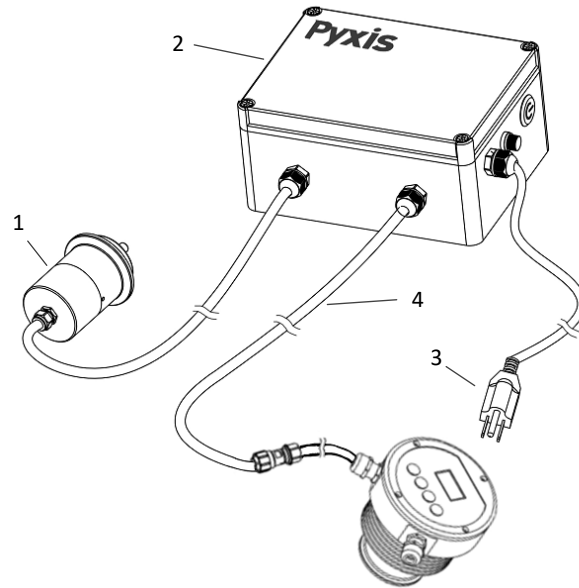| Item	Ultra-Sonic RT-100 Cleaning Module Kit
P/N	56208
Installation	64mm (2.5-inch) Sanitary Fitting into the RT-100 Tri-Clamp Flow Assembly Port
Control Method	Timed Cycle via RT-100 Settings (5,15, 30 min)
Duration of Cleaning Cycle	～5-Seconds Per Cycle
Power	110V or 220V，<80W
Weight	Ultra-Sonic Transducer：0.45Kg Power Control Box：～1Kg
Dimension	Ultra-Sonic Transducer：103x64x64mm Power Control Box：200x150x100mm
Material of Construction	Ultra-Sonic Transducer: 316L Stainless Steel Gasket: Neoprene

Pyxis Lab is constantly updating technology, as such specifications are subject to change

Ultra-Sonic RT-100 Cleaning Module Kit Package (P/N 56208)

- One Ultra-Sonic RT-100 Transducer w/ connection cable
- One Power/Control Box w/110 VAC Power Supply Cable
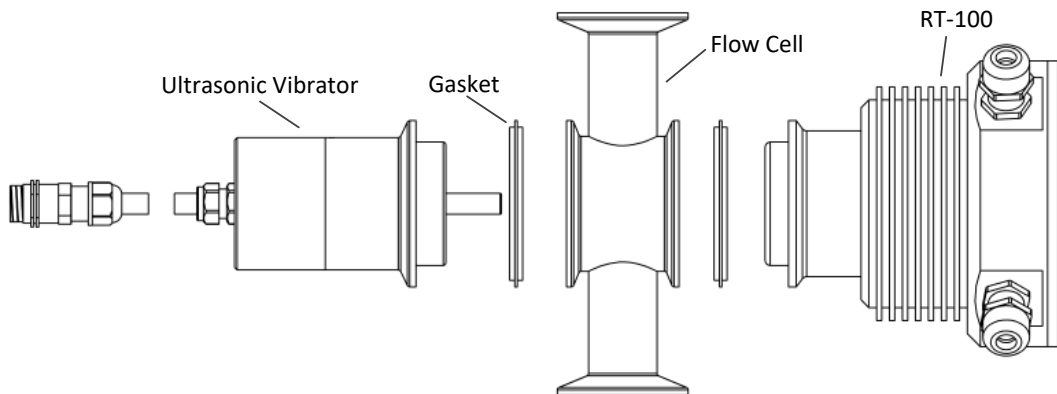- One 3-Pin Prewired Input Cable w/Adapter (3meter) for Connection to RT-100 Prism

Power/Control Box w/ 110VAC Plug/Cord

Ultra-Sonic Transducer

RT-100 Communication Cable with 3-pin adapter (3m)

Ultra-Sonic RT-100 Cleaning Module Kit Components and Connections

Item	ID #	Description	P/N
Ultrasonic RT-100 Cleaning Module Kit	1	Ultrasonic Transducer	56208
	2	Power Control Box	
	3	~110VAC Power Cord w/Plug (1.8m)	
	4	24V Power Supply and Communication With RT-100 (3m)	

Ultra-Sonic RT-100 Cleaning Module Transducer Dimensions (mm)

RT-100 Programming of the Ultra-Sonic Cleaning Module

The RT-100 interface enables users to rapidly program the cycle frequency of the Ultra-Sonic Cleaning Module. When using this accessory, the RT-100 should be connected to the Ultra-Sonic Cleaning Module Power/Control box via the 3-Pin cable with adapter. This cable will source 24VDC power supply from the Power/Control box for operation of the RT-100 as well as a 'Trigger' signal from the RT-100 sensor back to the Power/Control box where it is converted to 110VAC power supply to activate the Ultra-Sonic Transducer. The RT-100 real-time refractive index reading is used to automatically determine if the sensor is exposed to liquid or air sample, with cleaning operation interlock when the sensor is not exposed to liquid. Once the RT-100 and Power/Control Box have been properly connected and powered, the RT-100 can be programmed for Cleaning Cycle frequency by following the steps below.

Step 1 – Power On RT-100

Step 2 – Press the **MODE** Button repeatedly until Cleaning Cycle screen is displayed. *NOTE* the default cleaning cycle frequency of the RT-100 is 15-minutes.

Step 3 – Arrow **UP↑** or **DOWN↓** to select the desired cleaning cycle frequency.

Step 4 – Press the **OK** button. A programming success message will appear.

Step 5 – Press the **MODE** button to return to the Home Screen. Your RT-100 is now programmed for the cleaning cycle frequency desired.

Order Information   P/N

Ultra-Sonic RT-100 Cleaning Module Kit *(Complete Kit Enables Online Ultra-Sonic Cleaning of RT-100)*   56208

Optional / Replacement Accessories Information   P/N

Replacement Ultra-Sonic Transducer w-Cable   56216

Replacement Power/Control Box w-Cables for Ultra-Sonic Cleaning Module Kit   56217

RT-100 Prism – Inline Refractometer *(Includes Tri-Clamp Flow Cell Assembly and Flying Lead Cable)*   55105