SoundWater
Only Excellence

SPECIFICATION SHEET
Camano™ Flowmeter

Camano™ Ultrasonic Flowmeter

Ultrasonic flowmeters designed for speed and ease.

Camano is a flowmeter for long-term flow monitoring with a wall mount touch screen and separate transducer set. It also connects to your SCADA/PLC systems. It's ideal when a local display is required or for submersible applications.

The Camano offers accurate and reliable flow measurement quickly in a wide variety of applications—with minimum setup time and maximum ease of use!

Industries

- Waterparks, Pools, and Aquariums
- Building Commissioning and Maintenance
- Agricultural Irrigation
- Building Water Management

Fast to install, easy to use.

SoundWater Advantages

MEASUREMENTS YOU CAN TRUST
Our proprietary SoundWater Reciprocity Architecture™ prevents zero-flow drift and eliminates the need for calibration, resulting in long-term measurement stability and accuracy.

INCREASES PRODUCTIVITY
Featuring compact lightweight construction and intuitive apps—our products streamline installation, training, and setup—saving you time and money.

MADE IN USA
Locally owned and operated out of Wenatchee, Washington, our products are built with American quality and ingenuity.

WORKS IN TOUGH APPLICATIONS
Our transducers auto-adjust ultrasonic power output depending upon pipe and fluid conditions—giving you more frequent measurements when things get tough (e.g., corroded pipe or murky fluid).

LONG LIFE / LOW MAINTENANCE
SoundWater products are built to last using the highest quality materials, gasketed & double O-ring seals, and silicone gel to protect electronics.

SERVICE & ACCOUNTABILITY
We establish long-term customer relationships based on trust and service. We will respond to your needs and requests within 24 hours.

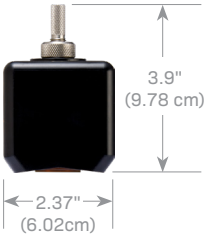
Advantages & Features

- Long term flow monitoring
- Wall mounted touch screen & App
- Submersible
- SoundWater Reciprocity Architecture
- Auto-Adjusting Ultrasonic Power
- Connects with your SCADA/PLC
- Gel-free transducers (optional)
- Measures wide range of fluids and pipe types, including challenging applications
- Flexible control unit mounting and connection options

Features

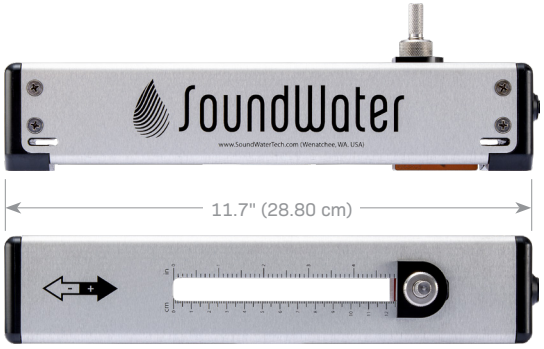
Dimensions

Camano Txx-C5



Camano Txx-C11

Camano Txx-CM5



Camano Txx-CM11

The Camano Control Unit and Camano App

Control Box

Control Box, bottom view

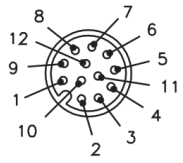
Connecting Power & Communications

Connect 24V DC power using the supplied cable. For all wired connections, check the wire color code table, and pinout diagrams below for proper set up. Also, refer to wiring diagrams on the following pages for guidelines.

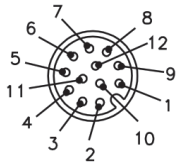
WIRING COLOR DEFINITIONS

	1	Power ground 0V
	2	RS485 Data (+)
	3	Pulse output, open drain
	4	4-20mA output
	5	RS485 Data (-)
	6	MODBUS, isolated ground
	7	Not connected
	8	Power 20-26V DC
	9	Alarm output, open drain
	10	Not connected
	11	Power ground 0V
	12	Not connected

Flowmeter Pinout



Supplied Cable Pinout



App Features

- Android-based, interactive touchscreen
- Easy configuration for 4-20 mA, pulse, MODBUS RTU, and alarms
- Programmable alarms
- Select from a wide range of fluids and pipe types
- Flexible control unit mounting and connections
- Backlit for maximum visibility in darkness or sunlight
- English or metric units

Camano Specifications*

* Specifications subject to change

Installation
15 pipe diameters upstream, 5 diameters downstream for optimal performance (typical)

Flow Detection
Bi-directional; 0 ft/s to 30 ft/s (0 m/s to 10 m/s)

Pipe Size
1" to 36" (nominal)

Performance

PIPE SIZE	ACCURACY	OPERATING RANGE	REPEATABILITY
3" to 36"	±1.0% to 2.0% typical	-20 to 20 ft/s (-6 to 6 m/s)	0.5%
1" to 2"	±2.0% to 3.0% typical	-20 to 20 ft/s (-6 to 6 m/s)	0.5%

*Under standard conditions, assuming fully developed and symmetrical flow profile (typically taken on a straight run of 15 diameters upstream and 5 diameters downstream; flow rate above 3 ft/s or 1m/s; non-aerated liquids). If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Turndown
300:1

Environmental
IP65 splash proof; weather and corrosion resistant control box

Flowmeter Materials
BODY: Anodized aluminum channel, HDPE & PVC electronics housing and footings
MOUNTING STRAPS: Stainless Steel **FASTENERS:** Stainless steel
HARDWARE: Stainlesss steel, acetal **CONNECTOR:** M12, nickel plated brass

Control Unit Materials
CONTROL BOX: Polycarbonate enclosure, glass touchscreen, stainless steel circular connector, nickel plated brass USB connector, nickel plated brass transducer connector, EPDM rubber **BACKPLATE:** Stainless steel

Temperature
Display: -20° to 100° F (-29° to 38° C) Transducer: -20° to 212° F (-29° to 100° C)

Outputs
NOTE: The isolation for all outputs is as a group; that is, all of the outputs share a common reference.

CURRENT (4-20 MA): Isolated 4-20 mA, directly proportional to flow—4 mA/zero flow (fixed), 20 mA/user programmable flow. Accuracy (linearity): 16-bit (15 ppm);

PULSE: Isolated, NFET (NPN type) open drain output with a frequency directly proportional to flow Maximum frequency: 10 kHz; mark: space ratio = 50.0: 50.0 (accurate to < 1 ppm)

DIGITAL ALARM: Isolated, NFET (NPN type) open drain output, configured to change state at any user-selected combination of: 1) high flow, 2) low flow, 3) poor acoustic signal (e.g., empty pipe, disconnected transducers, etc.); 4) open 4-20 mA circuit

MODBUS RTU: Isolated, RS485 half duplex

Hardware

MODEL	PIPE SIZE RANGE	LENGTH	PIPE MATERIALS
Camano T31-C5	2" to 8"	16.6"	Steels, Plastics, Aluminum, FRP
Camano T31-C11	2" to 18"	22.6"	Steels, Plastics, Aluminum, FRP
Camano T41-C5	2" to 6"	16.6"	Steels, Plastics, Aluminum, FRP & Copper/Brass
Camano T41-C11	2" to 14"	22.6"	Steels, Plastics, Aluminum, FRP & Copper/Brass
Camano T42-C5	1" to 6"	16.6"	Steels, Plastics, Alum, FRP & Copper/Brass
Camano T31-CM5*	6" to 18"	16.6"	Steels, Ductile Iron, Plastics, Aluminum, FRP
Camano T31-CM11*	6" to 36"	22.6"	Steels, Ductile Iron, Plastics, Aluminum, FRP
Camano T41-CM5	6" to 12"	16.6"	Steels, Plastics, Aluminum, FRP & Copper/Brass

*High corrosion, large pipe or tight spaces

Display
Android-based touchscreen user interface; backlit; Metric and English units

Power Consumption
24 V DC, external power; 300mA typical@20 V, 8W
Recommended external AC-DC converter part #PLUS ML30.241

Software
Android OS/Android-based app

Security
6-digit passcode protects configuration/setup, and volume reset

Manufacture
SoundWater Technologies, Wenatchee WA, USA

Zero Stability
Reciprocity based hardware for measurement stability and low flow performance.

Auto-Ranging
Auto-adjusting ultrasonic transducer power, and auto-adjusting transducer receiver gain. Maximizes usable signal and measurement quality.

Technology
Transit Time Ultrasonic