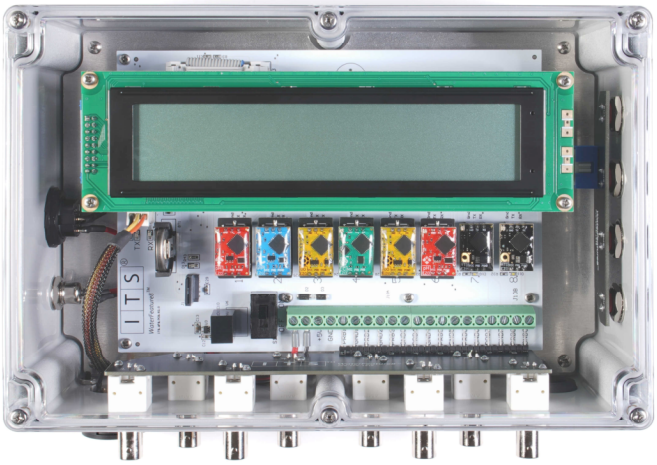
Integrated Treatment Systems, LLC

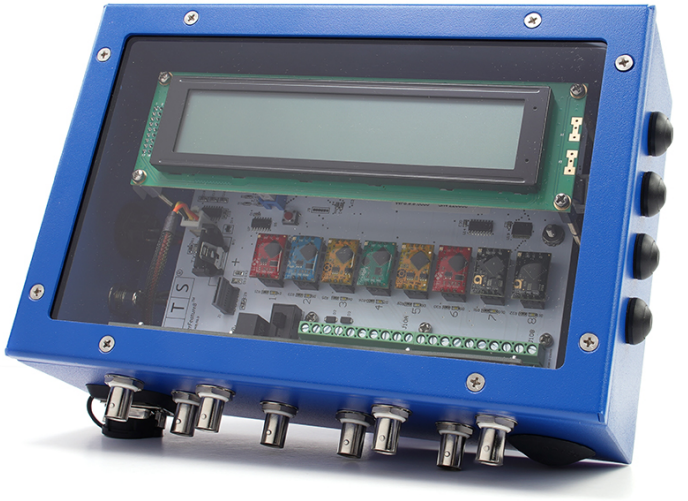
WaterFeature8

Sensor Interface System

The WaterFeature8™ water quality monitor and transmitter, designed and manufactured by Integrated Treatment Systems, LLC in the USA is a proven solution for integration into municipal and industrial water and wastewater treatment control systems. Powered by up to 8 Atlas Scientific, LLC EZO™ sensor circuits, it is used for real-time process monitoring of up to 8 sensor channels.



WaterFeature8 in Polycarbonate Enclosure

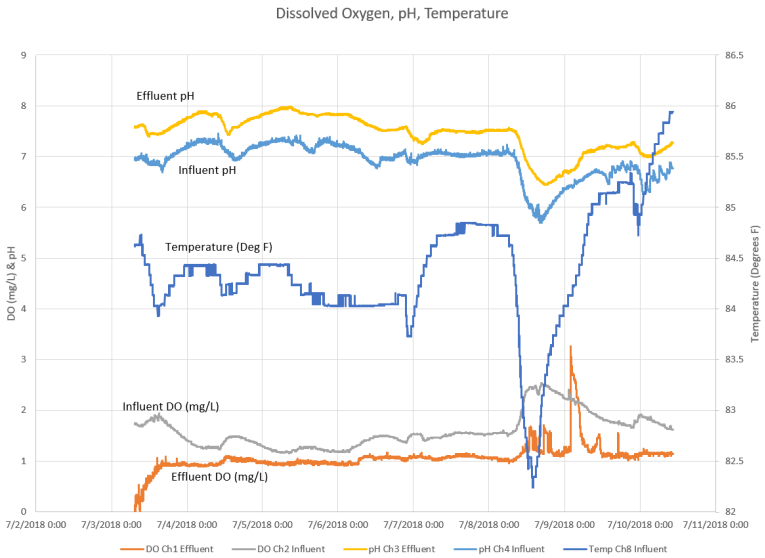


WaterFeature8 in Powder Coated Aluminum Enclosure

- Inexpensive sensors and simple, on-board calibration
- Real-time displayed values on all 8 channels
- Optional 4-20 mA output for PLC process control for each channel (Serial+Analog model only)
- RS-232 Serial remote communications w/DB9 standard connector
- Compatible with Atlas Scientific EZO circuits:

  pH :: DO :: ORP :: EC :: RTD :: $CO_{2(g)}$ :: $O_{2(g)}$

  Humidity :: Pressure :: Flow
- Automatic EZO Configuration (no programming req'd)
- Temperature Compensation for DO, pH, & EC
- TransFlash (microSD compatible) memory card data recording
- Continuous output and Remote State functions
- Real Time Clock with timestamp recording and battery backup



Data from a WaterFeature8 powered water monitoring system at an industrial pre-treatment site

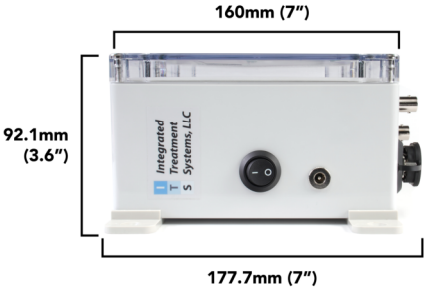
The Integrated Treatment Systems WaterFeature8 is a multiparameter water sensor monitor and transmitter designed for and by process engineers. WF8 systems have been deployed across the globe in applications such as government and quasi-government research, education, water and wastewater treatment, residential water quality monitoring, pools, aquaponics, hydroponics, and many others.

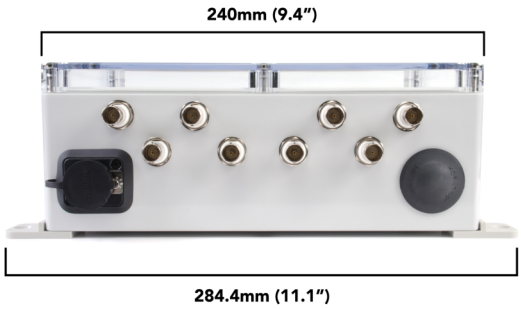
The WF8 Sensor Interface System is available in two functional models; the Serial Only and the Serial+Analog. The models are identical except that the +Analog system adds eight 4-20 mA output channels.

Each model WF8 is offered in a durable polycarbonate enclosure or a hand-built powder coated aluminum enclosure.

The WaterFeature8 can be deployed with any combination of up to 8 ea Atlas Scientific EZO water quality monitoring circuits, and therefore also works with any sensors that are compatible with EZO circuits.

Atlas Scientific sensor and EZO hardware is purchased separately via distributor, Amazon.com, eBay, Digi-Key, or at www.Atlas-Scientific.com.





WaterFeature8 Model Codes

Model No.	Panel Integration Kit	Enclosure	Power Adapter	Sensor Connector Style	4-20 mA Outputs
WF8.SBK.0000	Optional	No	User Supplied 24VDC	Terminals	No
WF8.SBK.0420	Optional	No	User Supplied 24VDC	Terminals	Yes
WF8.SIS.BNC.P.0000	N/A	Polycarb.	2-Prong USA Wall Adapter	BNC Jack	No
WF8.SIS.BNC.P.0420	N/A	Polycarb.	2-Prong USA Wall Adapter	BNC Jack	Yes
WF8.SIS.BNC.M.0000	N/A	PC Alum.	2-Prong USA Wall Adapter	BNC Jack	No
WF8.SIS.BNC.M.0420	N/A	PC Alum.	2-Prong USA Wall Adapter	BNC Jack	Yes

Power Consumption:

Minimum @ 24VDC = -0.5W (0.02A)

Maximum @ 24VDC = 5.75W (0.24A)

Environmental Temperature Range (LCD limited):

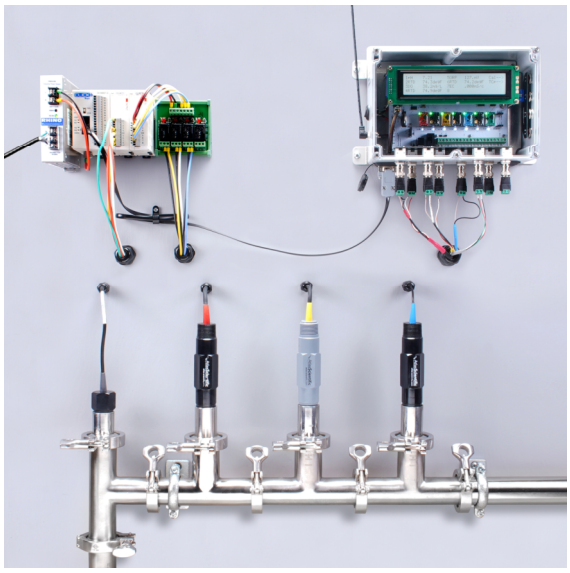
Minimum = -20 °C (-4 °F)

Maximum = 60 °C (140 °F)

RTC Backup Battery Size: CR 2025 (supplied)

Timestamp Standard: ISO 8601

Memory Card Standards: TransFlash and microSD (SD and SDHC) up to 32 GB, formatted with FAT32 file system (card not supplied)



The WaterFeature8 can serve as a standalone multi-parameter monitor, or it can be deployed as part of a larger control system.

A 7/8" hole (with plug, grommet, and bushing) is provided for making additional field connections such as flow meters and analog signal wiring.

WaterFeature8 Display and Output Specifications

EZO™ Sensor Circuit Type	Display Values (4 digits)			Analog Output Values (16-bit signal resolution steps 0.000153 mA per bit)		
	Display Resolution	Unit Display	Calibration Points	Low (4 mA)	High (20 mA)	Output Resolution per Bit
DO	0.01	mg/L	1 or 2	0 mg/L	10 mg/L	0.00015 mg/L
ORP	1	mV	1	-1,020 mV	1,020 mV	0.0311 mV
pH	0.01 to 0.1	S.U.	1, 2, or 3	0 S.U.	14 S.U.	0.0021 S.U.
RTD	0.1 to 1	degC	1 or 2	-4 °C	122 °C	0.002 °C
FLO	0.1	gpm	K-value Field Calibrated	0 gpm	525.1 gpm	0.01 gpm
EC	0.001 to 1.	µS/c	1	0 mS/cm	200 mS/cm	0.003 mS/cm
CO_2(g)	1	ppm	Factory Calibrated	0 ppm	10,000 ppm	0.191 ppm
O_2(g)	00.01 to 10.00	%	Factory Calibrated	0 %	42 %	0.0006 %
HUM	00.01 to 10.00	%	Factory Calibrated	0 %	100 %	0.0015 %
PRS	0.01 to 1	inch	Factory Calibrated	0 inch	1,3858 inch	0.021 inch