



Clearances and Weight

Recommended Wall Clearance - GuardTec Assembly	30" W x 20" H x 8" D [76.2 cm x 50.8 cm x 20.3 cm]
Recommended Clearance	Pump Control Module: 11" L x 7" W x 3" D [27.9 cm x 17.8 cm x 7.6 cm] Valve Control Module: 7" L x 5" W x 4" D [17.8 cm x 12.7 cm x 10.2 cm]
Installed Weight	13 lbs

Electrical

Power Supply Input	120/240 VAC, 1.2/0.55 A, 50/60 Hz, Single Phase
Power Supply Output	24 VDC, 4 A, 96 w
GuardTec Input	24 VDC
Pump Module Input	120 / 240 V, 20 A max (GFCI dedicated), 50/60 Hz Note: 240 V needs customer supplied power cord
Pump Module Output	120 / 240 V, 20 A max, 50/ 60 Hz Mechanical Relay, 12AWG (or per local electrical code and NEC) to Booster pump (customer supplied)
Valve Control Module Input /Output	24 VDC

Environmental Conditions

Ventilation	Well ventilated area. Refer to local codes for specific ventilation requirements.
Operating Ambient Temperature	-4°F to 158°F [-20°C to 1°C]
Recommended Ambient Temperature	40°F to 120°F [4.4°C to 48.9°C], Indoor use preferred
Indoor Use	Provide cover/shelter. Keep away from direct sunlight.

Cable Length & Equipment Distances

M12 Data Cable Length	9.84 ft [3 m]
Flow Cell	500 ft
Pump Control Module (Booster or Dosing Pumps)	500 ft
Valve Control Module (Pulsar® - Acid Plus or Pulsar® Infinity)	500 ft
Pulsar® Precision Feeder	175 ft

Communications Specifications

USB Port	Micro USB, for Firmware Updates
Ethernet Port	RJ45 for CAT 5 & 6 Ethernet Cable, 10/100/1000 Base-T
Communication Protocol	Modbus TCP. MQTT
Equipment Connectors	5 pin M12, male and female

Material Specifications

Enclosure Housing	LLDPE
Mounting Plates	Aluminum 5052/H32
GuardTec Housing	Polycarbonate, UV stabilized
Flow Cell	Polycarbonate, UV stabilized, optically clear
Modules, Connectors	Polycarbonate with flame proof certification, Ml 2 and liquid tight cord grips
Sensors / O-rings	Polycarbonate / Viton
UV Shield (Optional)	Acrylic, transparent UV stabilized, .220 in thick
Cable Connectors	316 SS
Sampling Ball Valve	PVC

Sensor Specifications

Flow Cell Sensor Connections	(4) total, M12 female
Integrated Flow Meter Range	0.01 - 0.50 gpm
Integrated Temperature Sensor Range / Resolution	-4°F to 185°F [-20°C to 85°C] / 1°F or C
pH Range / Resolution	0 to 11 pH, 0.1 pH units
pH Offset (in pH 7 buffer)	± 0.5 pH at 77°F (25°C)
Slope (pH 7 to pH 4 buffer)	93 to 102% at 77°F (25°C)
pH Response Time	± 0.1 pH unit in 30 seconds at 77°F 9 (25°C)
ORP Range / Resolution	-2000 to +2000 mV, 1 mV
ORP Response Time	30 seconds 95% at 77°F (25°C)
FAC Range	0 to 20 ppm
FAC Response Time	30 seconds
Shipping Cap (pH,ORP)	10 ml soaker bottle
Shipping Cap Solution	4M KCL/pH 4 Buffer {50/ 50}
pH Replacement Recommendation for Optimal Performance	± 0.89 pH offset, or less than 93% pH slope, or 24 months
ORP Replacement Recommendation for Optimal Performance	24 months
FAC Replacement Recommendation	Approximately 3-5 years

GuardTec Specifications

Feed Control Options	On/Off, Proportional, Manual
Equipment I/O	(5) total: (4) x feeder and pump modules, (1) x flow cell
LCD Type, Size, Resolution, Display Color	Capacitive Touchscreen, 7-inch, 800 X 480 RGB, 262K



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GuardTec Manual