

Installation, Operation & Maintenance Manual

Sentry PRO-TEC Controller Sampler Controllers

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Keep for Future Reference





Do not install, maintain, or operate this equipment without reading, understanding, and following the appropriate Sentry Equipment Corp instructions. Otherwise, injury, damage, or both may result.

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Note

The information contained in this document is subject to change without notice.

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Safety Information

Please read the entire manual before attempting to unpack, set up, or operate this product. Pay careful attention to all Warnings, Cautions, and Notes. Failure to do so could result in serious personal injury and/or equipment damage.

Use of Hazard Information

If multiple hazards exist, the signal word corresponding to the greatest hazard shall be used.

Definitions

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

NOTE

Information that requires special emphasis.

TIP

Alternate techniques or clarifying information.

SHALL: This word is understood to be mandatory.

SHOULD: This word is understood to be advisory.

General Safety Precautions

Product Selection, Installation, and Use

WARNING

Improper selection, installation, or use can cause personal injury or property damage. It is solely the responsibility of users, through their own analysis and testing, to select products suitable for their specific application requirements, ensure they are properly maintained, and limit their use to their intended purpose.

Follow proper local, state, and federal regulations for proper installation and operational requirements.

Always use caution and common sense when working with any chemical. Read the product label and Material Safety Data Sheets (MSDS) carefully and follow the instructions exactly.

Firefighting

NOTICE

When selecting the appropriate firefighting apparatus, the fire extinguisher shall be rated for electrical service and meet the requirements for the materials being sampled.

Potential Equipment Hazards

WARNING

Hot surfaces! This equipment may have very hot surfaces. If an operator contacts a hot surface, injury may occur. Use protective clothing to prevent injury. If other equipment comes in contact with a hot surface, damage to the equipment may occur. Ensure the area around this equipment is kept clear to prevent damage from occurring.

High pressures! This equipment may contain fluids at very high pressures. Prior to installing, removing or maintaining this equipment, ensure that the equipment is isolated from all connecting piping, the equipment is depressurized, the contents have been drained, and the equipment is cool.

Moving parts! This equipment may contain moving parts. All drive guards and doors must be secured in place when this machine is being operated.

General Description

The Sentry® SBC controller is a dedicated logic control system capable of controlling many automatic samplers in the Sentry product line including liquid, slurry, and bulk solids samplers.

Controller features

- Adjustable timer setpoints for all Isolok models
- Standard modes of operation include Hand and Auto sampling
- Continuous timed sampling

General Specifications

- Operating temperature: -4°F (-20°C) to 131°F (55°C)
- Relative humidity: 93% non-condensing

Receiving

- Examine the crate and all contents for any shipping damage immediately after receipt.
- Take pictures of any suspected damage.
- Report damages to the delivery company at once. This is the responsibility of the consignee.

Shipping Handling & Storage

1. Overseas shipments will have the controller packaged per international standards.
 - a. The controller contains electrical components. It requires storage temperatures of 32°F to 122°F (0°C to 50°C).
 - b. Dimensions and mass will change per enclosure type. Refer to the specific drawing set for more details. The typical box will be a nominal 10 x 8 (254mm x 203mm) and weigh approximately 7lbs (3.2kg).
 - c. Utilize the proper PPE equipment while moving, handling, and installing this equipment.
 - d. Handling of the junction box requires two hands and proper lifting techniques. Mounting feet are provided for the convenience of wall mounting.
 - e. Unless otherwise specified, the junction box is rated for NEMA type 4, 12, 13, and IP66. Nema 4x can be achieved with stainless steel or plastic based boxes.

Installation

- Installation should be performed by qualified personnel in accordance with state/provincial and local codes and procedures.
- Mount the controller in a location that is easily accessible and within view of the sampler.
- Mount the controller in a vibration-free location and have a qualified electrician wire the controller to the electrical supply.
- Ample space must remain available for future service needs. Typically, 36" (914mm) is required around the door for maintenance requirements. Refer to local codes for specific requirements.
- When transporting or installing the junction box, use care not to mishandle or damage during installation.
- For exterior installations, it is advisable to provide a roof to over the collection system and controller in warmer climates to prevent hot surfaces on sheet metal panels and doors.
- Surge suppression and filtering is recommended but not required.
- Hard wire the controller to instrument-quality power using appropriate certified conduit, fittings, and wiring or cable.
- Main disconnect and branch circuit protection is by others. Follow proper lock out tag out procedures while installing.
- Use a suitable external over-current protection device, such as a fuse or circuit breaker (15A) and disconnect device.
- The over-current protection and disconnect devices shall be installed on both the hot (L) and neutral (N) leads.
- The disconnect device shall be located near the equipment and marked with appropriate ON (I) OFF (O) markings as specified by local codes.
- When penetrating the controller enclosure, use tubes and fittings that maintain the environmental rating of the enclosure.

Operation

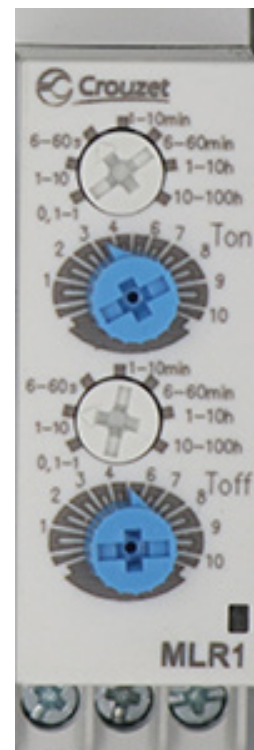
1. **AUTO:** Places the controller in AUTO mode. This mode allows local operation of the controller.
2. **Remote Contact:** Allows remote operation of the controller. Sampling starts when a contact from an external source is closed. Continuous sampling occurs for as long as the contact is closed. Momentarily closing this contact will start a single sample. (SS-107 must be in the "AUTO" position.)
3. **HAND:** Takes a single, manual sample and is extended as long as the operator holds SS-107 in the hand position.
 - a. When holding SS-107 in the Hand position, the Auto Mode pilot light will pulse once the unit has achieved the equivalent time setting for auto mode, indicating that the exposure time for the sampler is equivalent to an automatic sampling sequence.

Outputs

1. The PRO-TEC controller offers one output relay intended to drive a low consumption solenoid valve.

Timers

1. The image right shows then integral timer for the PRO-TEC controller.
 - a. The top two settings are related to the retract timer.
 - First select the timing range for the retract timer.
 - Second select the specific amount of retract time required.
 - b. The bottom two settings are related to the extend timer.
 - First select the timing range for the extend timer.
 - Second select the specific amount of extend time required.



Contact Us

If a problem should arise with the sampler or controller, please contact Sentry at +1-262-567-725

Standard Warranty

Sentry Equipment Corp (“Seller”) warrants products manufactured by it and supplied hereunder (“Products”) to be free from defects in workmanship and, to the extent materials are selected by Seller, to be free from defects in materials, in each case for a period as defined in the table below:

Product Line	Product Category	Warranty Period
Sentry®	1. Automatic Sampling 2. Corrosion Monitoring 3. Manual Sampling 4. Sample Conditioning 5. Sampling & Analysis Systems 6. Replacement Parts (without expiration dates)	Eighteen months from date of shipment or twelve months from startup, whichever occurs first
Waters Equipment	1. Sampling & Analysis Systems 2. Replacement Parts (without expiration dates)	Twelve months from date of shipment

To view the full warranty, go to www.sentry-equip.com/warranty.

Customer Support

With proven sampling expertise since 1924, Sentry products and services provide business operations the critical insights to optimize process control and product quality. We deliver true representative sampling and analysis techniques to customers around the globe, empowering them to accurately monitor and measure processes for improved production efficiency, output, and safety. Standing behind our commitments, we are determined to tackle any application, anywhere.

We know that running an efficient operation isn't easy. It requires thorough, careful analysis of controlled, real-time data achieved through reliable, accurate, and repeatable process monitoring, and measuring. By effectively conditioning, sampling, and measuring gas, liquid, slurry, powder, solids, steam, or water within their production environments, our customers obtain the critical insights they need to control and optimize their processes.

Yet, controlling your processes also means reliable customer support throughout the life cycle of your equipment.

- Customer Service—General information, warranty claims, order management.
- Installation Service—For systems that require specialized expertise upon installation.
- Technical Support—Troubleshooting, training, and technical manuals.
- Field Service & Retrofits—When a problem needs immediate attention.
- Replacements Parts & Consumables—Order your replacement parts and consumables.
- Sentry ProShield Services—Select from four ProShield Guardian service plans providing different levels of support to protect your large system investments with regularly scheduled maintenance.

To learn more, go to www.sentry-equip.com/support.

Serving customers
in more than 50 countries
across six continents worldwide.



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