

GUARDIAN SERIES™ FIXED SPEED PUMP CONTROLLER

The Guardian Series™ single-phase controller takes a major leap forward in fixed speed Submersible Turbine Pump (STP) control. Built upon the solid FE PETRO® brand smart controller platform, Guardian Series™ controllers feature an enhanced user interface, greater functionality, and higher performance compared to standard control boxes.

TECHNICAL ADVANTAGES

- Compatible with FE PETRO® single-phase 2 Hp, 1½ Hp, ½ Hp, and ¾ Hp fixed speed STPs, as well as comparable competitive STPs.
- 3½ digit LCD provides readable running and fault status for quick troubleshooting.
- Separate “Reset” and “Silence/Calibrate” push buttons provide clear interaction with the controller.
- Automatically logs the last five abnormal conditions seen in the pumping system. This data is retained in non-volatile memory. Service technicians can quickly view a history of abnormal conditions, which is particularly useful when troubleshooting intermittent conditions.
- Over voltage protection and enhanced underload detection protects pumping system equipment.
- With a single press of the “Calibrate” button, the controller will automatically learn the electrical characteristics of the STP for easy setup or retrofit.

Capabilities

Capability	Standard Relay Box (STP-CBS)	Smart Controller (STP-SCI)	Guardian Series™ Controller (SPGC-220)
Pump Compatibility	up to 2 Hp	up to 2 Hp	up to 2 Hp
Horsepower Selection	Not Required	Not Required	Not Required
Standard THHN Wiring	YES	YES	YES
Primary/Secondary Pump Operation	NO	YES	YES
Alternating Pump Operation	NO	YES	YES
Communication Display	NO	YES, yellow flashing light	YES, yellow flashing light
Incoming Power Display	NO	YES, solid green light	YES, displays “Idle”
Pump Running Display	YES, red pilot light	YES, green flashing light	YES, flashes “run”
Fault History Readout	NO	YES, flash last five faults	YES, displays last five faults
Fault Diagnostics	NO	YES, red flashing light	YES, red backlight display
Underload (dry run) Detection	NO	YES, 1 red flash	YES, flashes “UL”
Low Incoming Voltage Protection	NO	YES, 2 red flashes	YES, flashes “LI”
High Incoming Voltage Protection	NO	YES, surge protection	YES, flashes “HI”
Overload (running) Detection	NO	YES, 3 red flashes	YES, flashes “OL”
Overload (startup) Detection	NO	YES, 3 red flashes	YES, flashes “Lr”
Open Circuit Detection	NO	YES, 4 red flashes	YES, flashes “OC”
Extended Run Protection	NO	YES, 9 red flashes	YES, flashes “Er”
Relay Failure Protection	NO	YES, 10 red flashes	YES, flashes “rEL”
Audible Fault Alarm	NO	YES, reset/silence button	YES, separate silence button



SPECIFICATIONS

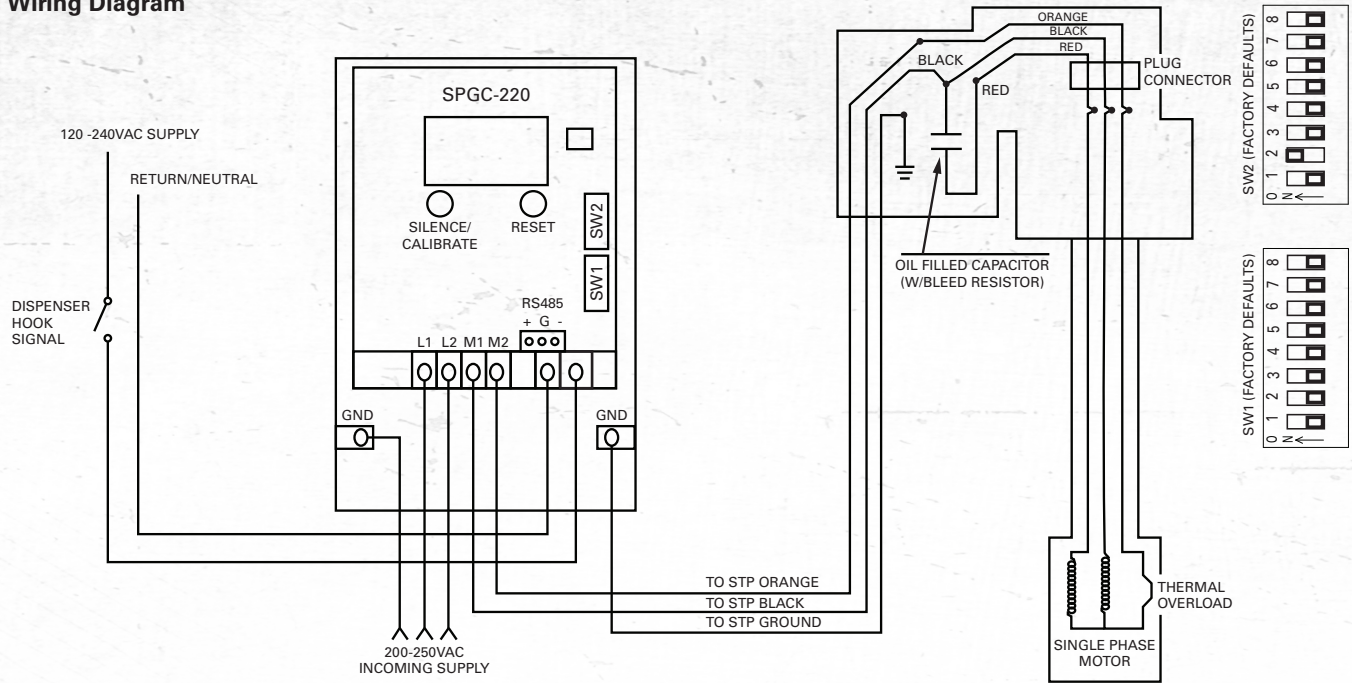
- Dimensions: 8½" × 5" × 3" (215 mm × 127 mm × 76 mm)
- Motor contact rating: 2 Hp, 200-250 VAC, 50/60 Hz, Single Phase
- Switch hook rating: 120-240 VAC, 50/60 Hz
- An integrated RS 485 com port is provided to connect Guardian Series™ Controllers to EVO™ Series Automatic Tank Gauges (ATGs) for enhanced functionality via Turbine Pump Interface (TPI).

Approvals & Certifications

- ULc listed.
- CE certified.
- ISO 9001:2015 certified manufacturer.

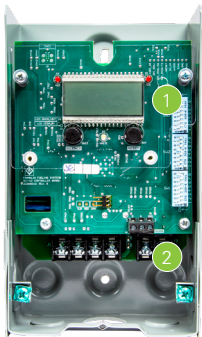
SPECIFICATIONS

Wiring Diagram



Note: See product installation instructions for further details. Wiring must conform to all federal, state, and local codes. Control panels are for non-hazardous indoor use only.

ORDERING INFORMATION



Guardian Series™ Single Phase Controller

Model	Description
5800100220	SPGC-220 Guardian Series™ Single-Phase Controller, 220 Volt
402312931	STP-DHI + SPGC-220 Guardian Series™ Single-Phase Controller bundle (220 Volt supply, 110 Volt hook)
402312932	STP-DHIB + SPGC-220 Guardian Series™ Single-Phase Controller bundle (220 Volt supply, 240 Volt hook)

Notes:

- Compatible with all single-phase FE PETRO® and competitive model STPs.
- One controller required for each submersible (up to 2 Hp).
- Compatible for use in primary/secondary configurations with STP-SCI models.

Replacement Parts

Item	Model	Description
1	225000932	SPGC-220 upper (user input) replacement board
2	225005932	SPGC-220 lower (power, relay) replacement board