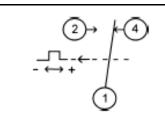
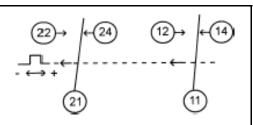
GREYSTONE ACCURACY BY DESIGN LLC Series (S Frost Protect Installati

LLC Series (SPDT & DPDT) Frost Protection Thermostat Installation Instructions

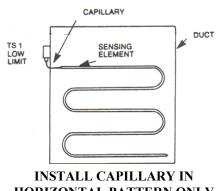
Model	Reset Action	Switch Action	Setpoint Range	Differential	Comments	
LLC-306	automatic	SPDT	2° to 20°C (35° to 68°F)	2.5°C (4.5°F) fixed	LLC-CLIPS capillary mounting clips must be or-	
LLC-307	manual	51 D 1			dered separately	
LLC-316	automatic	DDDT	1.1° to 21°C (34° to 70°F)	2.5°C (4.5°F) fixed	Five LLC-CLIPS capillary mounting clips	
LLC-317	manual	DPDT			supplied with each control	



LLC-306, LLC-307 SWITCH ACTION ON DECREASE IN TEMPERATURE (Contact 1 to 4 Opens; Contact 1 to 2 Closes)



LLC-316, LLC-317 SWITCH ACTION ON DECREASE IN TEMPERATURE (Contacts 11 to 14 and 21-24 Opens; Contacts 11 to 12 and 21 to 22 Closes)



HORIZONTAL PATTERN ONLY

ELECTRICAL RATINGS

	LLC-306, LL0	C-307 (SPDT)	LLC-316, LLC-317 (DPDT)	
INDUCTIVE:	120 vac	240 vac	120 vac	240 vac
F.L.A. L.R.A. Horsepower	24 144 2	24 144 3	14 84 3/4	12 72 2
PILOT DUTY	720 va max @ 120 to 600 vac 144 va max @ 24 vac		720 va max @ 120 to 600 vac 144 va max @ 24 vac	

Strap-on Temperature Sensor

- 1. Controller can be mounted in any position. Avoid locations subject to excessive vibration.
- 2. On manual reset model, position control to permit convenient access to the reset button .
- 3. Use three mounting holes in rear of case for flush mounting to duct or other flat surface.
- 4. Install capillary element in horizontal serpentine pattern across duct on downstream side of the coil so it is exposed to areas where low temperatures will occur. Do not kink or apply excessive force to the capillary element.
- 5. Fasten capillary at sufficient points to prevent damage from air movement or vibration.

<u>Setpoint Adjustment</u>

- 1. The setpoint shown on the controller scaleplate is the temperature at which switch contacts 1-4 (SPDT) or 21-24, 11-14 (DPDT) will OPEN on a fall in sensed temperature.
- 2. To change the setpoint, use a screwdriver or wrench to turn the range adjustment screw located at the top of the spring housing. Clockwise rotation decreases the controller setpoint. Counterclockwise rotation increases the setpoint.

Wiring

- 1. All wiring should comply with national and local electrical codes.
- 2. An opening for installing a connector for 1/2" conduit is provided in the bottom of the controller case.
- Recommended wire size is 10 to 14 AWG solid copper wire. Use screwdriver to loosen terminal screws. Strip wire ends 3/8" and insert into box connectors on the switch block. Securely retighten terminal screws.
- 4. For circuit testing, the SPDT switch and DPDT switches can be manually activated by using a screw driver to operate the test lever located on the bottom portion of the controller scaleplate.

Manual Reset Models

- 1. On a temperature fall to setpoint, switch contacts 1-4 (SPDT) or 21-24, 11-14 (DPDT) open and contacts 1-2 (SPDT) or 21-22, 11-12 (DPDT) close.
- 2. The switch remains "locked" in this position until the controller is manually reset by depressing the reset button located in the top of the controller case.
- 3. The controller cannot be manually reset until the sensed temperature is at least 5°F (3°C) above setpoint.