



Features:

- Zero clearance construction
- Horizontal or Vertical airflow, any direction accepted
- Fully proportional electric heater.
- Neptronic HEC patented universal controller.
- 4 different thermostats configuration options available.

Nomenclature:

DF C R 0 0 Z T - 6 A 1 0 - R

0: No screen on left side of the heater
1: Screen on left side of the heater

0: No screen on right side of the heater
1: Screen on right side of the heater

T: Toggle switch

5: Ø 5" collar 8: Ø 8" collar
6: Ø 6" collar

A: 120 Vac
B: 208 Vac
C: 240 Vac

05: 0.5 Kw 15: 1.5 Kw 30: 3 Kw 50: 5 Kw
10: 1 Kw 20: 2 Kw 40: 4 Kw

R : Room thermostat (STS3-13)
D : Internal set point with duct sensor (STC8-13)
S : Remote set point (ITO3) with duct sensor (STC8-13)
N : Controls by others

READ AND SAVE THESE INSTALLATION INSTRUCTIONS

Technical data	Model C Open Coil Elements
Maximum Inlet air temperature	95°F (35°C)
Maximum outlet air temperature	200°F (93°C)
Minimum distance from obstacle or obstruction in duct	36" (915mm) upstream and downstream of electric heater
Inlet bushing	2 knock out 7/8" (22.2mm) or 1 3/8" (34.9mm)
Control signal	Modulating See Electric diagram
Air flow direction	Horizontal or Vertical
Voltage	See the name plate
Current	
Power	
Control voltage	
Minimum air velocity	Ensure minimum air flow – as marked on name plate. Insufficient airflow will lead to opening of automatic thermal cut-out. This may damage heating elements and controls.

⚠ Caution, for safety reason, modification or alteration to internal electric connection or component of the **NEP Them** is strictly forbidden. Any non-authorized modification will void the warranty.

Dimensions

	Dimension	Inches	Metric (mm)
	A	4.09	103.9
B	5" Ø	8.78	223.1
	6" Ø		
	8" Ø		
C	7.22	183.5	
D	9.08	230.8	
W	5" Ø	6.12	155.5
	6" Ø	7.12	180.9
	8" Ø	9.12	231.7

Handling

- ✓ Protective packaging should be kept until installation.
- ✓ Electric heater should be handled with care, particularly Open Coil electric heater.

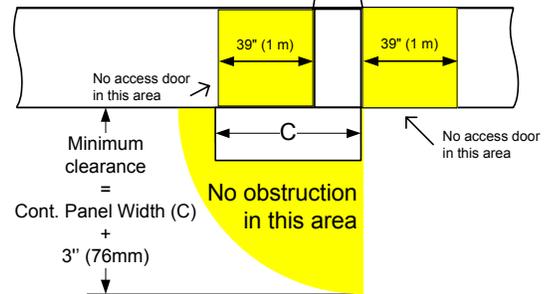
⚠ Risk of failure or malfunction. Do not operate electric heater if heating elements have been damaged during transport or handling.

Installation Tips

Minimum clearance to access control panel

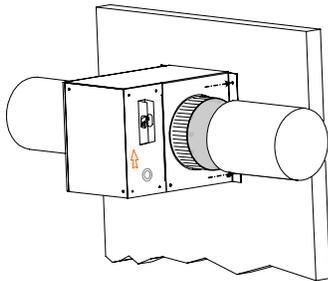
⚠ Attention, for safety reason, minimum clearance to access control panel should respect local electric code.

⚠ Caution, Risk of electric shock and burns. A minimum distance of 39" (1m) must be maintained between heating section and any opening or access door in the duct. This applies to all types of heaters. If such distance cannot be maintained, a protective guard (**C22.2 No.155 section 4.1.8**) must be installed to protect personnel from contact to heating elements and bare live parts.



Mechanical installation

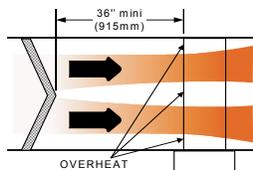
NEP Therm is equipped with round collar and end flange for easy attachment to wall



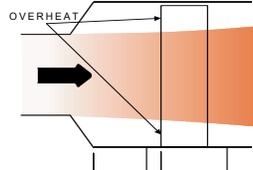
- 1) Secure **NEP Therm** by using metal screws through round flanges around the duct.
- 2) If necessary, install supports to maintain **NEP Therm** through the end flange.
- 3) For safety reasons, please respect the top and bottom orientation of the heater.

Airflow condition

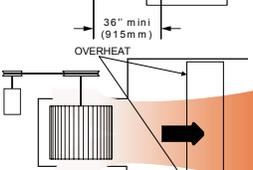
Airflow condition to avoid:



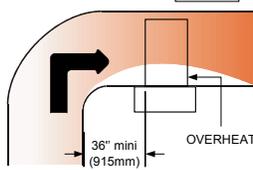
Electric heater is too close from filter.



Electric heater is too close from transition.



Electric heater is too close from Fan.



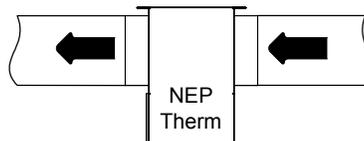
Electric heater is too close from elbow.

Airflow direction:

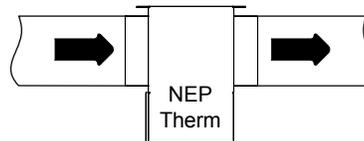
Any air flow direction is accepted by **NEP Therm**. The patented HEC universal controller will automatically adjust the control system to the air flow configuration.

Horizontal Air flow

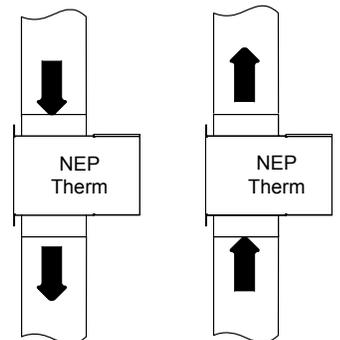
⚠ For safety reason. Please respect the top and the bottom orientation of the heater.



(top view)



Vertical Air flow

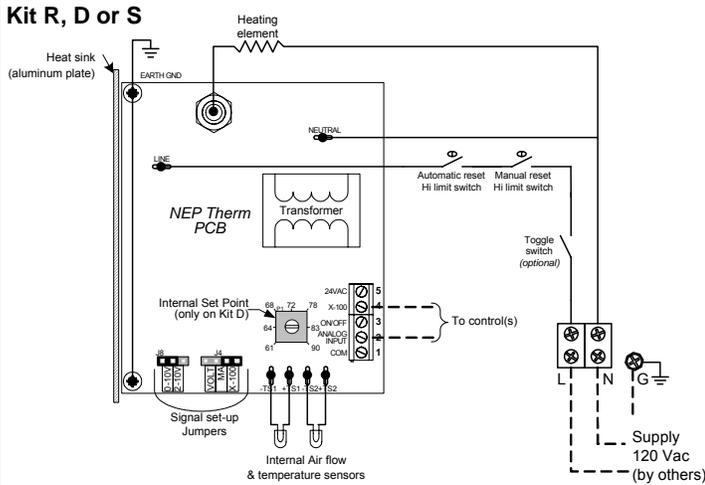


(top view)

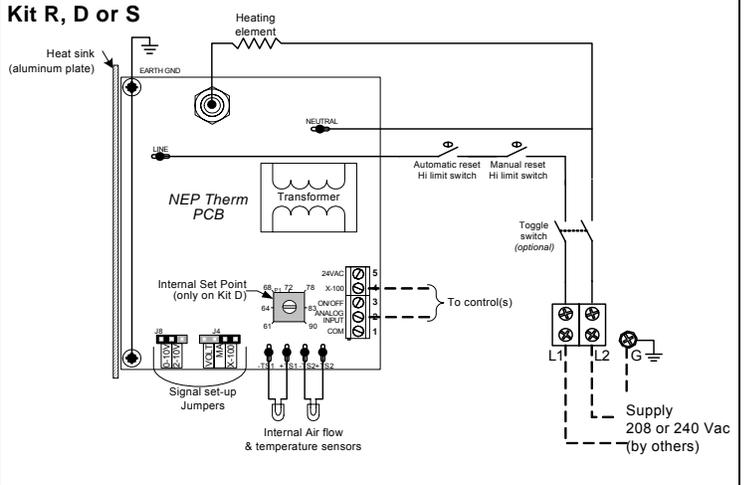
Wiring diagrams - 120 Vac

Wiring diagrams - 208 or 240 Vac

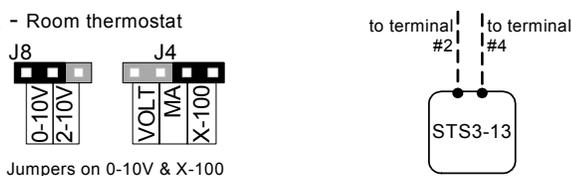
Kit R, D or S



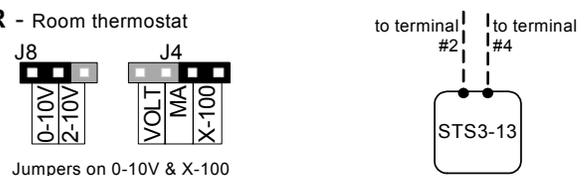
Kit R, D or S



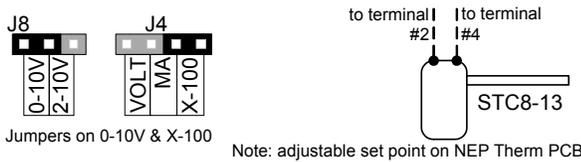
Kit R - Room thermostat



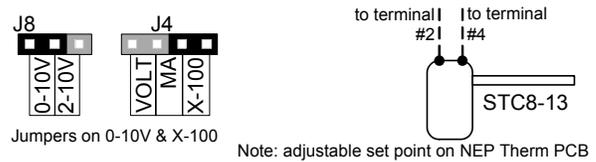
Kit R - Room thermostat



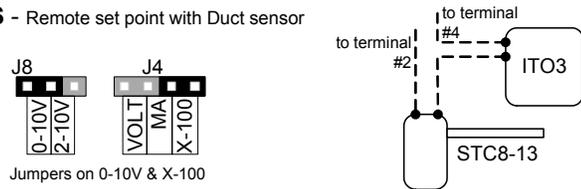
Kit D - Internal set point with Duct sensor



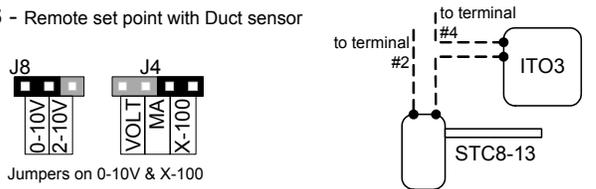
Kit D - Internal set point with Duct sensor



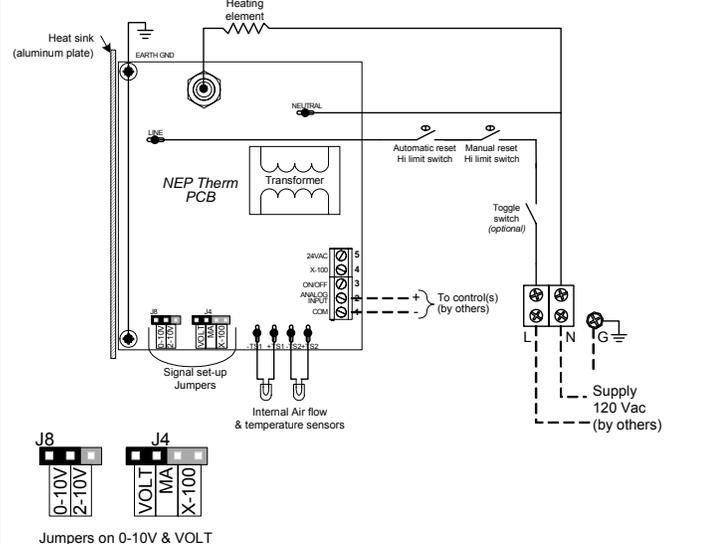
Kit S - Remote set point with Duct sensor



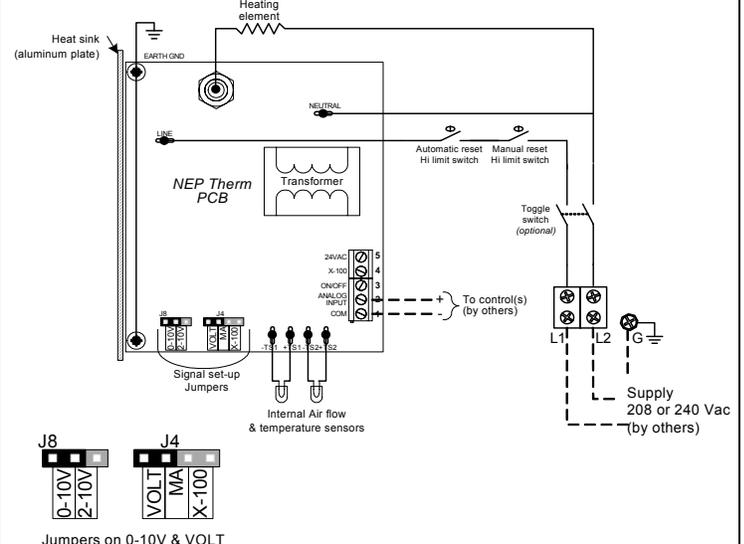
Kit S - Remote set point with Duct sensor



Kit N - Controls by others



Kit N - Controls by others



Controls signal & Wirings

See enclosed *Wiring diagrams*

Electric Installation

See enclosed *Wiring diagrams*



- **DANGER: Risk of electric shock.** Disconnect all supplies before working on any circuit.
- **CAUTION: Risk of malfunction.** Use only copper wires suitable for 105°C (221°F).
- **CAUTION:** Electric installation should conform to local electrical code.
- **CAUTION:** If a disconnect switch and/or fuses have not been supplied on control panel of electric heater, disconnect switch and/or fuses should be installed on supply.
- **CAUTION:** Gauge of electric supply wires should be of appropriate section, function of line current, as per local electrical code.

See the name plate for information on voltage and current.

- ✓ Connect all wires to appropriate terminals as per electrical diagram affixed inside the control panel door.
- ✓ Correct connection tightening should be verified before start up, and after short period of operation (typically after 2 weeks).

Operation condition

Air Flow :

- Air flow should not be lower than the minimum air flow indicated on name plate.
- Air flow going through the electric heater should be free of combustible particle, flammable vapour or gas.
- **Open Coil:** Air flow going through the electric heater should be free of dust.

Zero clearance construction:

- **NEP Therm** are designed and approved for zero clearance to combustible material. Insulation material may be installed directly onto electric heater surfaces or onto air duct. However control panel should be accessible for maintenance.



Risk of failure or malfunction. Do not cover aluminium side plate of heater with insulation material.

Maintenance

NEP Therm does not require specific maintenance; however we recommend a yearly inspection.

1) Visual inspection



Risk of electric shock. Disconnect all supplies before any visual inspection.

- ✓ Verify good condition of heating element.
- ✓ **Open Coil:** Verify carefully that there is no dust accumulation.
- ✓ Verify any indication of overheating condition as well as any trace of oxidation.

2) Electrical inspection



Risk of electric shock. Disconnect all supplies before any electrical inspection.

- ✓ Verify correct of electrical connection tightening.
- ✓ Verify the good condition of fuses (if any).
- ✓ Verify resistance of each circuit against ground.
- ✓ Verify correct operation of contactor(s).

If necessary, electrical component should be replaced only with identical origin component.

Technical support

For any question or specific request please consult our web site:

- www.neptronic.com

Or call:

- **1 800 361-2308.**
Ask for the electric heater department.
- or **(514) 333-1433**
- Fax : (514) 333-3163

