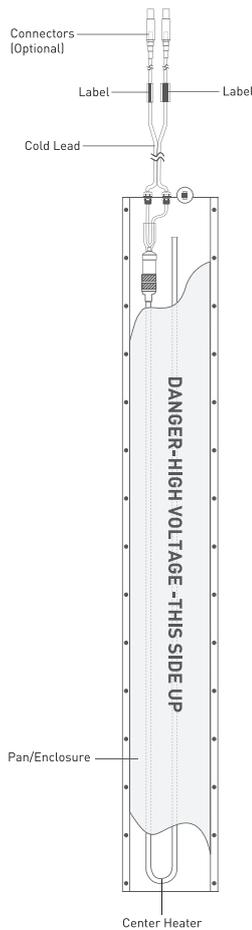


Raychem SWRH

SWITCH ROD HEATER



PRODUCT OVERVIEW

Raychem brand switch rod heaters offer a service-proven solution for track switch rod snow melting and de-icing. With their unique construction and automated control systems, the switch rod heaters result in an energy efficient, reliable and safe solution as compared to other technologies.

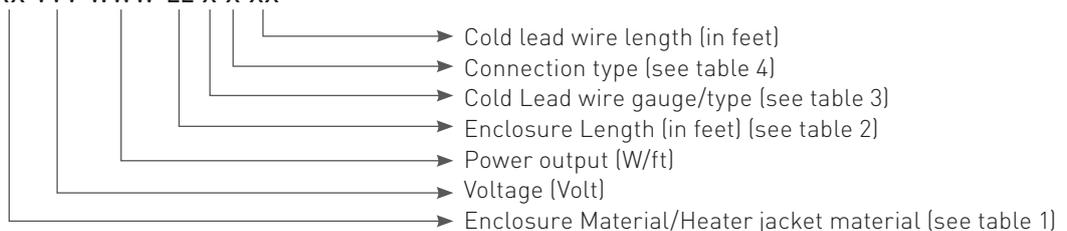
Raychem switch rod heaters include a constant wattage flat profile heating element installed using engineered retaining hardware which results in efficient snow and ice melting and complete movement of machine and gauge rods. Reduced heater operating temperatures increase longevity and minimize the possibility of track fires caused by switch heating equipment.

The heater assembly comes pre-terminated with cold leads attached for easy field connections. The installation is quick and does not require loosening or removal of any existing switch hardware. Pentair offers a standard 3 year warranty for its Switch Rod Heater assemblies. Monel sheathed heater elements are offered for high corrosion applications.

HEATING CABLE CATALOG NUMBER AND ORDERING INFORMATION

To order a Raychem Switch Rod Heater assembly, it is important to understand the format of our catalog number.

SWRH-407-RX-VVV-WWW-LL-X-X-XX



SWITCH ROD HEATER (SWRH)

HEATING CABLE CATALOG NUMBER AND ORDERING INFORMATION CONTINUED

Table 1: Enclosure Material/ Heater Jacket Material

Option	Enclosure Material/ Heater Jacket Material
1	Galvanized/Monel
2	Galvanized/Stainless Steel
3	Stainless Steel/Monel
4	Stainless Steel/Stainless Steel

Table 2: Enclosure Length (ft)

Option	Enclosure Length (ft)
04	4'
06	6'
08	8'
10	10'
12	12'

Table 3: Cold Lead wire AWG/ Type

Option	Cold Lead wire AWG/ Type
1	8 AWG, Cross linked polyolefin (XLPO)
2	6 AWG, Cross linked polyolefin (XLPO)
3	8 AWG, Chlorinated polyethylene (CPE)

Table 4: Connector Type

Option	Connector Description
0	No connector
1	Male w/Black Female Boot, 600 V
2	Male w/Red Female Boot, 600 V
3	Male w/Green Female Boot, 600 V
4	Male, Olive Drab Green, 900 VAC/1250 VDC

Example: PN: SWRH-407-R4-600-300-10-3-4-05

600 VDC and 300 W/ft rated switch rod heaters, 10 ft long stainless steel enclosure (pan) with Stainless Steel heater jacket, 8 AWG CPE cold lead wire 5 ft in length and connector type of Male, Olive Drab Green, 900 VAC/ 1250 VDC.

SPECIFICATIONS (NOMINAL)

Power Output	75 - 300 W/ft
Voltage	120V – 600 VAC, 600 VDC, 750 VDC
Minimum Installation Temperature	0°F (-18°C)
Maximum Enclosure (Pan) Length	12 ft

BENFITS OF SWRH SYSTEM

- Installation is quick and does not require loosening or removal of the braces
- Resists shock and vibration
- Efficient heat transfer
- Ideal for standard or high moisture/ corrosive environments
- Quick and easy connections and disconnections
- Many combinations of power output, voltages, and lengths
- Reduced track fires due to lower operating temperature
- Integrated control system equipped with multiple sensor inputs, Solid-state or electromechanical design
- Hard-wired or RF Control options that can result in incremental 50% energy savings

APPROVALS

Raychem SWRH switch rod heaters meet the requirements of the U.S. National Electrical Code and the Canadian Electrical Code. The switch rod heaters are typically offered as a part of an integrated system with optimized energy efficient design for each rail type and operating conditions. The system includes heater terminations, clips and attachment methods, fuse boxes and telemetry and controls. For additional information contact your Thermal representative or call (800) 545-6258.

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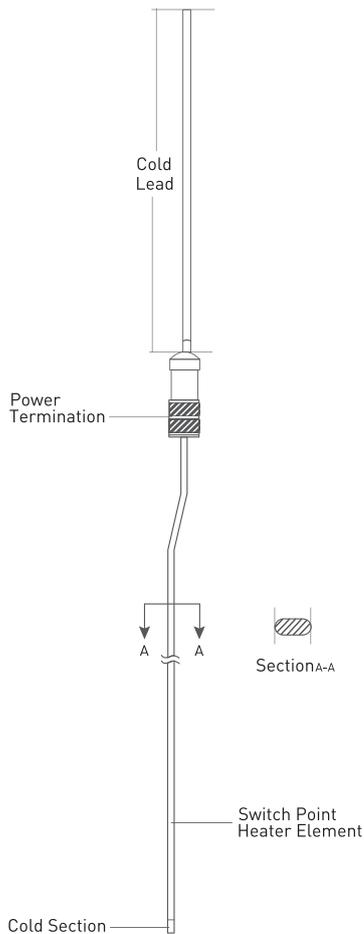
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Raychem SWPH

SWITCH POINT HEATER



PRODUCT OVERVIEW

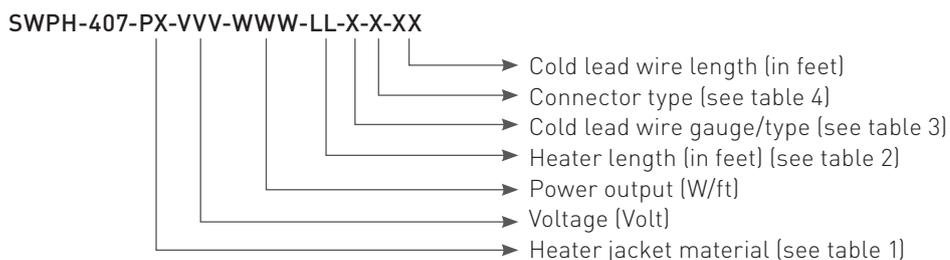
Raychem brand switch point heaters offer a service-proven solution for track switch snow melting and de-icing. With their unique construction and automated control systems, the switch point heaters result in an energy efficient, reliable and safe solution as compared to other technologies.

Raychem switch point heaters include a constant wattage flat profile heating element installed using proprietary attachment clips which result in efficient heat transfer to the rail. This reduces the heater operating temperatures increasing its longevity and resulting in safer operation and minimizing the chance of track fires and damage to track infrastructure.

The heaters are delivered pre-terminated with cold leads attached for easy field connections. The installation is quick and does not require loosening or removal of the braces. The heaters come in Stainless Steel or Monel sheath material to handle corrosive/high moisture environments. Pentair offers a standard 3 year warranty for the Stainless Steel sheath heater and 10 year extended warranty for the Monel sheath heater.

HEATING CABLE CATALOG NUMBER AND ORDERING INFORMATION

To order a Raychem switch point heating cable, it is important to understand the format of our catalog number.



SWITCH POINT HEATER (SWPH)

HEATING CABLE CATALOG NUMBER AND ORDERING INFORMATION CONTINUED

Table 1: Heater Jacket Material

Option	Heater Jacket Material
1	Monel
2	Stainless Steel

Table 2: Heater Length (ft)*

Option	Heater Length (ft)
08	8'
10	10'
12	12'
14	14'
16	16'
18	18'
20	20'
22	22'
24	24'

Table 3: Lead wire AWG/Type

Option	Lead wire AWG/ Type
1	8 AWG, Cross linked polyolefin (XLPO)
2	6 AWG, Cross linked polyolefin (XLPO)
3	8 AWG, Chlorinated polyethylene (CPE)

Table 4: Connector Type

Option	Connector Description
0	No connector
1	Male w/Black Female Boot, 600 V
2	Male w/Red Female Boot, 600 V
3	Male w/Green Female Boot, 600 V
4	Male, Olive Drab Green, 900 VAC/1250 VDC

Example: PN: SWPH-407-P2-750-250-24-3-4-05

750 VDC and 250 W/ft rated switch point heaters, 24 ft long with Stainless Steel jacket, 8 AWG CPE cold lead wire 5 ft in length and connector type of Male, Olive Drab Green, 900 VAC/ 1250 VDC.

*For Custom lengths please contact Pentair Thermal Management

SPECIFICATIONS (NOMINAL)

Power Output	75 - 300 W/ft at 32°F (0°C)
Voltage	480 VAC, 600, 650, 750 VDC
Minimum Installation Temperature	0°F (-18°C)
Heater Dimensions	Width: 0.52 inch (13.2 mm) Thickness: 0.22 inch (5.6 mm)

BENEFITS OF SWPH SYSTEM

- Installation is quick and does not require loosening or removal of the braces
- Resists shock and vibration
- Efficient heat transfer
- 40% minimum power reduction with no sacrifice in performance as compared to tubular heaters
- Ideal for standard or high moisture/ corrosive environments
- Minimal expansion under load – less than 1" in 20'
- 50% less wiring, cable accessories and junction boxes as compared to tubular heaters
- Quick and easy connections and disconnections
- No requirement to remove elements for switch maintenance
- Many combinations of power output, voltages, and lengths
- Reduced track fires due to lower operating temperature as compared to tubular heaters
- Integrated control system equipped with multiple sensor inputs, Solid-state or electromechanical design
- Hard-wired or RF Control options that can result in incremental 50% energy savings

APPROVALS

Raychem SWPH switch point heaters meet the requirements of the U.S. National Electrical Code and the Canadian Electrical Code. The switch point heaters are typically offered as a part of an integrated system with optimized energy efficient design for each rail type and operating conditions. The system includes heater terminations, clips and attachment hardware, fuse boxes and telemetry and controls. For additional information contact your Thermal representative or call (800) 545-6258.

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