

GENERAL INFORMATION

These heating cables provide protection from damage due to the freeze and thaw cycles on pipes, roofs and gutter systems. For Roof & Gutter installation instructions, please refer to the relevant document.

The cables automatically adjust heat output according to the ambient temperature conditions. Under cooler conditions the heat output increases, and as the temperature rises the output decreases to save on energy. **The cables are available in various pre-assembled lengths.**

DESCRIPTION

Warmup NAMSRK preassembled and pre-terminated cables are intended for use on metal or plastic water pipes for freeze protection of these pipes in residential, mobile home or other ordinary area installation applications.

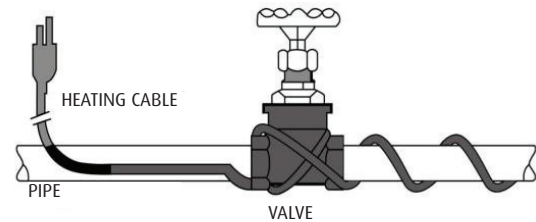
The cables are provided in 6, 12, 18, 24, 50, 75 and 100 foot lengths which include a factory sealed power connection with 30 inch power cord and plug, and a factory sealed end termination.

APPROVALS

NAMSRK preassembled heating cables are ETL approved for use in residential and mobile home pipe freeze protection applications.

OTHER ITEMS REQUIRED FOR PROPER INSTALLATION

- Thermal insulation (fiberglass or equivalent)
- GFI protected power receptacle



CONDITIONS OF USE

NAMSRK cables are designed for use in residential, mobile home or other ordinary area installation applications on the outside of metal or plastic piping only.

This electric heating cable is designed to be used in conjunction with suitable thermal insulation and connected to a an outlet with ground fault circuit interruption.

Please review the following cautions related to the use of the NAMSRK preassembled cable.

PACKAGE CONTENT

- 1 NAMSRK preassembled electric heating cable

TOOLS REQUIRED

- 2500 VDC megger - used to test electric heating cable insulation resistance.

CAUTION: ELECTRIC SHOCK AND/OR FIRE HAZARD.

1. Do NOT use the NAMSRK cable in classified hazardous areas. This product is approved for ordinary area use only.
2. Do NOT use the NAMSRK cable for underground or buried pipe applications.
3. Do NOT use the NAMSRK cable for flexible hose or flexible piping applications. This product is approved for used on fixed metal and plastic piping only.
4. Do NOT install the NAMSRK cable without use of proper thermal insulation and protective weather barrier.
5. Do NOT use the NAMSRK cable for piping installations behind walls, in ceilings, through flooring or any other inaccessible locations.
6. Do NOT use the NAMSRK cable directly INSIDE pipes. This product is approved for use installed on the OUTSIDE of metal and plastic pipes only.
7. Do NOT use the NAMSRK cables on piping that may exceed 85 deg C
8. Do NOT use the NAMSRK cables on piping that contains fluids other than water. This product is approved for use on pipes containing water only.
9. Do NOT use an extension cord with the NAMSRK cables.



The world's **best-selling** electric floor heating brand™

NAMSRK INSTALLATION INSTRUCTIONS FOR PIPE FREEZE PROTECTION

GENERAL

GFI CIRCUIT PROTECTION - To minimize danger from possible sustained electrical arcing due to damaged or improperly installed heating cable, and to comply with agency certifications and the National Electric Code (Article 427) - Ground Fault Equipment Protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection. Contact a qualified electrician for installation if GFI is not available.

WARNING:

ELECTRIC SHOCK AND/OR FIRE HAZARD. If cable is damaged, remove from service. Do not attempt to repair. There are no user serviceable parts. Replace damaged cable with new assembly.

KEEP INSTRUCTIONS FOR FUTURE REFERENCE.

SPECIFICATIONS

Service voltage	110-120V
Normal cable width (in/mm)	0.42 (10.6)
Normal cable thickness (in/mm)	0.23 (5.8)
Cable bus wire gauge (AWG)	16
Cold lead length (in/mm)	30 (762)
Min. Circuit breaker size (Amps)	15
Max. Exposure Temperature	185°F (85°C)
Electrical classification	Nonhazardous

IMPORTANT NOTES ON CABLE SELECTION

- For any "non-Standard" installations please contact Warmup at (888) 927-6333 (US) or (888) 592-7687 (Canada).
- We assume a minimum ambient temperature of 0°F and a thermal insulation of thick fiberglass wrap or equivalent. For protection to -20°F minimum ambient use 1" thick fiberglass wrap or equivalent.
- Add 1 foot of heating cable for every valve or spigot in the pipeline - make sure to apply this extra cable at each valve/spigot when installing.
- If your selected cable length is longer than your pipe length, spiral the cable evenly along the length of pipe.
- NAMSRK has a 5W/lin ft output. Ensure all metal pipes get 5W/lin ft.
- For 2" pipes and each 2" in diameter, double the output.
- Por plastic pipes, consider 25% more heat required.

Nominal Power Output Chart

Code	Length in ft	Voltage	Power output on pipe at 40°F (5°C) in W	Power output on pipe at 50°F (10°C) in W	Power output in ice & snow at 32°F (0°C) in W
NAMSRK-6FT	6	110-120	36	30	60
NAMSRK-12FT	12	110-120	72	60	120
NAMSRK-18FT	18	110-120	108	90	180
NAMSRK-24FT	24	110-120	144	120	240
NAMSRK-50FT	50	110-120	300	250	500
NAMSRK-75FT	75	110-120	450	375	750
NAMSRK-100FT	100	110-120	600	500	1000

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INSTALLATION

Note:

1. Before insulating, check to be sure heating cable is free from mechanical or thermal damage (cuts or nicks in cable insulation from utility knife, use of metal clamps, solder or over-heating).
2. Use Megohmmeter to test each circuit prior to, and after installing thermal insulation. See Megohmmeter test procedure below.
3. Ensure use of proper insulation thickness and type - fire resistant fiberglass or equivalent for protection to 0 deg F, 1" fire resistant fiberglass or equivalent for protection to -20 deg F.
4. Ensure insulation is dry. Wet insulation will not protect pipe from freeze-up.
5. Ensure all valves, spigots and piping are fully insulated up to and including joints and wall penetrations.
6. Secure heating cable cord as shown above to provide proper strain relief.
7. Plug cable into 120 Vac ground fault circuit protected outlet.
8. Check circuit breaker to verify power to the cable.
9. Proper heat output of cable may be verified by observing warm standing water in pipe within one hour of energizing the cable.

MEGOHMMETER TESTING PROCEDURE

Use only 2500VDC megohmmeter for this test.

- Check insulation resistance between each lead of the heating cable and the round ground lug on the power cord plug. Perform the test by placing one lead of the megohmmeter on the round ground lug and the other on one of the rectangular power lugs. You should read 1000 megohms minimum.
- Perform the test again by checking the opposite rectangular power lug. Again the reading should be 1000 meohms minimum. If you read less than 1000 megohms on either lead the cable needs to be replaced. Do not attempt to repair the unit. Replace with new product.
- The installer should record these megohm readings on these installation instructions and record the date of the test.
- End user of the system must keep instructions.
- This Megohm test should be performed at least once per season, preferably before energizing the system each fall or winter, or immediately after any work has taken place on the piping system.

