

MINERAL INSULATED CABLE ASSEMBLIES

Delta-Therm Corporation
398 W. Liberty St., P.O. Box 345
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800-526-7887

MR-MANUFACTURER

For over a quarter of a century, Delta-Therm Corporation has been successfully designing, manufacturing, and selling high quality heat-transfer components. Established in 1969, our company initially supplied mineral insulated cable assemblies for snow melting and pipe tracing applications. Since that time, we have dramatically expanded our line of products and accessories -- without sacrificing any of the quality our customers have come to expect. For more information or for a binder which lists all of our products, please call 1-800-526-7887.

Our engineering staff can help you design and order a heating system using the most efficient and cost-effective products for your specific application. Fax your dimensions, a layout of the area to be heated, and the available voltage, and we will return a design proposal and a preliminary quote -- normally within 24 hours.

We provide comprehensive, easy-to-understand installation instructions written specifically for electricians and installation crews.

Delta-Therm is UL listed as an industrial control panels designer and manufacturer.

PP-PRODUCT PRESENTATION

Mineral Insulated Cable Assemblies

Mineral insulated cable is specified when long life, design flexibility, non-combustion, defined heat output, and rugged construction are important.

Construction

Mineral insulated cable consists of one or two conductor resistance heating wire embedded in highly compressed magnesium oxide insulation, covered by either a copper or an Alloy 825 stainless steel sheath. An extruded, high-density polyethylene jacket can also be specified over copper sheath to provide optimal mechanical and corrosion protection. UL listed.

Unique Termination Design (One and Two Conductor)

All 1 and 2 conductor cables come fully terminated and moisture proofed. The end termination consists of a thermal gradient section butt connected to 19-strand THHN cold leads. The cold leads are crimped and soldered to the thermal gradient section, insulated with a high-dielectric, high temperature tape, and epoxy potted in a rigid brass sleeve. The thermal gradient section is silver soldered to the heating wire and protected by a rigid brass sleeve

packed with magnesium oxide.

100% Factory Tested

Each cable passes multiple tests including hi-pot, megger and resistance tests both before and after overnight water submersion.

Numerous Voltages Available

Mineral insulated cable systems can be designed for voltages up to 600V.

Flexibility

Our mineral insulated cable copper sheath is annealed before leaving the factory. This makes it pliable and easy to install. Obstacles and irregular areas are easily accommodated.

Durability

Properly designed, installed, and maintained systems are still working after 20 years.

Resistance to Moisture

Mineral insulated cable can be embedded in concrete or asphalt, placed in water, or used in damp locations.

Two Hour Fire Rated

Delta-Therm cable assemblies will operate in flash fires for thirty minutes and at least 2 hours in most other fire situations. Downtime is shortened, and startups are faster. Mineral insulated cable construction cannot cause or contribute to a fire.

Large Inventory

We carry a wide variety of jacketed and bare cable sizes. Orders of material in stock are usually shipped in one to two weeks.

Low Installation Costs

Our mineral insulated cable comes ready to install. Simply unroll, then tie or tape cable for stability. Then wire to power source. By using a one-pour system for concrete embedding, there is only one trip for the truck and one labor charge. No splicing or field terminations are necessary. Because our engineered layouts are flexible and customized for particular applications, electricians spend less time at the job site.

UA-USES, APPLICATIONS

Mineral insulated cable can be used for pipe tracing, floor warming, roof and gutter de-icing, hangar door rail ice prevention, freezer floor permafrost prevention, and pedestrian and vehicular snow melting. (See table in this snapshot for applications, recommended watts per linear foot and for spacing.)

MF-MATERIALS, FINISHES

Mineral insulated cable can be specified with either a copper sheath or an Alloy 825 stainless steel sheath. Both are rustproof. They also resist oils, solvents, gasoline, and many acids. Copper sheath cables can also be ordered with a high density polyethylene jacket for added protection against abrasion and corrosion.

TS-TECHNICAL SUPPORT

SPECIFYING DELTA-THERM MINERAL INSULATED CABLES

(Place specification details in Section 16855 CSI Master Format).

Door Heating

The door heating system shall consist of mineral insulated (MI) cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as expansion and control joints, etc.

All heating cables shall be new and UL listed.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 FAX: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the pull boxes shown to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

Pulling eyes, to assist in pulling the MI cable heaters into place, shall be silver soldered to the capped end of the MI cable.

The cable heaters shall be pulled into a continuous run of 1" conduit, located in the concrete pour under the door sills. Each conduit will serve all three doors on each side of the station. The conduit will terminate in pull boxes as shown on the drawings.

The heated section of the MI cable shall be entirely within the conduit. No visible or accessible splice boxes shall be allowed in the heated area.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel.

The pull boxes shall be located in the concrete flush with the surface, filled with Delta Dry water repellent powder in accordance with the manufacturer's installation instructions, and sealed to prevent moisture penetration.

The system shall be automatically controlled using a redundant moisture sensing system produced by the manufacturer. The control system shall automatically prevent the snow melting system from activating if either the slab or air temperature are above 32°F. Once activated the snow melting system shall automatically remain activated until the moisture from melting snow has been evaporated. The system shall then automatically rearm itself.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Drain Heating

The drain heating system shall consist of mineral insulated (MI) cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as location of downspouts, etc.

All heating cables shall be new and UL listed.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel.

The system shall be automatically controlled using an ambient sensing thermostat. The thermostat shall be a bulb and capillary type with a capillary tube at least eight feet long. The bulb shall be located outside of the building in a normally shaded area, although the body of the thermostat may be mounted inside the building. The thermostat shall be set to activate at 35°F.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Floor Warming

The floor warming system shall consist of mineral insulated (MI) cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as expansion and control joints, etc.

All heating cables shall be new and UL listed for installation in concrete.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

The MI copper sheath cable shall not lease the heated area or cross any expansion joints. No outdoor type visible or accessible splice boxes will be allowed in the heated area.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel. Only THHN pigtails in conduit shall exit from the heated zone.

The tee condulet thru boxes (or pull boxes) shall be completely buried in the concrete and filled with Delta Dry water repellent powder in accordance with the manufacturer's installation instructions.

The cable shall be tied to the reinforcing mesh and both shall be positioned approximately 2" deep in the poured surface. The cable shall be installed in accordance with the detailed layout drawings furnished by the manufacturer for approval and field use.

The system shall be automatically controlled by a special floor warming thermostat with a temperature sensing bulb located in a capped conduit inserted in the concrete and located between two heating cable runs as shown on the drawings.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Gutter De-icing

The gutter de-icing system consist of mineral insulated MI cable heaters as

shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as location of gutters, etc.

All heating cables shall be new and UL listed.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel.

The system shall be automatically controlled using an ambient sensing thermostat. The thermostat shall be a bulb and capillary type, with a capillary tube at least eight feet long. The bulb shall be located outside of the building in a normally shaded area, although the body of the thermostat may be mounted inside the building. The thermostat shall be set to activate at 35°F.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Gutter and Downspout De-icing

The gutter and downspout de-icing system shall consist of mineral insulated (MI) cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as location of downspouts, etc.

All heating cables shall be new and UL listed.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel.

The system shall be automatically controlled using an ambient sensing thermostat. The thermostat shall be a bulb and capillary type, with a capillary tube at least eight feet long. The bulb shall be located outside of the building in a normally shaded area, although the body of the thermostat may be mounted inside the building. The thermostat shall be set to activate at 35°F.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Hangar Door De-icing

The hangar door heating system shall consist of MI cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as expansion and control joints, etc.

All heating cables shall be new and UL listed.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN 19 strand wire pigtails (cold leads). This provides maximum flexibility for ease in pulling to the junction boxes or panel. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings. They shall all be located at least 18 inches above the ground.

The cables shall be placed adjacent to the rails in new construction. In retrofits, the cable heaters will be placed in saw cut slots cut approximately 3 inches from the rail. The slot shall be filled with a concrete mixture which

shall completely fill the slot and surround the cable. The concrete mix shall be one that cures to a dense, waterproof mass. For doors having no rails, placement shall be 3" from the center line of the door.

No visible or accessible splice boxes shall be allowed in the heated area.

The C conduit, which connects the heating cable to the conduit system, shall be filled with Delta Dry water repellent powder in accordance with the manufacturer's installation instructions, then sealed to prevent moisture penetration. The entire box shall be encased in concrete.

The system shall be automatically controlled using a redundant moisture sensing system produced by the manufacturer. The control system shall automatically prevent the snow melting system from activating if either the slab or air temperature are above 32°F. Once activated, the snow melting system shall automatically remain activated until the moisture from the melting snow has evaporated. The system shall then automatically rearm itself.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Permafrost Prevention

The permafrost prevention system shall consist of MI cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as expansion and control joints, etc.

All heating cables shall be new and UL listed for embedding in concrete, asphalt, or grout.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtailed (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes.

Selection of the installation mode shall be made by the engineers from the following options:

A - Direct embedding of the heating cables in a 6-inch sand bed located under the floor insulation.

B - Direct embedding of the heating cables in a 3-inch concrete slab located under the floor insulation.

C - The heating cables located in 1" conduit directly embedded in a 6-inch sand bed located under the floor insulation.

D - The heating cables located in 1" conduit directly embedded in a 3-inch concrete slab located under the floor insulation.

The MI copper sheath cable shall not cross any expansion or construction joints. No outdoor type visible or accessible splice boxes will be allowed in the heated area.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel. Only full circuit capacity cold leads (pigtails) shall be used from the conduit to the junction boxes.

The cable shall be installed in accordance with detailed layout drawings to be furnished by the manufacturer for engineers' and architects' approval prior to the start of installation, and for field use after approval.

The MI cable heaters shall have a high density polyethylene jacket (HDPE) to provide extra corrosion and mechanical protection.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Pipe Tracing - Freeze Protection

All liquid carrying pipes, tanks, and drains subject to freezing shall be electrically heated (traced) with a mineral insulated (MI) heating cable system designed to prevent freezing to -15°F. Unless otherwise stated on the drawings or specifications, the pipes shall have at least 1" of fiberglass insulation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, and shall install all associated boxes, wire, thermostats, terminations, etc., required for a complete installation.

All heating cables shall be new and UL listed.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI heating cable shall consist of a copper alloy conductor surrounded by magnesium oxide insulation. This in turn shall be surrounded by a seamless copper sheath which serves as a ground path. The resistance of this ground path shall not exceed 0.001ohms/ft. There shall be no combustible materials between the conductor wire and the ground sheath.

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel. Only full circuit capacity cold leads (pigtails) shall be used from the conduit to the junction boxes. The heating cables shall be held in place with fiberglass wraps placed 12 inches apart.

The cable heating system shall be automatically controlled by an ambient sensing thermostat set to 35°F. Cable heating loads up to 17.5 amps and 277 (or less) volts may be directly switched by the thermostat. Larger loads must be switched by a properly sized contractor.

A self regulating type heating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Pipe Tracing - High Temperature

All liquid carrying pipes and drains to be temperature maintained shall be electrically heated (traced) with a mineral insulated (MI) heating cable system designed to withstand temperatures to 400°F. Unless otherwise stated on the drawings or specifications, the pipes shall have at least 1" of fiberglass insulation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, and shall install all associated boxes, wire, thermostats, terminations, etc., required for a complete installation.

All heating cables shall be new and UL listed.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI heating cable shall consist of two copper alloy conductors surrounded by magnesium oxide insulation. This in turn shall be surrounded by a seamless Alloy 825 stainless steel sheath which serves as a ground path.

The resistance of this ground path shall not exceed 0.001ohms/ft. There shall be no combustible material between the conductor wire and the ground sheath.

The MI cable heater construction shall be such that the MI Alloy 825 stainless steel sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. The factory splice shall include a thermal gradient section of MI Alloy 825 stainless steel cable. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel. Only full circuit capacity cold leads (pigtails) shall be used from the condulet to the junction boxes. The heating cables shall be held in place with fiberglass wraps placed 12 inches apart.

The cable heating system shall be automatically controlled by a Delta-Therm A19AAB-10 (Class I, Division 2) thermostat capable of sensing an ambient temperature of 400°F.

A self regulating type heating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Snow Melting - Asphalt Over Concrete

The snow melting system shall consist of MI cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as expansion and control joints, etc.

All heating cables shall be new and UL listed for installation in concrete ramp.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI heating cable shall consist of a copper alloy conductor surrounded by magnesium oxide insulation. This in turn shall be surrounded by a seamless copper sheath which serves as a ground path. The resistance of this ground path shall not exceed 0.001ohms/ft. There shall be no combustible material between the conductor wire and the ground sheath.

To ensure maximum snow melting rate, heat output shall be constant and

shall not reduce as the temperature of the slab increases. To ensure flexibility and ease of installation so that tight radii may be formed, the cross section of the heated portion of the cable shall not exceed 0.4 of an inch.

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. Where shown as such on the drawings, the unheated section of MI cable shall be run in conduit to the existing wall-mounted junction boxes (in this case, the existing "home runs" shall be used).

Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory. The MI copper sheath cable shall not leave the heated area or cross any expansion or construction joints. No outdoor type visible or accessible boxes shall be allowed in the heated area.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel. Only THHN pigtails in conduit shall exit from the heated zone. The tee conduit through boxes (or pull boxes) shall be completely buried in the asphalt and filled with Delta Dry water repellent powder in accordance with the manufacturer's installation instructions.

The cable shall be fastened to the concrete base so the cables do not move while being covered with asphalt. The asphalt shall be at least 2" thick. The cable shall be installed in accordance with the detailed layout drawings furnished by the manufacturer for approval and field use.

The MI cable may have a high density polyethylene jacket (HDPE) to provide extra corrosion and mechanical protection.

The system shall be automatically controlled using a UL listed redundant moisture sensing system produced by the manufacturer. The control system shall automatically prevent the snow melting system from activating if either the slab or air temperature are above 32°F. Once activated, the snow melting system shall automatically remain activated until the moisture from melting snow has evaporated. The system shall then automatically rearm itself.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Snow Melting -Concrete

The snow melting system shall consist of MI cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as expansion and control joints etc.

All heating cables shall be new and UL listed for installation in concrete.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI copper sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit from the tee condulets shown to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

The MI copper sheath cable shall not leave the heated area or cross any expansion or construction joints. No outdoor type visible or accessible splice boxes shall be allowed in the heated area.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel. Only THHN pigtails in conduit shall exit from the heated zone.

The tee conduit thru boxes (or pull boxes) shall be completely buried in the concrete and filled with Delta Dry water repellent powder in accordance with the manufacturer's installation instruction.

The cable shall be tied to the reinforcing mesh in the apron areas and to the rail in the door areas. Both shall be positioned approximately three inches below the surface. The cable shall be installed in accordance with the detailed layout drawings furnished by the manufacturer for approval and field use.

The MI cable shall have a high density polyethylene jacket (HDPE) to provide extra corrosion and mechanical protection.

The system shall be automatically controlled using a redundant moisture sensing system produced by the manufacturer. The control system shall automatically prevent the snow melting system from activating if either the slab or air temperature are above 32°F. Once activated, the snow melting system shall automatically remain activated until the moisture from melting snow has evaporated. The system shall then automatically rearm itself.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

Snow Melting and De-icing - Retrofit

The de-icing system shall consist of MI cable heaters as shown and scheduled on the drawings, including all associated boxes, wire, condulets, etc., required for a complete installation.

The electrical contractor shall refer to the architectural and structural drawings to determine conditions affecting the installation of his work, such as expansion and control joints, etc. All heating cables shall be new and UL listed for installation in a concrete ramp.

The system shall be as sold by Delta-Therm Corporation, 398 W. Liberty St., P.O. Box 345, Wauconda, IL 60084 (Phone: 800-526-7887 Fax: 708-526-4456).

The MI cable heater construction shall be such that the MI sheath terminates in a factory splice to THHN stranded wire pigtails (cold leads) which can be pulled through conduit to junction boxes. Each cable heater shall be factory assembled, immersed in water for at least 12 hours, then tested before leaving the factory.

The MI cable heated section shall not leave the heated area or cross any expansion or construction joints. No outdoor type visible or accessible splice boxes shall be allowed in the heated area.

Pigtails shall be of sufficient length to reach the junction boxes or power panel as indicated on the drawings and shall be of stranded wire to provide maximum flexibility for ease in pulling to the junction boxes or panel. Only THHN pigtails in conduit shall exit from the heated zone.

Any exposed junction boxes shall be filled with Delta Dry water repellent powder in accordance with the manufacturer's installation instructions.

The cable shall be inserted into 3/8" saw cuts and filled with sand concrete mix. Some of the mix shall be placed in the slot prior to inserting the cable to ensure that the heating cable is completely encapsulated.

The system shall be automatically controlled using a redundant moisture sensing system produced by the manufacturer. The control system shall automatically prevent the system from activating if either the slab or air temperature are above 32°F. Once activated, the ice melting system shall automatically remain activated until the moisture from melting ice has evaporated. The system shall then automatically rearm itself.

Self regulating cable is not acceptable for this application.

For additional technical information, please call our engineering staff at 1-800-526-7887.

CC-CODES, CERTIFICATION

Delta-Therm's mineral insulated cable is UL listed for embedded cable applications, including snow melting, floor warming, hangar door rail ice prevention, permafrost prevention, and pipe tracing.

OP-OPERATION, MAINTENANCE

Our proprietary brass marking system identifies the location of the most probable system breakdown. The marking system and simple instructions allow you to locate splices and make repairs.