

Self-Regulating Heat-Trace Cables

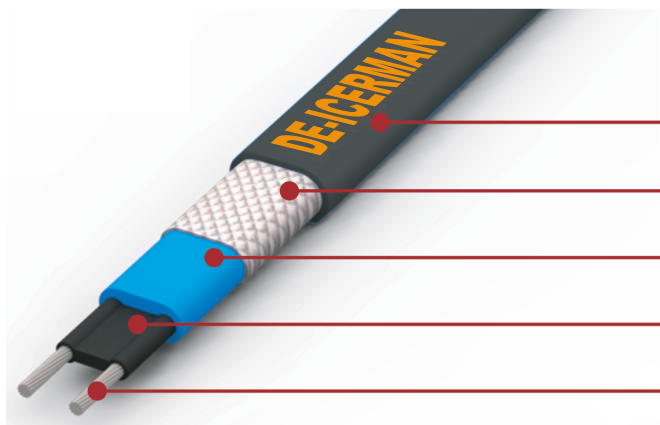
DESCRIPTION

De-Icerman self-regulating heat-trace cables are designed to automatically adjust its heat output in response to changes in ambient temperature along its length.

They consist of two parallel bus wires embedded in a semi-conductive polymer core whose electrical resistance varies with temperature decreasing in cold conditions to produce more heat and increasing in warmer conditions to reduce power output.

This self-modulating behavior prevents overheating and allows the cable to be safely overlapped or cut to length in the field.

The conductive core is typically surrounded by insulation, an optional tinned-copper braid for grounding, and an outer protective jacket made from **Modified polyolefin** for enhanced moisture and mechanical resistance.



Cable Construction

- Outer jacket (Modified polyolefin)
- Tinned copper braid
- Radiation cross-linked polyolefin insulation
- Semi-conductive self-limiting matrix
- Bus wire



APPLICATIONS

Pipe Freeze Protection self-regulating heat-trace cables are used to prevent water and other fluids inside pipes from freezing during cold weather, which can cause blockages, bursts, or system shutdowns. These cables are installed along the length of metal or plastic pipes and automatically adjust their heat output in response to temperature changes, delivering more heat when the pipe temperature drops and less when it rises. This energy-efficient, self-regulating behavior eliminates the risk of overheating and allows cables to be safely overlapped or cut to length in the field. They are commonly used in residential, commercial, and industrial settings to protect water supply lines, fire sprinkler systems, and process piping exposed to freezing conditions.

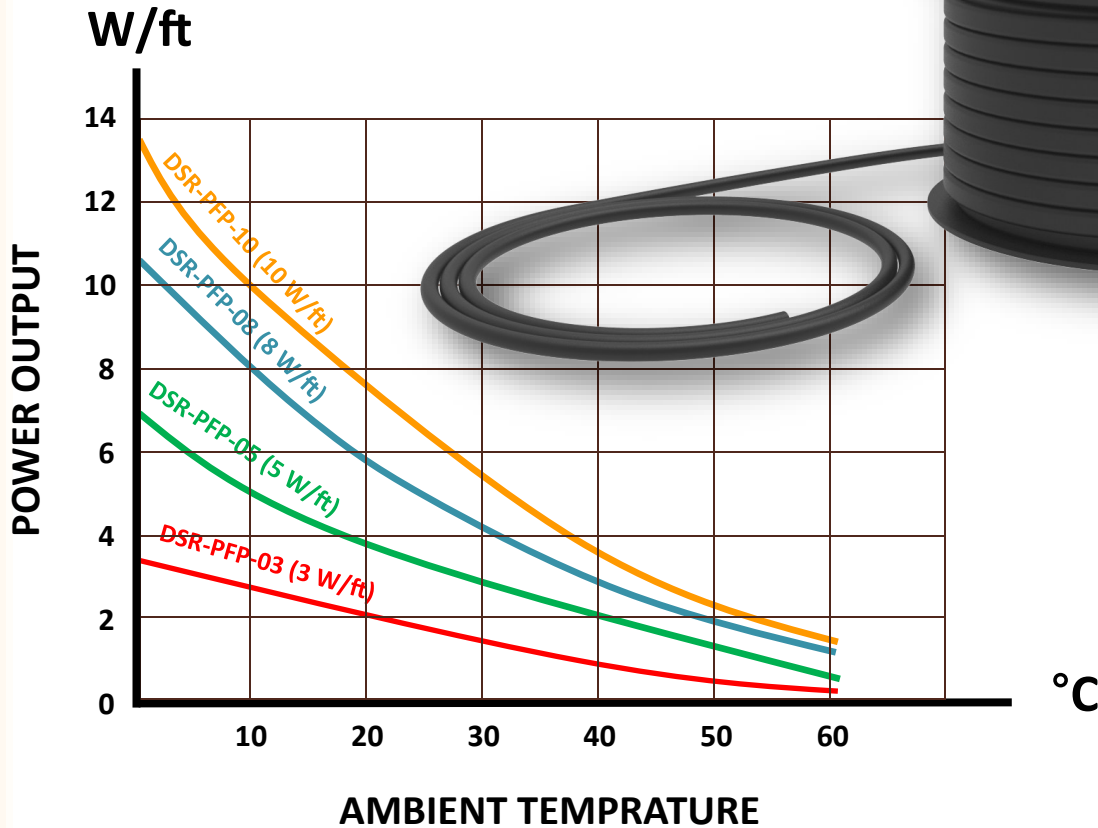
Specification	Supply Voltage	110 - 120V or 208 - 240V
	Bus Wires	16 AWG Tinned copper wires
	Power Output	3, 5, 8, and 10 W/ft
	Outer Jacket	Modified polyolefin
	Minimum Bend Radius	1 inch (25 mm) @ -20°C (-4°F)
	Max Exposure Temperature	85°C (185°F)
	Min Installation Temperature	-20°C (-4°F)
	Circuit Protection	30mA ground-fault protection required

Maximum Cable length per Circuit Breaker

Model (120 V)	Start-up Temperature	Maximum Cable Length (Ft.)			
		15A	20A	30A	40A
DSR-PFP-05-1	10°C (50°F)	203	216	249	249
	0°C (32°F)	177	200	249	249
	-20°C (-4°F)	131	170	249	249
DSR-PFP-08-1	10°C (50°F)	131	170	190	190
	0°C (32°F)	118	154	196	190
	-20°C (-4°F)	88	118	183	190

Model (240 V)	Start-up Temperature	Maximum Cable Length (Ft.)			
		15A	20A	30A	40A
DSR-PFP-05-2	10°C (50°F)	413	430	489	489
	0°C (32°F)	361	400	489	489
	-20°C (-4°F)	259	341	489	489
DSR-PFP-08-2	10°C (50°F)	265	341	377	377
	0°C (32°F)	236	308	374	377
	-20°C (-4°F)	177	243	364	377

POWER OUTPUT DIAGRAM



RECOMENDATIONS

Self regulating cables do adjust their heat output automatically, however they do not shut down their power completely! It is strongly recommended to combine them with sensors and controllers to maximize power consumption efficiency and lifespan. We carry a variety of sensors and controllers suitable for any type of residential, commercial, and industrial applications. Please refer to our installation manuals or contact us directly for details.

INSTALLATION & ACCESSORIES

For further details on installation and required accessories please refer to our installation manuals published on our website. We carry a comprehensive collection of accessories and connection kits to address any type of installation.

WARRANTY

At DE-ICERMAN we closely monitor the quality of our productions and manufacturing process. We offer 2-year warranty (from the date of purchase) on all our cable products.