ETL

Raychem

Self-regulating heating cable for pipe freeze protection

The Raychem R-ETL-A-CG self-regulating heating cable provides freeze protection to piped services in and around buildings.

PRODUCT OVERVIEW



R-ETL-A-CG is a self-regulating heating cable for pipe freeze protection, suitable for both in-pipe and on-pipe installation, including inside drinking-water pipes. It is UL recognized as PFAS-free and fully compliant with the [Drinking Water Directive (EU) 2020/2184], with approval from RISE.

The cable delivers reliable performance across a wide range of pipe diameters and climatic regions, with long circuit lengths of 121 m for more efficient installations and fewer power connections.

R-ETL-A-CG is available in full 305 m reels for simple ordering and handling, and can be cut to length on site. Thanks to its small geometry, the cable is easy to install, and its self-regulating technology automatically adjusts heat output pending on the local temperature at every point along its length. It never overheats when overlapped. Zero maintenance is required once installed.

- PFAS-free, independently recognized by UL under UL 746G.
- Third-party certified by RISE for installation inside drinking-water pipes.
- Cut to length on site.
- Small geometry for ease of installation.
- 10 W/m version for a range of pipe diameters and climatic regions.
- Zero maintenance after installation and commissioning.
- No risk of overheating due to self-regulating technology.
- On-pipe suitability verified in accordance with IEC/IEEE 62395-1.
- Flammability performance in compliance with IEC/IEEE 62395-1, Clause 5.2.3.

PRODUCT SPECIFICATIONS

Product	R-ETL-A-CG
Power Output @ 5 °C	10 (16W/m in Pipe)
Supply Voltage	230Vac
Maximum Exposure Temperature (Heater Power off) Max. 800 Hours Exposure.	65 °C
Dimensions	8,5 mm x 5,8 mm
Electrical Grounding Method (Earthing)	Nickel Plated Copper Braid
Primary (Inner) Jacket Material	Radiation cross-linked modified Polyolefin
Final (Outer) Jacket Material	Proprietary high-performance thermoplastic compound
Minimum Installation Temperature	–20 °C
Minimum Bend Radius	10 mm
Maximum Circuit Length (5 °C Switch-on)	121 m (13A) on pipe
	100 m (13A) in pipe
Impact resistance	7 J
Deformation resistance	1500 N
PCN	2000006663

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APPROVALS AND CERTIFICATIONS

- R-ETL-A-CG complies with the applicable requirements of the Construction Products Regulation, Regulation (EU) No 305/2011 or Regulation (EU) 2024/3110.
- For cold-water applications inside potable water pipes. Testing performed by Eurofins; included in RISE Type Approval C901444.
- Drinking-water hygienically tested according to the testing requirements of KTW-BWGL.
- Flammability compliance: Complies with the flammability requirements of IEC/IEEE 62395-1, Clause 5.2.3. Tested using a laboratory burner conforming to ASTM D5025-20.

C901444

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R-ETL CIRCUIT LENGTHS

Circuit Lengths are based on 230Vac supply and C-Type characteristic circuit protection devices.

R-ETL-A -CG (10W/m @ 5 °C)	Installation On-Pipe Circuit supply current (Amps)			Installation In-Pipe Circuit supply current (Amps)		
Switch-on Temperature (°C)	**10**	**13**	**16**	**10**	**13**	**16**
-20	25	37	60	25	37	60
-10	34	55	121	34	55	100
0	53	121	121	53	100	100
5	77	121	121	77	100	100
10	93	121	121	93	100	100

RECOMMENDED CONTROL DEVICES

PCN	Product	Description
728129-000	AT-TS-13	Ambient Sensing freeze protection thermostat. Range: -5 °C to +15 °C.
648945-000	AT-TS-14	Pipe sensing freeze protection thermostat. Range 0 °C to +120 °C.
1244-022440	RAYSTAT V5	Line Sensing Thermostat with Proportional Ambient Sensing Control (PASC)
1244-006265	RayStat-CONTROL-11-DIN	Line Sensing Thermostat with digital display (Din Rail mountable.)
1244-016626 - 31	SBS-R-FP Control Panels	Multi-circuit control panels with integrated electrical protection and circuit switching devices.

RECOMMENDED ELECTRICAL CONNECTION AND TERMINATION KITS

PCN	Product	Description
139433-000	U-ACC-PP-07	Cold lead connection & end seal kit
331368-000	CE20-03	Connection and end seal kit
946607-000	JB16-02	Junction Box
2000006781	ETL-SE-01	Silicone End seal for in-pipe application

ACCESSORIES

PCN	Product	Description
C77220-000	GT-66	Heat resistant glass cloth adhesive tape. (20m roll)
102823-000	KBL-10	Cable ties (100 ties per pack.)
938947-000	LAB-I-01	Electric Traced warning label

AT AMBIENT TEMP –20°C

	Pipe diameter (mm)								
Insulation thicknesses (mm)	**15**	**22**	**28**	**35**	**42**	**54**	**67**	**76**	**108**
10	R-ETL-A-CG								
15	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG						
20	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG				
25	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG				
30	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG			
40	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	
50	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG

AT AMBIENT TEMP –40°C

	Pipe diameter (mm)								
Insulation thicknesses (mm)	**15**	**22**	**28**	**35**	**42**	**54**	**67**	**76**	**108**
10									
15									
20	R-ETL-A-CG								
25	R-ETL-A-CG	R-ETL-A-CG							
30	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG						
40	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG					
50	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG	R-ETL-A-CG				

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