

# H321Q

## MI CABLE Mineral insulated heating cable

Stainless steel sheathed mineral insulated heating cable

- High performance output
- Wide temperature range
- Fire resistant
- High mechanical resistance
- Flames and corrosion resistance

The abbreviation H321Q defines the wide range of stainless steel sheathed mineral insulated heating cables.

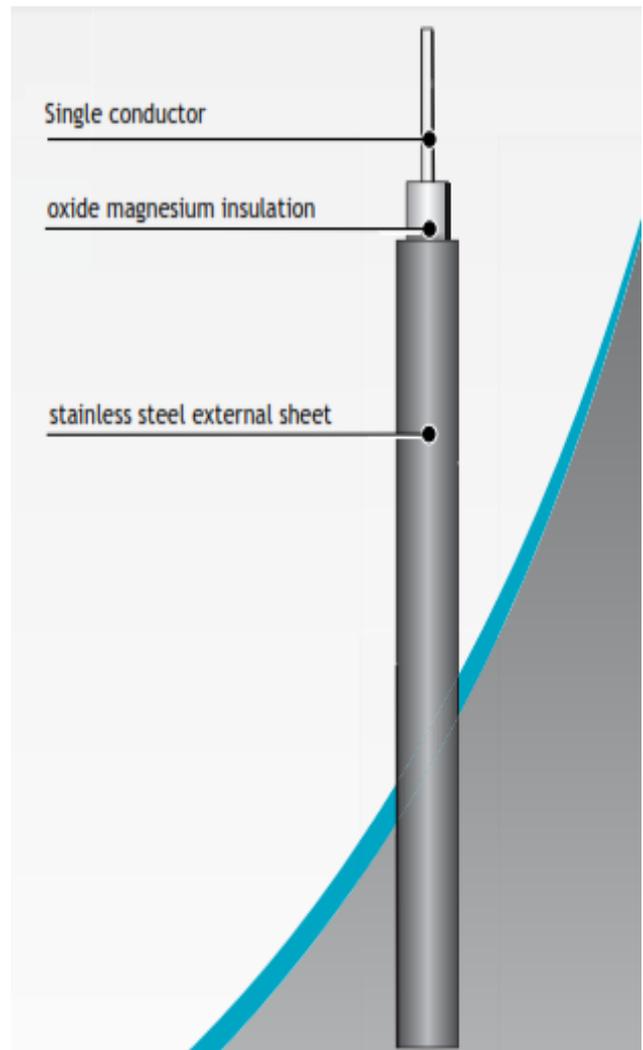
They are specially used in all industrial processes, where the process temperature is very high, up to 600°C.

The stainless steel sheathed mineral insulated heating cables allow to solve problems of freeze of primary and instrumental lines, which execution temperatures should be very high, up to 600°C.

Moreover, they are the ideal solution for temperature maintenance in nuclear plants, bitumen industries, melting sodium, chemical and oil industries, power plants and in all those applications where a high temperature resistance is required along with a high power per meter.

They can be powered in both high and medium voltage up to 500V alternate power according to the cable type.

The H321Q series presents low power resistance values essential for application on long pipes.



### Features

Conductor material	Nickelcrome
Isolating material	Magnesium oxide
Jacket material	Stainless steel 321
Power	Up to 500V, alternate power
Isolating resistance	1000MOhm/1000m; tested in factory
Isolating power	2.0KV rms ac
Max. jacket temperature	600°C
Min. installation temperature	-60°C
Min. bending radius	6 times the cable diameter
Min. laying pace	50mm
Approval	ATEX for use in areas 1 and 2

## Specification

Cable type	Diameter of the cable mm	Conductor material	Diameter of the conductor mm	Resistance Ohm/meter	Length of the standard coil meter	Diameter of the standard coil	Weight in Kg for 1000 meters
H321Q1M10	3,2	Nichrome	0,37	10	710	610	40
H321Q1M6,3	3,2	Nichrome	0,47	6,3	710	610	40
H321Q1M4	3,2	Nichrome	0,59	4	710	610	40
H321Q1M2,5	3,4	Nichrome	0,74	2,5	630	610	46
H321Q1M1,6	3,6	Nichrome	0,93	1,6	570	610	52
H321Q1M1	3,9	Nichrome	1,17	1	500	610	62
H321Q1M0,63	4,3	Nichrome	1,48	0,63	400	610	78
H321Q1M0,4	4,7	Nichrome	1,85	0,4	340	610	96
H321Q1M0,25	5,3	Nichrome	2,35	0,25	270	610	127
H321Q1M0,16	6,5	Nichrome	2,93	0,16	180	920	191

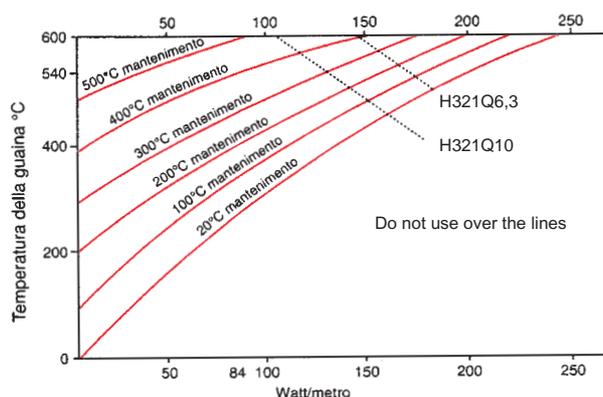
The values of the resistances in Ohm per meter of the heating cables are 20°C; the resistances in nickelcrome vary a little with temperature changes and the coefficients of variations can be matched according to the following table:

Temperature coefficient	20°C	100°C	200°C	400°C	600°C
	1	1,019	1,035	1,063	1,066

In the dimensioning of heat trace circuits with mineral insulated heating cables it is important to determine, for each application, the maximum charge and therefore the temperature that the jacket reaches on execution.

**The following directions are effective for application in safe areas; for applications in hazardous areas it is necessary to ask the producer, who will assemble also the heat trace circuits and will provide also all the necessary guarantees of ATEX conformity for the whole circuit and not only for each component.**

- from the dimensioning calculations it is possible to determine the power in watt per meter supplied by the heat trace circuit
- select the correction factor of the heating cable and multiply it by the power in watt per meter
- find the point on the graph where the corrected value intersects the maintain temperature. From the left hand (y) axis it is possible to read the temperature of the jacket, which must always be lower than the maximum temperature of the heating cable, equal to 600°C.



Cable type	Correction factor
H321Q1M10	1
H321Q1M6,3	1
H321Q1M4	1
H321Q1M2,5	0,952
H321Q1M1,6	0,901
H321Q1M1	0,84
H321Q1M0,63	0,769
H321Q1M0,4	0,714
H321Q1M0,25	0,645
H321Q1M0,16	0,538