

Series-Resistance Heating Units IndAstro-R

Features

- The series-resistance heating units IndAstro-R are specially designed to provide fast and even electric heating for roofs, drains, open areas, pavements, ground and freezers
- Resistant to UV and precipitation
- Extended operating period
- Manufactured as heating cable sections with heating cable, couplings, installation wire

IR-U



1 2 3 4



IR-H

1. Heating cores made of resistance alloys
2. Thermoplastic elastomer insulation
3. Foil shield with drainage wire or braided copper wire
4. Thermoplastic elastomer sheathing

Application

IndAstroR heating cable units are designed for:

- Heating the ground or outdoor areas, pavements, stairs when laid directly into cement-sand screed, tile adhesive layer or commercial concrete;
- To prevent the formation of ice in the drainage systems of buildings and structures, residential and industrial premises and freezers.



5. Double core heating cable
6. End coupling
7. Connection coupling
8. Installation wire

Application

- Heating cable section IR-U (universal)
De-icing roof systems, gutters of buildings and structures, outdoor areas, pavements, ground, freezers
- Heating cable section IR-H (enhanced)
De-icing roofs system, gutters of buildings and structures, outdoor areas, pavements

Technical Data

Rated voltage	~230 V ~380-400 V (optional)	
Insulation resistance, min	400 MOhm·m	
Linear power	5, 10, 20, 30, 40 W/m	
Ambient temperature range	IR-U	-35...+90 °C
	IR-H	-40...+90 °C
Minimum installation temperature	IR-U	-30 °C
	IR-H	-30 °C
Degree of external protection	IP67	
Mechanical resistance	M2	
Operating lifetime of the heating cable sections	minimum 25 years	

Heating cable sections

Recommended line capacities depending on the application

№	Application area	Recommended power density, W/m ²	Power density, W/m	
			Recommended	Max
1	Heating of open areas	250–400	25–30	40
2	Roof and gutter heating	250–300	20	25
3	Heating of football pitches and stadiums: – with natural grass – artificial turf	90–130 150–200	18	20
4	Heating greenhouses, orangeries and conservatories	70–120	10	12
5	Freezers	30–50	5	10

Parameters of standard heating units (220 V)

Heating cable section 5 IR-U, 5 IR-H (power 5 W/m)

Model	Length, m	Power Output, W	Resistance, Ohm, -5%...+10%	IR-U Order Code	IR-H Order Code
5IR-X [°] -2-01-0140-040	14	70	623,9–722,5		
5IR-X-2-01-0240-040	24	120	391,9–453,8		
5IR-X-2-01-0370-040	37	185	250,6–290,2		
5IR-X-2-01-0500-040	50	250	186,3–215,8		
5IR-X-2-01-0600-040	60	300	149,1–172,6		
5IR-X-2-01-0800-040	80	400	119,3–138,1		
5IR-X-2-01-1000-040	100	500	94,4–109,3		
5IR-X-2-01-1150-040	115	575	78,1–90,5		
5IR-X-2-01-1400-040	140	700	66,1–76,5		
5IR-X-2-01-1700-040	170	850	52,6–60,9		
5IR-X-2-01-1950-040	195	975	44,6–51,7		
5IR-X-2-01-2350-040	235	1175	37,0–42,8		
5IR-X-2-01-2700-040	270	1350	32,5–37,6		
5IR-X-2-01-3000-040	300	1500	29,1–33,7		
5IR-X-2-01-3350-040	335	1675	25,9–30,0		
5IR-X-2-01-3850-040	385	1925	22,8–26,4		

° - "X" is to be replaced with "U" for IR-U series and with "H" for IR-H series

Heating cable section 10 IR-U, 10IR-H (power 10 W/m)

Model	Length, m	Power Output, W	Resistance, Ohm, -5%...+10%	IR-U Order Code	IR-H Order Code
10IR-X [°] -2-01-0100-040	10	100	445,7–516,0		
10IR-X-2-01-0170-040	17	170	277,6–321,4		
10IR-X-2-01-0260-040	26	260	176,1–203,9		
10IR-X-2-01-0350-040	35	350	130,4–151,0		
10IR-X-2-01-0430-040	43	430	106,8–123,7		
10IR-X-2-01-0550-040	55	550	82,0–94,9		
10IR-X-2-01-0700-040	70	700	66,1–76,5		
10IR-X-2-01-0820-040	82	820	55,7–64,5		
10IR-X-2-01-1000-040	100	1000	47,2–54,6		
10IR-X-2-01-1200-040	120	1200	37,1–43,0		
10IR-X-2-01-1400-040	140	1400	32,1–37,1		
10IR-X-2-01-1650-040	165	1650	25,9–30,0		
10IR-X-2-01-1900-040	190	1900	22,9–26,5		
10IR-X-2-01-2150-040	215	2150	20,9–24,2		
10IR-X-2-01-2400-040	240	2400	18,6–21,5		
10IR-X-2-01-2700-040	270	2700	16,0–18,5		

° - "X" is to be replaced with "U" for IR-U series and with "H" for IR-H series

Heating cable sections

Heating cable section 20 IR-U, 20 IR-H (power 20 W/m)

Model	Length, m	Power Output, W	Resistance, Ohm, -5%...+10%	IR-U Order Code	IR-H Order Code
20IR-X-2-01-0070-040	7	140	312,0-361,2		
20IR-X-2-01-0120-040	12	240	196,0-226,9		
20IR-X-2-01-0180-040	18	360	121,9-141,2		
20IR-X-2-01-0250-040	25	500	93,2-107,9		
20IR-X-2-01-0300-040	30	600	74,5-86,3		
20IR-X-2-01-0400-040	40	800	59,6-69,0		
20IR-X-2-01-0500-040	50	1000	47,2-54,6		
20IR-X-2-01-0580-040	58	1160	39,4-45,6		
20IR-X-2-01-0700-040	70	1400	33,0-38,2		
20IR-X-2-01-0850-040	85	1700	26,3-30,4		
20IR-X-2-01-1000-040	100	2000	22,9-26,5		
20IR-X-2-01-1200-040	120	2400	18,9-21,9		
20IR-X-2-01-1350-040	135	2700	16,2-18,8		
20IR-X-2-01-1500-040	150	3000	14,6-16,9		
20IR-X-2-01-1700-040	170	3400	13,2-15,2		
20IR-X-2-01-1900-040	190	3800	11,3-13,0		

° - "X" is to be replaced with "U" for IR-U series and with "H" for IR-H series

Heating cable section 30 IR-U, 30 IR-H (power 30 W/m)

Model	Length, m	Power Output, W	Resistance, Ohm, -5%...+10%	IR-U Order Code	IR-H Order Code
30IR-X-2-01-0060-040	6	180	267,4-309,6		
30IR-X-2-01-0100-040	10	300	163,3-189,1		
30IR-X-2-01-0150-040	15	450	101,6-117,6		
30IR-X-2-01-0200-040	20	600	74,5-86,3		
30IR-X-2-01-0250-040	25	750	62,1-71,9		
30IR-X-2-01-0320-040	32	960	47,7-55,2		
30IR-X-2-01-0400-040	40	1200	37,7-43,7		
30IR-X-2-01-0470-040	47	1410	31,9-37,0		
30IR-X-2-01-0570-040	57	1710	26,9-31,1		
30IR-X-2-01-0700-040	70	2100	21,6-25,1		
30IR-X-2-01-0800-040	80	2400	18,3-21,2		
30IR-X-2-01-0950-040	95	2850	14,9-17,3		
30IR-X-2-01-1100-040	110	3300	13,2-15,3		
30IR-X-2-01-1250-040	125	3750	12,1-14,0		
30IR-X-2-01-1350-040	135	4050	10,4-12,1		
30IR-X-2-01-1550-040	155	4650	9,2-10,6		

° - "X" is to be replaced with "U" for IR-U series and with "H" for IR-H series

Heating cable sections

Heating cable section 40 IR-U, 40 IR-H (power 40 W/m)

Model	Length, m	Power Output, W	Resistance, Ohm, -5%...+10%	IR-U Order Code	IR-H Order Code
40IR-X-2-01-0050-040	5	200	222,8-258,0		
40IR-X-2-01-0080-040	8	320	130,6-151,3		
40IR-X-2-01-0130-040	13	520	88,1-102,0		
40IR-X-2-01-0180-040	18	720	67,1-77,7		
40IR-X-2-01-0220-040	22	880	54,7-63,3		
40IR-X-2-01-0280-040	28	1120	41,7-48,3		
40IR-X-2-01-0350-040	35	1400	33,0-38,2		
40IR-X-2-01-0410-040	41	1640	27,9-32,3		
40IR-X-2-01-0500-040	50	2000	23,6-27,3		
40IR-X-2-01-0600-040	60	2400	18,6-21,5		
40IR-X-2-01-0700-040	70	2800	16,0-18,6		
40IR-X-2-01-0850-040	85	3400	13,4-15,5		
40IR-X-2-01-0950-040	95	3800	11,4-13,2		
40IR-X-2-01-1050-040	105	4200	10,2-11,8		
40IR-X-2-01-1200-040	120	4800	9,3-10,8		
40IR-X-2-01-1350-040	135	5400	8,0-9,3		

° - "X" is to be replaced with "U" for IR-U series and with "H" for IR-H series

Approvals

