



Heating Element

Minimum bending radius: 3 x OD

Single core with cold ends: Standard SEI and SEA range

This range includes following heating elements:

- SEA types with stainless steel sheath well-suited from the cryogenic temperatures up to +600°C
- SEI types with Inconel® alloy sheath well-suited from the cryogenic temperatures up to +1000°C

Outer diameter: 2 and 3 mm

SHEATH		O.D. mm	Hot part in m	at 20°C Ω	POWER in WATTS											
Stainless steel 600°C code	Inconel® alloy 1000°C code				100	200	350	500	750	1000	1250	1500	1750	2000	3500	
Supply voltage (the indicated voltage produces the power mentioned above)																
	SEI 20/50	2	0.5	1.6	12	18	24									
	SEI 20/100	2	1	3.1	18	24	33	40								
SEA 20/150		2	1.5	4.7	22	30	40	48	60	70						
	SEI 20/200	2	2	6.2	24	36	48	56	70	80	90					
SEA 20/300		2	3	9.3		45	60	70	80	100	110	120				
	SEI 20/400	2	4	12.5			70	80	100	110	125	140	150			
SEA 20/500		2	5	15.6				90	110	125	140	150	165	175		
	SEI 20/600	2	6	18.6				95	120	140	150	165	180	190		
SEA 20/800		2	8	25					140	160	180	195	210	220		
	SEI 20/800	2	8	25					140	160	180	195	210	220		
	SEI 30/500	3	5	7				60	70	85	95	100	110	120		
	SEI 30/800	3	8	11.2					90	105	120	130	140	150		
	SEI 30/1000	3	10	14						120	130	145	155	165	220	

Outer diameter: 1 and 1.5 mm

SHEATH		O.D. mm	Hot part in m	At 20°C Ω	POWER in WATTS									
Stainless steel 600°C Code	Inconel® alloy 1000°C Code				25	50	75	100	150	200	350	500	750	1000
Supply Voltage (the indicated voltage produces the power mentioned above)														
	SEI 10/25	1	0.25	3.1	9	12	15	18						
	SEI 10/50	1	0.50	6.2		18	22	25	30	35				
SEA 10/75		1	0.75	9.4			28	30	38	45				
	SEI 10/100	1	1	12.5			30	35	45	50	65			
SEA 10/150		1	1.5	18.8				45	55	60	80	95		
	SEI 10/200	1	2	25				50	60	70	95	110	135	
	SEI 15/50	1.5	0.5	2.8		12	15	18	20	24				
	SEI 15/100	1.5	1	5.5			20	24	28	33	45	50		
SEA 15/150		1.5	1.5	8.2				28	35	40	55	65	80	
	SEI 15/200	1.5	2	11					40	48	60	75	90	
SEI 15/300		1.5	3	16.5						60	75	90	110	130
	SEI 15/400	1.5	4	22							90	105	130	150

Length & diameter on request: please go to data sheet E180

Mounting: It is necessary to take into consideration the indicated voltage values (see also pages 8 and 9):

- Blue: low voltage: every mounting method is suitable, even simple wrapping.
- Yellow: high voltage: the fixing method must ensure a good thermal contact.

Tolerances

Hot part length:

Cable ≤ 1 m: ±10% - mini: ±50 mm
Cable > 1 m: ±5% - mini: ±100 mm

Cold part minimum length guaranteed:

Hot part < 2 m → cold part = 0.50 m

Hot part ≥ 2 m → cold part = 1 m

Diameter: ±0.05 mm.



Heating elements

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Swaging

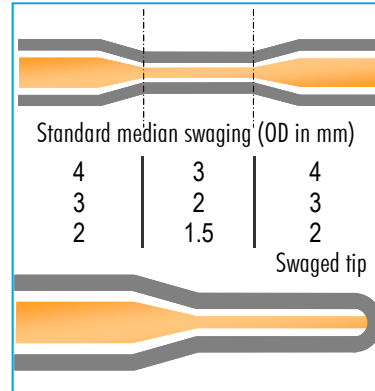
To increase the dissipated power without excessively heating up the connectors, a solution with swaging could be the answer.

Median swaging allows the power to be doubled. Numerous combinations of diameters are possible

Swaged tip allows multiplication of the power by a factor of 4. In this case, the end of the cable is normally grounded. The ratio between the diameters is 1 to 2.

This solution can be used when the power supply does not exceed 48 VDC or 24 VAC.

The purpose of the swaged tip is to double or to quadruple the power of the element.



Connection to supply cable

The THERMOCOAX heating elements are designed to work in very diverse and severe conditions.

Our connection range covers this diversity and the specific requirements of any applications.

The most common used connectors are issued from the plastic range where the maximum working temperature is 200°C and the metal/ceramic range where temperature can reach 600°C and operate in vacuum down to 10⁻⁹ bars.

More details are given in data sheet **E185**.



Seal glands and bushings

Any form of brazing or welding of a heating element through a wall requires some skill, and to facilitate the mounting, a range of small seal-glands have been developed and adopted for the standard THERMOCOAX dimensions.

More details are given in data sheet **E186**.



THERMOLOK seal gland



Bushing

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More information in the brochure
« How to choose your heating element »