

## Manganin® Wire for Low Temperature applications

Allectra offers for low temperature applications Kapton® insulated Manganin® wires. The Cu-Mn-Ni alloy offers a relatively high electrical conductance by low thermal conductivity. Two diameters are available: 0.14mm and 0.25mm.

Technical data:

	<b>0,14mm ø</b>	<b>0,25mm ø</b>
Nom. Wire Diameter	0,142mm (AWG 35)	0,254mm (AWG 30)
Total Diameter	0,18mm max	0,33mm max
Max. Voltage in Vacuum	1000V DC	6000V DC
Max. Current (short period)	0,15A (2A)	0,4A (5A)
El. Resistivity	0,43 Ohm mm <sup>2</sup> /m (20...100°C)	
	~27,2 Ohm/m (20°C) ~24,3 Ohm/m (4K)	~8,5 Ohm/m (20°C) ~7,6 Ohm/m (4K)
Resistance change	-0,4% @ -50°C -0,3% @ +175°C	
Max. Temperature	260°C (Vacuum) 150°C (Air)	
Thermal conductivity	22W /m K @ 20°C 2W /m K @ 10K 0,5W /m K @ 4K 0,06W /m K @ 1K	

Manganin can be soldered, brazed and welded. In air a thin oxide layer is formed, which has to be removed mechanically or via flux.  
Manganin is non-magnetic.

Please use the following part codes for ordering:

	<b>0,14mm ø</b>	<b>0,25mm ø</b>
-5m Spool:	312-KAP-MAN-014-5M	312-KAP-MAN-025-5M
-10m Spool:	312-KAP-MAN-014-10M	312-KAP-MAN-025-10M
Other lengths are available on request		

Manganin is a registered trademark of Isabellenhütte Heusler GmbH & Co. KG  
Kapton is a registered trademark of du Pont de Nemours

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All data given in this sheet are carefully checked but subject to change at any time.