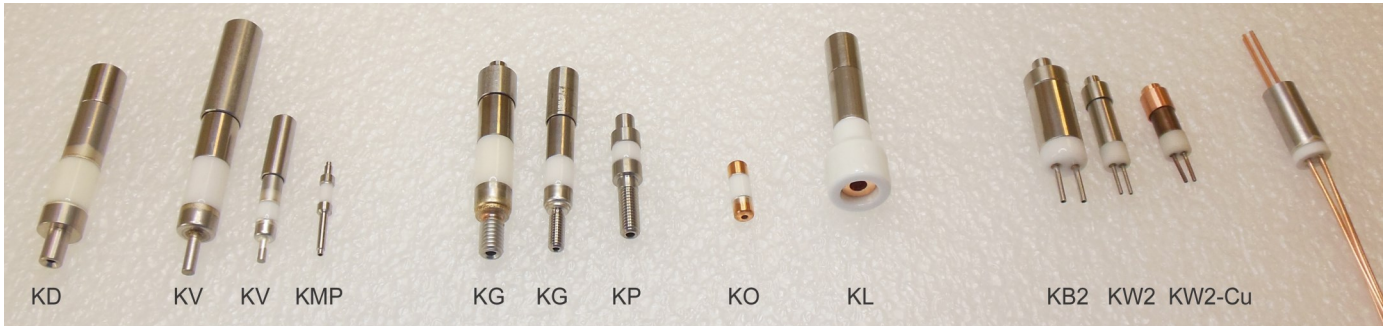


Electrical connection (metal-ceramic)



Mineral insulated (MI) cables require due to their special construction a special type of end contact sealing the cable. Due to the hygroscopic insulation material (MgO, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>) between current-carrying inner conductor and metallic sheath make it necessary to perform a excellent sealing of cable ends from the surrounding atmosphere.

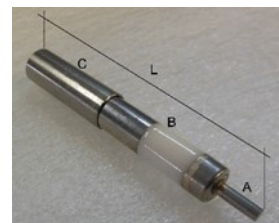
For the contacting of the MI cable especially at high temperatures and in vacuum, metal-ceramic composite components have a big importance.

**General handling:**

Protect ceramic components from impact, shock and excessive mechanical stress!  
This can cause hairline cracks and thus lead to failure!

**Typ KV**

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KV-1,0	10,0	L= 40mm; $\varnothing$ A= 2mm; $\varnothing$ B= 5mm; $\varnothing$ C= 6mm	550°C (short), 400°C (constant)
1,5	KV-1,5	12,5		
2,0	KV-2,0	17,5		
2,5	KV-2,5	24,0		
3,0	KV-3,0	30,0	L= 55mm; $\varnothing$ A= 3mm; $\varnothing$ B= 7mm; $\varnothing$ C= 8mm	
4,0	KV-4,0	40,0	L= 70mm; $\varnothing$ A= 3mm; $\varnothing$ B= 9mm; $\varnothing$ C= 10mm	
5,0	KV-5,0	60,0	L= 70mm; $\varnothing$ A= 4mm; $\varnothing$ B= 11mm; $\varnothing$ C= 12mm	



Electrical connection (metal-ceramic)

**General handling:**

Protect ceramic components from impact, shock and excessive mechanical stress!  
This can cause hairline cracks and thus lead to failure!

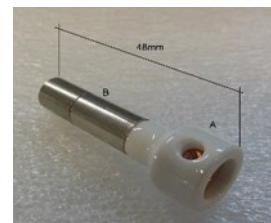
**Typ KP**

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,5	KP-1,5	12,5	L= 32,5mm; A= M5; $\varnothing$ B= 8mm	550°C (short), 500°C (constant)
2,0	KP-2,0	17,5		
2,5	KP-2,5	24,0		
3,0	KP-3,0	30,0		



**Typ KL**

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KL-1,0	10,0	L= 48mm; $\varnothing$ A= 15mm; $\varnothing$ B= 9mm	550°C (short), 400°C (constant)
1,5	KL-1,5	15,0		
2,0	KL-2,0	20,0		
2,5	KL-2,5	24,0		
3,0	KL-3,0	30,0		

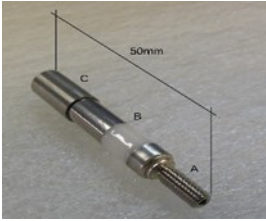
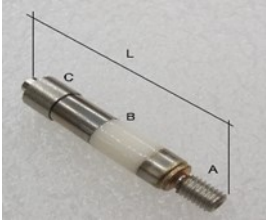


Electrical connection (metal-ceramic)

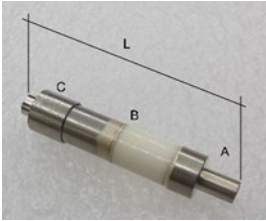
General handling:

Protect ceramic components from impact, shock and excessive mechanical stress!  
This can cause hairline cracks and thus lead to failure!

Typ KG

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KG-1,0	10,0	L= 50mm; A= M4; $\varnothing$ B= 7mm; $\varnothing$ C= 8mm	550°C (short), 400°C (constant) 
1,5	KG-1,5	15,0		
2,0	KG-2,0	20,0		
2,5	KG-2,5	24,0		
3,0	KG-3,0	30,0		
4,0	KG-4,0	40,0	L= 55mm; A= M5; $\varnothing$ B= 9mm; $\varnothing$ C= 10mm	550°C (short), 400°C (constant) 
5,0	KG-5,0	60,0		

Typ KD

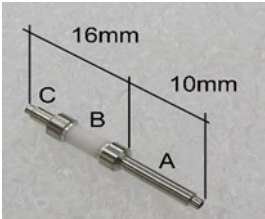
Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
3,5	KD-3,5	30,0	L= 51mm; $\varnothing$ A= 5mm; $\varnothing$ B= 9mm; $\varnothing$ C= 10mm	550°C (short), 400°C (constant) 
4,0	KD-4,0	40,0		
5,0	KD-5,0	60,0		

Electrical connection (metal-ceramic)

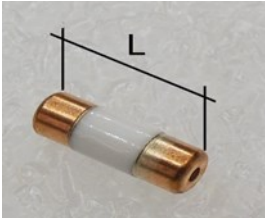
General handling:

Protect ceramic components from impact, shock and excessive mechanical stress!  
This can cause hairline cracks and thus lead to failure!

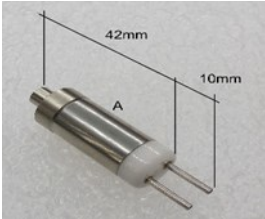
Typ KMP

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KMP-1,0	10,0	L= 26mm; $\varnothing$ A= 2mm; $\varnothing$ B= 3,6mm; $\varnothing$ C= 2mm	550°C (short), 500°C (constant) 

Typ KO-Cu

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KO-Cu 1,0	10,0	L= 15mm; $\varnothing$ = 5mm	550°C (short), 400°C (constant) 
1,5	KO-Cu 1,5	12,5		

Typ KB2

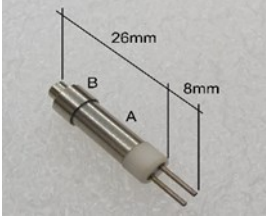
Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KB2-1,0	4,0	L= 52mm; $\varnothing$ A= 11mm	550°C (short), 400°C (constant) 
1,5	KB2-1,5	7,0		
2,0	KB2-2,0	10,0		
2,5	KB2-2,5	12,0		
3,0	KB2-3,0	15,0		
4,0	KB2-4,0	20,0		
5,0	KB2-5,0	24,0		

Electrical connection (metal-ceramic)

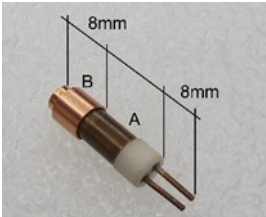
General handling:

Protect ceramic components from impact, shock and excessive mechanical stress!  
This can cause hairline cracks and thus lead to failure!

Typ KW2

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KW2-1,0	4,0	L= 34mm; $\varnothing$ A= 6mm; $\varnothing$ B= 7mm	550°C (short), 400°C (constant) 
1,5	KW2-1,5	7,0		
2,0	KW2-2,0	10,0		
2,5	KW2-2,5	12,0		

Typ KW2-Cu

Heater $\varnothing$ [mm]	Order Code	max. current [A] at 20°C	Dimension	Design and working temperature
1,0	KW2 Cu-1,0	4,0	L= 28mm; $\varnothing$ A= 6mm; $\varnothing$ B= 7mm	550°C (short), 400°C (constant) 
1,5	KW2 Cu-1,5	7,0		
2,0	KW2 Cu-2,0	10,0		
2,5	KW2 Cu-2,5	12,0		