



GÜNTHER GmbH
Temperaturmesstechnik



**Product category 05-TKT
Thermocouple Assemblies
with Ceramic Protection Tube**



05-TKT

Thermocouple Assemblies with Ceramic Protection Tube

Straight line thermocouple assemblies with ceramic protection tube (05-TKT) are mainly used for general temperature measurement in gaseous environments up to 1800°C.

Measurement and regulation processes can lead to strenuous operational demands through abrasion and corrosion. This is the reason for the protection tubes of these thermal sensors consisting of high grade heat-resistant ceramics. Metals often will not be able to bear the stress of this strain.

Aside from the industry customary oxide ceramics (purity of up to 99,8%), we offer non-oxide ceramics and individual solutions with a diversity of dimensions and materials. In most cases, GÜNTHER GmbH will have these items available from stock.

The assemblies of this product line can be fitted with an additional ceramic inner tube, which, in most cases, considerably increases endurance strength and total durability.

The maximum operating temperature is dependent both upon the mounting orientation (vertical / horizontal) and the corrosiveness of the respective ambient media.

Thermoelectric voltages and tolerances of our thermocouples are pursuant to DIN EN 60584, class 1.

Further technical information for this product line, e.g. an overview of individual properties of most common ceramics, is available on our website:

<http://www.guenther.eu/en/products/thermocouples/05-tkt/thermocouples-with-ceramic-protection-tube>

Application Examples for Thermocouple Assemblies with Ceramic Protection Tube:



Waste Recycling / Incineration



Glass Industry



Plant and Machine Construction



Steel and Iron Industry



Automobile Industry



Heat Treatment



Laboratories



Industrial Furnace Construction



Aluminium and Nonferrous Metal Industry



Cement and Building Material Industry



Energy Production





1 Connection Head

A	B
AUS	BUS
AUZ	BUZ
AUZH	BUZH
AUSH	BBK

2 Holding Pipe (Materials)

Available in various lengths

St. 35.8	Mat. No. 1.0305
Stainless Steel	Mat. No. 1.4571
X10Cr Al 24	Mat. No. 1.4762
X15CrNi Si 25 20	Mat. No. 1.4841
Inconel	Mat. No. 2.4816
Kanthal	

3 Process Connector (Detachable)

Flange
Threaded Socket
Flange / Counter Flange

4 Protective Tube (Materials)

C610	Quartz Glass
C799	Sapphire Glass
C530	SiN
SiC	

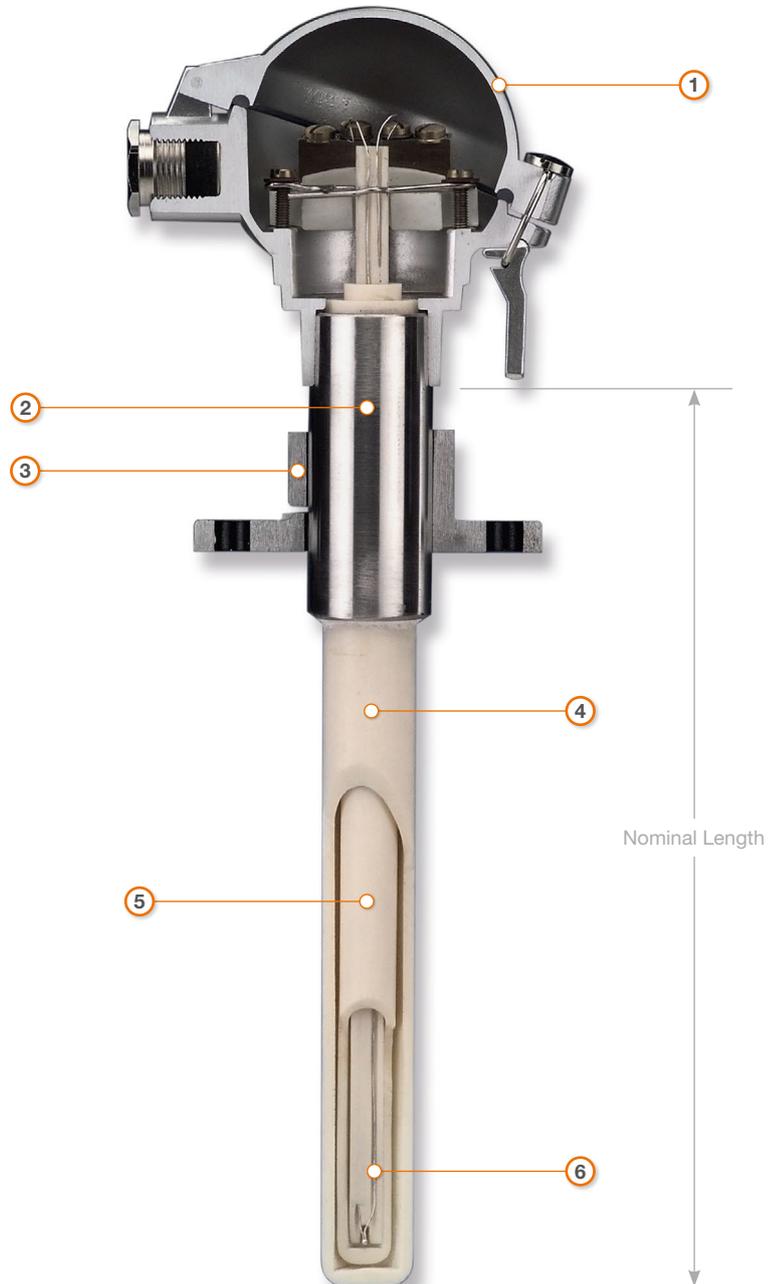
5 Innenrohr

C610	TEP
C799 (gas-tight)	Aluminium Oxide
C530	Porous Ceramic

6 Thermocouple

Type R	PtRh13-Pt
Type S	PtRh10-Pt
Type B	PtRh30-PtRh6
Type K	NiCr-Ni
Type J	Fe-CuNi
Type L	Fe-CuNi
Type C	WRe5-WRe26
Type N	Nicrosil-Nisil
Type D	WRe3-WRe25

Example of a common implementation in this product line



Individual Solutions such as, for example materials, process connectors, accessories, etc. not listed here, are often viable.

Please contact us for further information!

05 - TKT // Thermocouples with a ceramic protection tube and a built-in thermocouple

Ceramic protection tube + thermocouple

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Protection tube (dimensions / material)	10 x 7	mm	C610	1
	10 x 6	mm	C799	2
	15 x 11	mm	C610	3
	15 x 10	mm	C799	4
	16 x 12	mm	C610	5
	24 x 19	mm	C610	6
	24 x 18	mm	C799	7
	26 x 18	mm	C530	8
	16 x 12	mm	C799	9

Nominal length / mm

Inner tube	None		0
	C530	Porous ceramic material (on request)	1
	C610	gastight ceramic	2
	C799	Aluminium oxide	3

Holding tube (visible length)		1.0305	1.4571	1.4762	1.4841
15x 2	50 mm	05	75	-	-
15 x 2	60 mm	06	76	26	36
15 x 2	80 mm	07	77	27	37
15 x 2	100 mm	08	78	28	38
15 x 2	150 mm	09	79	29	39
15 x 2	200 mm	10	80	30	40
22 x 2	100 mm	11	81	31	41
22 x 2	150 mm	12	82	32	42
22 x 2	200 mm	13	83	33	43
22 x 2	250 mm	14	84	34	44
22 x 2	300 mm	15	85	35	45
28.3 x 1.5	80 mm	16	-	-	-
28.3 x 1.5	180 mm	17	-	-	-
32 x 2	50 mm	18	88	-	48
32 x 2	100 mm	19	89	-	49
32 x 2	150 mm	20	90	-	70
32 x 2	200 mm	21	91	-	71
32 x 2	250 mm	22	92	-	72
Alloy 600 (mat. no. 2.4816)		Kanthal			
22 x 2	200 mm	61	15 x 1.3	100 mm	51
22 x 2	300 mm	62	15 x 1.3	150 mm	52
22 x 2	400 mm	63	15 x 1.3	200 mm	53
22 x 2	500 mm	64			
30 x 2.5	230 mm	65	Individual		00
30 x 2.5	400 mm	66	No holding tube		99

Head	A	1	B	6
	AUS	2	BUS	7
	AUZ	3	BUZ	8
	AUZH	4	BUZH	9
	AUSH	5	BBK	0

Thermocouple	Type R	PtRh13-Pt	1
	Type S	PtRh10-Pt	2
	Type B	PtRh30-PtRh6	3
	Type K	NiCr-Ni	4
	Type J	Fe-CuNi	5
	Type L	Fe-CuNi	6
	Type C	WRe5-WRe26	7
	Type N	Nicrosil-Nisil	8
	Type D	WRe3-WRe25	9

Thermocouple	Standard	1	Standard (testable)	2
	Double	3	Double (testable)	4
	Triple	5		

Fastening	None	0
	Stop flange	1
	Mounting thread	2
	Flange/counter flange	3

Custom designs:

0	5
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9	9	0	5	x	x	x	x
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Consecutive no.

Nominal length / mm



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