

## Straight thermocouples according to DIN

### Protection tubes

- a = Steel St. 35.8, seamlessly, bottom is fused into the tube, material 1.0305  
b = Steel St. 35.8, enameled, seamlessly, bottom is fused into the tube, material 1.0305  
c = Heat-resistant steel X10CrA124, fused along length, closed on one side, material 1.4762  
d = In ceramic KER 710, gas-proofed, with extension tube in steel St. 35.8 Material 1.0305 with isolating tube KER 710  
e = Terminal head Design B, rust- and acid-resistant steel V4A X 6 CrNiMoTi17122, material 1.4571

Thermocouple According to DIN 43732

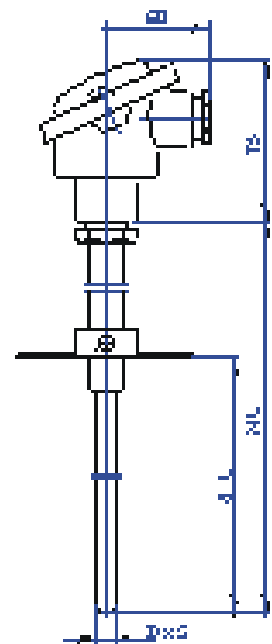
Protection tube According to 43720 and 43724, design A and B

Terminal head According to DIN 43729, design A and B 15, in light-metal, spread water resistant, Protection type IP 54, with process connection Pg 16

Stop flange According to DIN 43734, in grey iron, relocateable

### Design BM According to DIN 43733, terminal head design B 15, protection tube in steel, with stop flange in grey iron

Protection tube	Nominal length		Thermocouple Type diameter	Weight kg	Single-TC	Double-TC	
	NL	d x s					
a) up to 570°C	180	15 x 2	Fe-CuNi Typ "L"	1	0,48	30013001	30130011
	250			0,53	30013002	30130022	
	355			0,63	30013003	30130033	
	500			0,83	30013004	30130044	
b) up to 600°C	180	15 x 2	Fe-CuNi Typ "L"	1	0,48	30013011	30130111
	250			0,53	30013012	30130122	
	355			0,63	30013013	30130133	
	500			0,83	30013014	30130144	
	180	15 x 2	NiCr-Ni Typ "K"	1,5	0,48	30013021	30130211
	250			0,53	30013022	30130222	
	355			0,63	30013023	30130233	
	500			0,83	30013024	30130244	
c) up to 1150°C	180	15 x 2	NiCr-Ni Typ "K"	1,5	0,48	30013031	30130311
	250			0,53	30013032	30130322	
	355			0,63	30013033	30130333	
	500			0,83	30013034	30130344	

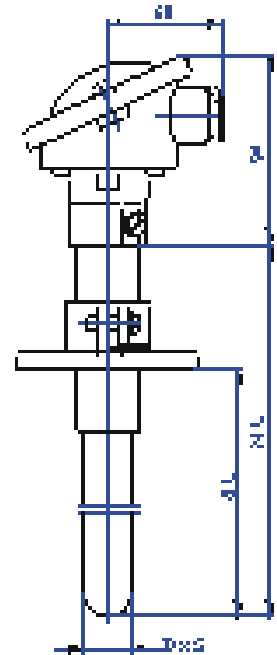


**Design AM According to DIN 43733, terminal head design A22**

Protection tube	Nominal length	Thermocouple Type		Weight kg	Single-TC	Double-TC	
		NL	d x s diameter				
a) up to 570°C	500	22 x 2	Fe-CuNi	3	1,40	30013051	30130511
	710				1,55	30013052	30130522
	1000				1,95	30013053	30130533
b) up to 600°C	500	22 x 2	Fe-CuNi	3	1,40	30013061	30130611
	710		Typ "L"		1,55	30013062	30130622
	1000				1,95	30013063	30130633
	500	22 x 2	NiCr-Ni	3	1,40	30013071	30130711
	710		Typ "K"		1,55	30013072	30130722
	1000				1,95	30013073	30130733
c) up to 1150°C	500	22 x 2	NiCr-Ni	3	1,40	30013081	30130811
	710				1,55	30013082	30130822
	1000				1,95	30013083	30130833
	1400				2,40	30013084	30130844

**Design AK according to DIN 43733, terminal head Form A 22/32, protection tube in ceramic, extension tube in steel, stop flange in grey iron**

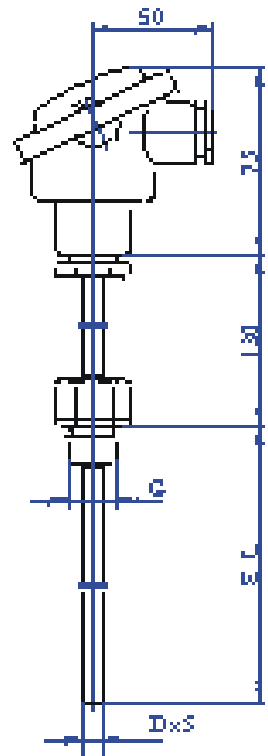
d) up to 1200°C	500	15 x 2	NiCr-Ni	3	1,40	30013101	30131011
	710		Typ "K"		1,55	30013102	30131022
	1000				1,65	30013103	30131033
	500	24 x 2,5	NiCr-Ni	3	1,95	30013111	30131111
	710		Typ "K"		2,15	30013112	30131122
	1000				2,35	30013113	30131133
	1400				2,75	30013114	30131144



### Design B Screw-in thermocouples according to DIN 43765

Thermocouple	According to DIN 43732 and 43735
Protection tube	According to DIN 43763, design B with thread G 1/2" and design C mit Einschraubgewinde G 1"
Terminal head	According to DIN 43729, design B 24 x 1,5 in light metal, spread water resistant, protection type IP 54 with process connection Pg 16

Protection tube	NL	Nominal length					
		d x s	Thermocouple Type	Durchm.	Weight kg	Single-TC	Double-TC
b) up to 600°C	100						
	160	9 x 1	Fe-CuNi	1	0,80	30013121	30131211
	250		Typ "J"		0,80	30013122	30131222
	400				0,90	30013123	30131233
e) up to 800°C	100				1,00	30013124	30131244
	160	9 x 1	NiCr-Ni	1	0,75	30013131	30131311
	250		Typ "K"		0,80	30013132	30131322
	400				0,90	30013133	30131333



### Design C Screw-in thermocouples according to DIN 43766

a) up to 570°C	100	11 x 2	Fe-CuNi	1,15	30013141	30131411
	160		Typ "L"	1,20	30013142	30131422
	250			1,25	30013143	30131433
e) up to 800°C	100	11 x 2	Fe-CuNi	1,15	30013151	30131511
	160		Typ "L"	1,20	30013152	30131522
	250			1,25	30013153	30131533

**Thermocouples design B and design C are also deliverable without extension tube!**

**All thermocouples are deliverable with integrated transmitter!**