



GÜNTHER^{GmbH}

Temperaturmesstechnik



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**Product category 53-WHD
Resistance Thermometer with
Welding Thermowell Form 4**

53-WHD

Resistance Thermometer with Welding Thermowell Form 4 (Formerly D-Sleeve)



Application Examples for Resistance Thermometers with Welding Thermowell



Waste Recycling / Incineration



Plant and Machine Construction



Automobile Industry



Chemical Industry



Laboratories



Energy Production

53-WHD

Resistance Thermometer with Welding Thermowell Form 4 (Formerly D-Sleeve) pursuant to DIN 43772

Resistance thermometers with welding thermowell (53-WHD) are used for temperature measurement in gaseous and liquid media such as air, steam, water, oil, etc. with high current velocities and pressures. The material of the thermowell defines the operation temperature. Specialised thermowells are suitable up to 700 bar of pressure. The instruments of this product line are fitted with exchangeable mineral-insulated gauge slides.

The main construction component is a thermowell of high-grade or pressure-vessel steel, which is used to weld the thermometer into the respective machine.

Selection of the thermowell is dependent on spatial proportions at the point of installation, as well as demands as dictated by temperature, pressure, current flow and chemical attack.

Standard values for stress capacity can be found in the diagrams of DIN 43772.

In particular the question of chemical stress capacity must be examined carefully for each individual scenario. Often times, only field testing will yield authoritative information, as even minor impurities in the ambient media can have significant impact on the performance of the thermowell within the application environment.

For specialised applications (precision, long-term stability, etc.) we recommend the application of precision resistors with narrowed tolerance.

Resistance values and tolerances of our resistance thermometers are pursuant to DIN EN 60751.





1 Connection Head

B (M24 x 1,5)	BUSH
BUS	BUZH
BUZ	NA
BBK	DL / MA

2 Neck Tube (Pursuant to DIN 43767)

with or without threading, made of
high grade steel or
zinc-plated steel

3 Thermowell (Pursuant to DIN 43763)

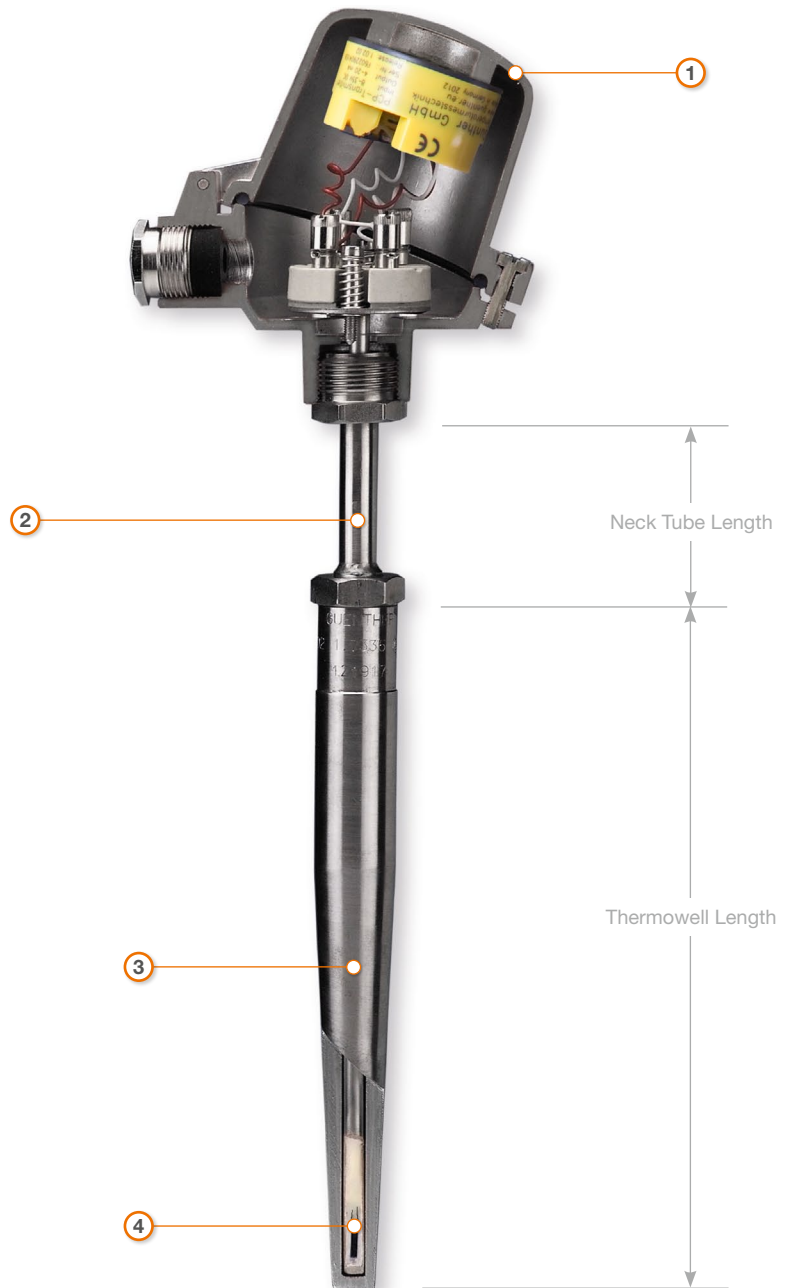
Cone Length:	40 - 125 mm
Shaft Length:	50 or 110 mm
Protective Tube Length:	115 - 260 mm
Diameter:	18 or 24 mm

4 Mineral-Insulated Gauge Slide

Mantle Diameter:	1,5 - 8,0 mm
Tip Diameter:	2,0 - 10,0 mm
Connection:	
	1 x Pt100 up to 3 x Pt100 Ohm
	2-Wire up to 4-Wire

Our resistance thermometers are also available in explosion protected ATEX models.

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!

53 - WHD // Weld in resistance thermometers with a D-type protective sleeve

Pt 100 Ω, metal + sheath

- /

Connection head

B (M24 x 1.5)	1	BUSH	6
BUS	2	BUZH	7
BUZ	3	NA	8
BBK	4	DL / MA (M10 x 1)	9
Other	5		0

Installation length / Neck pipe length in mm

Blank flange in acc. with DIN 2527

DN 10	PN 16	10	20	30	None
DN 15	PN 16	11	21	31	
DN 20	PN 16	12	22	32	00
DN 25	PN 16	13	23	33	
DN 32	PN 16	14	24	34	
DN 40	PN 16	15	25	35	
DN 50	PN 16	16	26	36	Other
DN 65	PN 16	17	27	37	
DN 80	PN 16	18	28	38	99
DN 100	PN 16	19	29	39	

Neck pipe in acc. with DIN 43767

With M24 x 1.5 / M18 x 1.5	screw fittings	Galvanised steel	1
With M24 x 1.5 / M18 x 1.5	screw fittings	Stainless steel	2
With M24 x 1.5 / M14 x 1.5	screw fittings	Galvanised steel	3
With M24 x 1.5 / M14 x 1.5	screw fittings	Stainless steel	4
None			0
Other			9

Welded protection tubes in acc. with DIN 43763

D1	Cone length = 65 mm, Shaft length = 50 mm, Thermowell length = 140 mm, ø 24 mm	10	20	30
D2	Cone length = 125 mm, Shaft length = 50 mm, Thermowell length = 200 mm, ø 24 mm	11	21	31
D4	Cone length = 65 mm, Shaft length = 110 mm, Thermowell length = 200 mm, ø 24 mm	12	22	32
D5	Cone length = 125 mm, Shaft length = 110 mm, Thermowell length = 260 mm, ø 24 mm	13	23	33
DS	Cone length = 65 mm, Shaft length = 50 mm, Thermowell length = 140 mm, ø 18 mm	15	25	35
DS	Cone length = 40 mm, Shaft length = 50 mm, Thermowell length = 115 mm, ø 18 mm	16	26	36
No thermowell (sheath freely protruding)		00		
Other		99		

1.7335
1.4571
1.5415

Sheath measurement inserts

Sheath measurement inserts									Rigid design:
Sheath ø [mm]	2.0	3.0	4.5	6.0	6.0	6.0	8.0	8.0	
Point ø [mm]	2.0	3.0	4.5	6.0	8.0	10.0	8.0	10.0	
Circuit									
1xPt100 Ω									
2-wire	00	10	20	30	40	50	60	70	80
1xPt100 Ω									
3-wire	01	11	21	31	41	51	61	71	81
1xPt100 Ω									
4-wire	02	12	22	32	42	52	62	72	82
2xPt100 Ω									
2-wire	03	13	23	33	43	53	63	73	83
2xPt100 Ω									
3-wire	04	14	24	34	44	54	64	74	84
3xPt100 Ω									
2-wire	05	15	25	35	45	55	65	75	85
2xPt100 Ω									
4-wire	06	16	26	36	46	56	66	76	86



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Custom designs:

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Consecutive no.

Installation length / neck pipe length in mm