

# Temperaturgeber

für verschiedene Medien

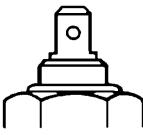
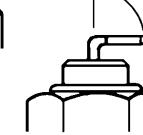
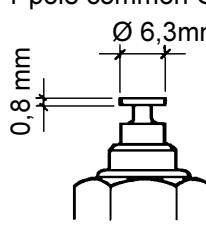
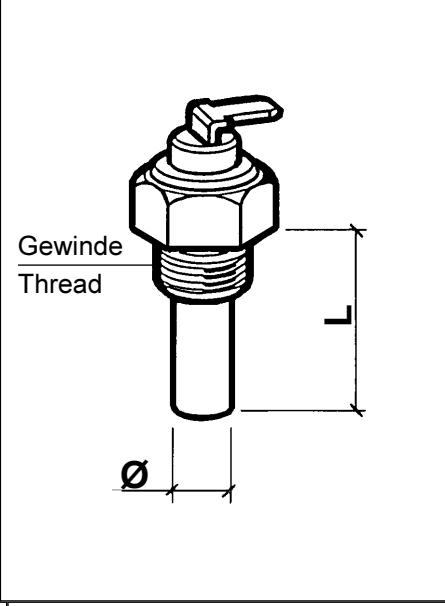
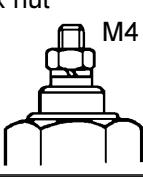
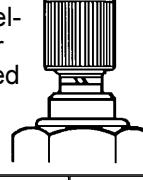
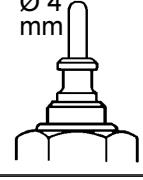
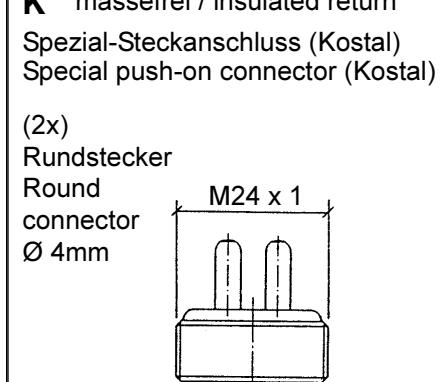
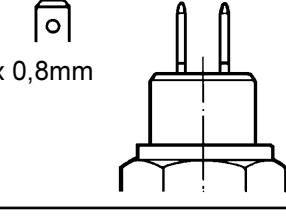
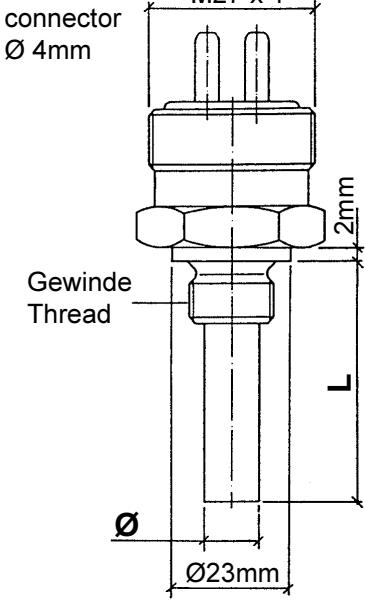
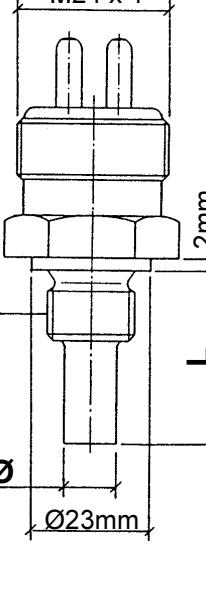
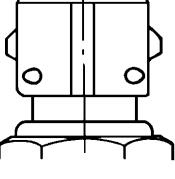
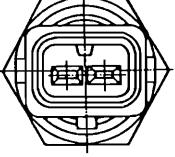
## Technische Daten:

Ausführung: Heißleiter

Nennspannung: 6V bis 24V

Temperaturangleichzeit:  
min. 3 Minuten nach ein-  
geschaltetem Betriebssystem

## Anschlussart / Type of connection:

<b>A</b> 1polig über Masse 1-pole common GND  6,3 x 0,8mm 	<b>B</b> 1polig über Masse 1-pole common GND  6,3 x 0,8mm 90° 	<b>C</b> 1polig über Masse 1-pole common GND  Ø 6,3mm 0,8 mm 	 Gewinde Thread
<b>D</b> 1polig über Masse 1-pole common GND Sechskantmutter Hex nut  M4 	<b>E</b> 1polig über Masse 1-pole common GND  Rändel- mutter Knurled nut  M4 	<b>F</b> 1polig über Masse 1-pole common GND  Ø 4 mm 	 Gewinde Thread
<b>G</b> massefrei / insulated return  (2x) 6,3 x 0,8mm 	<b>J</b> massefrei / insulated return Spezial-Steckanschluss (Kostal) Special push-on connector (Kostal)  (2x) Rundstecker Round connector Ø 4mm 	<b>K</b> massefrei / insulated return Spezial-Steckanschluss (Kostal) Special push-on connector (Kostal)  (2x) Rundstecker Round connector Ø 4mm 	
<b>H</b> massefrei / insulated return Spezial-Steckanschluss (Bosch) Special push-on connector (Bosch)    (2x) 2,8 x 0,8mm 			

# Temperaturgeber

für verschiedene Medien

# Temperature Sensors

for various fluids

▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

# Temperaturgeber

für verschiedene Medien

# Temperature Sensors

for various fluids

+ °C max.	Gewinde Thread	KT ▼ CT	Art Type	L mm	Ø mm	Betriebswert Operational Value + °C      Ω	Bestell-Nr. Order No.
130	M14 x 1,5	11	H	29	8,5	90 = 3300 ± 143	323-805-039-001C
130	M14 x 1,5	9	H	29	8,5	90 = 53,6 ± 1,4	323-805-017-002C
130	M14 x 1,5	18	H	29	7,5	90 = 426,2 ± 17,6	323-805-034-002B
140	M14 x 1,5	15	H	29	8,5	90 = 92,3 ± 5,2	323-805-042-001C
150	M10x1 keg. kurz / con. short	2	C	22	8,2	120 = 36,5 ± 2,7	323-801-009-003D
150	M10x1,5	2	C	22	6,9	120 = 36,5 ± 2,7	323-801-010-001D
150	M12x1,5	2	C	22	6,9	120 = 36,5 ± 2,7	323-801-010-003D/K
150	M14 x 1,25	2	B	15	9	120 = 36,5 <sup>+4,0</sup> <sub>-2,7</sub>	323-801-012-014D
150	M14 x 1,5	5	A	24	9	120 = 47,7 ± 3,2	323-804-004-009N
150	M14 x 1,5	2	A	29	9	120 = 36,5 ± 2,7	323-801-004-002N
150	M14 x 1,5 Gew.-Länge 9 / Thread length 9	2	B	29	9	120 = 36,5 ± 2,7	323-801-004-030D/K
150	M14 x 1,5 Gew.-Länge 14 / Thread length 14	2	B	29	9	120 = 36,5 ± 2,7	323-801-004-039D/K
150	M14 x 1,5	2	B	15	9	120 = 36,5 <sup>+4,0</sup> <sub>-2,7</sub>	323-801-012-002D/K
150	M14 x 1,5	2	D	29	9	120 = 36,5 ± 2,7	323-801-004-040D
150	M14 x 1,5	2	E	29	9	120 = 36,5 ± 2,7	323-801-004-014D
150	M14 x 1,5	2	G	29	11	120 = 36,5 ± 2,7	323-805-003-001K/N
150	M14 x 1,5	8	J	38	9	120 = 36,5 ± 3,5	323-805-014-001B
150	M14 x 1,5	10	J	38	9	120 = 996,3 ± 54,5	323-805-028-002B
150	M14 x 1,5	10	K	38	9	120 = 996,3 ± 54,5	323-805-028-003B
150	M16 x 1,5	2	B	15	9	120 = 36,5 <sup>+4,0</sup> <sub>-2,7</sub>	323-801-012-001D/K
150	M16 x 1,5	2	B	29	9	120 = 36,5 ± 2,7	323-801-004-029D/K
150	M16 x 1,5	2	E	29	9	120 = 36,5 ± 2,7	323-801-004-012C
150	M18 x 1,5	2	B	15	9	120 = 36,5 <sup>+4,0</sup> <sub>-2,7</sub>	323-801-012-003K
150	M18 x 1,5	2	B	29	9	120 = 36,5 ± 2,7	323-801-004-031D/K
150	M18 x 1,5	10	K	38	9	120 = 996,3 ± 54,5	323-805-028-001B
150	M22 x 1,5	2	B	15	9	120 = 36,5 <sup>+4,0</sup> <sub>-2,7</sub>	323-801-012-004K
150	M22 x 1,5	2	B	29	9	120 = 36,5 ± 2,7	323-801-004-032K
150	M26 x 1,5	2	B	29	9	120 = 36,5 ± 2,7	323-801-004-033K
150	1/2-14 NPTF	2	A	29	9	120 = 36,5 ± 2,7	323-801-004-007D
150	1/2-14 NPTF	2	D	29	9	120 = 36,5 ± 2,7	323-801-004-006D
150	1/2-20 Gg.	2	E	29	9	120 = 36,5 ± 2,7	323-801-004-023D
150	1/2-20 UNF - 2A	2	D	29	9	120 = 36,5 ± 2,7	323-801-004-042D
150	1/2 in-20 Whit. S, medium	2	B	29	9	120 = 36,5 ± 2,7	323-801-004-035D

▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

# Temperaturgeber

für verschiedene Medien

# Temperature Sensors

for various fluids

▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

# Temperaturgeber mit Warnkontakt (über Masse)

für verschiedene Medien

## Technische Daten:

Ausführung:	Heißleiter
Nennspannung:	6V bis 24V
Temperaturangleichzeit:	min. 3 Minuten nach eingeschaltetem Betriebsstrom
Schaltleistung:	1,2W bis 3W induktionsfrei
Ausschaltpunkt:	max. 5°C unter Einschaltpunkt
Kontaktgabe:	schleichend
Kontaktart:	Schalter schließt bei steigender Temperatur

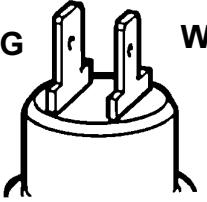
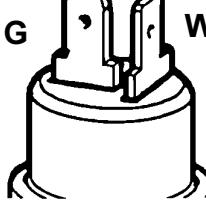
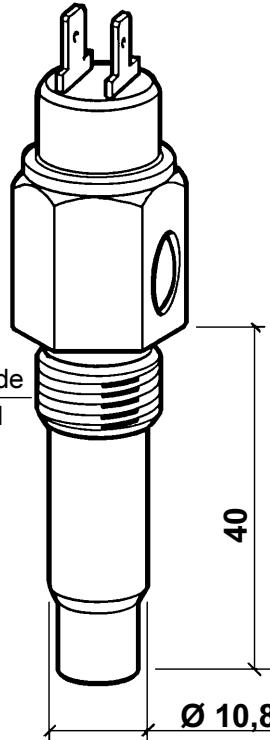
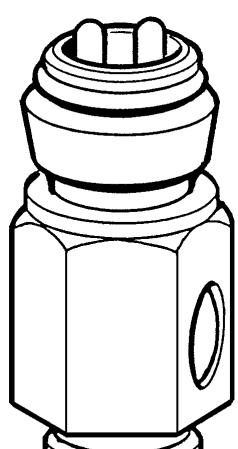
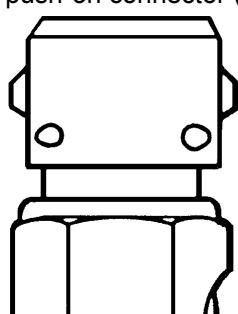
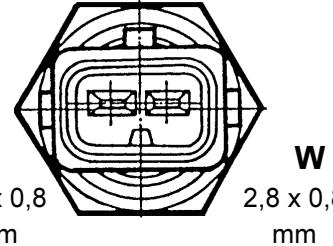
# Temperature Sensors with Warning Contact (common ground)

for various fluids

## Technical Data:

Version:	Thermistor
Rated voltage:	6V to 24V
Temperature response time:	3 minutes minimum after switching on operating current
Switching capacity:	1.2W to 3W noninductive
Break point:	5°C max. below make point
Contacting mode:	slow-acting
Type of contact:	Switch close as temperature rises

## Anschlussart / Type of connection:

<b>A</b> G = Flachstecker / Blade connector 6,3 x 0,8mm  W = Flachstecker / Blade connector 4,8 x 0,8mm  	<b>B</b> 2fach Flachsteckanschluss in T-Form angeordnet 2 blade connectors arranged in the form of letter T 6,3 x 0,8 mm  	
<b>C</b> Spezial-Steckanschluss (Kostal) Special push-on connector (Kostal)  	<b>D</b> Spezial-Steckanschluss (Bosch) Special push-on connector (Bosch)   	G = Geberanschluss Sensor terminal W = Warnkontaktanschluss Warning contact terminal

# Temperaturgeber mit Warnkontakt

## (über Masse)

# Temperature Sensors with Warning Contact

(common ground)

▼ siehe Datei: Temperaturregeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

# Temperaturgeber mit Warnkontakt

## (über Masse)

für verschiedene Medien

# Temperature Sensors with Warning Contact

(common ground)

for various fluids

- mit Dichtscheibe, unverlierbar / with sealing washer, captive

- ▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

# Temperaturgeber für Lufttemperatur für Temperaturmessanlage **VDO cockpit vision** **VDO cockpit international**

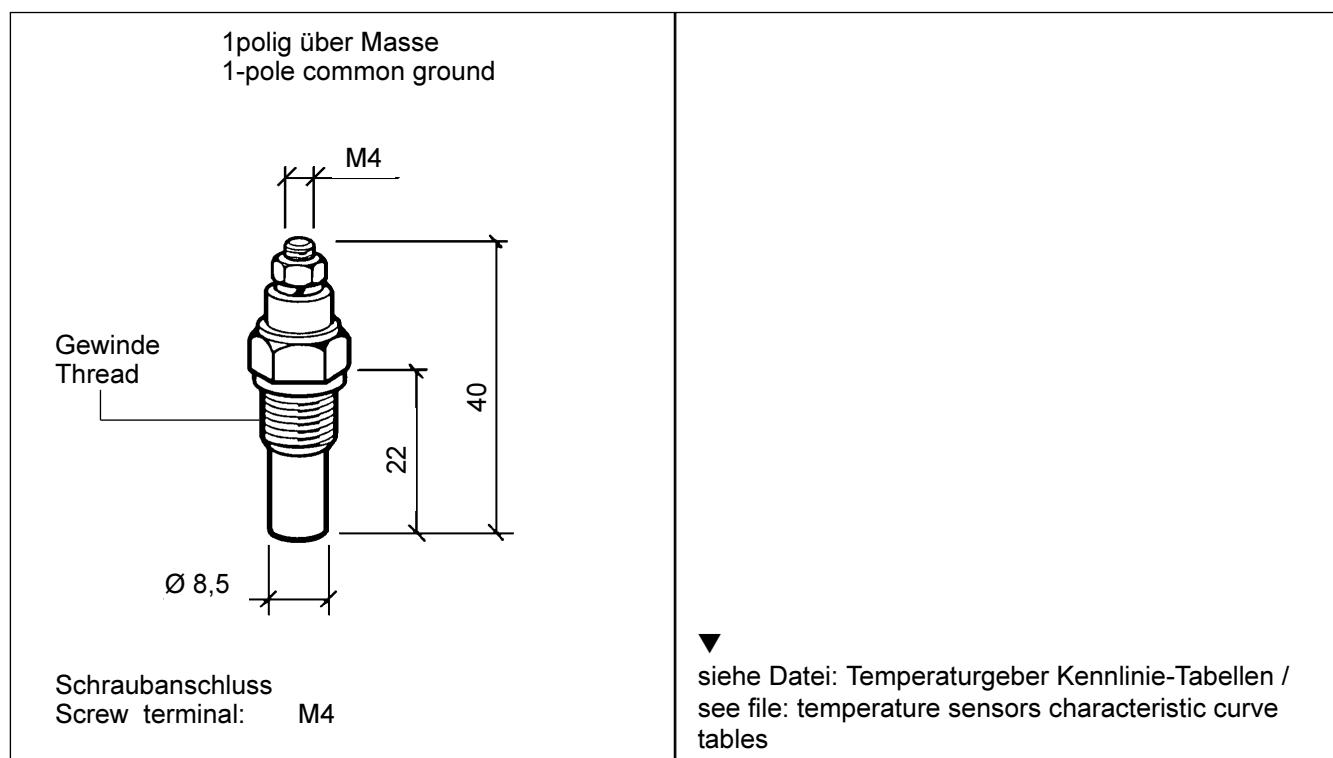
## Technische Daten:

Ausführung: Heißleiter  
 Nennspannung: 6V bis 24V  
 Betriebstemperatur:  
**– 25°C bis + 120°C max.**  
 Temperaturangleichzeit:  
 min. 3 Minuten nach eingeschaltetem Betriebsstrom

# Temperature Sensors for Air Temperature for temperature gauge kit **VDO cockpit vision** **VDO cockpit international**

## Technical Data:

Version: Thermistor  
 Rated voltage: 6V to 24V  
 Operating temperature:  
**– 25°C to + 120°C max.**  
 Temperature response time:  
 3 minutes minimum after switching on operating current



Gewinde Thread	KT CT ▼	Betriebswert Operational Value + °C      Ω	Bestell-Nr. Order No.
M10 x 1	13	0 = 1893 ± 102	<b>323-801-008-002D</b>

# Temperaturgeber für Lufttemperatur

für Temperaturmessanlage

## VDO LCD cockpit

## Technische Daten:

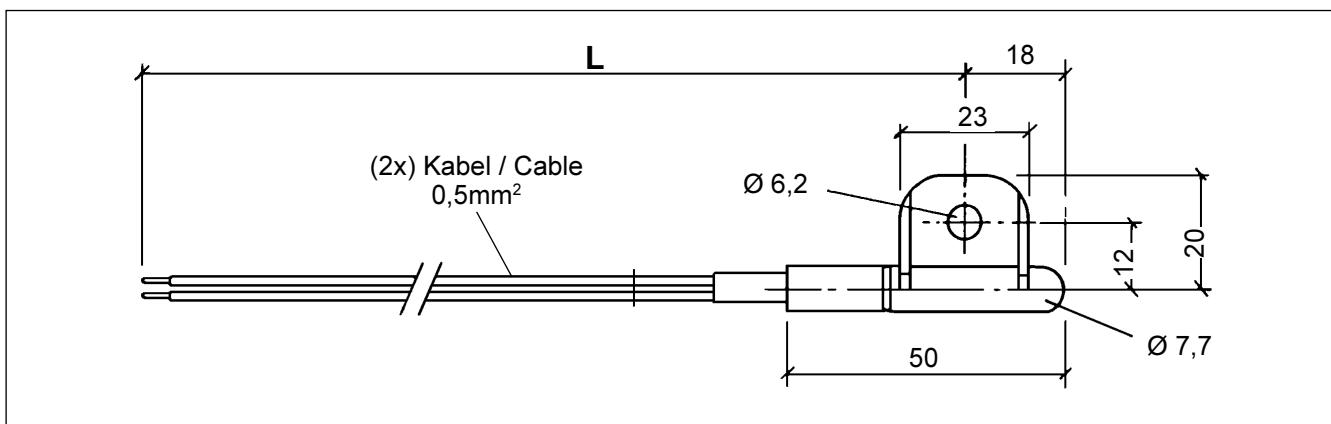
Ausführung: Heißleiter, massefrei  
spannungsunabhängig  
Betriebstemperatur:  
- 40°C bis + 85°C max.  
Temperaturangleichzeit:  
min. 3 Minuten nach eingeschaltetem Betriebsstrom  
Betriebswert: 0°C = 4082 Ω ± 26 Ω

# Temperature Sensors for Air Temperature

for temperature gauge kit  
**VDO LCD cockpit**

## Technical Data:

Version: Thermistor, insulated return  
 Independent voltage  
 Operating temperature:  
     – 40°C to + 85°C max.  
 Temperature response time:  
     3 minutes minimum after  
     switching on operating current  
 Operational value: 0°C = 4082 Ω ± 26 Ω



▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

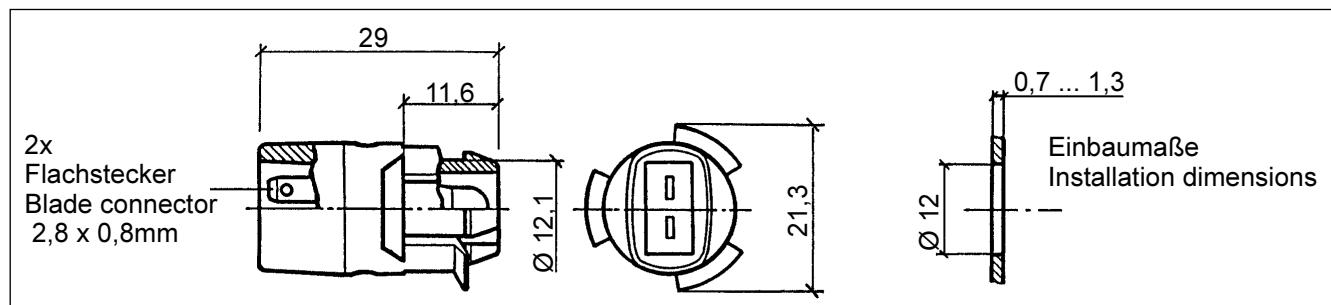
# Temperaturgeber für Lufttemperatur

Klippsausführung

## Technische Daten:

Ausführung:	Heißleiter, massefrei
spannungsunabhängig	
Betriebstemperatur:	<b>– 30°C bis + 85°C</b>
Temperaturangleichzeit:	min. 3 Minuten nach eingeschaltetem Betriebsstrom
Betriebswert:	$0^\circ\text{C} = 4082 \Omega \pm 26 \Omega$
Kennlinie-Tabelle:	16 ▼

▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables



**Bestell-Nr. / Order No. 323-809-010-001A**

## mit Fühlerspitze

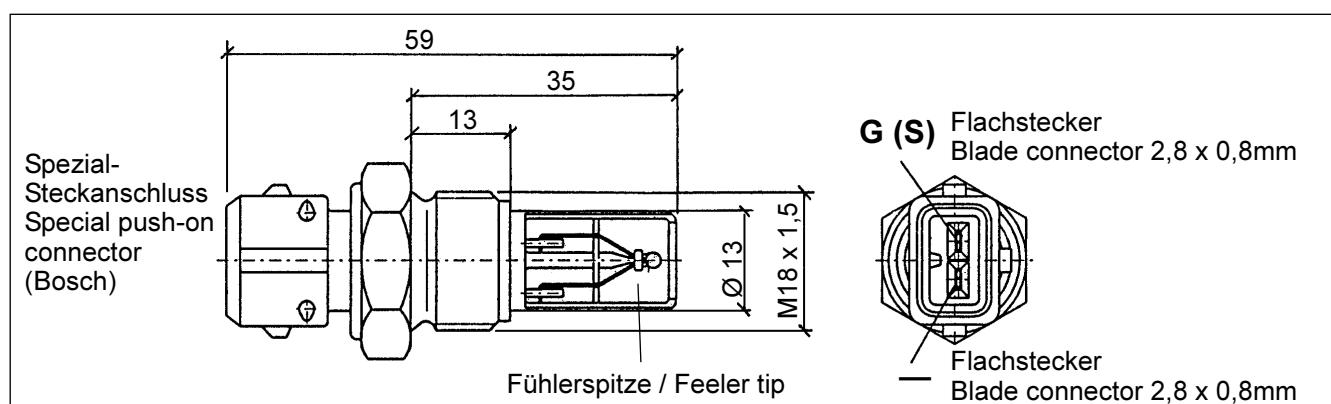
## Technische Daten:

Ausführung:	Heißleiter, massefrei
spannungsunabhängig	
Betriebstemperatur:	<b>– 40°C bis + 150°C</b> an der Fühlerspitze
Temperaturangleichzeit:	min. 3 Minuten nach eingeschaltetem Betriebsstrom
Betriebswert:	$0^\circ\text{C} = 16233,0 \Omega \pm 894,7 \Omega$
Kennlinie-Tabelle:	17 ▼

## With Feeler Tip

## Technical Data:

Version:	Thermistor, insulated return
Independent voltage	
Operating temperature:	<b>– 40°C to + 150°C</b>
on the feeler tip	
Temperature response time:	3 minutes minimum after switching on operating current
Operational value:	$0^\circ\text{C} = 16233,0 \Omega \pm 894,7 \Omega$
Characteristic curve table:	17 ▼



**Bestell-Nr. / Order No. 323-809-019-003A**

# Temperaturgeber Ölstabgeber (massefrei)

## Dipstick-Type Oil Temperature Sensors (insulated return)

### Technische Daten:

Nennspannung: 6V bis 24V

Betriebstemperatur: + 150°C max.

Betriebswerte: + 60°C = 237,5 Ω ± 20,2 Ω  
+ 90°C = 89,0 Ω ± 5,8 Ω  
+ 120°C = 38,4 Ω ± 1,9 Ω

2fach Flachsteckanschluss:

6,3 x 0,8mm

A = Anschlag: für Ölstabführungsbohrungen  
Ø 6mm bis Ø 15mm  
(verstellbar nach Fahrzeugtyp)

### Technical Data:

Rated voltage: 6V to 24V

Operating temperature:

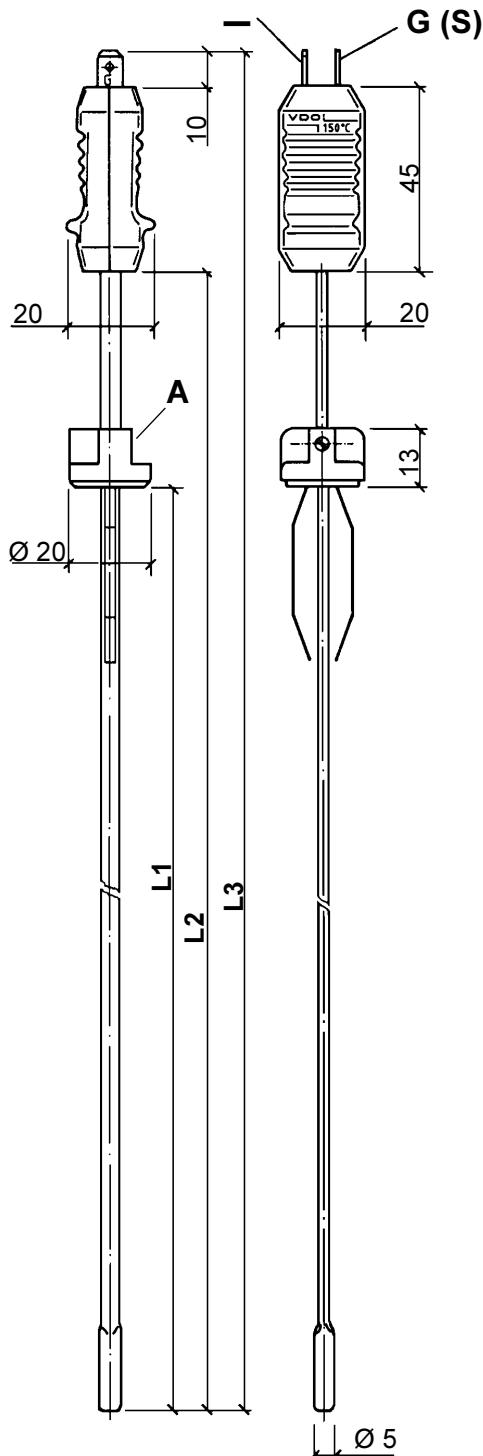
+ 150°C max.

Operational values: + 60°C = 237,5 Ω ± 20,2 Ω  
+ 90°C = 89,0 Ω ± 5,8 Ω  
+ 120°C = 38,4 Ω ± 1,9 Ω

2 blade connectors:

6,3 x 0,8mm

A = Stop: for dipstick sockets  
dia. 6mm to dia. 15mm  
(adjustable to allow for length  
varying with the vehicle)



Einstellänge Adjustment Length <b>L1</b>	Abmaß / Dimension <b>L2</b> <b>L3</b>		Bestell-Nr. Order No.
→ 333mm	350mm	435mm	<b>X10-323-003-001</b>
→ 543mm	560mm	615mm	<b>X10-323-003-002</b>

# Temperaturgeber (Spezialausführungen)

## Technische Daten:

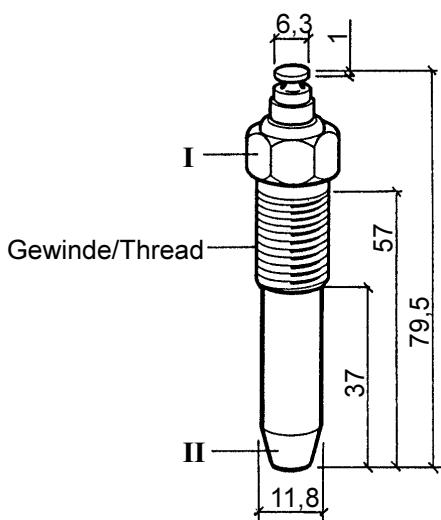
Ausführung: Heißleiter, 1polig über Masse  
 Nennspannung: 6V bis 24V  
 Temperaturangleichzeit:  
     min. 3 Minuten nach eingeschaltetem Betriebsstrom  
 Betriebswert:  
     Betrieb mit Anzeigegerät:  
          $210^{\circ}\text{C} = 18,9 \Omega \pm 1,3 \Omega$   
     Betrieb mit Schaltelektronik:  
          $210^{\circ}\text{C} = 20,05 \Omega \pm 0,80 \Omega$

# Temperature Sensors (Special Versions)

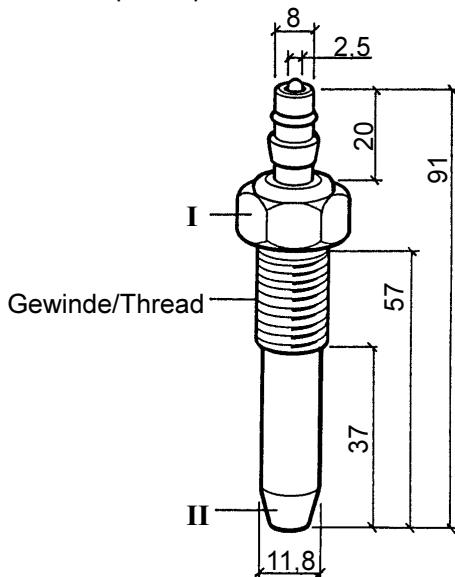
## Technical Data:

Version: Thermistor, 1-pole common ground  
 Rated voltage: 6V to 24V  
 Temperature response time:  
     3 minutes minimum after switching on operating current  
 Operating value:  
     Operation with indicating instrument:  
          $210^{\circ}\text{C} = 18.9 \Omega \pm 1.3 \Omega$   
     Operation with control electronics:  
          $210^{\circ}\text{C} = 20.05 \Omega \pm 0.80 \Omega$

**A** für Flachsteckhülse 6,3 x 1mm  
for spade connector 6,3 x 1mm



**B** Spezial-Steckanschluss  
Special push-on connector



Betriebstemperatur / Operating temperature		Gewinde Thread	KT CT	Art Type	Bestell-Nr. Order No.
Messstelle I Measuring point I	Messstelle II Measuring point II		▼		
-40°C ... +150°C	-40°C ... +250°C	M14 x 1,5	14	A	323-801-028-001C
-45°C ... +180°C	-45°C ... +250°C	M14 x 1,5	14	B	323-801-028-002C

▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

# Temperaturgeber (Spezialausführungen)

## für Bimetall-Anzeigegeräte

### Technische Daten:

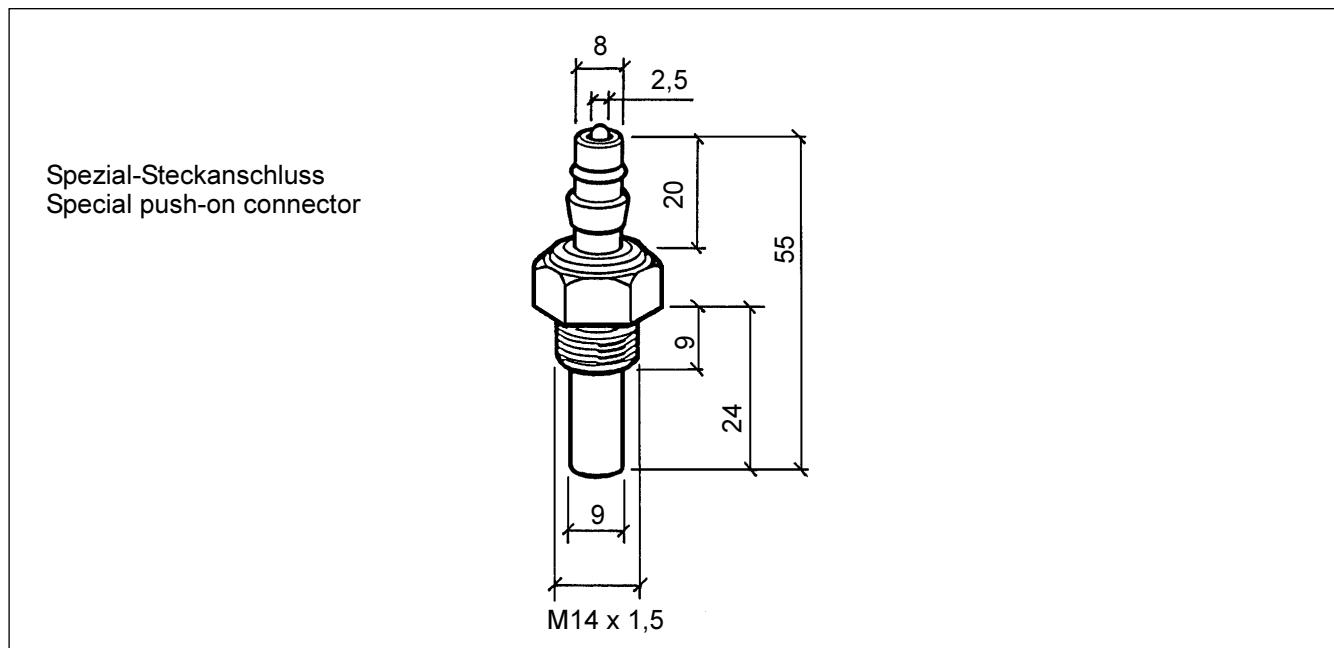
Ausführung: Heißleiter, 1polig über Masse  
 Nennspannung: 6V bis 24V  
 Betriebstemperatur: -45°C bis + 150°C  
 Temperaturangleichzeit:  
     min. 3 Minuten nach eingeschaltetem Betriebsstrom  
 Betriebswert:  
     Betrieb mit Anzeigegerät:  
         90°C = 86,7 Ω ± 11,0 Ω  
     Betrieb mit Schaltelelektronik:  
         90°C = 102,0 Ω ± 6,3 Ω  
 Kennlinie-Tabelle: 5 ▼

# Temperature Sensors (Special Versions)

## for bimetal indicating instruments

### Technical Data:

Version: Thermistor, 1-pole common ground  
 Rated voltage: 6V to 24V  
 Operating temperature: -45°C bis + 150°C  
 Temperature response time:  
     3 minutes minimum after switching on operating current  
 Operating value:  
     Operation with indicating instrument:  
         90°C = 86,7 Ω ± 11,0 Ω  
     Operation with control electronics:  
         90°C = 102,0 Ω ± 6,3 Ω  
 Characteristic curve table: 5 ▼



▼ siehe Datei: Temperaturgeber Kennlinie-Tabellen / see file: temperature sensors characteristic curve tables

**Bestell-Nr. / Order No. 323-804-004-010C**

# Temperaturgeber Kennlinie-Tabellen

Temperaturgeber: Heißleiter  
Temperature sensor: thermistor

# Temperature Sensors Characteristic Curve Tables

	Kennlinie-Tabelle Characteristic curve table	Seite Page
92-027-004	1	2
92-027-006	2	3
92-027-016	3	4
92-027-081	4	5
92-027-022	5	6
92-027-064	6	7
92-027-017	7	8
92-027-008	8	9
92-027-119	9	10
92-027-079	10	11
92-027-122	11	12
92-027-005	12	13, 14
92-027-007	13	15
92-027-063	14	16, 17
92-027-126	15	18
92-027-029-3901	16	19
92-027-106	17	20
92-027-121	18	21
92-027-010	19	22
92-027-011	20	23

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 1

### Heißleiter / Thermistor 92-027-004

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (Ohm)	± Tol (%)
-40.0	17162.35	16.93	2906.00
-35.0	12439.50	16.32	2029.83
-30.0	9134.53	15.72	1435.77
-25.0	6764.48	15.13	1023.58
-20.0	5067.60	14.56	737.59
-15.0	3833.89	14.14	542.02
-10.0	2929.90	13.75	402.82
-5.0	2249.44	13.37	300.80
.0	1743.15	13.00	226.69
5.0	1364.07	12.65	172.56
10.0	1075.63	12.34	132.75
15.0	850.09	12.18	103.51
20.0	676.95	12.02	81.36
25.0	543.54	11.74	63.83
30.0	439.29	11.50	50.52
35.0	356.64	11.38	40.59
40.0	291.46	11.25	32.79
45.0	239.56	11.11	26.62
50.0	197.29	11.20	22.10
55.0	161.46	10.86	17.54
60.0	134.03	10.04	13.46
65.0	113.96	9.86	11.23
70.0	97.05	9.87	9.58
75.0	82.36	9.49	7.82
80.0	70.12	9.21	6.46
85.0	59.73	8.91	5.32
90.0	51.21	8.48	4.34
95.0	44.32	8.07	3.58
100.0	38.47	7.74	2.98
105.0	33.40	8.18	2.73
110.0	29.12	8.59	2.50
115.0	25.53	9.22	2.35
120.0	22.44	9.89	2.22
125.0	19.75	10.53	2.08
130.0	17.44	11.16	1.95
135.0	15.46	11.82	1.83
140.0	13.75	12.49	1.72
145.0	12.26	13.17	1.61
150.0	10.96	13.86	1.52

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 2

### Heißleiter / Thermistor 92-027-006

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	36563.56	14.26	5212.38
-35.0	26284.63	13.87	3645.02
-30.0	19149.20	13.48	2581.56
-25.0	14127.68	13.11	1851.71
-20.0	10540.68	12.77	1346.27
-15.0	7721.35	12.60	972.85
-10.0	5720.88	12.45	712.14
-5.0	4284.03	12.32	527.68
0	3240.18	12.21	395.75
5.0	2473.60	12.13	300.01
10.0	1905.87	12.05	229.70
15.0	1486.65	12.10	179.88
20.0	1168.64	12.17	142.19
25.0	926.71	12.25	113.52
30.0	739.98	12.34	91.32
35.0	594.90	12.43	73.97
40.0	481.53	12.51	60.26
45.0	392.57	12.36	48.51
50.0	322.17	12.17	39.20
55.0	266.19	11.97	31.87
60.0	221.17	11.77	26.02
65.0	184.72	11.60	21.42
70.0	155.29	11.36	17.64
75.0	131.38	11.00	14.45
80.0	112.08	10.48	11.75
85.0	96.40	10.00	9.64
90.0	82.96	9.68	8.03
95.0	71.44	9.32	6.66
100.0	61.92	8.87	5.49
105.0	54.01	8.45	4.56
110.0	47.24	8.07	3.81
115.0	41.42	7.73	3.20
120.0	36.51	7.32	2.67
125.0	32.38	7.36	2.38
130.0	28.81	7.41	2.13
135.0	25.70	7.76	1.99
140.0	23.00	8.09	1.86
145.0	20.66	8.36	1.73
150.0	18.59	8.66	1.61
155.0	16.74	8.85	1.48
160.0	15.11	9.04	1.37
165.0	13.66	9.24	1.26
170.0	12.38	9.46	1.17
175.0	11.25	9.67	1.09
180.0	10.24	9.90	1.01

Prüfmedium  
Test fluid:  
Marlotherm S

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 3

### Heißleiter / Thermistor 92-027-016

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	6494.33	13.29	862.90
-25.0	4648.88	13.08	607.86
-20.0	3369.82	12.89	434.40
-15.0	2471.21	12.74	314.78
-10.0	1831.83	12.61	230.98
-5.0	1371.63	12.52	171.69
.0	1036.68	12.47	129.24
5.0	790.38	12.45	98.41
10.0	607.53	12.47	75.74
15.0	470.63	12.52	58.92
20.0	367.31	12.59	46.24
25.0	289.19	12.68	36.67
30.0	229.32	12.75	29.24
35.0	183.20	12.82	23.48
40.0	147.46	12.84	18.94
45.0	119.63	12.75	15.25
50.0	97.83	12.57	12.29
55.0	80.64	13.80	11.13
60.0	67.01	14.92	10.00
65.0	56.10	14.35	8.05
70.0	47.32	13.71	6.49
75.0	40.18	13.03	5.23
80.0	34.42	12.23	4.21
85.0	29.68	11.53	3.42
90.0	25.59	10.98	2.81
95.0	22.13	10.67	2.36
100.0	19.25	10.33	1.99
105.0	16.83	10.28	1.73
110.0	14.76	10.24	1.51
115.0	12.99	10.22	1.33
120.0	11.46	10.21	1.17
125.0	10.15	10.77	1.09
130.0	9.01	11.34	1.02
135.0	8.02	11.93	.96
140.0	7.15	12.54	.90
145.0	6.40	13.16	.84
150.0	5.73	13.79	.79

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 4

### Heißleiter / Thermistor 92-027-081

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	15980.29	19.78	3161.44
-25.0	11841.55	18.98	2247.59
-20.0	8875.65	18.20	1615.04
-15.0	6679.28	17.42	1163.54
-10.0	5078.36	16.67	846.35
-5.0	3879.50	15.92	617.49
.0	2991.26	15.19	454.40
5.0	2323.47	14.43	335.33
10.0	1819.64	13.69	249.17
15.0	1434.17	13.02	186.67
20.0	1138.30	12.37	140.81
25.0	908.81	11.07	100.65
30.0	731.94	10.77	78.82
35.0	591.25	10.74	63.53
40.0	480.71	10.71	51.50
45.0	393.35	10.61	41.74
50.0	323.63	10.53	34.08
55.0	267.45	10.43	27.91
60.0	222.54	10.27	22.86
65.0	186.47	10.03	18.70
70.0	157.09	9.77	15.35
75.0	133.02	9.44	12.56
80.0	113.22	9.09	10.30
85.0	96.84	8.73	8.46
90.0	83.25	8.34	6.95
95.0	71.93	7.95	5.72
100.0	62.43	7.54	4.71
105.0	54.43	7.13	3.88
110.0	47.62	6.73	3.20
115.0	41.79	6.30	2.63
120.0	36.81	5.87	2.16
125.0	32.54	5.45	1.77
130.0	28.86	5.04	1.46
135.0	25.66	5.52	1.42
140.0	22.87	6.03	1.38
145.0	20.40	6.51	1.33
150.0	18.25	6.99	1.28
155.0	16.38	7.49	1.23
160.0	14.73	8.00	1.18
165.0	13.28	8.57	1.14
170.0	11.99	9.14	1.10
175.0	10.85	9.73	1.06
180.0	9.84	10.32	1.02

Prüfmedium  
Test fluid:  
Marlotherm S

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 5

### Heißleiter / Thermistor 92-027-022

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	19927.45	17.19	3426.11
-35.0	14754.35	16.75	2471.48
-30.0	11056.91	16.32	1804.21
-25.0	8379.81	15.89	1331.85
-20.0	6417.93	15.49	994.32
-15.0	4950.53	14.88	736.71
-10.0	3854.56	14.29	550.63
-5.0	3027.56	13.70	414.92
.0	2396.66	13.17	315.60
5.0	1903.88	12.95	246.56
10.0	1523.61	12.76	194.35
15.0	1227.76	12.58	154.49
20.0	994.33	12.51	124.43
25.0	806.79	12.69	102.37
30.0	658.54	12.88	84.84
35.0	540.63	13.09	70.77
40.0	445.93	13.35	59.53
45.0	369.38	13.51	49.89
50.0	307.64	13.65	42.01
55.0	257.61	13.78	35.50
60.0	217.02	13.84	30.04
65.0	183.89	13.71	25.21
70.0	156.68	13.52	21.19
75.0	134.23	13.27	17.81
80.0	115.41	13.05	15.06
85.0	99.74	12.93	12.89
90.0	86.67	12.73	11.04
95.0	75.70	12.48	9.45
100.0	66.61	12.05	8.03
105.0	58.88	12.08	7.11
110.0	52.27	12.07	6.31
115.0	46.58	12.04	5.61
120.0	41.59	12.07	5.02
125.0	37.26	12.09	4.51
130.0	33.49	12.11	4.05
135.0	30.20	12.12	3.66
140.0	27.29	12.14	3.31
145.0	24.73	12.03	2.97
150.0	22.46	11.91	2.68

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 6

### Heißleiter / Thermistor 92-027-064

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	10407.46	11.68	1216.08
-25.0	8020.98	11.29	905.46
-20.0	6229.89	10.96	682.75
-15.0	4841.13	10.66	515.93
-10.0	3790.39	10.39	393.98
-5.0	2977.50	10.16	302.51
.0	2356.24	9.96	234.68
5.0	1877.62	9.78	183.54
10.0	1506.02	9.65	145.34
15.0	1215.79	9.54	116.01
20.0	987.12	9.50	93.76
25.0	806.99	9.53	76.88
30.0	662.36	9.59	63.50
35.0	545.98	9.69	52.91
40.0	452.25	9.79	44.29
45.0	376.46	9.92	37.34
50.0	314.24	10.15	31.89
55.0	263.14	10.26	27.00
60.0	222.01	10.27	22.79
65.0	188.57	10.34	19.51
70.0	160.68	10.46	16.80
75.0	137.51	10.47	14.40
80.0	118.19	10.44	12.34
85.0	102.06	10.34	10.56
90.0	88.56	10.17	9.01
95.0	77.20	9.95	7.69
100.0	67.71	9.63	6.52
105.0	59.63	9.35	5.57
110.0	52.71	9.04	4.76
115.0	46.77	8.69	4.06
120.0	41.64	8.27	3.44
125.0	37.20	8.28	3.08
130.0	33.39	8.18	2.73
135.0	30.05	8.11	2.44
140.0	27.08	8.13	2.20
145.0	24.44	8.08	1.98
150.0	22.14	7.96	1.76

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 7

### Heißleiter / Thermistor 92-027-017

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-20.0	25042.64	12.68	3176.13
-15.0	18749.57	11.54	2164.16
-10.0	14095.92	10.38	1463.46
-5.0	10710.62	9.23	988.28
.0	8220.03	8.08	664.08
5.0	6340.08	7.91	501.49
10.0	4934.67	7.74	381.96
15.0	3874.20	7.58	293.54
20.0	3066.43	7.42	227.53
25.0	2437.07	7.31	178.13
30.0	1951.37	7.20	140.42
35.0	1573.61	7.08	111.47
40.0	1277.55	6.97	89.03
45.0	1043.72	7.13	74.44
50.0	857.97	7.29	62.58
55.0	709.47	7.45	52.87
60.0	590.02	7.63	45.01
65.0	490.70	7.23	35.48
70.0	410.30	6.82	27.99
75.0	344.87	6.41	22.10
80.0	291.32	6.00	17.47
85.0	246.75	6.34	15.65
90.0	209.98	6.66	13.99
95.0	180.02	6.55	11.80
100.0	155.00	6.45	10.00
105.0	133.71	6.74	9.01
110.0	115.80	7.02	8.13
115.0	100.67	7.30	7.35
120.0	87.84	7.57	6.65
125.0	76.91	7.84	6.03
130.0	67.56	8.11	5.48
135.0	59.54	8.37	4.98
140.0	52.63	8.64	4.55
145.0	46.66	8.90	4.15
150.0	41.49	9.17	3.80

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 8

### Heißleiter / Thermistor 92-027-008

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	19125.46	13.50	2582.77
-25.0	14104.94	13.14	1853.43
-20.0	10516.08	12.81	1347.54
-15.0	7698.13	12.66	974.42
-10.0	5698.66	12.52	713.32
-5.0	4262.78	12.41	528.90
.0	3219.76	12.33	396.87
5.0	2454.24	12.27	301.20
10.0	1887.81	12.22	230.75
15.0	1469.55	12.31	180.87
20.0	1152.48	12.43	143.20
25.0	913.48	12.79	116.85
30.0	728.86	13.16	95.92
35.0	585.36	13.53	79.18
40.0	473.27	13.86	65.60
45.0	385.37	13.92	53.64
50.0	315.70	13.95	44.05
55.0	260.21	13.97	36.35
60.0	216.04	13.88	29.99
65.0	180.68	13.76	24.87
70.0	152.03	13.60	20.68
75.0	128.71	13.30	17.12
80.0	109.76	12.88	14.14
85.0	94.22	12.55	11.82
90.0	81.22	12.26	9.96
95.0	70.32	11.81	8.31
100.0	61.19	11.33	6.93
105.0	53.50	10.93	5.85
110.0	46.94	10.56	4.96
115.0	41.33	10.15	4.20
120.0	36.54	9.69	3.54
125.0	32.42	9.89	3.21
130.0	28.87	10.02	2.89
135.0	25.81	10.41	2.69
140.0	23.13	10.83	2.51
145.0	20.77	11.14	2.31
150.0	18.70	11.39	2.13
155.0	16.90	11.62	1.96
160.0	15.31	11.86	1.81
165.0	13.89	12.10	1.68
170.0	12.63	12.35	1.56
175.0	11.51	12.61	1.45
180.0	10.50	12.88	1.35

Prüfmedium  
Test fluid:  
Marlotherm S

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 9

### Heißleiter / Thermistor 92-027-119

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	17682.54	10.98	1941.37
-35.0	12886.35	10.50	1353.05
-30.0	9511.94	10.03	953.67
-25.0	7048.53	9.51	670.17
-20.0	5283.37	9.00	475.72
-15.0	3976.49	8.60	341.94
-10.0	3024.12	8.21	248.19
-5.0	2311.12	7.86	181.69
.0	1783.12	7.53	134.20
5.0	1386.46	7.19	99.70
10.0	1087.36	6.86	74.61
15.0	858.73	6.52	56.00
20.0	683.59	6.18	42.23
25.0	548.72	5.96	32.68
30.0	443.66	5.73	25.41
35.0	360.47	5.48	19.76
40.0	294.95	5.22	15.39
45.0	243.01	4.95	12.04
50.0	201.46	4.69	9.45
55.0	167.63	4.40	7.37
60.0	140.31	4.09	5.74
65.0	118.22	3.83	4.53
70.0	100.12	3.58	3.58
75.0	85.05	3.31	2.82
80.0	72.58	3.05	2.21
85.0	62.22	2.78	1.73
90.0	53.56	2.52	1.35
95.0	46.23	2.26	1.04
100.0	40.06	1.99	.80
105.0	34.85	2.23	.78
110.0	30.43	2.49	.76
115.0	26.63	2.68	.71
120.0	23.38	2.88	.67
125.0	20.58	3.08	.63
130.0	18.17	3.28	.60

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 10

### Heißleiter / Thermistor 92-027-079

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-25.0	296776.75	45.07	133772.00
-20.0	244764.88	40.86	99999.21
-15.0	199555.48	36.74	73325.48
-10.0	161040.78	32.87	52928.31
-5.0	128865.90	29.32	37778.61
.0	102463.83	26.17	26812.55
5.0	81141.90	23.41	18997.22
10.0	64133.61	21.04	13496.08
15.0	50695.18	19.00	9634.20
20.0	40140.31	17.24	6921.48
25.0	31913.54	15.79	5040.00
30.0	25470.75	14.51	3696.58
35.0	20420.35	13.37	2729.88
40.0	16452.20	12.32	2027.02
45.0	13324.39	11.35	1511.76
50.0	10848.26	10.43	1131.70
55.0	8879.55	9.56	849.01
60.0	7306.76	8.72	637.35
65.0	6044.02	7.92	478.57
70.0	5025.16	7.13	358.44
75.0	4194.78	6.36	266.61
80.0	3518.73	5.59	196.75
85.0	2963.76	4.90	145.37
90.0	2507.67	4.23	105.98
95.0	2131.15	3.55	75.68
100.0	1819.13	2.89	52.63
105.0	1555.71	3.53	54.95
110.0	1335.78	4.17	55.75
115.0	1151.39	4.82	55.45
120.0	996.30	5.47	54.50
125.0	863.76	6.09	52.58
130.0	751.51	6.71	50.44
135.0	655.66	7.33	48.07
140.0	573.94	7.96	45.66
145.0	503.72	8.58	43.20
150.0	443.47	9.20	40.80
155.0	391.39	9.82	38.43
160.0	346.44	10.44	36.17
165.0	307.33	11.06	33.99
170.0	273.37	11.68	31.92
175.0	243.79	12.29	29.97
180.0	217.95	12.91	28.14

Prüfmedium  
Test fluid:  
Marlotherm S

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 11

### Heißleiter / Thermistor 92-027-122

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	1785803.9	13.39	239048.10
-35.0	1275122.2	12.81	163306.90
-30.0	918286.97	12.26	112614.80
-25.0	665948.91	11.72	78043.37
-20.0	488148.29	11.21	54726.82
-15.0	359767.25	10.72	38582.75
-10.0	267864.56	10.23	27411.62
-5.0	200375.83	9.79	19618.48
.0	151350.70	9.37	14175.68
5.0	115392.59	8.94	10317.02
10.0	88744.99	8.53	7573.49
15.0	68922.74	8.14	5611.03
20.0	53933.66	7.78	4197.33
25.0	42643.00	7.52	3205.67
30.0	33955.49	7.28	2471.82
35.0	27115.10	7.04	1908.96
40.0	21792.92	6.79	1479.29
45.0	17657.32	6.56	1157.87
50.0	14388.38	6.33	910.24
55.0	11770.42	6.10	717.44
60.0	9682.07	5.88	569.37
65.0	8002.82	5.67	453.80
70.0	6645.76	5.44	361.86
75.0	5547.35	5.24	290.90
80.0	4649.77	5.00	232.29
85.0	3922.24	4.82	189.15
90.0	3323.40	4.61	153.31
95.0	2823.34	4.42	124.85
100.0	2407.19	4.19	100.84
105.0	2062.38	4.45	91.88
110.0	1773.65	4.69	83.27
115.0	1529.06	4.96	75.79
120.0	1322.37	5.18	68.52
125.0	1147.54	5.44	62.42
130.0	998.82	5.66	56.56

Prüfmedium / Test fluid: Glycol

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 12

(Teil / Section 1)

### Heißleiter / Thermistor 92-027-005

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	46051.47	21.56	9929.25
-25.0	33802.79	20.08	6787.31
-20.0	25007.98	18.60	4651.45
-15.0	18714.60	17.12	3204.63
-10.0	14063.03	16.49	2318.87
-5.0	10679.03	15.86	1693.77
.0	8189.16	15.25	1248.65
5.0	6310.21	14.80	934.00
10.0	4906.17	14.37	704.87
15.0	3846.86	13.94	536.35
20.0	3039.65	13.54	411.67
25.0	2414.20	13.25	319.78
30.0	1931.11	12.96	250.21
35.0	1555.23	12.68	197.21
40.0	1260.48	12.42	156.58
45.0	1026.45	12.22	125.43
50.0	841.37	11.97	100.73
55.0	698.00	11.79	82.32
60.0	580.98	11.76	68.32
65.0	478.97	11.60	55.55
70.0	397.50	11.36	45.15
75.0	333.56	11.20	37.35
80.0	281.83	10.90	30.73
85.0	240.92	10.67	25.70
90.0	205.99	10.70	22.04
95.0	174.44	10.53	18.36
100.0	148.81	10.19	15.16
105.0	128.32	9.93	12.74
110.0	111.37	9.51	10.60
115.0	97.57	9.19	8.97
120.0	85.47	9.13	7.80
125.0	74.31	8.85	6.57
130.0	64.99	8.42	5.47
135.0	57.38	8.06	4.62
140.0	50.84	7.68	3.91
145.0	45.20	7.42	3.35
150.0	40.29	7.17	2.89
155.0	35.97	6.81	2.45
160.0	32.19	6.51	2.10
165.0	28.76	6.96	2.00

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# Temperaturgeber / Temperature Sensors

Kennlinie-Tabelle / Characteristic Curve Table 12

(Teil / Section 2)

## Heißleiter / Thermistor 92-027-005

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
170.0	25.76	7.29	1.88
175.0	23.34	7.44	1.74
180.0	21.20	7.65	1.62
185.0	19.20	7.91	1.52
190.0	17.43	8.22	1.43
195.0	15.78	8.54	1.35
200.0	14.29	8.79	1.26
205.0	13.11	8.98	1.18
210.0	12.05	9.21	1.11
215.0	11.04	9.51	1.05
220.0	10.12	9.81	.99
225.0	9.30	10.07	.94
230.0	8.55	10.33	.88
235.0	7.88	10.59	.83
240.0	7.27	10.86	.79
245.0	6.72	11.17	.75
250.0	6.21	11.50	.71

Prüfmedium / Test fluid: Silikonöl / Silicon oil

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 13

### Heißleiter / Thermistor 92-027-007

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	10839.97	10.22	1107.44
-25.0	7894.30	9.43	744.46
-20.0	5820.86	8.64	503.02
-15.0	4329.44	7.84	339.58
-10.0	3256.85	7.04	229.25
-5.0	2470.11	6.22	153.64
.0	1892.98	5.39	102.01
5.0	1464.43	6.01	88.03
10.0	1143.48	6.62	75.74
15.0	899.41	7.22	64.96
20.0	713.37	7.82	55.76
25.0	570.94	8.45	48.26
30.0	460.31	9.09	41.84
35.0	373.18	9.72	36.29
40.0	304.56	10.36	31.55
45.0	249.55	11.00	27.44
50.0	205.71	11.63	23.92
55.0	171.09	12.27	20.99
60.0	143.08	12.91	18.47
65.0	120.18	13.55	16.29
70.0	101.46	14.20	14.41
75.0	85.95	14.84	12.76
80.0	73.15	15.49	11.33
85.0	62.54	16.13	10.09
90.0	53.69	16.77	9.01
95.0	46.29	17.42	8.06
100.0	40.06	18.06	7.24
105.0	34.81	18.70	6.51
110.0	30.35	19.35	5.87
115.0	26.55	19.99	5.31
120.0	23.31	20.64	4.81
125.0	20.53	21.28	4.37
130.0	18.14	21.92	3.98
135.0	16.08	22.56	3.63
140.0	14.29	23.20	3.31
145.0	12.73	23.84	3.04
150.0	11.38	24.48	2.79

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

Kennlinie-Tabelle / Characteristic Curve Table 14

(Teil / Section 1)

## Heißleiter / Thermistor 92-027-063

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	58109.87	15.65	9092.63
-35.0	42262.95	15.42	6515.34
-30.0	31137.77	15.20	4732.21
-25.0	23219.79	14.99	3481.09
-20.0	17512.24	14.80	2592.05
-15.0	13347.82	14.63	1952.27
-10.0	10275.77	14.47	1487.11
-5.0	7984.93	14.34	1145.04
.0	6259.39	14.23	890.83
5.0	4947.11	14.15	699.97
10.0	3940.41	14.10	555.45
15.0	3161.47	14.07	444.95
20.0	2553.96	14.08	359.70
25.0	2079.11	14.19	295.02
30.0	1702.75	14.33	244.01
35.0	1402.59	14.50	203.31
40.0	1161.68	14.69	170.60
45.0	967.22	14.90	144.08
50.0	808.98	15.16	122.68
55.0	679.30	15.41	104.68
60.0	572.84	15.70	89.95
65.0	485.03	15.94	77.31
70.0	412.37	16.21	66.83
75.0	352.10	16.40	57.73
80.0	301.84	16.60	50.10
85.0	259.92	16.68	43.34
90.0	224.71	16.75	37.64
95.0	195.18	16.69	32.57
100.0	170.18	16.61	28.27
105.0	149.07	16.38	24.42
110.0	131.05	16.15	21.17
115.0	115.72	15.78	18.26
120.0	102.55	15.39	15.78
125.0	91.25	14.91	13.60

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# Temperaturgeber / Temperature Sensors

Kennlinie-Tabelle / Characteristic Curve Table 14

(Teil / Section 2)

## Heißleiter / Thermistor 92-027-063

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
130.0	81.41	14.46	11.77
135.0	72.90	13.91	10.14
140.0	65.44	13.39	8.76
145.0	58.93	12.79	7.54
150.0	53.35	12.03	6.42
155.0	48.42	11.56	5.59
160.0	44.05	11.09	4.88
165.0	40.17	10.61	4.26
170.0	36.68	10.19	3.74
175.0	33.57	9.73	3.27
180.0	30.76	9.33	2.87
185.0	28.23	8.89	2.51
190.0	25.97	8.43	2.19
195.0	23.93	8.02	1.92
200.0	22.10	7.58	1.67
205.0	20.44	7.20	1.47
210.0	18.92	6.93	1.31
215.0	17.52	6.85	1.20
220.0	16.24	6.81	1.11
225.0	15.07	6.74	1.02
230.0	14.01	6.61	.93
235.0	13.06	7.11	.93
240.0	12.19	7.63	.93
245.0	11.39	8.15	.93
250.0	10.65	8.68	.92

Prüfmedium / Test fluid: Silikonöl / Silicon oil

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 15

### Heißleiter / Thermistor 92-027-126

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	49089.59	11.43	5609.48
-35.0	34454.74	10.97	3778.40
-30.0	24445.25	10.57	2583.24
-25.0	17524.57	10.21	1788.66
-20.0	12687.10	9.92	1258.67
-15.0	9271.93	9.69	898.58
-10.0	6837.60	9.51	650.26
-5.0	5086.33	9.40	478.28
.0	3815.65	9.31	355.12
5.0	2886.81	9.26	267.34
10.0	2202.95	9.22	203.11
15.0	1696.02	9.11	154.46
20.0	1317.86	8.95	117.94
25.0	1036.32	8.99	93.13
30.0	822.74	8.91	73.34
35.0	659.37	8.73	57.59
40.0	533.28	8.49	45.27
45.0	435.01	8.16	35.48
50.0	357.67	7.77	27.81
55.0	296.22	7.39	21.89
60.0	246.93	6.98	17.23
65.0	207.06	6.56	13.58
70.0	174.57	6.13	10.71
75.0	147.90	5.75	8.50
80.0	125.88	5.31	6.68
85.0	107.58	5.52	5.94
90.0	92.31	5.68	5.24
95.0	79.52	5.85	4.65
100.0	68.75	6.00	4.13
105.0	59.64	6.17	3.68
110.0	51.92	6.35	3.30
115.0	45.35	6.53	2.96
120.0	39.73	6.69	2.66
125.0	34.92	6.87	2.40
130.0	30.79	7.07	2.18
135.0	27.22	7.26	1.98
140.0	24.14	7.44	1.80

Prüfmedium / Test fluid: Glycol

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 16

### Heißleiter / Thermistor 92-027-029-3901

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	5848.26	.44	25.48
-35.0	5725.69	.50	28.68
-30.0	5574.12	.57	31.65
-25.0	5389.39	.63	34.06
-20.0	5174.01	.69	35.60
-15.0	4927.41	.71	35.08
-10.0	4658.61	.71	33.08
-5.0	4372.59	.69	30.08
.0	4082.00	.64	26.00
5.0	3794.36	.68	25.83
10.0	3520.31	.72	25.25
15.0	3262.42	.74	24.26
20.0	3029.33	.76	22.92
25.0	2823.37	.82	23.25
30.0	2643.73	.87	23.01
35.0	2486.95	.90	22.41
40.0	2353.45	.91	21.48
45.0	2239.89	.91	20.30
50.0	2144.43	.89	19.03
55.0	2063.97	.85	17.64
60.0	1996.72	.82	16.30
65.0	1940.11	.77	14.96
70.0	1892.86	.72	13.71
75.0	1853.26	.67	12.44
80.0	1820.12	.62	11.30
85.0	1792.21	.58	10.43

Prüfmedium / Test fluid: Silikonöl M5  
Silicon oil M5

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 17

### Heißleiter / Thermistor 92-027-106

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	168093.30	7.47	12560.47
-35.0	121029.12	7.14	8643.73
-30.0	88317.66	6.82	6021.00
-25.0	64989.19	6.60	4286.48
-20.0	48401.40	6.38	3087.91
-15.0	36313.93	6.11	2220.28
-10.0	27541.68	5.85	1610.30
-5.0	21040.55	5.68	1195.06
.0	16232.97	5.51	894.73
5.0	12608.31	5.29	666.74
10.0	9881.91	5.06	499.56
15.0	7796.08	4.81	374.99
20.0	6201.36	4.56	282.59
25.0	4965.97	4.45	220.76
30.0	4002.83	4.23	169.22
35.0	3244.88	3.95	128.24
40.0	2648.25	3.68	97.35
45.0	2172.41	3.45	74.87
50.0	1793.05	3.22	57.68
55.0	1486.82	3.29	48.91
60.0	1239.77	3.37	41.73
65.0	1037.84	3.59	37.30
70.0	873.28	3.82	33.39
75.0	738.12	3.96	29.22
80.0	626.83	4.09	25.66
85.0	534.39	4.18	22.33
90.0	457.57	4.27	19.53
95.0	393.20	4.41	17.33
100.0	339.26	4.55	15.43
105.0	293.70	4.59	13.48
110.0	255.21	4.64	11.83
115.0	222.47	4.88	10.86
120.0	194.59	5.13	9.98
125.0	170.71	5.22	8.92
130.0	150.24	5.32	7.99
135.0	132.59	5.47	7.25
140.0	117.36	5.62	6.59
145.0	104.15	5.86	6.11
150.0	92.68	6.11	5.66

Prüfmedium / Test fluid: Silikonöl M5 / M20  
Silicon oil M5 / M20

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 18

### Heißleiter / Thermistor 92-027-121

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	2598.34	41	10.68
-25.0	2573.55	51	13.12
-20.0	2541.52	63	16.04
-15.0	2501.37	78	19.46
-10.0	2451.97	95	23.33
-5.0	2392.29	1.15	27.59
.0	2321.57	1.38	32.11
5.0	2237.74	1.64	36.72
10.0	2142.11	1.92	41.12
15.0	2034.45	2.22	45.10
20.0	1916.98	2.52	48.32
25.0	1791.62	2.86	51.16
30.0	1660.49	3.19	52.94
35.0	1526.20	3.46	52.83
40.0	1392.31	3.70	51.56
45.0	1260.61	3.88	48.89
50.0	1134.37	4.01	45.45
55.0	1014.70	4.12	41.79
60.0	903.63	4.19	37.83
65.0	801.29	4.25	34.02
70.0	708.60	4.27	30.24
75.0	625.05	4.25	26.59
80.0	550.68	4.21	23.18
85.0	484.48	4.18	20.25
90.0	426.21	4.12	17.58
95.0	374.99	4.01	15.03
100.0	330.17	3.87	12.78
105.0	291.07	3.72	10.84
110.0	256.99	3.57	9.18
115.0	226.85	3.44	7.81
120.0	200.63	3.31	6.64
125.0	177.44	3.54	6.28
130.0	157.24	3.76	5.92
135.0	139.62	3.99	5.57
140.0	124.25	4.21	5.24
145.0	110.80	4.44	4.92
150.0	99.01	4.66	4.61

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 19

### Heißleiter / Thermistor 92-027-010

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-30.0	6494.33	13.29	862.90
-25.0	4648.88	13.08	607.86
-20.0	3369.82	12.89	434.40
-15.0	2471.21	12.74	314.78
-10.0	1831.83	12.61	230.98
-5.0	1371.63	12.52	171.69
.0	1036.68	12.47	129.24
5.0	790.38	12.45	98.41
10.0	607.53	12.47	75.74
15.0	470.63	12.52	58.92
20.0	367.31	12.59	46.24
25.0	289.19	12.68	36.67
30.0	229.32	12.75	29.24
35.0	183.20	12.82	23.48
40.0	147.46	12.84	18.94
45.0	119.63	12.75	15.25
50.0	97.83	12.57	12.29
55.0	80.64	13.80	11.13
60.0	67.01	14.92	10.00
65.0	56.10	14.35	8.05
70.0	47.32	13.71	6.49
75.0	40.18	13.03	5.23
80.0	34.42	12.23	4.21
85.0	29.68	11.53	3.42
90.0	25.59	10.98	2.81
95.0	22.13	10.67	2.36
100.0	19.25	10.33	1.99
105.0	16.83	10.28	1.73
110.0	14.76	10.24	1.51
115.0	12.99	10.22	1.33
120.0	11.46	10.21	1.17
125.0	10.15	10.77	1.09
130.0	9.01	11.34	1.02
135.0	8.02	11.93	.96
140.0	7.15	12.54	.90
145.0	6.40	13.16	.84
150.0	5.73	13.79	.79

Prüfmedium / Test fluid: Glycoshell

# Temperaturgeber / Temperature Sensors

## Kennlinie-Tabelle / Characteristic Curve Table 20

### Heißleiter / Thermistor 92-027-011

Temp. °C	Geber / Sensor		
	R (Ohm)	± Tol (%)	± Tol (Ohm)
-40.0	36563.56	14.26	5212.38
-35.0	26284.63	13.87	3645.02
-30.0	19149.20	13.48	2581.56
-25.0	14127.68	13.11	1851.71
-20.0	10540.68	12.77	1346.27
-15.0	7721.35	12.60	972.85
-10.0	5720.88	12.45	712.14
-5.0	4284.03	12.32	527.68
.0	3240.18	12.21	395.75
5.0	2473.60	12.13	300.01
10.0	1905.87	12.05	229.70
15.0	1486.65	12.10	179.88
20.0	1168.64	12.17	142.19
25.0	926.71	12.25	113.52
30.0	739.98	12.34	91.32
35.0	594.90	12.43	73.97
40.0	481.53	12.51	60.26
45.0	392.57	12.36	48.51
50.0	322.17	12.17	39.20
55.0	266.19	11.97	31.87
60.0	221.17	11.77	26.02
65.0	184.72	11.60	21.42
70.0	155.29	11.36	17.64
75.0	131.38	11.00	14.45
80.0	112.08	10.48	11.75
85.0	96.40	10.00	9.64
90.0	82.96	9.68	8.03
95.0	71.44	9.32	6.66
100.0	61.92	8.87	5.49
105.0	54.01	8.45	4.56
110.0	47.24	8.07	3.81
115.0	41.42	7.73	3.20
120.0	36.51	7.32	2.67
125.0	32.38	7.36	2.38
130.0	28.81	7.41	2.13
135.0	25.70	7.76	1.99
140.0	23.00	8.09	1.86
145.0	20.66	8.36	1.73
150.0	18.59	8.66	1.61
155.0	16.74	8.85	1.48
160.0	15.11	9.04	1.37
165.0	13.66	9.24	1.26
170.0	12.38	9.46	1.17
175.0	11.25	9.67	1.09
180.0	10.24	9.90	1.01

Prüfmedium  
Test fluid:  
Glycoshell

## Datenblätter für Sensoren und Schalter Data Sheets For Sensors And Switches

### Änderungsübersicht Temperaturgeber / Change View Temperature Sensors

Datum Date	Produktgruppe / Product line Doku-Nr./ Documentation No.	Seite Page	Bemerkung Comment																																								
0499	Temperaturgeber Temperature sensors TU00-0770-5104620	1 - 4	<p><i>entfernt / removed :</i></p> <table> <tr><td>120 °C</td><td>323-801-008-002D</td></tr> <tr><td></td><td>323-801-001-046N</td></tr> <tr><td></td><td>323-805-005-002N</td></tr> <tr><td></td><td>323-801-001-048N</td></tr> <tr><td></td><td>323-801-001-002N</td></tr> <tr><td></td><td>323-801-005-002D</td></tr> <tr><td></td><td>323-801-001-016N</td></tr> <tr><td></td><td>323-801-001-038N</td></tr> <tr><td></td><td>323-801-001-015N</td></tr> <tr><td></td><td>323-801-002-001D</td></tr> <tr><td></td><td>323-801-001-025N</td></tr> </table> <table> <tr><td>150 °C</td><td>323-801-012-013N</td></tr> <tr><td></td><td>323-801-004-043N</td></tr> <tr><td></td><td>323-801-004-016D</td></tr> <tr><td></td><td>323-801-012-003D</td></tr> <tr><td></td><td>323-801-012-004D</td></tr> <tr><td></td><td>323-801-004-032D</td></tr> <tr><td></td><td>323-801-004-036K</td></tr> <tr><td></td><td>323-801-012-011K</td></tr> <tr><td></td><td>323-801-004-041C</td></tr> </table> <p>Bemerkung / Comment: für Lufttemp. / for air temperature ohne Sechskantm. / without hex nut Ø 8 x 0,8 mm</p>	120 °C	323-801-008-002D		323-801-001-046N		323-805-005-002N		323-801-001-048N		323-801-001-002N		323-801-005-002D		323-801-001-016N		323-801-001-038N		323-801-001-015N		323-801-002-001D		323-801-001-025N	150 °C	323-801-012-013N		323-801-004-043N		323-801-004-016D		323-801-012-003D		323-801-012-004D		323-801-004-032D		323-801-004-036K		323-801-012-011K		323-801-004-041C
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0499	Temperaturgeber Temperature sensors TU00-0770-5104620	1 - 4	<p><i>neu / new:</i></p> <table> <tr><td></td><td>Abbildung / View E, J, K</td></tr> <tr><td>120 °C</td><td>323-805-002-003D</td></tr> <tr><td></td><td>323-805-033-002B</td></tr> <tr><td></td><td>323-801-002-001D</td></tr> <tr><td></td><td>323-804-015-001D</td></tr> <tr><td></td><td>323-804-004-004D</td></tr> <tr><td></td><td>323-801-001-030N</td></tr> </table> <table> <tr><td>130 °C</td><td>323-801-040-001D</td></tr> <tr><td></td><td>323-805-017-001C</td></tr> <tr><td></td><td>323-805-034-001B</td></tr> </table> <table> <tr><td>150 °C</td><td>323-801-004-009N</td></tr> <tr><td></td><td>323-801-004-040D</td></tr> <tr><td></td><td>323-805-035-001D</td></tr> <tr><td></td><td>323-801-043-001D</td></tr> <tr><td></td><td>323-805-014-001B</td></tr> <tr><td></td><td>323-805-028-002B</td></tr> <tr><td></td><td>323-805-028-003B</td></tr> <tr><td></td><td>323-805-028-001B</td></tr> <tr><td></td><td>323-801-004-042D</td></tr> <tr><td></td><td>323-801-004-003D</td></tr> </table> <p>Bemerkung / Comment ▲</p>		Abbildung / View E, J, K	120 °C	323-805-002-003D		323-805-033-002B		323-801-002-001D		323-804-015-001D		323-804-004-004D		323-801-001-030N	130 °C	323-801-040-001D		323-805-017-001C		323-805-034-001B	150 °C	323-801-004-009N		323-801-004-040D		323-805-035-001D		323-801-043-001D		323-805-014-001B		323-805-028-002B		323-805-028-003B		323-805-028-001B		323-801-004-042D		323-801-004-003D
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# Datenblätter für Sensoren und Schalter

## Data Sheets For Sensors And Switches

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Datum Date	Produktgruppe / Product line Doku-Nr./ Documentation No.	Seite Page	Bemerkung Comment																														
0499	Temperaturgeber mit Warnkontakt Temperature sensors with warning contact TU00-0770-5204620	1 - 3	<p><i>entfernt / removed :</i></p> <table> <tr><td>120 °C</td><td>323-803-001-003D</td></tr> <tr><td></td><td>323-803-001-033D</td></tr> <tr><td></td><td>323-803-005-001D</td></tr> <tr><td></td><td>323-803-001-015D</td></tr> <tr><td></td><td>323-803-001-034D</td></tr> <tr><td>150 °C</td><td>323-803-002-008D</td></tr> </table> <p>Bemerkung / Comment: blank / bright, "D"  <i>neu / new:</i></p> <p>Anschlussart / Type of connection C, D</p> <table> <tr><td>120 °C</td><td>323-803-004-002B</td></tr> <tr><td></td><td>323-803-001-019D</td></tr> </table> <table> <tr><td>150 °C</td><td>323-803-002-019D</td></tr> <tr><td></td><td>323-803-002-016D</td></tr> <tr><td></td><td>323-803-014-001D</td></tr> <tr><td></td><td>323-803-014-003D</td></tr> <tr><td></td><td>323-803-014-004C</td></tr> <tr><td></td><td>323-803-002-017D</td></tr> <tr><td></td><td>323-803-014-007C</td></tr> </table> <p><i>Bemerkung / Comment ▼</i></p>	120 °C	323-803-001-003D		323-803-001-033D		323-803-005-001D		323-803-001-015D		323-803-001-034D	150 °C	323-803-002-008D	120 °C	323-803-004-002B		323-803-001-019D	150 °C	323-803-002-019D		323-803-002-016D		323-803-014-001D		323-803-014-003D		323-803-014-004C		323-803-002-017D		323-803-014-007C
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	Temperaturgeber für Lufttemperatur Temperatur sensors for air temperature TU00-0770-5304620	1	<p><i>entfernt / removed :</i></p> <table> <tr><td></td><td>323-809-005-001D</td></tr> </table> <p><i>neu / new:</i></p> <table> <tr><td></td><td>323-809-005-002D</td></tr> </table> <p>Abbildung B neue Form / View B new form</p>		323-809-005-001D		323-809-005-002D																										
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	Temperaturgeber (Spezialausführungen) Temperatur sensors (special versions) TU00-0770-5404620	1 - 4	<p><i>neu / new:</i></p> <p><i>komplett / complete</i></p>																														
0700	Temperaturgeber Temperature sensors TU00-0770-5104620	2	<p><b>323-804-015-005D war / was 001D</b></p> <p><i>entfernt / removed :</i></p> <p>120°C 325-801-002-001C</p>																														
		3	<p><b>323-805-017-002C war / was 001C</b></p> <p><b>323-805-034-002B war / was 001B</b></p> <p><i>entfernt / removed :</i></p> <p>130°C 323-801-040-001D</p> <p>150°C 323-805-035-001D</p> <p>150°C 323-801-043-001D</p>																														
	Temperaturgeber mit Warnkontakt Temperature sensors with warning contact TU00-0770-5204620	2	<b>323-803-001-063D war / was 031D</b>																														

## Datenblätter für Sensoren und Schalter Data Sheets For Sensors And Switches

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Datum Date	Produktgruppe / Product line Doku-Nr./ Documentation No.	Seite Page	Bemerkung Comment
0700	Temperaturgeber für Lufttemperatur Temperature sensors for air temperature TU00-0770-5304620	1	<i>entfernt / removed :</i> <b>323-809-005-002D</b>
	Temperaturgeber (Spezialausführungen) Temperature sensors (special versions) TU00-0770-5504620		<i>entfernt / removed :</i> komplett / complete <b>(323-805-009-001D)</b> <b>(323-812-002-003A)</b> <b>(323-812-002-004A)</b>
0101	Temperaturgeber Temperature sensors TU00-0770-5104620	2, 3, 4	<i>neu / new:</i> Spalte KT (Kennlinie-Tabellen) Column CT (characteristic curve tables), 323-805-003-002 N, für Doppelanzeige / for dual-station readings
	Temperaturgeber mit Warnkontakt Temperature sensors with warning contact TU00-0770-5204620	2, 3	<i>neu / new:</i> Spalte KT (Kennlinie-Tabellen) Column CT (characteristic curve tables)
	Temperaturgeber für Lufttemperatur Temperature sensors for air temperature TU00-0770-5304620	1, 2 3	<i>neu / new:</i> Spalte KT (Kennlinie-Tabellen) Column CT (characteristic curve tables), Kennlinie-Tabelle Characteristic curve table
	Temperaturgeber, Spezialausführungen Temperature sensors, special versions TU00-0770-5504620	1 2	<i>neu / new:</i> Spalte KT (Kennlinie-Tabellen) Column CT (characteristic curve tables), Kennlinie-Tabelle Characteristic curve table
	Temperaturgeber, Kennlinie-Tabellen Temperature sensors, characteristic curve tables TU00-0770-7104620	1 - 23	<i>neu / new:</i> komplett / complete