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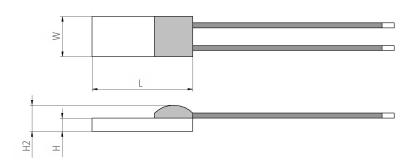
150 °C Series Nickel sensor with wires For low temperatures

Benefits & Characteristics

- Excellent long-term stability
- Insulated wires
- Easy interchangeability
- Small dimensions

Illustration¹⁾

- Simple linearization
- Vibration and temperature shock resistant
- Customer-specific sensor available upon request



1) For actual size, see dimensions

Technical Data

Operating temperature range:	-60 °C to +150 °C
Nominal resistance:*	100 Ω at 0 °C
	500 Ω at 0 °C
	1000 Ω at 0 °C
Characteristics curve:*	6180 ppm/K (Nickel ND)
	5000 ppm/K (Nickel NL)
	6370 ppm/K (Nickel NJ)**
	6720 ppm/K (Nickel NA)***
Long-term stability:	< 0.1 % at 1000 h at maximal operating temperature
Tolerance class (dependent on temperature) ¹⁾ :*	IST AG reference $T > 0 °C$
1) For tolerances <0°C please check application note	A 0.2 + 0.0035 x t
	B 0.4 + 0.007 x t
	C 0.8 + 0.014 x t
Connection:*	Enameled Cu-wire, Ø 0.2 mm (solderable, weldable)
	Enameled Cu-wire, Ø 0.15 mm (solderable, weldable)
	Enameled Cu-wire, Ø 0.25 mm, metallized backside (solderable, weldable)
Alternative wire construction:*	Inverted welding



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Recommended applied current:2)	1 mA at 100 Ω	
2) Self-heating must be considered	0.5 mA at 500 Ω	
	0.3 mA at 1000 Ω	
Other alternatives:*	Metallized backside	
	Substrate thickness	

* Customer-specific alternatives available

** 6370 ppm/K (Nickel NJ) 891 Ω at 0 °C only

*** 6720 ppm/K (Nickel NA) 120 Ω at 0 °C only

Order Information - 1E (enameled Cu-wire, Ø 0.2 mm)

Size	Dimensions (L x W x H / H2 in mm)	Class A	Class B
6180 ppm/K (Nickel ND)			
Nominal resistance: 100 Ω	2 at 0 °C		
232 Order code	2.3 x 2.0 x 0.65 / 1.3	Upon request	ND0K1.232.1E.B.025 Upon request
Nominal resistance: 1000			
232 Order code	2.3 x 2.0 x 0.65 / 1.3	Upon request	ND1K0.232.1E.B.025 Upon request
520 Order code	5.0 x 2.0 x 0.65 / 1.3	Upon request	ND1K0.520.1E.B.025 Upon request
5000 ppm/K (Nickel NL)			
Nominal resistance: 1000	Ω at 0 °C		
520	5.0 x 2.0 x 0.65 / 1.3	Upon request	NL1K0.520.1E.B.025
Order code			Upon request
Order Information -	· 1K (enameled Cu-wire, Ø 0).15 mm)	
Size	Dimensions (L x W x H / H2 in mm)	Class A	Class B
6180 ppm/K (Nickel ND)			
Nominal resistance: 100 Ω	2 at 0 °C		
232	2.3 x 2.0 x 0.65 / 1.3	Upon request	ND0K1.232.1K.B.007
Order code			Upon request

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Document name:

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Size Dimensions (L x W x H 7 H2 in mu) Class A Class B Nominal resistance: 100-2 3.3 x 2.0 x 0.65 / 1.3 Upon request ND1K0.232.1K.B.007 Order code 5.0 x 2.0 x 0.65 / 1.3 Upon request DD1K0.520.1K.B.007 Order code 5.0 x 2.0 x 0.65 / 1.3 Upon request DD1K0.520.1K.B.007 So00 ppm/K (Nickel NL) - - - - Nominal resistance: 100-2 - - - - - So10 ppm/K (Nickel NL) - <
232 2.3 x 2.0 x 0.65 / 1.3 Upon request ND1K0.232.1K.B.007 Order code Upon request Upon request 520 5.0 x 2.0 x 0.65 / 1.3 Upon request Order code VD1K0.520.1K.B.007 Upon request 5000 ppm/K (Nickel NL) Vpon request Vpon request Nominal resistance: 1000 Ω at 0 °C 5.0 x 2.0 x 0.65 / 1.3 Upon request 520 5.0 x 2.0 x 0.65 / 1.3 Upon request 6370 ppm/K (Nickel NJ) V Vpon request Nominal resistance: 891 Ω = C Vpon request Vpon request S38 5.0 x 3.8 x 0.65 / 1.3 NJ891.538.1K.K.076 Order code VJ891.538.1K.K.076 103197
232 2.3 x 2.0 x 0.65 / 1.3 Upon request ND1K0.232.1K.B.007 Order code Upon request ND1K0.520.1K.B.007 520 5.0 x 2.0 x 0.65 / 1.3 Upon request Order code Upon request ND1K0.520.1K.B.007 Order code Upon request ND1K0.520.1K.B.007 S000 ppm/K (Nickel NL) Upon request Upon request Nominal resistance: 1000 Ω at 0 °C S0 x 2.0 x 0.65 / 1.3 Upon request S20 5.0 x 2.0 x 0.65 / 1.3 Upon request S20 5.0 x 2.0 x 0.65 / 1.3 Upon request S20 S.0 x 2.0 x 0.65 / 1.3 Upon request S20 S.0 x 2.0 x 0.65 / 1.3 Upon request S20 S.0 x 2.0 x 0.65 / 1.3 Upon request G370 ppm/K (Nickel NJ) Vision request Vision request Nominal resistance: 891 Ω at 0 °C S S S38 S.0 x 3.8 x 0.65 / 1.3 NJ891.538.1K.K.076 Order code S NJ891.538.1K.K.076 Order code S NJ3197
Order code Upon request Upon request 520 5.0 x 2.0 x 0.65 / 1.3 Upon request Order code Upon request Upon request 5000 ppm/K (Nickel NL)
520 5.0 x 2.0 x 0.65 / 1.3 Upon request ND1K0.520.1K.B.007 Order code Upon request Upon request 5000 ppm/K (Nickel NL) Soort 2.0 x 0.65 / 1.3 Upon request Nominal resistance: 1000 Δ at 0 °C Soort 2.0 x 0.65 / 1.3 Upon request 520 5.0 x 2.0 x 0.65 / 1.3 Upon request 6370 ppm/K (Nickel NJ) VICKel NJ) Upon request 6370 ppm/K (Nickel NJ) Soort 2.0 x 0.65 / 1.3 Upon request Nominal resistance: 891 Ω at 0 °C Soort 2.0 x 0.65 / 1.3 Upon request Soort 2.0 x 0.65 / 1.3 Upon request Soort 2.0 x 0.65 / 1.3 Order code Soort 2.0 x 0.65 / 1.3 Upon request Soort 2.0 x 0.65 / 1.3 Upon request Upon request Soort 2.0 x 0.65 / 1.3 Upon request Upon request Soort 2.0 x 0.65 / 1.3 Upon request Upon request Soort 2.0 x 0.65 / 1.3 NIS91.538.1K.K.076 NIS91.538.1K.K.076 Order code Soort 2.0 x 0.65 / 1.3 NIS91.538.1K.K.076
Order code Upon request 5000 ppm/K (Nickel NL)
5000 ppm/K (Nickel NL)
Nominal resistance: 1000 Ω at 0 °C 520 5.0 x 2.0 x 0.65 / 1.3 Upon request Order code Upon request 6370 ppm/K (Nickel NJ) V Nominal resistance: 891 Ω + C V 538 5.0 x 3.8 x 0.65 / 1.3 NJ891.538.1K.K.076 Order code 103197
520 5.0 x 2.0 x 0.65 / 1.3 Upon request NL1K0.520.1K.B.007 Order code Upon request Upon request 6370 ppm/K (Nickel NJ) S38 x 0.65 / 1.3 NJ891.538.1K.K.076 Nominal resistance: 891 Q *C S10 x 3.8 x 0.65 / 1.3 NJ891.538.1K.K.076 Order code 103197
Order codeUpon request6370 ppm/K (Nickel NJ)Nominal resistance: 891 Q °C5385.0 x 3.8 x 0.65 / 1.3NJ891.538.1K.K.076Order code103197
6370 ppm/K (Nickel NJ) Nominal resistance: 891 Ω at 0 °C 538 5.0 x 3.8 x 0.65 / 1.3 Order code NJ891.538.1K.K.076 103197
Nominal resistance: 891 Ω at 0 °C 538 5.0 x 3.8 x 0.65 / 1.3 Order code NJ891.538.1K.K.076 103197
Order code 103197
Former order code 020.00514
Order Information - 1K (enameled Cu-wire, Ø 0.25 mm, metallized backside)
Size Dimensions (L x W x H / H2 in mm) Class A Class B
5000 ppm/K (Nickel NL)
Nominal resistance: 1000 Ω at 0 °C
520 5.0 x 2.0 x 0.65 / 1.3 NL1K0.520.1K.B.300.M

Order code

Former order code

Application Note:

Additional Documents



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Order Information Nickel sensors Secondary reference

	TC	R																		
			ANSI 67	720 ppr	n/K	J	=	6370) ppm/k	<										
	В						=	5696	i ppm/k	<										
	D	1 M M					=													
	L	= 5000 ppm/K S				=	speci	al												
		Res	sistance i	in Ω at	0 °C															
			Size ir	ח mm																
				Opera	ting t	emp	eratu	ire ran	ige											
								50 °C	5											
				2 =	-60	°C t	o +2	00 °C												
				3 =	-60	°C t	:0 +3	00 °C												
					С	onne	ectio	ſ												
					S		= S				FK	=	flat w	ire cust	omer-s	spe	ecifio	2		
					Ι		= ir	nsulate	ed wire		К			mer-spe						
					V	V	= v	vire			Е			eled Cu						
					F١	W	= fl	at wire	e											
							Tole	erance	class (T > 0	°C)									
							А	= 0	.2 + 0.	0035	5 x t									
							В	= 0	.4 + 0.	007 >	x [t]									
							С	= 0	.8 + 0.	014 >	x t									
							К	= C	ustome	er-spe	ecific									
								Wir	e lengt	h in r	mm									
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											ostrat	e th	ickness	s 0.25 m	nm N	Л	=	metalli	zed ba	cksid
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