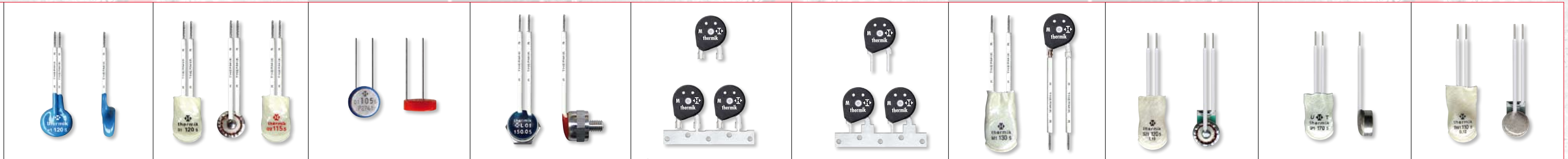
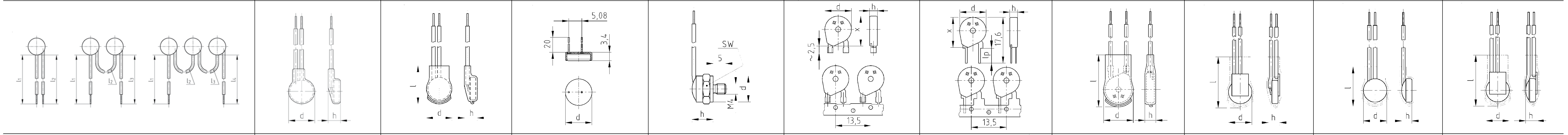
thermik® Brings temperatures under control
Thermal Protectors – Standard Products
thermik® Brings temperatures under control
Thermal Protectors – Standard Products

Ordering example

S01 - 155.05 0100 / 0100

- Type and version
- Switching temperature (°C)
- Tolerance (K)
- Lead length (mm)





		e1	C01 / S01 / C02 / S02	N01 / N02	L01 / L02	UM1	PM1	CM1 / SM1	CZ1 / SZ1	CP1 / SP1	CW1 / SW1
		Automatic resetting, with connection leads	Automatic resetting, with connection leads	Automatic resetting, with two solid non insulated connection wires either vertical or horizontal	Automatic resetting, with threaded stud and connection leads	Automatic resetting, single / or on tape with crimp contacts suitable for automated further processing	Fully automated production, single / or on tape with Pins for direct mounting on PCBs	Automatic resetting, fully automated production with connection leads	Automatic resetting, defined current sensitive by an eligible integrated series resistor, with connection leads	Electrical-self-hold-functionality with connection leads	Electrical-self-hold-functionality defined current sensitive by an eligible integrated series resistor, with connection leads
	Thermal Protectors	**e1**	**C01 / S01 / C02 / S02**	**N01 / N02**	**L01 / L02**	**UM1**	**PM1**	**CM1 / SM1**	**CZ1 / SZ1**	**CP1 / SP1**	**CW1 / SW1**
	with insulation cap		**S01 / SK1 / S02**					**SM1**	**SZ1**	**SP1**	**SW1**
	without insulation cap	with epoxy coating	**C01 / CK1 / C02**	**N01 / N02**		**UM1**	**PM1**	**CM1**	**CZ1**	**CP1**	**CW1**
1	Contact type, normally closed / normally open	NC	NC / NO	NC / NO	NC / NO	NC	NC	NC	NC	NC	NC
2	Nominal switching temperature (NST) in steps of 5°C	70 °C - 160 °C	60 °C - 200 °C	60 °C - 180 °C	60 °C - 200 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 160 °C	70 °C - 180 °C	70 °C - 160 °C
3	Standard tolerance	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K
4	Reset temperature range below NST (UL / CSA)	> 35 °C	-35 K ± 15 K	-35 K ± 15 K	-35 K ± 15 K	-35 K ± 15 K	-35 K ± 15 K	-35 K ± 15 K	-35 K ± 15 K	depends on NST	depends on NST
5	Operating voltage ... AC / DC - available, values on inquiry	100 V up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	100 V up to 250 V ~ (UL 277 V)	100 V up to 250 V ~ (UL 277 V)
6	Rated voltage U_{Nom} AC	250 V (VDE)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE)	250 V (VDE) 277 V (UL)	250 V (VDE)
7	Rated current AC cos φ = 1.0 (ohmic load) / switching cycles	2.0 A / 10.000 2.5 A / 3,000	2.5 A / 10,000 6.3 A / 3,000 7.5 A / 300	2.5 A / 10,000 6.3 A / 3,000 7.5 A / 300	2.5 A / 10,000 6.3 A / 3,000 7.5 A / 300	2.5 A / 10,000 6.3 A / 3,000	2.5 A / 10,000 6.3 A / 3,000	2.5 A / 10,000 6.3 A / 3,000	4.0 A / 3,000	10 A / 1,000	9.0 A / 1,000
8	Rated current AC cos φ = 0.6 acc. to IEC 60730-2-9	1.6 A / 10,000	1.6 A / 10,000	1.6 A / 10,000	1.6 A / 10,000	1.6 A / 10,000	1.6 A / 10,000	1.6 A / 10,000	1.6 A / 10,000	6.3 A / 1,000	1.6 A / 1,000
9	Rated current AC cos φ = 0.4 - 0.5 acc. to IEC 60730-2-3	-	1.8 A / 10,000	1.8 A / 10,000	1.8 A / 10,000	1.8 A / 10,000	1.8 A / 10,000	1.8 A / 10,000	-	-	-
10	Max. switching current at 250V ~ / cos φ = 0.4 - 0.5 / sw. cycles	-	7.2 A / 1,000	7.2 A / 1,000	7.2 A / 1,000	7.2 A / 1,000	7.2 A / 1,000	7.2 A / 1,000	-	-	-
11	Contact bounce time	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms
12	Contact resistance (acc. to MIL-Std. R 5757)	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ
13	Impregnation resistance with- or without resin (acc. to requirements)*	suitable	suitable	suitable	suitable	on request	on request	suitable	suitable	-	-
14	Vibration proof at 10 ... 60 Hz	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²
15	Pressure stability of housing *	300 N	450 N	450 N	450 N	450 N	450 N	450 N	-	-	-
16	High voltage insulation (not C - versions)	2 kV	2 kV	-	2 kV	-	-	2 kV	2 kV	2 kV	2 kV
17	Suitable for protection class I or II	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable
18	Standard wiring connection	lead wire 0.25 mm²	lead wire 0.25 mm² / AWG22	single wire 0.5 mm	lead wire 0.25 mm² / AWG22	Crimp	Pin 0.4 mm x 0.8 mm	lead wire 0.25 mm² / AWG22	lead wire 0.25 mm² / AWG22	lead wire 0.25 mm² / AWG22	single wire Ø 0.5 mm / AWG 22
19	Diameter (with / without insulation cap) Ød [mm]	10.2 mm	9.4 mm / 9.0 mm	10.0 mm	10.0 mm	10.2 mm	10.2 mm	10.6 mm / 10.2 mm	9.4 mm / 9.0 mm	9.4 mm / 9.0 mm	9.4 mm / 9.0 mm
20	Heigth (with / without insulation cap) h [mm]	4.8 mm	4.7 mm / 4.3 mm	3.4 mm	7.7 mm	3.0 mm	3.0 mm	3.4 mm / 3.0 mm	5.0 mm / 4.6 mm	5.6 mm / 5.1 mm	5.6 mm / 5.1 mm
21	Length of insulation cap l [mm]	-	15.0 mm	-	-	-	-	19.0 mm	19.0 mm	17.0 mm	19.0 mm
22	Length of housing	-	-	-	-	11.5 mm	11.5 mm	11.5 mm	-	-	-
23	Length of Pin lp [mm]	-	-	-	-	-	5.6 mm	-	-	-	-
24	Screw / -length	-	-	-	M4 / 5.0 mm	-	-	-	-	-	-
25	Wrench size / max. turning moment	-	-	-	10.0 mm / 2 Nm	-	-	-	-	-	-
26	Approvals available (according to design) **	IEC; VDE	IEC; ENEC; VDE; UL; CSA; CQC	IEC; ENEC; VDE; UL; CSA; CQC	IEC; ENEC; VDE; UL; CSA; CQC	IEC; ENEC; VDE; UL; cUL	IEC; ENEC; VDE; UL; cUL	IEC; ENEC; VDE; UL; cUL	IEC; ENEC; VDE	IEC ; VDE; UL; CSA	IEC; VDE

* acc. to Thermik Test
** please specify which approval is needed

Illustrations to the scale of 1:1

You will find a selection of the most common switches in the following tables. The values given can vary in the event of certain designs. Special switches are available upon request. Details regarding specific information, measurement methods, applications, licenses, et cetera can also be provided upon request. We reserve the right to technical changes in the course of further development.

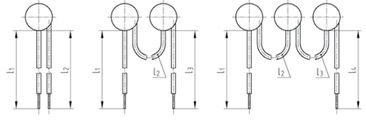
Part usage guidelines by the orderer which vary from our standards will not be inspected for application usability and/or norm conformity. The user solely is obligated to inspect the suitability of Thermik products for these kinds of uses.

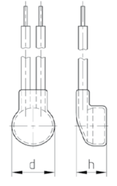
Series 01 version 01 09.05.2008 / Subject to change

Ordering example

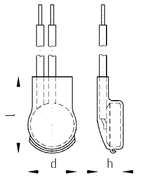
S05 - 155.05 0100 / 0100

- Type and version
- Switching temperature (°C)
- Tolerance (K)
- Lead length (mm)

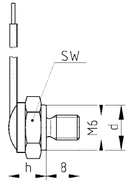




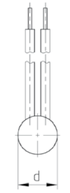
Automatic resetting, with connection leads



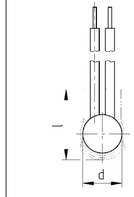
Automatic resetting, with connection leads



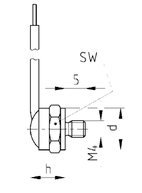
Automatic resetting, with threaded stud and connection leads



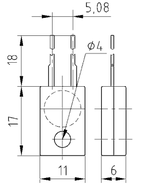
Automatic resetting, with threaded stud and connection leads



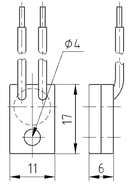
Automatic resetting, with connection leads



Automatic resetting, with threaded stud and connection leads

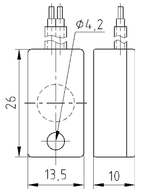


Automatic resetting, with mountable housing for direct mounting on PCBs with PCB-terminals

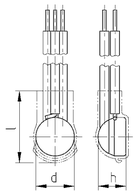


Automatic resetting, with mountable housing and connection leads

Automatic resetting, with mountable housing and double insulation suitable for protection class II



Automatic resetting, for star point connection to protect a three phase motor



	Thermal Protectors	e6	C05 / S05 / C09 / S09	L05 / L09	C06 / C08	S06 / S08	L06 / L08	P06 / P08	H06 / H08	V06 / V08	CY6 / SY6
	with insulation cap		S05 / S09			S06 / S08					SY6
	without insulation cap	with epoxy coating	C05 / C09		C06 / C08						CY6
1	Contact type, normally closed / normally open	NC	NC / NO	NC / NO	NC / NO	NC / NO	NC / NO	NC / NO	NC / NO	NC / NO	NC
2	Nominal switching temperature (NST) in steps of 5°C	70 °C - 160 °C	60 °C - 200 °C	60 °C - 160 °C	70 °C - 200 °C	70 °C 200 °C	70 °C - 200 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C
3	Standard tolerance	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K	± 5K
4	Reset temperature range below NST (UL / CSA)	> 35 °C	-30 K ± 15 K	-30 K ± 15 K	depends on NST	depends on NST	depends on NST	depends on NST	depends on NST	depends on NST	depends on NST
5	Operating voltage ... AC / DC - available, values on inquiry	100 V up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 500 V ~	up to 480 V ~
6	Rated voltage U_{Nom} AC	250 V (VDE)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	250 V	3 x 440 V / 50/60 Hz
7	Rated current AC cos φ = 1.0 (ohmic load) / switching cycles	10.0 A / 10,000 25.0 A / 300	6.3 A / 10,000 10.0 A / 3,000 (C05/S05) 20.0 A / 300 (C05/S05)	6.3 A / 10,000 10.0 A / 3,000 (C05/S05) 20.0 A / 300 (C05/S05)	10.0 A / 10,000 25.0 A / 300	10.0 A / 10,000 25.0 A / 300	10.0 A / 10,000 25.0 A / 300	10.0 A / 10,000 25.0 A / 300	10.0 A / 10,000 25.0 A / 300	10.0 A / 10,000 25.0 A / 300	2.5 A / 10,000 5.0 A / 2,000
8	Rated current AC cos φ = 0.6 acc. to IEC 60730-2-9	6.3 A / 10,000	4.0 A / 10,000	4.0 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	1.6 A / 10,000
9	Rated current AC cos φ = 0.4 - 0.5 acc. to IEC 60730-2-3	-	4.6 A / 10,000 (C05/S05)	4.6 A / 10,000 (C05/S05)	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	6.3 A / 10,000	-
10	Max. switching current at 250V ~ / cos φ = 0.4 - 0.5 / sw. cycles	-	18.4 A / 1,000 (C05/S05)	18.4 A / 1,000 (C05/S05)	25.0 A / 300	25.0 A / 300	25.0 A / 300	25.0 A / 300	25.0 A / 300	25.0 A / 300	-
11	Contact bounce time	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms
12	Contact resistance (acc. to MIL-Std. R 5757)	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ
13	Impregnation resistance with- or without resin (acc. to requirements)*	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable
14	Vibration proof at 10 ... 60 Hz	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²
15	Pressure stability of housing *	450 N	300 N	300 N	600 N	600 N	600 N	600 N	600 N	600 N	600 N
16	High voltage insulation (not C - versions)	2 kV	2 kV	2 kV	-	2 kV	2 kV	2 kV	2 kV	3.75 kV	2 kV
17	Suitable for protection class I or II	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable
18	Standard wiring connection	lead wire 0.5 mm²	lead wire 0.5 mm² / AWG20	lead wire 0.5 mm² / AWG20	lead wire 0.75 mm² / AWG18	lead wire 0.75 mm² / AWG18	lead wire 0.75 mm² / AWG18	Pins	lead wire 0.75 mm² / AWG18	lead wire 0,5 mm² / AWG 20	lead wire 0,5 mm² / AWG 20
19	Diameter (with / without insulation cap) Ød [mm]	10.5 mm	11.4 mm / 11,0 mm	10.9 mm	9.3 mm	9.8 mm	10.0 mm	-	-	-	9.8 mm / 9.3 mm
20	Heigth (with / without insulation cap) h [mm]	7.5 mm	5.8 mm / 5,4 mm	9.0 mm	7.2 mm	7.6 mm	8.0 mm	6.0 mm	6.0 mm	10.0 mm	7.6 mm / 7.2 mm
21	Length of insulation cap l [mm]	-	19.0 mm	-	-	17.0 mm	-	-	-	-	17.0 mm
22	Length of housing	-	-	-	-	-	-	17.0 mm / 11.0 mm	17.0 mm / 11.0 mm	26.0 mm / 13.5 mm	-
23	Length of Pin lp [mm]	-	-	-	-	-	-	18.0 mm	-	-	-
24	Screw / -length	-	-	M6 x 8.0 mm	-	-	M4 x 5.0 mm	-	-	-	-
25	Wrench size / max. turning moment	-	-	13.0 mm / 8 Nm	-	-	10.0 mm / 2 Nm	3 Nm	3 Nm	2.5 Nm	-
26	Approvals available (according to design) **	IEC; VDE	IEC; ENEC; VDE; UL; CSA; CQC	IEC; ENEC; VDE; UL; CSA; CQC	IEC; VDE; UL; CSA; CQC	IEC; VDE; UL; CSA; CQC	IEC; VDE; UL; CSA; CQC	IEC; VDE; UL; CSA; CQC	IEC; VDE; UL; CSA; CQC	IEC; VDE; CQC	UL; CSA

* acc. to Thermik Test
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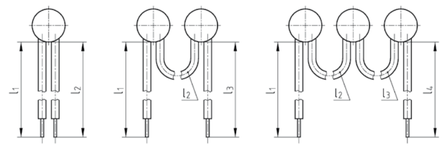
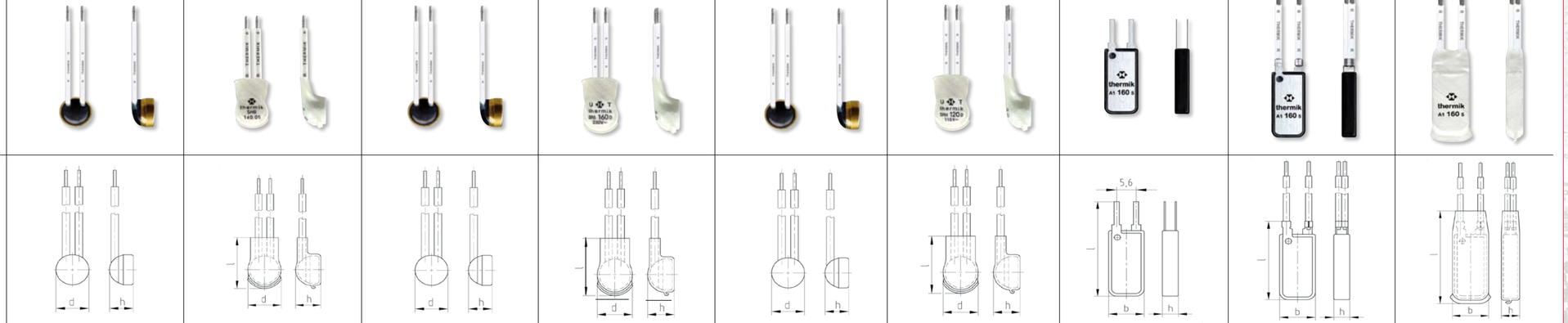
Ordering example

SR6 - 155.05 0100 / 0100

- Type and version
- Switching temperature (°C)
- Tolerance (K)
- Lead length (mm)





			Automatic resetting, without base insulation for high performance with connection leads	Automatic resetting, with an insulation cap for high performance with connection leads	Self-hold thermal protector without base insulation with connection leads	Self-hold thermal protector with an insulation cap with connection leads	Self-hold thermal protector without base insulation for high performance with connection leads	Self-hold thermal protector with an insulation cap for high performance with connection leads	Thermal Motor-Protector acc. to IEC 60730-2-2		
									for high performance and for direct mounting on terminals	without base insulation for high performance with connection leads	with an insulation cap for high performance with connection leads
	Thermal Protectors		**CH6**	**SH6**	**CR6**	**SR6**	**CRH**	**SRH**	**PA1**	**CA1**	**SA1**
	with insulation cap			**SH6**		**SR6**		**SRH**			
	without insulation cap		**CH6**		**CR6**		**CRH**		**PA1**	**CA1**	**SA1**
1	Contact type, normally closed / normally open		NC	NC	NC	NC	NC	NC	NC	NC	NC
2	Nominal switching temperature (NST) in steps of 5°C		70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 160 °C [1]	70 °C - 160 °C [1]	70 °C - 160 °C [1]
3	Standard tolerance		± 10K	± 10K	± 5K / ± 10K	± 5K / ± 10K	± 10K	± 10K	± 5K	± 5K	± 5K
4	Reset temperature range below NST (UL / CSA)		depends on NST	depends on NST	depends on NST	depends on NST	depends on NST	depends on NST	> 35° C	> 35° C	> 35° C
5	Operating voltage ... AC / DC - available, on inquiry		up to 500 V ~	up to 500 V ~	up to 250 V ~	up to 250 V ~	up to 250 V ~	up to 250 V ~	100 V up to 500 V ~	100 V up to 500 V ~	100 V up to 500 V ~
6	Rated voltage U_{nom} AC		250 V (VDE) 277 V (UL)	250 V (VDE) 277 V (UL)	115 V / 230 V (VDE) 250 V (UL)	115 V / 230 V (VDE) 250 V (UL)	115 V / 230 V (VDE) 250 V (UL)	115 V / 230 V (VDE) 250 V (UL)	250 V	250 V	250 V
7	Rated current AC cos φ = 1,0 (ohmic load) / switching cycles		13.5 A / 10,000	13.5 A / 10,000	10.0 A / 1,000	10.0 A / 1,000	13.5 A / 300	13.5 A / 300	37.0 A / 3,000	37.0 A / 3,000	37.0 A / 3,000
			35.0 A / 2,000 *	35.0 A / 2,000 *	25.0 A / 1,000	25.0 A / 1,000	42.0 A / 300	42.0 A / 300			
			42.0 A / 300	42.0 A / 300							
8	Rated current AC cos φ = 0.6 acc. to IEC 60730-2-9		9.0 A / 10,000	9.0 A / 10,000	6.3 A / 1,000	6.3 A / 1,000	9.0 A / 300	9.0 A / 300	-	-	-
9	Rated current AC cos φ = 0.4 - 0.5 acc. to IEC 60730-2-3		-	-	-	-	-	-	-	-	-
10	Max. switching current at 250V ~ / cos φ = 0.4 - 0.5 / sw. cycles		-	-	-	-	-	-	60.0 A (cos φ = 1.0)	60.0 A (cos φ = 1.0)	60.0 A (cos φ = 1.0)
11	Contact bounce time		< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms	< 1 ms
12	Contact resistance (acc. to MIL-Std. R 5757)		< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ	< 50 mΩ
13	Impregnation resistance with- or without resin (acc. to requirements)*		suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable
14	Vibration proof at 10 ... 60 Hz		100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	100 m/s²	-	-	-
15	Pressure stability of housing *		600 N	600 N	600 N	600 N	600 N	600 N	150 N	150 N	150 N
16	High voltage insulation (not C - versions)		-	-	-	2 kV	-	2 kV	-	-	2 kV
17	Suitable for protection class I or II		suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable	suitable
18	Standard wiring connection		lead wire 1.0 mm² / AWG 18	lead wire 1.0 mm² / AWG 18	lead wire 0.75 mm² / AWG 18	lead wire 0.75 mm² / AWG 18	lead wire 1.0 mm² / AWG 18	lead wire 1.0 mm² / AWG 18	Pin	lead wire 1.5 mm² / AWG 16	lead wire 1.5 mm² / AWG 16
19	Diameter (with / without insulation cap)	Ød [mm]	9.3 mm	9.8 mm	9.3 mm	9.8 mm	9.3 mm	9.8 mm	-	-	-
20	Heigth (with / without insulation cap)	h [mm]	7.2 mm	7.6 mm	7.2 mm	7.6 mm	7.2 mm	7.6 mm	4.6 mm	4.6 mm	5.1 mm
21	Length of insulation cap	l [mm]	-	17.0 mm	-	17.0 mm	-	17.0 mm	-	-	32.5 mm
22	Dimensions of housing	l / b [mm]	-	-	-	-	-	-	32.5 mm / 10.3 mm	27.0 mm / 10.3 mm	32.5 mm / 10.8 mm
23	Length of Pin	lp [mm]	-	-	-	-	-	-	-	-	-
24	Screw / -length		-	-	-	-	-	-	-	-	-
25	Wrench size / max. turning moment		-	-	-	-	-	-	-	-	-
26	Approvals available (according to design) **		IEC; VDE; UL; cUL	IEC; VDE; UL; cUL	IEC; VDE; UL; CSA	IEC; VDE; UL; CSA	IEC; VDE; UL; CSA	IEC; VDE; UL; CSA	IEC; VDE	IEC; VDE	IEC; VDE

* acc. to Thermik Test

** please specify which approval is needed

Illustrations to the scale of 1:1

You will find a selection of the most common switches in the following tables. The values given can vary in the event of certain designs. Special switches are available upon request. Details regarding specific information, measurement methods, applications, licenses, et cetera can also be provided upon request. We reserve the right to technical changes in the course of further development.

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[1] Tripping time depending on rated current

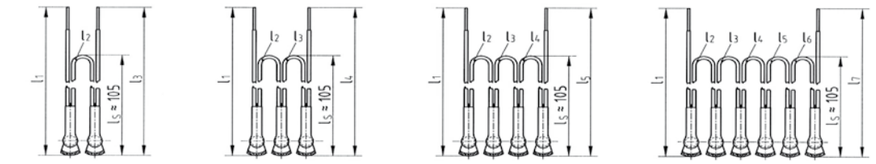
thermik® Brings temperatures under control
PTC-Thermistor Sensors

Ordering example

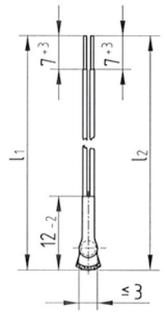
SNM - 150. ES 0100 / 0100

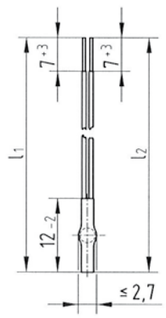
- Type
- Nominal response temperature (°C)
- Configuration / Version
- Lead length (mm)

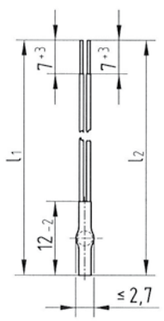


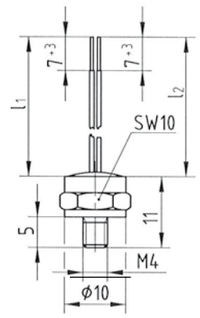



For missing dimensions please refer to single unit draft; available in versions: SNM, SKM, STM









PTC Thermistor Sensors	SNM	SKM	STM	LTM
Insulation material	Mylar-Nomex	Kynar	Teflon	
Nominal response temperature	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C	70 °C - 180 °C
Operating voltage	2.5 VDC - 30 VDC	2.5 VDC - 30 VDC	2.5 VDC - 30 VDC	2.5 VDC - 30 VDC
Max. operating voltage	30 VDC	30 VDC	30 VDC	30 VDC
Max. recomended sensor voltage	2.5 VDC - 7.5 VDC	2.5 VDC - 7.5 VDC	2.5 VDC - 7.5 VDC	2.5 VDC - 7.5 VDC
High voltage insulation	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Length of insulation cap	12.0 mm	12.0 mm	12.0 mm	12.0 mm
Diameter	≤ 3.0 mm	≤ 3.0 mm	≤ 3.0 mm	≤ 3.0 mm
Screw length				M 4 / 5 mm
Wrench size				10 / 2 Nm

General Characteristics

Temperature-Resistance-Diagramm
acc. to IEC 34-11-2, DIN 44081 (single), DIN 44082 (triplex)
preferred values for nominal response temperatures T_{REF}
90 °C to 160 °C in steps of 10 K

Temperature	Resistance	Measuring Voltage [V_{DC}]
-20° C to T_{REF} -20 K	20Ω to 250Ω	≤ 2.5 V
Temperature Range 90°C - 160°C		
T_{REF} -5 K	≤ 550 Ω	≤ 2.5 V
T_{REF} +5 K	≥ 1330 Ω	≤ 2.5 V
T_{REF} +15 K	≥ 4000 Ω	≤ 7.5 V pulsed

Colour-Coding *italic written* **data does not acc. to DIN 44081 / 44082**

60	*70*	*80*	90	100	*105*	110	*115*	120	*125*	130
white	white	white	green	red	blue	brown	blue	grey	red	blue
grey	brown	white	green	red	grey	brown	green	grey	green	blue

135	140	145	150	155	160	*165*	*170*	*180*	*190*
red	white	white	black	blue	blue	blue	white	white	black
brown	blue	black	black	black	red	brown	green	red	brown

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