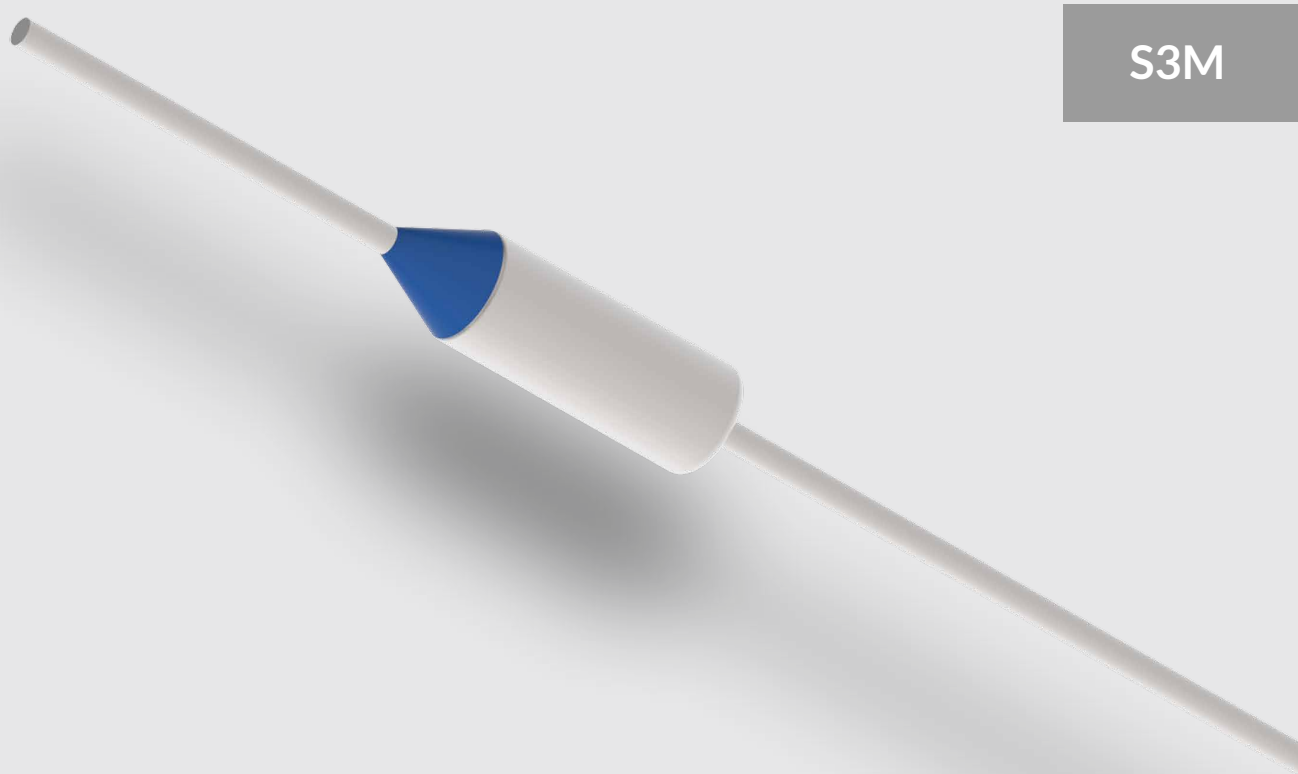
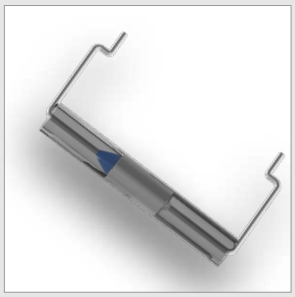
MICROTHERM
sentronic

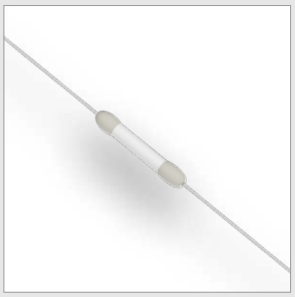
Thermal cut-out
Thermal fuse

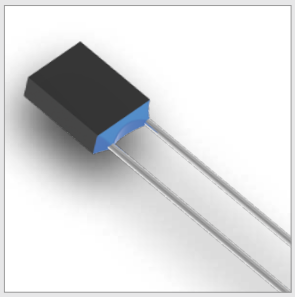
Typ

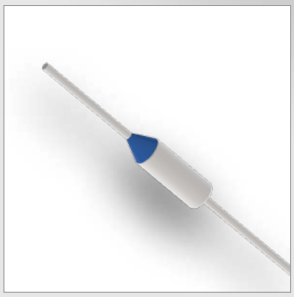
- MT
- SDF
- S3M











Applications

- Household appliances
- Electronic appliances
- Fan heaters
- Transformers
- Automotive industry

Benefits

- Small compact designs
- Broad product line
- Temperature range up to 240°C
- Custom-made executions

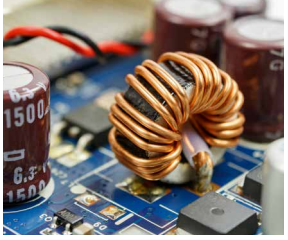
Description

Fuses of this type are highly universally applicable due to their small design and the **wide range of current-carrying capacity**. They are found in all industries with electro-technical applications.

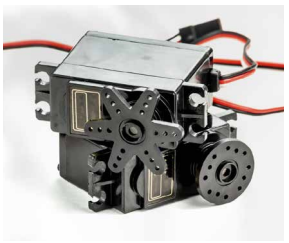
The portfolio ranges from the **miniature fuse S3M7** with a Ø 3 mm and length of 10 mm, up to the **robust S3M8** with a current load capacity of up to 25 A. And the so-called high-current fuses S3M5 and S3M8 can be particularly found in heating applications of all kinds.

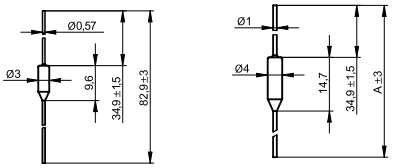
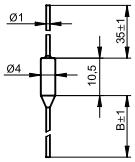
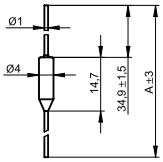
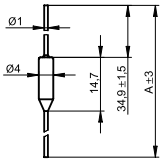
Since the purely wired fuse body usually has to be further processed for the respective application (insulation of the body, integration of connecting leads and connectors), Microtherm also offers the **possibility of customer-specific designs** for these fuses.

Beside these Microtherm offers the **MT series** in axial and radial shape as a cost-effective solution for a wide range of applications. These thermal fuses are based on melting wire design whereas technical data is given in the tables on the right page.



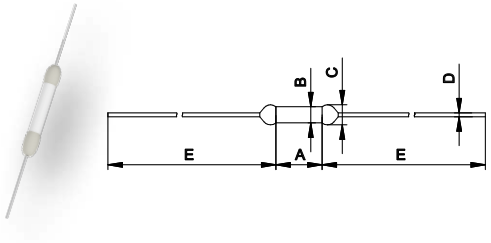


	S3M7 5A	S3M4 10A	SDFS/SDFL 15A	S3M5 20A	S3M8 25A
					
	metal housing	size A (00): 63,8 size A (01): 82,9	size B (S): 25,4 size B (L): 35	size A (00): 63,8 size A (01): 82,9	size A (00): 63,8 size A (01): 82,9

T_f (tolerance +0 / -10°C)	type	T_h	T_m	type	T_h	T_m	type	T_h	T_m(VDE)	T_m(UL)	type	T_h	T_m	type	T_h	T_m
66	-	-	-	-	-	-	DF	42	110	130	-	-	-	-	-	-
72	-	-	-	E4A	57	410	DF	50	115	110	E5A	57	410	E8A	47	410
73	-	-	-	E4A	58	410	-	-	-	-	E5A	58	410	E8A	48	410
77	E7F	62	125	E4A	62	300	DF	55	120	110	E5A	62	410	E8A	62	410
84	E7F	69	125	E4A	69	125	DF	60	125	114	E5A	69	220	E8A	69	220
91	-	-	-	E4A	76	300	DF	57	135	121	E5A	76	430	-	-	-
93	E7F	78	140	E4A	78	300	-	-	-	-	E5A	78	410	E8A	78	410
98	E7F	83	140	E4A	83	140	DF	76	140	130	E5A	83	410	E8A	83	410
100	-	-	-	-	-	-	DF	78	135	250	-	-	-	-	-	-
104	-	-	-	E4A	89	200	DF	80	150	150	E5A	89	225	E8A	89	225
110	E7F	95	140	E4A	95	240	DF	88	140	140	E5A	95	225	E8A	95	225
117	E7F	102	150	E4A	102	240	-	-	-	-	E5A	102	410	E8A	102	410
119	-	-	-	-	-	-	DF	95	170	170	-	-	-	-	-	-
121	E7F	106	300	E4A	106	300	-	-	-	-	E5A	106	410	E8A	106	410
128	E7F	113	150	E4A	113	205	DF	106	155	155	E5A	113	235	E8A	113	235
134	E7F	119	175	E4A	119	205	-	-	-	-	-	-	-	-	-	-
141	E7F	126	175	E4A	126	205	DF	117	171	171	E5A	126	350	-	-	-
144	E7F	129	175	E4A	129	300	DF	120	250	250	E5A	129	410	E8A	119	410
152	E7F	137	175	E4A	137	205	DF	128	176	175	E5A	137	410	-	-	-
167	E7F	152	200	E4A	154	210	-	-	-	-	E5A	152	410	E8A	152	410
170	-	-	-	-	-	-	DF	146	300	190	-	-	-	-	-	-
172	E7F	157	310	E4A	157	310	-	-	-	-	E5A	157	410	-	-	-
184	E7F	169	200	E4A	169	240	DF	160	300	214	E5A	169	410	E8A	169	410
190	E7F	175	270	E4A	175	350	-	-	-	-	E5A	175	410	-	-	-
192	E7F	177	210	E4A	177	210	DF	164	290	222	E5A	177	350	E8A	177	355
205	-	-	-	E4A	190	310	-	-	-	-	E5A	190	410	-	-	-
216	-	-	-	E4A	200	450	DF[1)]	191	241	-	E5A	200	410	-	-	-
228	-	-	-	-	-	-	DF	193	300	300	-	-	-	-	-	-
229	-	-	-	E4A	200	450	-	-	-	-	E5A	200	410	E8A	200	410
240	-	-	-	E4A	200	450	DF	200	290	260	E5A	200	410	E8A	200	410
257	-	-	-	E4A	220	470	-	-	-	-	-	-	-	-	-	-

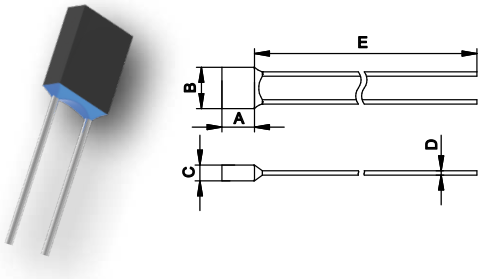
[1)] VDE approved only Tape + Reel, cut and bent on request



type	A	B	C	D	E	approvals
MTVS	6,5±0,5	Ø2,1±0,1	2,6 max	Ø0,5±0,05	37±3	UL, cUL, TÜV, CCC
MTKF	6,0±1	Ø1,5±0,1	1,8 max	Ø0,53±0,1	'00' = 38±3; '01' = 68±3	UL, VDE
MTHS	9,0±0,5	Ø2,5±0,5	3,0 max	Ø0,54±0,05	36±3	UL, cUL, TÜV, CCC
MTTF	6,3±1	Ø2,0±0,1	2,3 max	Ø0,53±0,1	'00' = 38±3; '01' = 68±3	UL, VDE
MTCS	11,5±0,5	Ø3,3±0,5	3,8 max	Ø0,80±0,05	35±3	UL, cUL, TÜV, CCC
MTYF	10,0±1	Ø3,0±0,2	3,3 max	Ø0,70±0,1	'00' = 38±3; '01' = 68±3	UL, VDE

T_f (tolerance +0 / -10°C)	type 1A	T_h	T_m	type 2A	T_h	T_m	type 5A	T_h	T_m
76	MTVS - V0[1]	53	200	MTTF - T0F[2]	55	200	MTCS - C0[1]	53	200
86	MTKF - K1F	60	200	MTTF - T1F[2]	60	200	MTCS - C18	61	200
102	MTKF - K2F	80	200	MTTF - T2F	75	200	MTYF - Y2F	70	200
115	MTKF - K3F	99	200	MTTF - T3F	95	200	MTYF - Y3F	90	200
127	MTKF - K4F	110	200	MTTF - T4F	110	200	MTYF - Y4F	100	200
133	MTKF - K13F	110	200	MTHS - H8	111	200	MTCS - C8	108	200
136	MTKF - K5F	115	200	MTHS - H9	112	200	MTCS - C9	111	200
139	MTVS - V13	115	200	MTHS - H13	115	200	MTCS - C13	112	200
145	MTVS - V6	121	200	MTTF - T7F[2]	125	200	MTCS - C6	118	200
150	MTVS - V7	126	200	MTHS - H7	126	200	MTCS - C7	123	200

[1] only TÜV, CCC [2] only 1A



type	A	B	C	D	E	approvals
MTNF	4,1±0,5	5,2±0,5	2,0±0,3	0,53±0,1	'S' = 36±3; 'L' = 68±3	UL, VDE
MTF	4,1±0,5	5,2±0,5	2,3±0,2	0,50±0,05	56±3	UL, VDE, CCC
MTX	5,8±0,5	5,8±0,5	2,3±0,2	0,54±0,05	64±3	UL, VDE, CCC
MTY	7,0±0,5	6,6±0,5	2,7±0,3	0,80±0,05	63±3	UL, VDE, CCC
MTT	7,5±0,5	8,3±0,5	3,4±0,2	1,05±0,5	38±5	UL, VDE, CCC
MTP	11,5±0,5	10,8±0,5	4,8±0,2	1,60±0,05	39±5	UL, VDE, CCC

T_f (tolerance +0 / -10°C)	type 1A	T_h	T_m	type 3A	T_h	T_m	type 5A	T_h	T_m	type 15A	T_h	T_m	type 20A	T_h	T_m
76	MTF - F0[1]	53	200	MTX - X0[1]	53	200	MTY - Y0[1]	53	200	-	-	-	-	-	-
86	MTNF - N1F	60	200	MTX - X18	61	200	MTY - Y18[1]	61	200	-	-	-	-	-	-
102	MTNF - N2F	75	200	MTX - X1	79	200	MTY - Y1[1]	77	200	MTT - T102	72	200	-	-	-
115	MTF - F2	91	200	MTX - X2	91	200	MTY - Y2	89	200	MTT - T115	85	200	MTP - P115	82	200
125	MTF - F3	100	200	MTX - X3[3]	100	200	-	-	-	-	-	-	-	-	-
130	MTF - F4	106	200	MTX - X4	106	200	MTY - Y4	103	200	-	-	-	-	-	-
133	MTF - F8	111	200	MTX - X8	111	200	-	-	-	-	-	-	-	-	-
136	MTNF - N5F	100	200	MTX - X9	112	200	MTY - Y9	111	200	MTT - T136	106	200	MTP - P136	102	200
145	MTF - F6[1]	121	200	MTX - X6	121	200	-	-	-	-	-	-	-	-	-
150	MTF - F7	126	200	MTX - X7	126	200	MTY - Y7	123	200	-	-	-	-	-	-
160	MTF - F16[2]	135	200	MTX - X16[2]	135	200	-	-	-	-	-	-	-	-	-

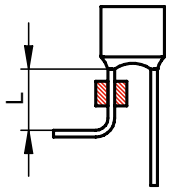
[1] not VDE [2] only CCC

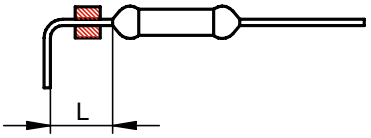
T_f	**Fuse tripping temperature:** The maximum temperature at which the thermal fuse changes its state from closed (= connected) to open (= interrupted). Note: Depending on the current intensity, self‑heating of the component occurs, which should be considered to avoid premature tripping.
T_h	**Continuous operating temperature:** Maximum temperature of the fuse, measured at the head end of the component, which can be maintained for a period of 168h (= 1 week) without triggering an unwanted contact opening. Above this temperature, the tripping temperature may drop, causing premature tripping is possible. Note: It is recommended not to expose the fuses to continuous operating temperatures above Th.
T_m	**Maximum limit temperature:** Maximum temperature above which a defect can occur with the opened thermal fuse. From here on, the function can no longer be guaranteed, which may result in an undesired short circuit (reclosing).

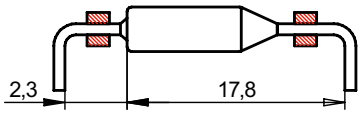
MICROTHERM
sentronic

Notes for handling of parts

Bending leads

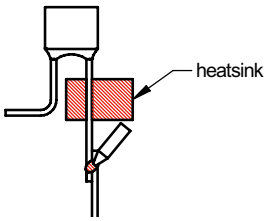


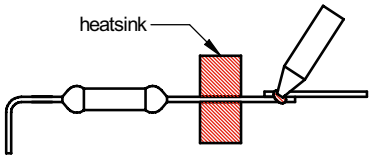


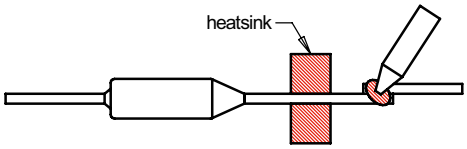


for wire up to ø 1mm	L >= 3mm
for wire > ø 1mm	L >= 5mm
Bending radius in general	R >= 1mm

Soldering leads







Microtherm Sentronic GmbH

Unterer Hardweg 9
75181 Pforzheim
Deutschland

Tel.: +49 7231 787-0
Fax: +49 7231 787-155

info@microtherm.de
www.microtherm.de