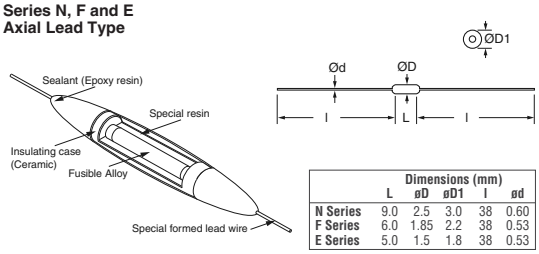
Panasonic® Thermal Cutoffs (TCO) / Thermal-Links — EYP Type

Features: • **Small and Insulation Type:** TCO is compact and insulated, featuring quick temperature response, and mountable in a small space without insulation or protection • **High Reliability:** TCO opens reliably when the equipment becomes abnormal, and is not resettable • **Solid Structure:** Unique formed lead provides reliable TCO connection and provides easy assembly handling. (Axial lead type only) • **Non-Cadmium Alloy:** TCO uses specially selected non-cadmium alloy • **Thin Type:** Thickness is less than 1mm. Available for spot welding.

Recommended Applications: Transformers, solenoids, ventilation fan, electric fans, small electric motors, dryers, gas home appliances, fluorescent lights, electric shavers, adaptors, heating devices, ICs, batteries, etc. The TCO can be used for overheating protection.

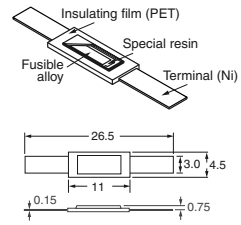
Approved Safety Standards:
▼ (Japan): 33-xxx (see chart)
UL (USA): E60271
CSA (Canada): LR67163
VDE (Germany): N Series: 4811.6-1171-0001; F Series: 4811.6-4510-1026; E Series: 4811.6-4510-1030
BEAB (U.K.): N Series: C0736; F Series: C0738; E Series: C0739

Series N, F and E Axial Lead Type



Dimensions (mm)	L	øD	øD1	l	ød
N Series	9.0	2.5	3.0	38	0.60
F Series	6.0	1.85	2.2	38	0.53
E Series	5.0	1.5	1.8	38	0.53

Series MT — Thin Type



Type No. of Approved Standards	Rated Functioning Temp.[1] (°C)	Functioning Temp.[2] (°C)	Maximum Operating Temp.[3] (°C)	Holding Temp.[4] (°C)	Maximum Temp. (°C)[5] UL, VDE, BEAB	Maximum Temp. (°C)[5] CSA	Electrical Rating AC/DC	Electrical Rating Amp (A)	Electrical Rating Volt (V)	Approved Safety Standards ▼	UL	CSA	VDE	BEAB	Digi-Key Part No.	Price Each 1	Price Each 10	Price Each 100	Panasonic Part No.
N Series																			
			52	56			AC	3.0	125		○	○	○	—					
N082	86	82±2	60	60	200	150	AC	2.0	250	33-627	○	○	○	○	P10917-ND◆	.33	.30	.27	EYP-2BN082
			45	50			DC	4.0	50		○	○	○	—					
			76	86			AC	3.0	125		○	○	○	—					
N109	114	110±3	80	90	200	150	AC	2.0	250	33-634	○	○	○	○	P10920-ND◆	.33	.30	.27	EYP-2BN109
			65	74			DC	5.0	50		○	○	○	—					
			76	86			AC	3.0	125		○	○	○	—					
N110	115	110^{+3}_{-2}	80	90	200	150	AC	2.0	250	33-634	○	○	○	—	P10921-ND◆	.33	.30	.27	EYP-2BN110
			65	74			DC	5.0	50		○	○	○	—					
			90	105			AC	3.0	125		○	○	○	—					
N124	130	126±2	94	105	200	180	AC	2.0	250	33-619	○	○	○	○	P10922-ND	.33	.30	.27	EYP-2BN124
			80	94			DC	5.0	50		○	○	○	—					
			105	115			AC	3.0	125		○	○	○	—					
N143	145	141±2	110	120	200	180	AC	2.0	250	33-621	○	○	○	○	P10925-ND◆	.33	.30	.27	EYP-2BN143
			80	90			DC	6.0	50		○	○	○	—					
			120	130			AC	3.0	125		○	○	○	—					
N163	168	163^{+4}_{-2}	120	135	200		AC	2.0	250	33-623	○	○	○	○	P10926-ND	.33	.30	.27	EYP-2BN163
			90	100			DC	6.0	50		○	○	○	—					
			120	140			AC	3.0	125		○	○	○	—					
N183	188	183^{+4}_{-2}	120	140	200		AC	2.0	250	33-625	○	○	○	○	P10927-ND	.33	.30	.27	EYP-2BN183
			120	130			DC	6.0	50		○	○	○	—					
F Series																			
			76	90			AC	2.0	125		○	○	○	—					
F115	115	110^{+3}_{-2}	80	90	200	150	AC	1.0	250	33-634	○	○	○	○	P10912-ND◆	.33	.30	.27	EYP-1BF115
			70	80			DC	4.0	50		○	○	○	—					
			120	135			AC	2.0	125		○	○	○	—					
F168	168	163^{+4}_{-2}	120	142	200		AC	1.0	250	33-623	○	○	○	—	P10916-ND	.33	.30	.27	EYP-1BF168
			95	110			DC	5.0	50		○	○	○	—					
E Series																			
			70	78			AC	1.5	125		○	○	○	—					
E102	102	98±2	75	80	200	150	AC	0.5	250	33-632	○	○	○	○	P10906-ND	.33	.30	.27	EYP-05BE102
			65	70			DC	3.0	50		○	○	○	—					
			76	93			AC	1.5	125		○	○	○	—					
E115	115	110±2	80	95	200	150	AC	0.5	250	33-634	○	○	○	○	P10907-ND◆	.33	.30	.27	EYP-05BE115
			70	84			DC	3.0	50		○	○	○	—					
			92	115			AC	1.5	125		○	○	○	—					
E133	133	128±2	96	115	200	180	AC	0.5	250	33-619	○	○	○	○	P10909-ND	.33	.30	.27	EYP-05BE133
			85	105			DC	3.0	50		○	○	○	—					
			99	120			AC	1.5	125		○	○	○	—					
E139	139	135±3	103	120	200	180	AC	0.5	250	33-619	○	○	○	○	P10910-ND‡	.33	.30	.27	EYP-05BE139
			92	110			DC	3.0	50		○	○	○	—					
MT Series †																			
MT102															P10934-ND	.65	.60	.54	EYP-2MT102
MT102A	102	98±2	65	70	150		DC	2.0	50	—	○	—	—	—	P10935-ND	.65	.60	.54	EYP-2MT102A
MT102B															P10936-ND	.65	.60	.54	EYP-2MT102B

NOTES:

1. **Rated Functioning Temperature** (UL: TF, CSA, VDE, BEAB: Tf). The temperature at which a TCO changes its state of conductivity to open circuit with loading detection current only. Tolerance: ▼ : ±7°C; UL, CSA, VDE, BEAB: 0 / -10°C
2. **Functioning Temperature**: (Fusing-off temperature): The functioning temperature at which a TCO changes its state of conductivity to open circuit in the ambient air oven which increases temperature by 1°C per minute and with loading detection current of 0.1A or less.
3. **Maximum Operating Temperature:** The maximum temperature at which a TCO can be maintained while conducting rated current for 3000 h.
4. **Holding Temperature** (UL: TH, CSA: Th, VDE, BEAB: Tc). The maximum temperature at which a TCO can be maintained while conducting rated current for 168h which will not cause a change in state of conductivity to open circuit.
5. **Maximum Temperature Limit** (UL: TM, CSA, VDE, BEAB: Tm) The maximum temperature at which a TCO can maintain its mechanical and electrical properties without closing again for 10 minutes after a TCO has changed its state of conductivity.

‡ P10910-ND are additionally approved for UL, on DC50V 5A

† Std. DC Resistance is <15mΩ, A = <16mΩ, B = <17mΩ

◆ ***RoHS Compliant***

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