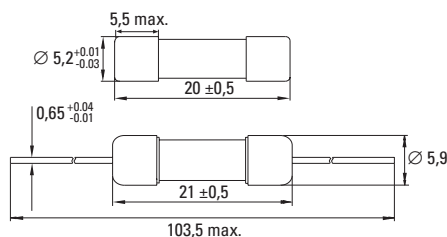


5x20mm / No. 194



Dimensions (mm)



IEC 60127-2/I, 250V, F

Time-Current Characteristic

Quick Acting (F)

Standard

IEC 60127-2/I
DIN 41660

Approvals

VDE: License No. 40005871
SEMKO: Certificate No. 9841086
cULus Recognized: File No. E 67006
CCC: Certificate No. 2002010207027295

Features

High breaking capacity
Direct solderable or plug-in versions
Internationally approved
Worldwide availability

WebLinks

Data Sheet - latest version

www.wickmannusa.com/products/194.pdf

Approval Certificates

www.wickmannusa.com/approvals

Time-Current Curve

www.wickmannusa.com/itcurves

Packaging

www.wickmannusa.com/pack

For Application Information refer to

www.wickmannusa.com/download/fuseology.pdf

Specifications

Packaging Code and Info

000: Bulk (1000 pcs.)
002: Bulk (10 pcs.)
040: Axial Leads - Bulk (1000 pcs.)
043: Axial Leads - Tape/Reel (1250 pcs.)

Materials

Tube: Ceramic
End Caps: Nickel-plated brass
Axial Leads: Silver-plated caps
Tin-plated copper wires
(not available above 10A)

Operating Temperature

-40°C to +85°C (consider de-rating)

Climatic Category

-40°C/+85°C/21 days (EN 60068-1..3)

Stock Conditions

+10°C to +60°C
relative humidity ≤ 75% yearly average,
without dew, maximum value for 30 days-95%

Vibration Resistance

24 cycles at 15 min. each (EN 60068-6)
10 - 60Hz at 0.75mm amplitude
60 - 2000Hz at 10g acceleration

Solderability

260°C, ≤ 3 sec. (Wave)
350°C, ≤ 1 sec. (Hand)

Soldering Heat Resistance

260°C, 10 sec. (IEC 60068-2-20)

Marking

Ⓜ, F, Current Rating, H, 250V, Approvals

Unit Weight

1.2g (approx.)
2.2g (with leads)



Limits for Pre-arcing Time

Rated Current	1.5 x I _{Rated}	2.1 x I _{Rated}	2.75 x I _{Rated}	4 x I _{Rated}	10 x I _{Rated}
200mA ... 3.15A	> 1h	< 30 min	10ms ... 2s	3ms ... 300ms	<20ms
4.00A ... 6.30A	> 1h	< 30 min	10ms ... 3s	3ms ... 300ms	<20ms
8.00A ... 10.00A	> 30min	< 30 min	10ms ... 3s	3ms ... 300ms	<20ms
12.50A ... 16.00A	> 1h	< 30 min	40ms ... 20s	10ms ... 1ms	<30ms

Permissible continuous operating current is ≤ 100% at ambient temperature of 23°C (73.4°F).

Rated Current	Amp Code	Voltage Rating	Breaking Capacity	Voltage Drop 1.0 x I _{Rated} max. (mV)	Power Dissipation 1.5 x I _{Rated} max. (W)	Melting Integral 10 x I _{Rated} max. (A²s)	Approvals			
							VDE	SEMKO	cULus	CCC
200mA ¹	0200	250V		3500	1.2	0.007	•	•		p
250mA ¹	0250	250V		1000	0.8	0.013	•	•		p
315mA ¹	0315	250V		950	0.8	0.015	•	•	•	p
400mA ¹	0400	250V		900	0.9	0.027	•	•	•	p
500mA ¹	0500	250V		850	1.0	0.041	•	•	•	p
630mA ¹	0630	250V		800	1.1	0.075	•	•	•	p
800mA ¹	0800	250V		750	1.3	0.12	•	•	•	p
1.00A	1100	250V		700	1.4	0.29	•	•	•	•
1.25A	1125	250V	1500A / 250VAC	650	1.6	0.7	•	•	•	•
1.60A	1160	250V	50-60Hz	500	1.8	1.0	•	•	•	•
2.00A	1200	250V	cos φ = 0.7-0.8	400	2.0	1.8	•	•	•	•
2.50A	1250	250V		350	2.3	3.0	•	•	•	•
3.15A	1315	250V		300	2.8	7.8	•	•	•	•
4.00A	1400	250V		270	3.5	15	•	•	•	•
5.00A	1500	250V		250	3.7	35	•	•	•	•
6.30A	1630	250V		200	4.0	75	•	•	•	•
8.00A ²	1800	250V		180	3.0	130			•	
10.00A ²	2100	250V		170	4.0	150			•	
12.50A ^{1,2}	2125	250V	750A / 250VAC	100	4.0	250	G	R	•	
16.00A ^{1,2}	2160	250V	1000A / 125VAC	90	4.5	480	G	R	•	

¹ Axial leads not available below 1A or above 10A. ² Not mentioned in the fuse standards. ^G Expert Report ^R Test Report ^P=pending

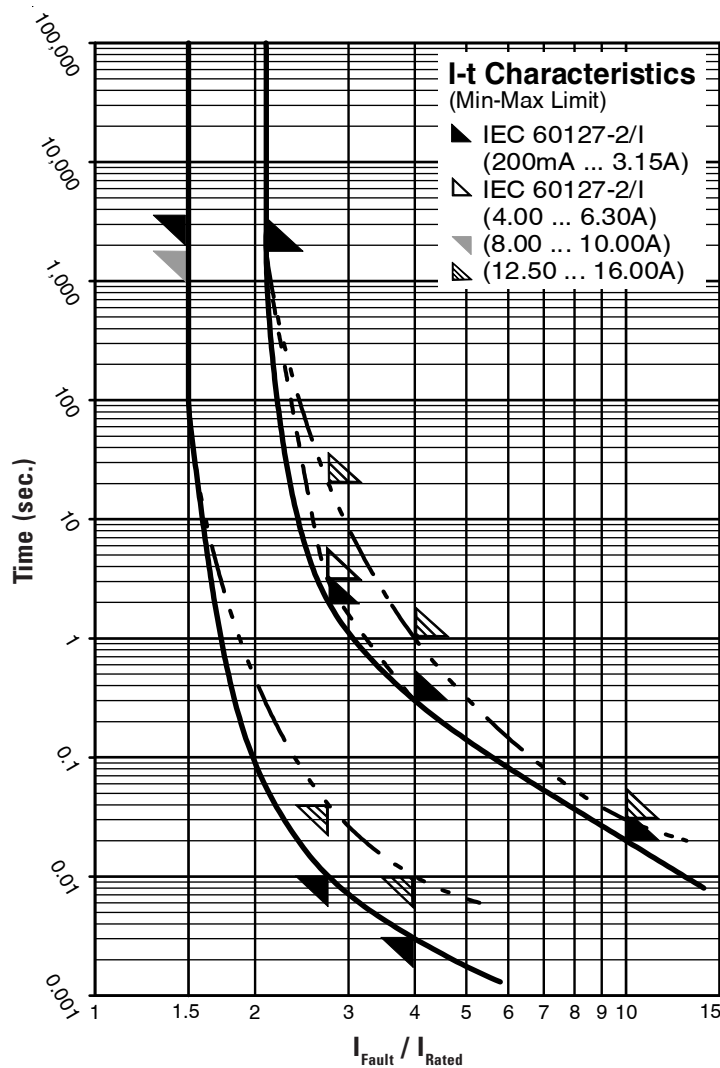
Order Information

Qty.	Order-Number	Series	Amp Code	Pack. Code
		194		

Specifications are subject to change without notice.

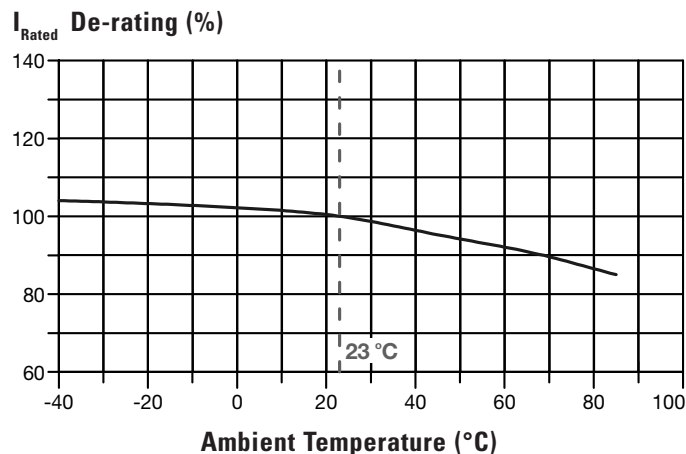
5x20mm / No. 194

Time-Current Characteristics



Contact WICKMANN for individual I-t curves

Thermal De-rating



Thermal De-rating Calculations

- 1) Estimate the maximum continuous ambient temperature measured 1cm from the fuse.
- 2) Determine the De-rating factor (%) from the curve above.
- 3) To calculate the minimum fuse current rating (I_{rated}) required, divide the measured continuous operating current of the circuit by the De-rating factor (%):

$$I_{\text{min. fuse current rating}} \geq \frac{I_{\text{Operating (Ambient)}}}{\% \text{ De-rating}}$$

- 4) These calculations pertain only to fuse de-rating under varying ambient temperatures. Additional calculations for determining minimum fuse rating may also be required. Please also consider the applicable fuse standard (IEC vs. UL) and the presence of inrush or pulsing currents.