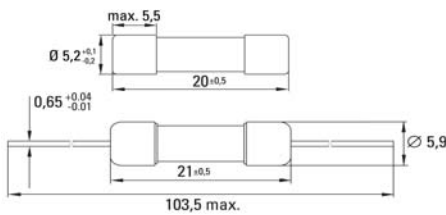


5x20 mm / No. 193

This product is not recommended for new designs. Please refer to Littelfuse No. 217.



Dimensions (mm)



Optional Holders

IEC 60127-2/II, 250V, F

Time-Current Characteristic

Quick Acting (F)

Standard

IEC 60127-2/II
DIN 41661

Approvals

VDE
SEMKO
cULus Recognized
CCC

Features

Visual fault indication
Direct solderable or plug-in versions
Internationally approved
Worldwide availability

WebLinks

Further info see:

www.wickmanngroup.com

Further application info see fuseology:

www.wickmanngroup.com/download/fuseology.pdf

Specifications

Packaging

000: Bulk (1000 pcs.)
002: Bulk (20x10 pcs.)
043: With mounted holder - Tape/Reel (1250 pcs.) on request

Materials

Tube: Glass
End Caps: Nickel-plated brass
Optional Holders: Nickel-plated caps
Tin-plated copper wires

Operating Temperature

-25 °C to +70 °C (consider de-rating)

Climatic Category

-25 °C / +70 °C / 21 days
(IEC 60068-1,-2-1,-2-2,-2-78)

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 - 60 Hz at 0.75 mm amplitude
60 - 2000 Hz at 10 g acceleration

Solderability

260 °C, ≤ 3 s (Wave)
350 °C, ≤ 1 s (LötKolben)

Soldering Heat Resistance

260 °C, 10 s (IEC 60068-2-20)

Marking

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

Unit Weight

1.0 g (approx.)
1.9 g (with mounted holders)

Limits for Pre-arcing Time

Rated Current	1.5 x I _N	2.1 x I _N	2.75 x I _N	4 x I _N	10 x I _N
32 mA ... 100 mA	> 1 h	< 30 min	10 ms ... 500 ms	3 ms ... 100 ms	< 20 ms
125 mA ... 6.30 A	> 1 h	< 30 min	50 ms ... 2 s	10 ms ... 300 ms	< 20 ms



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 _N Ⓜ max. (mV)	Power Dissipation 1.5 x I _N Ⓜ max. (W)	Melting Integral 10 x I _N Ⓜ max. (A ² s)	Approvals			
							VDE	SEMKO	CURus	CCC
32 mA	0032	250 V		10000 ¹	1.6 ¹	0.0020				p
40 mA	0040	250 V		8000 ¹	1.6 ¹	0.0032				p
50 mA	0050	250 V		7000 ¹	1.6 ¹	0.0050				p
63 mA	0063	250 V		5000 ¹	1.6 ¹	0.0079				p
80 mA	0080	250 V		3300	0.6	0.0032				p
100 mA	0100	250 V		2600	0.7	0.007				p
125 mA	0125	250 V		2000	0.8	0.014				p
160 mA	0160	250 V		2000	0.9	0.024				p
200 mA	0200	250 V		300	0.2	0.018				p
250 mA	0250	250 V		270	0.3	0.032				p
315 mA	0315	250 V	35 A / 250 V AC 50-60 Hz	250	0.3	0.062				p
400 mA	0400	250 V	cos φ = 1.0	200	0.3	0.13				p
500 mA	0500	250 V		190	0.3	0.23				p
630 mA	0630	250 V		180	0.4	0.44				p
800 mA	0800	250 V		170	0.5	1.0				p
1.00 A	1100	250 V		165	0.6	1.4				p
1.25 A	1125	250 V		160	0.8	2.7				p
1.60 A	1160	250 V		155	1.0	4.3				p
2.00 A	1200	250 V		150	1.0	7.8				p
2.50 A	1250	250 V		145	1.1	13				p
3.15 A	1315	250 V		140	1.3	20				p
4.00 A	1400	250 V	40 A/250 V AC/cos φ=1.0	130	2.1	21				p
5.00 A	1500	250 V	50 A/250 V AC/cos φ=1.0	125	2.3	38				p
6.30 A	1630	250 V	63 A/250 V AC/cos φ=1.0	100	2.5	72				p

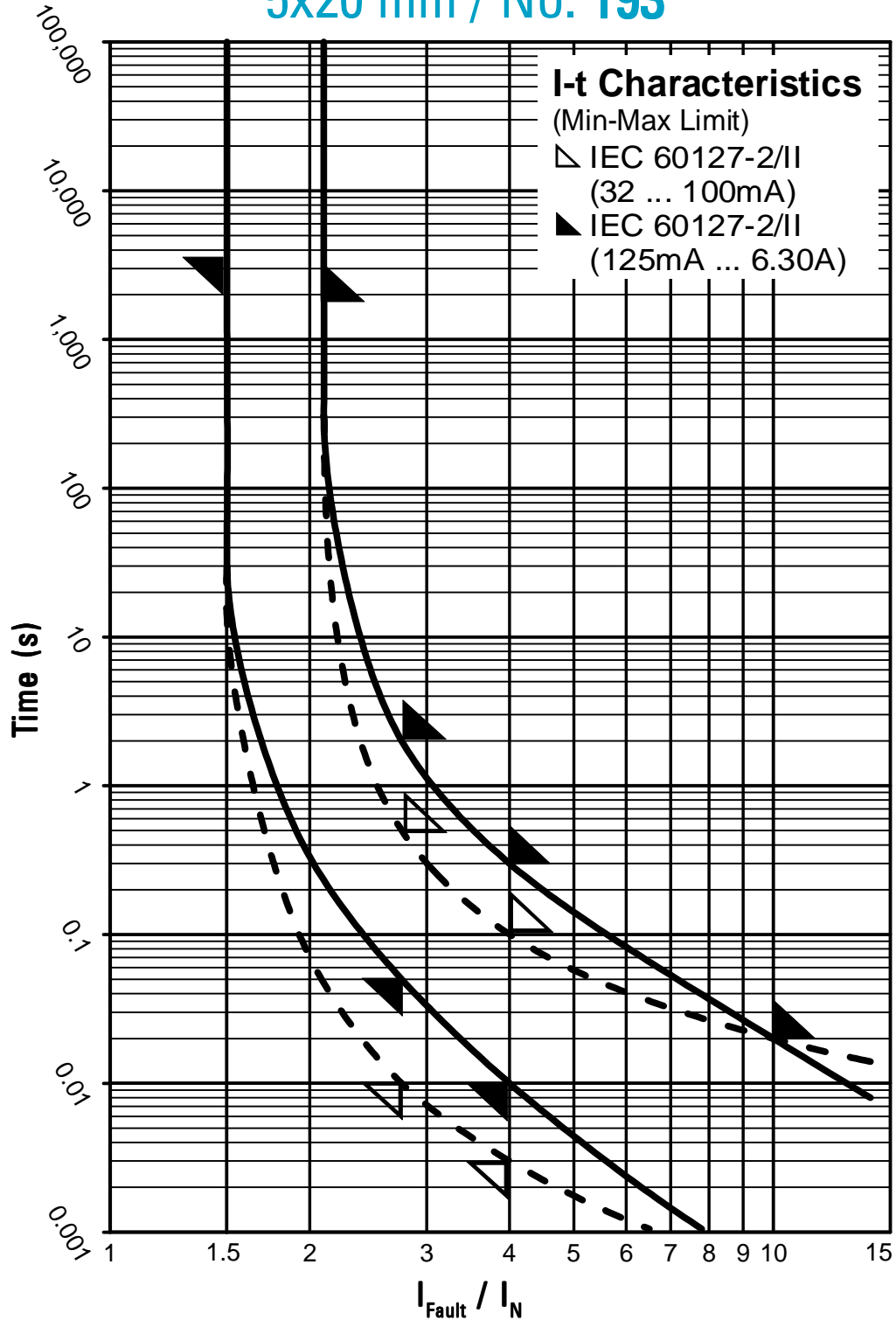
¹ IEC 60127-2 values

Order Information

Qty.	Order-Number	Series	Amp Code	Packaging
		193		

p=pending
Specifications are subject to change without notice.

5x20 mm / No. 193



Contact WICKMANN for individual I-t curves