

Supplemental (10 x 38) Fuses

KLKD_CN Series

600 V ac/dc • Fast Acting • 15–30 A



Description

The KLKD_CN series fast-acting 600 V ac/dc fuses are used in solar combiner boxes and in circuits with dc fault currents up to 50,000 A. These fuses are designed to meet both the UL and IEC photovoltaic fuse specifications and are available in standard and board-mount configurations. The KLKD_CN supplemental fuses also have high-interrupting and current-limiting capability. They are intended to supplement the primary branch-circuit fuse or breaker to provide backup overcurrent protection. The KLKD_CN fuses are non-indicating and may be used with an indicating fuse block or cover. These fuses are offered in a range of ampere ratings to match specific requirements in a variety of applications.

Features & Benefits

FEATURES	BENEFITS
10 x 38 mm size	Common dimensions used in a variety of applications
Fast-acting	Provides fast, reliable short-circuit response within the interrupting rating
Mounting options	Available in ferrule or PCB-mount configurations
POWR-GARD® technology	Ensures quality backup overcurrent protection
UL & IEC compliant	Serves a global market

Applications

- Solar combiner boxes
- Inverters
- Power supplies
- Desktop meters

Supplemental (10 x 38) Fuses

KLKD_CN Series

Specifications

Voltage Rating	600 V ac / V dc
Ampere Range	15 – 30 A
Interrupting Ratings	Ac: 100 kA 200 kA Littelfuse self-certified Dc: 15 – 30: 10 kA (UL 248-19) 15 – 30: 50 kA (UL 248-14)
Applicable Standards	UL 248-14, UL 248-19, CSA, IEC 60269-6
Environmental	RoHS Compliant
Material	Body: Melamine Caps: Copper Alloy
Operating Temperature	See Derating Curve
Country of Origin	China

Certification & Compliance

UL	UL Certifies Safety-US for Photovoltaic Systems (File E339112) cULus Listed Supplemental fuse (File E10480)
IEC	15 – 25 A Self Certified (IEC 60269-6)
CE	Declaration of Conformity: EU_DOC-KLKD_CN_230330_IEC; EU_DOC-KLKD_CN_230330
RoHS	RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863

Accessories

Littelfuse LPSM dead-front series fuse holder (ferrule fuse)
Littelfuse L60030M open-face series fuse holder (ferrule fuse)

Ordering Information (Ferrule Version)

AMPERAGE RATING	CATALOG NUMBER	PRODUCT MARKING	PACKING QUANTITY	ORDERING NUMBER	UPC CODE
15	KLKD015CN	KLKD 15A-CN	10	KLKD015.TXCN	07945831111
			100	KLKD015.HXCN	07945831112
20	KLKD020CN	KLKD 20A-CN	10	KLKD020.TXCN	07945831114
			100	KLKD020.HXCN	07945831115
25	KLKD025CN	KLKD 25A-CN	10	KLKD025.TXCN	07945831117
			100	KLKD025.HXCN	07945831118
30	KLKD030CN	KLKD 30A-CN	10	KLKD030.TXCN	07945831120
			100	KLKD030.HXCN	07945831121

Ordering Information (PCB Version)

AMPERAGE RATING	CATALOG NUMBER	PRODUCT MARKING	PACKING QUANTITY	ORDERING NUMBER	UPC CODE
15	KLKD015RCN	KLKD 15A-RCN	100	KLKD015.HXRCN	07945831113
20	KLKD020RCN	KLKD 20A-RCN	100	KLKD020.HXRCN	07945831116
25	KLKD025RCN	KLKD 25A-RCN	100	KLKD025.HXRCN	07945831119
30	KLKD030RCN	KLKD 30A-RCN	100	KLKD030.HXRCN	07945831122

Supplemental (10 x 38) Fuses

KLKD_CN Series

Electrical Specifications

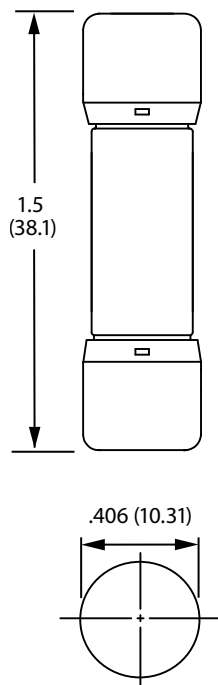
AMPERAGE RATING	CATALOG NUMBER		VOLTAGE RATING		INTERRUPTING RATING		NOM COLD RESISTANCE (OHMS)	WATTS LOSS AT 100 % RATED CURRENT (W)	WATTS LOSS AT 80 % RATED CURRENT (W)	AVERAGE MELTING I2T (A2S)	TOTAL CLEARING I2T (A2S) 20 KA @ 600 V DC	TOTAL CLEARING I2T (A2S) 100 KA @ 600 V AC
	FERRULE	PCB	AC	DC	AC	DC						
15	KLKD015CN	KLKD015RCN	600	600	200	50	0.007855	2.045	1.570	137	351	419
20	KLKD020CN	KLKD020RCN	600	600	200	50	0.0045	2.133	1.593	462	1151	1232
25	KLKD025CN	KLKD025RCN	600	600	200	50	0.003532	2.550	1.933	835	1744	2190
30	KLKD030CN	KLKD030RCN	600	600	200	50	0.002776	3.701	1.983	1409	2757	3220

Electrical Specification - Agency Requirements

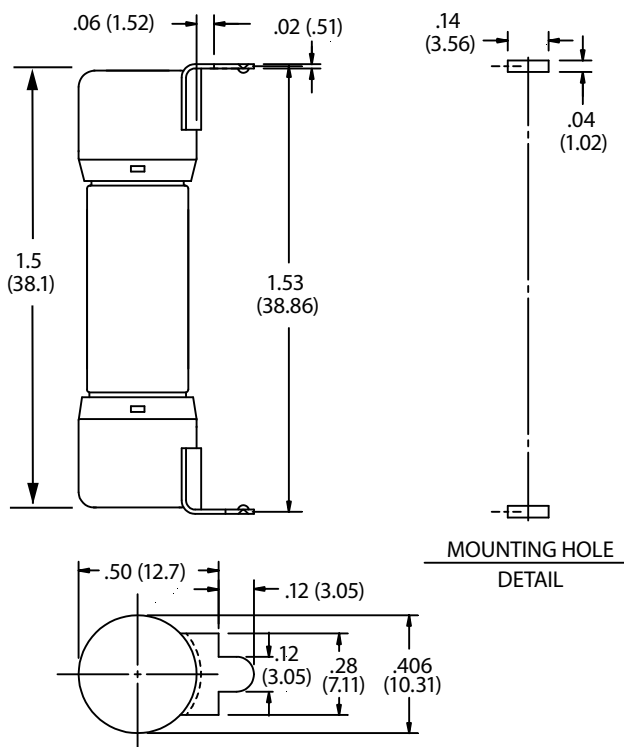
AMPERAGE RATING	OPENING TIME (MINUTES)			
	100 % OF AMPERE RATING PER UL	105 % OF AMPERE RATING PER IEC	135 % OF AMPERE RATING PER UL	200 % OF AMPERE RATING PER UL
15 – 30	Temperature Stabilization	60 min	60 max	2 max

Dimensions Inches (mm)

FERRULE VERSION



PCB VERSION



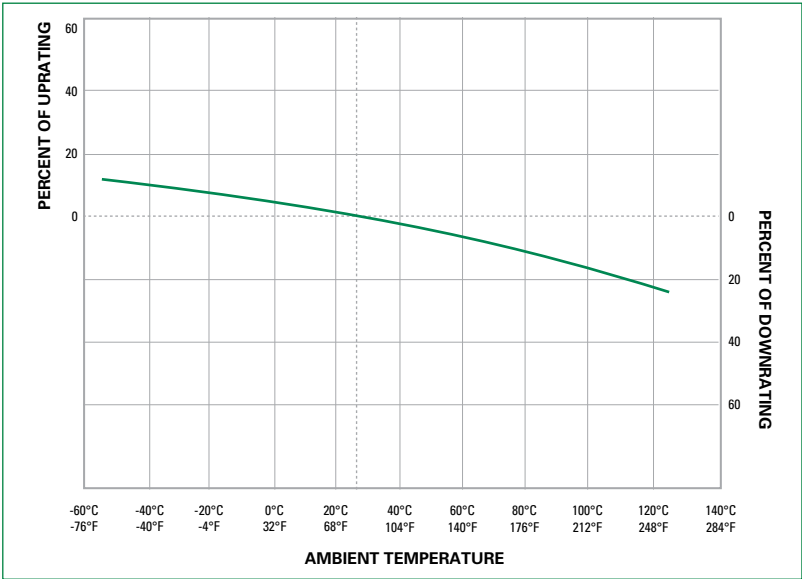
MOUNTING HOLE
DETAIL

Supplemental (10 x 38) Fuses

KLKD_CN Series

Temperature Derating Curve

Ambient temperature: temperature of air immediately surrounding fuse



Current-Limiting Effects

SHORT CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS	
	25 A	30 A
5,000	654	722
10,000	823	910
15,000	943	1042
20,000	1037	1147
25,000	1117	1235
30,000	1188	1313
35,000	1250	1382
40,000	1307	1445
50,000	1408	1556
60,000	1496	1654
80,000	1647	1820
100,000	1774	1961

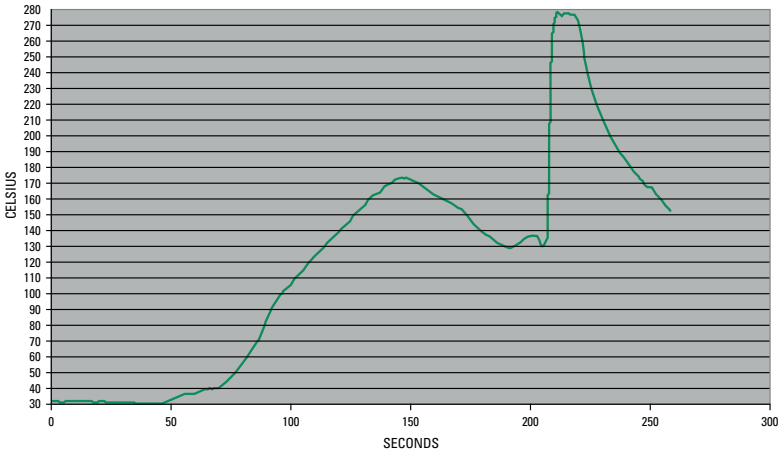
*Prospective RMS Symmetrical Amperes Short-Circuit Current

Supplemental (10 x 38) Fuses

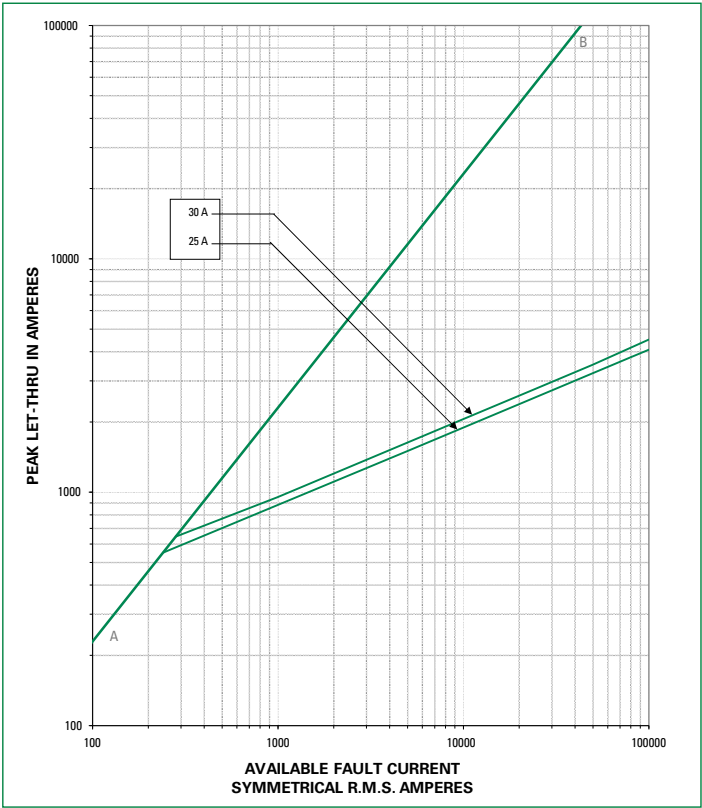
KLKD_CN Series

Recommended Process and Soldering Parameters

WAVE PARAMETER	LEAD FREE RECOMMENDATION
Preheat:	Typical Industry Recommendation
Temperature Minimum:	130 °C
Temperature Maximum:	—
Pre-heat Time	75 Seconds Maximum
Solder Pot Temperature	280 °C Maximum
Solder Dwell Time	270 °C for 8 Seconds Maximum
Complete Cycle Time	250 Seconds Maximum



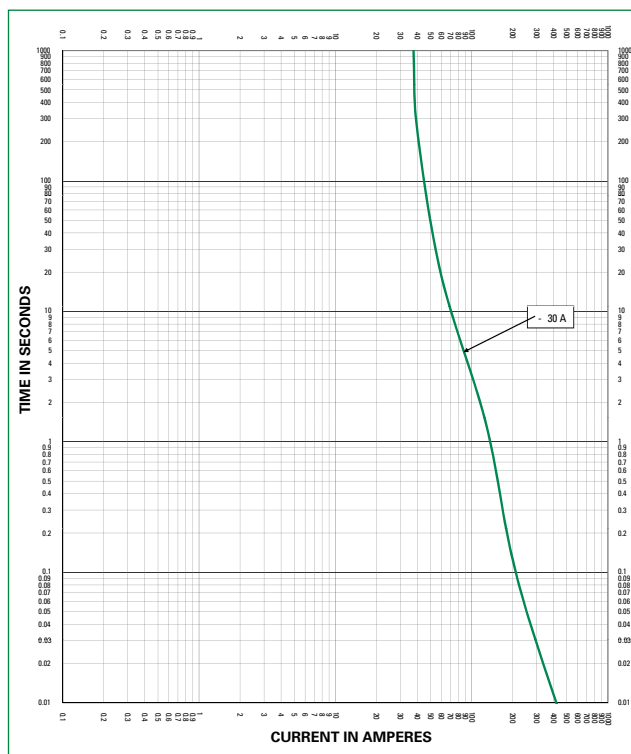
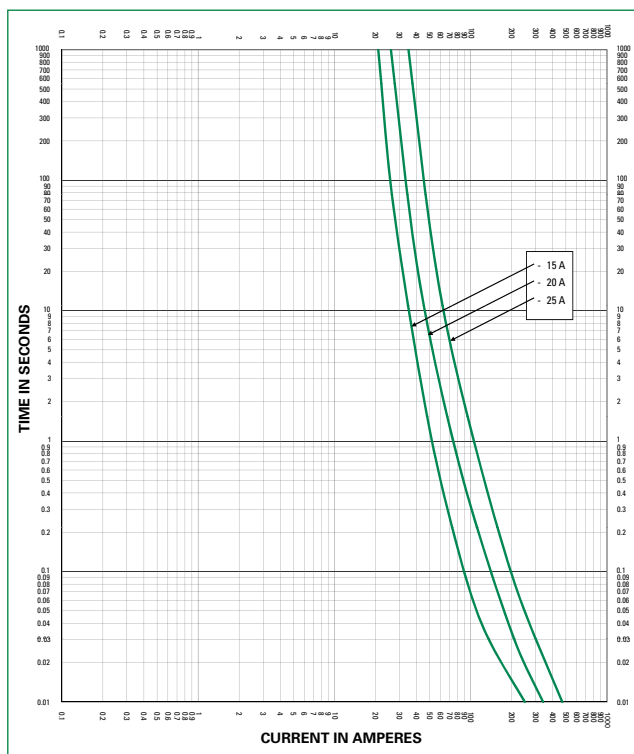
Peak Let-Thru Curve



Supplemental (10 x 38) Fuses

KLKD_CN Series

Time Current Curves



Disclaimer Notice – Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/product-disclaimer.