

PSC PROTECTION SEMICONDUCTOR SQUARE BODY FUSES

SOLUTIONS GUIDE

Now manufactured in North America for faster delivery to our North American consumers



FERRAZ SHAWMUT IS NOW MERSEN

MERSEN

PSC Square Body Fuses: Built with speed in mind

Mersen's high-performance Protection Semiconductor (PSC) technology square body fuses are truly *built with speed in mind* from protection to delivery. Mersen PSC semiconductor fuses deliver the ultimate in protection for your power conversion equipment.

Mersen's speed is not only in the performance, but also in the speed it takes to deliver the semiconductor protection you need. We've increased our production capacity by adding new production lines in our Newburyport, USA and Juarez, Mexico facilities. Our PSC fuses are made to order within ten business days* and direct ship from our production plant to your facility.

What does this mean for you? Over 550 PSC square body fuses in eight different body sizes (Sizes 30, 31, 32, 33, 70, 71, 72, & 73) will be available to ship within two weeks.* With Mersen, you're guaranteed:

- Fast delivery
- Easy ordering
- Superior protection

MERSEN

PSC semiconductor square body fuses now with

Priority Shipping Commitment

Over 550 PSC fuses in eight different body sizes will be available to ship within two weeks.*

Sizes 30, 31, 32, 33, 70, 71, 72, and 73



1250/1300 Volt PSC Square Body

Mersen 1250/1300V PSC square body fuses provide maximum flexibility in equipment design and ultimate protection for today's power conversion equipment. These square body fuses are available in four different body sizes, each size having more than four worldwide acceptable mounting styles. The different mounting styles and body sizes along with a broad range of ampere ratings allow greatest flexibility in equipment design.

Mersen PSC fuses have been engineered to provide state-of-the-art protection for SCRs, diodes, thyristors, GTOs and IGBT devices. They have die-cut elements embedded in solidified sand which helps control arcing characteristics for low I^2t and high interrupting rating. All contact surfaces are silver plated and all hardware is non-magnetic.

All PSC square body fuses are equipped with a low voltage trip-indicator. This trip-indicator can operate a field mountable microswitch which is easily mounted directly onto the fuse.

Features/Benefits:

- Choice of mounting styles gives wide choice for equipment design
- Broad range of ampere ratings in a given body size for design flexibility
- UL/CSA/IEC 60269-4 compliance for worldwide semiconductor applications

Highlights:

- Extremely fast acting
- Current limiting
- Very low I^2t
- Superior cycling ability

Applications:

- Protection of rectifiers, inverters, DC drives, UPS Systems, reduced voltage motor starters, and other equipment in globally accepted applications



Ratings:

- Volts** : 650-1300 VAC
 : DC - Consult Factory
- Amps** : 50-1800A
- I.R.** : 100kA AC

Approvals:

- UL recognized component File E76491
- IEC 60269-4 certified
- CSA 012636 0 000
- CCC approved



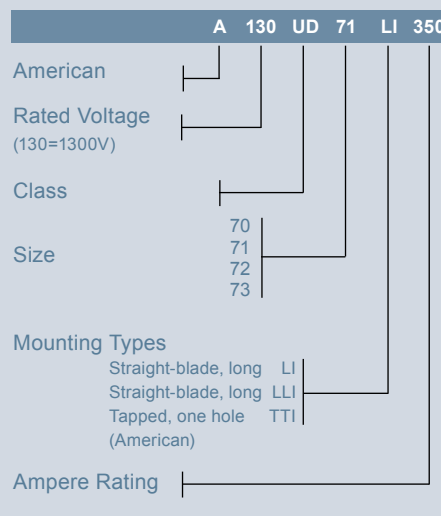
Catalog Number Designation:

A070 UD: North American
 Mounting Style/Approval
 Tested @ V_N

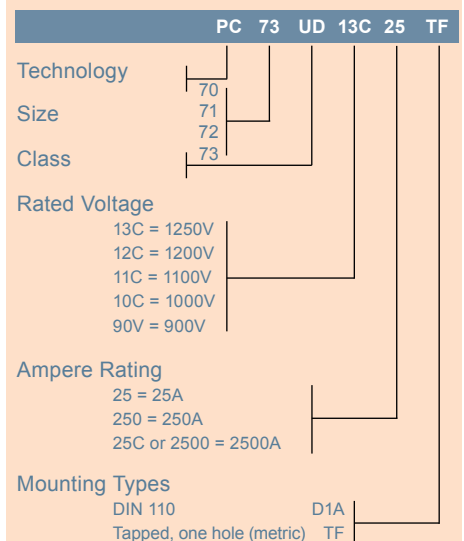
PC: European/IEC
 Mounting Style/Approval
 Tested @ $1.1 V_N$

* V_N = rated voltage

N. American Catalog Numbering System



European Catalog Numbering System

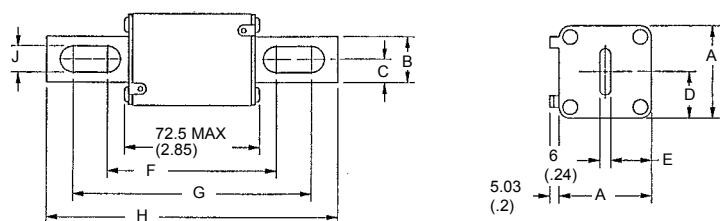


1250/1300 Volt PSC Square Body

North American Straight Blade, Types LI & LLI

Body Size	Type	Dimensions - mm (in)								
		A	B	C	D	E	F	G	H	J
70	LI	40 (1.57)	25 (0.98)	12.5 (0.49)	21 (0.83)	18 (0.71)	91.4 (3.60)	130.4 (5.13)	152.4 (6.00)	10.5 (0.41)
71	LLI	51 (2.01)	25 (0.98)	12.5 (0.49)	25.5 (1.00)	22.5 (0.89)	91.4 (3.60)	130.4 (5.13)	152.4 (6.00)	14.6 (0.57)
72	LI	60 (2.36)	32 (1.26)	16 (0.63)	30 (1.18)	27 (1.06)	97.6 (3.84)	132.4 (5.2)	157.4 (6.20)	14.6 (0.57)
73		74.5 (2.93)	40 (1.57)	20 (0.79)	37.2 (1.46)	34.2 (1.35)	98.8 (3.89)	132.4 (5.21)	157.4 (6.20)	15.9 (0.63)

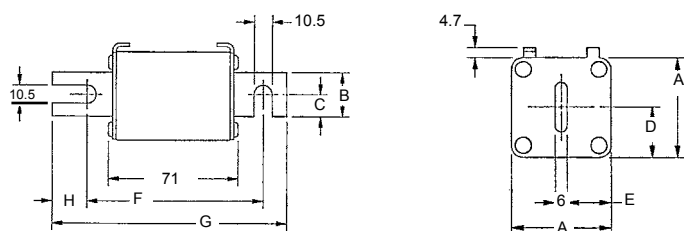
Outline Dimensions: Types LI and LLI



European Blade DIN 110, Type D1A

Body Size	Type	Dimensions - mm (in)						
		A	B	C	D	E	F	G
70	DIN 110	40 (1.57)	25 (.98)	12.5 (.49)	21 (.83)	17 (.67)	100.4 (3.95)	133.4 (5.25)
71		51 (2.01)	25 (.98)	12.5 (.49)	25.5 (1.00)	22.5 (.89)	100.4 (3.95)	133.4 (5.25)
72		60 (2.36)	32 (1.26)	16 (.63)	30 (1.18)	27 (1.06)	100.4 (3.95)	133.4 (5.25)
73		74.5 (2.93)	40 (1.57)	20 (.79)	37.2 (1.46)	34.25 (1.35)	100.4 (3.95)	133.4 (5.25)

Outline Dimensions: Type D1A

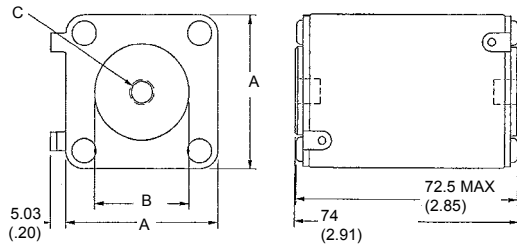


1250/1300 Volt PSC Square Body

1250/1300 Volt North American and European Tap Single Hole, Type TTI/TTF

Body Size	Type	Dimensions - mm/(In)		Tapped Hole (N. A.)		Tapped Hole (EURO.)	
		A	B	C (TTI)	D (TTF)		
70	TTI/TTF	40 (1.57)	25 (1.00)	5/16-18 X .23DP	M8 X 1.25 X 6 DP		
71		50.8 (2.00)	30.2 (1.19)	5/16-18 X .36DP	M8 X 1.25 X 9 DP		
72		60.3 (2.37)	38.1 (1.50)	3/8-16 X .36DP	M10 X 1.50 X 9 DP		
73		74.6 (2.94)	46 (1.81)	1/2-13 X .35DP	M12 X 1.75 X 9 DP		

Types TTI and TTF

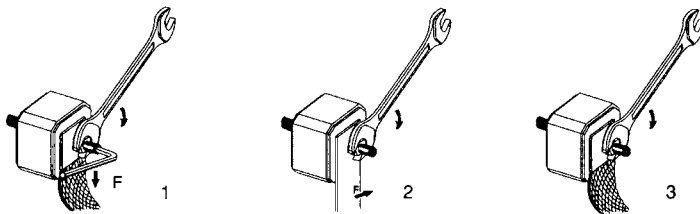


Standard Threaded Studs

Size	Reference No. Per Pair	Ref. and Dimension Per Pair of Studs	Weight (g)	Max Stud Mounting Torque (Nm)*	Max Nut Tightening Torque (Nm)*		
					Fig. 1	Fig. 2	Fig. 3
70 & 71	S098801	HC M8 X 30 & M 8 X 35	23	13	13.5	13.5	13.5
72	T098802	HC M 10 X 30 & M 10 X 50	40	15	26	26	26
73	V098803	HC M 12 X 35 & M 12 X 50	60		46	46	15
2X72	W098804	HC M 10 X 50	50		26	26	26
2X73	X098805	HC M 12 X 50	70		46	46	15

Packaging: 6 pairs

*in.lbs = Nm/0.113



1250/1300 Volt PSC Square Body

1300 Volt North American Style Ratings and Application Data, LI, LLI Mounting

Body Size	Ampere Rating I_n (A)	Rated Voltage V_n (V)	Melting I^2t ($A^2s \times 10^3$)	Total Clearing I^2t @ V_n ($A^2s \times 10^3$)	Watts Loss @ I_n (W)	Reference No.	Catalog No.	Description
70	63	1300	0.21	1.7	26	W300652	A130UD70LI063	A130URD70LI0063
	80	1300	0.46	3.8	27	X300653	A130UD70LI080	A130URD70LI0080
	100	1300	0.83	6.8	30	Y300654	A130UD70LI100	A130URD70LI0100
	125	1300	1.3	11	38	Z300655	A130UD70LI125	A130URD70LI0125
	160	1300	2.6	21	45	A300656	A130UD70LI160	A130URD70LI0160
	200	1300	4.7	38	56	B300657	A130UD70LI200	A130URD70LI0200
	250	1300	9.6	77	61	C300658	A130UD70LI250	A130URD70LI0250
	315	1300	20	169	72	D300659	A130UD70LI315	A130URD70LI0315
	350	1200	28	180	75	E300660	A120UD70LI350	A120URD70LI0350
71	160	1300	2.6	21	46	E300752	A130UD71LLI160	A130URD71LLI0160
	200	1300	4.7	38	54	F300661	A130UD71LLI200	A130URD71LLI0200
	250	1300	8.9	72	61	G300662	A130UD71LLI250	A130URD71LLI0250
	280	1300	12	96	70	R300717	A130UD71LLI280	A130URD71LLI0280
	315	1300	16	129	76	H300663	A130UD71LLI315	A130URD71LLI0315
	350	1300	22	178	80	J300664	A130UD71LLI350	A130URD71LLI0350
	400	1300	38	308	80	K300665	A130UD71LLI400	A130URD71LLI0400
	450	1300	47	378	95	L300666	A130UD71LLI450	A130URD71LLI0450
	500	1200	68	441	100	M300667	A120UD71LLI500	A120URD71LLI0500
	550	1200	84	548	112	N300668	A120UD71LLI550	A120URD71LLI0550
72	630	1100	126	820	120	P300669	A110UD71LLI630	A110URD71LLI0630
	280	1300	10	85	72	Q300670	A130UD72LI280	A130URD72LI0280
	315	1300	15	125	76	R300671	A130UD72LI315	A130URD72LI0315
	350	1300	21	170	77	S300672	A130UD72LI350	A130URD72LI0350
	400	1300	33	270	80	T300673	A130UD72LI400	A130URD72LI0400
	450	1300	44	360	89	V300674	A130UD72LI450	A130URD72LI0450
	500	1300	57	465	98	W300675	A130UD72LI500	A130URD72LI0500
	550	1300	68	550	120	X300676	A130UD72LI550	A130URD72LI0550
	630	1200	106	860	125	Y300677	A120UD72LI630	A120URD72LI0630
	700	1100	142	920	160	Z300678	A110UD72LI700	A110URD72LI0700
73	800	1100	215	1400	146	A300679	A110UD72LI800	A110URD72LI0800
	315	1300	12	95	84	B300680	A130UD73LI315	A130URD73LI0315
	350	1300	17	140	86	C300681	A130UD73LI350	A130URD73LI0350
	400	1300	25	203	93	D300682	A130UD73LI400	A130URD73LI0400
	450	1300	35	290	100	E300683	A130UD73LI450	A130URD73LI0450
	500	1300	44	360	112	F300684	A130UD73LI500	A130URD73LI0500
	550	1300	57	465	120	G300685	A130UD73LI550	A130URD73LI0550
	630	1300	84	680	132	H300686	A130UD73LI630	A130URD73LI0630
	700	1300	113	900	146	J300687	A130UD73LI700	A130URD73LI0700
	800	1200	190	1530	148	V301824	A130UD73LI800	A130URD73LI0800
	900	1100	250	1460	170	L300689	A110UD73LI900	A110URD73LI0900
	1000	1000	370	2130	174	M300690	A100UD73LI1000	A100URD73LI1000
	1100	1000	445	2555	208	N300691	A100UD73LI1100	A100URD73LI1100
	1250	1000	585	3080	230	J301193	A100UD73LI1250	A100URD73LI1250
	1400	900	755	3700	260	K301194	A090UD73LI1400	A090URD73LI1400
	1600	700	1430	5760	251	P300876	A070UD73LI1600	A070URD73LI1600
	1800	650	2040	7150	255	A301599	A065UD73LI1800	A065URD73LI1800

Microswitches

Application Data

Microswitch systems adapted to the following fuses: PSC sizes 30, 31, 32, 33 / 70, 71, 72, 73

Reference No.	Description	AC Volt (V) ***	Positive Operating Volt/ Current	Rated Current	Nature of Current	Interrupting Rating						AC Voltage Withstand Test	Impulse Voltage Test UIMP 1.2/50	FIRE Class UL 94
						Non-Inductive Circuit			Inductive Circuit					
						30V	110V	250V	30V	110V	250V			
X310014	MS3V1-5	1000	20 V 50 mA	10 A	50/60 Hz DC	10A	10A	10A	10A	10A	10A	8.5 kV*	14 kV**	H.B.
J310002	MS7V1-5	1500	20 V 50 mA	10 A	50/60 Hz DC	8A	0.4A	0.2A	4A	0.2A	0.1A	12 kV*	20 kV**	H.B.
X310013	MS3V1-5BS	1000	10 V 10 mA	3 A	50/60 Hz DC	3A	3A	3A	2A	1A	1A	8.5 kV*	14 kV **	H.B.
T310011	MS3V1-9BS	1000	10 V 10 mA	3 A	50/60 Hz DC	3A	3A	3A	2A	2A	1A	8.5 kV*	14 kV **	H.B.
K310003	MS7V1-5BS	1500	10 V 10 mA	3 A	50/60 Hz DC	3A	0.5A	0.25A	3A	0.2A	0.1A	12 kV*	20 kV**	H.B.
P310007	MS7V1-9BS	1500	10 V 10 mA	3 A	50/60 Hz DC	3A	0.5A	0.25A	3A	0.2A	0.1A	12 kV*	20 kV**	H.B.
R310009	MS3V1-5ET	1000	10 V 10 mA	3 A	50/60 Hz DC	3A	3A	3A	2A	1A	1A	8.5 kV*	14 kV**	H.B.
S310010	MS7V1-5ET	1500	10 V 10 mA	3 A	50/60 Hz DC	3A	0.5A	-	2A	0.2A	-	12 kV*	20 kV**	H.B.

* Between power circuit and microswitch terminals as per IEC 60 and 694 and NFC 64010 (50/60 Hz 1 min. duration in dry air)

** Between power circuit and microswitch terminals Uimp: impulse voltage as per IEC 947-1

*** Between power circuit and microswitch terminals

EACH MICROSWITCH WEIGHS LESS THAN 100 g, THEREFORE NO FUME AND SMOKE GRADE IS REQUIRED BY NF F 16-102 STANDARD



MS 3V 1-5



MS 7V 1-5