

# 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



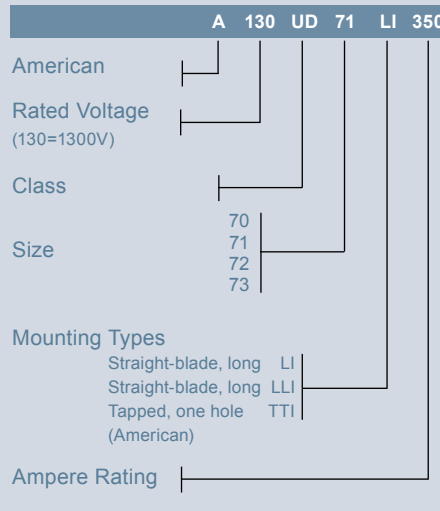
## Catalog Number Designation:

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

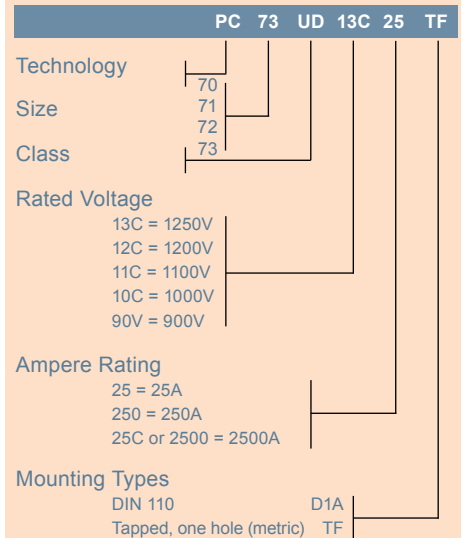
**PC:** European/IEC  
 Mounting Style/Approval  
 Tested @  $1.1 V_N$

\* $V_N$  = rated voltage

### N. American Catalog Numbering System



### European Catalog Numbering System

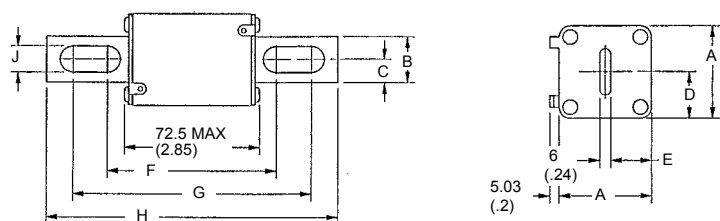


# 1250/1300 Volt PSC Square Body

## 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)

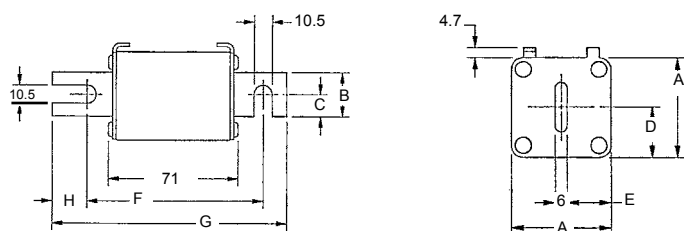
## Outline Dimensions: Types LI and LLI



## 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

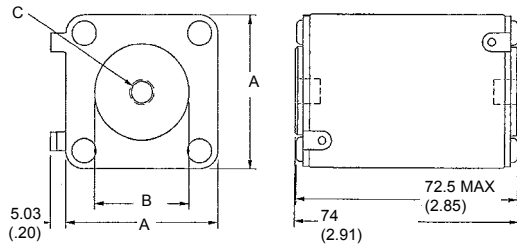


# 1250/1300 Volt PSC Square Body

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

Body Size	Type	Dimensions - mm/(In)		Tapped Hole (N. A.)	
		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

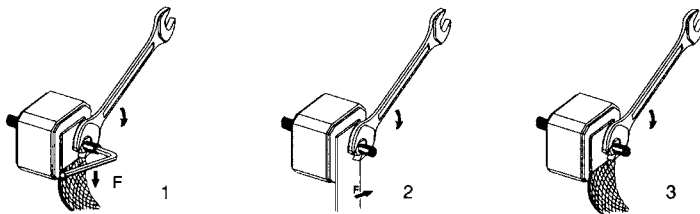


### Standard Threaded Studs

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

## 1250 Volt European/IEC Style Ratings and Application Data, DIN 110 Mounting

Body Size	Ampere Rating $I_n$ (A)	Rated Voltage $V_n$ (V) (IEC)	Melting I <sup>2</sup> t (A <sup>2</sup> s x 10 <sup>3</sup> )	Total Clearing I <sup>2</sup> t @ $V_n$ (A <sup>2</sup> s x 10 <sup>3</sup> )	Watts Loss @ $I_n$ (W)	Reference No.	Catalog No.	Description
70	50	1250	0.116	0.98	16	J301906	PC70UD13C50D1A	12,5URD70D11A0050
	63	1250	0.21	1.7	26	V300536	PC70UD13C63D1A	12,5URD70D11A0063
	80	1250	0.47	3.8	27	W300537	PC70UD13C80D1A	12,5URD70D11A0080
	100	1250	0.83	6.7	30	X300538	PC70UD13C100D1A	12,5URD70D11A0100
	125	1250	1.3	10.5	38	Y300539	PC70UD13C125D1A	12,5URD70D11A0125
	160	1250	2.5	21	45	Z300540	PC70UD13C160D1A	12,5URD70D11A0160
	200	1250	4.7	37.8	56	A300541	PC70UD13C200D1A	12,5URD70D11A0200
	250	1250	9.6	77	61	B300542	PC70UD13C250D1A	12,5URD70D11A0250
	280	1200	14	107	61	J300710	PC70UD12C280D1A	12URD70D11A0280
	315	1200	20	150	66	C300543	PC70UD12C315D1A	12URD70D11A0315
	350	1100	28	180	75	D300544	PC70UD11C350D1A	11URD70D11A0350
	400	1100	39	254	81	F300868	PC70UD11C400D1A	11URD70D11A0400
71	160	1250	2.6	21	46	D300751	PC71UD13C160D1A	12,5URD71D11A0160
	200	1250	4.7	38	54	E300545	PC71UD13C200D1A	12,5URD71D11A0200
	250	1250	8.9	71	61	F300546	PC71UD13C250D1A	12,5URD71D11A0250
	315	1250	16	130	76	G300547	PC71UD13C315D1A	12,5URD71D11A0315
	350	1250	22	180	80	H300548	PC71UD13C350D1A	12,5URD71D11A0350
	400	1250	38	310	80	J300549	PC71UD13C400D1A	12,5URD71D11A0400
	450	1250	47	380	95	K300550	PC71UD13C450D1A	12,5URD71D11A0450
	500	1100	68	440	100	L300551	PC71UD11C500D1A	11URD71D11A0500
	550	1100	84	540	112	M300552	PC71UD11C550D1A	11URD71D11A0550
	630	1000	125	810	105	N300553	PC71UD10C630D1A	10URD71D11A0630
72	280	1250	10	84	72	P300554	PC72UD13C280D1A	12,5URD72D11A0280
	315	1250	15	122	76	Q300555	PC72UD13C315D1A	12,5URD72D11A0315
	350	1250	21	170	77	R300556	PC72UD13C350D1A	12,5URD72D11A0350
	400	1250	32.5	270	80	S300557	PC72UD13C400D1A	12,5URD72D11A0400
	450	1250	44	360	89	T300558	PC72UD13C450D1A	12,5URD72D11A0450
	500	1250	57	460	98	V300559	PC72UD13C500D1A	12,5URD72D11A0500
	550	1250	68	550	120	W300560	PC72UD13C550D1A	12,5URD72D11A0550
	630	1100	105	850	113	X300561	PC72UD11C630D1A	11URD72D11A0630
	700	1000	145	910	122	Y300562	PC72UD10C700D1A	10URD72D11A0700
	800	1000	215	1400	125	Z300563	PC72UD10C800D1A	10URD72D11A0800
900	1000	312	1800	130	H300870	PC72UD10C900D1A	10URD72D11A0900	
73	315	1250	12	95	84	A300564	PC73UD13C315D1A	12,5URD73D11A0315
	350	1250	117	140	86	B300565	PC73UD13C350D1A	12,5URD73D11A0350
	400	1250	25	200	93	C300566	PC73UD13C400D1A	12,5URD73D11A0400
	450	1250	35.5	290	100	D300567	PC73UD13C450D1A	12,5URD73D11A0450
	500	1250	44	360	112	E300568	PC73UD13C500D1A	12,5URD73D11A0500
	550	1250	57	460	120	F300569	PC73UD13C550D1A	12,5URD73D11A0550
	630	1250	84	680	132	G300570	PC73UD13C630D1A	12,5URD73D11A0630
	700	1200	110	900	135	H300571	PC73UD12C700D1A	12URD73D11A0700
	800	1100	190	1530	136	J300572	PC73UD11C800D1A	11URD73D11A0800
	900	1000	250	1870	150	K300573	PC73UD10C900D1A	10URD73D11A0900
	1000	900	370	2130	152	L300574	PC73UD90V10CD1A	9URD73D11A1000
	1100	900	445	2470	168	M300575	PC73UD90V11CD1A	9URD73D11A1100