

# 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



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# 690/700 Volt PSC Square Body

Mersen 690/700V 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 seven 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  $I^2t$
- Worldwide acceptability
- 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** : 450-700 VAC  
 : DC - consult factory
- Amps** : 40-2500A
- I.R.** : 200kA AC

## Approvals:

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

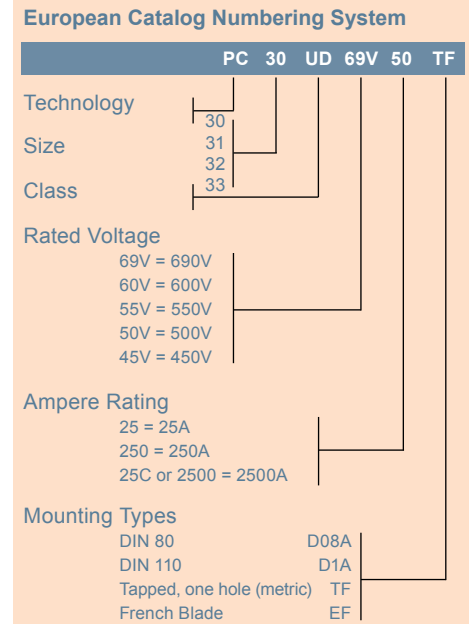
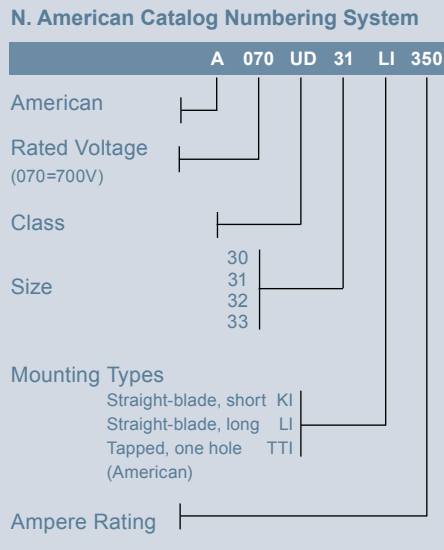


## Catalog Number Designation:

**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

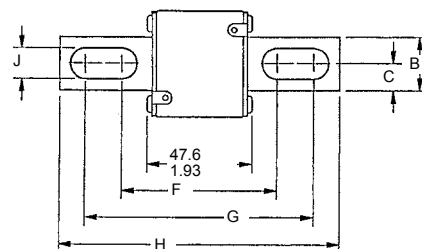


# 690/700 Volt PSC Square Body

## North American Short Straight Blade, Type KI

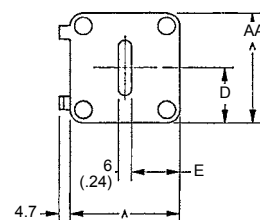
Body Size	Type	Dimensions - mm / in								
		A	B	C	D	E	F	G	H	J
30	KI	40 (1.57)	25 (.98)	12.5 (.49)	21 (.83)	18 (.71)	68 (2.68)	107 (4.21)	129 (5.08)	10.5 (.41)
31		51 (2.00)	25 (.98)	12.5 (.49)	25.5 (1.00)	22.5 (.88)	67.6 (2.66)	107.1 (4.216)	128.8 (5.07)	14.3 (.56)
32		60 (2.36)	32 (1.26)	16 (.63)	30 (1.18)	27 (1.06)	74.2 (2.92)	109 (4.29)	134 (5.28)	14.6 (.57)
33		74.5 (2.93)	40 (1.57)	20 (.79)	37.2 (1.46)	34.2 (1.35)	75.4 (2.97)	107.6 (4.24)	134 (5.28)	15.9 (.63)

## Outline Dimensions: Types KI and LI



## North American Long Straight Blade, Type LI

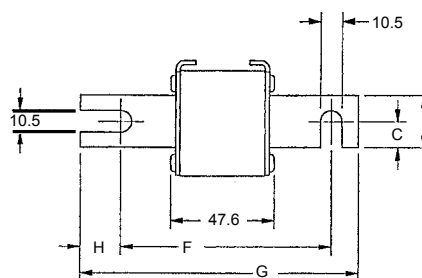
Body Size	Type	Dimensions - mm / in								
		A	B	C	D	E	F	G	H	J
30	LI	40 (1.57)	25 (.98)	12.5 (.49)	21 (.83)	18 (.71)	87.6 (3.45)	126.6 (4.98)	148.6 (5.85)	10.5 (.41)
31		51 (2.01)	25 (.98)	12.5 (.49)	25.5 (1.00)	22.5 (.89)	91.6 (3.61)	122.4 (4.82)	148.6 (5.85)	14.6 (.57)
32		60 (2.36)	32 (1.26)	16 (.63)	30 (1.18)	27 (1.06)	94.2 (3.71)	129 (5.08)	153 (6.02)	14.6 (.57)
33		74.5 (2.93)	40 (1.57)	20 (.79)	37.2 (1.46)	34.2 (1.35)	94.4 (3.72)	126.6 (4.98)	153 (6.02)	15.9 (.63)



## European Blade DIN 80, Type D08A

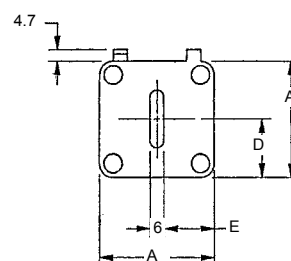
Body Size	Type	Dimensions - mm						
		A	B	C	D	E	F	G
30	DIN 80	40	25	12.5	21	17	77	110
31		51	25	12.5	25	22.5	77	110
32		60	32	16	30	27	77	110
33		74.5	40	20	37.2	34.25	77	110

## Outline Dimensions: Types D08A and D1A



## European Blade DIN 110, Type D1A

Body Size	Type	Dimensions - mm						
		A	B	C	D	E	F	G
30	DIN 110	40	25	12.5	21	17	101.6	134.6
31		51	25	12.5	25.5	22.5	101.6	134.6
32		60	32	16	30	27	101.6	134.6
33		74.5	40	20	37.2	34.25	101.6	134.6





# 690/700 Volt PSC Square Body

## 690 Volt European/IEC Style Ratings and Application Data, TTF Mounting

Body Size	Ampere Rating $I_n$ (A)	Rated Voltage $V_n$ (V) (IEC)	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
30	50	690	0.116	0.68	9	S300373	PC30UD69V50TF	6,9URD30TTF0050
	63	690	0.2	1.2	14	M300000	PC30UD69V63TF	6,9URD30TTF0063
	80	690	0.33	1.9	19	S300051	PC30UD69V80TF	6,9URD30TTF0080
	100	690	0.47	2.7	26	T300052	PC30UD69V100TF	6,9URD30TTF0100
	125	690	0.85	4.9	30	V300053	PC30UD69V125TF	6,9URD30TTF0125
	160	690	1.6	9.2	37	W300054	PC30UD69V160TF	6,9URD30TTF0160
	200	690	3	16.7	42	X300055	PC30UD69V200TF	6,9URD30TTF0200
	250	690	5.8	32.4	48	Y300056	PC30UD69V250TF	6,9URD30TTF0250
	315	690	12	67	53	Z300057	PC30UD69V315TF	6,9URD30TTF0315
	350	690	15.5	86	57	A300058	PC30UD69V350TF	6,9URD30TTF0350
	400	690	23	130	60	B300059	PC30UD69V400TF	6,9URD30TTF0400
	450	690	26	165	80	V300398	PC30UD69V450TF	6,9URD30TTF0450
	500	690	41	264	80	W300399	PC30UD69V500TF	6,9URD30TTF0500
	550	690	52	330	80	X300400	PC30UD69V550TF	6,9URD30TTF0550
31	200	690	2.6	14.6	45	N300001	PC31UD69V200TF	6,9URD31TTF0200
	250	690	4.7	27	52	P300002	PC31UD69V250TF	6,9URD31TTF0250
	315	690	7.5	43	65	Q300003	PC31UD69V315TF	6,9URD31TTF0315
	350	690	10.5	59	67	M300046	PC31UD69V350TF	6,9URD31TTF0350
	400	690	19	110	68	R300004	PC31UD69V400TF	6,9URD31TTF0400
	450	690	26.5	150	70	S300005	PC31UD69V450TF	6,9URD31TTF0450
	500	690	37	210	70	T300006	PC31UD69V500TF	6,9URD31TTF0500
	550	690	52	300	70	V300007	PC31UD69V550TF	6,9URD31TTF0550
	630	690	75	421	75	W300008	PC31UD69V630TF	6,9URD31TTF0630
	700	690	95	530	85	X300009	PC31UD69V700TF	6,9URD31TTF0700
800	690	140	880	105	Y300401	PC31UD69V800TF	6,9URD31TTF0800	
32	400	690	15	86	72	H300065	PC32UD69V400TF	6,9URD32TTF0400
	450	690	22	124	77	J300066	PC32UD69V450TF	6,9URD32TTF0450
	500	690	28	157	85	K300067	PC32UD69V500TF	6,9URD32TTF0500
	550	690	37	211	90	L300068	PC32UD69V550TF	6,9URD32TTF0550
	630	690	54	302	95	M300069	PC32UD69V630TF	6,9URD32TTF0630
	700	690	76	432	100	N300070	PC32UD69V700TF	6,9URD32TTF0700
	800	690	115	648	110	P300071	PC32UD69V800TF	6,9URD32TTF0800
	900	690	170	972	110	Q300072	PC32UD69V900TF	6,9URD32TTF0900
	1000	690	240	1350	115	S300074	PC32UD69V1000TF	6,9URD32TTF1000
	1100	600	270	1450	140	M300759	PC32UD60V1100TF	6URD32TTF1100
	1250	500	410	1950	150	P301060	PC32UD55V1250TF	5,5URD32TTF1250
33	500	690	19	108	105	V300076	PC33UD69V500TF	6,9URD33TTF0500
	550	690	27	151	105	W300077	PC33UD69V550TF	6,9URD33TTF0550
	630	690	40	227	110	X300078	PC33UD69V630TF	6,9URD33TTF0630
	700	690	55	324	115	Y300079	PC33UD69V700TF	6,9URD33TTF0700
	800	690	95	529	120	Z300080	PC33UD69V800TF	6,9URD33TTF0800
	900	690	135	760	120	A300081	PC33UD69V900TF	6,9URD33TTF0900
	1000	690	170	970	135	B300082	PC33UD69V1000TF	6,9URD33TTF1000
	1100	690	240	1360	135	C300083	PC33UD69V1100TF	6,9URD33TTF1100
	1250	690	350	2000	150	D300084	PC33UD69V1250TF	6,9URD33TTF1250
	1400	690	480	2700	160	E300085	PC33UD69V1400TF	6,9URD33TTF1400
	1500	600	500		220	Y300585	PC33UD60V1500TF	6URD33TTF1500
	1600	600	555	3250	210	Z300586	PC33UD60V1600TF	6URD33TTF1600
	1800	600	720		225	A300587	PC33UD60V1800TF	6URD33TTF1800
	2000	550	950		250	B300588	PC33UD55V2000TF	5,5URD33TTF2000
	2250	500	1250		280	K300757	PC33UD50V2250TF	5URD33TTF2250
2500	450	1870		280	L300758	PC33UD45V2500TF	4,5URD33TTF2500	