

# Bill of Materials

TI DESIGNS  
Part # TIDM-THREEPHASEMETER  
Literature # TIDR109

471X7 three phase four wire e-meter			Model: LSD-ET471X7-01		
Pos.	Ref Des	Description	Printfoot	Number per board	Comment
1	U1	MSP430F47197IPZ	QFP-100	1	
2	IC2	TPS77001	SOT23-5	1	
3	IC5	CAT24C02WI	SOIC-8	1	
4	C21, C22	12pF±10%	SMD-0603	2	
5	C9, C10, C12-C15, C17, C18, C31, C33, C42, C43, C45, C46	47pF±10%	SMD-0603	14	
6	C11, C16, C30, C34, C41, C44, C47	15nF±10%	SMD-0603	7	
7	C5, C7, C8, C27, C28, C29, C32, C35, C36, C37, C38, C48	100nF±10%	SMD-0603	12	
8	C6, 23, C24, C25, C26, C39, C49	22UF/16V	SMD电容_B型	7	
9	C40	22UF/16V	SMD电容_C型	1	
10	R7, R8, R9, R32, R33, R34	3.3Ω±1%	SMD-0603	6	DNP
11	R10, R13, R16	5.1Ω±1%	SMD-0603	4	
	R19	6.8Ω±1%			
12	R59	10Ω±5%	SMD-0603	1	
13	R82	47Ω±5%	SMD-0603	1	
14	R50, R51, R52	100Ω±1%	SMD-0603	3	
15	R77	470Ω±5%	SMD-0603	1	
16	R25, R75, R76	220Ω±5%	SMD-0603	3	
17	R11, R12, R14, R15, R17, R18, R20, R21, R24, R47, R48, R49, R72-R74, R78 R79	1K±1%	SMD-0603	17	
18	R53, R54, R55	1.5K±5%	SMD-0603	3	
19	R23, R26	2K±5%	SMD-0603	2	
20	R28, R29	5.1K±5%	SMD-0603	2	
21	R22, R66, R67	10K±5%	SMD-0603	3	
22	R27	20K±5%	SMD-0603	1	
23	R61	47K±5%	SMD-0603	1	
24	R31	169K±5%	SMD-0603	1	
25	R38-R46	330K±5%	SMD-0603	9	
26	R30	383K±5%	SMD-0603	1	
27	R69, R70	1M±5%	SMD-0603	2	
28	D8-D14, D16-D29	LS4148TE-11	1206	21	
29	D30-D33	SMBJ5.0CA	DO214	4	
30	L11-L18	CBY201209A121	SMD-0805	8	
31	T1, T2	S9013	SOT23	2	
32	T3	MMBT2222ALT1	SOT23	1	
33	IC6	RPM7238-RSIP-A3(H8)	DIP	1	
34	IRD1	IR204C-A Φ3	DIP	2	
35	OK1, OK2	NEC2501	DIP-4	2	
36	OK3, OK4	6N136	DIP-8	2	
37	C1-C3	0.47uF/630V or 0.47UF/275V	C225-062X268	3	Pitch:22.5mm siae:6.2*26.8

38	C4	2200uF/25V	E5-13	1	pitch:5mm diameter:13mm
39	R4- R6	470/3W	KH208-8	3	
40	JP5	20/3W	KH208-8	1	
41	R1-R3	20D680K	DIP	3	
42	D1-D6, D15, D34, D35, D36	1N4007	DIP (D041)	10	
43	D7	BZV10 9.1v	D034	1	
44	L1-L3	φ 3*8	DIP	3	
45	L4	4.7mH	SD8	1	pitch:5mm size:8x8x9.6
46	LED1	φ 3, red	DIP	1	
47	LED2	φ 3, yellow	DIP	1	
48	LED3	φ 3, green	DIP	1	
49	LCD	TTR2673	DIP	1	customized by LSD
50	Q1	32.768KHz ± 5PPM	φ 2 × 6	1	
51	Q2	16MHZ ± 20PPM	49S	1	
52	TR1	MDT28TA		1	customized by LSD
53	S1, S2	6 * 6 * 5	AN6 * 6	2	
54	X1	DB9 female	DB9	1	
55	X2, X3	SMD, 1.27mm	IDC20 1.27	2	
56	G1	LS14250		1	
57	JP1, JP6	2.54mm	SIP-3	2	
58	JP2, JP7, JP10, JP11, JP19	2.54mm	SIP-2	6	
59	X6	2.0mm	SIP-2	1	
60	XL2	2.0mm	SIP-8	1	
61	SV1	1.27mm	SIP-6	1	
62	JP14, JP15, JP16	2.54mm	IDC-8	3	
63	JP17, JP18	2.54mm	IDC-18	2	
64	JTAG	2.54mm	DC3-14	1	
65	X4, X5	SIP10, Pitch:2.54mm header and receptacle	XH2.54-10P	2	
66	PCBA1	LSD-ET471X7-01A_V5.0 160*139*1.6mm		1	
67	PCBA2	LSD-ET471X7-01B_V5.0 100*139*1.6mm		1	
67	Enclosure	DTSF-034		1	
68	CT	5(100)A/2.5mA (200Ω) class0.1		3	customized by LSD
69	Jumper	2.54mm		3	
70	wire for A-phase	yellow		1	length:15cm dia:0.5mm
71	wire for B-phase	bule		1	
72	wire for C-phase	red		1	
73	zero curve	black		1	length:15cm dia:1.0mm
74	wire	red		2	length:15cm dia:0.5mm

75	wire	black		2	length:15cm dia:0.5mm
76	color wires	XH2. 54-10, 10cm		1	length:10cm
77	Flat head screw	M5*10		6	
78	Flat head screw	M4*6		3	
79	Flat head screw	3*6		11	
80	self-tapping screw	3*8		6	

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