

POWER SUPPLY MODULE					
Sl. No.	Legends	Item Description	Qty. reqd.	Suppliers part no. / Ref Drawing No.	Supplier/Vendor Name
DIODES					
1	D1,D3,D4,D5,D15,D16,D17,D18,D19,D20	DIODE 1N4004 DO-204AL	10	D1N4004	VISHAY
2	Z1	SMD ZENER DIODE	1	ZNR-3.9V	SM Technology (Vendor)
3	Z2	9.2V ZENER DIODE	1	ZNR-9.2V	--
TRANSISTORS & MOSFETS					
4	Q2	BC557B PNP TO92 45V,100mA,625mW	1	BC557B	PHILIPS
5	Q6	Silicon N-Channel MOSFET	1	2SK1154	RENESAS
IC'S					
6	U4	IC TL431A TO92 PROGRAMABLE SHUNT REGULATOR	1	TL431A	TI
CAPACITORS					
7	C16	CAP ELEC 2200MF 6.3V 10MM Dia 5MM Pitch	1	-	JAMICON
8	C14	CAP ELEC 100uF 20% 25V	1	-	JAMICON
9	C28	CAP ELEC 47uF 20% 10V	1	-	JAMICON
10	C6	CAP CER 0.1uF 10% 10V SMD 0603 PACK X7R	1	MCCB104K1NRT	SMEC
RESISTORS					
11	R29,R30	RES TF 1% 1/8W 100PPM 10K 0603PACK	2	RC73A2C 1002 FT	SMEC
12	R22	RES TF 1% 1/8W 100PPM 1K 0603PACK	1	RC73A2C 1001 FT	SMEC
13	R13	RES TF 1% 1/8W 100PPM 2K 0603PACK	1	RC73A2C 2001 FT	SMEC
14	R12	RES TF 1% 1/8W 100PPM 680R 0603PACK	2	RC73A2C 6800 FT	SMEC
15	R14	RES TF 1% 1/8W 100PPM 6K2 0603PACK	1	RC73A2C 6201 FT	SMEC
16	R44	RES 1W 75R 1W	1	-	SMEC
MISCELLANEOUS					
17		TRANSFORMER (POWER SUPPLY)	1	240V/8V Dual	Excel Par
18	M1	METAL OXIDE VARISTOR (MOV)	1	TVR14561	HHV

MAIN MODULE					
Sl. No.	Legends	Item Description	Qty. reqd.	Suppliers part no. / Ref Drawing No.	Supplier/Vendor Name
DIODES					
1	D7,D10,D22,D23	DIODE BAV99 SOT23 3PIN	4	BAV99	PHILIPS
2	D6	DIODE BAS16 SOT23 3PIN	1	BAS16	PHILIPS
3	D2,D8	DIODE SCHOTTKY BAT54 SOT23 3PIN	2	BAT54	PHILIPS
TRANSISTORS & MOSFETS					
4	Q1,Q3	BC857 PNP SOT23 45V,100mA,250mW	2	BC857	PHILIPS
5	Q4,Q5	MMBT2222A NPN-SOT23 40V,600mA,225mW	2	MMBT2222A	PHILIPS
MISCELLANEOUS					
6	U1	HD64F38024 FP-80A 8BIT MICROCONTROLLER	1	HD64F38024H	RENESAS
7	U3	LMV824M OP-AMP QUAD LOW VOLTAGE R-to-R 14 PIN SOP PACK	1	LMV824M	NS
8	U7	74HC4016 QUAD BILATERAL SWITCHES	1	74HC4016	PHILIPS
9	U5	HN58X2408 EEPROM 1KBYTE 12C SOIC-8PIN	1	HN58X2408FPIAG	RENESAS
10	U8	LM239M LOW OFFSET QUAD COMPARATOR SO8 14PIN	1	LM239M	NS
11	U6	RTC PCF8563T 12C 8PIN SOIC	1	PCF8563T	PHILIPS
12	U2	V6309RSP3B SUPERVISORY CIRCUIT ACTIVE LOW SOT23	1	V6309RSP3B	EM MICRO
MISCELLANEOUS					
13	J1	3PIN CONN-2.54 PITCH BERG CONNECTOR	1	CONN-3PIN-BERG	Protectron Electronics Pvt. Ltd. (Vendor)
14	CN1	5 PIN CONNECTOR PIN 2.54MM PITCH	1	CONNPIN5	Protectron Electronics Pvt. Ltd. (Vendor)
15	BATT1	MANGANESE DIOXIDE LITHIUM BATTERY	1	CR2032 T23	MAXELL
16	CN2	CONNECTOR 14PINBOX-TYPE FRC 2.54MM PITCH	1	E10T CNN	
17	LCD1	8 DIGIT 5 ICONS LCD DISPLAY	1	-	
18	KWH,	RED LED 3 MM CLEAR TINTED + HOLDER	1	HLMP-1301 (Tinted)	AGILENT
19	OPQOPD1	IR LED +PHOTO TRANSISTOR COMBINATION	1	-	EVERLITE
20	DOWN	PUSH BUTTON SWITCH	1	-	SM Technology (Vendor)
21	XTAL-1	MINIATURE CYLINDRICAL CRYSTAL 9.8304MHz	1	EAT9.8304F22C55 HOSONIC AT-39 CRYSTAL	HOSONIC
22	XTAL-2	MINIATURE(CYLINDRICAL) CRYSTAL 32.768KHZ +/- 10ppm	1	XTAL_MINI	ELEKTRON
CAPACITORS					
23	C19	CAP ELEC 47uF 20% 10V	1	-	JAMICON
24	C11,C26,C27,C29,C5,C7,C8,C18,C20,C33,C9	CAP CER 0.1uF 10% 10V SMD 0603 PACK X7R	11	MCCB104K1NRT	SMEC
25	C34	CAP CER 12pF 10% 50V SM0603 NPO	1	MCCE120K1NOT	SMEC
26	C10,C36	CAP CER 220pF 10% 50V SMD0603 X7R	2	MCCE221K1NRT	SMEC
27	C12,C15,C17,C32,C35,C4	CAP CER 47pF 10% 50V 0603SMD NPO	6	MCCE470K1NOT	SMEC
28	C13,C31	CAP CER 56pF 10% 50V 0603SMD NPO	2	MCCE560K1NOT	SMEC
29	C23,C24	CAP CER 22pF 10% 50V 0603SMD NPO	2	MCCE221K1NOT	SMEC
RESISTORS					
30	R21,R34,R70,R92	RES ZERO OHM JUMPER	4	RC73JP2X	SMEC
31	R37,R46,R55,R60,R69,R74,R82	RES TF 1% 1/8W 100PPM 100K 0603PACK	7	RC73A2C 1003 FT	SMEC
32	R33,R38,R47,R48,R53,R45	RES TF 1% 1/8W 100PPM 100R 0603PACK	6	RC73A2C 1000 FT	SMEC
33	R20,R25,R26,R31,R36,R43,R52,R56,R57,R59,R66,R72,R76,R81	RES TF 1% 1/8W 100PPM 10K 0603PACK	14	RC73A2C 1002 FT	SMEC
34	R139,R140	RES TF 1% 1/8W 100PPM 10M 0603PACK	2	RC73A2C 1005 FT	SMEC
35	R24	RES TF 1% 1/8W 100PPM 120R 0603PACK	1	RC73A2C 1200 FT	SMEC
36	R1,R15,R16,R2	RES 2% 1/8W 100PPM160K 1206PACK	4	RC73A2E 1603 FT	SMEC
37	R42,R61,R62,R63,R75	RES TF 1% 1/8W 100PPM 1K 0603PACK	5	RC73A2C 1001 FT	SMEC
38	R35,R54,R65,R71,R78	RES TF 1% 1/8W 100PPM 1M 0603PACK	5	RC73A2C 1004 FT	SMEC
39	R80,R67,R77,R94,R97,R98	RES TF 1% 1/8W 100PPM 200K 0603PACK	6	RC73A2C 2003 FT	SMEC
40	R64,R79	RES TF 1% 1/8W 100PPM 243K 0603PACK	2	RC73A2C 2433 FT	SMEC
41	R41,R49,R50,R51	RES TF 1% 1/8W 100PPM 2K 0603PACK	4	RC73A2C 2001 FT	SMEC
42	R23	RES 1% 1/8W 100PPM 2K4 1206PACK	1	RC73A2E 2401 FT	SMEC
43	R17,R18,R19,R3,R32	RES TF 1% 1/8W 100PPM 33K 0603PACK	5	RC73A2C 333 FT	SMEC
44	R28	RES TF 1% 1/8W 100PPM 50K 0603PACK	1	RC73A2C 4992 FT	SMEC
45	R11	RES TF 1% 1/8W 100PPM 680R 0603PACK	1	RC73A2C 6800 FT	SMEC
46	R27	RES TF 1% 1/8W 100PPM 68K 0603PACK	1	RC73A2C 6812 FT	SMEC
47	R39,R40,R68,R73,R90,R91,R93,R22	TBD	8	-	SMEC

**Single Phase Energy Meter Reference Platform
Bill Of Material**

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ACCESSORIES REQUIRED WITHIN ENCLOSURE MODULE				
Sl. No.	Item Description	Qty. reqd.	Suppliers part no. / Ref Drawing No.	Supplier/Vendor Name
1	CT 10-60A	2	-	ELECTROHMS
2	NEUTRAL MISSING CT	1	-	ExcelPar (vendor)
3	PCB	1	-	AT &S

RS232 DAUGHTER CARD MODULE				
Sl. No.	Item Description	Qty. reqd.	Suppliers part no. / Ref Drawing No.	Supplier/Vendor Name
1	CAP ELEC 100uF 20% 16V	2	--	JAMICON
2	CAP CER 0.1uF 10% 10V SMD 0603 PACK X7R	7	MCCB104K1NRT	SMEC
RESISTORS				
3	RES TF 1% 1/8W 100PPM 5K1 0603PACK	1	RC73A2C 5101 FT	SMEC
4	RES TF 1% 1/8W 100PPM 2K 0603PACK	1	RC73A2C 2001 FT	SMEC
5	RES TF 1% 1/8W 100PPM 3K3 0603PACK	2	RC73A2C 332 FT	SMEC
INTEGRATED CIRCUITS				
6	3 Terminal Fixed 5V Voltage Regulator TO-92M Package	1	HA178L05P	RENESAS
7	14-pin Quad Two Input NAND Gate SO-14	1	74HC00D	PHILIPS
8	4-pin SMD Single Channel Opto-Isolator	2	SFH618-4SM	ISOCOM
9	5V RS232 Transceivers	1	MAX202ESE	MAXIM
MISCELLANEOUS				
10	DIODE 1N4004 DO-204AL	4	D1N4004	VISHAY
11	Low Voltage SMD Varistors	2	ZV 6 M 0805 101	KEKO

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OPTIONAL COMPONENTS MODULE				
Sl. No.	Item Description	Qty. reqd.	Suppliers part no. / Ref Drawing No.	Supplier/Vendor Name
RESISTORS				
1	RES TF 1% 1/8W 100PPM 1K 0603PACK	3	RC73A2C 1000 FT	SMEC
2	TBD	4		SMEC
3	RES TF 1% 1/8W 100PPM 100K 0603PACK	1	RC73A2C 1003 FT	SMEC
CAPACITORS				
4	CAP CER 0.1uF 10% 10V SMD 0603 PACK X7R	2	MCCB104K1NRT	SMEC
5	TBD	4		SMEC
6	CAP ELEC 47uF 20% 10V	2	-	JAMICON
DIODES				
7	THREE PIN SMD DIODE BAS16	1	BAS16	PHILIPS
MISCELLANEOUS				
8	RED LED 3 MM CLEAR TINTED + HOLDER	3	HLMP-1301 (Tinted)	AGILENT
9	PUSH BUTTON SWITCH	2	-	SM Technology (Vendor)
10	Inductor (T16 CORE)	1	T16 FERRITE CORE	JINANICA TELECOM PVT.LTD. (Vendor)