QQGQ2.E143030
Power Supplies, Information Technology Equipment Including Electrical Business Equipment - Component

Power Supplies, Information Technology Equipment Including Electrical Business Equipment - Component

Guide Information

POWER-ONE AG E143030
ACKERSTRASSE 56
8610 USTER, SWITZERLAND

	Rated Input			Max Output							
Model No.	**Volts**	**Hz**	**SC**	**V**	**A**	**VA**	**OC**	**SP**	**EP**	**FC**	**GC**
110H(a) Series											
	80-140ac 80-200dc	35-440	0,6	125	14	160	3/4	1950	2.5	0	1
12H(a) Series											
	8-16dc	-	6	125	14	160	3/4	1950	10	0	1
1M(b)15W Series, KM(b)15W Series											
	8.4-75dc	-	4	24	7.7	25	2/3	1950	-	0	0
1MY15(b) Series, KMY15(b) Series											
	50-150dc	-	4	24	7.7	25	3	1950	-	0	0
20-IMX35 Series, 40-IMX35 Series, 20-KMX35 Series, 40-KMX35 Series											
	9-75dc	-	4	15	4.2	35	3/4	60950	5@	0	-
230H(a) Series											
	160-250ac 160-250dc	35-440	0,6	125	14	160	3/4	1950	2.5	0	1
24H(a) Series											
	16-32dc	-	6	125	14	160	3/4	1950	8	0	1
24Q(a) Series											
	12-40dc	-	4	48	16	106	3	1950	14	0	0

48H(a) Series											
	32-64dc	-	6	125	14	160	3/4	1950	3.15	0	1
48Q(a) Series											
	24-80dc	-	4	48	16	106	3	1950	10	0	0
AK1 Series, AK7 Series											
	8-35dc	-	0	30	-	240	3	950	-	0	0
AK2 Series, AK8 Series											
	8-35dc	-	0	30	-	240	3	950	-	0	0
AM(a) Series											
	8-35dc	-	6	125	14	160	3/4	1950	10	0	1
AMZ(a) Series											
	8-35dc	-	6	125	14	160	3/4	1950	10	0	2
BM(a) Series											
	14-70dc	-	6	125	14	160	3/4	1950	8	0	1
BMZ(a) Series											
	14-70dc	-	6	125	14	160	3/4	1950	8	0	2
BQ(a) Series											
	12-40dc	-	4	48	16	106	3	1950	14	0	0
CM(a) Series											
	40-140ac 28-140dc	35-440	0,6	125	14	160	3/4	1950	3.15	0	1
CMZ(a) Series											
	40-140ac 28-140dc	35-440	0,6	125	14	160	3/4	1950	3.15	0	2
CQ(a) Series											
	24-80dc	-	4	48	16	106	3	1950	10	0	0
DM(a) Series											
	40-200ac 44-220dc	35-440	0,6	125	14	160	3	1950	2.5	0	1
DMZ(a) Series											
	40-200ac 44-220dc	35-440	0,6	125	14	160	3	1950	2.5	0	2
DQ(a) Series											
	36-120dc	-	0	48	16	106	3	1950	7	0	0
EM(a) Series											
	40-250ac 67-250dc	35-440	0,6	125	14	160	3/4	1950	2.5	0	1

EMZ(a) Series											
	40-250ac 67-250dc	35-440	0,6	125	14	160	3/4	1950	2.5	0	2
EQ(a) Series											
	55-150dc	-	0	48	16	106	3	1950	5	0	0
EWX Series											
	100- 350dc	-	6	114	20	280	3/4	1950	6.3	5	1
EX Series											
	100- 350dc	-	6	150	40	550	3/4	1950	20B	0	1
FM(a) Series											
	20-110dc	-	6	125	14	160	3/4	1950	3.15	0	1
FMZ(a) Series											
	20-110dc	-	6	125	14	160	3/4	1950	3.15	0	2
GQ(a) Series											
	18-60dc	-	4	48	16	106	3	1950	14	0	0
IM(b)7W Series											
	8.4-150dc	-	4	24	14	7	4	1950	6.0	0	2
IML10(b) Series											
	8.4-75dc	-	4	15	12.9	10.8	4	1950	6.0	0	2
IMS25 Series, KMS25S Series											
	14-75dc	-	4	12	3.9	46.7	3/4	1950	0	-	-
IMS30 Series, KMS30 Series											
	32-75dc	-	4	5.1	7.4	35	3/4	1950	0	0	-
IMS6 Series, NV Series[*r]											
	8-75dc	-	6	3.3	-	6	-	60950	-	0	-
				30	-	6	-				
IMX4 Series, KMX4 Series[*r]											
	8-75dc	-	6	30	-	5	-	1950	-	0	-
				3.3	-	5	-				
K1 Series, K7 Series											
	85-250ac 8-372dc	47-440	0	30dc	-	240	3	950	20B	0	0
K2 Series, K8 Series											
	85-250ac 8-372dc	47-440	0	30dc	-	240	3	950	20B	0	1

K4000, K5000											
	85-264ac 88-264dc	50/60	0	56	-	150	3, 4	1950	-	0	0
KM(b)7W Series											
	8.4-150dc	-	4	24	14	7	4	1950	6.0	0	2
KML10(b) Series											
	8.4-75dc	-	4	15	12.9	10.8	4	1950	6.0	0	2
KP5000	187-255ac	47-63	0	57.3	11.9	334	3, 4	1950	-	0	1
LCD30-1005											
	100-240ac	47-63	0	5.7	7.2	35.86	1	1950	20B	0	1
LCD30-1012[*r]											
	100-240ac	47-63	0	14.4	25	30	1	1950	20B	0	1
LCD30-1024[*r]											
	100-240ac	47-63	0	28.7	25	30	1	1950	20B	0	1
LCD30-1045											
	100-240ac	47-63	0	56.9	0.85	40.89	1	1950	20B	0	1
LCD60-1005											
	100-240ac	47-63	0	48	11.8	69.6	3	1950	20B	0	1
LCD60-1012[*r]											
	100-240ac	47-63	0	14.5	5	60	1	1950	20B	0	1
LCD60-1024[*r]											
	100-240ac	47-63	0	27.7	25	60	1	1950	20B	0	1
LCD60-1048											
	100-240ac	47-63	0	55.94	1.45	69.6	1	1950	20B	0	1
LGR Series											
	100-230ac	47-63	0	24dc	9	30	3,4	1950	-	0	0
LGR(b)	85-265ac 88-168dc	47-63	0	24	7	30	3	60950	20B	0	2
LH Series											
	70-250ac 70-250dc	34-440	0,4,6	125	14	160	3/4	1950	2.5	0	1

LHR Series											
	100-230ac	47-63	0	24	8.1	27	3	1950	6.3	0	0
LHR(b)	85-265ac 88-168dc	47-63	0	24	3.5	15	3	60950	20B	0	2
LM(a) Series											
	70-250ac 88-250dc	35-440	0,6	125	14	160	3/4	1950	2.5	0	1
LMZ(a) Series											
	70-250ac 88-250dc	35-65	0,6	125	14	160	3/4	1950	2.5	0	2
LOK 4(c)(c)(c)-2-(c)(c)(c)(c)											
	90-264ac 88-372dc	47-63	0	54.5	5.2	101	3	1950	15	0	1
LOR 16(c)(c)-2											
	85-264ac	50-60	0	24	4.1	97	3	1950	20B	0	2
LOR4(c)(c)(c)-2(b)											
	85-264ac	47-63	0	27	2.5	30	3	1950	15B	0	2
LOS 16(c)(c)-2											
	85-264ac	50-60	0	24	1.6	40	3	1950	20B	0	2
LOS4(c)(c)(c)-2(b)											
	85-264ac	47-63	0	24	1.27	15.2	3	1950	15B	0	2
LPC 1901, LPC 1902, LPC 1903											
	110-230ac	47-63	0	95	2.7	297	-	1950	-	0	1
LT Series											
	100-240ac	50/60	0	58	16.5	459	3	1950	-	0	0
LU17 Series											
	208-230ac	47-63	0	58.5	30	-	4	1950	-	0	0
LWX Series											
	93-240ac 100-350dc	14-440	0,6	114	20	280	3/4	1950	6.3	5	1
LX Series											
	93-240ac 100-350dc	50/60	0,6	150	40	550	3/4	1950	20B	0	1
ML078-000											

	230ac	47-63	0	56.6	33	1650	4	1950	-	0	0
NDS02ZG-XX(d)											
	36-75dc	-	6	5	3.72	13.6	3	60950	5@	0	0
NDS03ZA-XX(d)											
	36-75dc	-	6	1.5	3	4.5	3	60950	5@	0	0
NDS03ZB-XX(d)											
	36-75dc	-	6	1.8	3	5.4	3	60950	5@	0	0
NDS03ZD-XX(d)											
	36-75dc	-	6	2.7	3	7.5	3	60950	5@	0	0
NDS03ZE-XX(d)											
	36-75dc	-	6	3.3	3	9.9	3	60950	5@	0	0
NSA(a)(b)[*r]											
	-7 to -144dc	-	4	-48	-5	240	4	1950	-	0	-
NSC(a)(b)[*r]											
	-7 to -144dc	-	4	-48	-12	576	4	1950	-	0	-
NSR(a)(b)[*r]											
	-7 to -80dc	-	4	-36	-12	432	4	1950	-	0	-
P Family Series, R Family Series[*r]											
	16-150dc	-	6	24	18.8	96	3	1950	1	0	0
PSA(a)(b)[*r]											
	7-144dc	-	4	48	5	240	4	1950	-	0	-
PSB(a)(b)[*r]											
	7-144dc	-	4	48	7	336	4	1950	-	0	-
PSC(a)(b)[*r]											
	7-144dc	-	4	48	12	576	4	1950	-	0	-
PSK(a)(b), PSS(a)(b)[*r]											
	7-144dc	-	4	48	25	1200	4	1950	-	0	-
PSL(a)(b)[*r]											
	7-144dc	-	4	48	12	576	4	1950	-	0	-
PSR(a)(b)[*r]											
	7-80dc	-	4	36	12	432	4	1950	-	0	-
RDS04ZG	36-75dc	-	6	5	8	35	3	60950	10@	0	0
RDS05ZE	36-75dc	-	6	3.3	5.5	18.15	3	60950	10@	0	0
RDS06ZB	36-75dc	-	6	1.8	6	10.8	3	60950	10@	0	0

RF Series											
	36-75dc	-	4	5	6	27.3	3/4	60950	0	0	-
RND0.8ZHH											
	36-75dc	-	4	12	0.42	5	3/4	60950	0	0	-
RNS01EE, RNS01EG, RNS0.9ET											
	18-72dc	-	4	7	1.5	6	3/4	60950	0	0	-
RNS02YG, RNS02YE											
	18-36dc	-	4	5.05	2	7.5	3/4	60950	0	0	-
RNS02ZG, RNS03ZE, RNS0.6ZH, RND02ZGE, RND03ZEG, RND02ZGG											
	38-75dc	-	4	12	5	16.5	3/4	60950	0	0	-
S1 Series, S7 Series											
	85-250ac 8-372dc	47-440	0	30dc	-	240	3	950	20B	0	1
S2 Series, S8 Series											
	85-250ac 8-372dc	47-440	0	30dc	-	240	3	950	20B	0	1
S4000, S5000											
	85-264ac 88-264dc	50/60	0	56	-	100	3, 4	1950	-	0	0
SFS @ Series											
	36-72dc	-	6	5	13	63	3	60950	10	0	0
				1.5	8	-	-				
SFS08ZG	36-72dc	-	6	5.5	11.8	63	3	60950	10	0	0
SFS13ZE	36-72dc	-	6	3.7	16.5	56	3	60950	10	0	0
UT Series[*r]											
	70-140ac	50/60	0	54	10	-	3	950	-	0	0
				24	10	-	3				
VEW10 Series											
	85-250ac 110-330dc	47-63	0,6	48	3	15	4	1950	-	0	1
VEW1000-05											
	100/ 120/ 200/ 240ac	50/60	0	5	300	1500	0	1950	-	0	0
VEW1000-48											
	100/ 120/	50/60	0	48	32	1530	0	1950	-	0	0

	200/240ac										
VEW15 Series											
	85-250ac 110-330dc	47-63	0,6	48	5	25	4	1950	-	0	1
VEW200 Series											
	100-120/200-240ac	50/60	0	48	60	300	4	1950 w/D3	-	0	1
VEW25 Series											
	85-250ac 110-330dc	47-63	0,6	48	10	50	4	1950	-	0	1
VEW440 Series											
	100-120/200-240ac	50/60	0	48	120	600	3	1950	-	0	1
VEW50-05, VEW50-12, VEW50-15, VEW50-24, VEW50-28, VEW50-48[*r]											
	100-120/200-240ac	50/60	0	5	20	100	3	1950	20	0	0
				12	12.5	150	3				
				15	10.4	156	3				
VEW70-05, VEW70-12, VEW70-15, VEW70-24, VEW70-28, VEW70-48											
	100-120ac	50/60	0	5	43	219	3	1950	20	0	0
				12	18.2	218	3				
				15	14.5	217	3				
				24	8.9	213	3				
				28	8	225	3				
				48	4.8	230	3				
VRW100-05, VRW100-05A, VRW100-12, VRW100-12A, VRW100-15, VRW100-15A, VRW100-24, VRW100-24A, VRW100-48, VRW100-48A[*r]											
	100-120/200-240ac	50/60	0	5	20	121	4	1950	-	0	0
				12	8.5	-	4				
				15	7	-	4				
				24	4.5	127	4				
				48	2.1	-	4				

VRW15-05, VRW15-05A[*r]											
	100-240ac	50/60	0	5	3	15	4	1950	-	0	0
VRW15-12, VRW15-12A[*r]											
	100-240ac	50/60	0	12	1.3	15.6	4	1950	-	0	0
VRW15-15, VRW15-15A[*r]											
	100-240ac	50/60	0	15	1	15	4	1950	-	0	0
VRW15-24, VRW15-24A[*r]											
	100-240ac	50/60	0	24	0.7	16.8	4	1950	-	0	0
VRW150-05, VRW150-05A, VRW150-12, VRW150-12A, VRW150-15, VRW150-15A, VRW150-24, VRW150-24A, VRW150-48, VRW150-48A[*r]											
	100-120/200-240ac	50/60	0	5	30	185	4	1950	-	0	0
				12	13	-	4				
				15	10	-	4				
				24	6.5	206	4				
				48	3.2	-	4				
VRW200-05, VRW200-05A, VRW200-12, VRW200-12A, VRW200-15, VRW200-15A, VRW200-24, VRW200-24A[*r]											
	100-240ac	50/60	0	5dc	40	-	4	1950	-	0	0
				12dc	19	-	4				
				15dc	15	-	4				
				24dc	9	-	4				
VRW25-05, VRW25-05A, VRW25-12, VRW25-12A, VRW25-15, VRW25-15A, VRW25-24, VRW25-24A, VRW25-48, VRW25-48A[*r]											
	100-240ac	50/60	0	5	6	-	4	1950	-	0	0
				12	2.5	-	4				
				15	2	-	4				
				24	1.3	-	4				
				48	0.6	-	4				
VRW300-05, VRW300-05A, VRW300-12, VRW300-12A, VRW300-15, VRW300-15A, VRW300-24, VRW300-24A											
	100-240ac	50/60	0	5dc	60	-	4	1950 w/D3	-	0	0
				12dc	26	-	4				

				15dc	21	-	4				
				24dc	13	-	4				
VRW450-05, VRW450-05A, VRW450-12,VRW450-12A, VRW450-15, VRW450-15A, VRW450-24, VRW450-24A											
	100/ 240ac	50-60	0	5	90	450	4	1950 w/D3	-	0	0
				12	40	480	4				
				15	32	480	4				
				24	20	480	4				
VRW50-05, VRW50-05A, VRW50-12, VRW50-12A, VRW50-15, VRW50-15A, VRW50-24, VRW50-24A, VRW50-48, VRW50-48A[*r]											
	100-120/ 200-240ac	50/60	0	5	10	-	4	1950	-	0	0
				12	4.2	-	4				
				15	3.4	-	4				
				24	2.1	-	4				
				48	1	-	4				
VSR10-05, VSR10-12, VSR10-15, VSR10-24, VSR10-48[*r]											
	100-120/ 200-240ac 240-330dc	50-60	0	5	4	-	4	1950 w/D3	-	0	0
				12	1.7	-	4				
				15	1.4	-	4				
				24	0.9	-	4				
				48	0.4	-	4				
VSR120-05, VSR120-12, VSR120-15, VSR120-24, VSR120-48[*r]											
	100-120/ 200-240ac 240-330dc	50-60	0	5	40	-	4	1950 w/D3	-	0	0
				12	17	-	4				
				15	13.5	-	4				
				24	9	-	4				
				48	4.5	-	4				
VSR170-05, VSR170-12, VSR170-15, VSR170-24, VSR170-48[*r]											
	100-120/ 200-	50-60	0	5	66	-	4	1950	-	0	0

	240ac										
				12	28	-	4				
				15	23	-	4				
				24	15	-	4				
				48	7.5	-	4				
VSR20-05(a), VSR20-12(a), VSR20-15(a), VSR20-24(a), VSR20-48(a)											
	100-120ac	-	0	5	7	-	4	1950	-	0	0
				12	3	-	4				
				15	2.6	-	4				
				24	1.8	-	4				
				48	0.9	-	4				
VSR30-05, VSR30-12, VSR30-15, VSR30-24, VSR30-48[*r]											
	100-120/200-240ac	50-60	0	5	12	-	4	1950 w/D3	-	0	0
				12	5.5	-	4				
				15	4.4	-	4				
				24	3.3	-	4				
				48	1.5	-	4				
VSR330-05, VSR330-12, VSR330-15, VSR330-24, VSR330-48[*r]											
	100-120/200-240ac	50-60	0	5	132	-	4	1950 w/D3	-	0	0
				12	56	-	4				
				15	45	-	4				
				24	28	-	4				
				48	14	-	4				
VSR60-05, VSR60-12, VSR60-15, VSR60-24, VSR60-48[*r]											
	100-120/200-240ac	50-60	0	5	22	-	4	1950	30B	0	0
				12	10	-	4				
				15	8	-	4				
				24	5	-	4				
				48	2.5	-	4				
X30 Series											
	3-6dc	-	3	4	15	60	3	60950	-	0	0

X31 Series											
	10.8-13.2dc	-	3	5	17	147	3	60950	-	0	0
XB1(b) Series											
	208-240ac	50/60	0	59	15.5	678	3	1950	-	0	2
Y51 and Y50 Series											
	3.0-13.2dc	-	3	3.35	19.5	62.4	3	60950	15	0	0

[*r] - Output values are rated.

(a) - Complementary Recognized to UL 1012 (QQFU2).

(b) - Followed by additional alphanumeric characters or a blank.

(c) - Represents any alphanumeric character or a blank.

(d) - May or may not be followed by a dash followed by suffix letters and/or numbers.

Marking: Company name and model designation.

QQGQ2.GuideInfo
Power Supplies, Information Technology Equipment Including Electrical Business Equipment - Component

[Power Supplies - Component] Power Supplies, Information Technology Equipment Including Electrical Business Equipment - Component

The devices covered under this category are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. THE FINAL ACCEPTANCE OF THE COMPONENT IS DEPENDENT UPON ITS INSTALLATION AND USE IN COMPLETE EQUIPMENT SUBMITTED TO UNDERWRITERS LABORATORIES INC.

GENERAL

This category covers component power supplies intended for use in/with information processing and business equipment. End-use products that employ these types of power supplies are covered under Information Technology Equipment Including Electrical Business Equipment (**NWGQ**).

Codes

The following summarizes and defines codes shown in the individual Recognitions in addition to those indicated under Power Supplies (**QQAQ2**).

Supply Category (SC) — Code identifies the type of supply to which the component is intended to be connected.

SC Categories	Code
Branch circuit power	0
NEC Class 2	1
Isolated extra low voltage (ELV)*	2
Isolated safety extra low voltage (SELV)*	3
Isolated secondary circuit	4
Limited energy isolated secondary circuit	5
Centralized DC	6

Maximum Voltage (Max V) — The maximum output voltage under any resistive loading condition is indicated in volts peak.

Maximum Amperes (Max A) — The maximum output current under any resistive loading condition is indicated in amperes rms.

Maximum Volt (Max VA) — The maximum output volt-amperes under any resistive loading condition is indicated in volt-amperes rms.

Output Category (OC) — Each output is identified to indicate the type of output.

OC Categories	Code
NEC Class 1	0
NEC Class 2	1
Isolated extra low voltage (ELV)*	2
Isolated safety extra low voltage (SELV)*	3
Isolated secondary circuit	4
* ELV and SELV are defined in UL 60950and UL 60950-1	

Spacings (SP) — The standard used in judging spacings (or creepage and clearance distances) is indicated by the Standard No.

External Protection (EP) — Tests on the component were conducted with the primary protected by external overcurrent protection.

EP Categories	Code
Specified current rating, branch protection	@B
Specified current rating, time delay fuse	@T
Specified current rating, not branch protection	@
(@) Indicates current rating of protection in amperes	

Field Connections (FC) — Code indicates whether supply and output connections have been investigated for field connections.

FC Categories	Code
Supply and output not investigated for FC	0
Supply not investigated for FC	1
Output not investigated for FC	2
Supply suitable for FC (+)	3
Output suitable for FC (+)	4
Supply and output suitable for FC (+)	5
Supply suitable for FC (++)	6
Output suitable for FC (++)	7
Supply and output suitable for FC (++)	8
(+) Employs pressure wire terminals or terminal block suitable for field wiring	
(++) Employs a connector, or a cord terminating in a connector	

Grounding Connection (GC) — Units with functional grounding connections (no safety grounding connection) shall have dead metal parts bonded to the end-product grounding means.

GC Categories	Code
Only functional grounding provided	0
Provided with safety grounding connection	1
Double insulated product	2

REBUILT PRODUCTS

This category also covers Recognized Component power supplies that are rebuilt by the original manufacturer or another party having the necessary facilities, technical knowledge and manufacturing skills. Rebuilt power supplies are rebuilt to the extent necessary by disassembly and reassembly using new or reconditioned parts. Rebuilt power supplies are subject to the same requirements as new power supplies.

RELATED PRODUCTS

See Power Supplies, General Purpose (**QQFU2**).

ADDITIONAL INFORMATION

For additional information, see Power Supplies (**QQAQ2**).

REQUIREMENTS

The basic standards currently used to investigate products in this category are UL 60950 or UL 60950-1, "Safety of Information Technology Equipment."

UL MARKING

Products Recognized under UL's Component Program are identified by significant markings consisting of the manufacturer's identification and catalog, model or other product designation which correspond with the marking specified in UL's published records. Only those components which actually bear the "Marking" shown in the individual Recognitions should be considered as being covered under the Component Program.

For rebuilt products the word "Rebuilt," "Remanufactured" or "Reconditioned" precedes the product name.

The Listing or Classification Mark of Underwriters Laboratories Inc. is not authorized for use on, or in connection with, Recognized Components.

Underwriters Laboratories Inc.

Online Certifications Directory - Notice of Disclaimer

By accessing these Listings, Designs, Constructions, Systems, and Assemblies, the user acknowledges and accepts the terms and conditions upon which this service is made available.

THIS INFORMATION AND ALL RELATED MATERIALS, SUPPORT, AND SERVICES ARE MADE AVAILABLE BY UL FOR USE ONLY BY USERS FOR THEIR INTERNAL PURPOSES AND IS "AS IS," WITHOUT ANY REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

UL cannot and does not warrant that this information is current, accurate, or complete. This database contains the names of companies who have qualified to use the UL Mark and those products for which samples have been evaluated by UL and judged to be eligible for Listing. The manufacturer is not obligated to label all of his production. Accordingly, the appearance of a company's name or product in this database does not in itself assure those products are covered under UL's Listing and Follow-Up Service. Only those products bearing the appropriate UL Mark should be considered covered under UL's Listing and Follow-Up Service. Any reproduction or re-transmission of this information is prohibited unless reproduced or re-transmitted in its entirety, including this Notice of Disclaimer.

UL does not permit hyperlinking to this website without its express prior written consent and the execution of a *hyperlinking agreement*.