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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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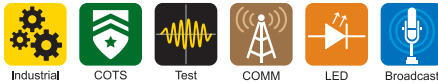
30-1500W Single Output Industrial Power Supplies

Features

- ◆ Limited Lifetime Warranty
- ◆ -10 to +71°C Operation (-40°C start up)
- ◆ Universal Input (85 - 265VAC)
- ◆ Conformally coated pcbs
- ◆ Class 1 Div 2 option (/RYHD suffix)



Key Market Segments & Applications



Specifications		HWS30A	HWS50A	HWS100A	HWS150A	HWS300	HWS600	HWS1000	HWS1500
Input Voltage range (47-63Hz)	-	85 - 265VAC or 120 - 370VDC**				85-265VAC or 120 - 330VDC**(4)			
Input Current (Typ) (1)	A	0.65 / 0.4	0.7 / 0.35	1.3 / 0.65	1.9 / 0.95	4.1 / 2.1	8.1 / 3.9	13.5 / 7	19 / 10
Inrush Current (1)	A	14 / 28				20 / 40			
Power Factor	-	Meets EN61000-3-2							
Temperature Coefficient	-	<0.02%/°C							
Overcurrent Protection	-	>104%							
Overvoltage Protection	V	Yes (See table on page 2)							
Hold Up Time (Typ)	ms	20							
Leakage Current (60Hz)	mA	<0.5mA				<0.75mA		<1.2mA	<1.5mA
Remote Sense	-	No				Yes			
Indicator	-	Green LED = ON							
Remote On/Off	-	No				Yes (Isolated from output)			
Parallel operation	-	No				Single wire connection (5 units max)			
DC Good	-	No				Yes			
Remote Adjust (PV)	-	No						Yes (3)	
Operating Temperature and Derating	°C	HWS50-150: -10 to +71°C, (Derating applies above 50°C) HWS300-1500: -10°C~+71°C, (Derate linearly to 50% load from +50~+71°C) Guaranteed start up at -40°C (see specification sheets on website for details and derating)							
Storage Temperature	°C	-40 to +85°C							
Humidity (non condensing)	-	Operating: 30 - 90%RH (10 -90% on HWS300-1500), Non operating 10 - 95%RH							
Cooling	-	Convection				Internal fan			
Withstand Voltage (2)	-	Input to Ground 2kVAC, Input to Output 3kVAC, Output to Ground 500VAC for 1 min.							
Isolation Resistance	-	>100MΩ at 25°C & 70%RH, Output to Ground 500VDC, >10M Output to remote on/off 100VDC							
Vibration (non operating)	-	MIL-STD-810F 514.5 Category 4, 10 (HWS1500 Cat 4, figure 514.5C-1)							
Shock (in packaging)	-	MIL-STD-810F 516.5 Category I, VI (HWS1500 <196.1m/s²)							
Safety Agency Approvals	-	UL60950-1, CSA60950-1, EN60950-1, CE Mark							
Line Dip	-	Complies with SEMI F47 (200VAC line only)							
Conducted & Radiated EMI	-	EN55011 / EN55022-B, FCC-B, VCCI-B (HWS1500 Class A)							
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8, -11, IEC61000-6-2							
Weight (Typ)	g	200	260	420	470	1000	1600	3200	3800
Size (WxHxD)	in	1.04x3.23x3.74	1.04x3.23x4.72	1.1x3.23x6.3	1.46x3.23x6.3	2.4x3.23x6.5	3.94x3.23x6.5	5x3.2x9.5	5x3.25x11
MTBF - Telcordia SR-332 issue 3**	hours	8,169,868	3,726,622	2,963,512	2,676,081	2,145,809	1,998,996	1,087,031	1,152,309
Warranty	yrs	Limited lifetime warranty (See TDK-Lambda's terms and conditions)							

(1) 100/200VAC input
 (2) HWS300-600 2.5kVAC Input to ground
 (3) 1-6V program voltage input to adjust output 20-120% (typical) of nominal. See instruction manual for details & models with this feature
 (4) No DC Input for HWS1500

* Class 1 Div 2 option (/RYHD suffix)
 ** Safety certified for AC input only. DC input not available on HWS1500
 *** 24V output model, 25°C ambient, full load, 230VAC input

Output Ratings										
Model	Voltage	Adjust Range	Max Curr(A)	Peak Curr(A) ⁴	Max Power(W)	Load Reg(mV)	Line Reg(mV)	Ripple Noise(mV)	Overshoot (V)	Efficiency (typ)% ¹
HWS30A-3/HD	3.3V	2.97 - 3.96	6	-	20	40	20	120	4.13-4.95	75/77
HWS50A-3/HD	3.3V	2.97 - 3.96	10	-	33	40	20	120	4.13-4.95	82/84
HWS100A-3/HD	3.3V	2.97 - 3.96	20	-	66	40	20	120	4.13-4.95	82/84
HWS150A-3/HD	3.3V	2.97 - 3.96	30	-	99	40	20	120	4.13-4.95	78/81
HWS300-3/HD	3.3V	2.64 - 3.96	60	-	198	30	20	120	4.13-4.95	74/77
HWS600-3/HD	3.3V	2.64 - 3.96	120	-	396	30	20	120	4.13-4.95	75/78
HWS1000-3/HD	3.3V	2.64 - 3.96	200	-	660	40	20	120	4.12-4.62	71/73
HWS1500-3/HD	3.3V	2.64 - 3.96	300	-	990	60	36	150	4.12-4.62	72/75
HWS30A-5/HD	5V	4.0 - 6.0	6	-	30	40	20	120	6.25-7.25	80/82
HWS50A-5/HD	5V	4.0 - 6.0	10	-	50	40	20	120	6.25-7.25	82/84
HWS100A-5/HD	5V	4.0 - 6.0	20	-	100	40	20	120	6.25-7.25	84/86
HWS150A-5/HD	5V	4.0 - 6.0	30	-	150	40	20	120	6.25-7.25	85/87
HWS300-5/HD	5V	4.0 - 6.0	60	-	300	30	20	120	6.25-7.25	79/82
HWS600-5/HD	5V	4.0 - 6.0	120	-	600	30	20	120	6.25-7.25	80/83
HWS1000-5/HD	5V	4.0 - 6.0	200	-	1000	40	20	120	6.25-7	76/78
HWS1500-5/HD	5V	4.0 - 6.0	300	-	1500	60	36	150	6.25-7	77/81
HWS1000-6/HD	6V	4.8 - 7.2	167	-	1002	60	36	150	7.5-8.4	79/81
HWS1000-7/HD	7.5V	6.0 - 9.0	134	160	1005	60	36	150	9.37-10.5	80/82
HWS30A-12/HD	12V	9.6 - 14.4	2.5	-	30	96	48	150	15-17.4	84/86
HWS50A-12/HD	12V	9.6 - 14.4	4.3	-	51.6	96	48	150	15-17.4	83/85
HWS100A-12/HD	12V	9.6 - 14.4	8.5	-	102	96	48	150	15-17.4	86/88
HWS150A-12/HD	12V	9.6 - 14.4	13	-	156	96	48	150	15-17.4	85/88
HWS300-12/HD	12V	9.6 - 14.4	27	-	324	72	48	150	15-17.4	80/83
HWS600-12/HD	12V	9.6 - 14.4	53	-	636	72	48	150	15-17.4	80/83
HWS1000-12/HD	12V	9.6 - 14.4	88	100	1056	100	48	150	15-17.4	82/85
HWS1500-12/HD	12V	9.6 - 14.4	125	-	1500	72	48	150	15-17.4	82/85
HWS30A-15/HD	15V	12.0 - 18.0	2	-	30	120	60	150	18.8-21.8	85/87
HWS50A-15/HD	15V	12.0 - 18.0	3.5	-	52.5	120	60	150	18.8-21.8	83/86
HWS100A-15/HD	15V	12.0 - 18.0	7	-	105	120	60	150	18.8-21.8	86/88
HWS150A-15/HD	15V	12.0 - 18.0	10	-	150	120	60	150	18.8-21.8	86/89
HWS300-15/HD	15V	12.0 - 18.0	22	-	330	90	60	150	18.8-21.8	80/83
HWS600-15/HD	15V	12.0 - 18.0	43	-	645	90	60	150	18.8-21.8	81/84
HWS1000-15/HD	15V	12.0 - 18.0	70	80	1050	120	60	150	18.7-21.8	83/85
HWS1500-15/HD	15V	12.0 - 18.0	100	-	1500	90	60	150	18.7-21.8	83/87
HWS30A-24/HD	24V	19.2 - 28.8	1.3	-	31.2	192	96	150	30-34.8	86/88
HWS50A-24/HD	24V	19.2 - 28.8	2.2	-	52.8	192	96	150	30-34.8	84/87
HWS100A-24/HD	24V	19.2 - 28.8	4.5	-	108	192	96	150	30-34.8	87/89
HWS150A-24/HD	24V	19.2 - 28.8	6.5	-	156	192	96	150	30-34.8	88/90
HWS300-24/HD	24V	19.2 - 28.8	14	16.5	336	144	96	150	30-34.8	82/85
HWS600-24/HD	24V	19.2 - 28.8	27	31	648	144	96	150	30-34.8	82/85
HWS1000-24/HD	24V	19.2 - 28.8	46	58.5	1104	150	96	150	30-34.8	85/87
HWS1500-24/HD	24V	19.2 - 28.8	65/70 (1)	105	1560	144	96	200	30-34.8	84/88
HWS1000-36/HD	36V	28.8 - 43.2	30.7	39	1104	150	144	200	45-49.7	85/88
HWS1500-36/HD	36V	28.8 - 43.2	42/46.5 (2)	70	1512	150	144	200	45-49.7	84/88
HWS30A-48/HD	48V	38.4 - 52.8	0.65	-	31.2	384	192	200	55.2-64.8	86/87
HWS50A-48/HD	48V	38.4 - 52.8	1.1	-	52.8	384	192	200	55.2-64.8	84/86
HWS100A-48/HD	48V	38.4 - 52.8	2.1	-	100.8	384	192	200	55.2-64.8	88/90
HWS150A-48/HD	48V	38.4 - 52.8	3.3	-	158.4	384	192	200	55.2-64.8	89/91
HWS300-48/HD	48V	38.4 - 52.8	7	-	336	288	192	350	55.2-64.8	82/85
HWS600-48/HD	48V	38.4 - 52.8	13	-	624	288	192	350	55.2-64.8	83/86
HWS1000-48/HD	48V	38.4 - 52.8	28	29.2	1104	300	192	200	55.2-60	86/88
HWS1500-48/HD	48V	38.4 - 52.8	32	-	1536	288	192	200	55.2-64.8	86/90
HWS1000-60/HD	60V	48.0 - 66.0	18.4	23.4	1104	360	240	400	69-75	85/88

Options	
Suffix	Description
Blank	No Cover (HWS50-150 Only) HWS300-1500 the cover is fitted as standard
/HDA	The cover option for HWS50-150 is special order only HWS300-1500 the cover is fitted as standard
/RYHD	ISA 12.12.01 (UL1604) - Class 1 Div 2 with dry contact relay DC Good signal (300W, 600W and 1500W 24V output models only, no remote on/off function.)

Other Industrial Products	
LZSA	500W to 1500W Single output
DPP, DLP, DSP, DRB, DRF	10W to 480W DIN Rail Mount
PFE	300 to 1000W AC-DC Power Models

For Additional Information, please visit
us.tdk-lambda.com/lp/products/hwsa-series.htm

