

- Limited Lifetime Warranty
- Medical Approvals
- Universal Input (85 - 265VAC)
- High Efficiency
- Broad 30W to 1500W product range
- RoHS Compliant Design

HWS-/ME Series

Single Output
Medical Power Supplies

Key Market Segments & Applications



HWS-/ME Features and Benefits

Features

- Limited Lifetime Warranty
- Medical Approvals
- Wide Range AC Input

Benefits

- Lower Cost of Ownership
- Reduces System Approval Times
- Supports Global Use

Specifications

| ITEM | MODELS | | HWS30A | HWS100A | HWS300 | HWS600 | HWS1000 | HWS1500 |
|------------------------------------|--------|----|--|---------------|-----------------------------------|----------------|------------------|---------------------|
| | | | HWS50A | HWS150A | | | | |
| Input Voltage | (4) | | 85-265VAC (47-63Hz) or 120-370VDC | | 85-265VAC (47-63Hz) or 120-330VDC | | | 85-265VAC (47-63Hz) |
| Input Current (Typ) | (1) | A | 0.65 / 0.4 | 1.3 / 0.65 | 4.1 / 2.1 | 8.1 / 3.9 | 13.5/7.0 | 19/10 |
| Inrush Current | (1) | A | 14 / 28 | | 20 / 40 | | | |
| Power Factor / Flicker | | | Meets EN61000-3-2, EN61000-3-3 | | | | | |
| 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) | (2) | mA | <0.5mA | | | | | |
| Remote Sense | | | No | | Yes | | | |
| Indicator | | | Green LED = ON | | | | | |
| Remote On/Off | | | No | | Yes (Isolated from output) | | | |
| Parallel operation | | | No | | Single wire conn. (5 units max) | | | |
| DC Good | | | No | | Yes | | | |
| Voltage Programming | | | No | | | | Yes | |
| Operating Temperature and Derating | | | HWS30A-150A: -10°C to +70°C, (derating applies above 50°C please refer to individual model specification for derating graph) HWS300-1500: -10°C to +70°C, (-10 to +50°C: 100%, derate linearly to 50% load from +50°C to +70°C) | | | | | |
| Storage Temperature | | °C | -30°C 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 | (3) | | 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, >10MΩ Output to remote on/off 100VDC | | | | | |
| Vibration (non operating) | | | 10 - 55Hz (1 min sweep), 19.6m/s ² constant, X, Y, Z axis, one hour each | | | | | |
| Shock (in packaging) | | | < 196.1m/s ² | | | | | |
| Safety Agency Approvals | (2) | | ES60601-1, EN60601-1, CSA-C22.2 No6011-M90 (C-UL) (basic insulation), CE Mark | | | | | |
| Line Dip | | | Complies with SEMI F47 (200VAC line only) | | | | | |
| Conducted & Radiated EMI Immunity | | | EN55011 / EN55022-B, FCC-B, VCCI-B (HWS600 & 1500 Class A) IEC61000-4-2, -3, -4, -5, -6, -8, -11, IEC61000-6-2 | | | | | |
| Weight (Typ) | | g | 220 | 450 | 1000 | 1600 | 3200 | 3800 |
| Size (WxHxD) | | | 26 x 82 x 95 | 33 x 82 x 160 | | | | |
| (with cover except 30 & 50W) | | mm | 26 x 82 x 120 | 42 x 82 x 160 | 61 x 82 x 165 | 100 x 82 x 165 | 126.5 x 82 x 240 | 280 x 82 x 126.5 |
| Warranty | | | Limited Lifetime Warranty (See TDK-Lambda terms & conditions) | | | | | |

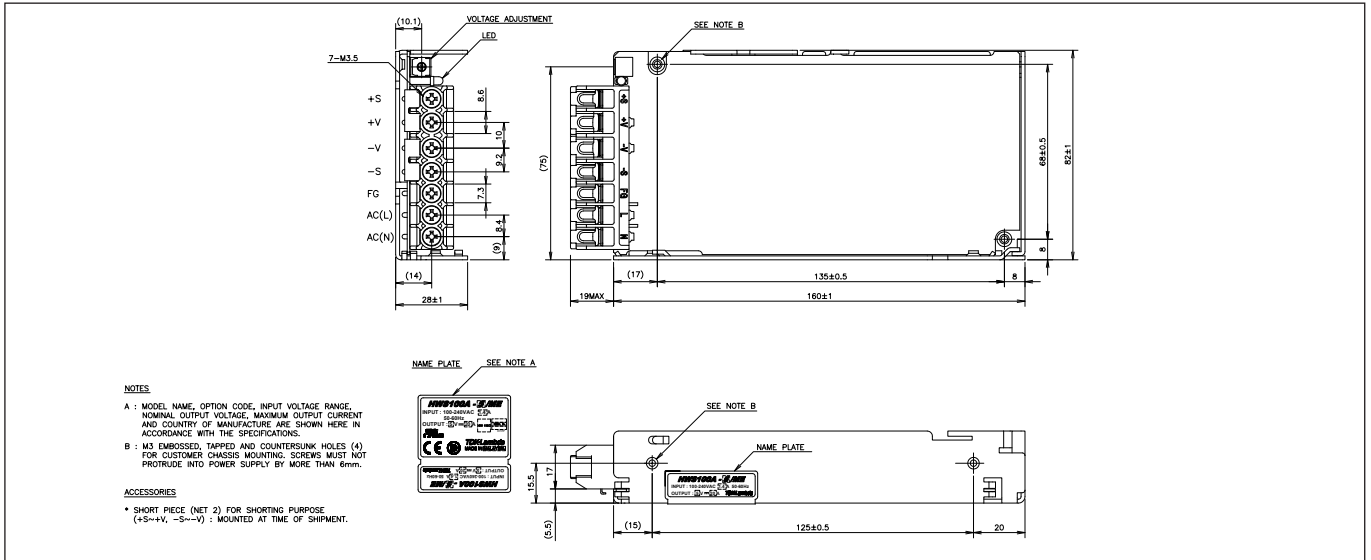
Notes: (1) 100/200VAC input. (2) See clause 19.5DV.2 of UL60601 for equipment in proximity of patient. (3) HWS300-600 2.5kVAC Input to ground. (4) Consult Sales Office for use under DC Input conditions

| Model Selector | | | | | | | | | |
|----------------|---------|---------------------------|--|---|--------------|--------------|------------------|-----------------|--------------------------------|
| Model | Voltage | Adjust Range | Max Curr(A) ⁴ | Max Power(W) | Load Reg(mV) | Line Reg(mV) | Ripple Noise(mV) | Overvoltage (V) | Efficiency (typ)% ¹ |
| HWS30A-5/ME | 5V | 4.0 - 6.0 | 6 | 30 | 40 | 20 | 120 | 6.25-7.25 | 77/80 |
| HWS50A-5/ME | 5V | 4.0 - 6.0 | 10 | 50 | 40 | 20 | 120 | 6.25-7.25 | 82/84 |
| HWS100A-5/ME | 5V | 4.0 - 6.0 | 20 | 100 | 40 | 20 | 120 | 6.25-7.25 | 83/86 |
| HWS150A-5/ME | 5V | 4.0 - 6.0 | 30 | 150 | 40 | 20 | 120 | 6.25-7.25 | 83/86 |
| HWS600-5/ME | 5V | 4.0 - 6.0 | 120 | 600 | 30 | 20 | 120 | 6.25-7.25 | 80/83 |
| HWS30A-12/ME | 12V | 9.6 - 14.4 | 2.5 | 30 | 96 | 48 | 150 | 15-17.4 | 81/83 |
| HWS50A-12/ME | 12V | 9.6 - 14.4 | 4.3 | 51.6 | 96 | 48 | 150 | 15-17.4 | 81/83 |
| HWS100A-12/ME | 12V | 9.6 - 14.4 | 8.5 | 102 | 96 | 48 | 150 | 15-17.4 | 83/86 |
| HWS150A-12/ME | 12V | 9.6 - 14.4 | 13 | 156 | 96 | 48 | 150 | 15-17.4 | 83/86 |
| HWS300-12/ME | 12V | 9.6 - 14.4 | 27 | 324 | 72 | 48 | 150 | 15-17.4 | 80/83 |
| HWS600-12/ME | 12V | 9.6 - 14.4 | 53 | 636 | 72 | 48 | 150 | 15-17.4 | 80/83 |
| HWS30A-15/ME | 15V | 12.0 - 18.0 | 2 | 30 | 120 | 60 | 150 | 18.8-21.8 | 81/83 |
| HWS50A-15/ME | 15V | 12.0 - 18.0 | 3.5 | 52.5 | 120 | 60 | 150 | 18.8-21.8 | 81/83 |
| HWS100A-15/ME | 15V | 12.0 - 18.0 | 7 | 105 | 120 | 60 | 150 | 18.8-21.8 | 83/86 |
| HWS150A-15/ME | 15V | 12.0 - 18.0 | 10 | 150 | 120 | 60 | 150 | 18.8-21.8 | 83/86 |
| HWS300-15/ME | 15V | 12.0 - 18.0 | 22 | 330 | 90 | 60 | 150 | 18.8-21.8 | 82/85 |
| HWS600-15/ME | 15V | 12.0 - 18.0 | 43 | 645 | 90 | 60 | 150 | 18.8-21.8 | 81/84 |
| HWS30A-24/ME | 24V | 19.2 - 28.8 | 1.3 | 31.2 | 192 | 96 | 200 | 30-34.8 | 83/86 |
| HWS50A-24/ME | 24V | 19.2 - 28.8 | 2.2 | 52.8 | 192 | 96 | 150 | 30-34.8 | 82/84 |
| HWS100A-24/ME | 24V | 19.2 - 28.8 | 4.5 | 108 | 192 | 96 | 150 | 30-34.8 | 84/87 |
| HWS150A-24/ME | 24V | 19.2 - 28.8 | 6.5 | 156 | 192 | 96 | 150 | 30-34.8 | 85/88 |
| HWS300-24/ME | 24V | 19.2 - 28.8 | 14 (16.5 pk) | 336 | 144 | 96 | 150 | 30-34.8 | 82/85 |
| HWS600-24/ME | 24V | 19.2 - 28.8 | 27 (31 pk) | 648 | 144 | 96 | 150 | 30-34.8 | 82/85 |
| HWS1000-24/ME | 24V | 19.2 - 28.8 | 46 (58.5 pk) | 1104 | 150 | 96 | 150 | 30-34.8 | 85/87 |
| HWS1500-24/ME | 24V | 4.8 - 28.8 ⁽⁷⁾ | 65/70 ⁽¹⁾ (105pk ⁽⁵⁾) | 1560/1680 ⁽¹⁾ (2520 pk ⁽⁵⁾) | 144 | 96 | 200 | 30-34.8 | 84/88 |
| HWS1000-36/ME | 36V | 28.8 - 43.2 | 30.7 (39 pk) | 1104 | 150 | 144 | 200 | 45-49.7 | 85/88 |
| HWS1500-36/ME | 36V | 7.2 - 43.2 ⁽⁶⁾ | 42/46.5 ⁽¹⁾ (70 pk) ⁽⁵⁾ | 1512/1674 ⁽¹⁾ (2520 pk ⁽⁵⁾) | 150 | 144 | 200 | 34-49.7 | 84/88 |
| HWS30A-48/ME | 48V | 38.4 - 52.8 | 0.65 | 31.2 | 384 | 192 | 200 | 55.2-64.8 | 82/83 |
| HWS50A-48/ME | 48V | 38.4 - 52.8 | 1.1 | 52.8 | 384 | 192 | 200 | 55.2-64.8 | 83/85 |
| HWS100A-48/ME | 48V | 38.4 - 52.8 | 2.1 | 100.8 | 384 | 192 | 200 | 55.2-64.8 | 84/87 |
| HWS150A-48/ME | 48V | 38.4 - 52.8 | 3.3 | 158.4 | 384 | 192 | 200 | 55.2-64.8 | 85/88 |
| HWS300-48/ME | 48V | 38.4 - 52.8 | 7 | 336 | 288 | 192 | 350 | 55.2-64.8 | 82/85 |
| HWS600-48/ME | 48V | 38.4 - 52.8 | 13 | 624 | 288 | 192 | 350 | 55.2-64.8 | 83/86 |
| HWS1000-48/ME | 48V | 38.4 - 52.8 | 23 | 1104 | 300 | 192 | 200 | 55.2-60 | 86/88 |
| HWS1500-48/ME | 48V | 9.6 - 52.8 ⁽⁶⁾ | 32 | 1536 | 288 | 192 | 200 | 55.2-64.8 | 86/90 |

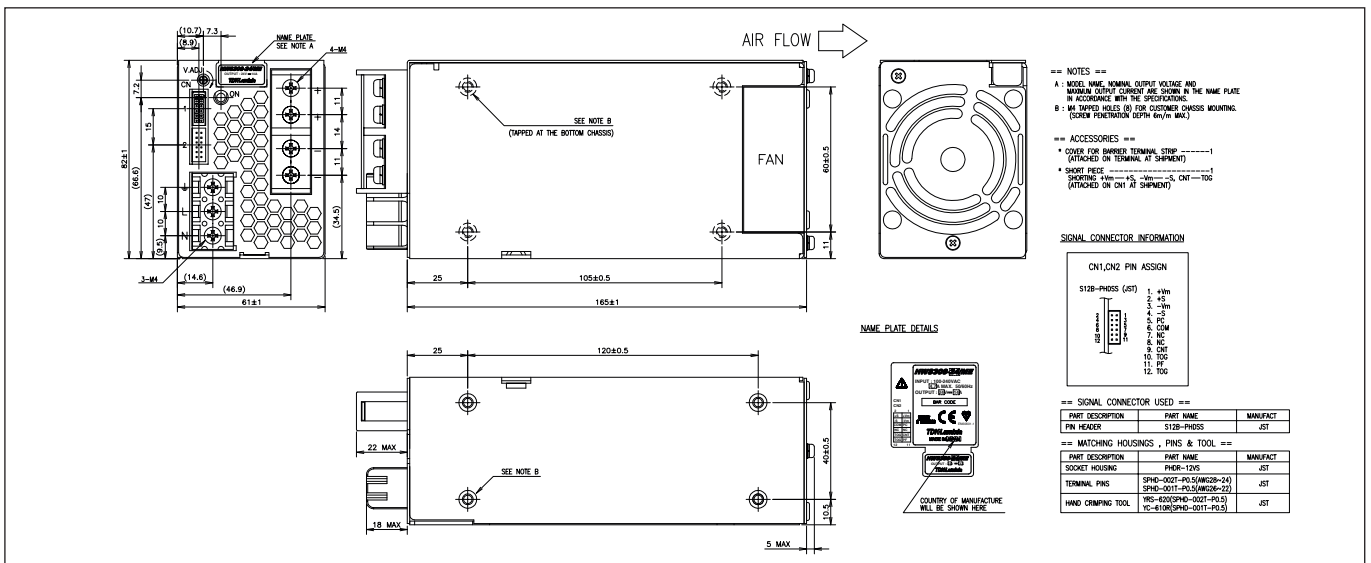
- (4) Peak load for 10s maximum on time, 35% duty cycle (5) 200-265AC Input
 (6) Using voltage programming input - see installation manual for details

| Options | |
|---------|--|
| Suffix | Description |
| Blank | No cover (except HWS300-1500 cover fitted) as standard |
| /A | Cover fitted (egHWSA100-24/MEA) |

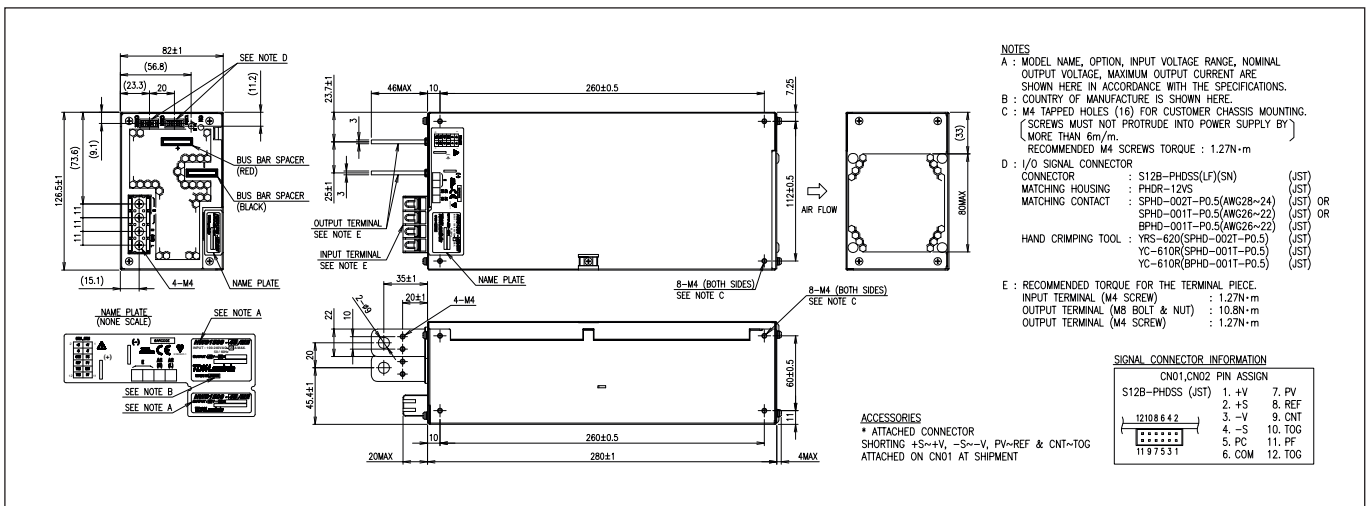
Outline Drawing HWS100A/MEA Series



Outline Drawing HWS300 Series



Outline Drawing HWS1500 Series





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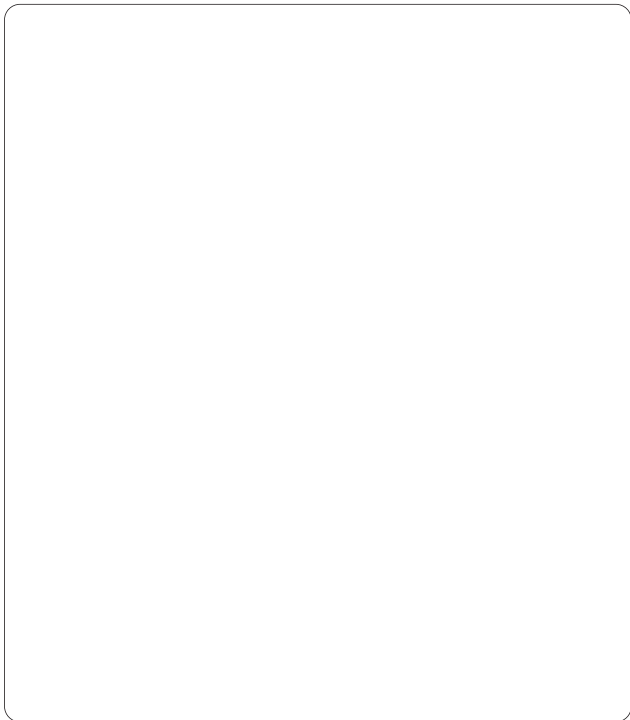
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