

AC-DC Power supply

TPS series



» Feature

- Maximize the effect of protection against heat with using the Aluminum case. (30 W - 75 W)
- Output voltage adjustable volume built-in
- Output ON Pilot lamp (LED)
- Free Voltage (100 - 240 V AC)
- Inrush Current Limit Circuit built-in
- Over current, Over voltage (except for 15 W), output short circuit, and overheating protection function

» Suffix code

Model	Code	Description
TPS--	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	TPS Power supply
Power output	15	15 W
	30	30 W
	50	50 W
	75	75 W
	100	100 W
	150	150 W
	220	220 W
	350	350 W
	450	450 W
	600	600 W
Number of output voltage	S	1 Output (Single output)
	D	2 Output (Dual output)
Output voltage classification	05	5 V DC
	12	12 V DC
	15	15 V DC
	24	24 V DC

15 Watt

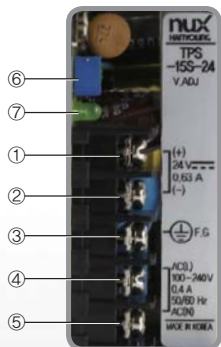
(5 V, 12 V, 15 V, 24 V DC)

TPS series

» Specification

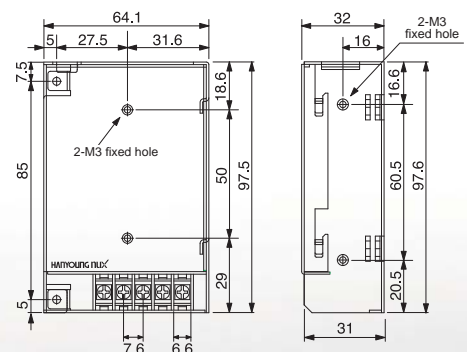
Model		TPS-15S-05	TPS-15S-12	TPS-15S-15	TPS-15S-24	
Output	Rated output voltage	5 V	12 V	15 V	24 V	
	Rated output current	3 A	1.3 A	1 A	0.63 A	
	Rated power output	15 W	15.6 W	15 W	15.1 W	
	Peak current	3.9 A	1.4 A	1.3 A	0.8 A	
	Circuit voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Load voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Ripple/noise	50/100 mV max	80/170 mV max	80/170 mV max	100/200 mV max	
	Ambient temperature fluctuation	50 mV	120 mV	150 mV	240 mV	
	Running time	500 ms max (110 V AC, I _o = 100 %)				
	Remaining time	20 ms min (110 V AC, I _o = 100 %)				
	Voltage fluctuation range	4.75 - 5.25 V	11.4 - 12.6 V	14.25 - 15.75 V	22.8 - 25.2 V	
Voltage setting range	±1 % max (Rated output voltage)					
Input	Input voltage	100 - 240 V AC (※ Designed voltage range : 88 - 264 V AC)				
	Input frequency	50 - 60 Hz (47 - 63 Hz)				
	Current (A)	110 V AC	0.4	0.4	0.4	0.4
		220 V AC	0.2	0.2	0.2	0.2
	Efficiency	220 V AC	75 %	79 %	83 %	84 %
	Inrush current	110 V AC	20 A Typ. (T _a = 25 °C, I _o = 100 %)			
		220 V AC	40 A Typ. (T _a = 25 °C, I _o = 100 %)			
Leakage current	110 V AC	3.5 mA max				
	220 V AC	3.5 mA max				
Protection function	Over voltage protection	Protective function performed within 110 ~ 190 % of the rated output current				
	Overheating protection	135 °C				
	Protection of output short	Auto Re-start				
	Output signal LED	Green LED				
ETC	Dielectric strength	2,700 V AC for 1 min, Detection current = 10 mA, (Input - Output)				
		1,500 V AC for 1 min, Detection current = 10 mA, (Input - FG)				
		500 V AC for 1 min, Detection current = 10 mA, (Output - FG)				
Insulation resistance	50 MΩ min. (Input - Output, FG), (Output - FG)					
Environment	Ambient temperature	-20 ~ +50 °C (Refer to the derating curve of output load)				
	Ambient humidity	20 ~ 90 % R.H (With no condensation)				
	Storage temperature	-30 ~ +85 °C (With no condensation)				
	Vibration resistance	10 - 55 Hz, peak amplitude 0.375 mm, 2 hours for each of 3 directions (Not in motion)				
	Shock resistance	150 %, 3 times for each of 6 directions (State of packing)				
	Weight	approx. 228 g (Excluded the weight of box)				

» Connection diagram



Terminal number	Terminal name	Description
①	+ VOUT	DC output terminal
②	- VOUT	
③	⊕	FG
④	AC (L)	AC Input terminal
⑤	AC (N)	
⑥	V-ADJ	Output voltage variable volume
⑦	DC OK	Output indication LED

» Dimension (Unit : mm)



30 Watt

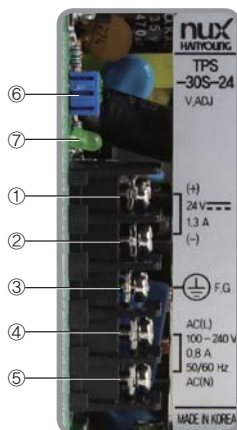
(5 V, 12 V, 15 V, 24 V DC)

TPS series

» Specification

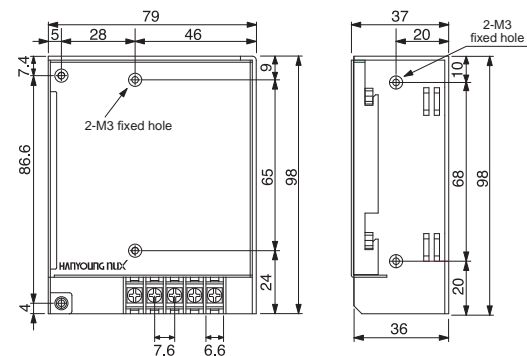
Model		TPS-30S-05	TPS-30S-12	TPS-30S-15	TPS-30S-24	
Output	Rated output voltage	5 V	12 V	15 V	24 V	
	Rated output current	6 A	2.5 A	2 A	1.3 A	
	Rated power output	30 W			31.2 W	
	Peak current	7.5 A	3.5 A	2.2 A	1.5 A	
	Circuit voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Load voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Ripple/noise	50/100 mV max	80/170 mV max	80/170 mV max	100/200 mV max	
	Ambient temperature fluctuation	50 mV	120 mV	150 mV	240 mV	
	Running time	500 ms max(110 V AC, lo = 100 %)				
	Remaining time	20 ms min(110 V AC, lo = 100 %)				
	Voltage fluctuation range	4.75 - 5.25 V	11.4 - 12.6 V	14.25 - 15.75 V	22.8 - 25.2 V	
Voltage setting range	±1 % max (Rated output voltage)					
Input	Input voltage	100 - 240 V AC (※ Designed voltage range : 88 - 264 V AC)				
	Input frequency	50 - 60 Hz (47 - 63 Hz)				
	Current (A)	110 V AC	0.8	0.8	0.8	0.8
		220 V AC	0.4	0.4	0.4	0.4
	Efficiency	220 V AC	72 %	84 %	85 %	85 %
	Inrush current	110 V AC	20 A Typ. (Ta = 25 °C, lo = 100 % at COLD START)			
		220 V AC	40 A Typ. (Ta = 25 °C, lo = 100 % at COLD START)			
Leakage current	110 V AC	3.5 mA max				
	220 V AC	3.5 mA max				
Protection function	Over current protection	Protective function performed within 110 ~ 220 % of the rated output current				
	Over voltage protection	5.75 - 7.0 V	13.8 - 16.8 V	17.3 - 21 V	27.6 - 33.6 V	
	Overheating protection	140 °C				
	Protection of output short	Auto Re-start				
	Output signal LED	Green LED				
ETC	Dielectric strength	2,700 V AC for 1 min, Detection current = 10 mA, (Input - Output)				
		1,500 V AC for 1 min, Detection current = 10 mA, (Input - FG)				
		500 V AC for 1 min, Detection current = 10 mA, (Output - FG)				
Insulation resistance	50 MΩ min. (Input - Output, FG), (Output - FG)					
Environment	Ambient temperature	-20 ~ +50 °C (Refer to the derating curve of output load)				
	Ambient humidity	20 ~ 90 % R.H (With no condensation)				
	Storage temperature	-30 ~ +85 °C (With no condensation)				
	Vibration resistance	10 - 55 Hz, peak amplitude 0.375 mm, 2 hours for each of 3 directions (not in motion)				
	Shock resistance	150 %, 3 times for each of 6 directions (State of packing)				
	Weight	approx. 238 g (Excluded the weight of box)				

» Connection diagram



Terminal number	Terminal name	Description
①	+V OUT	DC output terminal
②	-V OUT	
③	⊕	FG
④	AC (L)	AC Input terminal
⑤	AC (N)	
⑥	V-ADJ	Output voltage variable volume
⑦	DC OK	Output indication LED

» Dimension (Unit : mm)



50 Watt

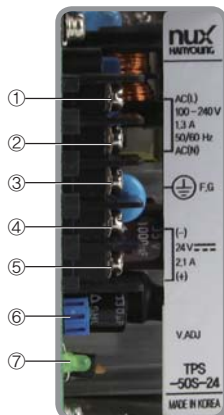
(5 V, 12 V, 15 V, 24 V DC)

TPS series

» Specification

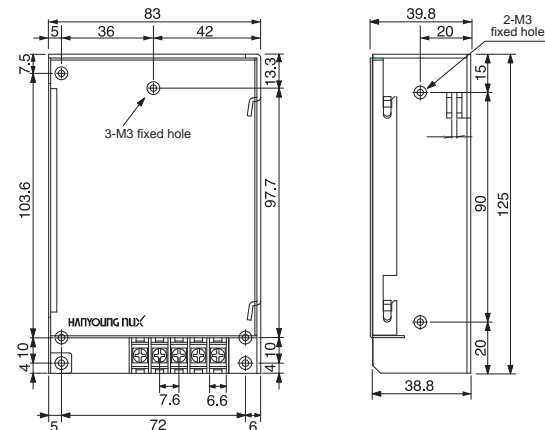
Model		TPS-50S-05	TPS-50S-12	TPS-50S-15	TPS-50S-24	
Output	Rated output voltage	5 V	12 V	15 V	24 V	
	Rated output current	9 A	4.2 A	3.4 A	2.1 A	
	Rated power output	45 W	50.4 W	51 W	50.4 W	
	Peak current	12 A	5.5 A	4.0 A	2.8 A	
	Circuit voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Load voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Ripple/noise	50/100 mV max	80/170 mV max	80/170 mV max	100/200 mV max	
	Ambient temperature fluctuation	50 mV	120 mV	150 mV	240 mV	
	Running time	500 ms max (110 V AC, I _o = 100 %)				
	Remaining time	20 ms min (110 V AC, I _o = 100 %)				
	Voltage fluctuation range	4.75 - 5.25 V	11.4 - 12.6 V	14.25 - 15.75 V	22.8 - 25.2 V	
Voltage setting range	± 1% max (Rated output voltage)					
Input	Input voltage	100 - 240 V AC (※ Designed voltage range : 88 - 264 V AC)				
	Input frequency	50 - 60 Hz (47 - 63 Hz)				
	Current (A)	110 V AC	1.3	1.3	1.3	1.3
		220 V AC	0.6	0.6	0.6	0.6
	Efficiency	220 V AC	75 %	83 %	85 %	87 %
	Inrush current	110 V AC	20 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
		220 V AC	40 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
Leakage current	110 V AC	3.5 mA max				
	220 V AC	3.5 mA max				
Protection function	Over current protection	Protective function performed within 110 ~ 190 % of the rated output current				
	Over voltage protection	5.75 - 7.0 V	13.8 - 16.8 V	17.3 - 21 V	27.6 - 33.6 V	
	Overheating protection	140 °C				
	Protection of output short	Auto Re-start				
	Output signal LED	Green LED				
ETC	Dielectric strength	2,700 V AC for 1 min, Detection current = 10 mA, (Input - Output)				
		1,500 V AC for 1 min, Detection current = 10 mA, (Input - FG)				
		500 V AC for 1 min, Detection current = 10 mA, (Output - FG)				
Insulation resistance	50 MΩ min. (Input - Output, FG), (Output - FG)					
Environment	Ambient temperature	-20 ~ +50 °C (Refer to the derating curve of output load)				
	Ambient humidity	20 ~ 90 % R.H (With no condensation)				
	Storage temperature	-30 ~ +85 °C (With no condensation)				
	Vibration resistance	10 - 55 Hz, peak amplitude 0.375 mm, 2 hours for each of 3 directions (not in motion)				
	Shock resistance	150 %, 3 times for each of 6 directions (State of packing)				
	Weight	approx. 328 g (Excluded the weight of box)				

» Connection diagram



Terminal number	Terminal name	Description
①	AC (L)	AC Input terminal
②	AC (N)	
③	⊕	FG
④	-V OUT	DC output terminal
⑤	+V OUT	
⑥	V-ADJ	Output voltage variable volume
⑦	DC OK	Output indication LED

» Dimension (Unit : mm)



75 Watt

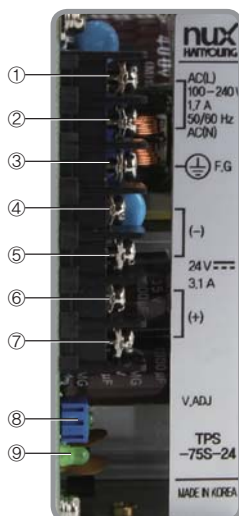
(5 V, 12 V, 15 V, 24 V DC)

TPS series

» Specification

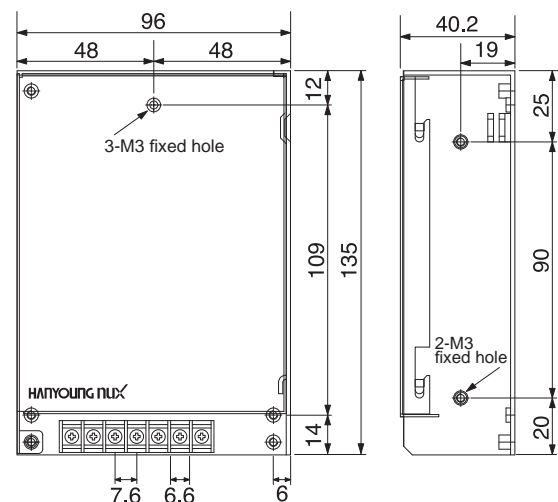
Model		TPS-75S-05	TPS-75S-12	TPS-75S-15	TPS-75S-24	
Output	Rated output voltage	5 V	12 V	15 V	24 V	
	Rated output current	13 A	6.3 A	5 A	3.1 A	
	Rated power output	65 W	75.6 W	75 W	74.4 W	
	Peak current	15 A	7.0 A	5.3 A	3.5 A	
	Circuit voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Load voltage fluctuation rate	±50 mV	±120 mV	±150 mV	±240 mV	
	Ripple/noise	50/100 mV max	80/170 mV max	80/170 mV max	100/200 mV max	
	Ambient temperature fluctuation	50 mV	120 mV	150 mV	240 mV	
	Running time	500 ms max (110 V AC, I _o = 100 %)				
	Remaining time	20 ms min (110 V AC, I _o = 100 %)				
	Voltage fluctuation range	4.75 - 5.25 V	11.4 - 12.6 V	14.25 - 15.75 V	22.8 - 25.2 V	
Voltage setting range	±1 % max (Rated output voltage)					
Input	Input voltage	100 - 240 V AC (※ Designed voltage range : 88 - 264 V AC)				
	Input frequency	50 - 60 Hz (47 - 63 Hz)				
	Current (A)	110 V AC	1.7	1.7	1.7	1.7
		220 V AC	0.8	0.8	0.8	0.8
	Efficiency	220 V AC	77 %	85 %	85 %	87 %
	Inrush current	110 V AC	20 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
		220 V AC	40 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
Leakage current	110 V AC	3.5 mA max				
	220 V AC	3.5 mA max				
Protection function	Over current protection	Protective function performed within 110 ~ 170 % of the rated output current				
	Over voltage protection	5.75 - 7.0 V	13.8 - 16.8 V	17.3 - 21 V	27.6 - 33.6 V	
	Overheating protection	140 °C				
	Protection of output short	Auto Re-start				
	Output signal LED	Green LED				
ETC	Dielectric strength	2,700 V AC for 1 min, Detection current = 10 mA, (Input - Output)				
		1,500 V AC for 1 min, Detection current = 10 mA, (Input - FG)				
		500 V AC for 1 min, Detection current = 10 mA, (Output - FG)				
Insulation resistance	50 MΩ min. (Input - Output, FG), (Output - FG)					
Environment	Ambient temperature	-20 ~ +50 °C (Refer to the derating curve of output load)				
	Ambient humidity	20 ~ 90 % R.H (With no condensation)				
	Storage temperature	-30 ~ +85 °C (With no condensation)				
	Vibration resistance	10 - 55 Hz, peak amplitude 0.375 mm, 2 hours for each of 3 directions (not in motion)				
	Shock resistance	150 %, 3 times for each of 6 directions (State of packing)				
	Weight	approx. 394 g (Excluded the weight of box)				

» Connection diagram



Terminal number	Terminal name	Description
①	AC (L)	AC Input terminal
②	AC (N)	
③	⊥	FG
④	-V OUT	DC output terminal
⑤	+V OUT	
⑧	V-ADJ	Output voltage variable volume
⑨	DC OK	Output indication LED

» Dimension (Unit : mm)



100 Watt

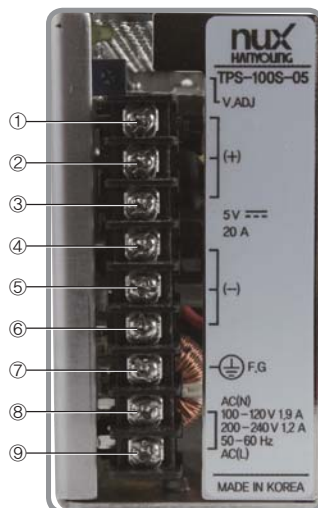
(5 V, 12 V, 15 V, 24 V DC)

TPS series

» Specification

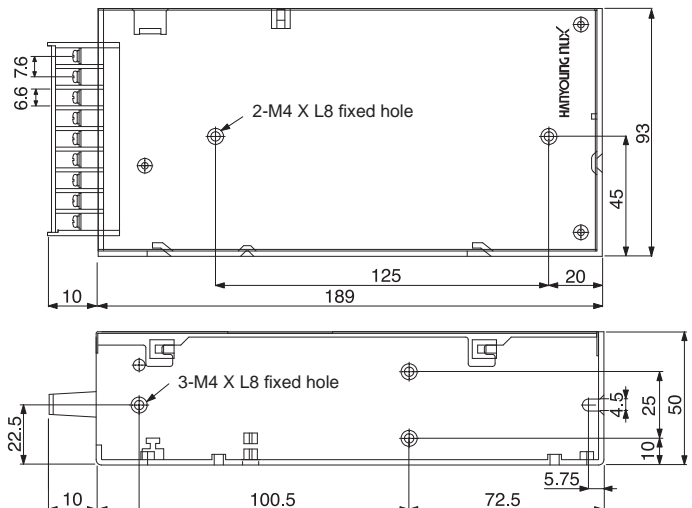
Model		TPS-100S-05	TPS-100S-12	TPS-100S-15	TPS-100S-24	
Output	Rated output voltage	5 V	12 V	15 V	24 V	
	Rated output current	20 A	8.4 A	6.7 A	4.2 A	
	Rated power output	100 W	100.8 W	100.5 W	100.8 W	
	Peak current	27 A	13 A	10 A	6 A	
	Circuit voltage fluctuation rate	±25 mV	±36 mV	±45 mV	±72 mV	
	Load voltage fluctuation rate	±50 mV	±36 mV	±45 mV	±72 mV	
	Ripple/noise	50/100 mV max	80/170 mV max	80/170 mV max	100/200 mV max	
	Ambient temperature fluctuation	50 mV	120 mV	150 mV	240 mV	
	Running time	500 ms max (110 V AC, I _o = 100 %)				
	Remaining time	20 ms min (110 V AC, I _o = 100 %)				
	Voltage fluctuation range	4.75 - 5.25 V	11.4 - 12.6 V	14.25 - 15.75 V	22.8 - 25.2 V	
Voltage setting range	±0.5 % max (Rated output voltage)					
Input	Input voltage	100 - 120 / 200 - 240 V AC				
	Input frequency	50 - 60 Hz (47 - 63 Hz)				
	Current (A)	110 V AC	1.88	1.75	1.75	1.69
		220 V AC	1.0	0.93	0.91	0.90
	Efficiency	220 V AC	80 %	87 %	87 %	90 %
	Inrush current	110 V AC	25 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
		220 V AC	50 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
Leakage current	110 V AC	3.5 mA max				
	220 V AC	3.5 mA max				
Protection function	Over current protection	Protective function performed within 110 ~ 170 % of the rated output current				
	Over voltage protection	5.75 - 7.0 V	13.8 - 16.8 V	17.3 - 21 V	27.6 - 33.6 V	
	Overheating protection	140 °C				
	Protection of output short	Auto Re-start				
	Output signal LED	Green LED				
ETC	Dielectric strength	2,700 V AC for 1 min, Detection current = 10 mA, (Input - Output)				
		1,500 V AC for 1 min, Detection current = 10 mA, (Input - FG)				
		500 V AC for 1 min, Detection current = 10 mA, (Output - FG)				
Insulation resistance	50 MΩ min. (Input - Output, FG), (Output - FG)					
Environment	Ambient temperature	-20 ~ +50 °C (Refer to the derating curve of output load)				
	Ambient humidity	20 ~ 90 % R.H (With no condensation)				
	Storage temperature	-30 ~ +85 °C (With no condensation)				
	Vibration resistance	10 - 55 Hz, peak amplitude 0.375 mm, 2 hours for each of 3 directions (not in motion)				
	Shock resistance	150 %, 3 times for each of 6 directions (State of packing)				
	Weight	approx. 650 g (Excluded the weight of box)				

» Connection diagram



Terminal number	Terminal name	Description
①	+V OUT	+ Out
②	+V OUT	
③	+V OUT	
④	-V OUT	- Out
⑤	-V OUT	
⑥	-V OUT	
⑦	⊕	FG
⑧	AC (N)	AC Input terminal
⑨	AC (L)	

» Dimension (Unit : mm)



150 Watt

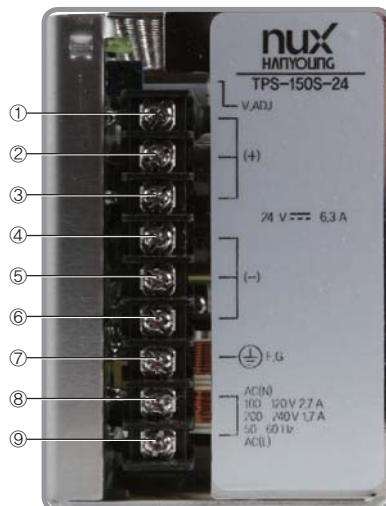
(5 V, 12 V, 15 V, 24 V DC)

TPS series

» Specification

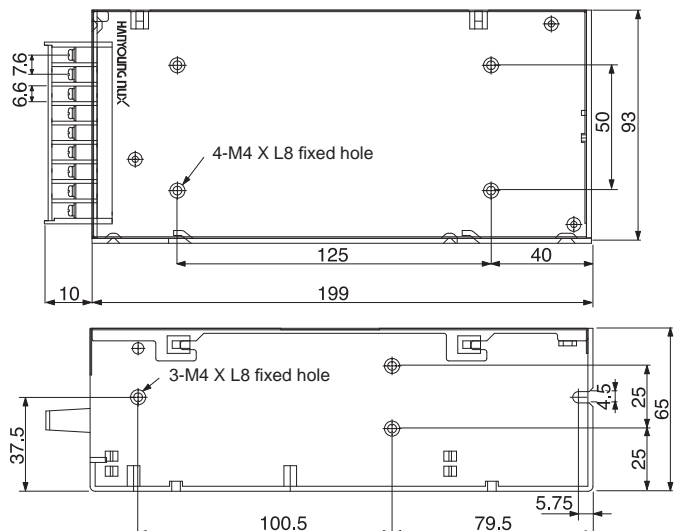
Model		TPS-75S-05	TPS-75S-12	TPS-75S-15	TPS-75S-24	
Output	Rated output voltage	5 V	12 V	15 V	24 V	
	Rated output current	27 A	12.5 A	10 A	6.3 A	
	Rated power output	135 W	150 W	150 W	151 W	
	Peak current	33 A	14 A	14 A	10 A	
	Circuit voltage fluctuation rate	±25 mV	±36 mV	±45 mV	±72 mV	
	Load voltage fluctuation rate	±50 mV	±36 mV	±45 mV	±72 mV	
	Ripple/noise	50/100 mV max	80/170 mV max	80/170 mV max	100/200 mV max	
	Ambient temperature fluctuation	50 mV	120 mV	150 mV	240 mV	
	Running time	500 ms max (110 V AC, I _o = 100 %)				
	Remaining time	20 ms min (110 V AC, I _o = 100 %)				
	Voltage fluctuation range	4.75 - 5.25 V	11.4 - 12.6 V	14.25 - 15.75 V	22.8 - 25.2 V	
Voltage setting range	±0.5 % max (Rated output voltage)					
Input	Input voltage	100 - 120 / 200 - 240 V AC				
	Input frequency	50 - 60 Hz (47 - 63 Hz)				
	Current (A)	110 V AC	2.95	2.85	2.85	2.75
		220 V AC	1.75	1.65	1.65	1.55
	Efficiency	220 V AC	78 %	87 %	85 %	89 %
	Inrush current	110 V AC	28 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
		220 V AC	58 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)			
Leakage current	110 V AC	3.5 mA max				
	220 V AC	3.5 mA max				
Protection function	Over current protection	Protective function performed within 110 ~ 170 % of the rated output current				
	Over voltage protection	5.75 - 7.0 V	13.8 - 16.8 V	17.3 - 21 V	27.6 - 33.6 V	
	Overheating protection	140 °C				
	Protection of output short	Auto Re-start				
	Output signal LED	Green LED				
ETC	Dielectric strength	2,700 V AC for 1 min, Detection current = 10 mA, (Input - Output)				
		1,500 V AC for 1 min, Detection current = 10 mA, (Input - FG)				
		500 V AC for 1 min, Detection current = 10 mA, (Output - FG)				
Insulation resistance	50 MΩ min. (Input - Output, FG), (Output - FG)					
Environment	Ambient temperature	-20 ~ +50 °C (Refer to the derating curve of output load)				
	Ambient humidity	20 ~ 90 % R.H (With no condensation)				
	Storage temperature	-30 ~ +85 °C (With no condensation)				
	Vibration resistance	10 - 55 Hz, peak amplitude 0.375 mm, 2 hours for each of 3 directions (not in motion)				
	Shock resistance	150 %, 3 times for each of 6 directions (State of packing)				
	Weight	approx. 726 g (Excluded the weight of box)				

» Connection diagram



Terminal number	Terminal name	Description
①	+V OUT	+ Out
②	+V OUT	
③	+V OUT	
④	-V OUT	- Out
⑤	-V OUT	
⑥	-V OUT	
⑦	⊕	FG
⑧	AC (N)	AC Input terminal
⑨	AC (L)	

» Dimension (Unit : mm)



220 Watt

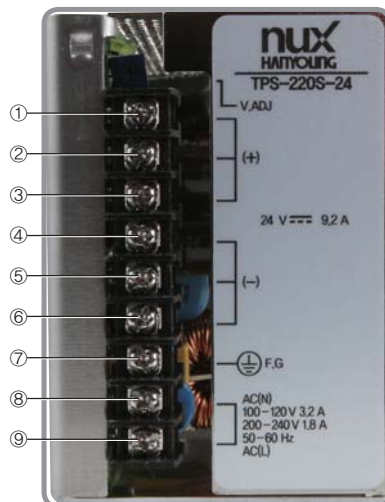
(5 V, 12 V, 15 V, 24 V DC)

TPS series

» Specification

Model		TPS-220S-12	TPS-220S-15	TPS-220S-24	
Output	Rated output voltage	12 V	15 V	24 V	
	Rated output current	17 A	14.7 A	9.2 A	
	Rated power output	204 W	220.5 W	220.8 W	
	Peak current	20 A	20 A	13 A	
	Circuit voltage fluctuation rate	±36 mV	±45 mV	±72 mV	
	Load voltage fluctuation rate	±36 mV	±45 mV	±72 mV	
	Ripple/noise	80/170 mV max	80/170 mV max	100/200 mV max	
	Ambient temperature fluctuation	120 mV	150 mV	240 mV	
	Running time	500 ms max (110 V AC, I _o = 100 %)			
	Remaining time	20 ms min (110 V AC, I _o = 100 %)			
	Voltage fluctuation range	11.4 - 12.6 V	14.25 - 15.75 V	22.8 - 25.2 V	
	Voltage setting range	±0.5 % max (Rated output voltage)			
Input	Input voltage	100 - 120 / 200 - 240 V AC			
	Input frequency	50 - 60 Hz (47 - 63 Hz)			
	Current (A)	110 V AC	3.2	3.2	3.1
		220 V AC	1.8	1.8	1.7
	Efficiency	220 V AC	86 %	86 %	90 %
	Inrush current	110 V AC	20 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)		
		220 V AC	40 A Typ. (T _a = 25 °C, I _o = 100 % at COLD START)		
Leakage current	110 V AC	3.5 mA max			
	220 V AC	3.5 mA max			
Protection function	Over current protection	Protective function performed within 110 ~ 170 % of the rated output current			
	Over voltage protection	13.8 - 16.8 V	17.3 - 21 V	27.6 - 33.6 V	
	Overheating protection	140 °C			
	Protection of output short	Auto Re-start			
	Output signal LED	Green LED			
ETC	Dielectric strength	2,700 V AC for 1 min, Detection current = 10 mA, (Input - Output)			
		1,500 V AC for 1 min, Detection current = 10 mA, (Input - FG)			
		500 V AC for 1 min, Detection current = 10 mA, (Output - FG)			
Insulation resistance	50 MΩ min. (Input - Output, FG), (Output - FG)				
Environment	Ambient temperature	-20 ~ +50 °C (Refer to the derating curve of output load)			
	Ambient humidity	20 ~ 90 % R.H (With no condensation)			
	Storage temperature	-30 ~ +85 °C (With no condensation)			
	Vibration resistance	10 - 55 Hz, peak amplitude 0.375 mm, 2 hours for each of 3 directions (not in motion)			
	Shock resistance	150 %, 3 times for each of 6 directions (State of packing)			
	Weight	approx. 726 g (Excluded the weight of box)			

» Connection diagram



Terminal number	Terminal name	Description
①	+V OUT	+ Out
②	+V OUT	
③	+V OUT	
④	-V OUT	- Out
⑤	-V OUT	
⑥	-V OUT	
⑦	⊕	FG
⑧	AC (N)	AC Input terminal
⑨	AC (L)	

» Dimension (Unit : mm)

