

Switching power supplies, UPS & PoE equipment



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Faraday Electronics Company was founded in 2011 by power supply specialists. The company was created to meet the specific needs of customers. For example, power supplies were developed with the ability to set any output voltage in the range from 12V to 24V using an adjustable resistor.

Our products are manufactured under two brand names:

smart solutions inside[®]
FARADAY
ELECTRONICS

The trademark is protected on the territory of Russia.

TD·FE[®]

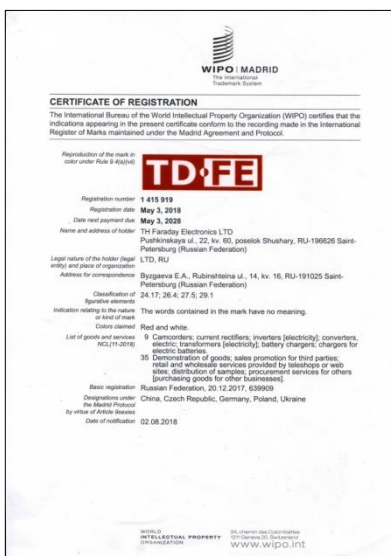
The trademark is protected by Madrid - The International Trademark System.

Our key manufacturing partners are Chinese factories with a high technological level of Power Supply production. We trust the production of our power supplies only to factories with which we have been cooperating for many years.

We design and manufacture Power Supplies according to customer requests. Our conventional power supplies are also subject to change according to customer requirements.

Faraday power sources comply with international standards of reliability and consumer properties, since we do not use simplified schemes and low-quality components in the design and manufacture of switching power supplies. The warranty period for our products is at least two years.

Contact us and we will immediately consider your request, while offering the most economical solution.





FEATURES:

- CE, EAC certified
- Universal input, wide range: 100-240 VAC/±135-370 VDC
- Adjustable DC output in the range of 12-24 V (manual adjusting by 10-turns variable resistor)
- Miniature aluminum housing
- Automatic protection: short circuit, overload
- Two LED indicators for power on and DC voltage range
- DIN-rail mounting allowed with additional DIN-holder

SPECIFICATION

Model name		18W/12-24V/ 78AL	36W/12-24V/ 95AL	50W/12-24V/ 120AL*	75W/12- 24V/140AL*
Output	Rated power	18 W	36 W	50 W	75 W
	Rated DC voltage	12 - 24 V			
	Maximum DC voltage range	11,5 - 24,5 V			
	Rated current range	1,5 - 0,75 A	3,0 - 1,5 A	4,2 - 2,2 A	6,25 - 3,15 A
	Voltage ripple and noise	≤0,5 %			
	PWM frequency	65 kHz			
	Temperature regulation	≤1 %			
	Setup, rise time	<1500 ms			
	Open collector output maximum current	40 mA			
Input	Voltage range	100 - 240 VAC (94 - 264 VAC max.); ±135 - 370 VDC			
	Frequency range	47 - 63 Hz			
	Efficiency	≥82 %	≥84 %	≥84 %	≥85 %
	No load power consumption	≤1,2W			
	Inrush current	40 A max.			
Indication	Green LED (power ON)	On - output DC OK / blinking - in protection			
	Red LED (DC range)	OFF: output voltage ≤ 18 V/ ON: output voltage > 18 V			
Protection	Maximum output power	23 W	74 W	60 W	140 W
	Short circuit, overload	Hiccup mode, recovers automatically after fault condition is removed			
Environment	Working temperature	-25..+65 °C			
	Storage temperature	-40..+85 °C			
	Humidity	20 - 90% RH non-condensing			
	Vibration	10-500 Hz, 2G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes			
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B			
	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA			
	Withstand voltage I/P-FG	1.5kV / 60 s / 5 mA			
	Withstand voltage O/P-FG	0.5kV / 60 s / 5 mA			
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH			
Others	MTBF	150 000 hours			
	Dimension, mm	84 x 53 x 24	102 x 58 x 29	113 x 68 x 36	134 x 74 x 37
	DIN-rail mounting	DIN-holder is supplied separately **			
	Warranty	3 years			
	Packing	Plastic bag, white box			
	Weight	100 g	160 g	205 g	270 g

* CON2-connector on models 50W и 75W is intended for remote on/off power supply in the case if warm reboot of a load needed. The pins 'On/Off' and 'Gnd' should be shorted and then open for DC output off/on. Pin assignment in order from the board edge: 1. Gnd; 2. V+; 3. On/Off.

** DIN-holder appearance and application example:





FEATURES:

- CE, EAC certified
- Using to build power system for PoE
- Adjustable DC output in the range of 50-60 V
- Automatic protection: short circuit, overload

SPECIFICATION

Model name		36W/50-60V/95AL	65W/50-60V/140AL	150W/50-60V
Output	Rated power	36 W	65 W	150 W
	Rated DC voltage	50 - 60 V		
	Maximum DC voltage range	48,5 - 61,5 V		48,0 - 65,0 V
	Rated current range	0,72 - 0,6 A	1.3 – 1.08 A	3.0 – 2.5 A
	Voltage ripple and noise	≤0,5 %		≤0,2 %
	PWM frequency	60 kHz		55 kHz
	Temperature regulation	≤1 %		
	Setup, rise time	≤1500 mS		
	Open collector output maximum current	40 mA		-
Input	Voltage range	100 - 240 VAC (94 - 264 VAC max.); ±135 - 370 VDC		90 - 132 VAC/ 176 - 264 VAC (switchable)
	Frequency range	47 - 63 Hz		
	Efficiency	≥82 % (Uout = 50 V); ≥84 % (Uout = 60 V)		≥88 %
	No load power consumption	≤1 W		≤4,5 W
	Inrush current	40 A max.		
Indication	Green LED (power ON)	On - output DC OK / blinking - in protection		
	Red LED (DC range)	ON: output voltage > 55 V		-
Protection	Maximum output power	74 W	97 W	195 W
	Short circuit, overload	Hiccup mode, recovers automatically after fault condition is removed		
Environment	Working temperature	-25...+65 °C		-10...+60 °C
	Storage temperature	-40...+85 °C		
	Humidity	20 - 90 % RH non-condensing		
	Vibration	10-500 Hz, 2G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes		
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B		UL60950-1, EAC TP TC 004, EAC TP TC 020
	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA		
	Withstand voltage I/P-FG	1.5kV / 60 s / 5 mA		
	Withstand voltage O/P-FG	0.5kV / 60 s / 5 mA		
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH		
Others	MTBF	150 000 hours		
	Dimension, mm	101 x 59 x 29	113 x 68 x 36	200 x 98 x 39
	DIN-rail mounting	DIN-holder is supplied separately **		-
	Warranty	3 years		2 years
	Packing	Plastic bag, white box		
	Weight	150 g	200 g	630 g

* CON2-connector on model 65W is intended for remote on/off power supply in the case if warm reboot of a load needed. The pins 'On/Off' and 'Gnd' should be shorted and then open for DC output off/on. Pin assignment in order from the board edge: 1. Gnd; 2. V+; 3. On/Off.

** DIN-holder appearance and application example:



FEATURES:



- CE, EAC certified
- Wide AC input range selectable by switch
- Standard aluminum housing
- Automatic protection: short circuit, overload, overvoltage, overtemperature
- LED indicator for power on

SPECIFICATION

Model name		120W/12V	240W/12V	150W/24V	350W/48V	350W/48V Slim
Output	Rated power	120 W	240 W	150 W	350 W	
	Rated DC voltage	12 V		24 V	48 V	48 V
	Maximum DC voltage range	11.4 - 13.2 V		22.8 - 26.4 V	40.5 - 50.5 V	42.8 - 54 V
	Rated current range	10 A	20 A	6.25 A	7.3 A	
	Voltage ripple and noise	≤0,5 %				
	PWM frequency	80 kHz	55 kHz	55 kHz	55 kHz	65 kHz
	Temperature regulation	≤1 %				
	Setup, rise time	≤2000 ms				
Input	Voltage range	164-264VAC	90 - 132 VAC / 176 - 264 VAC (selected by switch)			
	Frequency range	47 - 63 Hz				
	Efficiency	82 %	80 %	86 %	87 %	90 %
	No load power consumption	<4 W	<4 W	<5 W	<6 W	<2 W
	Inrush current	60 A max.				
Indication	Green LED (power ON)	On - output DC OK / blinking - in protection				
Protection	Maximum output power	144 W	312 W	195 W	455 W	
	Short circuit, overload, overvoltage, OTP	Hiccup mode, recovers automatically after fault condition is removed *				
Environment	Working temperature	- 10..+60 ° C				- 30..+70 ° C
	Storage temperature	-20 ..+85 ° C				-40 ..+85 ° C
	Humidity	20 - 90% RH non-condensing				
	Vibration	10-500 Hz, 2G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes				
Safety & EMC	Safety standards, EMC emission	UL60950-1, EAC TP TC 004 approved, EAC TP TC 020				
	Withstand voltage I/P-O/P	1.5kV / 60 s / 5 mA				3.0kV / 60 s / 5 mA
	Withstand voltage I/P-FG	1.5kV / 60 s / 5 mA				
	Withstand voltage O/P-FG	0.5kV / 60 s / 5 mA				1.0kV / 60 s / 5 mA
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH				
Others	MTBF	150 000 hours				
	Dimension, mm	160x98x39	215x115x50	199x98x38	215x115x50	215x115x30
	DIN-rail mounting	DIN holder**	-			
	Warranty	2 years				
	Packing	Plastic bag, white box				
	Weight	480 g	840 g	630 g	880 g	760 g

* models 240W/12V, 350W/48V and 350W/48V Slim have built-in cooling fan for automatic temperature control;

** can be mounted on a DIN-rail using two DIN-holders, supplied separately:



FEATURES:



- Miniature aluminium housing
- DIN-rail mounting allowed with additional DIN-holder
- Work mode LED indication on-board and additional external board (optional)
- Automatic protection: overload, short circuit, wrong polarity battery connection, battery deep discharge
- Battery hot swapping
- Work without battery as power supply
- Absence output voltage drop-down during switch to battery and back
- On-board information outputs (transistor's open collector)

SPECIFICATION

	Model name	UPS 30W/24V Simple	UPS 30W Simple	UPS 75W Simple
Output	DC voltage (AC mode)	27,4 V ± 2%	13,8 V ± 2%	13,8 V ± 2%
	DC voltage (Battery mode)	20,8 - 27,6 V	10,3 - 13,8 V	10,3 - 13,8 V
	Voltage ripple and noise	≤60 mV	≤30 mV	≤120 mV
	Battery maximum charge voltage	27,4 V ± 2%	13,8 V ± 2%	13,8 V ± 2%
	Battery low voltage	21,0 ± 0,2V	10,5 ± 0,2V	10,5 ± 0,2V
	Rated current	1 A	2 A	5 A
	Maximum current (AC mode)	1.1 A	2,2 A	5,2 A
	Maximum current (Battery mode)	1.1 A	2,2 A	5,2 A
	Battery charge current	0,3 A	0,5 A	1,0 A
	Battery sustaining current	20 - 100 mA (depends of battery capacity)		
	Recommended battery capacity	2 x 7 Ah	7 Ah	7 - 12 Ah
	UPS self consumption (AC absent)	≤30 mA		
	Voltage loss between battery and output	0,3 V	0,3 V	0,3 V
	Power source efficiency	≥85%	≥85%	≥85%
Input	Voltage range	100 - 240 VAC (85 - 264 VAC max.); ±120 - 370 VDC		
	No load power consumption	≤0,5 W	≤0,5 W	≤0,5 W
	Frequency range	47 - 63 (400) Hz		
Protection	Short circuit in load	Yes	Yes	Yes
	Overload	Yes	Yes	Yes
	Battery deep discharge	Yes	Yes	Yes
	Wrong polarity battery connection	Yes	Yes	Yes
Info out	AC present	Yes	Yes	Yes
	Out OK	Yes	Yes	Yes
	Battery low voltage	<22V	<11V	<11V
Indication	Indication of AC, DC out and Battery	3 LEDs on PCB (External PCB - optional)		
	Yellow LED (AC)	'ON' - AC present		
	Red LED (Battery)	Blinking - battery charging		
	Green LED (DC out)	'ON' - DC output voltage OK		
Safety	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA		
	Withstand voltage I/P-FG	1.5kV / 60 s / 5 mA		
	Withstand voltage O/P-FG	0.5kV / 60 s / 5 mA		
Others	Working temperature	-20..+45 °C (20 - 90% RH non-condensing)		
	Storage temperature	-30..+80 °C (20 - 90% RH non-condensing)		
	Dimension, mm	101x59x29	101x59x29	134x74x37
	Warranty	2 years		



FEATURES:

- Miniature plastic housing for DIN-rail mounting
- Automatic protection: overload, short circuit, battery deep discharge, wrong polarity battery connection
- Battery hot swapping
- Work without battery as power supply
- 'Start' button for start UPS in the absence of AC input (UPS 30W/DIN only)
- Ready for 12.6V Li-ion battery (UPS 45W/DIN only)
- Absence output voltage drop-down during switch to battery and back
- LED indication for work mode

SPECIFICATION

	Model name	UPS 30W/DIN	UPS 45W/DIN	
			13,5V Mode	12,6V Mode
Output	DC voltage (AC mode)	13,6 ± 0,2 V	13,5V± 0,2 V	12,6V
	DC voltage (Battery mode)	10,5 - 13,6 V	13,5-10,5V	12.6-10.5V
	Voltage ripple and noise	≤40 mV	≤50 mV	
	Voltage adjustment range	13,6 (fixed)	14,1-12,6V	12,6V (fixed)
	Battery low voltage	10,5 ± 0,2 V		
	Rated current	2 A	3 A	
	Maximum current (AC mode)	2,1 A	3,1 A	
	Maximum current (Battery mode)	2,2 A	3,2 A	
	Battery charge current	0,5 A		
	Battery sustaining current	20 - 100 mA (depends of battery capacity)		
	Recommended battery capacity	1.2 Ah - 7 Ah	4.5 ..9 Ah	4.5 ..9 Ah
	UPS self consumption (AC absent)	≤30 mA		
	Voltage loss between battery and output	0,1 V		
Power source efficiency	≥84%	≥86%		
Input	Voltage range	100 – 240 VAC (85 – 264 VAC max.) ; ±120 – 370 VDC		
	No load power consumption	≤ 1 W		
	Frequency range	47 - 63 Hz		
Protection	Short circuit in load	Yes		
	Overload	Yes		
	Battery deep discharge	Yes		
	Wrong polarity battery connection	Yes		
Indication	Indication of AC, DC out and Battery	GREEN – work from AC, RED – work from battery		
Safety	Red LED (AC)	3kV / 60 s / 5 mA		
	Transparent LED (Battery)	1.5kV / 60 s / 5 mA		
	Green LED (DC out)	0.5kV / 60 s / 5 mA		
Others	Working temperature	-25...+45 °C		
	Storage temperature	-30...+80 °C		
	Humidity	20 - 90% RH non-condensing		
	Dimension, mm	90x54,5x35		
	Weight	120 g		
	Warranty	2 years		

FEATURES:



- Automatic protection: overload, short circuit, battery deep discharge
- Battery hot swapping
- Work without battery as power supply
- Absence output voltage drop-down during switch to battery and back
- LED indication for Power-ON
- Relay information outputs 'AC OK', 'BAT LOW' for UPS 300W Simple*

SPECIFICATION

	Model name	UPS 120W Simple	UPS 120W/24V Simple	UPS 300W Simple
Output	DC voltage (AC mode)	13,8 V	27,6 V	13,8 V
	DC voltage (Battery mode)	10,4 - 14,1 V	20,8-28,2 V	10,0 - 13,8 V
	Voltage ripple and noise	≤100 mV	≤180 mV	≤150 mV
	Battery maximum charge voltage	14,4 V	28,2 V	13,8 V
	Battery low voltage	10±1 V	21±1 V	10,5±0,5 V
	Rated current	8 A	4 A	16 A
	Maximum current (AC mode)	8.4 A	4,2 A	17 A
	Maximum current (Battery mode)	8.8 A	4,4 A	18 A
	Battery charge current	0,5 A	0,3 A	2A/5A (selectable by switch)
	Battery sustaining current	20 - 100 mA (depends of battery capacity)		
	Recommended battery capacity	7 Ah (two batteries parallel connection allowed)	2 x 7 Ah 2 x 9 Ah	17..100 Ah
Input	UPS self consumption (AC absent)	≤80 mA	≤80 mA	≤110 mA
	Voltage loss between battery and output	0,4 V	0,4 V	0,6 V
	Power source efficiency	≥84%	≥86%	≥86%
	AC Voltage range	90 - 130VAC / 180 - 264VAC (selected by switch)		
Protection	No load power consumption	≤4,5 W	≤7 W	≤6 W
	Frequency range	47 - 63 Hz		
	Short circuit in load	Yes	Yes	Yes
Indication	Overload	Yes	Yes	Yes
	Battery deep discharge	Yes	Yes	Yes
	Wrong polarity battery connection	No	No	Fuse (if AC off)
	Indication of AC, DC out and Battery	External PCB		DC OK
Safety	Red LED (AC)	'ON' - AC present		-
	Transparent LED (Battery)	Blinking red - battery charging		-
	Green LED (DC out)	'ON' - DC output voltage OK		
	Withstand voltage I/P-O/P	1.5kV / 60 s / 5 mA		
Others	Withstand voltage I/P-FG	1.5kV / 60 s / 5 mA		
	Withstand voltage O/P-FG	0.5kV / 60 s / 5 mA		
	Working temperature	-10..+60 °Ct		-20..+60 °C
	Storage temperature	-20..+85 °C		
	Humidity	20 - 90% RH non-condensing		
	Dimension, mm	159 x 98 x 38		215 x 115 x 50
	Weight, kg	0,5		0,9
	Warranty	2 years		

* model **UPS 300W Simple** has two information outputs (Relay 30V, 1A max.): - "AC present" (Short - 'AC present' / Open - 'AC absent') and "Battery LOW" (Short - 'battery voltage < 11V' / Open - 'battery voltage > 11V');

** **UPS 300W Simple** has built-in fan for forced cooling



FEATURES:

- Automatic protection: overload, short circuit, battery deep discharge
- Battery hot swapping
- Work without battery as power supply
- Absence output voltage drop-down during switch to battery and back
- LED indication for Power-ON
- Relay information outputs 'AC OK', 'BAT LOW' (for UPS 160W/48V Simple and UPS 300W/48V Simple)

SPECIFICATION

	Model name		UPS 155W/48V Simple	UPS 160W/48V Simple	UPS 300W/48V Simple
Output	DC voltage (AC mode)		54 V (adjust. 48 - 58 V)	55,4 V (adjust. 48-56 V)	55,2 V (adjust. 48-56 V)
	DC voltage (Battery mode)		41,3 - 54 V	40,0 - 55,2 V	
	Voltage ripple and noise		≤40 mV	≤200 mV	≤120 mV
	Battery maximum charge voltage		56,4 V	55,4 V	55,2 V
	Battery low voltage		37 - 41 V	40±0.5 V	40±1 V
	Rated current		2,7 A	3,1 A	4,5 A
	Maximum current (AC mode)		3,0 A	3,1 A	4,6 A
	Maximum current (Battery mode)		3,2 A	3,2 A	4,7 A
	Battery charge current, max.		0,2 A	0,5 A	1,0 A
	Battery sustaining current		20 - 100 mA (depends of battery capacity)		
	Recommended battery capacity		4 x 7 Ah	4 x 7 .. 4 x 9 Ah	4 x 7 .. 4 x 17 Ah
	UPS self consumption (AC absent)		≤40 mA	≤60 mA	≤70 mA
	Voltage loss between battery and output		0,3 V	0,2 V	0,2 V
	Power source efficiency		≥86% (PF>0.92)	≥89%	≥89%
Input	AC Voltage range		110 - 230VAC (90 - 264VAC max.)	90 - 130VAC / 180 - 264VAC (selected by switch)	
	No load power consumption		≤7 W	≤5 W	≤9 W
	Frequency range		47 - 63 Hz		
Protection	Short circuit in load		Yes		
	Overload		Yes		
	Battery deep discharge		Yes		
	Wrong polarity battery connection		Yes	Fuse (Works only when the AC voltage is off)	
Indication	Green LED		'ON' - DC output voltage OK		
Information outputs	Type		-	Relay (30V, 1A max.)	
	AC present		-	Short - 'AC present' / Open - 'AC absent'	
	Battery voltage	Short	-	battery voltage < 44±1 V	battery voltage < 43±1 V
		Open	-	battery voltage > 44±1 V	battery voltage > 43±1 V
Safety	Withstand voltage I/P-O/P		1.5kV / 60 s / 5 mA		
	Withstand voltage I/P-FG		1.5kV / 60 s / 5 mA		
	Withstand voltage O/P-FG		0.5kV / 60 s / 5 mA		
Others	Working temperature		-10..+60 °C		-20..+70 °C
	Storage temperature		-20..+85 °C		
	Humidity		20 - 90% RH non-condensing		
	Dimension, mm		199 x 110 x 50	199 x 98 x 38	215x115x50
	DIN-rail mounting		No	With add. din-holder	No
	Weight		0,77 kg	0,6 kg	0,9 kg
	Warranty period		2 years		

* UPS 300W/48V Simple have built-in fan for forced cooling

FEATURES:



- DIN-rail mounting
- Automatic protection: overload, short circuit, battery deep discharge, overtemperature (for UPS 300W/24V/DIN)
- Battery hot swapping
- Work without battery as power supply
- Absence output voltage drop-down during switch to battery and back
- LED indication for Power-ON
- Relay information outputs 'AC OK', 'BAT LOW' (for UPS 300W/24V/DIN)

SPECIFICATION

	Model name		UPS 120W/24V/DIN	UPS 300W/24V/DIN
Output	DC voltage (AC mode)		27,6 V (adjust. 24-28 V)	27,6 V (adjust. 25-28 V)
	DC voltage (Battery mode)		21,5..27,0 V	20,0..27,6 V
	Voltage ripple and noise		≤120 mV	≤150 mV
	Battery maximum charge voltage		27,6 V	27,6 V
	Battery low voltage		21,5V	20±1 V
	Rated current		4,5 A	10 A
	Maximum current (AC mode)		4,6 A	11 A
	Maximum current (Battery mode)		4,7 A	11 A
	Battery charge current, max.		0,5 A	1,0 A
	Battery sustaining current		20 - 100 mA (depends of battery capacity)	
	Recommended battery capacity		2 x 7 Ah .. 2 x 12 Ah	4 x 7 Ah .. 4 x 17 Ah
	UPS self consumption (AC absent)		≤40 mA	≤40 mA
	Voltage loss between battery and output		0,6 V	0,6 V
	Power source efficiency		≥86%	≥89%
Input	AC Voltage range		100 - 240 VAC (85 - 264 VAC max.)	90 - 130VAC / 180 - 264VAC (selected by switch)
	No load power consumption		≤2 W	≤5 W
	Frequency range		47 - 63 Hz	
Protection	Short circuit in load		Yes	
	Overload		Yes	
	Overtemperature		No	Yes
	Battery deep discharge		Yes	
	Wrong polarity battery connection		Fuse (works only when the AC voltage is off)	
Indication	Green LED		'ON' - DC output voltage OK	
Information outputs	Type		Relay (30V, 1A max.)	
	AC present		-	Short - 'AC present' Open - 'AC absent'
	Battery voltage	Short	-	battery voltage < 22±1 V
		Open	-	battery voltage > 22±1 V
Safety	Withstand voltage I/P-O/P		1.5kV / 60 s / 5 mA	
	Withstand voltage I/P-FG		1.5kV / 60 s / 5 mA	
	Withstand voltage O/P-FG		0.5kV / 60 s / 5 mA	
Others	Working temperature		-20..+40 °C	-20..+60 °C
	Storage temperature		-20..+85 °C	
	Humidity		20 - 90% RH non-condensing	
	Dimension, mm		125,2x113,5x40	132x123,5x70
	DIN-rail mounting		Yes	
	Weight		0,6 kg	0,97 kg
	Warranty period		2 years	

FEATURES:



- DIN-rail mounting
- Automatic protection: overload, short circuit, overtemperature, battery deep discharge
- Battery hot swapping
- Work without battery as power supply
- Absence output voltage drop-down during switch to battery and back
- LED indication for Power-ON
- Relay information outputs 'AC OK', 'BAT LOW'

SPECIFICATION

	Model name		UPS 300W/24V/DIN	UPS 300W/48V/DIN	UPS 600W/48V/DIN
Output	DC voltage (AC mode)		27,6 V (adjust. 25-28 V)	55,2 V (adjust. 48 - 55,5 V)	
	DC voltage (Battery mode)		20,0..27,6 V	40,0 - 55,2 V	41,0 - 55,2 V
	Voltage ripple and noise		≤150 mV	≤120 mV	≤120 mV
	Battery maximum charge voltage		27,6 V	55,2 V	
	Battery low voltage		20±1 V	40±1 V	41±1 V
	Rated current		10 A	4,5 A	10 A
	Maximum current (AC mode)		11 A	4,6 A	11 A
	Maximum current (Battery mode)		11 A	4,7 A	11 A
	Battery charge current, max.		1,0 A	1,0 A	
	Battery sustaining current		20 - 100 mA (depends of battery capacity)		
	Recommended battery capacity		2 x 9 Ah .. 2 x 26 Ah	4 x 7 Ah .. 4 x 17 Ah	4 x 9 Ah .. 4 x 26 Ah
	UPS self consumption (AC absent)		≤75 mA	≤40 mA	≤80 mA
	Voltage loss between battery and output		0,2 V	0,6 V	
	Power source efficiency		≥87%	≥89%	≥88% (PF>0.96)
Input	AC Voltage range		90 - 130VAC / 180 - 264VAC (selected by switch)		90 - 264V
	No load power consumption		≤5 W	≤6 W	≤12 W
	Frequency range		47 - 63 Hz		
Protection	Short circuit in load		Yes		
	Overload		Yes		
	Overtemperature		Yes		
	Battery deep discharge		Yes		
	Wrong polarity battery connection		Fuse (works only when the AC voltage is off)		
Indication	Green LED		'ON' - DC output voltage OK		
Information outputs	Type		Relay (30V, 1A max.)		
	AC present		Short - 'AC present' / Open - 'AC absent'		
	Battery voltage	Short	battery voltage < 22±1 V	battery voltage < 43±1 V	
		Open	battery voltage > 22±1 V	battery voltage > 43±1 V	
Safety	Withstand voltage I/P-O/P		1.5kV / 60 s / 5 mA		
	Withstand voltage I/P-FG		1.5kV / 60 s / 5 mA		
	Withstand voltage O/P-FG		0.5kV / 60 s / 5 mA		
Others	Working temperature		-20..+60 °C		
	Storage temperature		-20..+85 °C		
	Humidity		20 - 90% RH non-condensing		
	Dimension, mm		132x123,5x70		128,5x125,2x85,5
	DIN-rail mounting		Yes		
	Weight		0,97 kg		1,5 kg
	Warranty period		2 years		



FEATURES:

- UPS in metal box with lock
- 3 LED indicators on the door
- Automatic protection: overload, short circuit, battery deep discharge, wrong polarity battery connection
- Battery hot swapping
- Work without battery as power supply
- Connecting battery to load without AC
- Absence output voltage drop-down during switch to battery and back

SPECIFICATION

	Model name	UPS 45W BOX	UPS 75W BOX
Output	DC voltage (AC mode)	13,8 V ± 2%	
	Voltage ripple and noise	≤40 mV	
	DC voltage (Battery mode)	10,2 - 13,6 V	
	Battery maximum charge voltage	13,6 V	
	Voltage loss between battery and output	0,4 V	
	Battery low voltage	10,2 - 10,6 V	
	Rated current	3,0 A	5,0 A
	Maximum current (AC mode)	3,5 A	5,5 A
	Maximum current (Battery mode)	4,0 A	5,6 A
	Battery charge current	1,0 A	
	Recommended battery capacity	7 Ah	7 Ah (18 Ah *)
	UPS self consumption (AC absent)	55 mA	30 mA
	Power source efficiency	≥84%	
Input	AC Voltage range	190 - 240 VAC (100 - 264 VAC max.)	
	Frequency range	47 - 63 Hz	
	No load power consumption	≤0,5 W	≤0,8 W
Protection	Short circuit in load, overload, battery deep discharge, wrong polarity battery connection	Automatic (without fuses)	
	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA	
	Withstand voltage I/P-FG	1.5kV / 60 s / 5 mA	
	Withstand voltage O/P-FG	0.5kV / 60 s / 5 mA	
Indication	Indication of AC, DC out and Battery	On the door of the UPS	
	Yellow LED (AC)	'ON' - AC present	
	Red LED (Battery)	Blinking - battery charging	
	Green LED (DC out)	'ON' - DC output voltage OK	
Others	Working temperature	-20...+60 °C (20 - 90% RH non-condensing)	
	Storage temperature	-30...+70 °C (20 - 90% RH non-condensing)	
	Dimension of box, mm	203 x 163 x 74	265 x 195 x 75 295 x 195 x 90*
	Weight	1,14 kg	1,38 kg

* - metal box for 18A/h battery available upon request



FEATURES:

- CE, EAC certified
- Can be installed on DIN rail TS-35/7.5 or 15
- Universal input, wide range: 100-240 VAC/
±120..370VDC
- Adjustable DC output in the range of 12..24 V (manual)
- Automatic protection: short circuit, overload
- LED indicators for power on

SPECIFICATION

Model name			12W/12-24V/ DIN	24W/12-24V/ DIN	36W/12-24V/ DIN	50W/12-24V/ DIN	75W/12-24V/ DIN
Output	Rated power		12 W	24 W	36 W	50 W	75 W
	Rated DC voltage		12 - 24 V				
	Maximum DC voltage range		11,5 - 24,5 V				
	Rated current range		1,0 - 0,5 A	2,0 - 1,0 A	3,0 - 1,5 A	4,2 – 2,2 A	6,25 – 3,15A
	Voltage ripple and noise		≤0,5 %				
	PWM frequency		65 kHz				
	Temperature regulation		≤1 %				
	Setup, rise time		≤1500 ms				
Input	Voltage range		100 - 240 VAC (85 - 264 VAC max.); ±120 – 370 VDC				
	Frequency range		47 - 63 Hz				
	Efficiency	for 12V	≥83 %	≥85 %	≥85 %	≥84 %	≥84 %
		for 24V	≥84 %	≥87 %	≥87 %	≥88 %	≥88 %
	No load power consumption		≤0,2 W	≤0,3 W	≤0,5 W	≤0,3 W	≤1 W
Indication	Inrush current		30 A max.	40 A max.			
	Green LED (power ON)		On - output DC OK / blinking - in protection				
	Red LED (DC range)		-				ON: output voltage>18V
Protection	Maximum output power		17 W	36 W	56 W	65 W	120 W
	Short circuit, overload		Hiccup mode, recovers automatically after fault condition is removed				
Environment	Working temperature		- 25..+60 °C				
	Storage temperature		-40..+85 °C				
	Humidity		20 - 90% RH non-condensing				
	Vibration		10-500 Hz, 2G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes				
Safety & EMC	Safety standards, EMC emission		IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B				
	Withstand voltage I/P-O/P		3kV / 60 s / 5 mA				
	Withstand voltage I/P-FG		1.5kV / 60 s / 5 mA				
	Withstand voltage O/P-FG		0.5kV / 60 s / 5 mA				
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)		100 M Ohms/500 VDC/25 °C/70% RH				
Others	MTBF		150 000 hours				
	Dimension, mm		91 x 63 x 19.5	93 x 56 x 25	93 x 78 x 56	93 x 78 x 56	126x108x39
	DIN-rail mounting		Provided by case's design				
	Warranty		2 years				
	Packing		Plastic bag, white box				
	Weight		65 g	110 g	200 g	200 g	420 g



FEATURES:

- CE, EAC certified
- Can be installed on DIN rail TS-35/7.5 or 15
- Universal input, wide range: 100-240 VAC/ $\pm 120 \dots 370$ VDC
- Automatic protection: short circuit, overload
- LED indicators for power on

SPECIFICATION

Model name			36W/12-24V/DIN Slim	80W/12-24V/DIN	120W/24V/DIN
Output	Rated power		36 W	80 W	120 W
	Rated DC voltage		Adjustable in the range of 12 - 24 V		24 V
	Maximum DC voltage range		11,5 - 24,5 V		22-26 V
	Rated current range		3,0 - 1,5 A	6,67 – 3,34 A	5,0 A
	Voltage ripple and noise		≤0,5 %	≤0,8 %	≤1 %
	PWM frequency		65 kHz		
	Temperature regulation		≤1 %		
	Setup, rise time		≤1500 ms		
Input	Voltage range		100 - 240 VAC (85 - 264 VAC max.); ±120 – 370 VDC		
	Frequency range		47 - 63 Hz		
	Efficiency	for 12 V	≥86 %	≥87 %	-
		for 24 V	≥88 %	≥90 %	≥87 %
	No load power consumption		≤0,2 W	≤0,4 W	≤3 W
	Inrush current		40 A max.		
Indication	Green LED (power ON)		On - output DC OK / blinking - in protection		
Protection	Maximum output power		46 W	120 W	156 W
	Short circuit, overload		Hiccup mode, recovers automatically after fault condition is removed		
Environment	Working temperature		-25..+60 °C	-25..+40 °C	
	Storage temperature		-40..+85 °C		
	Humidity		20 - 90% RH non-condensing		
	Vibration		10-500 Hz, 2G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes		
Safety & EMC	Safety standards, EMC emission		IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B		
	Withstand voltage I/P-O/P		3kV / 60 s / 5 mA		
	Withstand voltage I/P-FG		1.5kV / 60 s / 5 mA		
	Withstand voltage O/P-FG		0.5kV / 60 s / 5 mA		
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)		100 M Ohms/500 VDC/25 °C/70% RH		
Others	MTBF		150 000 hours		
	Dimension, mm		90 x 54,5 x 35	93 x 78 x 56	125x102x32
	DIN-rail mounting		Provided by case's design		
	Warranty		2 years		
	Packing		White box		
	Weight		120 g	200 g	420 g



FEATURES:

- CE, EAC certified
- Can be installed on DIN rail TS-35/7.5 or 15
- Automatic protection: short circuit, overload
- LED indicators for power on
- Models 240W/48V/DIN, 480W/48V/DIN have industrial design

SPECIFICATION

Model name		12W/12V/DIN	12W/24V/DIN	240W/24V/DIN	240W/48V/DIN	480W/48V/DIN
Output	Rated power	12 W		240 W	240 W	480 W
	Rated DC voltage	12 B	24 B	24 B	48 B	48 B
	Maximum DC voltage range	11 - 13 V	21 – 26 V	22 - 27 V	47 - 56 V	47 - 56 V
	Rated current range	1 A	0,5 A	5 A	5 A	10 A
	Voltage ripple and noise	≤0,5 %				
	PWM frequency	65 kHz		65 kHz	200 kHz	100 kHz
	Temperature regulation	≤1 %				
	Setup, rise time	≤1500 ms		≤2000 ms		≤3000 ms
DC OK relay contact	No		No	Yes	Yes	
Input	Voltage range	100 - 240 VAC (85 - 264 VAC max.); ±120 – 370 VDC		100-120/ 200–240 VAC (switch)	100 - 240 VAC (90-264 VAC max.); ±127 – 370 VDC	
	Frequency range	47 - 63 Hz				
	Efficiency	≥85 %	≥83 %	≥86 %	≥91 % (PF>0.95)	
	No load power consumption	≤0,1 W	≤0,3 W	≤2,5 W	≤0,3 W	≤3 W
	Inrush current	40 A max.		60 A max.	35 A max.	40 A max.
Indication	Green LED (power ON)	On - output DC OK / blinking - in protection				
	Red LED (Overload)	-		-	Overload	
Protection	Maximum output power	17 W	19 W	330 W	288 W	576 W
	Short circuit, overload, over voltage	Hiccup mode, recovers automatically after fault condition is removed				
Environment	Working temperature	- 25..+60 °C			- 40..+70 °C	
	Storage temperature	-40..+85 °C				
	Humidity	20 - 90% RH non-condensing				
	Vibration	10-500 Hz, 2G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes				
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B				Class A
	Withstand voltage I/P-O/P	3kV/60s/5mA		2kV/60s/5mA	3kV/60s/5mA	
	Withstand voltage I/P-FG	1.5kV/60s/5mA		2kV/60s/5mA	1.5kV/60s/5mA	
	Withstand voltage O/P-FG	0.5kV/60s/5 mA				
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH				
Others	MTBF	150 000 h				100 000 h
	Dimension, mm	91 x 63 x 19.5		125,2x113,5x63	130,5x122x45	132x123,5x70
	DIN-rail mounting	Provided by case's design				
	Warranty	2 years			3 years	
	Packing	White box				
	Weight	65 g		760 g	755 g	1,2 kg

Note: Models **240W/48V/DIN** and **480W/48V/DIN** has switch for parallel connection of power supplies



FEATURES:

- CE, EAC certified
- Universal input, wide range: 100-240 VAC/±120..370 VDC
- Automatic protection: short circuit, overload, overvoltage
- 8 hours burn-in test
- Designed for CCTV
- LED indicator for power on
- DC jack 5.5x2.1x11 mm

SPECIFICATION

Model name		12W/12V/1A	24W/12V/2A	36W/12V/3A	60W/12V/5A
Output	Rated power	12 W	24 W	36 W	60 W
	Rated DC voltage	12 V			
	Rated current	1 A	2 A	3 A	5 A
	Maximum current	1,2 A	2,4 A	3,4 A	6 A
	Voltage ripple and noise	≤0,5 %			
	PWM frequency	65 kHz	50 kHz	65 kHz	65 kHz
	Temperature regulation	≤ 1%			
	Setup, rise time	≤1500 ms			
Input	Voltage range	100 - 240 VAC (85 - 264 VAC max.); ±120 - 370 VDC			
	Frequency range	47 - 63 Hz			
	Efficiency	≥80 %	≥84 %		
	No load power consumption	≤0,2 W			
	Inrush current	60 A max.		40 A max.	
Indication	LED	On - output DC OK / blinking - in protection	No	On - output DC OK / blinking - in protection	
AC cable	Another type available by customer request	AC Euro-plug, cable length 0,5 m			
DC cable	Another type available by customer request	Cable length 1m with ferrite coil and DC plug 5.5*2.1*11mm			
Protection	Maximum output power	22 W	43 W	45 W	72 W
	Short circuit, overload, overvoltage	Hiccup mode, recovers automatically after fault condition is removed			
Environment	Working temperature	0..+60 °C			
	Storage temperature	-25..+85 °C			
	Humidity	20 - 90% RH non-condensing			
	Vibration	10-500 Hz, 5G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes			
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B			
	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA			
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH			
Others	MTBF	150 000 hours			
	Warranty	2 years			
	Case	With ear for screw mounting		Without ear for screw mounting	
	Dimension, mm	74 x 45 x 28	79 x 45 x 32	97 x 46 x 32	120 x 53 x 32
	Packing	Plastic bag, white box			
	Weight	140 g	160 g	200 g	250 g



FEATURES:

- CE, EAC certified
- Universal input, wide range: 100-240 VAC/±150..380 VDC
- Automatic protection: short circuit, overload, overvoltage
- 8 hours burn-in test
- LED indicator for power on
- DC jack 4.0 x 1.7 x 8.0 mm

SPECIFICATION

Model name		19W/14.4V/EU	18W/18V/1A
Output	Rated power	18 W	
	Rated DC voltage	18 ±0,5 V	
	Rated current	1 A	
	Maximum current	1,2 A	
	Voltage ripple and noise	≤0,5 %	
	PWM frequency	65 kHz	
	Temperature regulation	≤ 1%	
	Setup, rise time	≤1500 ms	
Input	Voltage range	100 - 240 VAC (85 - 264 VACmax.); ±120-370 VDC	
	Frequency range	47 - 63 Hz	
	Efficiency	≥84 %	
	No load power consumption	≤0,2 W	
	Inrush current	60 A max.	
Indication	LED	On - output DC OK / blinking - in protection	
AC cable	Another type available by customer request	AC Euro-plug, cable length 1,5 m	AC Euro-plug, cable length 0,5 m
DC cable	Another type available by customer request	Cable 1,5 m with ferrite coil and DC plug 4.0x1.7x8.0 mm, female connector 4x1.7mm with heat shrinkable tube	Cable 1,0 m with ferrite coil and DC plug 4.0x1.7x8.0 mm
Protection	Maximum output power	34 W	
	Short circuit, overload, overvoltage	Hiccup mode, recovers automatically after fault condition is removed	
Environment	Working temperature	0..+40 °C	
	Storage temperature	-25..+85 °C	
	Humidity	20 - 90 % RH non-condensing	
	Vibration	10-500 Hz, 5G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes	
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B	
	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA	
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH	
Others	MTBF	150 000 hours	
	Warranty	2 years	
	Case	With ear for screw mounting	
	Dimension, mm	74 x 45 x 28	
	Packing	Plastic bag, white box	
	Weight	182 g	150 g



FEATURES:

- CE, EAC certified
- Miniature plastic case
- IP 67 protection
- Work temperature range -30..40°C (for model 18W/12V/WP)
- Automatic protection: short circuit, overload, overvoltage
- DC jack 5.5x2.1x10 mm (18W/12V/WP, 24W/12V/WP)

SPECIFICATION

Model name		18W/12V/WP	24W/12V/WP	24W/15V/WP	18W/18V/WP
Output	Rated power	18 W	24 W	24 W	18 W
	Rated DC voltage	12 V +/- 5%		15 V +/- 5%	18 V +/- 2%
	Rated current	1.5 A	2 A	1.6 A	1 A
	Voltage ripple and noise	≤60 mV		≤120 mV	≤80 mV
	PWM frequency	65 kHz			
	Temperature regulation	≤1 %			
	Setup, rise time	<1500 ms			
Input	Voltage range	100 - 240 VAC (90 - 264 VAC max.); ±127 - 370 VDC			
	Frequency range	50 - 60 Hz			
	Efficiency	≥82 %	≥85 %	≥80%	≥82%
	No load power consumption	≤0,2 W	≤0,5 W	≤0,5 W	≤0,2 W
	Inrush current	40 A max.			
Protection	Maximum output power	30 W	34 W	34 W	27 W
	Short circuit, overload, overvoltage	Hiccup mode, recovers automatically after fault condition is removed			
Environment	Working temperature	-30..+40 °C	-10..+40 °C		0..+50 °C
	Storage temperature	-40..+85 °C			
	Humidity	100 %			
	Vibration	10-500 Hz, 5G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes			
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022			
	Withstand voltage I/P-O/P	1,5kV / 60 s / 5 mA			3kV / 60 s / 5 mA
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	1,5kV / 60 s / 5 mA			
	Safety standards, EMC emission	0,5kV / 60 s / 5 mA			
	Withstand voltage I/P-O/P	100 M Ohms/500 VDC			
Others	DC jack	5.5 x 2.1 x 10 mm		-	-
	MTBF	150 000 hours			
	Warranty	2 years			
	AC cable length	250 mm		200 mm	250 mm
	DC cable length	450 mm		200 mm	250 mm
	Packing	White box			
	Dimension, mm	48x50x26 (diagonal 55 mm)	59,5x61,4x29,7 (diagonal 66 mm)		48x50x26 (diagonal 55 mm)
	Weight	106 g	170 g		106 g



FEATURES:

- CE, EAC certified
- IP 67 protection
- Work temperature range -20..+50°C
- Automatic protection: short circuit, overload, overvoltage

SPECIFICATION

Model name		36W/12V/WP	60W/12V/WP
Output	Rated power	36 W	60 W
	Rated DC voltage	12 V +/- 5%	
	Rated current	3 A	5 A
	Voltage ripple and noise	≤30 mV	≤80 mV
	PWM frequency	50 kHz	52 kHz
	Temperature regulation	≤1 %	
Input	Setup, rise time	<1500 ms	
	AC Voltage range	100 - 240 VAC	
	Frequency range	50 - 60 Hz	
	Efficiency	≥82%	≥88%
	No load power consumption	≤0,2 W	
Protection	Inrush current	65 A max.	
	Short circuit, overload, overvoltage	Hiccup mode, recovers automatically after fault condition is removed	
Environment	Maximum output power	54 W	90 W
	Working temperature	-20..+50 °C	
	Storage temperature	-40..+85 °C	
	Humidity	100 %	
Safety & EMC	Vibration	10-500 Hz, 5G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes	
	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022	
	Withstand voltage I/P-O/P	1,5kV / 60 s / 5 mA	
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	1,5kV / 60 s / 5 mA	
	Safety standards, EMC emission	0,5kV / 60 s / 5 mA	
Others	Withstand voltage I/P-O/P	100 M Ohms/500 VDC/25 °C/70% RH	
	DC jack	-	
	MTBF	150 000 h	
	Warranty	2 years	
	AC cable length	200 mm	
	DC cable length	200 mm	
	Packing	White box	
	Dimension, mm	134x50x33	150x56x35
	Weight	295 g	410 g



FEATURES:

- CE, EAC certified
- Universal input, wide range: 100-240 VAC
- Automatic protection: short circuit, overload, overvoltage
- Non-flammable housing material

SPECIFICATION

Model name		5W/WM/PL, 5W/WM/PL1*	10W/WM/PL	12W/WM/PL	12W/WM/PL1	18W/WM/PL	30W/WM/PL
Output	Rated power	5 W	10 W	12 W	12 W	18 W	30 W
	Rated DC voltage	5 V	5 V	12 V	12 V	12 V	15 V
	Rated current	1 A	2 A	1 A	1 A	1,5 A	2 A
	Voltage ripple and noise	≤3,0 %	≤1,0 %				
	PWM frequency	52 kHz	80 kHz	60 kHz	40 kHz	65 kHz	65 kHz
	Temperature regulation	≤1 %					
	Setup, rise time	<1500 ms					
Input	Voltage range	100 - 240 VAC (94 - 264 VAC max.); ±135 - 370 VDC					
	Frequency range	47 - 63 Hz					
	Efficiency	≥76 %		≥82 %			
	No load power consumption	≤0,5 W					
	Inrush current	60 A max.					
Protection	Maximum output power	6 W	12 W	22 W	15 W	33 W	45 W
	Short circuit, overload, overvoltage	Hiccup mode, recovers automatically after fault condition is removed					
Environment	Working temperature	0..+ 40 °C (20..90% RH non condensed)					
	Storage temperature	-10..+55 °C (20..90% RH non condensed)					
	Vibration	10-500 Hz, 5G, 10 min./1 cycle, period for 60 min., each along X, Y, Z axes					
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B					
	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA					
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH					
Others	Socket/jack	USB-A Socket	jack 5.5 x 2.1 x 10 mm				-
	MTBF	150 000 h					
	Warranty	2 years					
	Packing	White box					
	Dimension, mm	68 x 34 x 73	63 x 35,5 x 31	64 x 39 x 65	63 x 35,5 x 31	70 x 42 x 67	115 x 50 x 30
	Weight	50 g	85 g	97 g	85 g	120 g	150 g

* model 5W/WM/PL1 has DC cable 1.2m length with jack 5.5 x 2.1 x 10 mm; the weight – 80 g.



FEATURES:

- CE, EAC certified
- Support 10/100 and 10/100/1000 Base-T applications
- Different supply modes A/B
- LED indications of operating modes
- Automatic protection: short circuit, overload, overvoltage
- Universal input, wide range: 94-264 VAC
- AC cable included

SPECIFICATION

Model name		24W/POE	24W/POE+	30W/1Gb/POE+	60W/1Gb/POE+	90W/1Gb/POE+
Output	Pass through data rates	10/100 Mbps		10/100/1000 Mbps		
	PoE supply mode	B	A/B	A	A/B	
	PoE standard compliance	IEEE 802.3af	IEEE 802.3af / IEEE 802.3at			IEEE 802.3af / 802.3at / 802.3bt
	PoE outputs	4,5 (+) 7,8 (-)	1,2,4,5 (+) 3,6,7,8 (-)	1,2 (-) 3,6 (+)	1,2(-) 3,6(+)/ 4,5(+) 7,8(-)	
	Rated power	24 W		30W	30W/60W	30W/60W/90W
	Rated voltage	48 V		54 V	53V	56V
	Rated current	0,5 A		0,55 A	0,56 A / 1,13 A	0,53/1,07/1,6 A
Input	Voltage range	100 - 240 VAC (94 - 264 VAC max.); ±135-370 VDC				
	Frequency range	47 - 63 Hz				
Indication	LEDs	"Power" – AC Power "Link" – PD connected		Green - AC Power Red - PD connected	"Power" – AC Power "Model A", "Model B" - PoE supply mode	"Power" – AC pwr PoE power: "30W": 0-30 W "60W": 30-60 W "90W": 60-90 W
Protection	Automatic	Short circuit, over current, over voltage, over load, anti-interference				
Environment	Working temperature	0..+40 °C		0..+40 °C	-10..+50 °C	0..+45 °C
	Storage temperature	-10..+55 °C		-40..+60 °C	-20..+50 °C	-20..+70 °C
	Humidity	85% RH max. (non-condensing)				80% RH max.
	Vibration	10-500 Hz, 2G, 10 min./1 cycle, period for 60 min. each along X, Y, Z axes				
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B				
	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA				
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC/25 °C/70% RH				
Others	MTBF	150 000 hours				
	Warranty	2 years				
	Packing	White box, AC cord				
	Dimension, mm	113 x 55 x 30		121 x 50 x 36	168 x 73.5 x 44	178.5 x 80 x 46
	Weight	230 g		290 g	700 g	800 g



FEATURES:

- CE, EAC certified
- Support 10/100/1000 Base-T applications
- Different supply modes A/B
- LED indications of operating modes
- Automatic protection: short circuit, overload, overvoltage
- Universal input, wide range: 94-264 VAC
- AC cable included

SPECIFICATION

Model name		60W/1Gb/PoE_v2	90W/1Gb/PoE_v2
Output	Pass through data rates	10/100/1000 Mbps	
	PoE supply mode	A/B	
	PoE standard compliance	IEEE 802.3af / IEEE 802.3at	IEEE 802.3af / 802.3at / 802.3bt
	PoE outputs	1,2(+) 3,6(-) / 4,5(+) 7,8(-)	
	Rated power	60W	90W
	Rated voltage	55V	
	Rated current	0,55/1,09A	1,63A
Input	Voltage range	100 - 240 VAC (94 - 264 VAC max.); ±155-338 VDC	
	Frequency range	47 - 63 Hz	
Indication	LEDs	"PORT" – AC input	"PWR" – AC input "PoE" - PoE device connected
Protection	Automatic	Short circuit, over current, over voltage, over load, anti-interference	
Environment	Working temperature	-10..+40 °C	
	Storage temperature	-40..+85 °C	
	Working humidity	10 - 90% RH non-condensing	
	Vibration	10-55 Hz, 5G, 3 min./1 cycle, period for 60 min., each along X, Y, Z axes	
Safety & EMC	Safety standards, EMC emission	IEC61000-3-2:2014, EN61000-3-3:2013, EN55013:2013, EN55020:2007, EN60065:2009, EN55022 Class B	
	Withstand voltage I/P-O/P	1.5kV / 60 s / 10 mA	
	Isolation resistance (I/P-O/P, I/P-FG, O/P-FG)	100 M Ohms/500 VDC	
Others	MTBF	150 000 hours	
	Warranty	2 years	
	Packing	White box, AC cord	
	Dimension, mm	167 x 57 x 40	172 x 76 x 42
	Weight	260 g	540 g



FEATURES:

- CE, EAC certified
- Indoor and outdoor (IP66) design
- Standard IEEE802.3af/at compliance
- Support 10/100 and 10/100/1000 Base-T applications
- Extends PoE connection distance up to 100 meters
- Additional power source not required
- Compact size

APPLICATION

The models of PoE Extenders **Ext/1Gb/PoE** and **Ext/POE (IP66)** (hereinafter 'Extender') allows you to increase the transmission distance of information signals and power using PoE (Power over Ethernet) technology.

As a rule, the distance between the ports of network devices, when transmitting power using PoE technology, is limited to 100 meters. The Extender is used to increase this distance. To connect every additional 100m Ethernet cable (UTP cat.5e or 6), it is necessary to use an intermediate including of the Extender in line.

Thus, using the Extender, you can connect powered devices (IP cameras, VoIP phones, etc.) more than 100 meters from the power supply device. By connecting an additional Extension for every additional 100 m of cable, it is possible to increase the distances up to 200, 300 and more meters, depending on the required power of the powered device.

The Extender does not require an additional power source, because it powered by a PoE switch or a PoE injector. The Extender has two Ethernet ports that are automatically tuned to the link speed, access modes: duplex, crossover, full-rate network throughput.

SPECIFICATION

Parameter	Value
Number of channels	1
Bandwidth	10/100/1000 Mbps half/full duplex
PoE input	1,2(-) 3,6(+) and 7,8(-) 4,5(+)
PoE output	1,2(-) 3,6(+). Maximum power up to 25 W
Indicators (for model Ext/1Gb/PoE only)	LED indicators are located on the RJ45 connector Power indicator: PoE enabled, Network indicator: Link/Act
Connectors	Shielded RJ-45, EIA 568A and 568B
Network cables	Shielded category 5 (or higher)
Dimensions, LxWxH, mm	145x60x40 (185x45x45 for IP66)
Mounting	Wall of shelf
Environment Ext/1Gb/POE	Work temperature: -10..45°C. Humidity 90% max. non-condensing. Storage temperature: -40..70 °C. Humidity 95% max. non-condensing.
Environment Ext/POE (IP66)	Work temperature: -25..55 °C. Can be used outdoor (IP 66), subject to the use of outdoor waterproof cable UTP. Storage temperature: -40..70 °C.
Regulatory Compliance	IEEE802.3af/at

DESCRIPTION



The 8-port industrial L2 managed PoE 100 Mbps switch with two 1000 Mbps combo up-links is designed to connect via Ethernet up to 8 IP cameras and other IEEE 802.3at/af standard equipment, and provides power for PoE with power up to 30 watts per port. Two combo ports, each has an RJ45 socket and a slot for an SFP module, allow you to organize a cascade connection of switches, a connection to a server, a DVR, etc. at speed of 1000 Mbps using a UTP cable or optical fiber.

Additional console port for managing the switch via the RS-232 serial port (CLI command line (Console, Telnet)).

Managed model supports a variety of network redundancy protocol STP/RSTP/MSTP (<50ms). When one way network fails, communication can be recovered quickly to ensure uninterrupted communication of important applications. You can control parameters according to the actual application needs, through Web, SNMP network management, POE power supply management, port flow control, VLAN division, STP, RSTP and other functions of the application service configuration.

The switch has an aluminum case, an IP40 protection class, and allows the switch to be mounted on a DIN rail of 35 mm. The switch has lightning protection of ports and power supply circuits up to 4kV.

Operating temperature -40 .. + 75°C.

SPECIFICATION

Parameter	Value
Interface	
Fixed Port	8*10/100Base-TX PoE ports (Data/Power) 2*10/100/1000Base-T uplink RJ45 ports(Data) 2*100/1000Base-X uplink SFP slot ports (combo ports)(Data) 2 set of V+, V- redundant DC power interface (5P Phoenix terminal)
Ethernet Port	Port 1-8 support 10/100Base-TX Port 9-10 support 10/100/1000Base-T(X) auto-sensing Full/half duplex MDI/MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)
SFP Slot Port	Gigabit SFP optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Cable	Multi mode: 850nm 0 ~ 550M, single mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.
Chip Parameter	
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T

	IEEE802.3z 1000Base-X IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	64Gbps
Forwarding Rate@64byte	4.17Mpps
MAC	16K
Buffer Memory	4M
Jumbo Frame	10K
LED Indicator	Power:PWR(green), network ;Link,link/Act(yellow), POE: PoE (green), Speed:Speed(green)
PoE & Power	
PoE Port	Port 1 to 8 IEEE802.3af/at @ POE
PoE Management	Distribution for PoE output power of each port PoE working status Delay start of power supply Scheduling of PoE operation and time
Power Supply Pin	1/2 (+), 3/6 (-)
Max Power Per Port	30W; IEEE802.3af/at
Total PWR / Input Voltage	240W/48VDC
Power Consumption	Standby:<8W;Full load:<240W
Power Supply	Not included
Working Voltage	48-57VDC; 5P industrial Phoenix terminal, support anti-reverse protection.
Physical Parameter	
Operation TEMP / Humidity	-40~+80°C;5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+85°C;5%~95% RH Non condensing
Dimension (L*W*H)	165*147*54mm
Net weight	1.1kg
Installation	DIN rail
Certification & Warranty	
Lightning protection / protection level	Lightning protection: 6KV 8/20us; Protection level: IP40 IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge IEC61000-4-3(RS):10V/m(80~1000MHz) IEC61000-4-4(EFT): power cable:±4kV; data cable:±2kV IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz) IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s IEC61000-4-9(pulsed magnet field):1000A/m IEC61000-4-10(damped oscillation):30A/m 1MHz IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV IEC61000-4-16(common-mode transmission):30V; 300V,1s FCC Part 15/CISPR22(EN55022):Class A IEC61000-6-2(Common Industrial Standard)
Mechanical Properties	IEC60068-2-6 (anti vibration) IEC60068-2-27 (anti shock) IEC60068-2-32 (free fall)
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS;
Warranty	3 years

Network Management Features	
Interface	IEEE802.3X (Full-duplex) Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.
VLAN	QinQ configuration VLAN based on protocol 4K VLAN based on port, IEEE802.1q
Port Aggregation	LACP, Manual aggregation Max 5 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2/v3, Max 64 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS Priority Mark/Remark 8*Output queues of each port 802.1p/DSCP priority mapping Queue Scheduling Algorithm (SP,WRR,SP+WRR)
ACL	L2-L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range and VLAN etc. Port-based Issuing ACL.
Security	Port isolation Broadcast storm control Port+MAC binding, IP+MAC+port binding
DHCP	DHCP Client,DHCP Snooping,DHCP Relay
System & Management	NTP Login Record SNMP V1/V2C/V3 One-key recovery Web Management (HTTPS)

All manufactured models can be supplied in an open design (Open frame). At the request of the customer can be changed characteristics and dimensions of the PCB of standard power supplies

TD Faraday Electronics Ltd. accepts orders for the development of new models according to the customer's technical specifications. This service is provided free of charge if a serial order is placed.

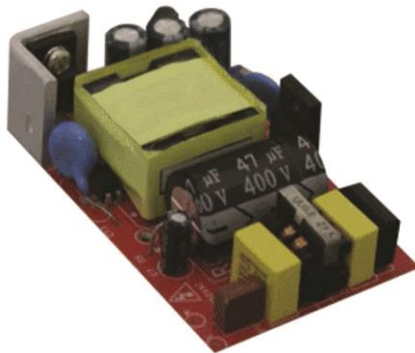
Examples of Open frame power units:

6W/OPF



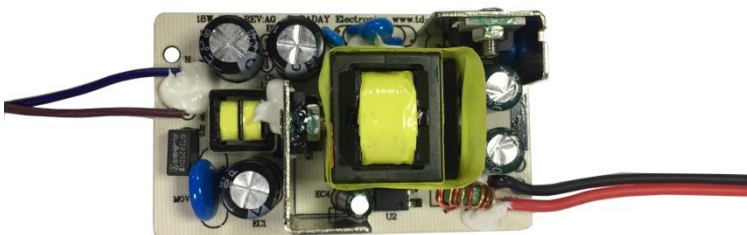
Output power = 6,5 W
Output : 'Channel 1' = 12V, 500mA ; 'Channel 2' = 24 V, 20mA
Input voltage range = 100 - 240 VAC

27W/12-24V/OPF



Output power = 27 W
Output voltage = 12 - 24 V (adjustable)
Output current = 1,15 - 2,25 A
Input voltage range = 100 - 240 VAC

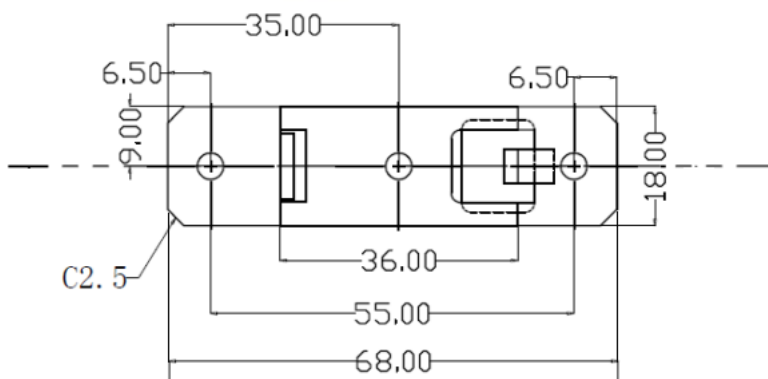
18W/OPF



Output power = 18,2 W
Output voltage = 14 V
Output current = 1,3 A
Input voltage range = 100 - 240 VAC

DIN-holder

Purpose: The DIN holder is fixed with two screws to the power supply case and is designed to fix the case on a DIN rail.



Bracket for mounting the battery on a DIN rail

Purpose: Bracket for fastening a battery with a capacity 7 Ah on a DIN rail for easy mounting of the battery on a DIN rail next to the power supply unit

