

Switching power supplies & PoE equipment



ENCLOSED (p. 2-4)

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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[®]

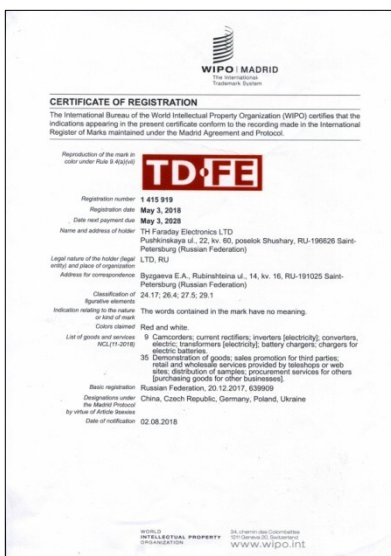
The trademark is protected by Madrid - The International Trademark System.

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/±90..380 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.); ±90..380 VDC			
	Frequency range	47 - 63 Hz			
	Efficiency	≥82 % (Uout = 12 V); ≥85 % (Uout = 24 V)			
	No load power consumption	≤1W			
	Inrush current	20 A max.		35 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	21 W	43 W	60 W	90 W
	Short circuit, overload	Hiccup mode, recovers automatically after fault condition is removed			
Environment	Working temperature	-25..+ 65 °C			
	Storage temperature	-40..+85 °C (10..90% RH)			
	Working 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.); ±150 - 380 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	43 W	78 W	157 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 (10..90% RH)		
	Working 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	250W/12V	150W/24V	350W/48V
Output	Rated power	120 W	240 W	240 W	150 W	350 W
	Rated DC voltage	12 V			24 V	48 V
	Maximum DC voltage range	11.4 - 13.2 V			22.8 - 26.4 V	40.5 - 50.5 V
	Rated current range	10 A	20 A	20 A	6.3 A	7.3 A
	Voltage ripple and noise	≤0,5 %				
	PWM frequency	80 kHz	55 kHz	55 kHz	55 kHz	55 kHz
	Temperature regulation	≤1 %				
	Setup, rise time	≤2000 mc				
Input	Voltage range	164-264VAC	90 -132 VAC / 176-264 VAC (selected by switch)			
	Frequency range	47 - 63 Hz				
	Efficiency	82 %	80 %	82%	86 %	87 %
	No load power consumption	<3 W	<4 W	<4,5 W	<5 W	<6 W
	Inrush current	45 A	45 A	45 A	36 A	60 A
Indication	Green LED (power ON)	On - output DC OK / blinking - in protection				
Protection	Maximum output power	126 W	250 W	250 W	157 W	385 W
	Short circuit, overload, overvoltage, OTP	Hiccup mode, recovers automatically after fault condition is removed *				
Environment	Working temperature	- 10..+60 °C				
	Storage temperature	-20 ..+85 °C				
	Working 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				
	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	160x98x39	215x115x50	215x115x50	200x98x39	215x115x50
	DIN-rail mounting	DIN holder**	-			
	Warranty	2 years				
	Packing	Plastic bag, white box				
	Weight	480 g	840 g	830 g	630 g	880 g

* models 240W/12V and 350W/48V 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 A/h	7 A/h	7 ..12 A/h
	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	AC Voltage range	100 - 240 VAC (86 - 264 VAC max.)		
	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		
		Constantly ON - battery voltage less than 22V	Constantly ON - battery voltage less than 11V	Constantly ON - battery voltage less than 11V
Safety	Green LED (DC out)	'ON' - DC output voltage OK		
	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		
	Storage temperature	-30..+80 °C		
	Dimension, mm	101x59x29	101x59x29	134x74x37



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

SPECIFICATION

	Model name	UPS 120W Simple	UPS 155W/48V Simple
Output	DC voltage (AC mode)	13,8 V (adjust. 11.3-14.9 V)	54 V (adjust. 48-58 V)
	DC voltage (Battery mode)	10,4 - 14,1 V	41,3-53,2 V
	Voltage ripple and noise	≤100 mV	≤40 mV
	Battery maximum charge voltage	14,4 V	57,5 V
	Battery low voltage	9,5-11 V	37-41 V
	Rated current	8 A	2,7 A
	Maximum current (AC mode)	8.4 A	3,0 A
	Maximum current (Battery mode)	8.8 A	3,2 A
	Battery charge current	0,5 A	0,2 A
	Battery sustaining current	20 - 100 mA (depends of battery capacity)	
	Recommended battery capacity	7 A/h (two batteries connection allowed)	4 x 7 A/h
	UPS self consumption (AC absent)	≤80 mA	≤40 mA
	Voltage loss between battery and output	0,4 V	0,3 V
	Power source efficiency	≥84%	≥86% (PF>0.92)
Input	AC Voltage range	90-132VAC / 180-264VAC (selected by switch)	110 - 230VAC (90 - 264VAC max.)
	No load power consumption	≤4,5 W	≤7 W
	Frequency range	47 - 63 Hz	
Protection	Short circuit in load	Yes	Yes
	Overload	Yes	Yes
	Battery deep discharge	Yes	Yes
	Wrong polarity battery connection	No	Yes
Indication	Indication of AC, DC out and Battery	External PCB	On-board
	Red LED (AC)	'ON' - AC present	-
	Transparent LED (Battery)	Blinking red - battery charging	-
	Green LED (DC out)	'ON' - DC output voltage OK	
Safety	Withstand voltage I/P-O/P	3kV / 60 s / 5 mA	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	
	Storage temperature	-20..+85 °C	
	Dimension, mm	159 x 98 x 38	199x110x50
	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 A/h	7 A/h (18 A/h *)
	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	
	Storage temperature	-30..+70 °C	
	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/±90..380VDC
- 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 (94 - 264 VAC max.); ±90 - 380VDC				
	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	≤0,3 W	≤0,3 W	≤1 W
	Inrush current		20 A max.	35 A max.			40 A max.
Indication	Green LED (power ON)		On - output DC OK / blinking - in protection				
	Red LED (DC range)		-				ON: output voltage>18V
Protection	Maximum output power		15 W	30 W	43 W	60 W	90 W
	Short circuit, overload, over voltage		Hiccup mode, recovers automatically after fault condition is removed				
Environment	Working temperature		- 25..+60 °C				
	Storage temperature		-40..+85 °C (10..90% RH)				
	Working 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 65 x 19.5	93 x 56 x 25	93 x 78 x 56	93 x 78 x 56	125x108x40
	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
- Automatic protection: short circuit, overload
- LED indicators for power on

SPECIFICATION

Model name		120W/24V/DIN	240W/48V/DIN
Output	Rated power	120 W	240 W
	Rated DC voltage	24 V	48 V
	Maximum DC voltage range	22 - 26 V	47 - 56 V
	Rated current range	5 A	5 A
	Voltage ripple and noise	≤0,5 %	
	PWM frequency	65 kHz	200 kHz
	Temperature regulation	≤1 %	
	Setup, rise time	≤2000 ms	
	DC OK relay contact	No	Yes
Input	Voltage range	170 - 240 VAC	100 - 240 VAC (90-264 VAC max.)
	Frequency range	47 - 63 Hz	
	Efficiency	≥87 %	≥91 % (PF>0.95)
	No load power consumption	≤2,5 W	
	Inrush current	35 A max.	
Indication	Green LED (power ON)	On - output DC OK / blinking - in protection	
	Red LED (Overload)	-	Overload
Protection	Maximum output power	135 W	264 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 (10...90% RH)	
	Working 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	125x108x40	130.5x124x45
	DIN-rail mounting	Provided by case's design	
	Warranty	2 years	3 years
	Packing	White box	
	Weight	480 g	755 g

Note: Model 240W/48V/DIN has switch for power supplies parallel connection



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
- 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.); ±150-380 VDC			
	Frequency range	47 - 63 Hz			
	Efficiency	≥80 %	≥84 %		
	No load power consumption	≤0,2 W			
	Inrush current	20 A max			
Indication	LED	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	15 W	30 W	45 W	75 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 (10..90% RH)			
	Working 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 B ±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.); ±150-380 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	Cable 1,0 m with ferrite coil and DC plug 4.0x1.7x8.0 mm (additional female connector 4x1.7mm with heat shrinkable tube)
Protection	Maximum output power	21 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 (10..90% RH)	
	Working 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	150 g	250 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

SPECIFICATION

Model name		18W/12V/WP	24W/12V/WP	18W/18V/WP
Output	Rated power	18 W	24 W	18 W
	Rated DC voltage	12 V +/- 5%		18 V +/- 2%
	Rated current	1.5 A	2 A	1 A
	Voltage ripple and noise	≤60 mV		≤80 mV
	PWM frequency	65 kHz		
	Temperature regulation	≤1 %		
	Setup, rise time	<1500 ms		
Input	Voltage range	100 - 240 VAC		
	Frequency range	50 - 60 Hz		
	Efficiency	≥82 %	≥85 %	≥82 %
	No load power consumption	≤0,2 W		≤0,5 W
	Inrush current	20 A max.		
Protection	Short circuit, overload, over current	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		
	Working 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/25 °C/70% RH		
Others	DC jack	5.5 x 2.1 x 10 mm		-
	MTBF	150 000 hours		
	Warranty	2 years		
	AC cable length	250 mm		250 mm
	DC cable length	450 mm		250 mm
	Packing	White box		
	Dimension, mm	48 x 50 x 26 (diagonal 55 mm)	59,5 x 61,4 x 29,7 (diagonal 66 mm)	48 x 50 x 26 (diagonal 55 mm)
	Weight	106 g	170 g	106 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	3W/WM/PL	12W/WM/PL	18W/WM/PL
Output	Rated power	5 W	3 W	12 W	18 W
	Rated DC voltage	5 V	12 V		
	Rated current	1,0 A	0,2 A	1,0 A	1,5A
	Voltage ripple and noise	30 mV	≤1,0 %		
	PWM frequency	52 kHz	60 kHz	60 kHz	65 kHz
	Temperature regulation	≤1 %			
	Setup, rise time	<1500 mS			
Input	Voltage range	100 - 240 VAC (94 - 264 V max.)			
	Frequency range	47 - 63 Hz			
	Efficiency	≥76 %	≥82 %		
	No load power consumption	≤0,5W			
	Inrush current	20 A max			
Protection	Maximum output power	6 W	5 W	15 W	21 W
	Short circuit, overload, overvoltage	Hiccup mode, recovers automatically after fault condition is removed			
Environment	Working temperature	0..+ 50 °C			
	Storage temperature	-25..+85 °C (10..90% RH)			
	Working 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	Socket/plug	USB-A socket	Plug 5.5 x 2.1 x 10 mm		
	MTBF	150 000 hours			
	Warranty	2 years			
	Packing	Plastic bag, white box			
	Dimension, mm	68 x 34 x 73	64 x 39 x 65	64 x 39 x 65	70 x 42 x 67
	Weight	50 g	90 g	97 g	120 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+
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		
	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
	Rated voltage	48 V		54 V	53V
	Rated current	0,5 A		0,55 A	0,56 A /1,13 A
Input	Voltage range	100 - 240 VAC (94 - 264 VAC max.)			
	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
Protection	Automatic	Short circuit, over current, over voltage, over load, anti-interference			
Environment	Working temperature	0..+40 °C		0..+40 °C	-10..+50 °C
	Storage temperature	-10..+55 °C		-40..+60 °C	-20..+50 °C
	Working 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			
	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		120 x 50 x 35	168 x 73.5 x 44
	Weight	230 g		290 g	700 g



FEATURES:

- CE, EAC certified
- Indoor and outdoor 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 unmanaged 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. 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 .. + 70°C. DIN-rail mounting.

SPECIFICATION

Parameter		Description
Ethernet Standards compliance		IEEE 802.3 10Base-T Ethernet; IEEE 802.3af Power over Ethernet; IEEE 802.3at High Power over Ethernet; IEEE 802.3u 100Base-TX Fast Ethernet; IEEE 802.3z 1000Base-X Gigabit Ethernet; IEEE 802.3ab 1000Base-T Gigabit Ethernet; IEEE 802.3x Flow control
Ports	1..8	Fast Ethernet 10/100Base-T/TX RJ45 with PoE 30 W max., distance up to 100 meters, PoE outputs 1,2 (+)/3,6 (-)
	Combo G1,G2	Gigabit Ethernet 1000Base-T RJ45 + 1000Base-X SFP
MAC address table		8 K
Data buffer		1 Mbit
Maximum frame size		1632 bytes
Bandwidth		5,6 G
Transfer rate	10Mbps	14880 pps
	100 Mbps	148800 pps
Indication	LINK/ACT	GREEN - port connected; BLINKING - data receiving/transmitting
	PoE	ORANGE - PD is connected
	G1,G2-combo	GREEN - port connected
Environment	Working temperature	-40..70°C
	Storage temperature	-40..75 °C
	Humidity non-condensing	10-85%
Electrical parameters	Power consumption	Not more than 6 W
	PoE power budget	30x8=240 W
	External power supply	48V 3A (included)*
Dimensions LxWxH		167 x 72 x 142.5 mm
Weight		1,15 Kg

* can be completed with power supply up to 250W per request

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.

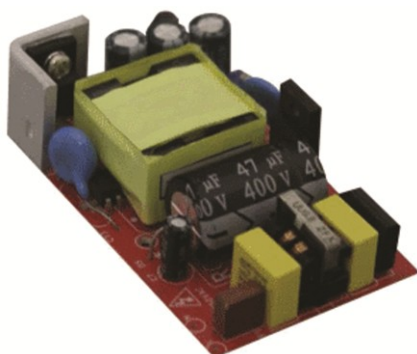
Examples of Open frame power units :

6W/OPF



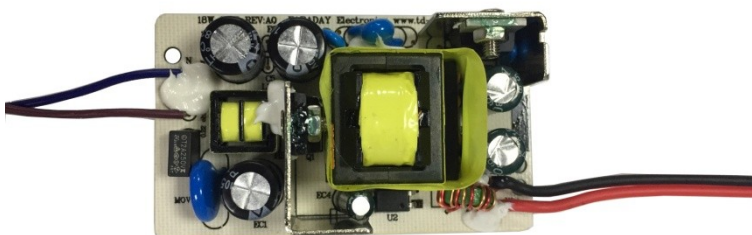
Output power = 6,5 W
Output : 'Channel 1' = 12V, 500mA ; 'Channel 2' = 24 V, 20mA
Input voltage range = 100 - 240 VAC

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

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