



# 50-600

## WATTS

### DC/DC CONVERTERS

#### SINGLE OUTPUT

**Ideal for distributed architecture**

**Large range of models and accessories**

**Parallel function with current sharing**

**Power good signal**

**Remote control**

**Auxiliary outputs**

**High efficiency**

**High reliability**

**Guarantee 2 years**

a) The PH series offers the largest range of high density DC/DC modules from 60-600W, with inputs ranging from 18-400VDC and outputs from 2-48V DC. Full function models have current sharing and module good signals making them ideal for N +1 applications.

b) The wide operating temperature range permits use in external applications without derating (-40°C start up available on request).

#### INPUT

Input voltage range	18 to 36 VDC for model 24V 36 to 76 VDC for model 48V 82 to 185 VDC for model 110V 200 to 400 VDC for model 280V
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#### OUTPUT

Power	50 to 600 W
Output adjustable	±10% simple / -60%/+20% Full
Line regulation	0.4%
Load regulation	0.8%
Ripple and noise (value peak to peak)	100mV for models 2V and 5V ≤1% for models ≥12VDC
Current limit	Constant current
Over voltage protection	inverter shutdown - manual reset

#### GENERAL

Thermal protection	inverter shutdown - manual reset
Efficiency	68 to 90% model dependent
Cooling	conduction
Voltage isolation :	
Input-output	3 KVAC
Input-ground	2.5 KVAC
Output-ground	500 VDC
Parallel operation	Full function models only
Series	possible

#### ENVIRONMENTAL

Operating temperature range	-20°C to +85°C (baseplate) up to +100°C for PH300S/600S (-40°C as an option)
Derating	start up of PH300S and PH600S (consult Technical Sales)
Shock	20 G
Vibration	10 ~ 55HZ amplitude (Sweep for 1 min) amplitude 0.825 mm constant (5G max) 1 hour on each axis

# ELECTRICAL SPECIFICATION

Volts	Amp.	Watts	Model	Model	Model	Model
max.	nom.	nom.	Input	Input	Input	Input
			24V	48V	110V	280V
<b>Full Function</b>						
2.0	15.00	30	-	PH75F48-2	PH75F110-2	PH75F280-2
2.0	20.00	40	PH100F24-2	-	-	-
2.0	30.00	60	-	PH150F48-2	PH150F110-2	PH150F280-2
2.0	60.00	120	-	PH300F48-2	PH300F110-2	PH300F280-2
3.3	15.00	45	-	PH75F48-3	PH75F110-3	PH75F280-3
3.3	20.00	60	PH100F24-3	-	-	-
3.3	30.00	90	-	PH150F48-3	PH150F110-3	PH150F280-3
3.3	60.00	180	-	PH300F48-3	PH300F110-3	PH300F280-3
5.0	15.00	75	-	PH75F48-5	PH75F110-5	PH75F280-5
5.0	20.00	100	PH100F24-5	-	-	-
5.0	30.00	150	-	PH150F48-5	PH150F110-5	PH150F280-5
5.0	60.00	300	-	PH300F48-5	PH300F110-5	PH300F280-5
12.0	6.30	75	-	PH75F48-12	PH75F110-12	PH75F280-12
12.0	8.40	100	PH100F24-12	-	-	-
12.0	12.50	150	-	PH150F48-12	PH150F110-12	PH150F280-12
12.0	25.00	300	-	PH300F48-12	PH300F110-12	PH300F280-12
15.0	5.00	75	-	PH75F48-15	PH75F110-15	PH75F280-15
15.0	6.70	100	PH100F24-15	-	-	-
15.0	10.00	150	-	PH150F48-15	PH150F110-15	PH150F280-15
15.0	20.00	300	-	PH300F48-15	PH300F110-15	PH300F280-15
24.0	3.20	75	-	PH75F48-24	PH75F110-24	PH75F280-24
24.0	4.20	100	PH100F24-24	-	-	-
24.0	6.30	150	-	PH150F48-24	PH150F110-24	PH150F280-24
24.0	12.60	300	-	PH300F48-24	PH300F110-24	PH300F280-24
28.0	2.70	50	-	PH75F48-28	PH75F110-28	PH75F280-28
28.0	3.60	100	PH100F24-28	-	-	-
28.0	5.40	150	-	PH150F48-28	PH150F110-28	PH150F280-28
28.0	10.80	300	PH300F24-28	PH300F48-28	PH300F110-28	PH300F280-28

Volts	Amp.	Watts	Model	Model	Model	Model
max.	nom.	nom.	Input	Input	Input	Input
			24V	48V	110V	280V
<b>Simple Function</b>						
3.3	10.00	33	PH50S24-3	PH50S48-3	-	PH50S280-3
3.3	15.00	49.5	-	PH75S48-3	-	PH75S280-3
3.3	20.00	66	-	PH100S48-3	-	PH100S280-3
3.3	30.00	99	-	PH150S48-3	-	PH150S280-3
3.3	50.00	181.5	-	PH300S48-3	-	PH300S280-3
3.3	100.00	330	-	-	-	PH600S280-3
5.0	10.00	50	PH50S24-5	PH50S48-5	PH50S110-5	PH50S280-5
5.0	15.00	75	-	PH75S48-5	PH75S110-5	PH75S280-5
5.0	20.00	100	-	PH100S48-5	-	PH100S280-5
5.0	30.00	150	-	PH150S48-5	PH150S110-5	PH150S280-5
5.0	50.00	275	-	PH300S48-5	-	PH300S280-5
5.0	100.00	500	-	-	-	PH600S280-5
12.0	4.20	50	PH50S24-12	PH50S48-12	PH50S110-12	PH50S280-12
12.0	6.30	75	-	PH75S48-12	PH75S110-12	PH75S280-12
12.0	8.40	100	-	PH100S48-12	-	PH100S280-12
12.0	12.50	150	-	PH150S48-12	PH150S110-12	PH150S280-12
12.0	25.00	300	-	PH300S48-12	-	PH300S280-12
12.0	50.00	600	-	-	-	PH600S280-12
15.0	3.40	50	PH50S24-15	PH50S48-15	PH50S110-15	PH50S280-15
15.0	5.00	75	-	PH75S48-15	PH75S110-15	PH75S280-15
15.0	6.70	100	-	PH100S48-15	-	PH100S280-15
15.0	10.00	150	-	PH150S48-15	PH150S110-15	PH150S280-15
15.0	20.00	300	-	PH300S48-15	-	PH300S280-15
15.0	40.00	600	-	-	-	PH600S280-15
24.0	2.10	50	PH50S24-24	PH50S48-24	PH50S110-24	PH50S280-24
24.0	3.20	75	-	PH75S48-24	PH75S110-24	PH75S280-24
24.0	4.20	100	-	PH100S48-24	-	PH100S280-24
24.0	6.30	150	-	PH150S48-24	PH150S110-24	PH150S280-24
24.0	12.50	300	-	PH300S48-24	-	PH300S280-24
24.0	25.00	600	-	-	-	PH600S280-24
28.0	1.80	50	PH50S24-28	PH50S48-28	PH50S110-28	PH50S280-28
28.0	2.70	75	-	PH75S48-28	PH75S110-28	PH75S280-28
28.0	3.60	100	-	PH100S48-28	-	PH100S280-28
28.0	5.40	150	-	PH150S48-28	PH150S110-28	PH150S280-28
28.0	10.71	300	-	PH300S48-28	-	PH300S280-28
28.0	21.43	600	-	-	-	PH600S280-28
48.0	6.25	300	-	PH300S48-48	-	PH300S280-48
48.0	12.50	600	-	-	-	PH600S280-48

## SELECTION GUIDE : SIMPLE OR FULL FUNCTION

	Simple Function	Full Function
<b>Output voltage adjustment</b>	±10% except PH300S, PH600S : +20% / -10% for 3.3V, 5V and 48V outputs	-60% / +20%
<b>Auxiliary functions</b>	No except PH300S / PH600S	Yes
<b>Parallel function with current sharing</b>	No except PH300S / PH600S (with external circuit)	Yes
<b>Power good signal</b>	No except PH300S / PH600S	Yes

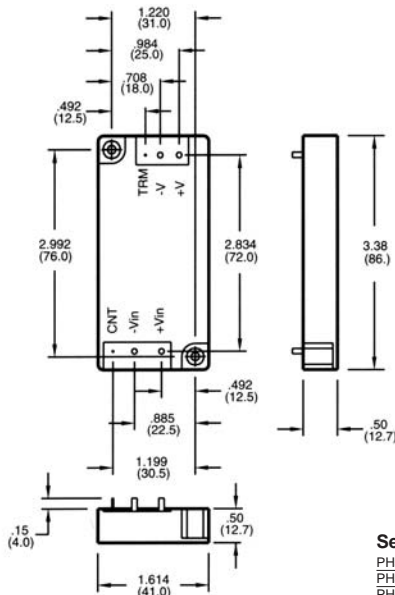


# Series PH

# PHYSICAL SPECIFICATION (continued)

## PH 50S/75S

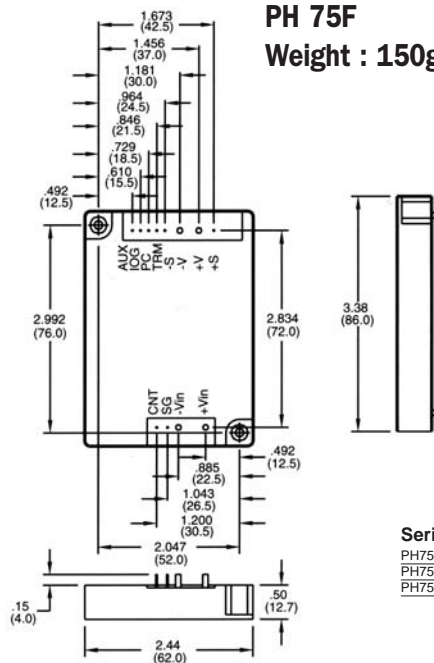
Weight : 100g



Series	Voltage
PH50S24	24V
PH50S48	48V
PH50S110	110V
PH50S280	280V
PH75S48	48V
PH75S110	110V
PH75S280	280V

## PH 75F

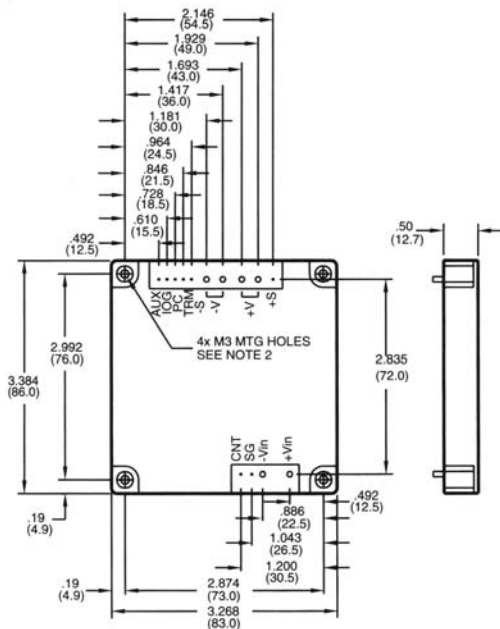
Weight : 150g



Series	Voltage
PH75F48	48V
PH75F110	110V
PH75F280	280V

## PH 100F/150F

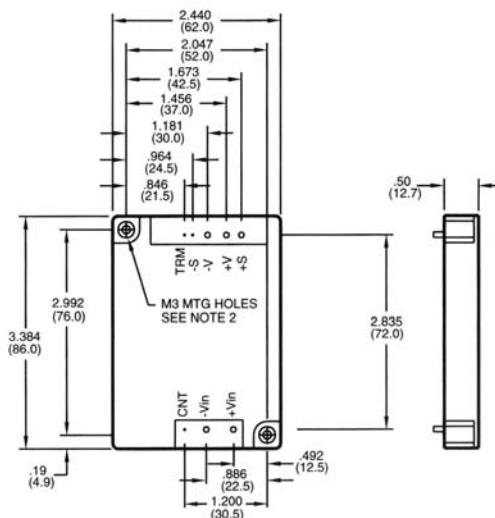
Weight : 180g



Series	Voltage
PH100F24	24V

## PH 100S

Weight : 150g



- 1- M3 tapped holes for chassis mounting
- 2- The dimensions are in inches and mm.

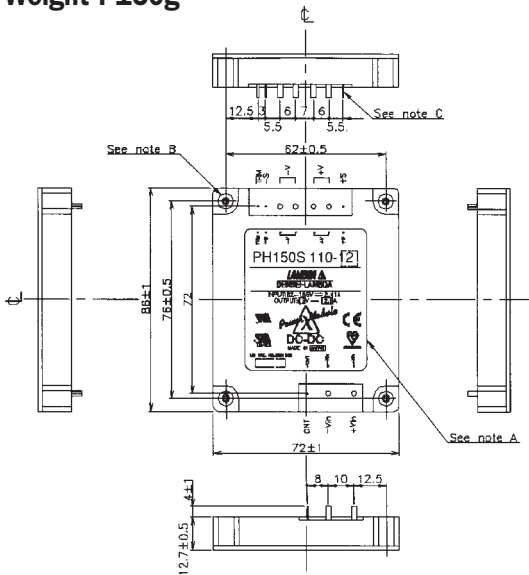
NB. Products viewed from below, not above.

# Series PH



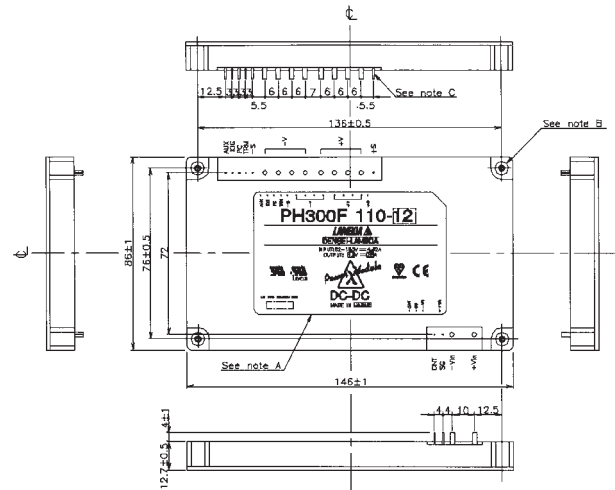
# PHYSICAL SPECIFICATIONS (continued)

## PH 150S Weight : 150g

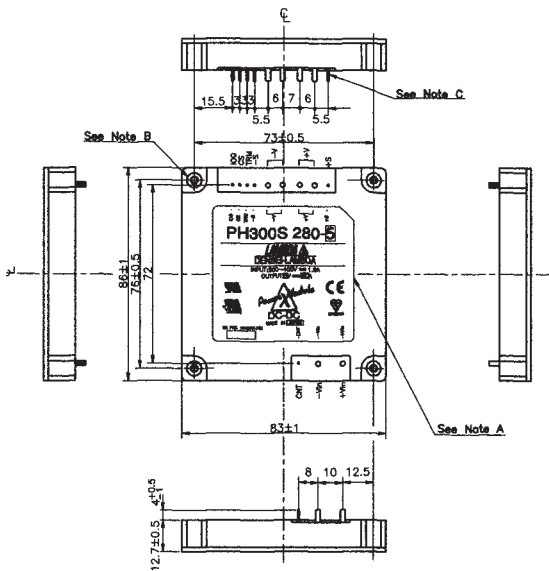


Series	Voltage
PH150S48	48V
PH150S110	110V
PH150S280	280V

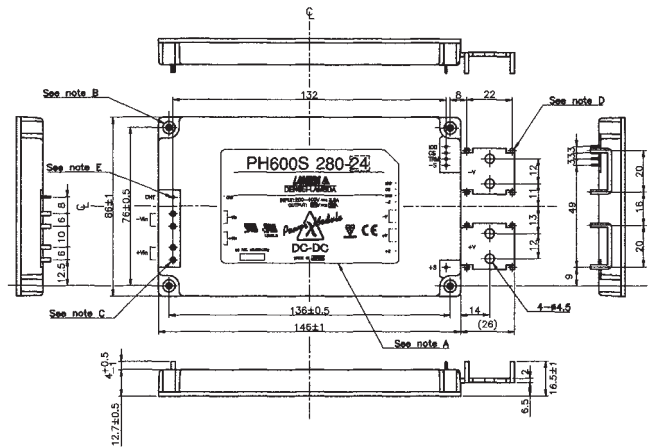
## PH 300F Weight : 250g



## PH 300S Weight : 200g



## PH 600S Weight : 400g



- 1- MS tapped holes for chassis mounting.
- 2- The dimensions are in inches and mm.

NB. Products viewed from below, not above.