



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 |
|---------------------|---|

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 |

PHYSICAL SPECIFICATION (continued)

| | Model | Model | Model | Model |
|----------------------|-----------------|-------------|-------------|---------------------------|
| Volts Amp. max. | Watts Input 24V | Input 48V | Input 110V | Input 280V |
| Full Function | | | | |
| 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 |

| | Model | Model | Model | Model |
|------------------------|-----------------|------------|-------------|---------------------------|
| Volts Amp. max. | Watts Input 24V | Input 48V | Input 110V | Input 280V |
| Simple Function | | | | |
| 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 |
|---|---|---------------|
| Output voltage adjustment | $\pm 10\%$ except PH300S, PH600S : +20% / -10% for 3.3V, 5V and 48V outputs | -60% / +20% |
| Auxiliary functions | No except PH300S / PH600S | Yes |
| Parallel function with current sharing | No except PH300S / PH600S (with external circuit) | Yes |
| Power good signal | No except PH300S / PH600S | Yes |

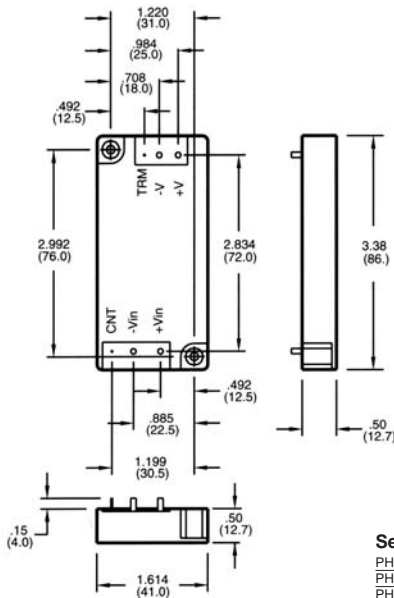


Series PH

PHYSICAL SPECIFICATIONS (continued)

PH 50S/75S

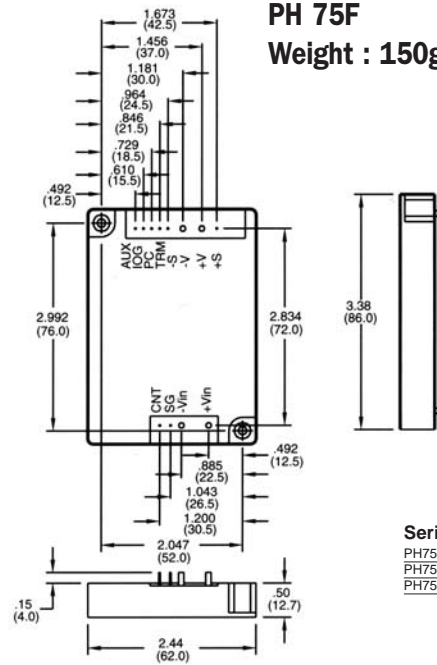
Weight : 100g



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

PH 75F

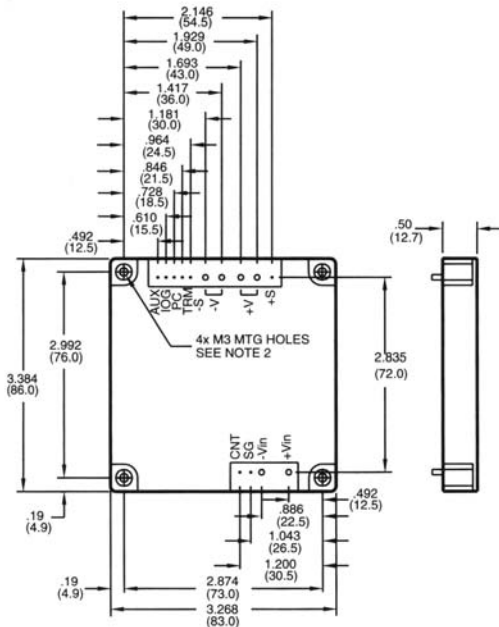
Weight : 150g



| Series | Voltage |
|----------|---------|
| PH75F48 | 48V |
| PH75F110 | 110V |
| PH75F280 | 280V |

PH 100F/150F

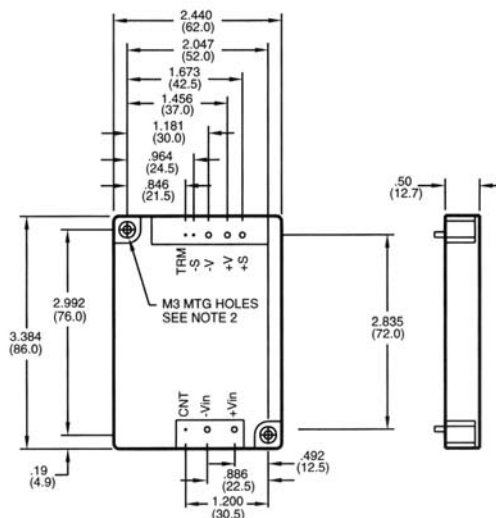
Weight : 180g



| Series | Voltage |
|----------|---------|
| PH100F24 | 24V |

PH 100S

Weight : 150g

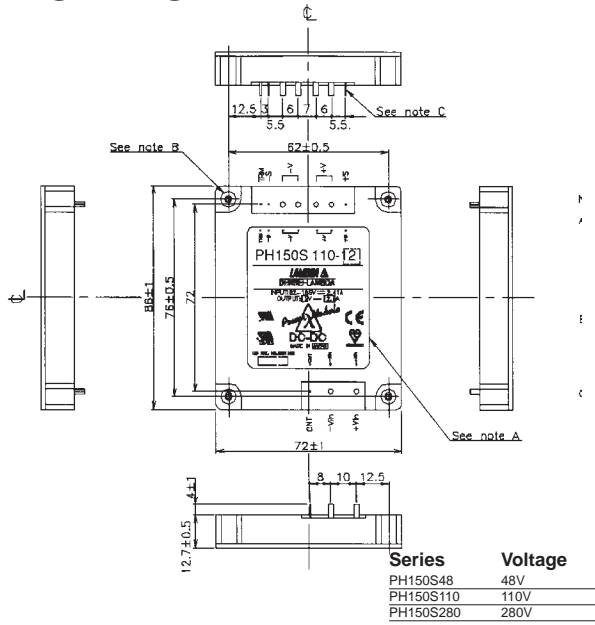


- 1- M3 tapped holes for chassis mounting
- 2- The dimensions are in inches and mm.

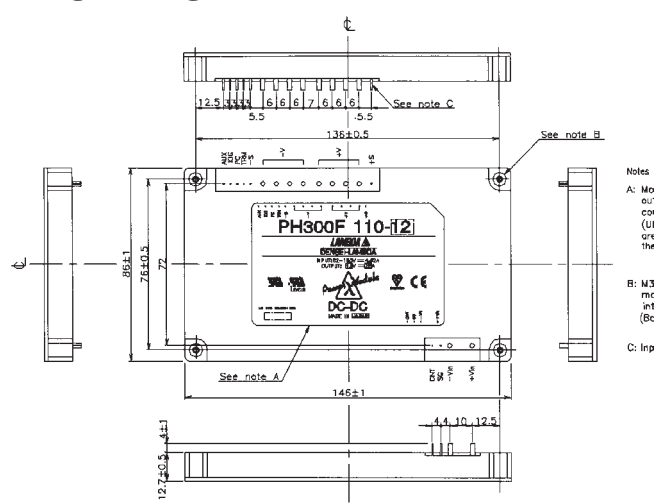
NB. Products viewed from below, not above.

ELECTRICAL SPECIFICATION

PH 150S Weight : 150g

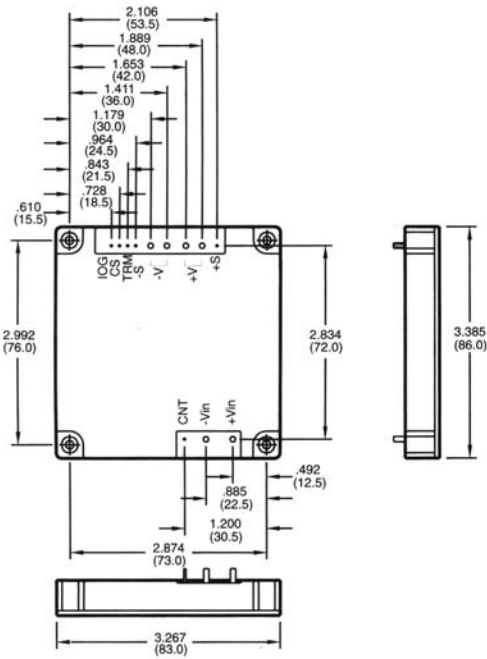


PH 300F Weight : 250g

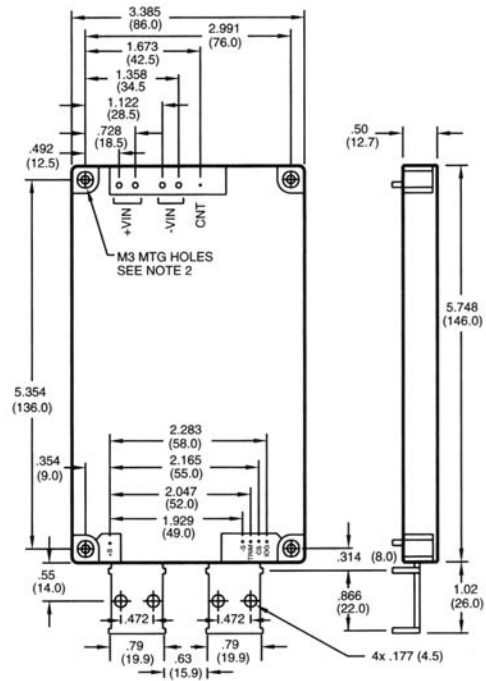


Notes
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the
B: M3
mc
int
(Bc
C: Inp

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.