



50W to 150W DC-DC Converters Single Output High Density Power Modules

Features	Benefits
• High Density	• Smaller Package Size
• Up to 425 Vdc Input	• Cover HVDC Telecom Requirements
• Fixed Operating Frequency	• Easier System Filtering
• High Efficiency	• Better System Thermal Management



Specification		PH50A280	PH75A280	PH100A280	PH150A280
ITEMS					
Input Voltage range	-		200 - 425 VDC		
Input Current (1)	A		See Model selector		
Output Voltage Accuracy	%		+/-2		
Maximum Ripple and Noise (5)	mV		5V: 100mV, 12V: 150mV, 24V: 240mV, 48V: 400mV		
Temperature Coefficient	-		<0.02°C / W		
Overvoltage protection (2) (4)	-		See model selector		
Overcurrent protection (6)	%		102-150		
Remote sense (2)	-		Yes		
Remote ON/OFF control (2)	-		yes - SHORT=ON OPEN=OFF		
Series Operation (2)	-		Yes		
Parallel Operation	-		No		
Operating Temperature (2)	°C		-40°C to +100°C (Baseplate), -40°C to +85°C (Ambient)		
Storage Temperature	°C		-40°C to +100°C		
Humidity (non condensing)	-		Operating: 5 - 95%RH, Storage: 5 - 95%RH		
Cooling	-		Conduction cooled		
Withstand Voltage (3)	-	I/P to Grnd 2.5kVAC (20mA), I/P to O/P: 3kVAC (20mA), O/P to Baseplate: 500VAC (20mA) for 1mn			
Isolation Resistance	-	>100MΩ at 25°C & 70%RH, Output to Baseplate: 500VDC			
Vibration	-	10 - 55Hz (1 minute sweep), Amplitude 0.825mm Constant (Maximum 49.0m/s ²) X, Y, Z 1 hour each			
Shock	-	196.1 m/s ²			
Safety Agency Approvals	-	UL60950-1, CSA60950-1, EN60950-1, CE mark (LVD)			
Weight (Typ)	g	55			
Size (W x H x D) (7)	mm	Quarter Brick Format - 37.2 x 12.7 x 58.3			
Warranty	yrs	5			

Notes:

- (1) At 280 VDC input and maximum output current (baseplate temperature = 25°C)
- (2) Refer to detailed Specifications & Instruction Manual
- (3) This specification applies to Power Module as stand-alone
- (4) OVP reset: Line OFF or Control OFF
- (5) 200 - 425 VDC input, Constant load
- (6) Constant current limitation - Automatic recovery
- (7) Refer to outline drawing

Read Instruction Manual carefully before using the Power module unit

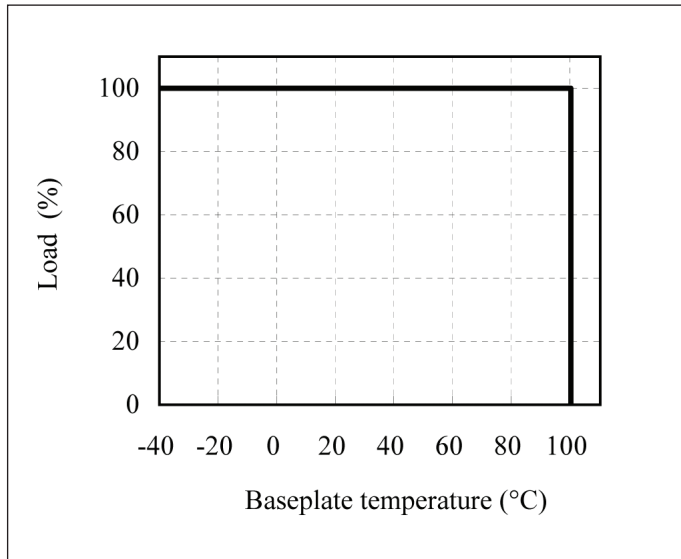
Model Selector

Model	Output Voltage	Output Adjust Range (V)	Max Output Current (A)	Max Output Power (W)	Efficiency ⁽³⁾ (%)	Input Current (A)	Load Reg ⁽¹⁾ (mV)	Line Reg ⁽²⁾ (mV)	OVP (V)
PH50A280-5	5V	4 - 6	10	50	86	0.21	10	10	6.25 - 7.5
PH50A280-12	12V	9.6 - 13.2	4.2	50.4	89	0.20	24	24	13.8 - 17.4
PH50A280-24	24V	19.2 - 26.4	2.1	50.4	89	0.20	48	48	27.6 - 34.8
PH50A280-48	48V	38.4 - 52.8	1.1	52.8	89	0.21	96	96	55.2 - 69.6
PH75A280-5	5V	4 - 6	15	75	86	0.32	10	10	6.25 - 7.5
PH75A280-12	12V	9.6 - 13.2	6.3	75.6	89	0.31	24	24	13.8 - 17.4
PH75A280-24	24V	19.2 - 26.4	3.2	76.8	90	0.31	48	48	27.6 - 34.8
PH75A280-48	48V	38.4 - 52.8	1.6	76.8	90	0.31	96	96	55.2 - 69.6
PH100A280-5	5V	4 - 6	20	100	86	0.42	10	10	6.25 - 7.5
PH100A280-12	12V	9.6 - 13.2	8.4	100.8	88	0.41	24	24	13.8 - 17.4
PH100A280-24	24V	19.2 - 26.4	4.2	100.8	89	0.41	48	48	27.6 - 34.8
PH100A280-48	48V	38.4 - 52.8	2.1	100.8	90	0.40	96	96	55.2 - 69.6
PH150A280-12	12V	9.6 - 13.2	12.5	150	88	0.62	24	24	13.8 - 17.4
PH150A280-24	24V	19.2 - 26.4	6.3	151.2	89	0.61	48	48	27.6 - 34.8
PH150A280-48	48V	38.4 - 52.8	3.2	153.6	90	0.60	96	96	55.2 - 69.6

Notes:

- (1) No load - Full load, Constant input voltage (2) 200 - 425 VDC input, Constant load (3) At 280Vdc input and maximum output current

Derating Curve PH280-A Series

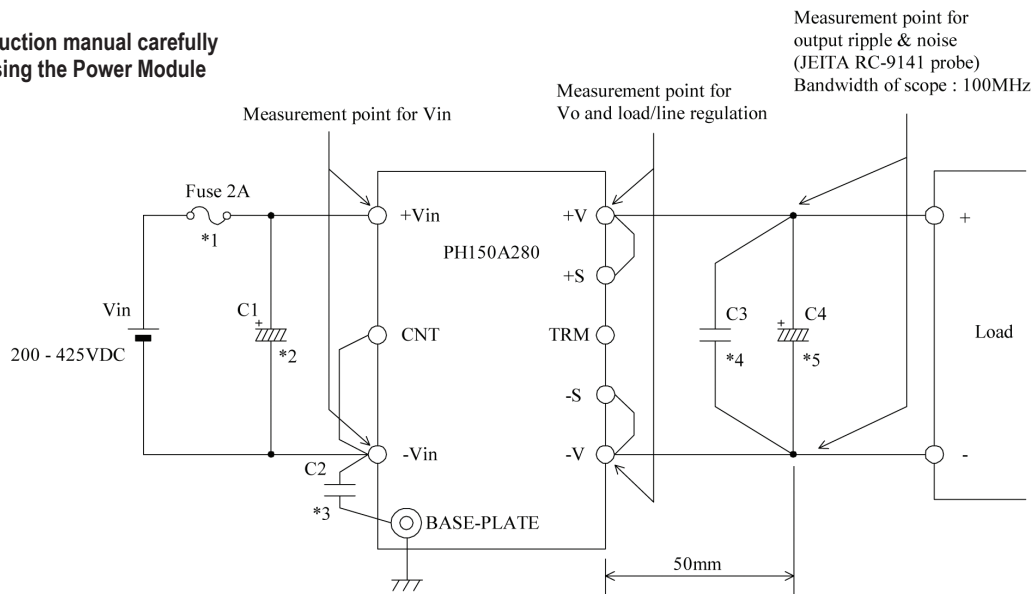


Pin Assignments

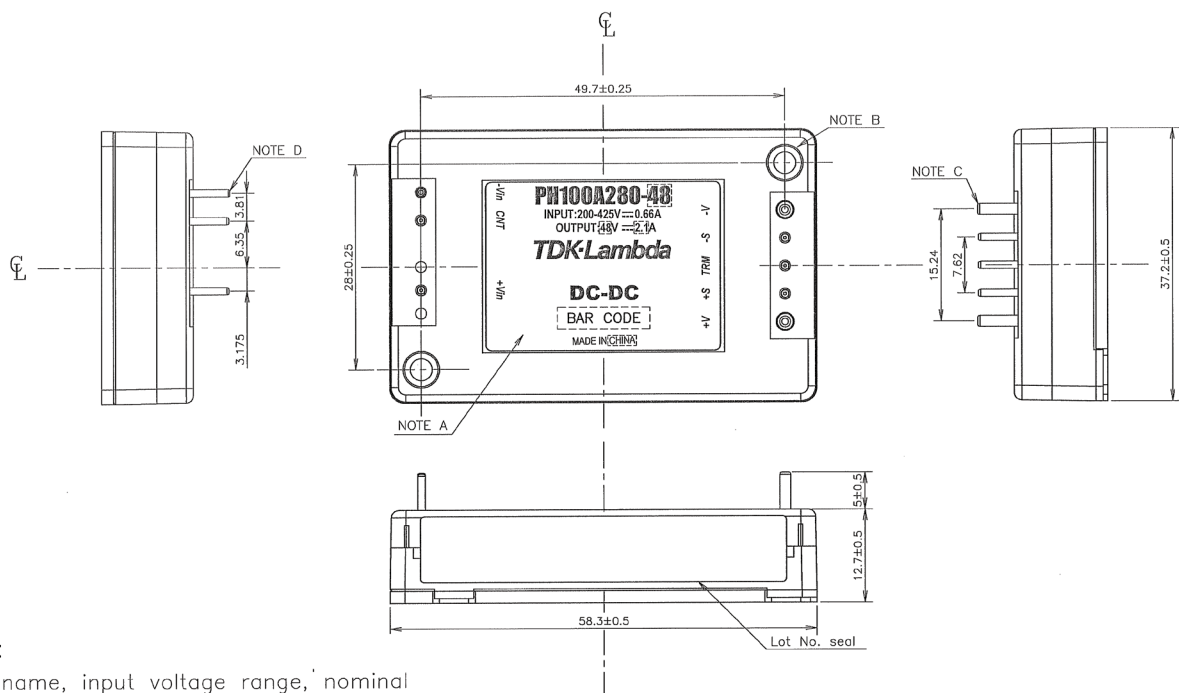
Pin Description	Function
+Vin	Positive Input Terminal
-Vin	Negative Input Terminal
+S	Positive Remote Sense
-S	Negative Remote Sense
+V	Positive Output Terminal
-V	Negative Output Terminal
CNT	On/Off Control Terminal
TRM	Output Adjustment Trim Pin

Basic Connection PH280-A Series

Read instruction manual carefully before using the Power Module



Outline Drawing PH280-A Series



NOTES :

- A: Model name, input voltage range, nominal output voltage, maximum output current, country of manufacture and safety marking (C-UL-US & CE marking) are shown here in accordance with the specifications.
- B: M3 tapped holes 2 for customer chassis mounting (FG).
- C: Output pin : 2- ϕ 1.5
- D: Input and Signal pin : 6- ϕ 1.0
- E: Unless otherwise specified dimensional tolerance : ± 0.25 mm



TDK-Lambda France SAS

ZAC des Delaches
CS 41077
9 rue Thuillere
91978 Villebon Courtaboeuf
France
Tel: +33 1 60 12 71 65
Fax: +33 1 60 12 71 66
france@tdk-lambda.com
www.fr.tdk-lambda.com



Italy Sales Office

Via dei Lavoratori 128/130
20092 Cinisello Balsamo (MI)
Italy
Tel: +39 02 61 29 38 63
Fax: +39 02 61 29 09 00
info.italia@it.tdk-lambda.com
www.it.tdk-lambda.com



Netherlands

info@tdk-lambda.nl
www.tdk-lambda.nl



TDK-Lambda Germany GmbH

Karl-Bold-Strasse 40
77855 Achern
Germany
Tel: +49 7841 666 0
Fax: +49 7841 5000
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



Austria Sales Office

Aredstrasse 22
2544 Leobersdorf
Austria
Tel: +43 2256 655 84
Fax: +43 2256 645 12
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



Scandinavia Sales Office

Valdemarsgade 7
4100 Ringsted
Denmark
Tel: +45 24 63 95 65
Fax: +45 69 80 44 99
info@de.tdk-lambda.com
www.emea.tdk-lambda.com



Switzerland Sales Office

Bahnhofstrasse 50
8305 Dietlikon
Switzerland
Tel: +41 44 850 53 53
Fax: +41 44 850 53 50
info@de.tdk-lambda.com
www.de.tdk-lambda.com



TDK-Lambda UK Ltd.

Kingsley Avenue
Ilfracombe
Devon EX34 8ES
United Kingdom
Tel: +44 (0) 12 71 85 66 66
Fax: +44 (0) 12 71 86 48 94
powersolutions@uk.tdk-lambda.com
www.uk.tdk-lambda.com



TDK-Lambda Ltd.

Kibbutz
Givat Hashlosa 48800
Israel
Tel: +9 723 902 4333
Fax: +9 723 902 4777
info@tdk-lambda.co.il
www.tdk-lambda.co.il



Russia

Technical Support:

St Petersburg
Tel: +7 (812) 6580463

Sales:

Moscow
info@tdk-lambda.ru
www.tdk-lambda.ru

Local Distribution