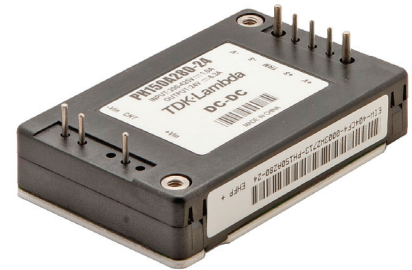




50W to 150W DC-DC Converters Single Output High Density Power Modules



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		
Model		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

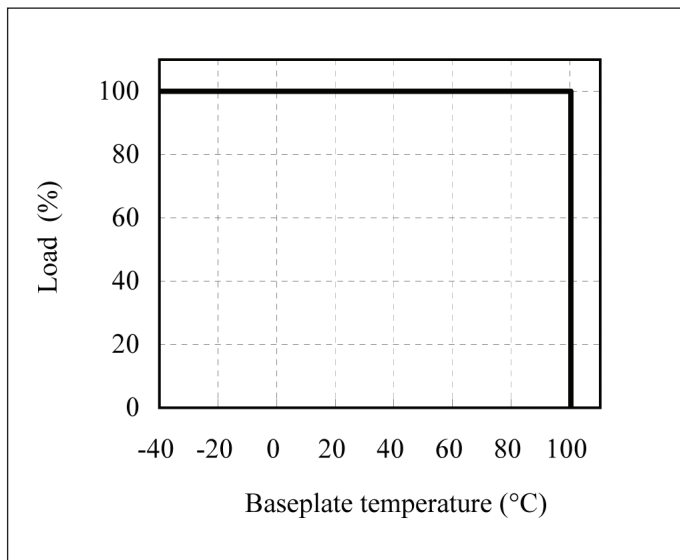
Model Selector

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

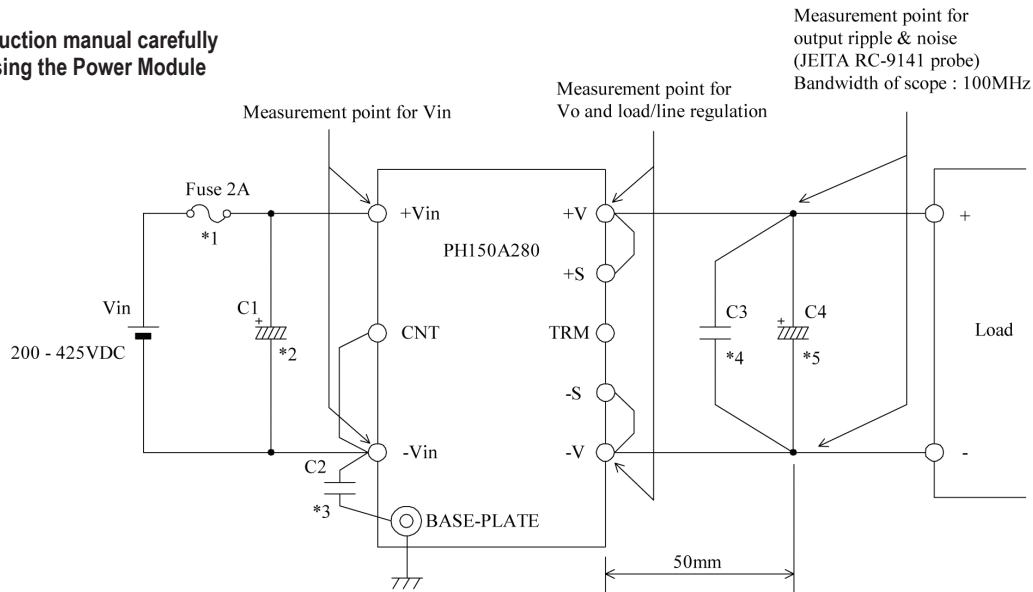


Pin Assignments

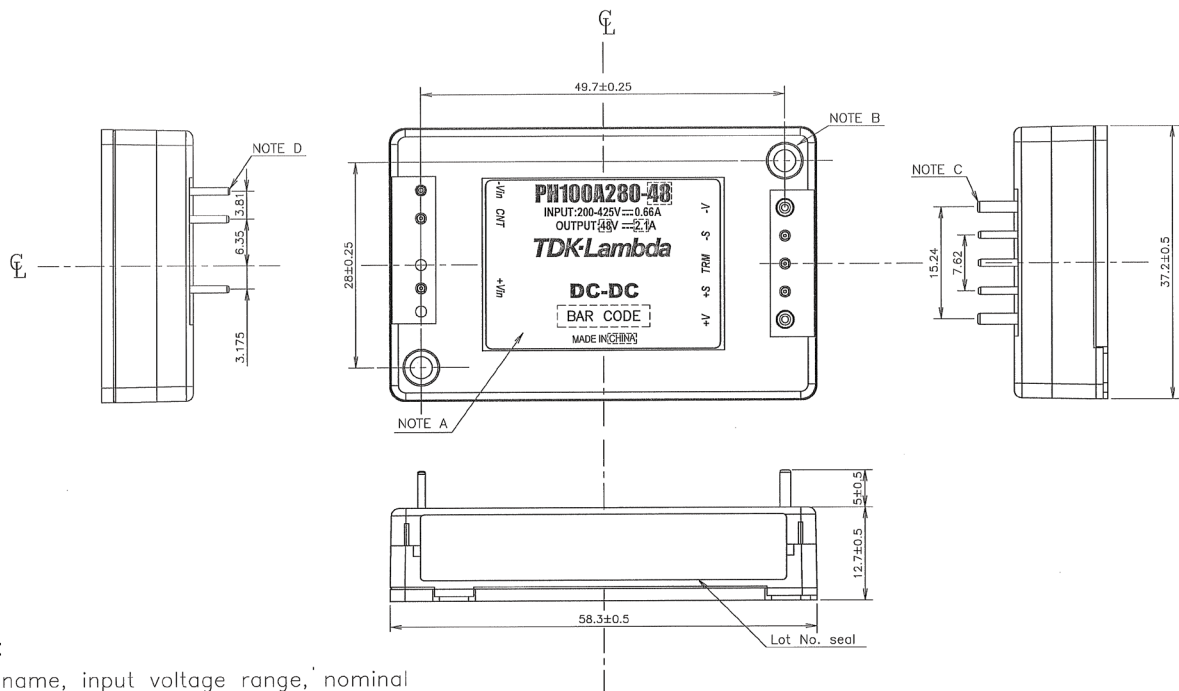
Pin Description	Function
+Vin	Positive Input Terminal
-Vin	Negative Input Terminal
+S	Positive Remote Sense
-S	Negative Remote Sense
+V	Positive Output Terminal
-V	Negative Output Terminal
CNT	On/Off Control Terminal
TRM	Output Adjustment Trim Pin

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 : $\pm$ 0.25mm



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