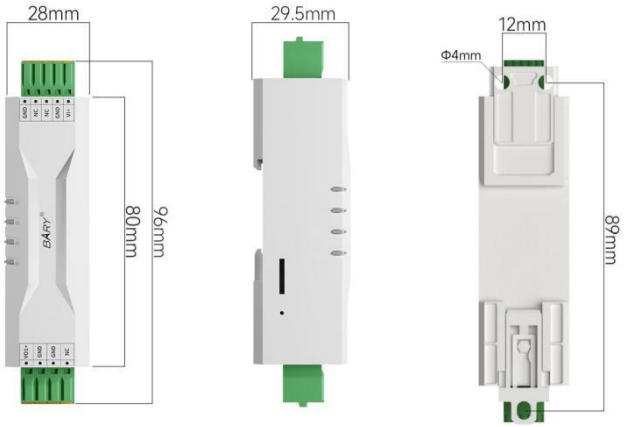
Features

- Installation Method: Standard 35mm rail mounting;
- Connection: Spring terminals; quick installation without tools;
- Input Protection: Lightning protection, reverse polarity protection;
- Output Protection: Overvoltage Protection;
- Conversion efficiency: 97% (MAX);
- Input range: 4.2–100 VDC;
- Applications: Industrial sites, instrumentation, RF communications, railways, transportation, smart streetlights, smart homes, smart switches, smart homes.



Product Options Table

Product Models	Input Voltage (VDC)	Ouput			Temperature Range (℃)
	Nominal Value (Range)	Power（W）	Voltage （VDC）	Current（mA）	
BDD03-80052A0	80(22-100)	10	5	2000	-40℃ to +85℃
BDD03-80121A0	80(22-100)	12	12	1000	-40℃ to +85℃
BDD03-48243A0	48(28-60)	72	24	3000	-40℃ to +85℃
BDD03-80241A0	80(28-100)	24	24	1000	-40℃ to +85℃
BDD03-4805123A0	48(14.5-60)	15+36	5+12	3000	-40℃ to +85℃
BDD03-4805125A0	48(14.5-60)	25+36	5+12	5000	-40℃ to +85℃

Input Parameters

Item	Working Conditions			Minimum	Typical	Maximum	Unit
Input Current	BDD03-80052A0	24V (VIN)	5V(Output)	--	557	--	mA
	BDD03-80121A0	24V (VIN)	12V(Output)	--	554	--	
	BDD03-48243A0	48V(VIN)	24V(Output)	--	1578	--	
	BDD03-80241A0	48V(VIN)	24V(Output)	--	588	--	
	BDD03-4805123A0	24V (VIN)	5V+12V	--		--	
	BDD03-4805125A0	24V (VIN)	5V+12V	--		--	
Ripple Noise	BDD03			20	--	30	mV
Start-up Voltage	BDD03-80052A0			22	--	22.2	VDC
	BDD03-80121A0			22	--	22.2	
	BDD03-48243A0			28	--	28.2	
	BDD03-80241A0			28	--	28.2	
	BDD03-4805123A0			8.8	--	9	

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	BDD03-4805125A0	8.8	--	9	
Input Low-Voltage Protection	BDD03	Not.			
Input Filter Type	BDD03	C			
Recommended External Input Fuses	BDD03	5A/100V, slow-blow, must be connected			

Output Parameters

Item	Working Conditions	Minimum	Typical	Maximum	Unit
Output Voltage Accuracy	0%～100% load	--	±1.5	±3	%
Voltage Regulation	Fully loaded	--	±0.3	±0.5	
Load Regulation	5%–100% load (balanced load)	--	±1	±2	
Ripple Noise	20 MHz bandwidth, 100% load	15	--	75	mVp-p
Temperature Coefficient		--	±0.05	--	%/℃
Overvoltage Protection	BDD03	N ot.			
Overcurrent Protection		N ot.			
Short-Circuit Protection		N ot.			

General Features

Item	Working Conditions	Minimum	Typical	Maximum	Unit
Switching Frequency	BDD03	500	550	600	KHz
Ambient Temperature	See - Product Derating Design	-40	25	+40	℃
Storage Temperature		-40	25	+85	℃
Storage Humidity		--	--	95	%RH

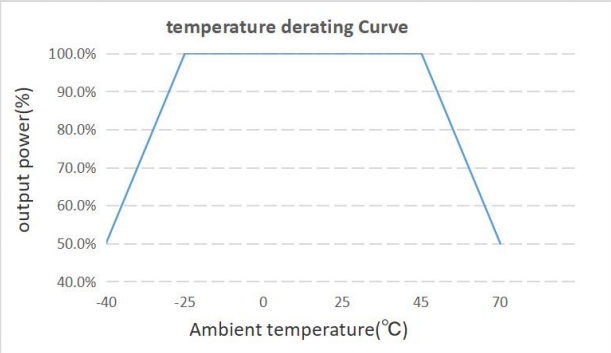
Mechanical Specifications

Dimensions	96*28*29.5mm;
Weight	41g
Cooling Method	Natural Air Cooling

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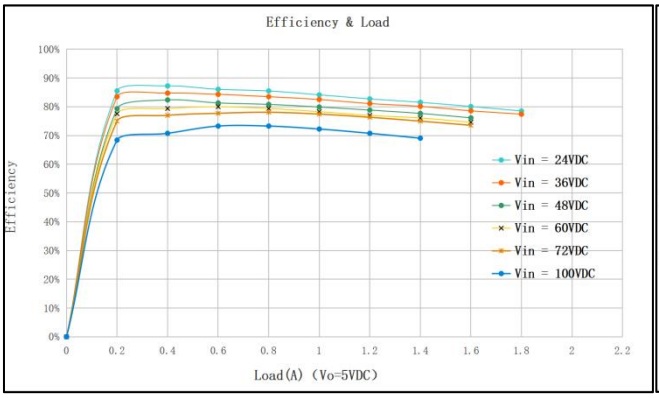
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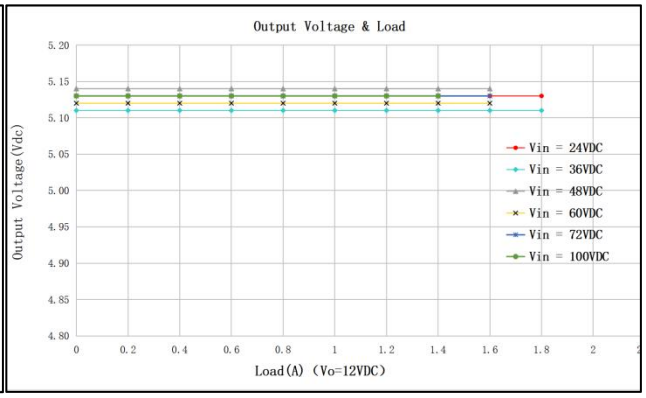
Product Derating Design



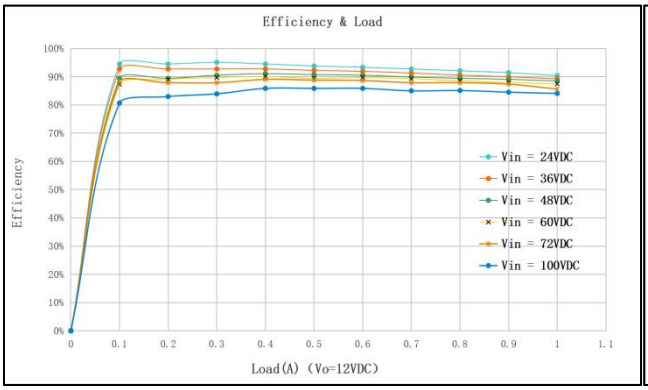
Product Performance Curve Chart

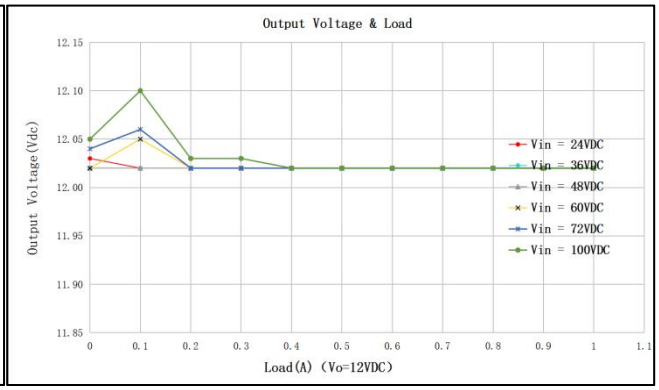
BDD03-80052A0





BDD03-80121A0

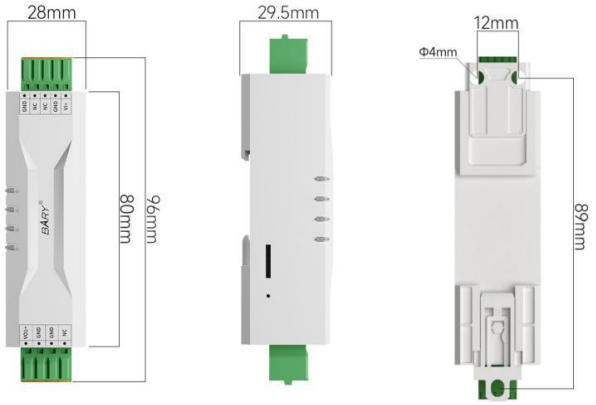




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External Dimensions



Pin Descriptions



Pin Labels	Direction	Description
VO1+	Output	Power supply output positive terminal.
VO2+	Output	Positive terminal of the second output channel in the dual-output version; in the single-output version, this pin is internally open.
GND	Input/Output	Input and output negative terminals.
NC	/	Not connected internally
VI+	Input	Power supply positive terminal.

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Version	Updates	Release Date	Revised by
V1.1	First Release	2025-06-27	LYC

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