Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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DDC15 Series

DC-DC Power Supplies

XP Power

15 Watts

- 4:1 DC Input Range
- 3.3 V to 24 DC Outputs
- Low Profile Design
- Ambient Operation from -40 °C to +70 °C
- 1500 VDC Isolation
- Class B Conducted and Radiated Emissions
- High Efficiency – Up to 85%
- 3 Year Warranty

The DDC series is a range of DIN Rail mounting DC/DC converters designed to offer additional voltages in AC input DIN Rail power systems, provide isolated outputs & noise immunity or support battery powered or battery backed applications. With a 4:1 wide input range the DDC series converters can be supplied by both a 12V or 24V nominal input and offer output voltages between 5VDC and 24VDC

Dimensions:

DDC15:
0.71 x 3.58 x 2.22" (18.0 x 91.0 x 56.5 mm)

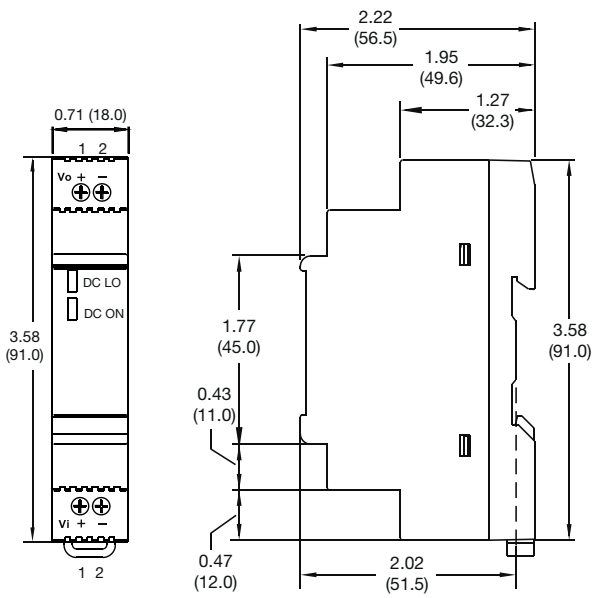
Models & Ratings

Output Voltage	Output Power	Output Current	Input Current, Typ Max	Maximum Capacitive Load	Typical Efficiency[1]	Model Number
3V3	11.5 W	3.50 A	0.62 A/1.8 A	3500 µF	79%	DDC1524S03
5V	13.5 W	2.70 A	0.70 A/1.9 A	3500 µF	80%	DDC1524S05
9V	13.5 W	1.50 A	0.70 A/1.9 A	2200 µF	81%	DDC1524S09
12V	15.0 W	1.25 A	0.76 A/2.1 A	1000 µF	82%	DDC1524S12
15V	15.0 W	1.00 A	0.76 A/2.1 A	1000 µF	83%	DDC1524S15
24V	15.0 W	0.63 A	0.76 A/2.1 A	470 µF	83%	DDC1524S24

Notes

1. Typical efficiency at nominal input and full load.

Mechanical Details



Pin Connector		
Conn	Pin	Designation
DC I/P	1	+Vin
	2	-Vin
DC O/P	1	+Vout
	2	-Vout

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage Range	9		36	VDC	
Input Current					See Models and Ratings table
Inrush Current			95	A	at 36 V
Input Filter	Pi type				
Undervoltage Lockout	On at >8.5 V				
Input Surge			40	VDC	No Damage
Input Protection	T3.0A/63 VDC Internal Fuse				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	5		24	V	See Models and Ratings table
Initial Set Accuracy	0		±1	%	
Minimum Load	0			A	No minimum load required
Start Up Delay		50		ms	
Start Up Rise Time		11		ms	
Line Regulation			±1	%	
Load Regulation			±1.5, ±1	%	3V3 model, other models
Transient Response			4	% deviation	Recovery to within 1% in <1 ms for a 50% load change at 0.25 A/µs rate
Ripple & Noise			100	mV pk-pk	20 MHz bandwidth
Short Circuit Protection					Trip & Restart (hiccup mode), auto recovery
Overload Protection	110		165	%	Trip & Restart (hiccup mode)
Overvoltage Protection	115		135	%	Of nominal output voltage
Temperature Coefficient			0.03	%/°C	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		82		%	See Models and Ratings table
Isolation	1500			VDC	Variable
Switching Frequency	150		300	kHz	
Power Density			2.7	W/in³	
Mean Time Between Failure	990			kHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.143 (65.0)		lb (g)	
DC ON Indicator	90			%	Of nominal voltage. Green LED
DC Low Indicator	70		90	%	Of nominal voltage. Red LED

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-40		+70	°C	See derating curve
Storage Temperature	-55		+85	°C	
Humidity	5		95	%RH	Non-condensing
Operating Altitude			4850	m	
Cooling					Natural convection
Shock	±3 shocks in each plane, total 36 shocks of 15 g : 11 ms halfsine. Conforms to EN60068-2-27				
Vibration	10-500 Hz at 2 g sweep and endurance at resonance in all 3 planes. Conforms to EN60068-2-6				

EMC: Emissions

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
Conducted	EN55022	Class B		
Radiated	EN55022	Class B		

EMC: Immunity

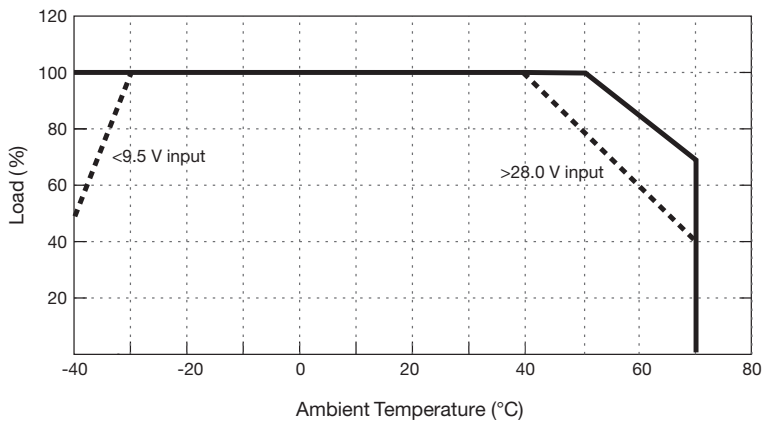
Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD Immunity	EN61000-4-2	6 kV	A	Contact
		8 kV		Air Discharge
Radiated Immunity	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	2	A	
Surge	EN61000-4-5	1	A	
Conducted	EN61000-4-6	10 V	A	
Magnetic Fields	EN61000-4-8	4	A	

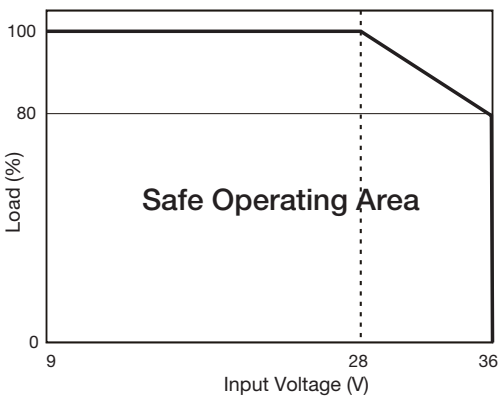
Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
UL	UL508	Industrial Control Equipment
TUV	EN60950-1 +A2:2013	Information Technology
CB	IEC60950-1 +A2:2013	Information Technology

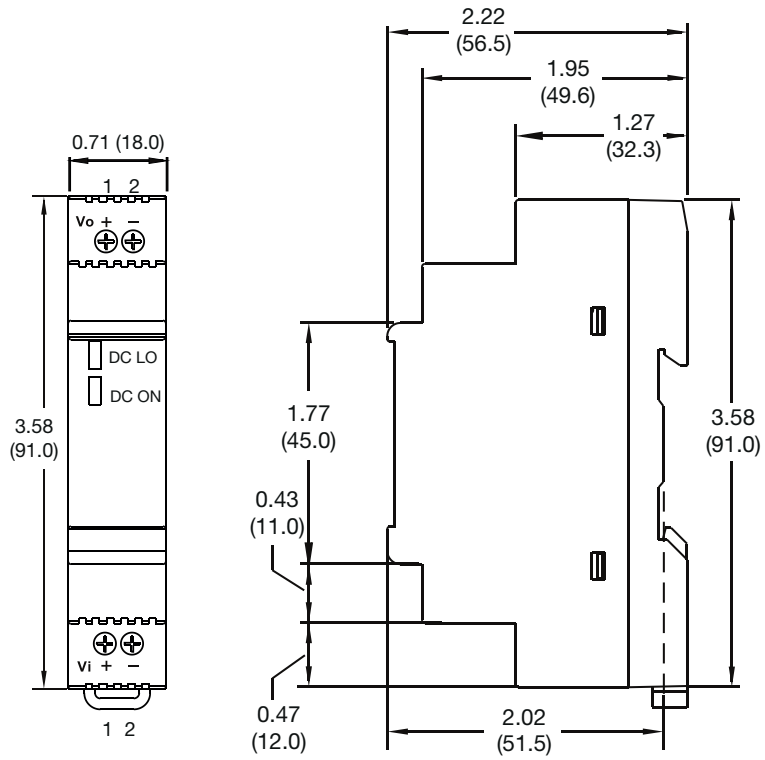
Application Notes

Derating Curves





Mechanical Details



Pin Connector		
Conn	Pin	Designation
DC I/P	1	+Vin
	2	-Vin
DC O/P	1	+Vout
	2	+Vout

Notes

1. All dimensions in inches (mm)
2. Weight: 0.143 lbs (65 g)
3. Tolerance: ±0.02 in (±0.5 mm)
4. Screw terminal: 12-26 AWG cables size.
5. Connection screw maximum torque: Input: 5 lbs-in (0.56 Nm)