



30W DIN Rail Type DC-DC Converter

DDR-30 series



■ Feature

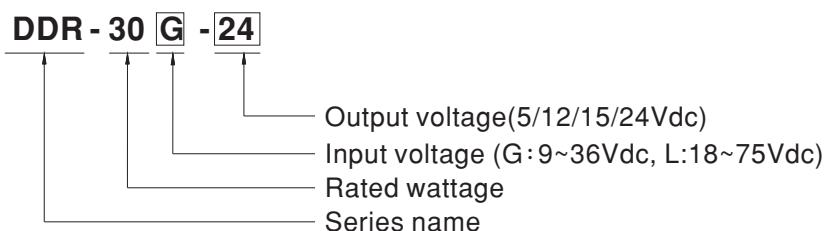
- Width only 35mm (2SU)
- 4:1 ultra wide input range
- -40~+85°C wide working temperature
- No minimum load required
- DC output adjustable ($\pm 10\%$)
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- Protections: Short circuit / Overload / Over voltage /
Input reverse polarity /
Input under voltage protection
- 4KVdc I/O isolation(Reinforced isolation)
- 3 years warranty

■ Description

DDR-30 series is a 30W DIN Rail type DC-DC converter with main features including DIN rail-type easy installation, ultra slim width (35mm), 4:1 ultra wide input voltage, -40~+85°C wide operating temperature, 4KVdc I/O isolation, adjustable output voltage ($\pm 10\%$) and full protective functions...etc.

This series has two input options: 9~36V /18~75V and various output options: 5V / 12V / 15V / 24V and can be used for industrial control, security control, communication system and other fields. Suitable applications are DC buck/boost regulator, increasing system insulation level and voltage drop compensation along cable...etc.

■ Model Encoding





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SPECIFICATION

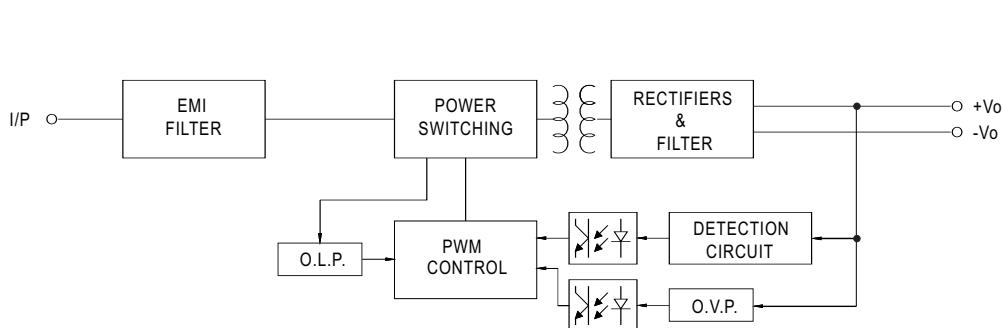
MODEL	DDR-30G-5	DDR-30G-12	DDR-30G-15	DDR-30G-24	DDR-30L-5	DDR-30L-12	DDR-30L-15	DDR-30L-24															
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	5V	12V	15V	24V														
	RATED CURRENT	6A	2.5A	2A	1.25A	6A	2.5A	2A	1.25A														
	CURRENT RANGE	0 ~ 6A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.25A	0 ~ 6A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.25A														
	RATED POWER	30W	30W	30W	30W	30W	30W	30W	30W														
	RIPPLE & NOISE (max.) Note.2	60mVp-p	75mVp-p	75mVp-p	100mVp-p	60mVp-p	75mVp-p	75mVp-p	100mVp-p														
	VOLTAGE ADJ. RANGE	4.5 ~ 5.5V	9 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 28V	4.5 ~ 5.5V	9 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 28V														
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%														
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%														
	LOAD REGULATION	±1.5%	±0.5%	±0.5%	±0.5%	±1.5%	±0.5%	±0.5%	±0.5%														
	SETUP, RISE TIME	120ms, 85ms at full load																					
INPUT	HOLD UP TIME (Typ.)	G-type: 7ms@24Vdc input				L-type: 18ms@48Vdc input																	
	EXTERNAL CAPACITANCE LOAD (Max.)	3300 μ F	2200 μ F	1500 μ F	1000 μ F	3300 μ F	2200 μ F	1500 μ F	1000 μ F														
	VOLTAGE RANGE Note.4	9 ~ 36Vdc				18 ~ 75Vdc																	
	EFFICIENCY (Typ.)	85%	86%	87%	89%	86%	89%	90%	91%														
PROTECTION	DC CURRENT (Typ.)	1.5A/24Vdc				0.8A/48Vdc																	
	INRUSH CURRENT (Typ.)	15A/24Vdc				15A/48Vdc																	
	OVERLOAD	110 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed																					
	OVER VOLTAGE	5.75 ~ 7V	13.8 ~ 16.2V	17.25 ~ 20.25V	28.8 ~ 34V	5.75 ~ 7V	13.8 ~ 16.2V	17.25 ~ 20.25V	28.8 ~ 34V														
ENVIRONMENT	REVERSE POLARITY	Protection type : Shut down o/p voltage, re-power on to recover																					
	UNDER VOLTAGE LOCKOUT	By internal MOSFET, no damage, recovers automatically after fault condition removed 24Vin (G-type):Power ON \geq 9V, OFF \leq 8.5V 48Vin (L-type):Power ON \geq 18V, OFF \leq 17V																					
	WORKING TEMP.	-40 ~ +85°C (Refer to "Derating Curve")																					
	WORKING HUMIDITY	5 ~ 95% RH non-condensing																					
SAFETY & EMC (Note 5)	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 5 ~ 95% RH non-condensing																					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)																					
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6																					
	OPERATING ALTITUDE	5000 meters																					
	SAFETY STANDARDS	UL/IEC 62368-1 ,AS/NZS 62368.1 approved; Design refer to UL508																					
	WITHSTAND VOLTAGE	I/P-O/P:4KVdc																					
EMC EMISSION	ISOLATION RESISTANCE	I/P-O/P>100M Ohms / 500Vdc / 25°C / 70% RH																					
	Parameter	Standard		Test Level / Note																			
	Conducted	BS EN/EN55032		Class B																			
	Radiated	BS EN/EN55032		Class B																			
	Voltage Flicker	BS EN/EN61000-3-3		-----																			
EMC IMMUNITY	BS EN/EN55024 , BS EN/EN61000-6-2(BS EN/EN50082-2)																						
	Parameter	Standard		Test Level / Note																			
	ESD	BS EN/EN61000-4-2		Level 3, 8KV air ; Level 3, 6KV contact; criteria A																			
	Radiated	BS EN/EN61000-4-3		Level 3, 10V/m ; criteria A																			
	EFT / Burst	BS EN/EN61000-4-4		Level 3, 2KV ; criteria A																			
	Surge	BS EN/EN61000-4-5		Level 3, 1KV/Line-Line ; criteria A																			
OTHERS	Conducted	BS EN/EN61000-4-6		Level 3, 10V ; criteria A																			
	Magnetic Field	BS EN/EN61000-4-8		Level 4, 30A/m ; criteria A																			
NOTE	MTBF	483.3K hrs min. MIL-HDBK-217F (25°C)																					
	DIMENSION	35*90*54.5mm (W*H*D)																					
	PACKING	0.12Kg;96pcs/12.5Kg/1.CUFT																					
1. All parameters NOT specially mentioned are measured at normal input (G:24Vdc, L:48Vdc), rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the derating curve for more details. 5. The power supply is considered as an independent unit, but the final equipment still need to re-confirmed that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com) 6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).																							
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx																							



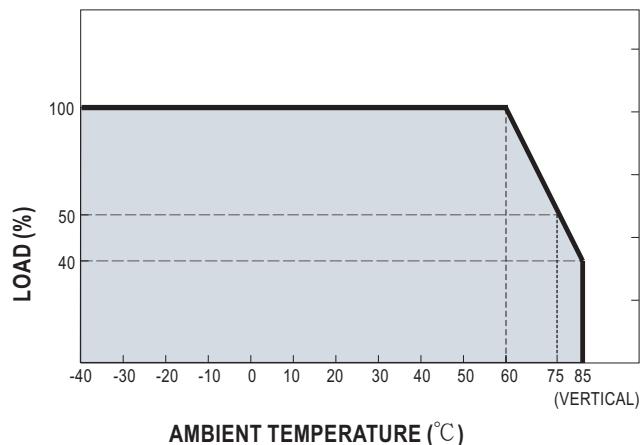
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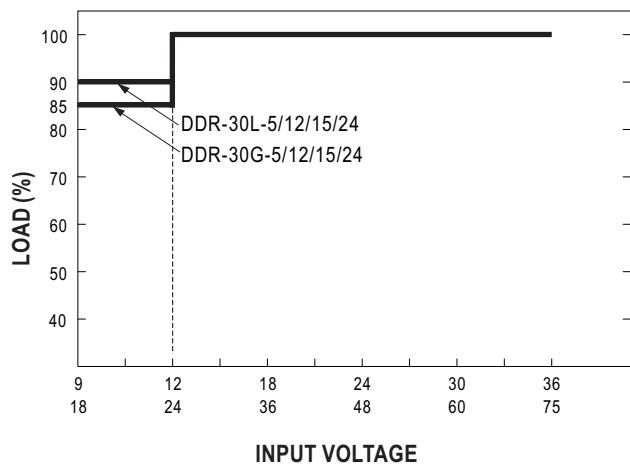
■ Block Diagram



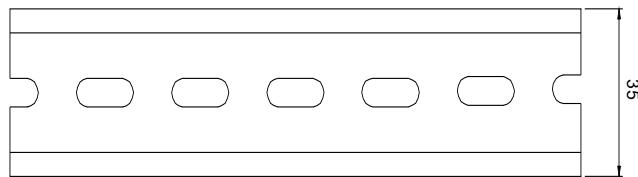
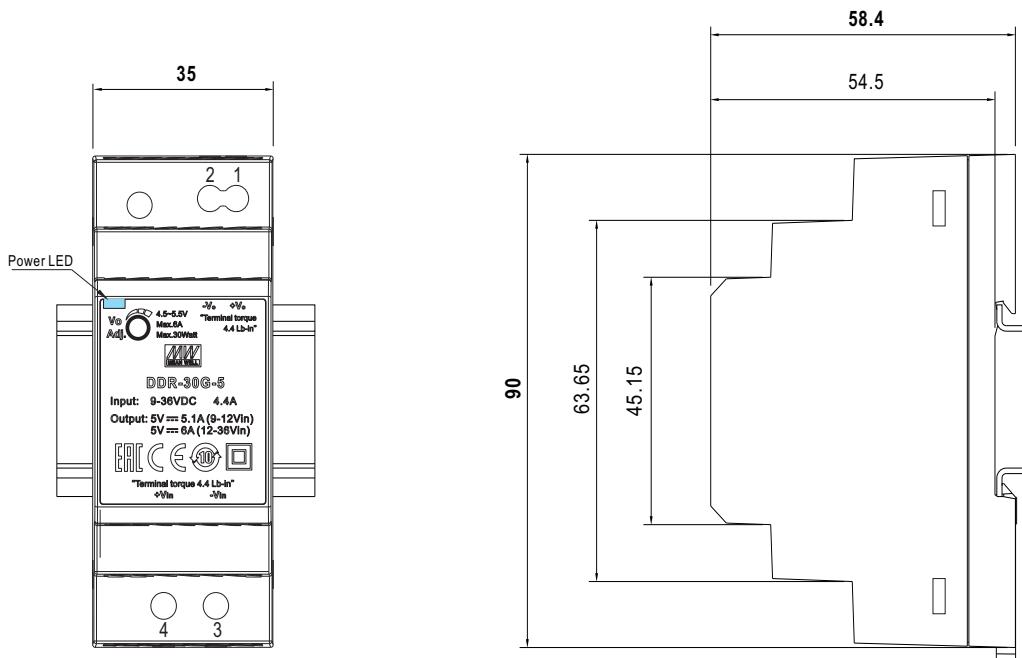
■ Derating Curve



■ Output derating VS input voltage



■ Mechanical Specification

 (Unit: mm, tolerance ± 0.5 mm)


ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

Terminal Pin No. Assignment

Pin No.	Assignment
1	DC Output +Vo
2	DC Output -Vo
3	DC Input -Vin
4	DC Input +Vin

■ Installation Manual

 Please refer to : <http://www.meanwell.com/manual.html>