



### Características M

- Anchura de sólo 52,5 mm
- (3SU) Rango de entrada ultraamplio 4:1
- Amplia temperatura de trabajo -40 +85 °C
- No requiere carga mínima
- Salida DC ajustable (T 10%)
- Refrigeración por convección de aire libre
- Puede instalarse en carril DIN TS-35/7,5 ó 15
- Protecciones: Cortocircuito / Sobrecarga / Sobretensión / Polaridad inversa de entrada / Protección contra subtenión de entrada Aislamiento de E/S 4KVdc (aislamiento reforzado)
- 3 años de garantía



### M Aplicaciones

Sistema de control industrial  
Equipos de fabricación de semiconductores Automatización de fábricas  
Red inalámbrica electromecánica  
Sistema de telecomunicaciones o datacom

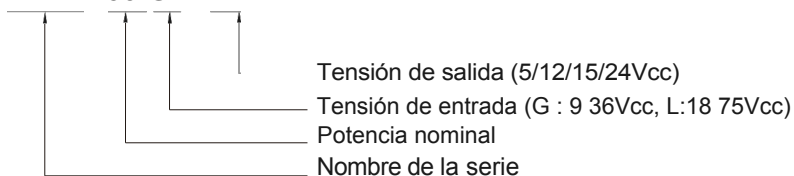
### Descripción

La serie DDR-60 es un convertidor CC-CC de 60W de tipo carril DIN con características principales como fácil instalación en carril DIN, anchura ultra delgada (52,5mm), voltaje de entrada ultra amplio 4:1, temperatura de funcionamiento amplia -40-+85°C, aislamiento de E/S 4KVdc, voltaje de salida ajustable (+ 1 0%) y funciones de protección completas...etc.

Esta serie tiene dos opciones de entrada: 9 36V / 18 75V y varias opciones de salida: 5V / 12V / 15V / 24V y se puede utilizar para control industrial, control de seguridad, sistema de comunicación y otros campos. Las aplicaciones adecuadas son regulador DC buck/boost, aumento del nivel de aislamiento del sistema y compensación de caída de tensión a lo largo del cable...etc.

### Modelo Codificación

DDR - 60 G - 24





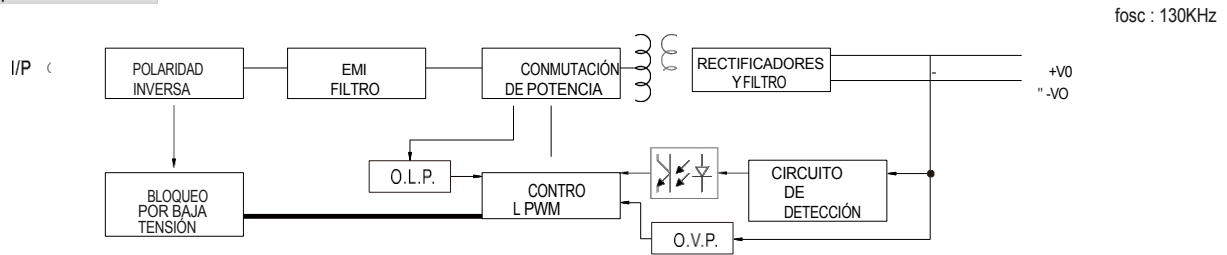
## 60W DIN Rail Type DC-DC Converter

## DDR-60 series

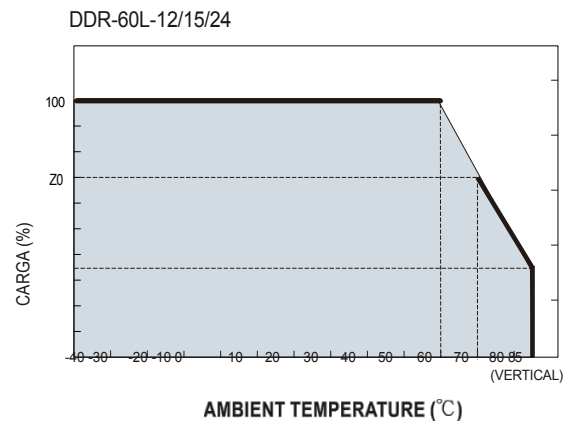
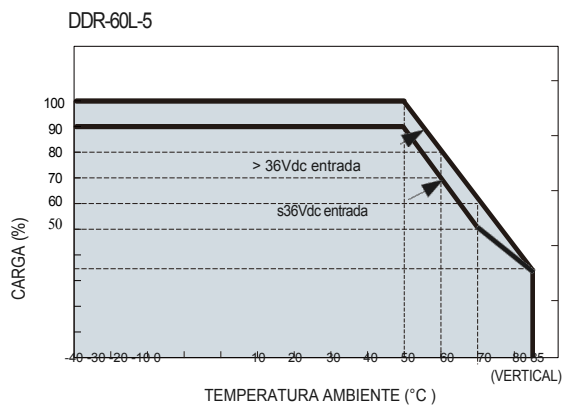
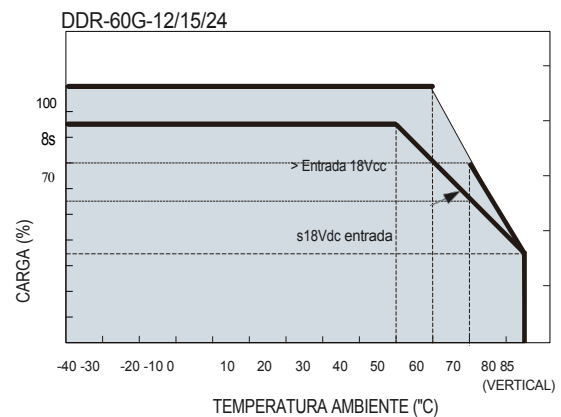
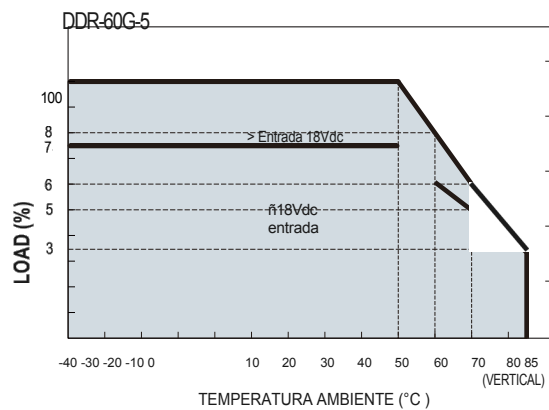
## SPECIFICATION

MODEL		DDR-60G-5	DDR-60G-12	DDR-60G-15	DDR-60G-24	DDR-60L-5	DDR-60L-12	DDR-60L-15	DDR-60L-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	5V	12V	15V	24V	
	RATED CURRENT	10.8A	5A	4A	2.5A	12A	5A	4A	2.5A	
	CURRENT RANGE	0 ~ 10.8A	0 ~ 5A	0 ~ 4A	0 ~ 2.5A	0 ~ 12A	0 ~ 5A	0 ~ 4A	0 ~ 2.5A	
	RATED POWER	54W	60W	60W	60W	60W	60W	60W	60W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	60mVp-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 <small>Note.3</small>	±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					L-type: 10ms@48Vdc input			
		G-type: 5ms@24Vdc input								
	EXTERNAL CAPACITANCE LOAD (Max.)	6800 $\mu$ F	4700 $\mu$ F	3300 $\mu$ F	2200 $\mu$ F	6800 $\mu$ F	4700 $\mu$ F	3300 $\mu$ F	2200 $\mu$ F	
INPUT	VOLTAGE RANGE <small>Note.4</small>	9 ~ 36Vdc				18 ~ 75Vdc				
	EFFICIENCY (Typ.)	87.5%	91%	91%	91%	87.5%	91%	92%	92%	
		3A/24Vdc				1.5A/48Vdc				
	INRUSH CURRENT (Typ.)	20A/24Vdc				20A/48Vdc				
PROTECTION	OVERLOAD	105 ~ 135% 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	
		Protection type : Shut down o/p voltage, re-power on to recover								
	REVERSE POLARITY	By internal MOSFET, no damage, recovers automatically after fault condition removed								
	UNDER VOLTAGE LOCKOUT	24Vin (G-type):Power ON $\geq$ 9V , OFF $\leq$ 8.5V 48Vin (L-type):Power ON $\geq$ 18V , OFF $\leq$ 17V								
ENVIRONMENT	WORKING TEMP.	-40 ~ +85°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	5 ~ 95% RH non-condensing								
	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	2000 meters								
SAFETY & EMC (Note 5)	SAFETY STANDARDS	IEC 62368-1 (LVD), AS/NZS 62368.1 approved; Design refer to UL508								
	WITHSTAND VOLTAGE	I/P-O/P:4KVdc								
	ISOLATION RESISTANCE	I/P-O/P>100M Ohms / 500Vdc / 25°C / 70% RH								
	EMC EMISSION	Parameter				Standard	Test Level/ Note			
		Conducted				EN55032	Class A			
		Radiated				EN55032	Class A for 1m I/O cable , Class B for 30cm I/O cable			
		Voltage Flicker				EN61000-3-3	----			
	EMC IMMUNITY	EN55024 , EN61000-6-2(EN50082-2)								
		Parameter				Standard	Test Level / Note			
		ESD				EN61000-4-2	Level 3, 8KV air ; Level 3, 6KV contact; criteria A			
		Radiated				EN61000-4-3	Level 3, 10V/m ; criteria A			
		EFT / Burst				EN61000-4-4	Level 3, 2KV ; criteria A			
		Surge				EN61000-4-5	Level 3, 1KV/Line-Line ; criteria A			
		Conducted				EN61000-4-6	Level 3, 10V ; criteria A			
		Magnetic Field				EN61000-4-8	Level 4, 30A/m ; criteria A			
OTHERS		MTBF	61K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION									
	PACKING	216g; 60pcs/14Kg/0.97CUFT								
NOTE	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 0.1 $\mu$ f & 47 $\mu$ f 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-confirm 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) 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)									

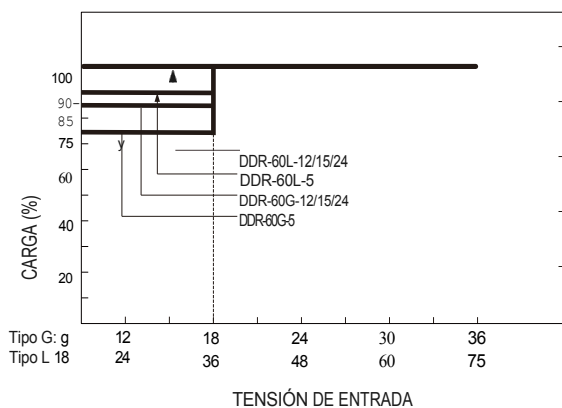
Diagrama de bloques B



B Curva de reducción

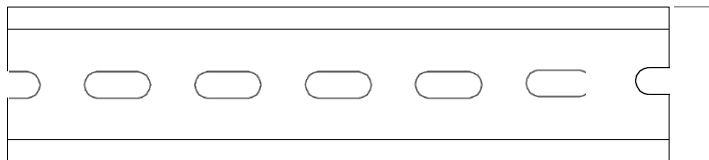
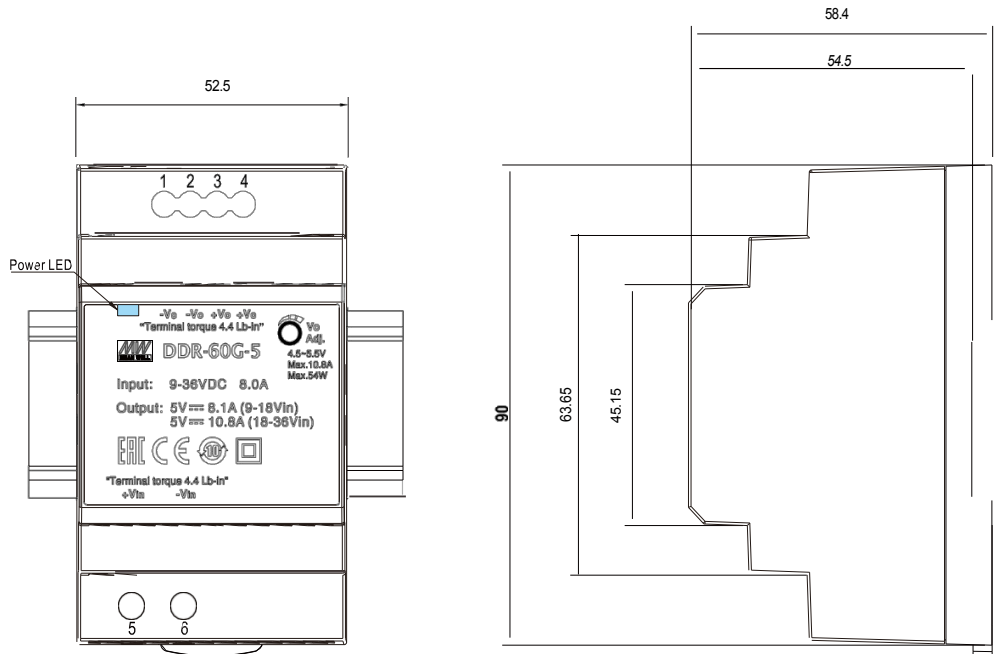


B Derrateo de salida VS tensión de entrada





## B Especificaciones mecánicas



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

PinNo.	Asignación
1,2	Salida DC -Vo
3,4	Salida CC +Vo
5	Entrada CC +Vin
6	Entrada CC -Vin

## B Manual de instalación

Consulte : <http://www.meanwell.com/manual.html>

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