

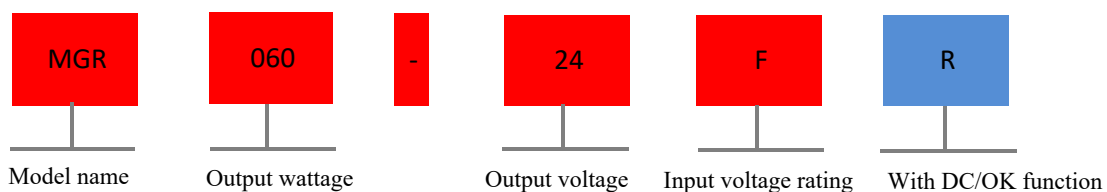
## MGR060-□F/FR Series



### ▲ Features

- Universal AC input/full range
- Protections: short circuit/overload/over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- Built in DC OK active signal
- LED indicator for power on
- No load power consumption < 0.75W
- 100% full load burn-in test
- 3 years warranty

### ▲ Model Encoding



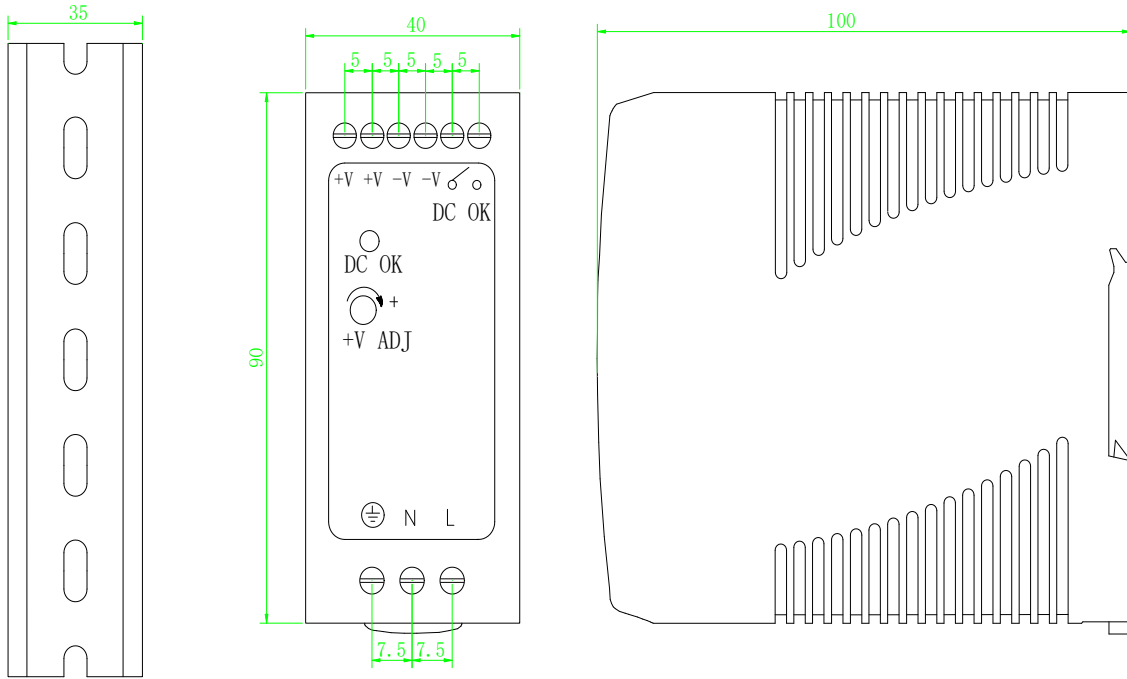


## Specifications

Input				
Voltage range	85-264VAC 120-370VDC			
AC current	1.8A/115VAC 1A/230VAC			
Frequency range	47-63Hz			
Inrush current (max)	Cold start: 30A/115VAC 60A/230VAC			
Output				
DC voltage (V)	5V	12V	24V	48V
Efficiency	78%	86%	88%	88%
Rated Current (A)	10A	5A	2.5A	1.25A
Rated power(W)	50W	60W	60W	60W
Voltage ADJ.range	5-6V	12-15V	24-30V	48-56V
Ripple & noise(max ) Note.2	80mVp-p	120mVp-p	150mVp-p	200mVp-p
Voltage tolerance Note.3	±2%	±1%	±1%	±1%
Line regulation	±1%	±1%	±1%	±1%
Load regulation	±1.5%	±1%	±1%	±1%
Setup, rise time Note.4	500ms 30ms/230VAC 500ms 30ms/115VAC(at full load)			
Hold up time	50ms/230VAC 20ms/115VAC(at full load)			
Status indicator	Green LED			
Protection				
Overload	105%-150% rated output power			
	Protection type: Constant current limiting, recovers automatically after fault condition is removed.			
Over voltage(V)	6.25-7.25V	15.6-18V	31.2-36V	57.6-64.8V
	Protection type: Shut down O/P voltage ,re-power on to recover.			
DC OK signal	Relay contact rating(max.):30V/1A resistive			
Safety and EMC				
Withstand voltage	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC			
Isolation resistance	I/P-O/P,I/P-FG,O/P-FG :100M Ohms/500VDC/25°C/70% RH			
Safety standards	Design reference EN IEC 62368-1、GB 4943.1			
EMC emission	Parameter	Standard	Test Level/Note	
	Conducted	EN 55032	Class B	
	Radiated	EN 55032	Class B	
	Voltage Flicker	EN 61000-3-3	Design reference Class A	
	Harmonic Current	EN IEC 61000-3-2	Design reference Class A	
EMC immunity	Parameter	Standard	Test Level/Note	
	ESD	EN 61000-4-2	Level 3 8KV air	
	Radiated Susceptibility	EN 61000-4-3	Level 2 3V/m	
	EFT/Burest	EN 61000-4-4	Level 2 1KV/5KHZ	
	Surge	EN 61000-4-5	Level 2 1KV/L-N;Level2 2KV/L-N-FG	
	Conducted	EN 61000-4-6	Level 2 3V	
	Magnetic Field	EN 61000-4-8	Level 2 3A/m	
Voltage Dips and interruptions	EN 61000-4-11	< 5% residual voltage for 0.5 cycles ,70% residual voltage for 25 cycles. < 5% residual voltage for 250 cycles.		
Environmental				
Working temperature	- 20~+70 °C (Refer to "Derating curve " )			
Storage temperature	- 40~+85°C			
Storage humidity	10-95% RH			
Vibration	Component:10-500Hz,2G 10 min/1cycle ,60 min each along X,Y,Z axes			

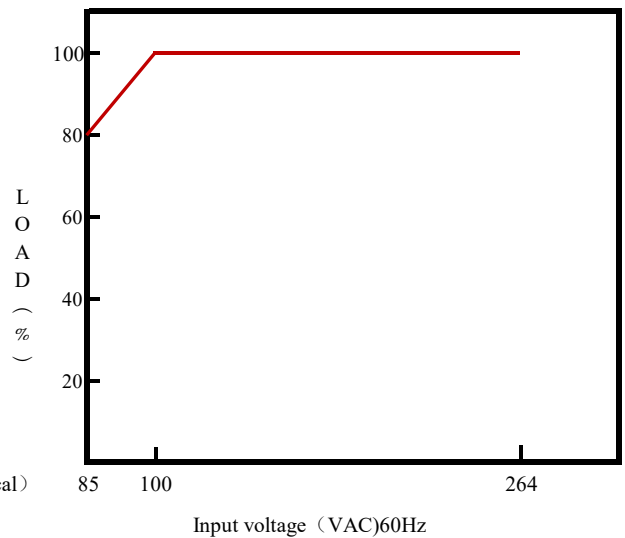
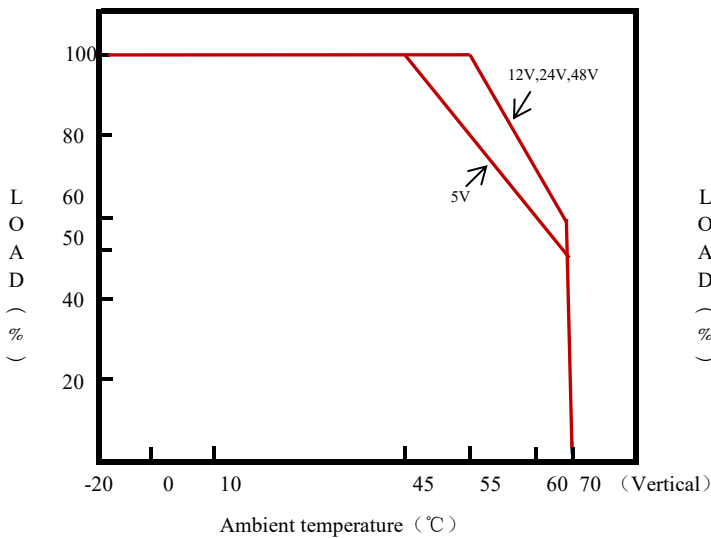
Others		
Mean time between failure	299.2K hrs min MIL-HDBK-217F(25°C)	
Installation	Install on DIN rail TS35	
Protection class	IP20	
Weight	0.35kg	
Length*width*height	90*40*100mm	
Data	Details	Mode name
	MGR 50W 10A/5V	MGR060-05F
	MGR 60W 5A/12V	MGR060-12F
	MGR 60W 2.5A/24V	MGR060-24F
	MGR 60W 1.25A/48V	MGR060-48F
	MGR 50W 10A/5V	MGR060-05FR
	MGR 60W 5A/12V	MGR060-12FR
	MGR 60W 2.5A/24V	MGR060-24FR
	MGR 60W 1.25A/48V	MGR060-48FR

## Installation Instruction



Install DIN rail TS35/7.5 or TS35/15  
Tightening Torque Max. :5 kgf-cm (4.4 Lb-in)

## Derating curve



- Note:**
1. All parameters NOT specially mentioned are measured at 230VAC input, 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. Length of set up time is measured at cold first statr. Turning ON/OFF the power supply may lead to increase of the set up time
  5. 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)