

M5R240-□ Series



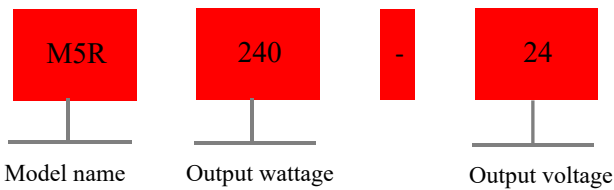
▲ Features

- Three-Phase 340-550VAC wide range input
(Dual phase operation possible)
- 63mm slim width
- Built-in passive PFC function compliance to BS EN/EN61000-3-2
- High efficiency 92% and low power dissipation
- Protections: Short circuit/Overload/Over voltage/Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- can be installed on DIN rail TS-35/7.5 or 15
- DC OK relay contact
- 3 years warranty

▲ Applications

- Industrial control system
- Factory automation
- Electro-mechanical apparatus
- Semiconductor fabrication equipment

▲ Model Encoding

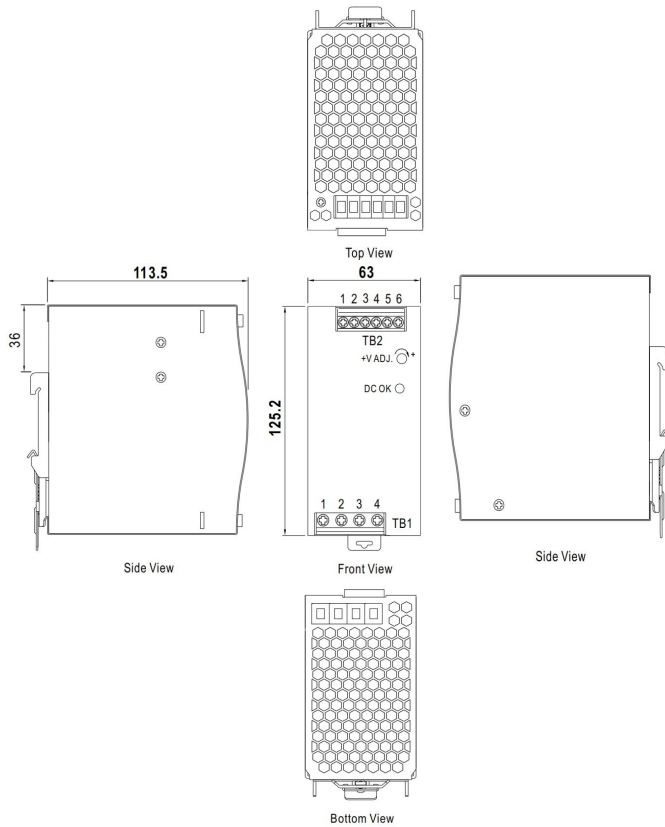




Specification

Input			
Voltage range Note.1	Three-Phase 340 ~ 550VAC (Dual phase operation possible in connecting L1,L3,FG or L2,L3,FG) or 480 ~ 780VDC		
Leakage current	<2mA / 530VAC		
Frequency range	47-63Hz		
Inrush current (Typ.)	Cold start :50A		
Power factor(Typ.)	PF \geq 0.53/400VAC PF \geq 0.52/500VAC at full load		
AC Current(Typ.)	0.69A/400VAC 0.6A/500VAC		
Output			
DC voltage (V)	24V		48V
Efficiency(TYP.)	92%		92%
Rated Current (A)	10A		5A
Current range(A)	0-10A		0-5A
Rated power(W)	240W		240W
Ripple & noise(max) Note.2	100mVp-p		120mVp-p
Voltage ADJ.range	24-28V		48-55V
Voltage tolerance Note.3	\pm 1%		\pm 1%
Line regulation	\pm 0.5%		\pm 0.5%
Load regulation	\pm 1%		\pm 1%
Setup, rise time	2000ms 60ms/400VAC 1500ms 60ms/500VAC(at full load)		
Hold up time(Typ.)	20ms/400VAC 40ms/500VAC(at full load)		
Status indicator	Green LED		
Protection			
Overload	105 ~ 130% rated output power		
	Protection type : Constant current limiting, unit will hiccup after 3 sec.		
Over voltage(V)	30 ~ 36V		56 ~ 65V
	Protection type : Hiccup mode, recovers automatically after fault condition is removed.		
Over temperature	Shut down o/p voltage, recovers automatically after temperature goes down		
DC OK Realy Contact Ratings (max.)	60VDC/0.3A, 30VDC/1A, 30VAC/0.5A resistive load		
Safety and EMC			
Withstand voltage	I/P-O/P:4.87KVAC I/P-FG:2.4KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC		
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG: \geq 100M Ohms / 500VDC / 25°C/ 70% RH		
Safety standards	Design reference EN IEC 62368-1、GB4943.1		
EMC emission	Parameter	Standard	Test Level / Note
	Conducted	EN 55032	Class B
	Radiated	EN 55032	Class B
	Harmonic Current	EN 61000-3-3	Design reference Class A
EMC immunity	Parameter	Standard	Test Level / Note
	ESD	EN 61000-4-2	Level 4, 15KV air ; Level 4, 8KV contact
	Radiated Field	EN 61000-4-3	Level 3 10V/m
	EFT / Burst	EN 61000-4-4	Level 3 2KV/5KHZ
	Surge	EN 61000-4-5	Level 3 2KV/Line-Line;Level3 4kV/Line-Line-FG
	Conducted	EN 61000-4-6	Level 3 10V
	Magnetic Field	EN 61000-4-8	Level 4 30A/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 Note.5	- 30~+70 °C (Refer to "Derating curve ")		
Storage TEMP.humidity	-40~+85°C 10 ~ 95% RH non-condensing		
Working humidity	20 ~ 95% RH non-condensing		
TEMP.coefficient	\pm 0.05%/°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		
Others			
Mean time between failure	1534.9K hrs min MIL-HDBK-217F(25°C)		
Installation	Install on DIN rail TS35		
Weight	About 1kg		
Length*width*height	63*125.2*113.5mm		
Data	Details	Model name	
	M5R 240W 10A/24V	M5R240-24	
	M5R 240W 5A/48V	M5R240-48	

Installation Instruction



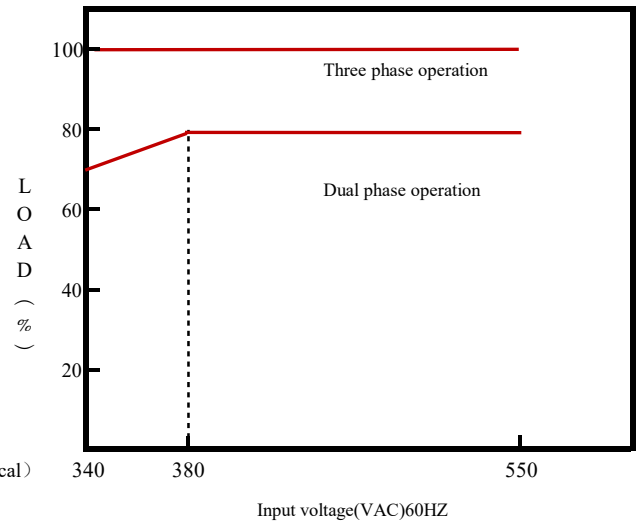
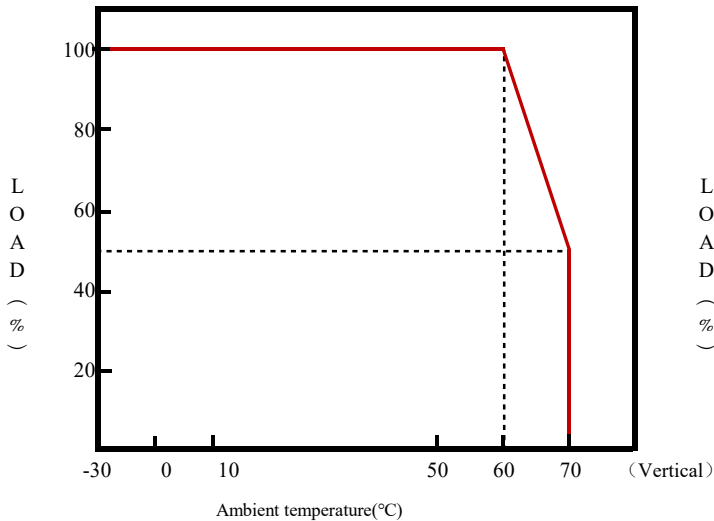
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	AC/L1
2	AC/L2 or DC -
3	AC/L3 or DC +
4	FG ⊕

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V
5,6	DC OK Relay Contact

Derating curve



Note : When the dual phase input voltage is between 340~380Vac and ambient temperature is between -10°C~30°C, the power supply may experience hiccup at cold start. The power supply will start up normally after 5~10 seconds.

Note:

- Dual phase operation is allowed under certain derating to output load. Please refer to derating curves for details.
- Ripple & noise are measured at 20MHZ of bandwidth by using a "12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- Tolerance: includes set up tolerance, line regulation and load regulation.
- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
- Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
- 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).