

M5R480-□ Series



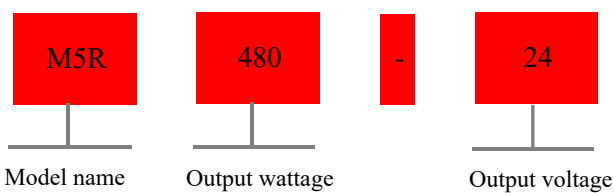
▲ Features

- Three-Phase 340-550VAC wide range input
(Dual phase operation possible)
- Width only 85.5mm
- Built-in passive PFC function compliance to BS EN/EN61000-3-2
- High efficiency 93% 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
- Optional DC OK relay contact
- 3 years warranty

▲ Applications

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

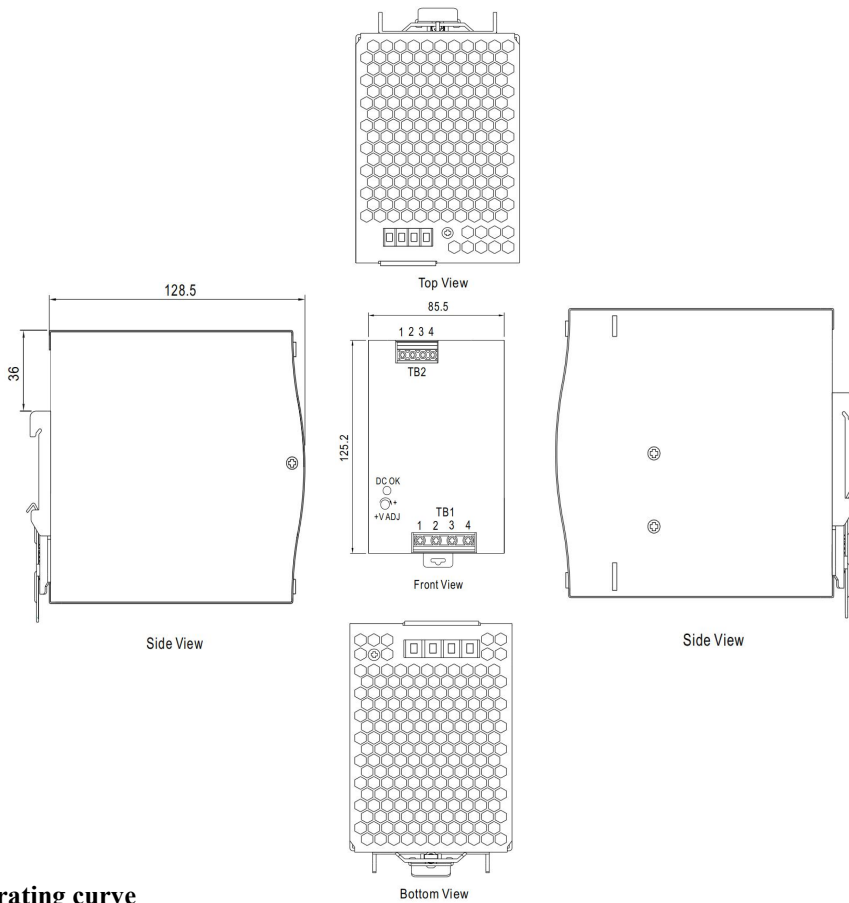
▲ Model Encoding



Specification

Input			
Voltage range Note.1	Three-Phase 340 ~ 550VAC (Dual phase operation possible) 480 ~ 780VDC		
Leakage current	<3.5mA / 530VAC		
Frequency range	47-63Hz		
Inrush current (Typ.)	Cold start :50A		
Power factor(Typ.)	PF \geq 0.9/400VAC PF \geq 0.88/500VAC at full load		
AC Current(Typ.)	0.85A/400VAC 0.7A/500VAC		
Output			
DC voltage (V)	24V		48V
Efficiency(TYP.)	92.5%		93%
Rated Current (A)	20A		10A
Current range(A)	0-20A		0-10A
Rated power(W)	480W		480W
Ripple & noise(max) Note.2	150mVp-p		150mVp-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	1200ms 60ms/400VAC 800ms 60ms/500VAC(at full load)		
Hold up time(Typ.)	20ms/400VAC 20ms/500VAC(at full load)		
Status indicator	Green LED		
Protection			
Overload	105 ~ 130% rated output power		
	Protection type : Constant current limiting, unit will shut down after 3 sec. ,re-power on to recover		
Over voltage(V)	29 ~ 33V		56 ~ 65V
	Protection type : Shut down o/p voltage, re-power on to recover		
Over temperature	Shut down o/p voltage, recovers automatically after temperature goes down		
Safety and EMC			
Withstand voltage	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK(optional):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、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	设计参考 Class A
EMC immunity	Voltage Flicker	EN IEC 61000-3-2	Class A
	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%		
Working humidity	20 ~ 95% RH non-condensing		
TEMP.coefficient	\pm 0.03%/°C (0 ~ 50°C)		
Vibration	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6		
Others			
Mean time between failure	1174.0K hrs min MIL-HDBK-217F(25°C)		
Installation	Install on DIN rail TS35		
Weight	About 1.51kg		
Length*width*height	85.5*125.2*128.5mm		
Data	Details	Model name	
	M5R 480W 20A/24V	M5R480-24	
	M5R 480W 10A/48V	M5R480-48	

Installation Instruction



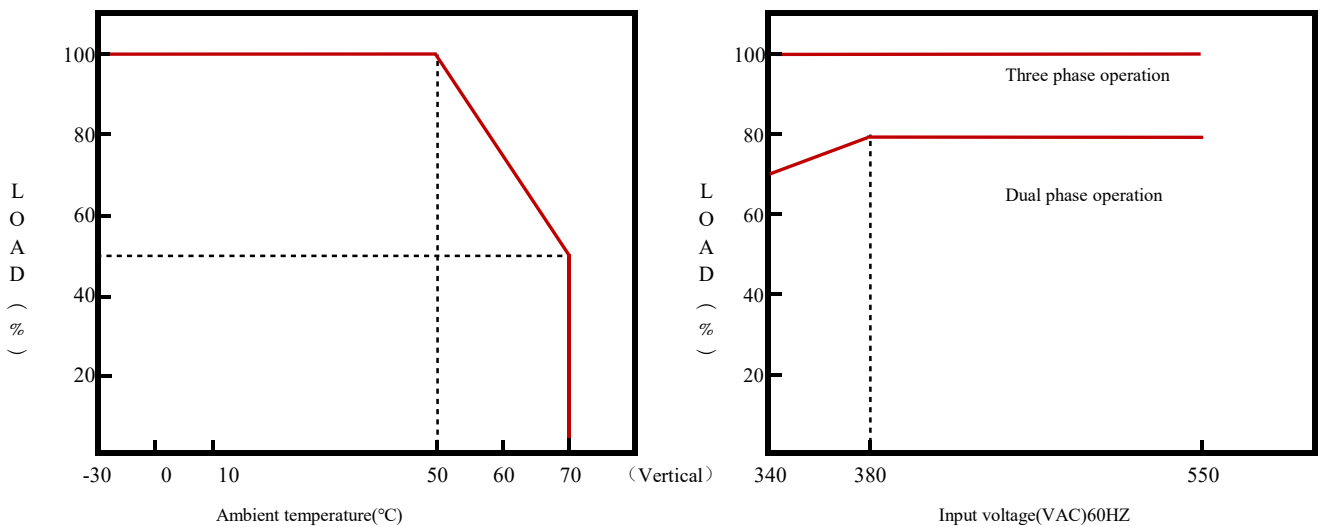
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	PE (⊕)
2	AC/L3
3	AC/L2
4	AC/L1

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V

Derating curve



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).