MDR-10/20

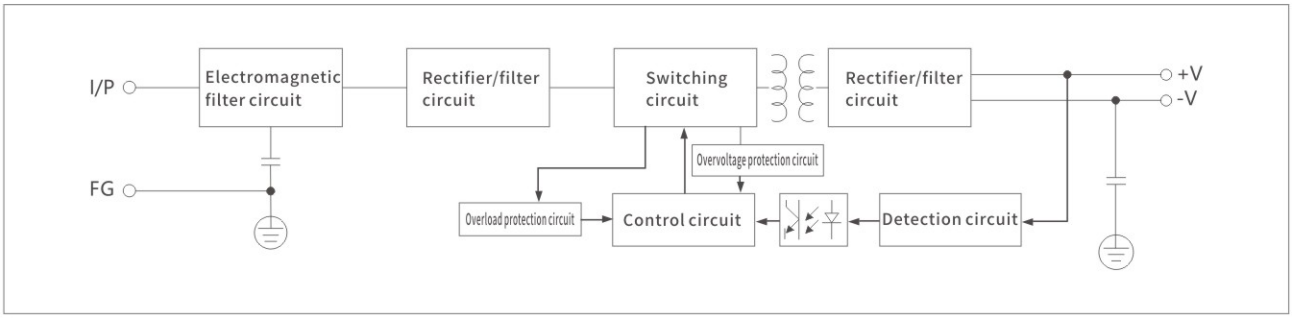
DIN RAIL TYPE SWITCH POWER SUPPLY

Product overview

The MDR-10、20 series is a 10、20W single group output closed type power supply that uses 85 to 264VAC full range AC input. The entire series provides 5V、12V、15V、24V、36V and 48V output.

In addition to the efficiency of up to 91.5%, the design of the environmentally friendly flame-retardant housing enhances the heat dissipation ability, allowing the MDR-10、20 to operate in the temperature range of - 20 °C to+70 °C without a fan. Making it easy for the terminal system to meet international energy requirements. The MDR-10、20 have complete protection functions and resistance to 5G vibration; It complies with TUV EN60950-1、EN60335-1、EN61558-1/-2-16、UL60950-1 and GB4943 international safety regulations. The MDR-10、20 series provide a cost-effective solution for various industrial applications.

Principle diagram



MDR-10/20 SERIES

DIN RAIL TYPE SWITCH POWER SUPPLY

KEEN SIDE electronics

Technical parameter

Type		Technical indicators			
Output	DC voltage	5V	12V	15V	24V
	Ripple and noise ①	＜80mV	＜120mV	＜120mV	＜150mV
	Voltage regulation range	±10%			
	Linear adjustment rate	±1%			
	Load adjustment rate	±5%	±3%	±3%	±2%
Input	Start up time	1000ms、30ms、25ms： 110VAC　　500ms、30ms、120ms： 220VAC			
	Voltage range/frequency	85-264VAC 47Hz～63Hz (120VDC～370VDC)			
	Efficiency (typical) ②	＞77%	＞81%	＞81%	＞84%
	Impulse current	110VAC 35A， 220VAC 70A			
Protection characteristics	Overload protection	When the rated output power is ⩾ 105% - 135%: protection mode: hiccup mode, which can be automatically restored after removing abnormal conditions			
	Overvoltage protection	When the output voltage is greater than 135%, the shutdown output will automatically recover after the abnormal condition is removed			
Environment	Operating temperature、humidity	-20°C～+70°C；20%～90RH			
	Storage temperature、humidity	-40°C～+85°C；10%～95RH			
Security	Withstand voltage	Input-output: 3KVAC			
	Isolation resistor	Input - output and input - shell, output - shell: 500 VDC / 100 mΩ			
Other	Size	22.5*90*100mm(L*W*H)			
	Net weight/gross weight	170g/185g			
Remarks	①Ripple and noise measurement method: use a 12 twisted pair, and connect 0.1uF and 47uF capacitors in parallel at the terminal, and measure at 20MHz bandwidth. ② The efficiency is tested at the input voltage of 230VAC, rated load and ambient temperature of 25 °C. Precision: including setting error, linear adjustment rate and load adjustment rate. Test method of linear regulation: test from low voltage to high voltage under rated load. Load adjustment rate test method: from 0% to 100% of rated load. The starting time is measured under the cold start state. Fast and frequent startup and shutdown may increase the starting time. When the operating altitude is higher than 2000 meters, the operating ambient temperature needs to be reduced by 5 °C/1000 meters.				

Type	MDR-10			
DC voltage	5V	12V	15V	24V
Rated current	2A	0.84A	0.67A	0.42A
Rated power	10W	10W	10W	10W
Voltage accuracy	±5%	±1%	±1%	±1%
Operating current	0.33A/110VAC 0.21A/230VAC			

Type	MDR-20			
DC voltage	5V	12V	15V	24V
Rated current	3A	1.67A	1.34A	1A
Rated power	15W	20W	20W	24W
Voltage accuracy	±2%	±1%	±1%	±1%
Operating current	0.55A/110VAC 0.35A/230VAC			

MDR-40/60

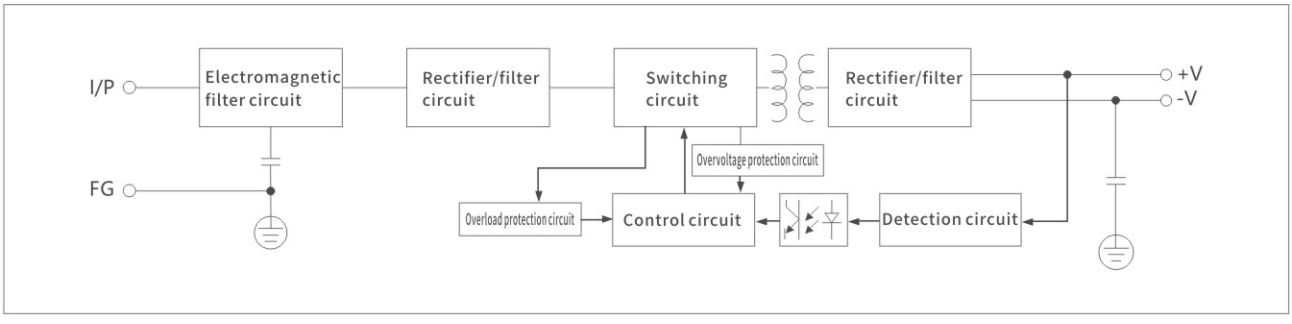
DIN RAIL TYPE SWITCH POWER SUPPLY

Product overview

The MDR-40、60 series is a 40、60W single group output closed type power supply that uses 85 to 264VAC full range AC input. The entire series provides 5V、12V、15V、24V、36V and 48V output.

In addition to the efficiency of up to 91.5%, the design of the environmentally friendly flame-retardant housing enhances the heat dissipation ability, allowing the MDR-40、60 to operate in the temperature range of - 20 °C to+70 °C without a fan. Making it easy for the terminal system to meet international energy requirements. The MDR-40、60 have complete protection functions and resistance to 5G vibration; It complies with TUV EN60950-1、EN60335-1、EN61558-1/-2-16、UL60950-1 and GB4943 international safety regulations. The MDR-40、60 series provide a cost-effective solution for various industrial applications.

Principle diagram



MDR-40/60 SERIES

DIN RAIL TYPE SWITCH POWER SUPPLY

KEEN SIDE electronics

Technical parameter

Type		Technical indicators			
Output	DC voltage	5V	12V	15V	24V
	Ripple and noise ①	＜80mV	＜120mV	＜120mV	＜200mV
	Voltage regulation range	±10%			
	Linear adjustment rate	±1%			
	Load adjustment rate	±1%	±1%	±1%	±1%
Input	Start up time	500ms、30ms、25ms： 110VAC		500ms、30ms、120ms： 220VAC	
	Voltage range/frequency	85-264VAC 47Hz～63Hz (120VDC～370VDC)			
	Efficiency (typical) ②	＞78%	＞86%	＞88%	＞88%
	Impulse current	110VAC 35A， 220VAC 70A			
Protection characteristics	Overload protection	When the rated output power is ⩾ 105% - 135%: protection mode: hiccup mode, which can be automatically restored after removing abnormal conditions			
	Overvoltage protection	When the output voltage is greater than 135%, the shutdown output will automatically recover after the abnormal condition is removed			
Environment	Operating temperature、humidity	-20°C～+70°C；20%～90RH			
	Storage temperature、humidity	-40°C～+85°C；10%～95RH			
Security	Withstand voltage	Input-output: 3KVAC duration: 1 minute			
	Isolation resistor	Input - output and input - shell, output - shell: 500 VDC / 100 mΩ			
Other	Size	40*90*100mm(L*W*H)			
	Net weight/gross weight	300g/325g			
Remarks	① Ripple and noise measurement method: use a 12 twisted pair, and connect 0.1uF and 47uF capacitors in parallel at the terminal, and measure at 20MHz bandwidth. ② The efficiency is tested at the input voltage of 230VAC, rated load and ambient temperature of 25 °C. Precision: including setting error, linear adjustment rate and load adjustment rate. Test method of linear regulation: test from low voltage to high voltage under rated load. Load adjustment rate test method: from 0% to 100% of rated load. The starting time is measured under the cold start state. Fast and frequent startup and shutdown may increase the starting time. When the operating altitude is higher than 2000 meters, the operating ambient temperature needs to be reduced by 5 °C/1000 meters.				

Type	MDR-40			
DC voltage	5V	12V	24V	48V
Rated current	6A	3.3A	1.7A	0.83A
Rated power	30W	40W	40.8W	39.8W
Voltage accuracy	±2%	±1%	±1%	±1%
Operating current	1.1A/110VAC 0.7A/220VAC			

Type	MDR-60			
DC voltage	5V	12V	24V	48V
Rated current	10A	5A	2.5A	1.25A
Rated power	50W	60W	60W	60W
Voltage accuracy	±2%	±1%	±1%	±1%
Operating current	1.8A/110VAC 1A/230VAC			

MDR-100

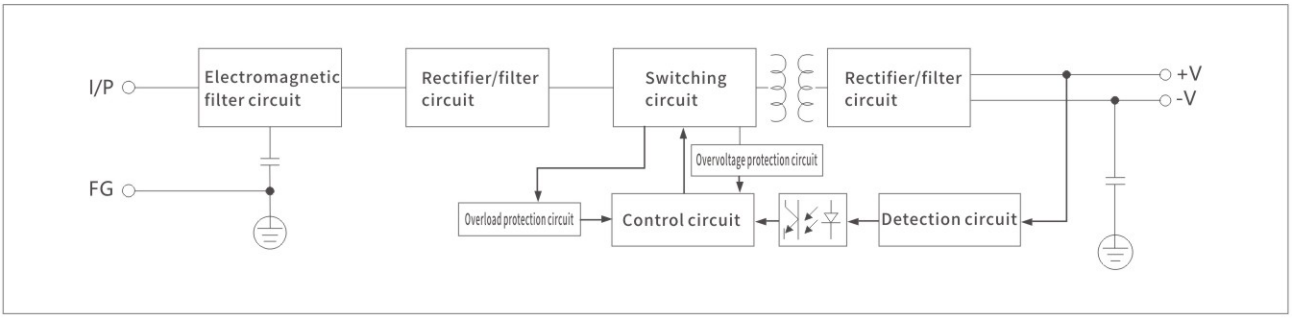
DIN RAIL TYPE SWITCH POWER SUPPLY

Product overview

The MDR-100 series is a 100W single group output closed type power supply that uses 85 to 264VAC full range AC input. The entire series provides 5V、12V、15V、24V、36V and 48V output.

In addition to the efficiency of up to 91.5%, the design of the environmentally friendly flame-retardant housing enhances the heat dissipation ability, allowing the MDR-100 to operate in the temperature range of - 20 °C to+70 °C without a fan. Making it easy for the terminal system to meet international energy requirements. The MDR-100 have complete protection functions and resistance to 5G vibration; It complies with TUV EN60950-1、 EN60335-1、EN61558-1/-2-16、 UL60950-1 and GB4943 international safety regulations. The MDR-100 series provide a cost-effective solution for various industrial applications.

Principle diagram



KEEN SIDE electronics

Technical parameter

Type		Technical indicators		
Output	Dc voltage	12V	24V	48V
	Rated current	7.5A	4A	2A
	Rated power	90W	96W	96W
	Ripple and noise ①	＜120mV	＜150mV	＜200mV
	Voltage accuracy	±1%	±1%	±1%
	Voltage regulation range	±10%		
	Load adjustment rate	±1%	±1%	±1%
	Linear adjustment rate	±1%		
Input	Voltage range	85-264VAC 47Hz~63Hz (120VDC~370VDC)		
	Power factor	PF≥0.95/230VAC PF≥0.98/115VAC (full load)		
	Efficiency (typical) ②	＞83%	＞86%	＞87%
	Operating current	＜1.3A 110VAC ＜0.8A 220VAC		
	Impulse current	110VAC 35A， 220VAC 70A		
	Start up time	3000ms、50ms、20ms： 110VAC 3000ms、50ms、50msms： 220VAC		
Protection characteristics	Overload protection	When the rated output power is ⩾ 105% - 150%: protection mode: hiccup mode, which can be automatically restored after removing abnormal conditions		
	Overvoltage protection	When the output voltage is greater than 135%, the shutdown output will automatically recover after the abnormal condition is removed		
	Over temperature protection	＞85° turn off the output and recover after the power is restarted after the temperature drops		
Environment	Operating temperature、humidity	-20°C～+70°C；20%～90RH		
	Storage temperature、humidity	-40°C～+85°C；10%～95RH		
Security	Withstand voltage	Input-output: 3KVAC duration: 1 minute		
	Isolation resistor	Input - output and input - shell, output - shell: 500 VDC / 100 mΩ		
Other	Size	55*90*100mm(L*W*H)		
	Net weight/gross weight	420kg/450kg		
Remarks	①Ripple and noise measurement method: use a 12 twisted pair, and connect 0.1uF and 47uF capacitors in parallel at the terminal, and measure at 20MHz bandwidth. ② The efficiency is tested at the input voltage of 230VAC, rated load and ambient temperature of 25 °C. Precision: including setting error, linear adjustment rate and load adjustment rate. Test method of linear regulation: test from low voltage to high voltage under rated load. Load adjustment rate test method: from 0% to 100% of rated load. The starting time is measured under the cold start state. Fast and frequent startup and shutdown may increase the starting time. When the operating altitude is higher than 2000 meters, the operating ambient temperature needs to be reduced by 5 °C/1000 meters.			