



# DIN SERIES

20W-60W Slim Type Single Output Models  
30W-100W Slim Step Shape Class II Models  
45W-480W Single Phase Models  
120W-960W High Input Voltage Models  
Redundancy and DC UPS Modules



## Current Automation

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## 20W~ 60W Slim Type Single Output Models

### 20W Series (MDR-20)

Model	Output	Tol.	R&N	Efficiency
MDR-20-5	5V, 0-3.00A	±2%	80mV	76%
MDR-20-12	12V, 0-1.67A	±1%	120mV	80%
MDR-20-15	15V, 0-1.3A	±1%	120mV	81%
MDR-20-24	24V, 0-1.00A	±1%	150mV	84%

### 40W Series (MDR-40)

Model	Output	Tol.	R&N	Efficiency
MDR-40-5	5V, 0-6.00A	±2%	80mV	78%
MDR-40-12	12V, 0-3.33A	±1%	120mV	86%
MDR-40-24	24V, 0-1.70A	±1%	150mV	88%
MDR-40-48	48V, 0-0.83A	±1%	200mV	88%

### 60W Series (MDR-60)

Model	Output	Tol.	R&N	Efficiency
MDR-60-5	5V, 0-10.0A	±2%	80mV	78%
MDR-60-12	12V, 0-5.00A	±1%	120mV	86%
MDR-60-24	24V, 0-2.50A	±1%	150mV	88%
MDR-60-48	48V, 0-1.25A	±1%	200mV	87%

### Features

- Universal AC input/ Full range
- No load power consumption <0.75W
- Protections: Short circuit/overload/over voltage
- LED indicator for power on
- Installed on DIN rail TS35/7.5 or 15
- DC OK signal output (20W)
- DC OK relay contact (40W and 60W)
- Cooling by free air convection
- 100% full load burn-in test



### General specifications

Model no.	MDR-20	MDR-40	MDR-60
AC input voltage range	85-264VAC; 120-370VDC		
AC inrush current (max.)	Cold start, 20A at 115VAC, 40A at 230VAC	Cold start, 30A at 115VAC,	
DC adjustment range	±10% rated output voltage	0 - +20% rated output voltage	
Overload protection	105%-160% constant current limiting, auto-recovery	105% - 150% constant current limiting, auto-recovery	
Over voltage protection	115% - 135% rated output voltage	125% - 150% rated output voltage	
Setup, rise, hold up time	500ms, 30 ms, 50ms at full load and 230VAC		
Withstand voltage	I/P-0/P:3KVAC, I/P-FG:1.5KVAC, 1 minute		
Working temperature	-20 - 50°C@100%, 70°C@50% load	-20 - 60°C@100%, 70°C@60% load	-20 - 55°C@100%, 70°C@60% load )5V only; -20 - 45°C@100%, 70°C@50% load)
DC OK signal	Open collector	Relay contact	
Safety standards	UL508, TUV EN60950-1 approved		
EMC standards	EN55022 classB, EN61000-3-2-3, ENV50204, EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61204-3 (EN61000-6-2 heavy industry level also for 40W and 60W)		
Connection	I/P: 3 poles, O/P: 3 poles screw DIN terminal	IP: 3 poles, O/P: 6 poles screw DIN terminal	
Dimension (WxHxD) (mm)	22.5x 90x 100		40x 90x 100
Packing	0.19kg; 72pcs/14.7kg/0.97CUFT	0.3kg; 42pcs/13.6kg/0.82CUFT	0.33kg; 42pcs/14.8kg/0.82CUFT

## 30W ~ 100W Step Shape Class II Models

### 30W Series (DR-30)

Model	Output	Tol.	R&N	Efficiency
DR-30-5	5V, 0-3.0A	±2%	80mV	74%
DR-30-12	12V, 0-2.0A	±1%	120mV	81%
DR-30-15	15V, 0-2.0A	±1%	120mV	82%
DR-30-24	24V, 0-1.5A	±1%	150mV	83%

### 60W Series (DR-60)

Model	Output	Tol.	R&N	Efficiency
DR-60-5	5V, 0-6.5A	±2%	80mV	76%
DR-60-12	12V, 0-4.5A	±1%	120mV	82%
DR-60-15	15V, 0-4.0A	±1%	120mV	83%
DR-60-24	24V, 0-2.5A	±1%	150mV	84%

### 100W Series (DR-100)

Model	Output	Tol.	R&N	Efficiency
DR-100-12	12V, 0-7.5A	±1%	120mV	84%
DR-100-15	24V, 0-6.5A	±1%	120mV	85%
DR-100-24	48V, 0-4.2A	±1%	150mV	86%

### Features

- Universal AC input/ Full range
- Protections:  
Short circuit/overload/over voltage /over temperature (100W)
- Cooling by free air convection
- Installed on DIN rail TS-35/7.5 or 15
- Isolation Class II
- 100% full load burn-in test
- LED indicator for power on
- Suitable for building automation
- and control of household appliance



### General specifications

Model no.	DR-30	DR-60	DR-100
AC input voltage range	85-264VAC; 120-370VDC	88 - 264VAC; 124 - 370VDC	
AC inrush current (max.)	Cold start, 30A at 230VAC	Cold start, 36A at 230VAC	
DC adjustment range	±10%	±10%	12V: 12 - 15V 15V: 15 - 18V, 24V: 24 - 29V
Overload protection	105 - 160% constant current limiting, auto-recovery		105 - 135% constant current limiting, auto recovery
Over voltage protection	Range	115% - 135% rated output voltage	
	Type	Shut off, AC recycle to re-start	
Withstand voltage	I/P-O/P:3KVAC		
Working temperature	-20 - +60°C(please refer to output derating curves)		
Safety standards	UL60950-1, TUV EN60950-1 approved		
EMC standards	EN55022 class B, EN61000-3-2-3, ENV50204, EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61204-3 EN61000-6-2 heavy industry level		
Connection	I/P: 2 poles, O/P: 4 poles screw DIN terminal		
Dimension (WxHxD) (mm)	78x 93x 56	78x 93x 56	100x 93x 56
Case no.	918B	918B	970A
Packing	48pcs/14.0kg	48pcs/15.4kg	36pcs/13.6kg

## 45W ~ 480W Single Phase

### 45W Series (DR-45)

Model	Output	Tol.	R&N	Efficiency
DR-4505	5V, 0-5.0A	±2%	80mV	74%
DR-4512	12V, 0-3.5A	±1%	120mV	81%
DR-4515	15V, 0-2.8A	±1%	120mV	82%
DR-4524	24V, 0-2.0A	±1%	150mV	83%

### 75W Series (DR-75)

Model	Output	Tol.	R&N	Efficiency
DR-75-12	12V, 0-6.3A	±2%	100mV	76%
DR-75-24	24V, 0-3.2A	±1%	150mV	80%
DR-75-48	48V, 0-1.6A	±1%	240mV	81%

### 120W Series (DR-120)

Model	Output	Tol.	R&N	Efficiency
DR-120-12	12V, 0-10A	±2%	80mV	80%
DR-120-24	24V, 0-5.0A	±1%	80mV	84%
DR-120-48	48V, 0-2.5A	±1%	100mV	85%

### 240W Series (DRP-240)

Model	Output	Tol.	R&N	Efficiency
DRP-240-24	24V, 0-10A	±1%	80mV	84%
DRP-240-48	48V, 0-5.0A	±1%	150mV	85%

### 480W Series (DRP-480/DRP-480S)

Model	Output	Tol.	R&N	Efficiency
DRP-480-24	24V, 0-20A	±1%	120mV	89%
DRP-480-48	48V, 0-10A	±1%	120mV	89%
DRP-480S-24	24V, 0-20A	±1%	120mV	89%
DRP-480S-48	48V, 0-10A	±1%	120mV	89%



### Features

- Universal AC input/full range (DR-45/75, DRP-240)  
AC input selectable by switch (DR-120, DRP-480S)  
AC input 180 - 264V only (DRP-480)
- Build-in active PFC function, PF>0.95 (DRP-240)  
Build-in passive PFC function compliance to EN61000-3-2 (480W models)
- Protections: Short circuit/overload/over voltage/over temperature
- Cooling by free air convection
- Installed on DIN rail TS-35/7.5 or 15
- 100% full load burn-in test
- UL508 (industrial control equipment) listed
- LED indicator for power on

### General specifications

Model no.	DR-45	DR-75	DR-120	DRP-240	DRP-480	DRP-480S
AC input voltage range	85-264VAC (DR-45/75, DRP-240); 90-132/180-264 VAC selectable by switch (DR-120, DRP-120S) 180 - 264VAC only (DRP-480)					
AC inrush current (max.)	Coldstart,56Aat230VAC		Cold start, 40A at 230VAC		Coldstart,45A at 230VAC	Coldstart,40Aat230VAC
DC adjustment range	±10%		12V: 12 ~ 14V, 24V: 24~28V, 48V: 48~53V			
Overload protection	105 - 150% constant current limiting, auto-recovery					
Overvoltageprotection	Range	115% - 142% rated output voltage		30-36V for 24V model, 54-60V for 48V model		
	Type	Shut off, AC recycle to re-start (DR-75: hiccup mode, auto recovery)				
Overtemperatureprotection	Shut down output voltage, recovers automatically after temperature goes down					
Withstand voltage	I/P-O/P:3KVAC, I/P - FG: 1.5KVAC, O/P - FG: 0.5KVAC, 1 minute					
Working temperature	-10 - +50°C		-10 - +60°C		-10 - +70°C	
Safety standards	UL508, TUV EN60950-1 approved (UL60950-1 also for DR-120, DRP-240, DRP-480, DRP480S)					
EMC standards	EN55022 class B, EN61000-3-2,3, ENV50204, EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61000-6-2 heavy industry level					
Connection	I/P: 3 poles, O/P: 4 poles screw DIN terminal					
Dimension(WxHxD)(mm)	78x 93x 67		55.5x125.2x100		65.5x125.2x100	
Case no.	918A		923		921A	
Packing	48pcs/16.1kg		20pcs/13.0kg		20pcs/16.5kg	
					12pcs/15.5kg	
					6psc/15.okg	
					6pcs/16.6kg	

# 120W ~ 960W High Input Voltage

## 120W Series (DRH-120)

Model	Output	Tol.	R&N	Efficiency
DRH-120-24	24V, 0-5.0A	±1%	80mV	85%
DRH-120-48	48V, 0-2.5A	±1%	80mV	86%

## 240W Series (DRT-240)

Model	Output	Tol.	R&N	Efficiency
DRT-240-24	24V, 0-10A	±1%	80mV	89%
DRT-240-48	48V, 0-5.0A	±1%	80mV	89%

## 480W Series (DRT-480)

Model	Output	Tol.	R&N	Efficiency
DRT-480-24	24V, 0-20A	±2%	80mV	89%
DRT-480-48	48V, 0-10A	±1%	80mV	90%

## 960W Series (DRT-960)

Model	Output	Tol.	R&N	Efficiency
DRT-960-24	24V, 0-40A	±1%	80mV	91%
DRT-960-48	48V, 0-20A	±1%	80mV	92%

## Features

- Input 340-550VAC, 3-phase 4 wires (single phase for 120W)
- High efficiency and low dissipation
- Protections: Short circuit/overload/over voltage/over temperature
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL508 (industrial control equipment) approved (240-960W)
- EN61000-6-2 industrial immunity level
- Optional parallel function (1+1) (960W only)
- 100% full load burn-in test
- LED indicator for power on



## General specifications

Model no.	DRH-120	DRT-240	DRT-480	DRT-960
AC input voltage range	340-550 VAC, single phase	340-550 VAC, 3-phase 4 wires (dual-phase operation possible)		
AC inrush current (max.)	Cold start, 50A at 400 VAC			
DC adjustment range	24V: 24-28V, 48V: 48-55V			
Overload protection	105 - 160% rated output power; Constant current limiting, auto recovery	105 - 150% rated output power; Constant current limiting, auto recovery		105 - 125% constant current limiting, delay shut off after 3 sec.
Over voltage protection	Range	24V: 30-36V, 48V: 59-66V		125 - 155% rated output voltage
	Type	Shut off, AC recycle to re-start		
Over temperature protection	Shut down output voltage, recovers automatically after temperature goes down			
Withstand voltage	I/P-O/P: 3KVAC, I/P - FG: 1.5KVAC, O/P - FG: 0.5KVAC, 1 minute			
Working temperature	-20 - +60°C	-20 - +70°C		-20 - +60°C
Safety standards	IEC60950-1 CB approved	UL508, UL60950-1, TUV EN60950-1 approved		
EMC standards	EN55022 class B, EN61000-3-2,3, ENV50204, EN61000-4-2,3,4,5,6,8,11, EN61204-3, EN61000-6-2 heavy industrial level			
Connection	I/P: 3 poles, O/P: 4 poles	I/P: 4 poles, O/P: 4 poles		I/P: 4 poles, O/P: 6 poles
Dimension (WxHxD) (mm)	65.5x125.2x100	125.5x125.2x100	227x125.2x100	276x125.2x100
Case no.	921	922A	930A	934
Packing	20pcs/16.0kg	12pcs/16.6kg	6pcs/16.0kg	4pcs/14.2kg