



Features

- Universal AC input / Full range
- Installed on DIN rail TS-35 / 7.5 or 15
- Protections: Short circuit / Overload / Over voltage
- No load power consumption <0.75W (<1W for MDR-100)
- LED indicator for power on
- Built-in active PFC and over temp. protection (MDR-100)
- Class I, Div 2 Hazardous Locations T4(MDR-40/60)
- DC OK signal output (MDR-10/20);
DC OK relay contact (MDR-40/60/100)
- Cooling by free air convection
- DC output voltage adjustable (MDR-20~100)
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)

Model No.	MDR-10	MDR-20	MDR-40	MDR-60	MDR-100
AC input voltage range	85~264VAC; 120~370VDC				
AC inrush current	Cold start, 35A at 115VAC, 70A at 230VAC	Cold start, 20A at 115VAC, 40A at 230VAC	Cold start, 30A at 115VAC, 60A at 230VAC		
DC adjustment range	Fixed	±10% rated output voltage	0~+20% rated output voltage		
Overload protection	>105% hiccup mode, auto-recovery	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, 30ms, 120ms	500ms, 30ms, 50ms		3000ms, 50ms, 50ms	
Withstand voltage	I/P-O/P:3kVAC, I/P-FG:2kVAC, 1minute				
Working temperature	-20~+70°C (refer to output derating curve)				-10~+60°C
DC OK signal	Open collector		Relay contact		
Safety standards	UL508, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1, AS/NZS 60950.1 approved; MDR-40/60 also approved for UL62368-1, ANSI/ISA 12.12.01-2013 Class I, Div. 2 Group A, B, C, D Hazardous Locations T4				
EMC standards	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61204-3, EN61000-6-2 heavy industry level (MDR-40/60/100), CNS13438				
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)	22.5x90x100		40x90x100		55x90x100

10W



Model No.	Output	Tol.	R&N	Effi.
MDR-10-5	5V, 0~2.0A	±5%	80mV	77%
MDR-10-12	12V, 0~0.84A	±3%	120mV	81%
MDR-10-15	15V, 0~0.67A	±3%	120mV	81%
MDR-10-24	24V, 0~0.42A	±2%	150mV	84%

Model No.	Output	Tol.	R&N	Effi.
MDR-40-24	24V, 0~1.70A	±1%	150mV	88%
MDR-40-48	48V, 0~0.83A	±1%	200mV	88%

20W



Model No.	Output	Tol.	R&N	Effi.
MDR-20-5	5V, 0~3.0A	±2%	80mV	76%
MDR-20-12	12V, 0~1.67A	±1%	120mV	80%
MDR-20-15	15V, 0~1.34A	±1%	120mV	81%
MDR-20-24	24V, 0~1.00A	±1%	150mV	84%

60W



Model No.	Output	Tol.	R&N	Effi.
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%

40W



Model No.	Output	Tol.	R&N	Effi.
MDR-40-5	5V, 0~6.00A	±2%	80mV	78%
MDR-40-12	12V, 0~3.33A	±1%	120mV	86%

100W



Model No.	Output	Tol.	R&N	Effi.
MDR-100-12	12V, 0~7.5A	±1%	120mV	83%
MDR-100-24	24V, 0~4.0A	±1%	150mV	86%
MDR-100-48	48V, 0~2.0A	±1%	200mV	87%



HDR-15

HDR-30

HDR-60

Features

- Isolation **Class II**
- Universal AC input / Full range (277VAC operational)
- No load power consumption <0.3W
- Compact size with 1SU~4SU width
- **Class 2** power unit / Pass LPS
- **Over voltage category III**
- Protections: Short circuit / Overload / Over voltage
- Can be installed on DIN rail TS-35 / 7.5 or 15
- Cooling by free air convection
- DC output voltage adjustable
- LED indicator for power on
- Suitable for building automation and control of household appliance
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)



Model No.	HDR-15	HDR-30	HDR-60
AC input voltage range	85~264VAC (277VAC operational); 120~370VDC (390VDC operational)		
AC inrush current (max.)	Cold start, 45A at 230VAC		Cold start, 60A at 230VAC
DC adjustment range	5V: 4.5~5.5V, 12V: 10.8~13.8V, 15V: 13.5~18V, 24V: 21.6~29V, 48V: 43.2~55.2V		
Overload protection	Range	110%~145%	105%~160%
	Type	Hiccup mode when output voltage <50%, constant current limiting within 50~100% rated output voltage, auto-recovery	
Over voltage protection	Range	115%~150% rated output voltage	
	Type	Shut off, clamp by zener diode	Shut down, re-power on to recover
Withstand voltage	I/P-O/P: 4kVAC		
Working temperature	-30~+70°C (refer to output load derating curve)		
Vibration	10~500Hz, 2G 10 min./1 cycle, period for 60 min. each along X, Y, Z axes		
Safety standards	UL62368-1, UL508, TUV BS EN/EN61558-2-16, BS EN62368-1, EAC TP TC 004, BSMI CNS14336-1 approved		
EMC standards	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, EN61204-3		
Connection	I/P and O/P: 2 poles screw DIN terminal		I/P: 2 poles, O/P: 4 poles screw DIN terminal
Dimension (WxHxD)(mm)	17.5x 90x 54.5	35x 90x 54.5	52.5x 90x 54.5

15W		HDR-15		
Model No.	Output	Tol.	R&N	Effi.
HDR-15-5	5V, 0~2.40A	±2%	80mV	80%
HDR-15-12	12V, 0~1.25A	±1%	120mV	85%
HDR-15-15	15V, 0~1.00A	±1%	120mV	85.5%
HDR-15-24	24V, 0~0.63A	±1%	150mV	86%
HDR-15-48	48V, 0~0.32A	±1%	240mV	87%

60W		HDR-60		
Model No.	Output	Tol.	R&N	Effi.
HDR-60-5	5V, 0~6.5A	±2%	80mV	85%
HDR-60-12	12V, 0~4.5A	±1%	120mV	88%
HDR-60-15	15V, 0~4.0A	±1%	120mV	89%
HDR-60-24	24V, 0~2.5A	±1%	150mV	90%
HDR-60-48	48V, 0~1.25A	±1%	240mV	91%

30W		HDR-30		
Model No.	Output	Tol.	R&N	Effi.
HDR-30-5	5V, 0~3.0A	±2%	80mV	82%
HDR-30-12	12V, 0~2.0A	±1%	120mV	88%
HDR-30-15	15V, 0~2.0A	±1%	120mV	89%
HDR-30-24	24V, 0~1.5A	±1%	150mV	89%
HDR-30-48	48V, 0~0.75A	±1%	240mV	90%

HDR vs. MDR

Difference Series	Casing Type	Protection Classes	Over Voltage Category	Working Temp.
HDR	Step Shape	Class II	OVC III	-30~+70°C
MDR	Ultra Slim	Class I	-----	-20~+70°C



Features

- Isolation **Class II**
- Universal AC input / Full range (277VAC operational)
- No load power consumption <0.3W
- **Compact size with 4SU~6SU width**
- **Class 2 power unit / Pass LPS** (HDR-100 only)
- **Over voltage category III**
- Protections: Short circuit / Overload / Over voltage
- Can be installed on DIN rail TS-35 / 7.5 or 15
- Cooling by free air convection
- DC output voltage adjustable
- LED indicator for power on
- Suitable for building automation and control of household appliance
- 3 years warranty

General Specification



Model No.	HDR-100 □		HDR-150
AC input voltage range	85~264VAC (277VAC operational); 120~370VDC (390VDC operational)		
AC inrush current (max.)	Cold start, 70A at 230VAC		
DC adjustment range	HDR-100 12V: 12~13V, 15V: 15~17V, 24V: 24~25.5V, 48V: 48~48.7V HDR-100-N 12V: 12~13.8V, 15V: 13.8~18V, 24V: 21.6~29V, 48V: 43.2~55.2V		12V: 10.8~13.8V 15V: 13.8~18V 24V: 21.6~29V 48V: 43.2~55.2V
	Overload protection	Range HDR-100: 102%~110%; HDR-100-xxN: 105%~150%	105%~135%
Over voltage protection	Range	125%~155% rated output voltage	
	Type	Shut down, re-power on to recover	
Withstand voltage	I/P-O/P: 3kVAC		
Working temperature	-30~+70°C (refer to output load derating curve)		
Vibration	10~500Hz, 2G 10 min./1 cycle, period for 60 min. each along X, Y, Z axes		
Safety standards	UL62368-1, UL508, TUV BS EN/EN61558-2-16, IEC62368-1, BSMI CNS14336, AS/NZS60950.1, TPTC004 approved		UL62368-1, UL61010, TUV BS EN/EN61558-2-16, IEC62368-1, TPTC004 approved
EMC standards	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-6-2, EN61000-4-2,3,4,5,6,8,11, CNS13438, EN61204-3		
Connection	I/P: 2 poles, O/P: 4 poles screw DIN terminal		
Dimension (WxHxD)(mm)	70x 90x 54.5		105x 90x 54.5

100W		HDR-100		
Model No.	Output	Tol.	R&N	Effi.
HDR-100-12	12V, 0~7.1A	±2%	120mV	88%
HDR-100-12N	12V, 0~7.5A	±2%	120mV	88%
HDR-100-15	15V, 0~6.13A	±1%	120mV	89%
HDR-100-15N	15V, 0~6.5A	±1%	120mV	89%
HDR-100-24	24V, 0~3.83A	±1%	150mV	90%
HDR-100-24N	24V, 0~4.2A	±1%	150mV	90%
HDR-100-48	48V, 0~1.92A	±1%	240mV	90%
HDR-100-48N	48V, 0~2.1A	±1%	240mV	90%

150W		HDR-150		
Model No.	Output	Tol.	R&N	Effi.
HDR-150-12	12V, 0~11.3A	±2%	100mV	89%
HDR-150-15	15V, 0~9.5A	±1%	120mV	89.5%
HDR-150-24	24V, 0~6.25A	±1%	150mV	90.5%
HDR-150-48	48V, 0~3.2A	±1%	200mV	90.5%

HDR-100: 92W max., pass LPS
 HDR-100-xxN: 100W max., non-LPS with a wide output adjustable range



Features

- High efficiency up to **94%**
- Universal AC input / Full range (SDR-75/120/240/480); AC input 180~264VAC only (SDR-960)
- **Complete functions:**
 - ◆ **130~150% peak load** capability by series
 - ◆ **Current sharing** up to **3840W** (7+1 for SDR-480P, 3+1 for SDR-960)
 - ◆ Built-in **DC OK relay contact** (except for SDR-75)
 - ◆ Comply with **SEMIF47** (SDR-75~960)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- DC output voltage adjustable
- Installed on DIN rail TS-35 / 7.5 or 15
- UL508(industrial control equipment) approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)

Model No.	SDR-75	SDR-120	SDR-240	SDR-480□	SDR-960
AC input voltage range	88~264VAC; 124~370VDC			90~264VAC; 127~370VDC	180~264VAC; 254~370VDC
AC inrush current (max.)	Cold start, 50A at 230VAC	Cold start, 70A at 230VAC	Cold start, 55A at 230VAC	Cold start, 80A at 230VAC	Cold start, 50A at 230VAC
DC adjustment range	12V: 12~14V (only for SDR-75/120), 24V: 24~28V, 48V: 48~55V				
Overload protection	Normally works within 110%~150% rated output power for 3 seconds and then shut down output voltage with auto-recovery (re-power on to recover for SDR-75)				Normally works within 105%~130% rated output power for 3 seconds and then shut down o/p voltage with auto-recovery after 30 seconds if the peak load condition is removed
	>150% rated power or short circuit, constant current limiting with auto-recovery within 2 seconds and may cause to shut down if over 2 seconds				Constant current limiting within 130%~150% rated output power for more than 3 seconds and then shut down o/p voltage, re-power on to recover
Over voltage protection	Range	14~17V for 12V model(SDR-75/120), 29~33V for 24V model, 56~65V for 48V model			
	Type	Shut down o/p voltage, re-power on to recover		Shut down o/p voltage with auto-recovery, or re-power on to recover	
Over temperature protection	Re-power on to recover	Recovers automatically after temperature goes down			
Withstand voltage	I/P-O/P:3kVAC, I/P-FG:1.5kVAC, O/P-FG:0.5kVAC, O/P-DC OK:0.5kVAC (except for SDR-75)				
Working temperature	-30~+70°C		-25~+70°C (refer to output derating curve)		-30~+70°C
Safety standards	UL508, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1(SDR-120/240/480/960) approved				
EMC standards	BS EN/EN55011(SDR-120/240/480), EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EAC TP TC 020, EN61000-6-2 (EN50082-2), EN61204-3; SEMI (SDR-75/120/240/480)				
Connection (screw DIN terminal)	I/P: 3 poles, O/P: 4 poles		I/P: 3 poles, O/P: 6 poles	I/P: 3 poles, O/P: 8 poles	I/P:3 poles, O/P: 6 poles
Dimension (WxHxD)(mm)	32x125.2x102	40x125.2x113.5	63x125.2x113.5	85.5x125.2x128.5	110x125.2x150

75W



Model No.	Output	Tol.	R&N	Effi.
SDR-75-12	12V, 0~6.3A	±1.0%	100mV	88.5%
SDR-75-24	24V, 0~3.2A	±1.0%	100mV	89.0%
SDR-75-48	48V, 0~1.6A	±1.0%	120mV	90.0%

120W



Model No.	Output	Tol.	R&N	Effi.
SDR-120-12	12V, 0~10A	±1.0%	100mV	89.0%
SDR-120-24	24V, 0~ 5A	±1.0%	100mV	91.0%
SDR-120-48	48V, 0~2.5A	±1.0%	120mV	90.5%

240W



Model No.	Output	Tol.	R&N	Effi.
SDR-240-24	24V, 0~10A	±1.0%	50mV	94%
SDR-240-48	48V, 0~5A	±1.0%	50mV	94%

480W



Model No.	Output	Tol.	R&N	Effi.
SDR-480□-24	24V, 0~20A	±1.2%	100mV	94%
SDR-480□-48	48V, 0~10A	±1.0%	120mV	94%

□ =blank, P ; Blank: basic function, P: with parallel function

960W



Model No.	Output	Tol.	R&N	Effi.
SDR-960-24	24V, 0~40A	±1.0%	180mV	94%
SDR-960-48	48V, 0~20A	±1.0%	250mV	94%



Features

- Universal AC input / Full range
- Built-in active PFC function(NDR-240/480)
- High efficiency up to 92.5%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- DC output voltage adjustable
- Can be installed on DIN rail TS-35 / 7.5 or 15
- UL508 (industrial control equipment) listed
- EN61000-6-2 (EN50082-2) industrial immunity level
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)



Model No.	NDR-75	NDR-120	NDR-240	NDR-480
AC input voltage range	90~264VAC; 127~370VDC			
AC inrush current (max.)	Cold start, 35A at 230VAC			
DC adjustment range	12V: 12~14V, 24V: 24~28V, 48V: 48~55V			
Overload protection	Range	105%~130%		
	Type	Constant current limiting, auto-recovery		Constant current limiting, shut off after 3 sec., re-power on to recover
Over voltage protection	Range	12V: 14~17V, 24V: 29~33V, 48V: 56~65V		
	Type	Shut down o/p voltage, re-power on to recover		
Over temperature protection	Shut down o/p voltage, re-power on to recover		Shut down o/p voltage, auto-recovery	
Withstand voltage	I/P-O/P: 3kVAC, I/P-FG: 2kVAC, O/P-FG: 0.5kVAC			
Working temperature	-20~+70°C (refer to output derating curve)			
Safety standards	UL508, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1(NDR-240/480) approved			
EMC standards	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61000-6-2(EN50082-2), EN61204-3; EAC TP TC 020			
Connection (screw DIN terminal)	I/P: 3 poles, O/P: 4 poles			
Dimension (WxHxD)(mm)	32x 125.2x 102	40x 125.2x 113.5	63x 125.2x 113.5	85.5x 125.2x 128.5

75W		NDR-75		
Model No.	Output	Tol.	R&N	Effi.
NDR-75-12	12V, 0~6.3A	±2.0%	80mV	85.5%
NDR-75-24	24V, 0~3.2A	±1.0%	150mV	88.0%
NDR-75-48	48V, 0~1.6A	±1.0%	240mV	89.0%

240W		NDR-240		
Model No.	Output	Tol.	R&N	Effi.
NDR-240-24	24V, 0~10A	±1.0%	150mV	88.5%
NDR-240-48	48V, 0~5A	±1.0%	150mV	90.0%

120W		NDR-120		
Model No.	Output	Tol.	R&N	Effi.
NDR-120-12	12V, 0~10A	±2.0%	100mV	85.5%
NDR-120-24	24V, 0~5A	±1.0%	120mV	88.0%
NDR-120-48	48V, 0~2.5A	±1.0%	150mV	89.0%

480W		NDR-480		
Model No.	Output	Tol.	R&N	Effi.
NDR-480-24	24V, 0~20A	±1.0%	150mV	92.5%
NDR-480-48	48V, 0~10A	±1.0%	150mV	92.5%



Features

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- DC output voltage adjustable
- Can be installed on DIN rail TS-35 / 7.5 or 15
- UL508 (industrial control equipment) listed
- EN61000-6-2 (EN50082-2) industrial immunity level
- Low cost
- 2 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)



Model No.	EDR-75	EDR-120	EDR-150
AC input voltage range	90~264VAC; 127~370VDC		
AC inrush current (max.)	Cold start, 35A at 230VAC		
DC adjustment range	12V: 12~14V, 24V: 24~28V, 48V: 48~55V		
Overload protection	Range	105%~130%	
	Type	Constant current limiting, auto-recovery	
Over voltage protection	Range	12V: 14~17V, 24V: 29~33V, 48V: 56~65V	24V: 29~33V
	Type	Shut down o/p voltage, re-power on to recover	
Over temperature protection	Shut down o/p voltage, re-power on to recover		
Withstand voltage	I/P-O/P: 3kVAC, I/P-FG: 2kVAC, O/P-FG: 0.5kVAC		
Working temperature	-20~+60°C (refer to output derating curve)		
Safety standards	UL508, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1 approved		
EMC standards	BS EN/EN55032 classA, EN61000-3-2(125W for EDR-150),3, BS EN/EN61000-4-2,3,4,5,6,8,11, EN61000-6-2(EN50082-2); EAC TP TC 020, CNS13438		
Connection (screw DIN terminal)	I/P: 3 poles, O/P: 4 poles		
Dimension (WxHxD)(mm)	32x 125.2x 102	40x 125.2x 113.5	

75W EDR-75

Model No.	Output	Tol.	R&N	Effi.
EDR-75-12	12V, 0~6.3A	±2.0%	80mV	85.5%
EDR-75-24	24V, 0~3.2A	±1.0%	120mV	87.5%
EDR-75-48	48V, 0~1.6A	±1.0%	150mV	88.5%

150W EDR-150

Model No.	Output (230VAC/115VAC)	Tol.	R&N	Effi.
EDR-150-24	24V, 0~6.5A / 0~5.2A	±1.0%	150mV	87%

120W EDR-120

Model No.	Output	Tol.	R&N	Effi.
EDR-120-12	12V, 0~10A	±2.0%	100mV	85.0%
EDR-120-24	24V, 0~5A	±1.0%	120mV	87.5%
EDR-120-48	48V, 0~2.5A	±1.0%	150mV	88.5%

EDR vs. NDR

Difference Series	EMI	Working Temp.	Warranty
EDR	Class A	-20~+60°C	2 years
NDR	Class B	-20~+70°C	3 years



Features

- Single or two phase ultra wide input range 180~550VAC
- Built-in active PFC function (WDR-240/480)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- DC output voltage adjustable
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35 / 7.5 or 15
- Over voltage category III (WDR-60)
- EN61000-6-2(EN50082-2) industrial immunity level
- Built-in DC OK relay contact
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)

Model No.	WDR-60	WDR-120	WDR-240	WDR-480
AC input voltage range	180~550VAC(single or two phase); 254~780VDC			
AC input current	0.3A / 400VAC, 0.6A / 230VAC	0.55A / 400VAC, 1.2A / 230VAC	1A / 400VAC, 2A / 230VAC	1.6A / 400VAC, 4A / 230VAC
AC inrush current (max.)	Cold start, 50A at 400VAC			
DC adjustment range	5V: 5~6V, 12V: 12~15V, 24V: 24~29V, 48V: 48~57V	12V: 12~15V, 24V: 24~29V, 48V: 48~58V	24V: 24~28V, 48V: 48~55V	
Overload protection	Hiccup mode when output voltage <50%, constant current limiting within 50~100% rated output voltage, auto-recovery	105%~130% rated output power, constant current limiting, auto-recovery	105%~130% rated output power, constant current limiting, unit will shut down after 3 sec.; auto-recovery after 1 minute if the fault condition is removed.	
Over voltage protection	Range	5.7~7.5V for 5V model (WDR-60), 16~18V for 12V model, 29~33V for 24V model, 56~65V for 48V model		
	Type	Shut down o/p voltage, re-power on to recover		
Over temp. protection	Shut down output voltage, recovers automatically after temperature goes down			
Withstand voltage	I/P-O/P:4.7kVAC, I/P-FG:2.5kVAC, O/P-FG:0.5kVAC, O/P-DC OK:0.5kVAC, 1 minute	I/P-O/P:3kVAC, I/P-FG:1.5kVAC, O/P-FG:0.5kVAC, O/P-DC OK:0.5kVAC, 1 minute		
Isolation resistance	100MΩ(min.)@500VDC			
Working temperature	-30~+85°C	-25~+70°C	-30~+70°C (refer to output derating curve)	
DC OK signal	Relay Contact			
Safety standards	UL61010, TUV BS EN/EN61558-2-16, AS/NZS62368.1, EAC TP TC004	UL508, AS/NZS62368.1, EAC TP TC 004, BS EN/EN62368-1 approved; Design refer to GL		
EMC standards	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), EN61204-3; EAC TP TC 020, heavy industry level			
Connection (screw DIN terminal)	I/P: 3 poles, O/P: 4 poles		I/P: 3 poles, O/P: 6 poles	
Dimension (WxHxD)(mm)	32x125.2x102	40x125.2x113.5	63x125.2x113.5	85.5x125.2x128.5

60W



Model No.	Output	Tol.	R&N	Effi.
WDR-60-05	5V, 0~10A	±1.5%	100mV	83.5%
WDR-60-12	12V, 0~5A	±1.5%	120mV	86.5%
WDR-60-24	24V, 0~2.5A	±1.0%	150mV	89.0%
WDR-60-48	48V, 0~1.25A	±1.0%	200mV	90.5%

240W



Model No.	Output	Tol.	R&N	Effi.
WDR-240-24	24V, 0~10A	±1.0%	150mV	91%
WDR-240-48	48V, 0~5A	±1.0%	150mV	91%

120W



Model No.	Output	Tol.	R&N	Effi.
WDR-120-12	12V, 0~10A	±1.5%	120mV	89.5%
WDR-120-24	24V, 0~5A	±1.0%	120mV	91%
WDR-120-48	48V, 0~2.5A	±1.0%	150mV	92%

480W



Model No.	Output	Tol.	R&N	Effi.
WDR-480-24	24V, 0~20A	±1.0%	100mV	92%
WDR-480-48	48V, 0~10A	±1.0%	150mV	93%



Features

- 3-phase, 340~550VAC wide range input (2-phase operation possible)
- Slim width
- Built-in active PFC function (TDR-480/960)
- Built-in passive PFC function (TDR-240)
- High efficiency up to 94.5%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- DC output voltage adjustable
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL508 / UL61010-1 Industrial control equipment approved
- Current sharing up to 3840W(3+1) for TDR-960
- Built-in DC OK relay contact (optional for TDR-480)
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)

Model No.	TDR-240	TDR-480	TDR-960
AC input voltage range	3-phase 340~550VAC (2-phase operation possible), 480~780VDC		
AC input current (Typ.)	0.69A / 400VAC, 0.6A / 500VAC	0.85A / 400VAC, 0.7A / 500VAC	2.0A / 400VAC, 1.4A / 500VAC
DC adjustment range	24V: 24~28V, 48V: 48~55V		
Overload protection	105%~130% rated output power, constant current limiting, unit will shut down after 3 sec., re-power on to recover 105%~130% rated output power, constant current limiting, unit will hiccup after 3 sec.(TDR-240)		
Over voltage protection	Range	29~33V for 24V model, 56~65V for 48V model (30~36V for TDR-240-24)	
	Type	Shut down o/p voltage, re-power on to recover Hiccup mode, recovers automatically after temperature goes down.	
Over temperature protection	Shut down o/p voltage, auto-recovery after temperature goes down		
Withstand voltage	I/P-O/P:4.87kVAC I/P-FG:2.4kVAC O/P-FG:0.5kVAC O/P-DC OK: 0.5kVAC	I/P-O/P:3kVAC I/P-FG:2kVAC O/P-FG:0.5kVAC O/P-DC OK: 0.5kVAC(TDR-960; optional for TDR-480)	
Working temperature	-30~+70°C (refer to output derating curve)		
Safety standards	UL61010-1, UL61010-2-201, AS/NZS62368.1, EAC TP TC 004, BS EN/EN61558-2-16 approved	UL508, IEC62368-1, AS/NZS62368.1, EAC TP TC 004 approved; UL62368-1 for TDR-480	
EMC standards	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61204-3, EN55024,EN61000-6-2, heavy industry level; EAC TP TC 020		
Connection (screw DIN terminal)	I/P: 4 poles, O/P: 4 poles		I/P: 4 poles, O/P: 6 poles
Dimension (WxHxD)(mm)	63x 125.2x 113.5	85.5x 125.2x 128.5	110x125.2x150

240W

Model No.	Output	Tol.	R&N	Effi.
TDR-240-24	24V, 0~10A	±1.0%	100mV	92%
TDR-240-48	48V, 0~5A	±1.0%	120mV	92%

960W

Model No.	Output	Tol.	R&N	Effi.
TDR-960-24	24V, 0~40A	±1.0%	180mV	94.0%
TDR-960-48	48V, 0~20A	±1.0%	250mV	94.5%

480W

Model No.	Output	Tol.	R&N	Effi.
TDR-480-24	24V, 0~20A	±1.0%	150mV	92.5%
TDR-480-48	48V, 0~10A	±1.0%	150mV	93%

WDR vs. TDR

Series	Difference	AC Input Voltage
WDR		1φ ; 180~550VAC
TDR		3φ ; 340~550VAC



DRA-40



DRA-60

Features

- Universal AC input / Full range
- **Io can be trimmed 10~100% by 1~10Vdc, PWM signal or resistance**
- Installed on DIN rail TS-35 / 7.5 or 15
- Protections: Short circuit / Overload / Over voltage
- Pass LPS
- Cooling by free air convection
- DC output voltage adjustable
- LED indicator for power on
- Suitable for machine vision inspection system and plant cultivation application
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)



Model No.	DRA-40	DRA-60
AC input voltage range	90~264VAC; 127~370VDC	
AC inrush current (max.)	Cold start, 60A at 230VAC	
DC adjustment range	12V: 12~15V, 24V: 24~30V	
Current adjustment range	10%~100% rated output current adjustable by 1~10VDCc, PWM signal or resistance	
Overload protection	Range	95%~108%
	Type	Constant current limiting, auto-recovery
Over voltage protection	120%~155% rated output power, shut down o/p voltage, re-power on to recover	
Withstand voltage	I/P-O/P: 3kVAC, I/P-FG: 2kVAC, O/P-FG: 0.5kVAC	
Working temperature	-30~+70°C (refer to output derating curve)	
Safety standards	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved	
EMC standards	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61204-3; EAC TP TC 020	
Connection (screw DIN terminal)	I/P: 3 poles, O/P: 6 poles screw DIN terminal	
Dimension (WxHxD)(mm)	40x 90x 100	

40W		DRA-40		
Model No.	Output	Tol.	R&N	Effi.
DRA-40-12	12V, 0~3.34A	±1.0%	120mV	85%
DRA-40-24	24V, 0~1.7A	±1.0%	150mV	87%

60W		DRA-60		
Model No.	Output	Tol.	R&N	Effi.
DRA-60-12	12V, 0~5A	±1.0%	120mV	85%
DRA-60-24	24V, 0~2.5A	±1.0%	150mV	87%



■ Features

- Output current 20A & 40A
- Support **1+1 and N+1 redundancy** system
- Suitable for redundancy operation of 12V/24V/48V system
- 2 channels input and 1 output
- **-40~+80°C** ultra wide operation temp.
- **2 dry relay contact** for monitoring output status, and LED indicator for input failure alarm
- **Slim width**
- Installed on DIN rail TS-35/7.5 or 15
- 3 years warranty

ERDN20/40 series, enclosed type modules are available on P.28

■ General Specification (Please refer to www.meanwell.com for detail spec.)



Model No.	DRDN20 ^[24]			DRDN40 ^[24]				
	12	24	48	12	24	48		
Input	DC input voltage range	9~14Vdc	19~29Vdc	36~60Vdc	9~14Vdc	19~29Vdc	36~60Vdc	
	Rated current	10Ax2 input, 20Ax1 input			20Ax2 input, 40Ax1 input			
	Peak current	15Ax2 input, 30Ax1 input			30Ax2 input, 60Ax1 input			
	Voltage drop (Vin-Vout)	0.2~0.5Vdc max.						
	Reverse voltage (max.)	40Vdc	40Vdc	65Vdc	40Vdc	40Vdc	65Vdc	
Output	Rated current	20A			40A			
	Peak current	30A, 5 sec.			60A, 5 sec.			
	Standby power losses	1.5W Typ.						
General	Relay contact	2 dry relay contact, 30Vdc resistive load for each channel						
	Input voltage alarm	Voltage range	<8.5V or >14.7V	<18V or >31V	<34.2V or >63V	<8.5V or >14.7V	<18V or >31V	<34.2V or >63V
		LED display	Green: OK, dark: input voltage failure					
	Working temperature	-40~+80°C						
	Protections	Overload or short circuit, <30A for 5 sec. no damage						
	Cooling	Free air convection						
	Safety standards	UL62368-1, EAC TP TC 004 approved						
	EMC standards	BS EN/EN55032 class B, EN61000-4,2,3,4,5,6,8						
	Connection (Screw DIN terminal)	I/P: 4 poles (Vin1 and Vin2 ±), O/P and FG 4 poles (Vo-/Vo, FG); 4 poles (Alarm1 and Alarm2 dry relay contact)			I/P: 4 poles (Vin1 and Vin2 ±), O/P 2 poles (Vo-/Vo), FG 1 pole; 2+2 poles (Alarm1 and Alarm2 dry relay contact)			
	Dimension (WxHxD)(mm)	32x 125.2x 102			55x 125.2x 113.5			

■ 20A DRDN20

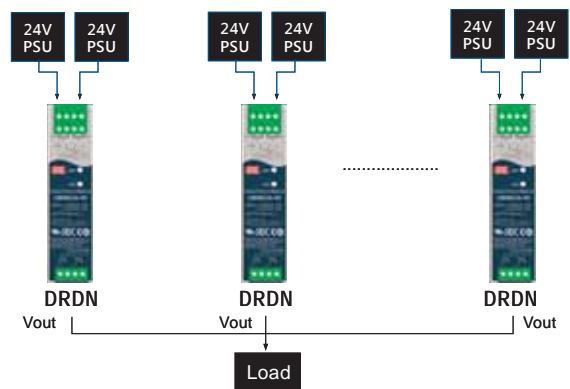
Model No.	Nominal Voltage	Input / Output Current
DRDN20 ^[24]	12V, 24V, 48V	2x10A / 20A
□ = 12, 24, 48		

■ 40A DRDN40

Model No.	Nominal Voltage	Input / Output Current
DRDN40 ^[24]	12V, 24V, 48V	2x20A / 40A
□ = 12, 24, 48		

DRDN20/40 Example of Application

1+N Redundancy : Using 1 more PSU as the redundant unit



Note: 12V/ 24V/ 48V models are applicable.



■ Features

- Buffering with **electrolytic capacitors** instead of battery, save maintenance cost
- Suitable for 24Vdc systems
- Buffering time: **350ms@20A load**; **250ms@40A load**
- Buffer mode selectable by switch :
Fixed mode at 22Vdc or dynamic mode for Vin-1V
- **Support parallel connection** to extend buffering time
- -25~+75°C operating temperature
- 3 years warranty

■ General Specification (Please refer to www.meanwell.com for detail spec.)



Model No.		DBUF20	DBUF40	
Charging mode	DC normal operating mode	24Vdc		
	Charging voltage	23~30Vdc		
	Charging current	900mA Max.		
	Current consumption at standby	100mA Max.		
	Charging time	15s Typ. 25s Max.	25s Typ. 35s Max.	
Buffer mode	DC normal operating voltage	22Vdc / Vin-1Vdc		
	DC operating voltage range	22-29Vdc		
	Output current (max.)	20A	40A	
	Ripple & Noise (max.)	200mVp-p		
Protection		Over voltage / Overload / Short circuit / Reverse polarity		
Function	Selectable by switch	Fix 22Vdc(Default)	Buffering starts if terminal voltage falls below 22Vdc	
		Vin-1Vdc	Buffering starts if terminal voltage is decreased by >1Vdc	
	Control	Inhibit(I)	+>:Vs-V(I)<6Vdc: Buffer module ONVs-V(I)>10Vdc: Buffer module OFF 35Vdc/4mA Max.	
		Ready(R)	Charged ready: V(R)>+Vs - 2Vdc; Unready: V(R)<1Vdc 35Vdc/10mA Max.	
			Buffering(B)	Buffering: V(B)>+Vs - 2Vdc; Other mode: V(B)<1Vdc 35Vdc /10mA Max.
Supply Voltage(+Vs)	10~35Vdc/10mA(Connected to +V or external voltage)			
Working temperature		-25~+75°C (refer to output derating curve)		
Safety standards		IEC62368-1,UL62368-1 approved		
EMC standards		BS EN/EN55032 class B, EN61000-4-2,3,4,5,6,8		
Connection (screw DIN terminal)		Parallel: 4 poles(+Vx2, -Vx2), Function: I(Inhibit), R(Ready), B(Buffering), FG		
Dimension (WxHxD)(mm)		63x 125.2x 114.9		

20A DBUF20			40A DBUF40		
Model No.	DC Operating Voltage Range	Buffer Time	Model No.	DC Operating Voltage Range	Buffer Time
DBUF20-24	22~29Vdc	350ms@20A	DBUF40-24	22~29Vdc	250ms@40A
		700ms@10A			500ms@20A
		45s@0.1A			42s@0.1A

NEW



DUPS-20



DUPS-40

Features

- Uninterruptible DC-UPS controller
- **Parallel connected to DC BUS (Power supply + DC-UPS Module + Batteries + Load)**
- Allows 4AH~135AH lead-acid various battery capacities
- Complete diagnostic and monitoring for DC BUS OK, battery discharge, battery fail
- LED indicator for signal status
- Protections: Battery reverse polarity protection & Short circuit(By internal fuse) /Battery discharge / Over discharge current
- Cooling by free air convection
- Suitable for 24V system
- 3 years warranty

General Specification (Please refer to www.meanwell.com for detail spec.)

EAC UK CA CE

Model No.		DUPS20	DUPS40
DC BUS	Discharger Current	0~20A	0~40A
	BAT Voltage	21~29Vdc	
	PSU Voltage	24~29Vdc	
	Charging Current(typ.)	2A	
Battery	Normal BAT Voltage	24Vdc(2x12Vdc in series or 1x24Vdc)	
	BAT Type	Lead-acid battery	
	External battery(typ.)	24Vdc, 4AH~135AH	
Protections	BAT Polarity	By internal fuse	
	Short Circuit	This protection only works when batteries are not connected. External fuse is recommended and when batteries are connected	
	Over discharge current	21~26A	42~52A
	BAT deep discharge	Cut-off battery discharge by RELAY	
Functions	DC BUS OK	RELAY status	Short when DC voltage between 21~29Vdc(±2%), RELAY contact
		LED(Green)	DC BUS OK: Light, DC BUS fail: Dark
	BAT fail	RELAY status	Short when battery voltage falls below 22Vdc(±2%)or battery failure is observed through the battery test function,RELAY contact
		LED(Red)	Battery over-discharge warning or battery broken:Light Battery OK:Dark
	BAT discharge	RELAY status	Short when battery in discharge condition,RELAY contact
		LED(Yellow)	Battery discharge:Light Battery is not discharge:Dark
Working temperature		-30~+70°C (refer to output derating curve)	
Safety standards		EAC TP TC 004 approved	
EMC standards		BS EN/EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61204-3, EAC TP TC 020	
Connection (screw DIN terminal)		I/P: 2 poles, O/P: 2 poles screw DIN terminal,Single Output: 6 poles	
Dimension (WxHxD)(mm)		40x 125.2x 113.5	63x 125.2x 113.5

20A/40A

DUPS20/40

Model No.	DC BUS Voltage	DC BUS Current
DUPS20	24~29Vdc	20A
DUPS40	24~29Vdc	40A



Features

- Battery controller for DIN rail UPS system
- Parallel connected to DC BUS
- Suitable for 24V system up to 40A
- Installed on DIN Rail TS-35 / 7.5 or 15
- Built-in battery test function
- Battery polarity protection
- Relay contact signal output and LED indicator for DC BUS OK, Battery Fail, and Battery Discharge
- Cooling by free air convection
- 3 years warranty

It is highly recommended to use DUPS40 for all new project

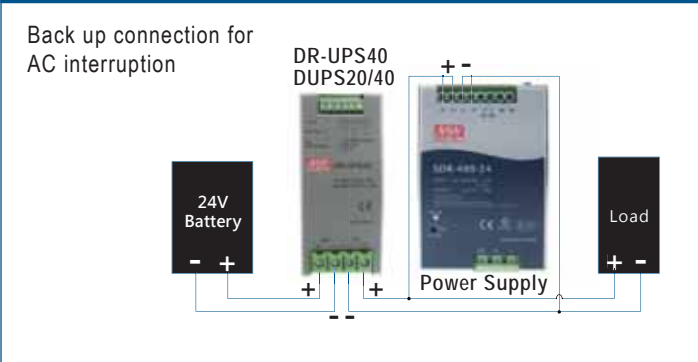


Model No.	DR-UPS40		
DC BUS	Discharge Current	0~40A	
	BAT voltage	21~29Vdc	
	PSU Voltage	24~29Vdc	
	Charging current (typ.)	2A	
Battery	External battery (typ.)	24Vdc, 4AH / 7AH / 12AH	
Functions	DC BUS OK	Relay status	Short when DC voltage between 21~29V(±3%), relay contacts
		LED(Green)	DC bus OK : Light; DC bus fail : Dark
	BAT fail	Relay status	Short when battery failure is observed through the battery test function, relay contacts
		LED(Red)	Battery over-discharge warning or battery broken: Light; Battery OK: Dark
	BAT discharge	Relay status	Short when battery in discharge condition, relay contacts
		LED(Yellow)	Battery discharging: light; Battery is not discharging or discharging current <2A: Dark
Working temperature	-20~+70°C		
EMC standards	BS EN/EN55032 class B, EN61000-4-2,3,4,5,6,8,11; EAC TP TC 020		
Connection	I/P: 2 poles, O/P: 2 poles screw DIN terminal, Single output: 6 poles		
Dimension (WxHxD)(mm)	55.5 x 125.5 x 100		

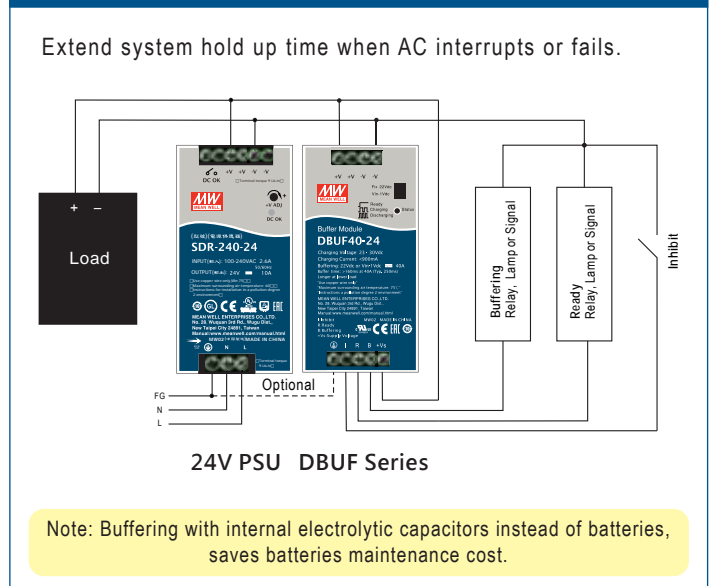
40A DR-UPS40

Model No.	DC BUS Voltage	DC BUS Current
DR-UPS40	24~29V	40A max.

DR-UPS40&DUPS20/40 Example of Application



DBUF20/40 Example of Application





Features

- **DIN Rail type** or **terminal block** mounted
- ICL-16: 23A inrush current limiting, 16A continuous
ICL-28: 48A inrush current limiting, 28A continuous
- 180~264VAC input
- Integrated by pass relay, no simple NTC
- Internal thermal protection
- -30~+70°C wide operating temperature
- **Over voltage category III**
- Operating altitude up to **5000 meters**
- Installed on DIN Rail TS-35/7.5 or 15 (ICL-16R/28R)

General Specification (Please refer to www.meanwell.com for detail spec.)



Model No.	ICL-16R	ICL-16L	ICL-28R	ICL-28L
AC input voltage range	180~264VAC, 50/60Hz			
AC inrush current limiting	23A max., 16A continuous		48A max. 28A continuous	
AC input power	3680VA (16Ax 230VAC)		6440VA (28Ax 230VAC)	
AC input consumption	<1.5W at 264VAC input		<2W at 264VAC input	
Internal relay limiting time (Ton power on)	300±50ms			
Internal relay	Limiting cycle	PSU setup time <250ms 1 cycle / 5min	PSU setup time 250~350ms 1 cycle / 1min	PSU setup time >350ms 5 cycle / 1min
	Release time	500±50ms		
Internal protection	Thermal fuse protects overload and fire			
Load capacity	2500µF max.		6000µF max.	
Working temperature	-30~+70°C			
Safety standards	IEC62368-1 (LVD)			
EMC standards	BS EN/EN55032 class B, EN61000-3-2, EN61000-4-2,3,4,5,6,8,11, EAC TP TC020			
Connection	ICL-16R/28R: I/P: 2 poles, O/P: 2 poles (Screw DIN terminal); ICL-16L/28L: I/P: 2 poles, O/P: 2 poles (Terminal block)			
Dimension (mm)	35x 90x 54.5 (WxHxD)	175x 42x 24 (LxWxH)	52.5x 90x 54.5 (WxHxD)	175x 42x 24 (LxWxH)

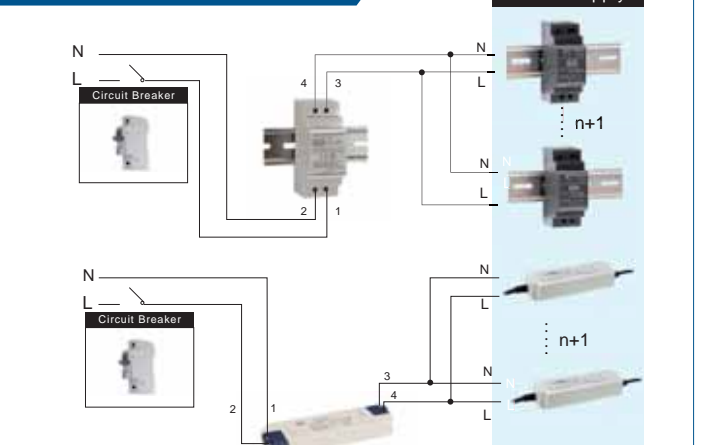
16A ICL-16R/L

Model No.	Inrush Current	Type.
ICL-16R	16A	DIN Rail
ICL-16L	16A	Terminal Block

28A ICL-28R/L

Model No.	Inrush Current	Type.
ICL-28R	28A	DIN Rail
ICL-28L	28A	Terminal Block

Example of Application



For the number of power supplies being able to be connected to ICL-16R/L and ICL-28R/L, please refer to the installation manual.