



*Your Reliable Power Partner*



# ***DIN Rail Power Supply***

*AC/DC Switching Power Supplies*



# Company Profile

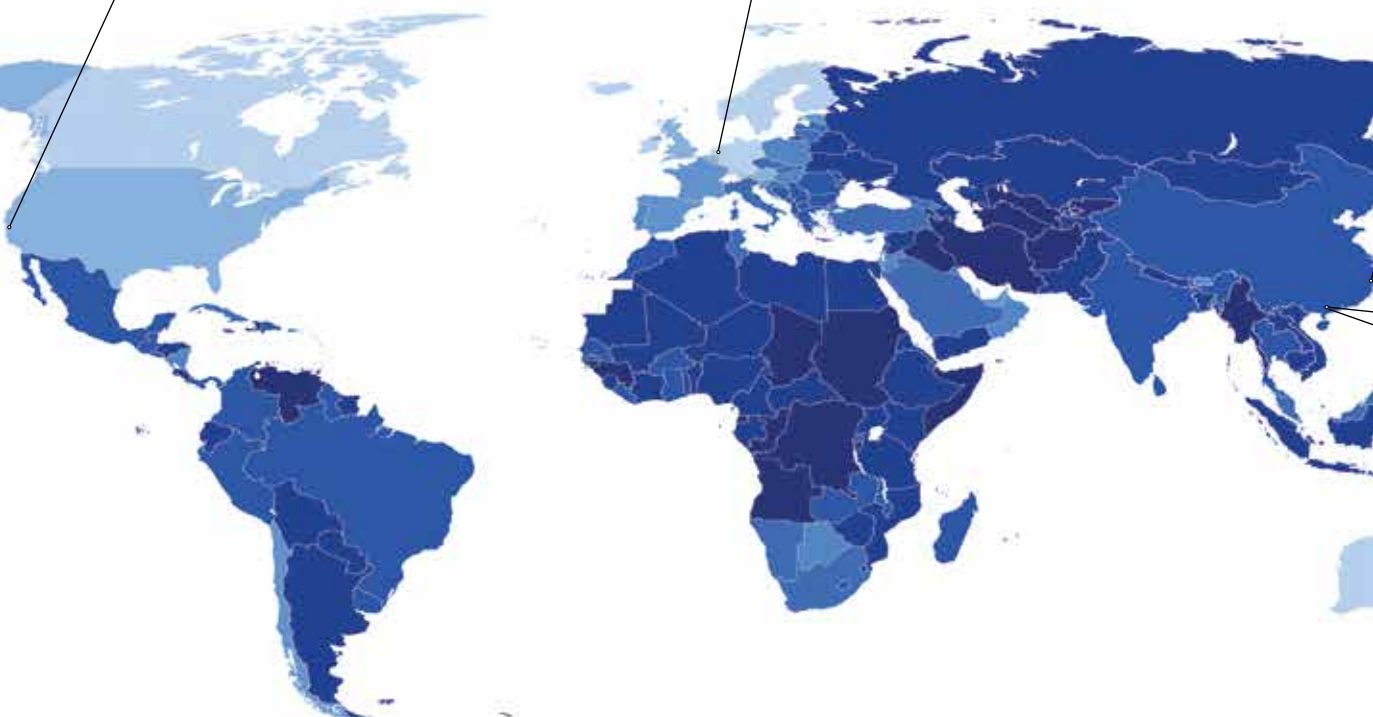
Established in 1982, MEAN WELL is a leading standard switching power supply manufacturers in the world. MEAN WELL currently operates under five companies in Taiwan, China, USA and Europe and three factories in Taiwan, GuangZhou and SuZhou. The product lines include AC/DC switching power supplies, DC/DC converters, waterproof LED drivers, adaptors, DC/AC inverters and battery chargers. We have over 10,000 standard models widely used in medical, automation, communication, LED lighting, display, and office automation fields.

The whole product line of MEAN WELL for DIN rail category has supplied more than 52 series and 165 models ranging from AC/DC power supply 10~960W, DC/DC Converter 15~480W and several supplementary units, covering inrush current limiter , redundancy module , buffer module and DC UPS functions.

MEAN WELL USA



MEAN WELL EUROPE



Besides thorough product categories, another highlight of MEAN WELL products is the complete safety approval, including UL, CUL, TUV, SEMI and GL safety regulations, also passing EN55032 electromagnetic compatibility (EMC) testing for customers to choose.

With more than almost 40 years of experience in R&D and production of standard power supplies, MEAN WELL has twelve product categories covering more than 10,000 models, to provide "One Stop Shopping" power solutions. Every product in the MEAN WELL range is the result of rigid procedures governing design, design verification test (DVT), design quality test (DQT), component selection, pilot-run production, and mass production.

With more than 200 distributors globally, the MEAN WELL products are distributed to over 80 countries worldwide. The small size orders can expect delivery within 24 hours without MOQ requirement. If you are looking for switching power supply with high reliability, good quality, reasonable price and full series products which can satisfy your various demands, MEAN WELL, a total solution provider, is definitely your first choice!



**MEAN WELL SUZHOU**



**MEAN WELL TAIWAN**



**MEAN WELL GUANGZHOU  
TIANHE R&D CENTER**



**MEAN WELL GUANGZHOU  
HUADU FACTORY**





# Reliable Quality

The brand name "MEAN WELL" is defined as "have good intentions". We strongly believe that the product quality is the life of power supply manufacturer. "To become the reliable power partner" has been the motivation for MEAN WELL to grow continuously.

In 1994, MEAN WELL acquired the ISO9001 certification and began to implement the total quality management (TQM) system, which are audited by TUV annually to continuous review and improvement. In April 2013, MEAN WELL acquired the ISO14000 certification and obtained the OHSAS18001 system (ESH, environmental safety and health) in 2015, to take the concept of environmental protection into action, and expect to create a safe and healthy life.



OHSAS18001



ISO9001



ISO14000

MEAN WELL DIN Rail power supply products comply with UL / CUL / TUV / CB / CE / GL / SEMI certificates, including UL508, UL1310, UL62368-1, TUV EN62368-1, TUV EN61558-1 /-2-16, IEC 62368-1, SEMI F47, GL, EN55011, EN55032.





MEAN WELL has a complete quality management system. To ensure product quality, 100% burn-in test, function test and pressure test have been applied in manufacturing process, while the MIL-105E sampling method used in IQC, PCBQC (semi-finished products testing) and FQC phases. In the R&D stage, MEAN WELL quality engineers customize the "Test Plan" for each product, to complete the verifications of DFMEA, DVT/DQT, ORT, EMC, drop test, vibration test, thermal shock test, and reliability test.

In production stage, the product engineers co-work with process engineers to review the pilot run, semi-finished products quality control, process checking, finished product quality control, and the feedback analysis as well as the production problems occurred.





# Product Range

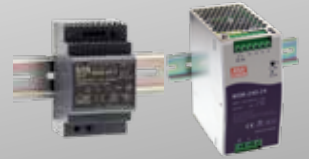


## AC/DC Power Supply

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- 10~960W
- 1 $\phi$ , 2 $\phi$ , 3 $\phi$ , AC input
- 5V~48V
- Class I & II models



## DC/DC Converter

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- 15~480W
- 2:1, 4:1 or 10:1 wide input range
- 3.3~48V
- -40~+85°C ultra-wide operating temp.
- EN50155 railway standard (120W~480W)



## Supplementary Units

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- 16A & 28A AC inrush current limiter
- 20A & 40A redundancy module
- 20A & 40A buffer module
- 40A DC UPS module

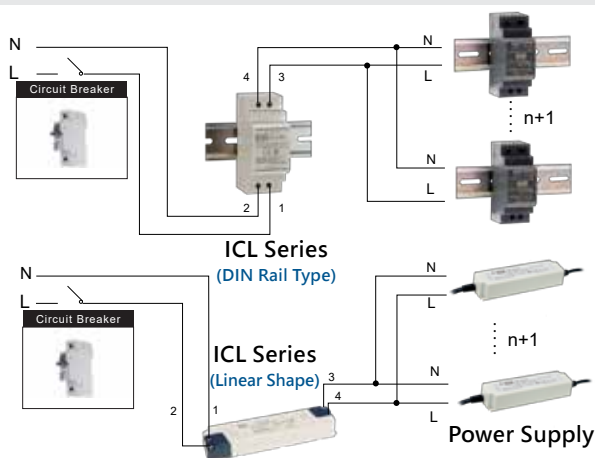


# Supplementary Units

## AC Inrush Current Limiter

### ICL Series

Allow more power supplies and large capacitive loads on the same circuit breaker.



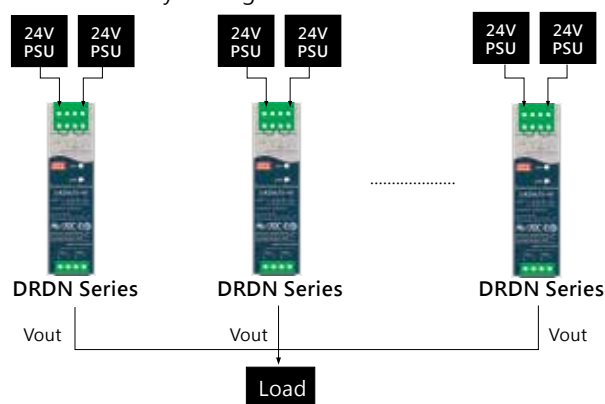
Note: Fewer circuit branches are required to support the same number of power supply installations, reduce system cost.

## Redundancy Module

### DRDN/ERDN/DR-RDN Series

Secure highest reliability and stability in 1+1 or 1+N.

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

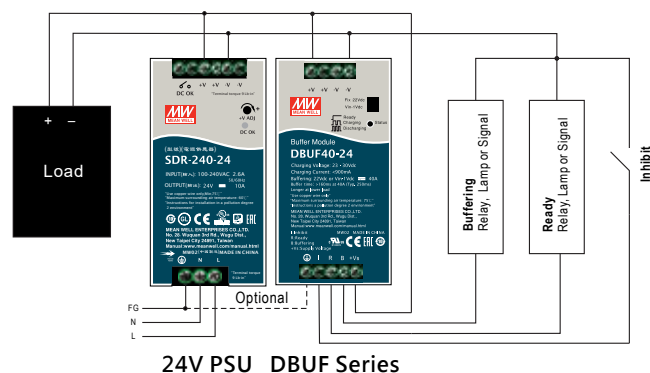


Note: 12V/ 24V/ 48V models are all applicable.

## Buffer Module

### DBUF Series

Extend system hold up time when AC interrupts or fails.

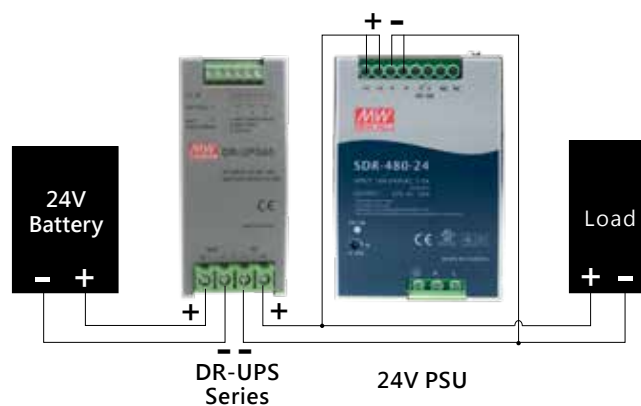


Note: Buffering with internal electrolytic capacitors instead of batteries, saves batteries maintenance cost.

## DC-UPS Module

### DR-UPS Series

Uninterruptible power supply with battery provides long buffer time when AC interrupts or fails.



Note: Buffering with external batteries, can ensure uninterrupted system operation when AC or DC power supply stops providing power.

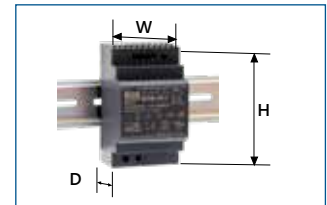
# HDR Series

## Plastic Case — 15~150W Slim Step Shape



### Features

- Isolation class II
- 1SU~6SU narrow width
- 85~264VAC input (277VAC operational)
- No load power consumption <0.3W
- Pass LPS (Limited power source)
- DC output voltage adjustable
- Protections : Short circuit / Overload / Over voltage
- Over voltage category III
- Cooling by free air convection
- -30~+70°C operating temperature
- DIN rail TS-35/7.5 or 15 mountable
- LED indicator for power on
- Suitable for building automation and control of household appliance
- 3 years warranty



Dimension (WxHxD)

HDR-15	17.5(1SU) x 90 x 54.5mm
HDR-30	35(2SU) x 90 x 54.5mm
HDR-60	52.5(3SU) x 90 x 54.5mm
HDR-100	70(4SU) x 90 x 54.5mm
HDR-150	105(6SU) x 90 x 54.5mm

### 15W



Model No.	Output	Tol.	R&N	Effi.
HDR-15-5	5V, 2.4A	±2.0%	80mV	80%
HDR-15-12	12V, 1.25A	±1.0%	120mV	85.5%
HDR-15-15	15V, 1.0A	±1.0%	120mV	86.5%
HDR-15-24	24V, 0.63A	±1.0%	150mV	88%
HDR-15-48	48V, 0.32A	±1.0%	240mV	88%

### 30W



Model No.	Output	Tol.	R&N	Effi.
HDR-30-5	5V, 3.0A	±2.0%	80mV	82%
HDR-30-12	12V, 2.0A	±1.0%	120mV	88%
HDR-30-15	15V, 2.0A	±1.0%	120mV	89%
HDR-30-24	24V, 1.5A	±1.0%	150mV	89%
HDR-30-48	48V, 0.75A	±1.0%	240mV	90%

### 60W



Model No.	Output	Tol.	R&N	Effi.
HDR-60-5	5V, 6.5A	±2.0%	80mV	85%
HDR-60-12	12V, 4.5A	±1.0%	120mV	88%
HDR-60-15	15V, 4.0A	±1.0%	120mV	89%

Model No.	Output	Tol.	R&N	Effi.
HDR-60-24	24V, 2.5A	±1.0%	150mV	90%
HDR-60-48	48V, 1.25A	±1.0%	240mV	91%

### 100W



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%

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

### 150W



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



# MDR Series

## Plastic Case — 10~96W Ultra Slim



### Features

- Isolation class I
- 85~264VAC input
- No load power consumption <0.75W (<1W for MDR-100)
- DC output voltage adjustable (MDR-20~100)
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Div 2 Hazardous Locations T4(MDR-40/60)
- DC OK signal output (MDR-10/20);  
DC OK relay contact (MDR-40/60/100)
- LED indicator for power on
- Can be installed on DIN rail TS-35 / 7.5 or 15
- Built-in active PFC and over temp. protection (MDR-100)
- 3 years warranty



#### Dimension (WxHxD)

MDR-10	22.5x 90x 100mm
MDR-20	22.5x 90x 100mm
MDR-40	40x 90x 100mm
MDR-60	40x 90x 100mm
MDR-100	55x 90x 100mm

### 10W



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

### 20W



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

### 40W



Model No.	Output	Tol.	R&N	Effi.
MDR-40-5	5V, 6.00A	±2%	80mV	78%
MDR-40-12	12V, 3.33A	±1%	120mV	86%
MDR-40-24	24V, 1.70A	±1%	150mV	88%
MDR-40-48	48V, 0.83A	±1%	200mV	88%

### 60W



Model No.	Output	Tol.	R&N	Effi.
MDR-60-5	5V, 10.0A	±2%	80mV	78%
MDR-60-12	12V, 5.00A	±1%	120mV	86%
MDR-60-24	24V, 2.50A	±1%	150mV	88%
MDR-60-48	48V, 1.25A	±1%	200mV	87%

### 96W



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

### HDR vs. MDR

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

# EDR/NDR Series

## Metal Case — 75~480W Slim & Economical



### Features

- 90~264VAC input
- Built-in active PFC function(NDR-240/480)
- High efficiency up to 92.5%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in constant current limiting circuit
- Cooling by free air convection
- Operating temperature: -20~+60°C(EDR), -20~+70°C(NDR)
- DC output voltage adjustable
- Can be installed on DIN rail TS-35 / 7.5 or 15
- 3 years warranty (2 years warranty for EDR)



Dimension (WxHxD)

EDR-75 32x 125.2x 102mm      EDR-150 40x 125.2x 113.5mm  
EDR-120 40x 125.2x 113.5mm



Dimension (WxHxD)

NDR-75 32x 125.2x 102mm      NDR-240 63x 125.2x 113.5mm  
NDR-120 40x 125.2x 113.5mm      NDR-480 85.5x 125.2x 128.5mm

### 75W



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

### 75W



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

### 120W



Model No.	Output	Tol.	R&N	Effi.
EDR-120-12	12V, 10A	±2.0%	100mV	85.0%
EDR-120-24	24V, 5.0A	±1.0%	120mV	87.5%
EDR-120-48	48V, 2.5A	±1.0%	150mV	88.5%

### 120W



Model No.	Output	Tol.	R&N	Effi.
NDR-120-12	12V, 10A	±2.0%	100mV	85.5%
NDR-120-24	24V, 5.0A	±1.0%	120mV	88.0%
NDR-120-48	48V, 2.5A	±1.0%	150mV	89.0%

### 150W



Model No.	Output (230VAC/115VAC)	Tol.	R&N	Effi.
EDR-150-24	24V, 6.5A/5.2A	±1.0%	150mV	87.0%

### 240W



Model No.	Output	Tol.	R&N	Effi.
NDR-240-24	24V, 10A	±1.0%	150mV	88.5%
NDR-240-48	48V, 5.0A	±1.0%	150mV	90.0%

### 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

### 480W



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

# SDR Series



## Metal Case — 75~960W Slim & High Performance

### Features

- 90~264VAC input (180~264VAC for SDR-960)
- Built-in active PFC function (SDR-120/240/480/960)
- High efficiency up to **94%**
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in constant current limiting circuit
- Cooling by free air convection
- **-30~+70°C** operating temperature
- Can be installed on DIN rail TS-35 / 7.5 or 15
- **Complete functions:**
  - ◆ **130~150% peak load** capability by series
  - ◆ **Current sharing** up to **3840W** (7+1 for SDR-480P, 3+1 for SDR-960)
  - ◆ **DC OK relay contact** (except for SDR-75)
  - ◆ Comply with **GL** (SDR-120~480), **SEMIF47** (SDR-75~960)
- DC output voltage adjustable
- 3 years warranty



#### Dimension (WxHxD)

SDR-75	32x 125.2x 102mm
SDR-120	40x 125.2x 113.5mm
SDR-240	63x 125.2x 113.5mm
SDR-480□	85.5x 125.2x 128.5mm
SDR-960	110x 125.2x 150mm

### 75W



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

### 120W



Model No.	Output	Tol.	R&N	Effi.
SDR-120-12	12V, 10A	±1.0%	100mV	89.0%
SDR-120-24	24V, 5.0A	±1.0%	100mV	91.0%
SDR-120-48	48V, 2.5A	±1.0%	120mV	90.5%

### 240W



Model No.	Output	Tol.	R&N	Effi.
SDR-240-24	24V, 10A	±1.0%	50mV	94.0%
SDR-240-48	48V, 5.0A	±1.0%	50mV	94.0%

### 480W



Model No.	Output	Tol.	R&N	Effi.
SDR-480□-24	24V, 20A	±1.2%	100mV	94.0%
SDR-480□-48	48V, 10A	±1.0%	120mV	94.0%

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

### 960W



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



# WDR/TDR Series



**Metal Case — 60~480W Slim Wide Input Range / 240~960W Slim 3-phase**

## Features

- AC input range:
  - WDR- 1 $\phi$  and 2 $\phi$ , 180~550VAC ultra-wide input
  - TDR - 3 $\phi$ , 340~550VAC input
- Compact size, narrow width
- Built-in active PFC function (except for WDR-60/120, TDR-240)
- High efficiency up to **94.5%**
- Built-in constant current limiting circuit
- Current sharing up to **3840W(3+1)** for TDR-960
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Working temperature: **-30~+70°C**
- Built-in DC OK relay contact (optional for TDR-480)
- Can be installed on DIN rail TS-35/7.5 or 15
- 3 years warranty



Dimension (WxHxD)

WDR-60 32x 125.2x 102mm      WDR-240 63x 125.2x 113.5mm  
 WDR-120 40x 125.2x 113.5mm      WDR-480 85.5x 125.2x 128.5mm



Dimension (WxHxD)

TDR-240 63x 125.2x 113.5mm      TDR-960 110x 125.2x 150mm  
 TDR-480 85.5x 125.2x 128.5mm

■ 60W cUL US ENEC EAC CE  
UL61010 EN61558

Model No.	Output	Tol.	R&N	Effi.
WDR-60-5	5V, 10A	±1.5%	100mV	84.5%
WDR-60-12	12V, 5.0A	±1.5%	120mV	86.5%
WDR-60-24	24V, 2.5A	±1.0%	150mV	89.0%
WDR-60-48	48V, 1.25A	±1.0%	200mV	90.5%

■ 120W cUL US EAC CB CE  
UL508

Model No.	Output	Tol.	R&N	Effi.
WDR-120-12	12V, 10A	±1.5%	120mV	89.5%
WDR-120-24	24V, 5.0A	±1.0%	120mV	91.0%
WDR-120-48	48V, 2.5A	±1.0%	150mV	92.0%

■ 240W FC UL EAC CB CE  
UL508

Model No.	Output	Tol.	R&N	Effi.
WDR-240-24	24V, 10A	±1.0%	150mV	91.0%
WDR-240-48	48V, 5.0A	±1.0%	150mV	91.0%

■ 480W FC UL EAC CB CE  
UL508

Model No.	Output	Tol.	R&N	Effi.
WDR-480-24	24V, 20A	±1.0%	100mV	92.0%
WDR-480-48	48V, 10A	±1.0%	150mV	93.0%

■ 240W cUL US ENEC EAC CE  
UL61010 EN61558

Model No.	Output	Tol.	R&N	Effi.
TDR-240-24	24V, 10A	±1.0%	100mV	92.0%
TDR-240-48	48V, 5.0A	±1.0%	120mV	92.0%

■ 480W FC UL EAC CB CE  
UL508

Model No.	Output	Tol.	R&N	Effi.
TDR-480-24	24V, 20A	±1.0%	150mV	92.0%
TDR-480-48	48V, 10A	±1.0%	240mV	92.0%

■ 960W Parallel FC UL EAC CB CE  
UL508

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

## WDR vs. TDR

Series	Difference	AC Input Voltage
	WDR	
TDR		3 $\phi$ ; 340~550VAC

# DRA/DRC Series

40~100W AC/DC Specific Power Supply

## 40W & 60W Output Current Programmable

### Features

- 90~264VAC input
- **Io can be trimmed 10~100% by 1~10Vdc, PWM signal or resistance**
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- -30~+70°C operating temperature
- Pass LPS
- LED indicator for power on
- Can be installed on DIN rail TS-35 / 7.5 or 15
- Suitable for machine vision inspection system and plant cultivation application
- 3 years warranty



### 40W

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

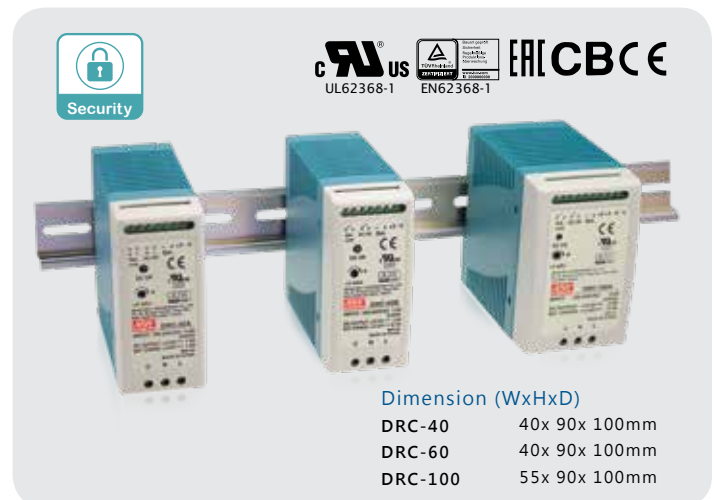
### 60W

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

## 40~100W Battery Charger with UPS Security Power

### Features

- 90~264VAC input
- **Single output with battery charger (UPS function)**
- **Alarm signal for AC OK and battery low**
- Protections: Short circuit / Overload / Over voltage / Battery low protection / Battery reverse polarity protection by fuse
- Cooling by free air convection
- Working temperature: -30~+70°C
- Pass LPS (DRC-40/60)
- LED indicator for power on
- Can be installed on DIN rail TS-35/7.5 or 15
- Suitable for security application
- 3 years warranty



### Dimension (WxHxD)

DRC-40	40x 90x 100mm
DRC-60	40x 90x 100mm
DRC-100	55x 90x 100mm

### 60W

Model No.	Output	Tol.	R&N	Effi.	Max.
DRC-60A	13.8V, 4.3A	±1%	120mV	86%	59W
	13.8V, 1.5A (Charger)				
DRC-60B	27.6V, 2.15A	±1%	200mV	88%	59W
	27.6V, 0.75A (Charger)				

### 100W

Model No.	Output	Tol.	R&N	Effi.	Max.
DRC-100A	13.8V, 7A	±1%	120mV	87%	97W
	13.8V, 2.5A (Charger)				
DRC-100B	27.6V, 3.5A	±1%	240mV	89%	97W
	27.6V, 1.25A (Charger)				

### 40W

Model No.	Output	Tol.	R&N	Effi.	Max.
DRC-40A	13.8V, 2.9A	±1%	120mV	86%	40W
	13.8V, 1.0A (Charger)				
DRC-40B	27.6V, 1.45A	±1%	200mV	87%	40W
	27.6V, 0.5A (Charger)				

# KNX Series

## 640mA & 1280mA Bus Power Supply

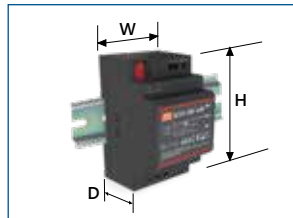


### Features

- EIB / KNX power supply with Integrated choke
- Compact size with 3SU/4SU width
- Safety extra low voltage (SELV)
- 180~264VAC input
- No load power consumption <0.5W
- Protections:
  - Short circuit / Overload (short-circuit-proof) / Over voltage
- Cooling by free air convection
- Isolation class I
- LED indicator for normal operation, bus reset and bus overload
- Over voltage category III
- -30~+70°C operating temperature
- Can be installed on DIN rail TS-35/7.5 or 15
- 3 years warranty



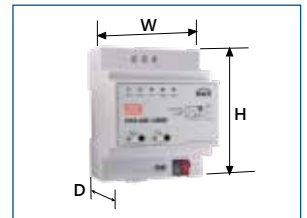
KNX-20E-640



W52.5x H90x D54.5mm



KNX-40E-1280



W72x H90x D57mm

### 20W



Model No.	V <sub>out1</sub> (with choke)	V <sub>out2</sub> (without choke)	I <sub>out</sub> (I <sub>1</sub> +I <sub>2</sub> )
KNX-20E-640	Bus, 30VDC	30VDC	640mA

### 40W



Model No.	V <sub>out1</sub> (with choke)	V <sub>out2</sub> (without choke)	I <sub>out</sub> (I <sub>1</sub> +I <sub>2</sub> )
KNX-40E-1280 <input type="checkbox"/>	Bus, 30VDC	30VDC	1280mA

: Blank, D ; Blank= Basic function, D=Diagnostic function

### Applications





# DDR Series

## 15~60W DC/DC Converter



### Features

- **Compact size** with 1SU~3SU width
- **4:1** wide input range
- Protections: Short circuit / Overload / Over voltage / **Input reverse polarity** / **Input under voltage**
- Cooling by free air convection
- 4000VDC I/O isolation (**Reinforced isolation**)
- **-40~+85°C** ultra-wide operating temperature
- DC output adjustable ( $\pm 10\%$ )
- Can be installed on DIN rail TS-35/7.5 or 15
- 3 years warranty



#### Dimension (WxHxD)

DDR-15	17.5x 90x 54.5mm
DDR-30	35x 90x 54.5mm
DDR-60	52.5x 90x 54.5mm

### 15W

Model No.	Vin	Vout	Iout	R&N	Effi.
DDR-15G-3.3	9~36Vdc	3.3Vdc	3.5A	50mV	84%
DDR-15G-5	9~36Vdc	5Vdc	3A	50mV	84%
DDR-15G-12	9~36Vdc	12Vdc	1.25A	60mV	85%
DDR-15G-15	9~36Vdc	15Vdc	1A	75mV	85%
DDR-15G-24	9~36Vdc	24Vdc	0.63A	100mV	86%

DDR-15L-3.3	18~75Vdc	3.3Vdc	4.5A	50mV	84%
DDR-15L-5	18~75Vdc	5Vdc	3A	50mV	85%
DDR-15L-12	18~75Vdc	12Vdc	1.25A	60mV	86%
DDR-15L-15	18~75Vdc	15Vdc	1A	75mV	86%
DDR-15L-24	18~75Vdc	24Vdc	0.63A	100mV	87%

### 30W

Model No.	Vin	Vout	Iout	R&N	Effi.
DDR-30G-5	9~36Vdc	5Vdc	6A	60mV	85%
DDR-30G-12	9~36Vdc	12Vdc	2.5A	75mV	86%
DDR-30G-15	9~36Vdc	15Vdc	2A	75mV	87%
DDR-30G-24	9~36Vdc	24Vdc	1.25A	100mV	89%

### 30W

DDR-30L-5	18~75Vdc	5Vdc	6A	60mV	86%
DDR-30L-12	18~75Vdc	12Vdc	2.5A	75mV	89%
DDR-30L-15	18~75Vdc	15Vdc	2A	75mV	90%
DDR-30L-24	18~75Vdc	24Vdc	1.25A	100mV	91%

### 60W

Model No.	Vin	Vout	Iout	R&N	Effi.
DDR-60G-5	9~36Vdc	5Vdc	10.8A	60mV	87.5%
DDR-60G-12	9~36Vdc	12Vdc	5A	75mV	91%
DDR-60G-15	9~36Vdc	15Vdc	4A	75mV	91%
DDR-60G-24	9~36Vdc	24Vdc	2.5A	100mV	91%

DDR-60L-5	18~75Vdc	5Vdc	12A	60mV	87.5%
DDR-60L-12	18~75Vdc	12Vdc	5A	75mV	91%
DDR-60L-15	18~75Vdc	15Vdc	4A	75mV	92%
DDR-60L-24	18~75Vdc	24Vdc	2.5A	100mV	92%

# DDR Series

## 120~480W DC/DC Converter



### Features

- ITE & Railway safety
- 2:1 wide input range
- **150% peak** load capability
- Protections:  
Short circuit / Overload / Over voltage /  
Over temperature / **DC Input reverse polarity** /  
**DC Input under voltage**
- Cooling by free air convection
- 4000VDC I/O isolation (**Reinforced isolation**)
- **-40~+70°C** wide operating temperature
- DC output adjustable
- DC OK relay contact and Remote ON/OFF (DDR-240/480 only)
- **Current sharing** up to **1920W**  
(**3+1: 960W** for DDR-240, **1920W** for DDR-480)
- Can be installed on DIN rail TS-35/7.5 or 15
- 3 years warranty



Dimension (WxHxD)

DDR-120	32x 125.2x 102mm
DDR-240	40x 125.2x 113.5mm
DDR-480	85.5x 125.2x 128.5mm

### 120W

Model No.	Vin	Vout	Iout	R&N	Effi.
DDR-120A-12	9~18Vdc	12Vdc	8.3A	50mV	88.5%
DDR-120A-24	9~18Vdc	24Vdc	4.2A	50mV	88.5%
DDR-120A-48	9~18Vdc	48Vdc	2.1A	50mV	88.5%
DDR-120B-12	16.8~33.6Vdc	12Vdc	10A	50mV	89.0%
DDR-120B-24	16.8~33.6Vdc	24Vdc	5A	50mV	89.5%
DDR-120B-48	16.8~33.2Vdc	48Vdc	2.5A	50mV	91.0%
DDR-120C-12	33.6~67.2Vdc	12Vdc	10A	50mV	89.5%
DDR-120C-24	33.6~67.2Vdc	24Vdc	5A	50mV	91.0%
DDR-120C-48	33.6~67.2Vdc	48Vdc	2.5A	50mV	92.0%
DDR-120D-12	67.2~154Vdc	12Vdc	10A	50mV	89.5%
DDR-120D-24	67.2~154Vdc	24Vdc	5A	50mV	91.0%
DDR-120D-48	67.2~154Vdc	48Vdc	2.5A	50mV	91.5%

### 240W

Model No.	Vin	Vout	Iout	R&N	Effi.
DDR-240B-24	16.8~33.6Vdc	24Vdc	10A	80mV	90.0%
DDR-240B-48	16.8~33.2Vdc	48Vdc	5A	100mV	90.0%
DDR-240C-24	33.6~67.2Vdc	24Vdc	10A	80mV	91.0%
DDR-240C-48	33.6~67.2Vdc	48Vdc	5A	100mV	92.0%
DDR-240D-24	67.2~154Vdc	24Vdc	10A	80mV	92.0%
DDR-240D-48	67.2~154Vdc	48Vdc	5A	100mV	92.5%

### 480W

Model No.	Vin	Vout	Iout	R&N	Effi.
DDR-480B-12	16.8~33.6Vdc	12Vdc	35A	100mV	90%
DDR-480B-24	16.8~33.6Vdc	24Vdc	20A	120mV	91%
DDR-480B-48	16.8~33.6Vdc	48Vdc	10A	150mV	91%
DDR-480C-12	33.6~67.2Vdc	12Vdc	35A	100mV	91%
DDR-480C-24	33.6~67.2Vdc	24Vdc	20A	120mV	92%
DDR-480C-48	33.6~67.2Vdc	48Vdc	10A	150mV	92%
DDR-480D-12	67.2~154Vdc	12Vdc	35A	100mV	91%
DDR-480D-24	67.2~154Vdc	24Vdc	20A	120mV	92%
DDR-480D-48	67.2~154Vdc	48Vdc	10A	150mV	93%

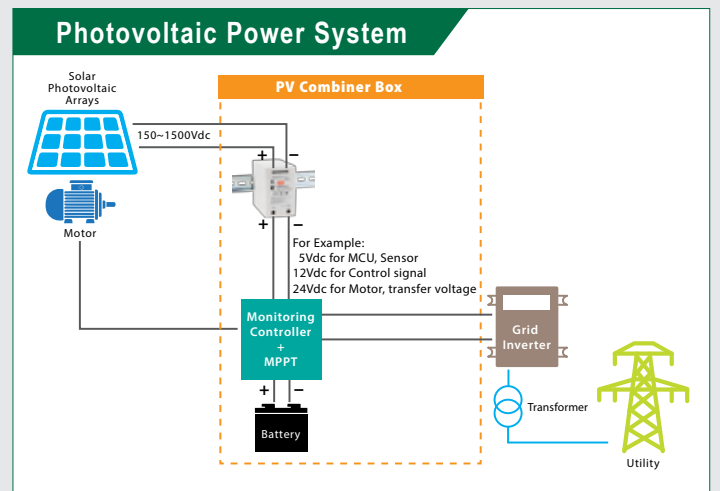
# DDRH/ICL Series



## 60W Ultra Wide Input DC/DC Converter

### Features

- 150~1500Vdc 10:1 ultra-wide input range
- Potted with silicone, dust and moisture proof
- 4KVac I/O high isolation (Reinforced isolation)
- Protections: Short circuit / Overload / Over voltage / Over temp. / DC input under voltage / DC input reverse polarity
- Cooling by free air convection
- -30~+80°C wide operating temp. (> +55°C de-rating)
- Over voltage category II
- Operating altitude up to 5000 meters
- DC OK relay contact
- Can be installed on DIN rail TS-35/7.5 or 15
- DC output voltage adjustable
- IEC62109-1 (LVD) approved
- Suitable for photovoltaic power generation, 380Vdc DC power distribution system or high voltage converter to low voltage
- 3 years warranty



### 60W

Model No.	Vin	Vout	Iout	R&N	Effi.
DDRH-60-5	150~1500Vdc	5V	10A	100mV	81%
DDRH-60-12	150~1500Vdc	12V	5A	120mV	85%
DDRH-60-24	150~1500Vdc	24V	2.5A	150mV	87%
DDRH-60-48	150~1500Vdc	48V	1.25A	200mV	88%

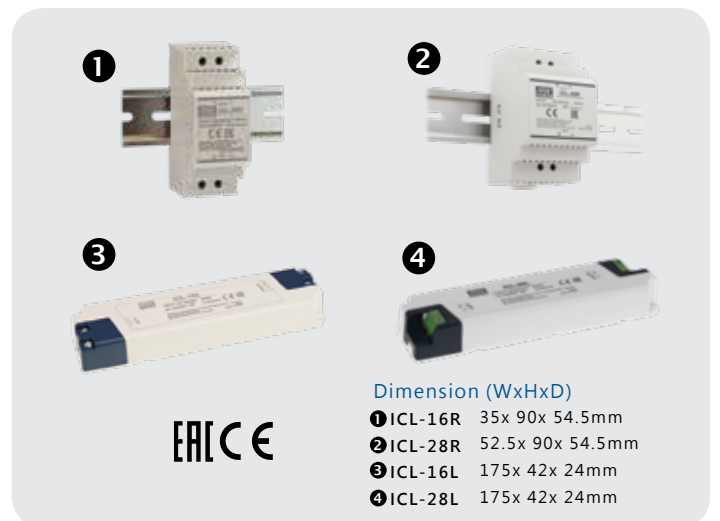
## 16A & 28A AC Inrush Current Limiter

### Features

- R: DIN Rail type or L: terminal block mounted
- ICL-16: 23A inrush current limiting, 16A continuous
- ICL-28: 48A inrush current limiting, 28A continuous
- 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

### 16A (ICL-16R/L)

Model No.	Inrush Current	Input
ICL-16R	16A	180~264Vac
ICI-16L	16A	180~264Vac



### 28A (ICL-28R/L)

Model No.	Inrush Current	Input
ICL-28R	28A	180~264Vac
ICI-28L	28A	180~264Vac



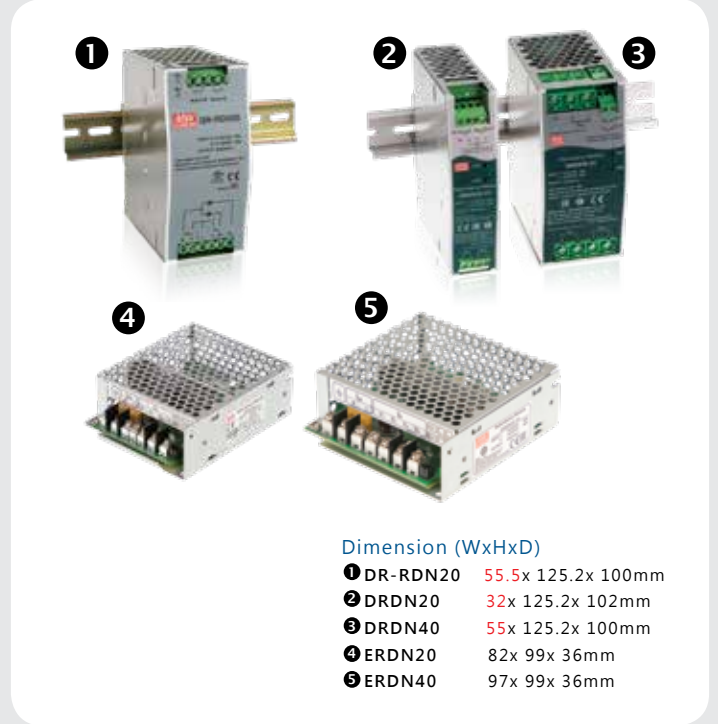
# DRDN/DR-RDN series

## 20A & 40A Redundancy Module

DRDN-20/40, ERDN20/40 and DR-RDN20 series are 20A/40A power supply redundancy modules, which can be used with the backup power supply to improve the stability and reliability of the overall system.

### Features

- Output current 20A & 40A
- Support 1+1 and N+1 redundancy system
- Suitable for redundancy operation of 5V/12V/24V/48V system
- 2 channels DC input and 1 channel DC input
- 2 channels DC OK relay contact
- -40~+80°C ultra wide operating temperature
- 2 dry relay contact for monitoring output status, and LED indicator for input failure alarm
- 3 years warranty



Model No.	Nominal Voltage	Input / Output Current
DR-RDN20	24V, 20A	2x10A / 20A



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

□ = 12, 24, 48



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

□ = 12, 24, 48



Model No.	Nominal Voltage	Input / Output Current
ERDN20-□	5V, 12V, 24V, 48V	2x10A / 20A

□ = 5, 12, 24, 48



Model No.	Nominal Voltage	Input / Output Current
ERDN40-□	12V, 24V, 48V	2x20A / 40A

□ = 12, 24, 48

### DR-RDN20 vs. DRDN&ERDN

Series	Difference	Generation	Output Current	System Voltage	Working Temp.	Case Size
DR-RDN20		Old	20A	24V	-40~+70°C	20A: 55.5x 125.2x 100mm
DRDN20/40		New	20A/40A	12V, 24V, 48V	-40~+80°C	20A: 32x 125.2x 102mm
ERDN20/40	5V, 12V, 24V, 48V			40A: 55.5x 125.2x 100mm		

# DBUF/DR-UPS40



## 20A & 40A Buffer Module

**DBUF20/40** buffer modules are supplementary devices for regulated DC 24V power supplies. The buffer module utilizes maintenance-free electrolytic capacitors to store energy, thus eliminates the need of periodic replacement as compared to costlier batteries which also have shorter functional life span.



### 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

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

## 40A DC UPS Module

**DR-UPS40** is a 40A max. DC UPS (battery control) module for the 24VDC power system. Accompany with external batteries, it can back-up up to 40A of current to critical loads for certain period of time depending on the capacity of batteries. With complete monitoring signals / LED indicators for DC BUS OK, Battery Fail, Battery Discharge, and the repeated Battery Test function, users can customize their own DC UPS system to back up critical loads and capture the status of the whole system easily.



### Features

- Battery controller for DIN rail **UPS system, parallel connected to DC BUS**
- Suitable for 24V system up to 40A
- Battery polarity protection
- Relay contact signal output and LED indicator for DC BUS OK, Battery Fail, and Battery Discharge
- -20~+70°C operating temperature
- 3 years warranty

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

# Selection Guide

## AC/DC

Picture	Model	Power (W)	PFC	Input voltage (Vac)	Output voltage (Vdc)	Dimension (mm)	Key features	Page
	HDR-15	15	-	85~277	5, 12, 15, 24, 48	17.5 x 90 x 54.5	 Class II Slim <b>step shape</b>	7
	HDR-30	30				35 x 90 x 54.5		
	HDR-60	60				52.5 x 90 x 54.5		
	HDR-100	100			12, 15, 24, 48	70 x 90 x 54.5		
	HDR-150	150			105 x 90 x 54.5			
	MDR-10	10	-	85~264	5, 12, 15, 24	22.5 x 90 x 100	 Class I   Class I Div 2 / HL (MDR-40/60)	8
	MDR-20	20						
	MDR-40	40			5, 12, 24, 48	40 x 90 x 100		
	MDR-60	60						
	MDR-100	96			12, 24, 48	55 x 90 x 100		
	EDR-75	75	-	90~264	12, 24, 48	32 x 125.2 x 102	 Class I Slim & <b>Low cost</b>	9
	EDR-120	120						
	EDR-150	150			24	40 x 125.2 x 113.5		
	NDR-75	75	-	90~264	12, 24, 48	32 x 125.2 x 102	 Class I Slim & <b>Economical</b>	9
	NDR-120	120						
	NDR-240	240	V		24, 48	63 x 125.2 x 113.5		
	NDR-480	480			85.5 x 125.2 x 128.5			
	SDR-75	75	-	88~264	12, 24, 48	32 x 125.2 x 102	 Class I  Parallel (SDR-480P/960)  DC OK (except for SDR-75)  Peak 150% load (130% for SDR-960) Slim & <b>High Performance</b>	10
	SDR-120	120						
	SDR-240	240	V	90~264	24, 48	63 x 125.2 x 113.5		
	SDR-480P	480			85.5 x 125.2 x 128.5			
	SDR-960	960			180~264	110 x 125.2 x 150		
	WDR-60	60	-	180~550 1φ & 2φ	5, 12, 24, 48	32 x 125.2 x 102	 Class I Slim & <b>Wide input range</b>	11
	WDR-120	120						
	WDR-240	240	V		24, 48	63 x 125.2 x 113.5		
	WDR-480	480			85.5 x 125.2 x 128.5			

Picture	Model	Power (W)	PFC	Input voltage (Vac)	Output voltage (Vdc)	Dimension (mm)	Key features	Page
	TDR-240	240	-	340~550 3φ (2φ possible)	24, 48	63 x 125.2 x 113.5	 	11
	TDR-480	480	V			85.5 x 125.2 x 128.5		
	TDR-960	960				110 x 125.2 x 150		
	DRA-40	40	-	90~264	12, 24	40 x 90 x 100	Io programmable 10~100%	12
	DRA-60	60						
	DRC-40	40	-	90~264	13.8, 27.6	40 x 90 x 100	Battery charger with UPS security power	12
	DRC-60	60				55 x 90 x 100		
	DRC-100	100						
	KNX-20E-640	20	-	180~264	30	52.5 x 90 x 55		13
	KNX-40E-1280	40				72 x 90 x 57		

## DC/DC

Picture	Model	Power (W)	Input voltage (Vdc)	Output voltage (Vdc)	Dimension (mm)	Key features	Page
	DDR-15	15	G: 9~36 L: 18~75	3.3, 5, 12, 15, 24	17.5 x 90 x 54.5		14
	DDR-30	30		5, 12, 15, 24	35 x 90 x 54.5		
	DDR-60	60			52.5 x 90 x 54.5		
	DDR-120	120	A: 9~18 B: 16.8~33.6 C: 33.6~67.2 D: 67.2~154	12, 24, 48	32 x 125.2 x 102	 EN50155	15
	DDR-240	240		24, 48	40 x 125.2 x 113.5		
	DDR-480	480			85.5 x 125.2 x 128.5		
	DDRH-60	60	150~1500	5, 12, 24, 48	57 x 93.5 x 105	 Solar PV	16

## Peripheral Module

Picture	Model	Input voltage (Vdc)	Output (A)	Dimension (mm)	Key features	Page
	ICL-16R	180~264Vac	16	35 x 90 x 54.5	16A AC inrush current limiter	16
	ICL-16L			175 x 42 x 24		
	ICL-28R		28	52.5 x 90 x 54.5	28A AC inrush current limiter	
	ICL-28L			175 x 42 x 24		
	DR-RDN20	24	20	55.5 x 125.2 x 100	20A redundancy module	17
	DRDN20	12, 24, 48	20	32 x 125.2 x 102	20A & 40A redundancy module	
	DRDN40		40	40 x 125.2 x 113.5		
	ERDN20	5, 12, 24, 48	20	82 x 99 x 36	20A & 40A redundancy module	17
	ERDN40	12, 24, 48	40	97 x 99 x 36		
	DR-UPS40	24	24Vdc	55.5 x 125.2 x 100	40A DC UPS module	18
	DBUF20	24	20	63 x 125.2 x 114.9	Electrolytic capacitor, Buffer time 350ms@20A, 250ms@40A	18
	DBUF40		40			

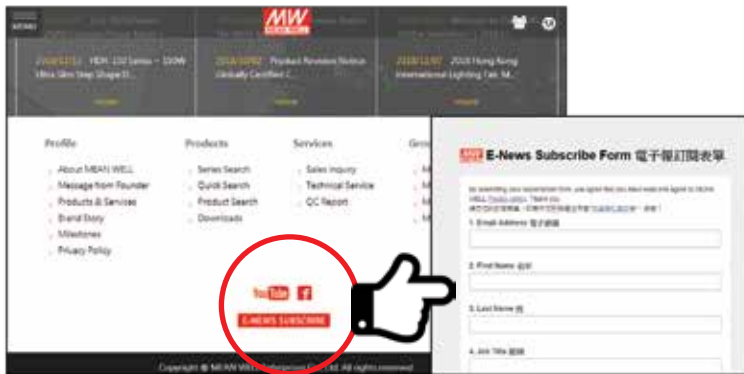


# Safety Chart

Series Name	Safety										EMC	
	UL508	UL61010	UL62368-1	TUV EN62368-1	TUV EN61558-1, -2-16	BSMI	EAC	RCM	CB	CE	EN5032 Class	EN50491-5-1, -5-2, -5-3
HDR-15/30/60/100	●		●		●	●	●	●	●	●	B	
HDR-150		●	●		●		●		●	●	B	
MDR-10/20	●			●		●	●	●	●	●	B	
MDR-40/60	●		●	●		●	●	●	●	●	B	
MDR-100	●			●		●	●	●		●	B	
EDR-75/120/150	●			●			●	●	●	●	A	
NDR-75/120	●			●			●	●	●	●	B	
NDR-240/480	●			●		●	●	●	●	●	B	
SDR-75/240	●			●			●		●	●	B	
SDR-120/240/480 <sup>P</sup> /960	●			●		●	●		●	●	B	
WDR-60		●			●		●			●	B	
WDR-120/240/480	●						●		●	●	B	
TDR-240		●			●		●			●	B	
TDR-480/960	●						●		●	●	B	
DRA-40/60			●	●			●		●	●	B	
DRC-40/60/100			●	●			●		●	●	B	
KNX-20E-640					●		●			●		●
KNX-40E-1280					●		●			●		●
DDR-15/30/60							●	●		●	B	
DDR-120/240/480							●	●		●	B	
DDRH-60							●			●	A	
ICL-16R/L							●			●	B	
ICL-28R/L							●			●	B	
DR-RDN20	●						●			●	B	
DRDN20/40			●				●		●	●	B	
ERDN20/40			●				●		●	●	B	
DBUF20/40			●				●		●	●	B	
DR-UPS40							●			●	B	

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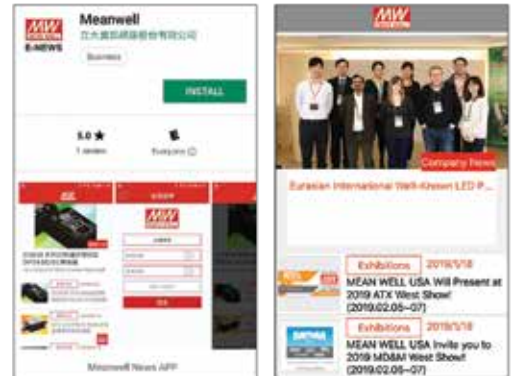
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**Taiwan** (Headquarters)

**MEAN WELL ENTERPRISES CO., LTD.**

No. 28, Wuquan 3rd Road, Wugu District,  
New Taipei City, Taiwan, 24891

**Tel** +886-2-2299-6100(rep.)

**Fax** +886-2-2299-6200(rep.) +886-2-2298-0818(sales)

**e-mail** info@meanwell.com

**Web** www.meanwell.com

**U.S.A.**

**MEAN WELL USA, INC.**

44030 Fremont Blvd., Fremont, CA 94538, U.S.A.

**Tel** +1-510-683-8886

**Fax** +1-510-683-8899

**e-mail** info@meanwellusa.com **Web** www.meanwellusa.com

**Europe**

**MEAN WELL EUROPE B.V.**

Langs de Werf 8, 1185XT Amstelveen, the Netherlands

**Tel** +31-20-758-6000

**Fax** +31-20-758-6001

**e-mail** info@meanwell.eu **Web** www.meanwell.eu



**info@meanwell.com**  
**www.meanwell.com**



**China**

**MEAN WELL (GUANGZHOU) ELECTRONICS CO., LTD.**

No.11, Jingu South Road, Huadong Town, Huadu District,  
Guangzhou, Guangdong, China

**Tel** +86-20-3773-7100 / 400-800-3608(sales)

+86-755-2359-1630(Shengzhen Office)

**R&D Center**

2F, A Building, Yuean Industry Park, Huangcun,  
Dongpu Town, Tianhe District, Guangzhou, China  
Post Code: 510660

**Tel** +86-20-2887-1200(rep.)

**Fax** +86-20-8201-0507

**e-mail** info@meanwell.com.cn

**Web** www.meanwell.com.cn

**SUZHOU MEAN WELL TECHNOLOGY CO., LTD.**

No.77, Jian-Min Rd. Dong-Qiao, Pan-Yang Ind. Park,  
Huang-Dai Town, Xiang-Cheng District,  
Suzhou, Jiang-Su, China

**Tel** +86-512-6508-8600

+86-10-5200-1817(Beijing Office)

**Fax** +86-512-6508-8700

**e-mail** info@meanwell.cc

**Web** www.meanwell.cc

