

SUSTAINABLE
DEVELOPMENT
GROUP



DC/DC Converter Product Line Introduction

Product Strategy Center info@meanwell.com

MEAN WELL



▼ Introduction

▼ Product Category and Road Map

▼ Key Features

▼ Advantages

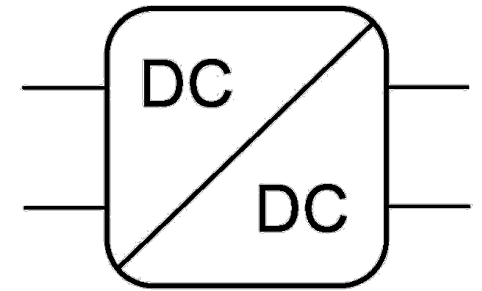
▼ Applications

MEAN WELL

Introduction

Why Choose DC/DC Converter?

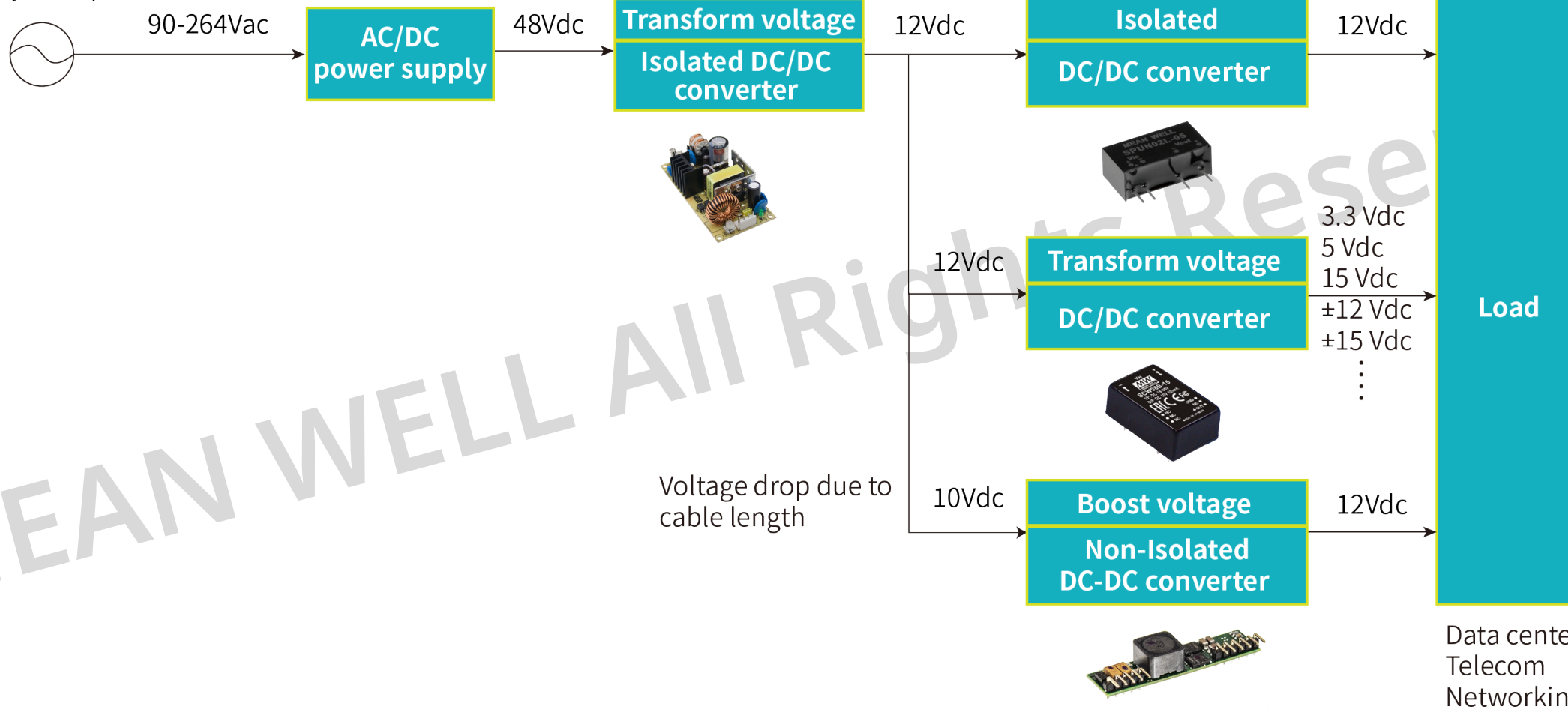
1. AC-DC rectifier + DC-DC **point-of-load** application
2. Long wiring causes **voltage drop**, add DC-DC to pull up voltage and **solve voltage drop issue**
3. **For locations without AC power**, DC-DC converter provides power to load from battery or renewable energy sources
4. **Reduce ripple and noise**
5. **Additional isolation** improves equipment safety



Introduction

AC/DC+DC/DC Point-of-Load Application

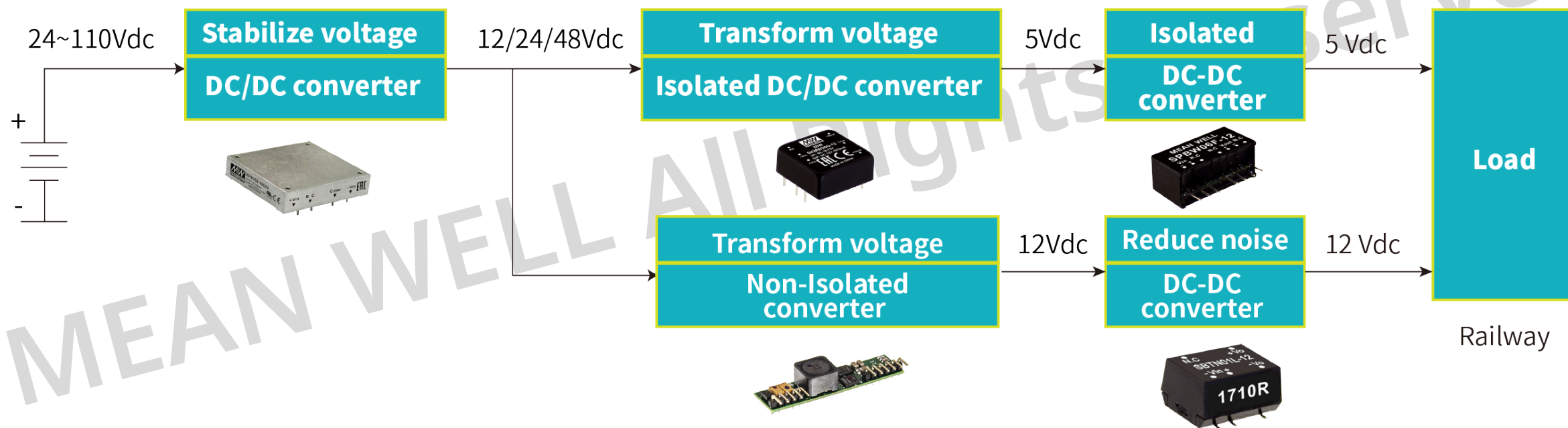
Utility AC input



Introduction

No Utility AC(1) — Power From DC Source

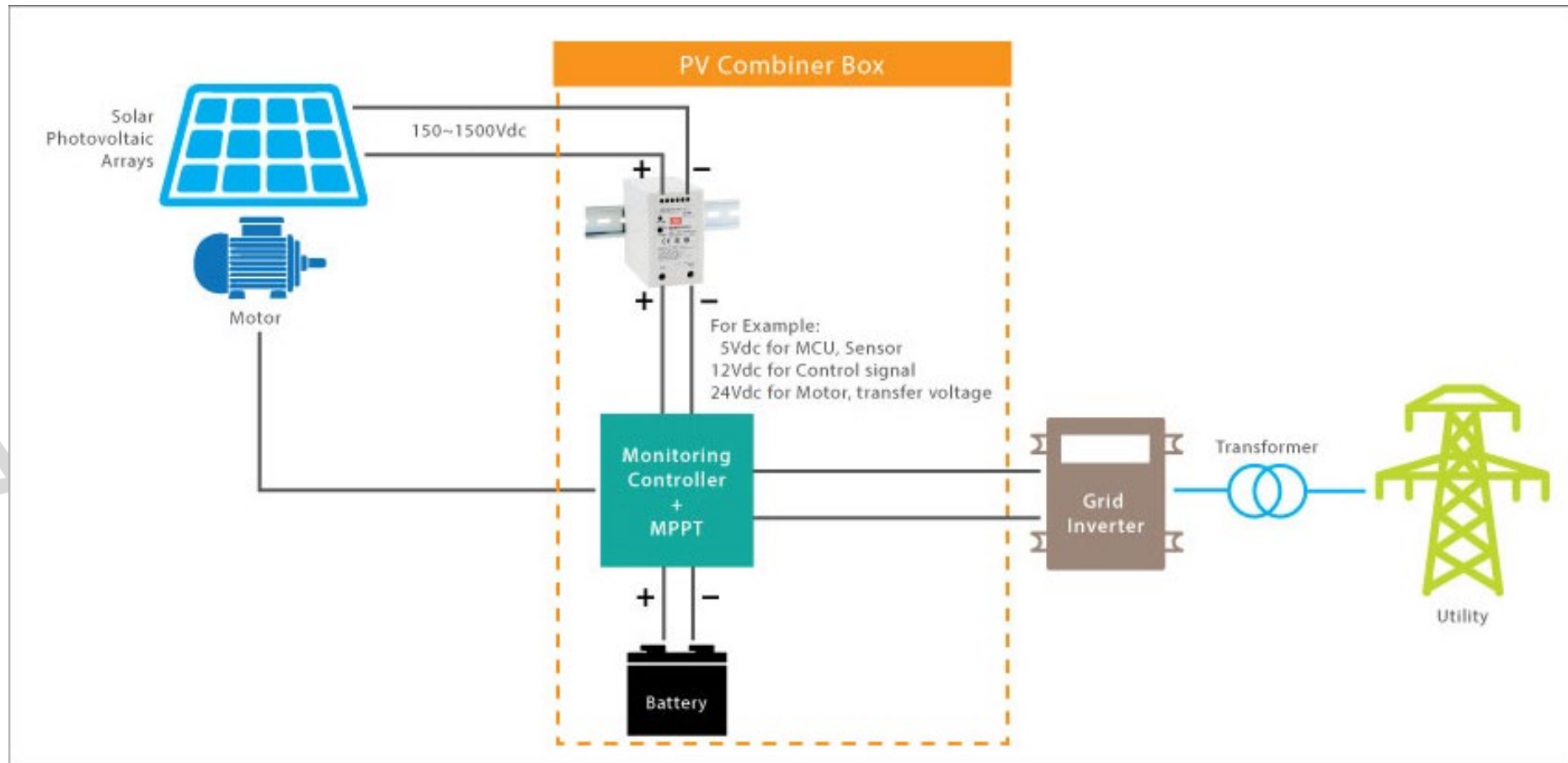
Railway / Bus / Boat



Introduction

No Utility AC(2) — Power From Solar Panel

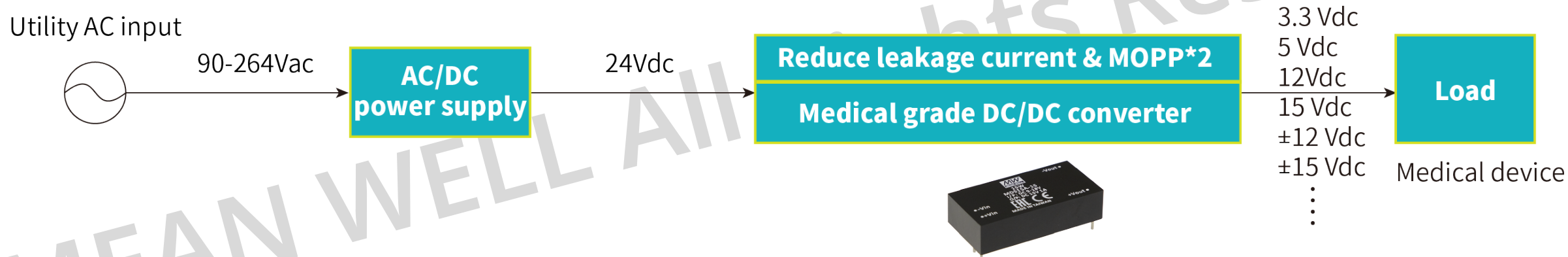
In the suburbs or mountains



Introduction

Additional Isolation

Upgrade System Safety



Product Category

※ Blue words are new products

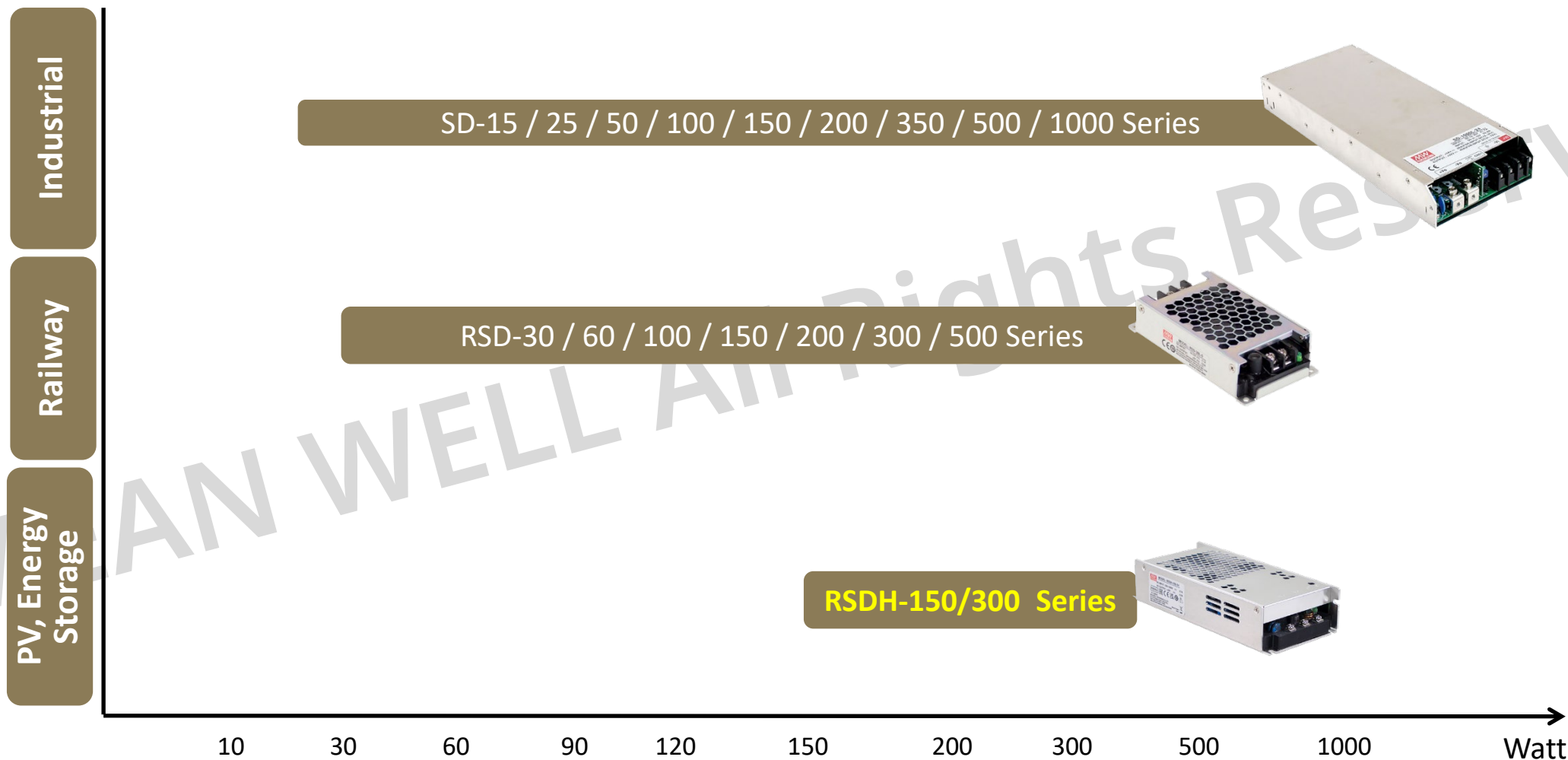
※ Please click on series names for related introduction webpages or specifications.

Type	Photo	Series
Enclosed		15~1000W SD series — Industrial 30~500W RSD series — Industrial + Railway 150~300W RSDH series — Solar PV + Energy storage
DIN rail		15~480W DDR series — Industrial + Railway 15~240W DDRH series — Solar PV + Energy storage + High DC BUS system
PCB		15~40W PSD series — Industrial
On-board		Potted — 0.5~150W SMD , SIP , DIP24 , 1" x 1" , 2" x 1" , 2" x 2" and Brick Non-Potted — 5~15W NSD series — Isolated 35~100W NID series — Non-isolated

Road Map

Enclosed Type

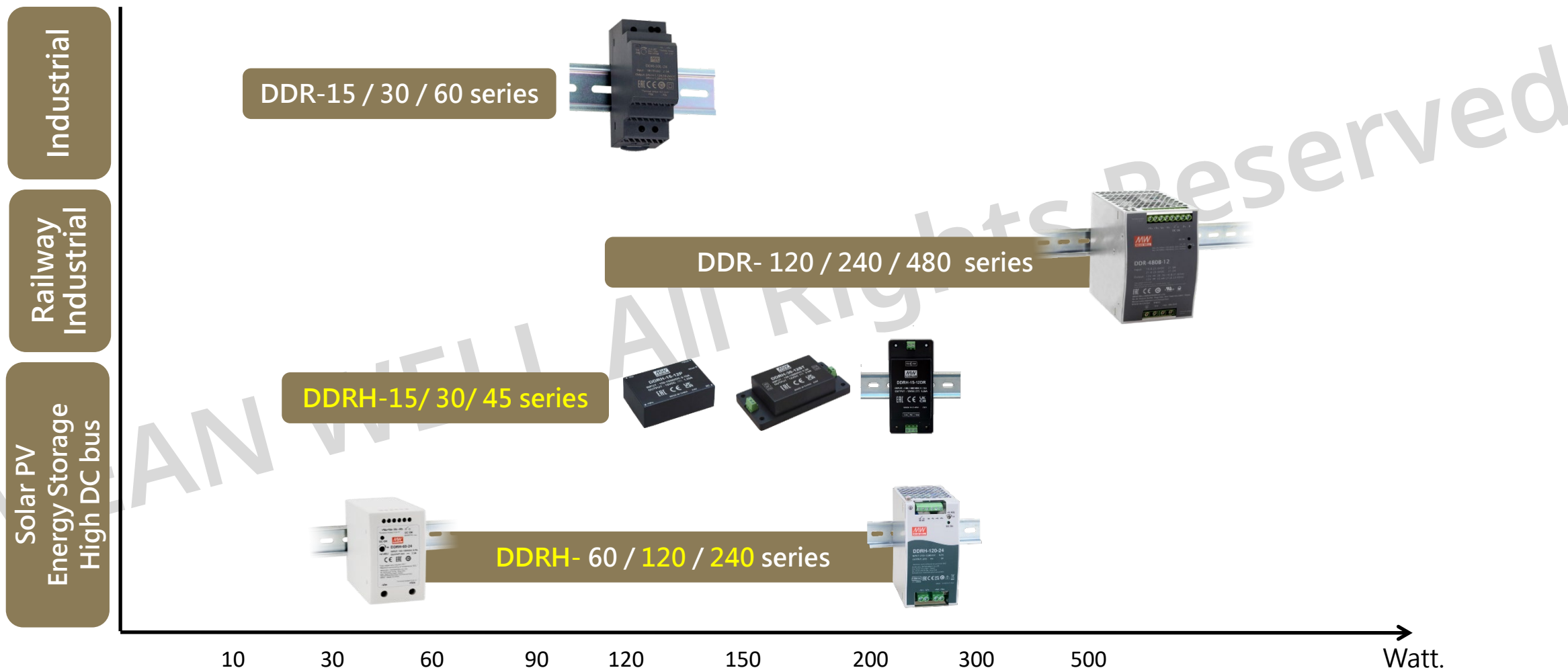
※ Yellow words are new products



Road Map

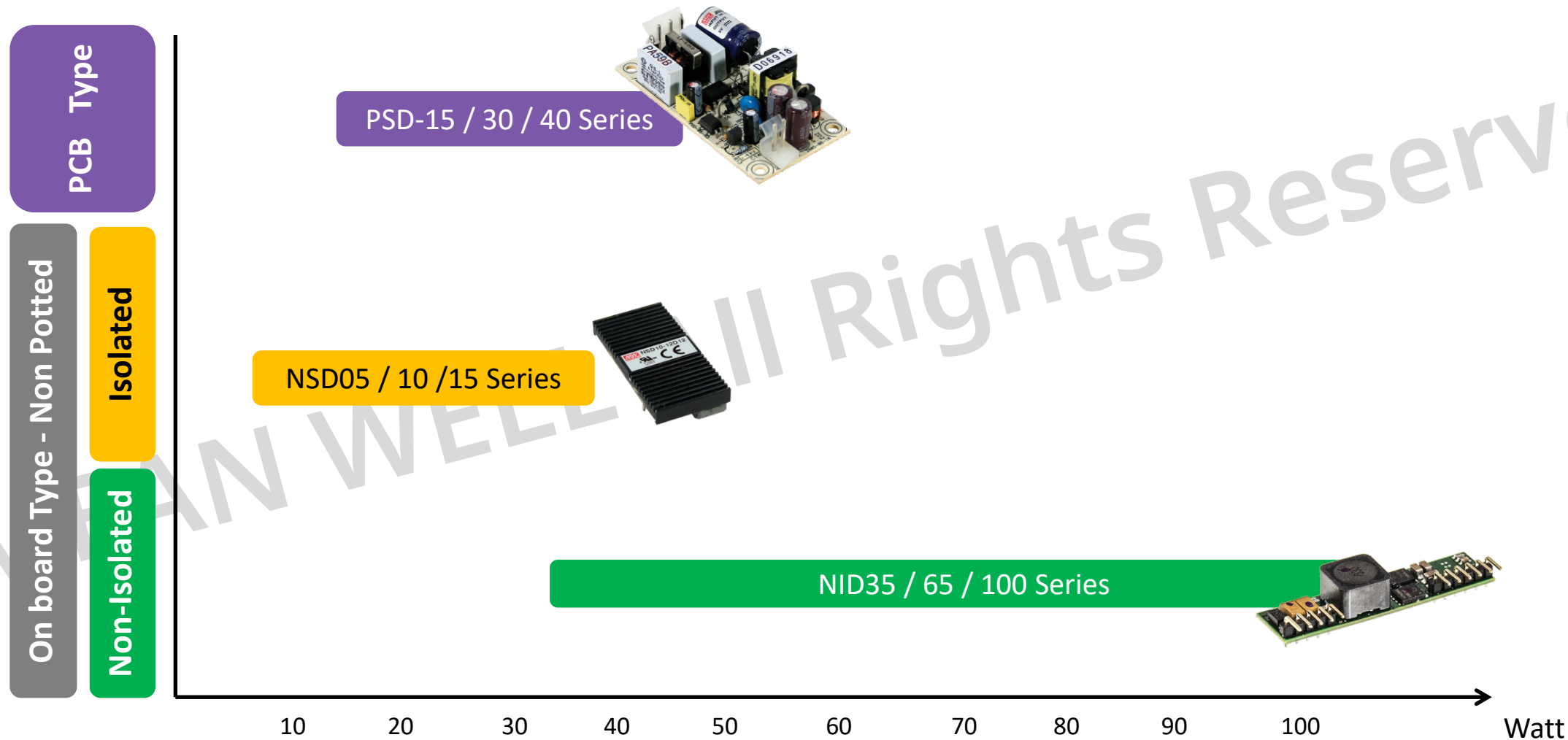
DIN Rail Type

※ Yellow words are new products



Road Map

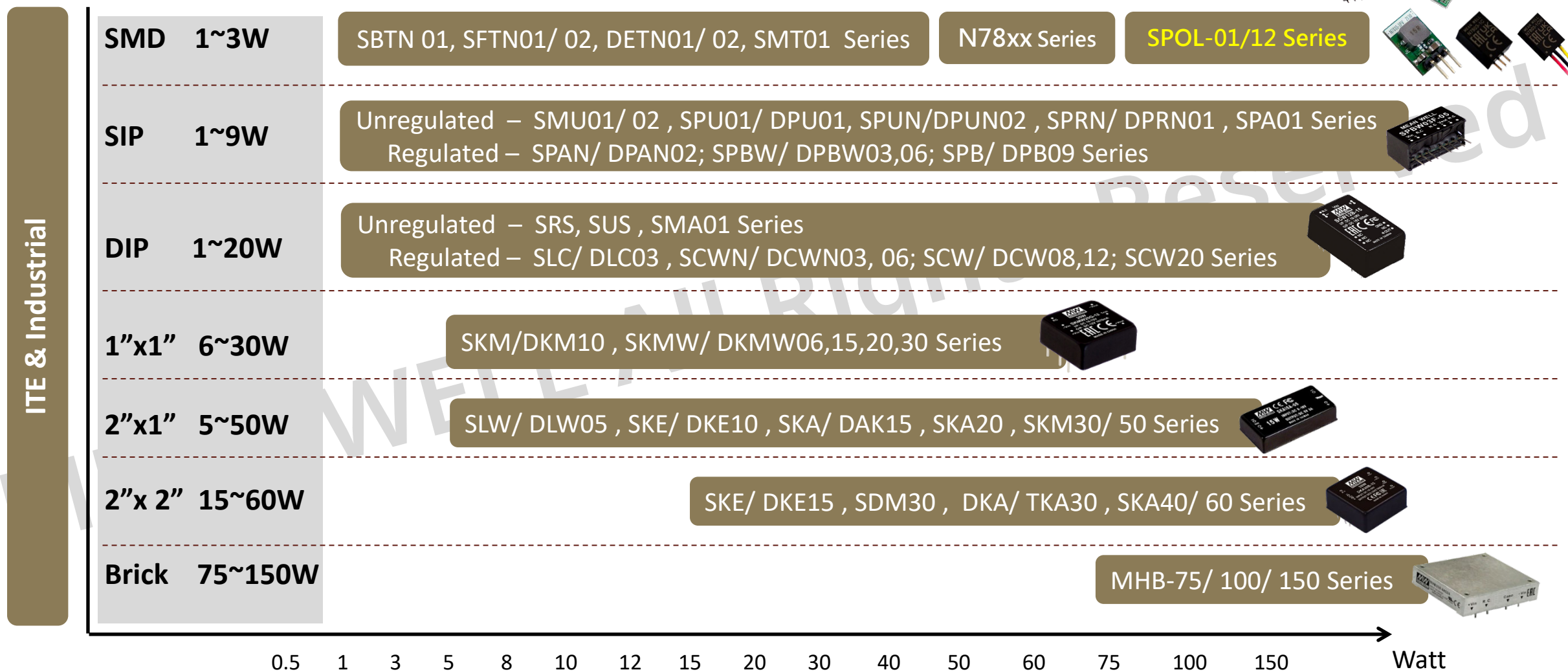
PCB & On Board Type



Road Map

On Board Type with Potted

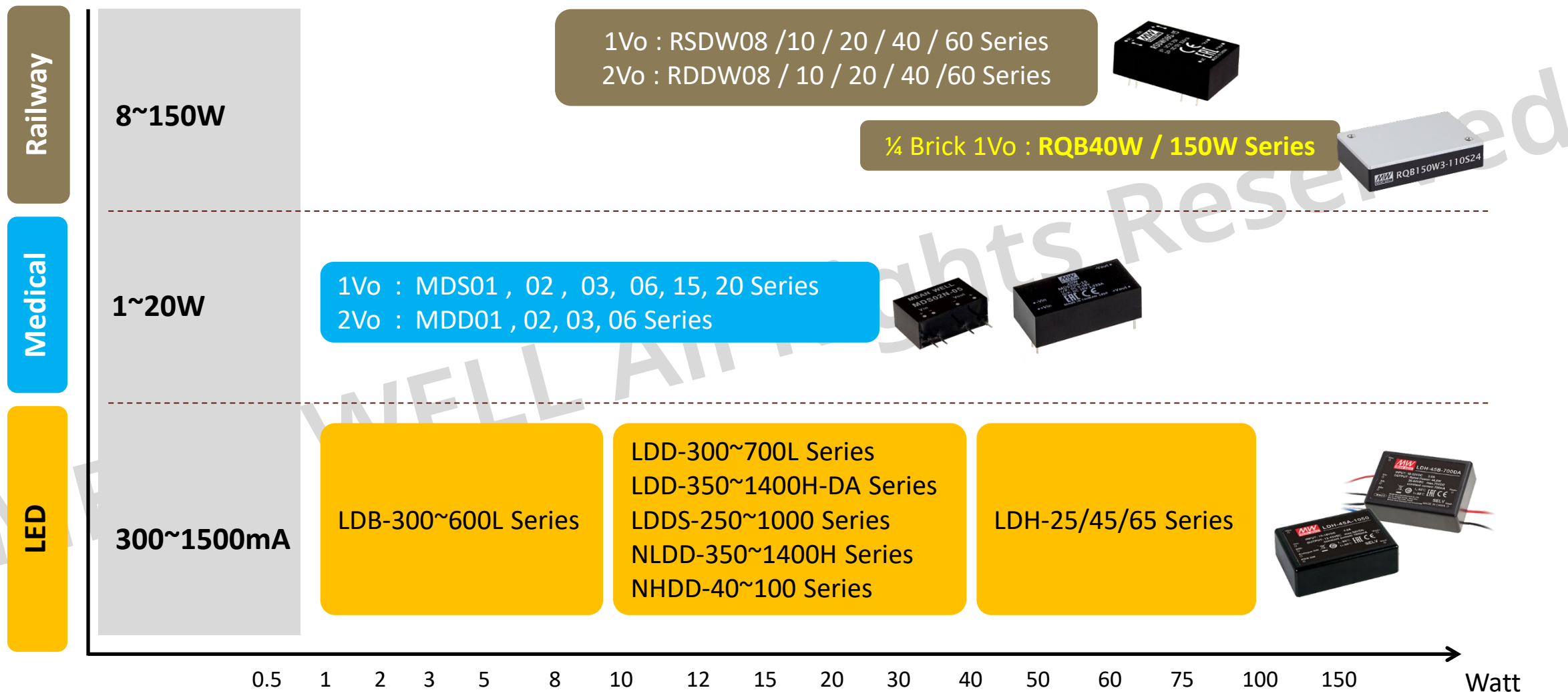
※ Yellow words are new products



Road Map

On Board Type with Potted

※ Yellow words are new products



DC-DC Converter Selection Table for Railway

Mounting Type	Series Name	Specifications						
		Package Type	Watt. (W)	Vin (Vdc)	Vo (Vdc)	Operating temp.	Safety	Dimension (Lx Wx H)
Encapsulated Modules (Pin mount) 	RSDW/RDDW08	DIP24	8	F: 9~36V G: 18~75V	Single : 3.3 / 5 / 12 /15V Dual : ±5/12/15V	-40 ~ +85℃	CB/UL/EAC/ CE/UKCA (by model)	31.8*20.8*10.2 mm
	RSDW/RDDW10		10	H: 43~160V				
	RSDW/RDDW20	2" x 1"	20		Single: 5 / 12 /15V Dual : ±12/15/24V			50.8*25.4*10.2 mm
	RSDW/RDDW20UW		20	8.5~160V				
	RSDW/RDDW40		40		F: 9~36V G: 18~75V H: 40~160V	Single: 3.3/ 5/ 12/ 15/ 24/ 48V Dual : ±12/15V		
	RSDW/RDDW60		60					
	RQB40W12	1/4 Brick	40	14~160V	Single : 5 / 12 / 24 / 48 / 54V	-40 ~ +90℃	57.9*36.8*12.7mm	
	RQB150W3		150	60~160V	Single : 12 / 24 / 48 / 54V			
Enclosed Type (Terminal block) 	RSD-30		30	G: 9~36V	Single : 3.3 / 5 / 12 / 15 / 24V	-40 ~ +70℃	CB/UL/EAC/ RCM/CE/UKCA	113*60*25 mm
	RSD-60		60	L: 18~72V H: 40~160V				128*60*25 mm
	RSD-100		100	B: 16.8~31.2V C: 33.6~62.4V D: 67.2~154V E: 25.2~46.8V F: 50.4~93.6V	Single : 5 / 12 / 24 / 48V			161*68*36 mm
	RSD-150		150		Single : 12/ 24 / 48V			189*77*36 mm
	RSD-200		200					Single : 5 / 12 / 24 / 48V
	RSD-300		300		-40~ +80℃	216*96.5*40 mm		
	RSD-500		500			Single : 12 / 24 / 48V		237*100*41 mm
	DIN Rail Type (Rail mount) 	DDR-120		120	A: 9~18V B: 16.8~33.6V C: 33.6~67.2V D: 67.2~154V	Single : 12 / 24 / 48V	-40~ +70℃	CB/UL/EAC/ RCM/CE/UKCA
DDR-240		240	Single : 24 / 48V	40*125.2*113.5 mm				
DDR-480		480	Single : 12 / 24 / 48V	-40~ +80℃		85.5*125.2*128.5 mm		

DC-DC Converter Selection Table for Solar PV / Energy Storage

Mounting Type	Series	Specifications						
		Watt (W)	Vin (Vdc)	Vo (Vdc)	Operating Temp.	Parallel	Safety	Dimension (Lx Wx H)
On-Board 	DDRH-15○	15W	150~1500Vdc	5V / 12V / 15V / 24V	-40~+80℃	X	EAC/CE/UKCA (IEC62109-1)	P : 76.2*50.8*25mm ST : 122.3*57.3*31.2mm DR : 122.3*57.3*31.2mm
	DDRH-30○	30W		12V / 15V / 24V				P : 89*63.5*25mm ST : 135*70*31.2mm DR : 135*70*31.2mm
	DDRH-45○	45W						
Rail mount 	DDRH-60	60W	150~1500Vdc	5V / 12V / 24V / 48V	-30~+80℃	X	CB/DEKRA/ EAC/CE/UKCA (IEC/EN62109-1)	57*93.5*105 mm
	DDRH-120	120W	250~1500Vdc	12V / 24V / 32V / 48V	-40~ +80℃	X		63*125.2*115mm
	DDRH-240	240W				V (960W)		85.5*125.2*129.2 mm
Terminal block 	RSDH-150	150W				X		191*86*41mm
	RSDH-300	300W				X		237*100*41mm

○ = P (PCB mount) 、 ST (Screw Terminal) 、 DR (DIN Rail type)

Key Features

Multiple Installation Options

Installation Method and Explanation		Location	Suitable Series
Chassis mount		Terminal block wiring flexibility	In the end equipment
DIN Rail mount		Easy assembly and disassembly, integrated wiring	Power distribution cabinet DIN rails
PCB mount		Standardized mounting hole locations	In the end equipment
Board mount		Solder on end equipment PCB	Solder onto PCB as a component

Key Features

Multiple Input Voltage

Input Voltage Range		Application	Suitable Products
±10%	4.5 ~ 5.5Vdc 10.8 ~ 13.2Vdc 21.6 ~ 26.4Vdc 43.2 ~ 52.8Vdc	ITE Equipment: Isolation and filter applications Not suitable for unstable input (eg. Battery...)	0.5~3W : SRS, SBTN/ SFTN/ DETN MDS/MDD, SPU/SPUN, SMA, SMU series
2 : 1	9~18Vdc 18~36Vdc 36~75Vdc	ITE/ industrial/ medical: Voltage conversion applications	1~500W : SPA/ SPAN/ SPB, SCW/ DCW, SLC/ DLC, SLW/ DLW, SKM/ DKM/ SKE/ DKE, SKA/ DKA/ TKA, SDM, MHB, LDH, PSD, SD-15~350, RSD-100~500 series
3 : 1	60~160Vdc	Railway transportation: 110Vdc railway voltage	150W: RQB150W3
4 : 1	9~36Vdc 18~75Vdc 40~160Vdc	ITE/ industrial: Voltage conversion applications that require wider input range than 2:1	3~1000W : NSD, SCWN/ DCWN , SPBW/ DPBW, SKMW/ DKMW, RSDW/ RDDW, LDD, LDB, RSD-30~60, SD-500~1000 series
10:1	150~1500Vdc	Photo Voltaic (P.V.) / BESS/ DC high voltage: DC input comes from solar panel arrays	15~240W: DDRH / RSDH series
12:1	14~160Vdc	Railway transportation: 24/ 48/ 72/ 96/ 110Vdc railway voltages	40W : RQB40W12 series
18:1	9~160Vdc		20W : RSDW / RDDW-UW series

Key Features

Multiple I/O Isolation Voltage

IP-OP Isolation	Application	Suitable Products
1~1.5KV	Information / communication equipment...	0.5~1000W : NSD, PSD, SD, SRS, SUS, SPU/ SPRN, SPAN/ DPAN, SPBW/ DPBW, SCW/ DCW, SKMW/ DKMW, SLW/ DLW, SKE/ DKE, SKA/ DKA, MHB series.....
3KV	Industrial apparatus, electric meters...	1~60W : SBTN/ SFTN/ DETN, SPU, SCWN/ DCWN, RSDW/ RDDW series
4KV	Railway...	8~500W : RSD, DDR, RSDH, DDRH series
6KV	Medical, harsh environment...	1~20W: MDS/ MDD series

Key Features

Safety for Multiple Industries

Series	Safety	Application
PSD-15~45 series, NSD05~15 series NID35~100 series, RSD-30~500 series DDR-15~480 series	ITE 62368-1 	
DDRH-15~240 series RSDH-150/300 series	PV IEC62109-1 	
RSDW08~60 series, RDDW08~60 series RQB40/150 series RSD-30~500 series, DDR-120~480 series	Railway EN50155 	
MDD01~02 series, MDS01~15 series	Medical 60601-1 	
LDD, LDB, LDH series	LED EN55015 	

Advantages

Brand Awareness

- Well-known brand
- Transparent product information
- Comprehensive marketing activities
- Your reliable power partner

Sales Channel

- Global channel sales
- Quick and localized sales services
- Standard products available from stock (30 days L/T for large quantity)

Complete Product

- **Flexible installation:**
Chassis Mount
DIN Rail Mount
PCB Mount
Board Mount
- **Complete Wattage:**
0.5~1000W
- **Complete Models:**
Input : $\pm 10\%$, 2:1, 3:1, 4:1, 10:1, 12:1, 18:1
Output: Single, Dual, Triple

Application Variety

- ITE
- Industrial
- Medical
- Railway
- LED lighting
- Solar PV renewable energy

Applications



ITE & Industrial

- Datacenter
- Network switch
- Smart meter
- Transmitter
- Injection molding



Medical

- Ticketing machine
- Message display
- On-board computer
- USB charger
- Broadcaster



Railway

- CPR device
- Body composition analyzer
- Scalpel
- Respirator
- Blood cell counter



LED Lighting

- Smart streetlight
- Solar powered lighting
- Commercial track light
- Horticultural lighting
- Vehicle/ship lighting

WHY MEAN WELL

P **Products** 
More than 10,000 models, continues to introduce 10% new models and EOL 5% every year

Q **Quality** 
High reliability and quality indicator
Post-sales failure rate decreases by 10% each year

C **Cost** 
High cost-performance products, stable material price, complete supply chain integration

D **Delivery** 
24-hour delivery for small amount order.
14-day delivery for frequent purchase standard products.

S **Service** 
MEAN WELL Group and distributors provide services 24 hours a day, and commit to reply within 24 hours

R **Reliable Relationship** 
75% of revenue come from long-term distributors and customers

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