



DUPS40 Uninterruptible Module



MEAN WELL DUPS40 Uninterruptible Module Owner's Manual

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MEAN WELL DUPS40 Uninterruptible Module



Product Information

Specifications

- Model: DUPS40
- Output Current: 40A
- Input Voltage Range: 24Vdc (24 ~ 29Vdc)
- Discharge Current Range: 0 ~ 40A
- Charging Current: 2A
- Battery Type: Lead-acid battery
- Battery Capacities: 4AH ~ 135AH
- Protection: Battery reverse polarity, short circuit, over discharge current
- Cooling: Free air convection
- Warranty: 3 years

Product Usage Instructions

Installation

1. Ensure the input voltage range is within 24 ~ 29Vdc.
2. Mount the DC-UPS module securely on a DIN rail.
3. Connect the load and batteries following the correct polarity.

Operation

1. Monitor the LED indicator for signal status.
2. Regularly check the battery capacities and recharge if needed.
3. Observe any warnings related to over-discharge or battery failure.

Maintenance

1. Clean the unit periodically to ensure proper cooling.
2. Inspect for any loose connections or damage.
3. Follow recommended battery maintenance practices.

FAQs

- **Q: What should I do if the LED indicator shows battery over-discharge warning?**

A: Recharge the batteries promptly to avoid damage and ensure continuous operation.

- **Q: Can I connect batteries with capacities outside the specified range?**

A: It is recommended to use batteries within the specified 4AH ~ 135AH range for optimal performance and safety.

- **Q: How can I test the unit for proper functionality?**

A: Perform regular diagnostic checks as outlined in the user manual to ensure all functions are working correctly.



Features

- Uninterruptible DC-UPS controller
- Parallel connection to DC BUS (Power supply + DC-UPS Module + Batteries + Load)
- Suitable for 24V system, up to 40A
- 2A Battery charging current
- 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 detection) / Battery discharge / Over discharge current
- Cooling by free air convection
- 3 years warranty



Applications

- Industrial control system
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

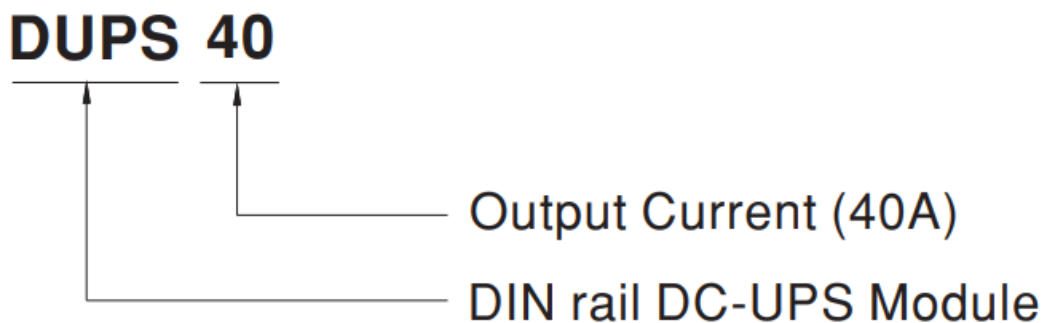
GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

The DUPS40 is a 40A DIN rail type DC-UPS module, and it is paired with a power supply and an external battery to achieve the backup function. When the AC mains fails or is interrupted, the load will be immediately connected to the battery pack to avoid interruption and to ensure the continuous operation of the entire system (the operating time depends on the capacity of the battery pack). The main features of DUPS40 include: fast installation, suitability for 24V battery packs and various capacities of 4AH~135AH, 2A battery charging current, low voltage disconnect for battery protection and more. The product is suitable for use in data centers, security systems, emergency lighting, wireless communication UPS, central monitoring systems, etc.

Model Encoding



SPECIFICATION

MODEL		DUPS40
DC UPS INPUT	NORMAL INPUT VOLTAGE	24Vdc
	INPUT VOLTAGE RANGE	24 ~ 29Vdc
	RATED CURRENT	40A
DC UPS OUTPUT	VOLTAGE RANGE	21 ~ 29Vdc
	DISCHARGE CURRENT RANGE	0 ~ 40A

	CHARGING CURRENT	2A
BATT ERY	NORMAL BATTERY VO LTAGE	24Vdc (2 x 12Vdc in series or 1 x 24Vdc)
	BATTERY TYPE	Lead-acid battery
	EXTERNAL BATTERY CAPACITIES	4AH ~ 135AH
PRO TECTI ON	BATTERY POLARITY	Protected by internal detection, No Damage, recovers automatically after fa ult conduction is removed
	SHORT CIRCUIT	This protection only works when batteries are not connected, No Damage. External fuse is recommended when batteries are connected.
	OVER DISCHARGE CU RRENT	42~46A, After 3 sec., unit will cut off battery discharging by relay
	BATTERY DEEP DISCH ARGE	Cut-off battery discharging by relay
FUNC TION	RELAY CONTACT RATI NGS (max.)	30VDC/1A resistive load
	DC BUS OK	Relay contact: Short when DC voltage between 21~29V(±2%), relay contacts
		LED(Green) : DC BUS OK : light ; DC BUS fail : dark
	BATTERY FAIL Note.2	Short when battery voltage falls below 22V(±2%) or battery failure is observ ed through the battery test function, relay contacts
		LED(Red): Battery over-discharge warning or battery broken: light ; Battery OK: dark
	BATTERY DISCHARGE	Relay contact: Short when battery in discharge condition, relay contacts
		LED(Yellow) : light : Battery discharging ; dark : Battery is not discharging or discharging current < 2.0A
ENVI RON MENT	COOLING	Free air convection
	WORKING TEMP. Note.3	-30 ~ +70°C (Refer to “Derating Curve”)
	WORKING HUMIDITY	5 ~ 95% RH non-condensing
	STORAGE TEMP.	-40 ~ +85°C
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6
	OPERATING ALTITUDE Note.4	2000 meters/OVC II
	SAFETY STANDARDS	EAC TP TC 004 approved

SAFE TY & EMC (Note. 5)	WITHSTAND VOLTAGE	IP/OP – Chassis : 0.5KVac ; IP/OP- Relay : 0.5KVac ; Relay – Chassis : 0.5 KVac		
	ISOLATION RESISTANCE	IP/OP – Chassis, IP/OP- Relay, Relay – Chassis:>100M Ohms / 500Vdc / 25°C/ 70% RH		
	EMC EMISSION	Parameter	Standard	Test Level / Note
		Conducted	—	—
		Radiated	BS EN/EN55032(CISPR32)	Class B
		Voltage Flicker	—	—
		Harmonic Current	—	—
	EMC IMMUNITY	BS EN/EN55035, BS EN/EN61000-6-2, BS EN/EN61204-3		
		Parameter	Standard	Test Level / Note
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact; criteria B Level 2, 4KV air ; Level 1, 2KV contact; criteria A
		Radiated	BS EN/EN61000-4-3	Level 3, 10V/m ; criteria A
		EFT / Burst	BS EN/EN61000-4-4	Level 3, 2KV ; criteria A
		Surge	BS EN/EN61000-4-5	Level 3, 0.5KV(DC input ports)
		Conducted	BS EN/EN61000-4-6	Level 3, 10V ; criteria A
		Magnetic Field	BS EN/EN61000-4-8	Level 4, 30A/m ; criteria A
OTHERS	MTBF	1376.5K hrs min. Telcordia SR-332 (Bellcore) ; 499.5K hrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	63*125.2*113.5mm (W*H*D)		
	PACKING	0.42Kg; 20pcs/9.4Kg/1.57CUFT		

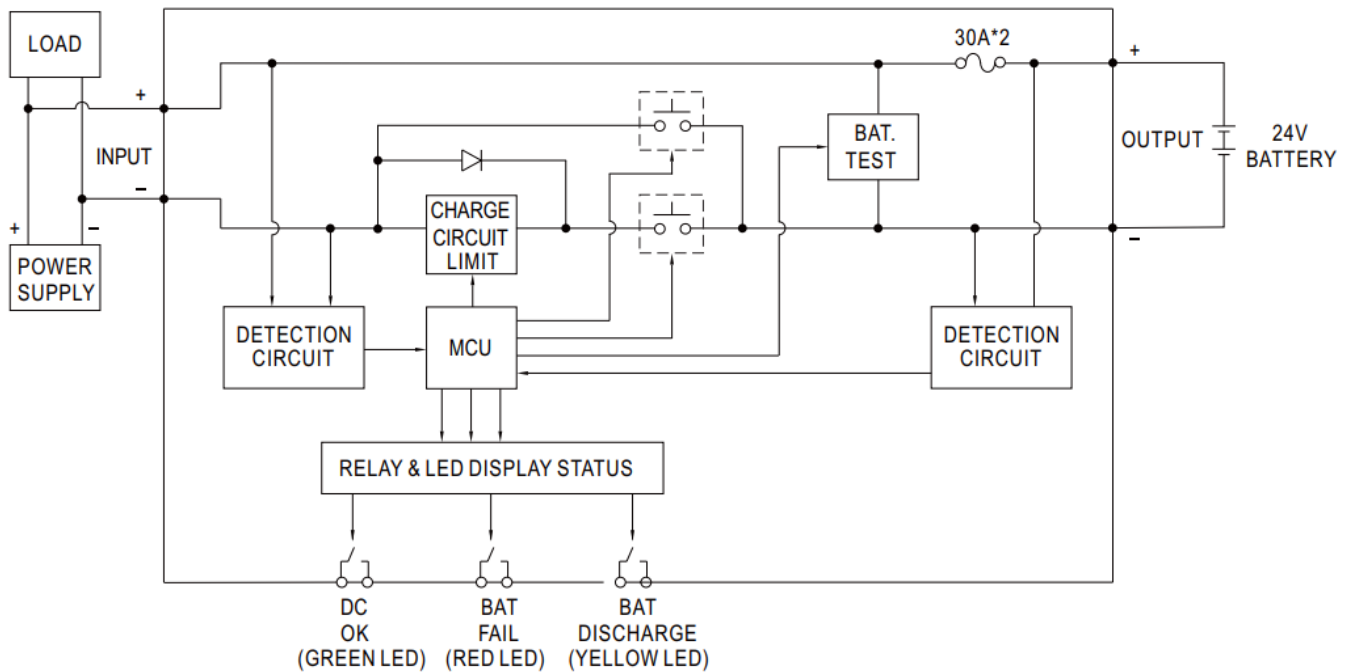
NOTE

1. All parameters NOT specially mentioned are measured at normal input(24V) , rated load and 25°C of ambient temperature.
2. Every 30 seconds, unit will test the battery.If the testing result is faulty, unit will turn on “Battery Fail” r elay contact and “Red LED” indicator.
3. Derating may be needed over high ambient temperature. Please check the derating curve for more d etails.
4. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
5. The unit is considered a component which will be installed into a final equipment. All the EMC tests a re been executed by mounting the unit on a 360*720mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests,please refer to “EMI testing of component power supplies.”

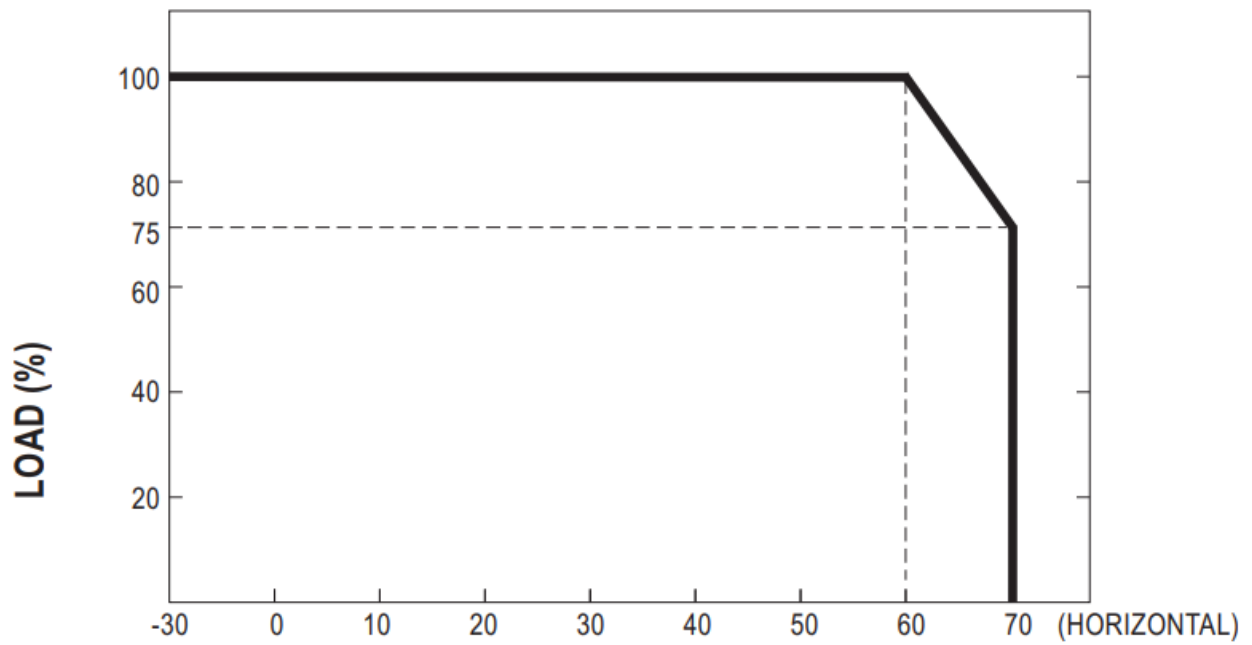
(as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)

※ Product Liability Disclaimer For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

Block Diagram

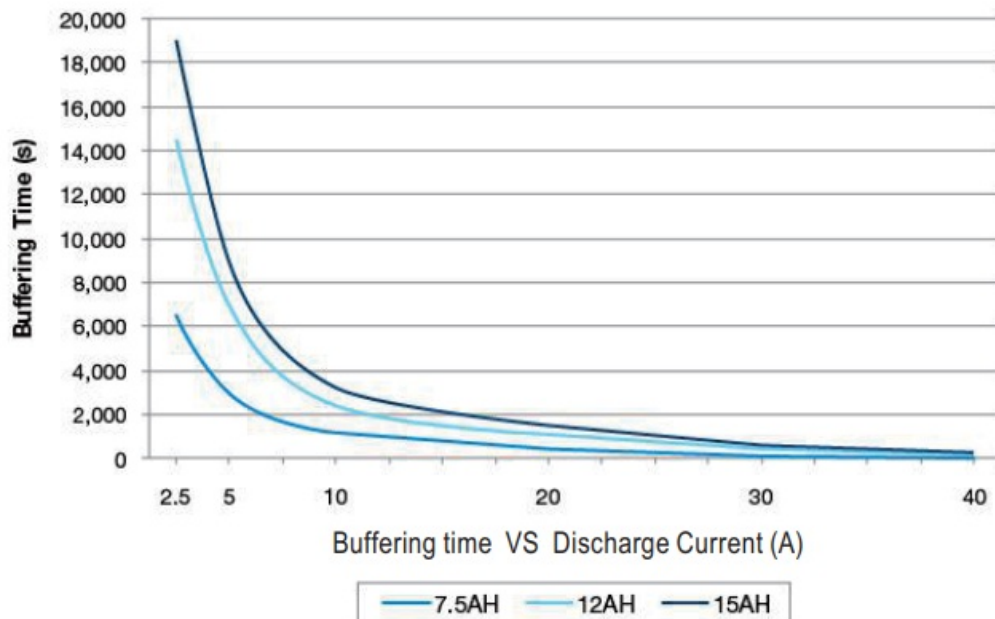


Derating Curve



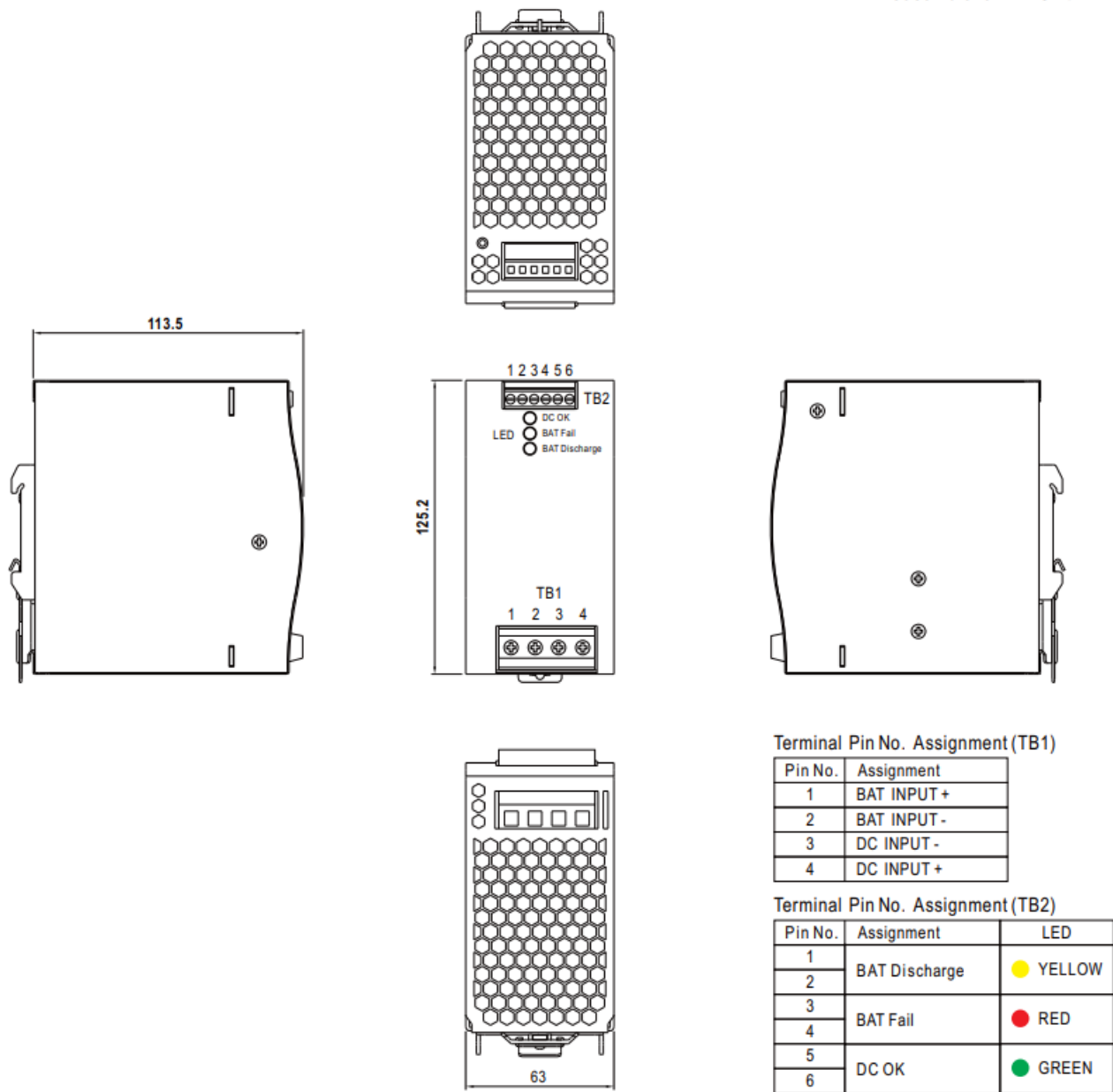
Buffering Time

Discharge Current	Buffering Time(Reference)		
	7.5AH	12AH	15AH
2.5A	6500s	14500s	19000s
5A	3000s	7000s	9000s
10A	1200s	2400s	3200s
20A	400s	1100s	1500s
30A	120s	450s	600s
40A	25s	200s	280s



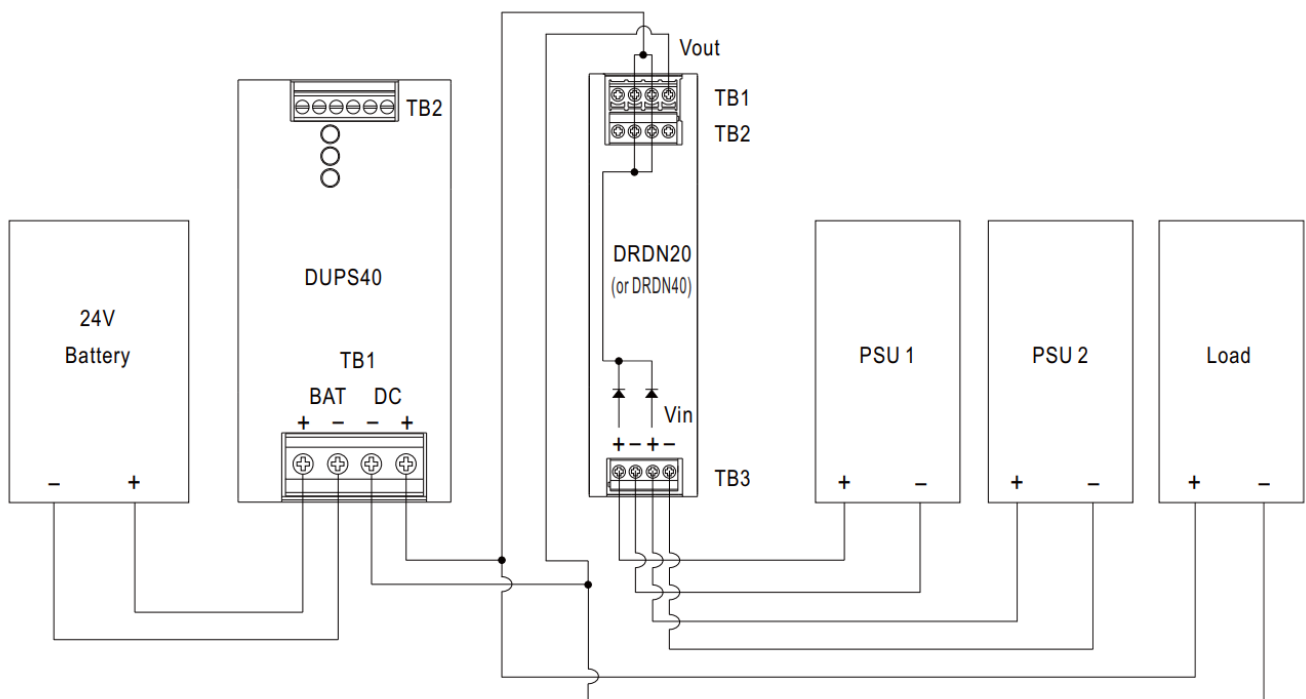
Mechanical Specification

Case No.979F Unit:mm



Installation Instruction

This series fits DIN rail TS35/7.5 or TS35/15. For installation details, please refer to the Instruction manual.



Installation Manual

Please refer to: <http://www.meanwell.com/manual.html>

Documents / Resources

	<p>MEAN WELL DUPS40 Uninterruptible Module [pdf] Owner's Manual DUPS40 Uninterruptible Module, DUPS40, Uninterruptible Module, Module</p>
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References

- [User Manual](#)

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