MEAN WELL DRDN20 DIN Rail Type Redundancy Module Owner's Manual

MEAN WELL DRDN20 DIN Rail Type Redundancy Module

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Features

- Support 1 + 1 and N+ 1 redundancy system
- 2 channels input and 1 output
- Suitable for red undance operation of 12V/24V/48V system
- Output current up to 20A
- Cooling by free air convection
- -40~+80°C ultra-wide operating temperature (>+60°C derating)
- 32mm slim width
- Built-in 2 channels DC OK signal and alarm relay contact
- Installed on DIN Rail TS35/7.5 or 15
- 3 years warranty

Applications

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

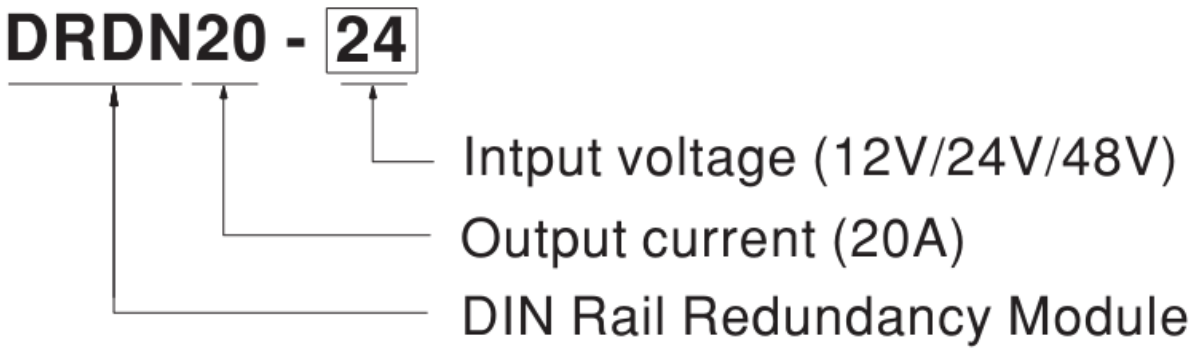
GTIN CODE

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

Description

The DRDN20 series is a 20A redundancy module that can be used with a power supply to improve overall system operation reliability. Product key features include:12V/24V/48V input voltage for selection, support N+1 and 1 +1 redundancy systems, built-in two rails DC input contacts and single output. The MOSFET technology implemented can reduce heat loss and reduce the voltage difference between the input and output voltages, built-in 2 channels DC OK relay contacts for monitoring output status, ultra-wide operating temperature of -40 to +80°C and narrow width (32mm).

Model Encoding



SPECIFICATION

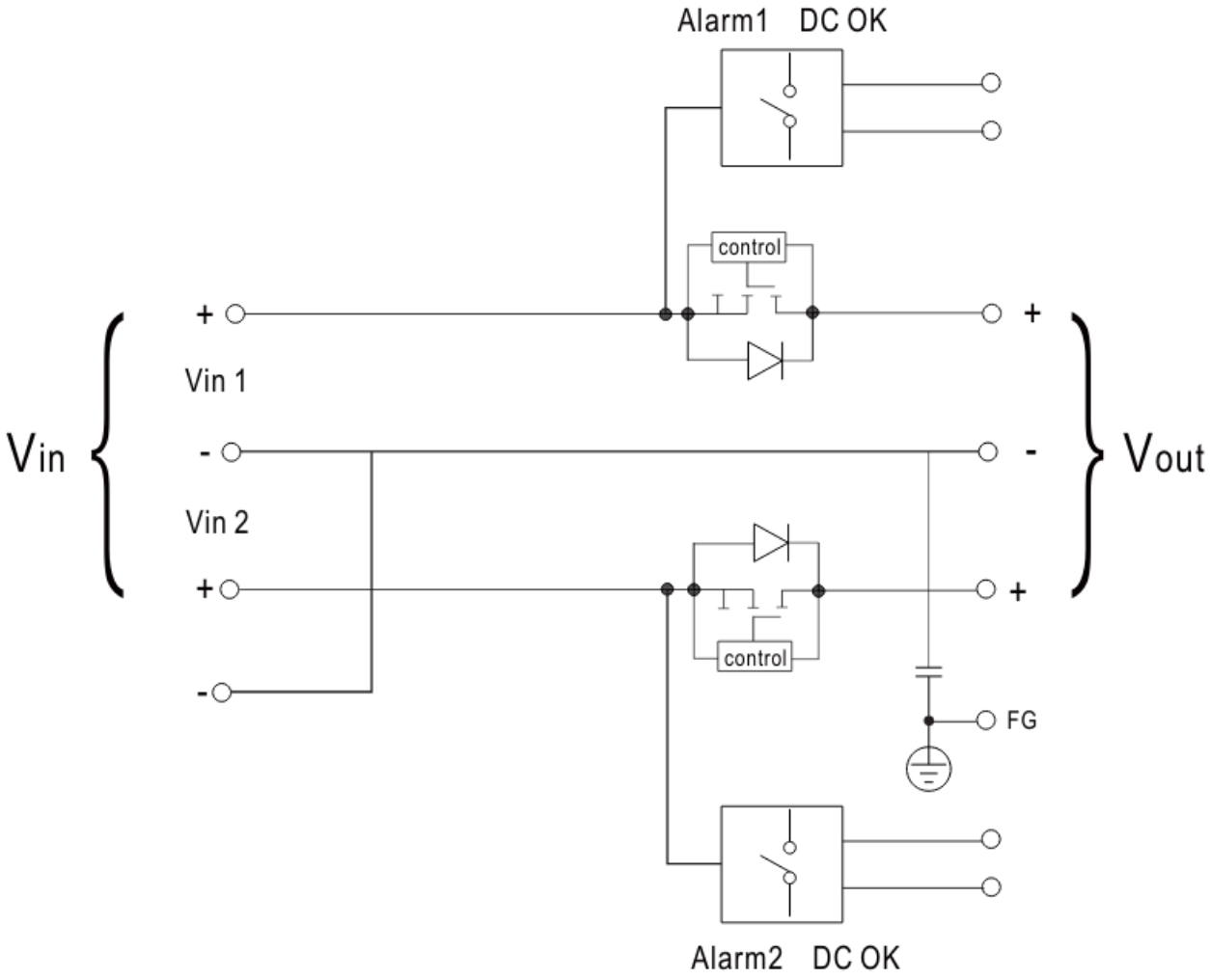
MODEL		ORON20-□		
		□ =12V, 24V. 48V		
INPUT	NUMBER OF INPUT	2 Channels		
	DC NORMAL VOLTAGE	12Vdc	24Vdc	48Vdc
	DC VOLTAGE RANGE	9-14Vdc	19- 29Vdc	36-60 Vdc
	RATED CURRENT	0-20A per input Continuous		
	VOLTAGE DR OP (Vin-Vou)t (max.)	0.25V		
	PEAK CURRENT	0-30A per input SSec.		
	EFFICIENCY (Typ.)	98%		
	INPUT REVE RSE CURRE NT (max.)	1mA		
	INPUT REVE RSE VOLTAG E (max.)	40Vdc 40Vdc	40Vdc	65Vdc

OUTPUT	RATED CURRENT		0-20A, Continuous		
	PEAK CURRENT (max.)		30A, 5Sec.		
	CAPACITANCE (Typ.)		320 uF		
	STANDBY POWER LOSSES(Typ.)		1.5W		
PROTECTION	OVERLOAD		< 30A,5Sec. No damage		
	SHORT CIRCUIT		< 30A,5Sec. No damage		
FUNCTION	REDUNDANCY		For 1+1 redundancy, and support N+1 redundancy		
	BOTH INPUTS VOLTAGE ALARM		<8.SVor >14.7V(± 5%)	<18V or >31V (± 5%)	<34.2V or >63V (± 5%1
	RELAY		30Vdc/1A resistive load		
	LEO STATUS DISPLAY		Green LED OK		
ENVIRONMENT	COOLING		Free air connection		
	WORKING TEMP.	Note. 2	-40 – +ado's (Referto' Derating Curve")		
	WORKING HUMIDITY		5- 95%RH non-condensing		
	STORAGE TEMP.		-40 – +85'C		
	TEMP. COEFFICIENT		± 0 03%/'C 10 – 60′ Cl		
	VIBRATION		Component:10- 500Hz, 5G 10 min./cycle 6,0 min.	echelon, Y, Zaxes; Mounting: Compliance to IEC 61373	
	OPERATING ALTITUDE	Note. 3	5000 meters/OVC11		
	SAFETY STANDARDS		IEC 6236-81, UL 62368-,1EAC TP TC 004 approved		
	WITHSTAND VOLTAGE		IP/OP· Chassis: 0.5KVac; IP/OP-Relay: 0.5KVac ; Relay· Chassis: O.SKVac		
	ISOLATION RESISTANCE		IP/OP· Chassis, IP/OP-Relay, Relay· Chassis:>10M0Ohms/ 500Vdc/ 25″C/ 70% RH		

SAFETY & EMC (Note. 4)	EMC EMISSION	Parameter	Standard	Test Level Note
		Conducted	BS EN/EN55032(CISPR 32	Class B
		Radiated	BS EN/EN55032t(SCPR32	Class B
		Voltage Flicker	——	——
		Harmonic Current	-..	——
	EMC IMMUNITY	BS EN/EN 55035, BS EN/EN 61000-6-2(BS EN/EN 50082-2)		
		Parameter	**Standard**	Test Level Note
		ESD	BS EN/EN6100-4-2	Level 4,15KV air; Level 3, 8KV contact; criteria A
		Radiated	BS EN/EN 6100-4-3	Level3, 10V/m; criteria A
		EFT/ Burst	BS EN/EN 6100-4-4	Level3, 2KV; criteria A
		Surge	BS EN/EN6100-4-5	Level 3 1KV/ line line; level 3 2KV/ line-Line Chassis; criteria A
		Conducted	BS EN/EN 6100-4-6	Level 3, 10V; criteria A

		Magnetic Field	BS EN/EN6100-4-8	Level 4, 30A/m; criteria A
OTHERS	MTBF	1836.0Khrsmin. Telcordia SR-332 (Bellcore) ; 482.1K hrsmin. MIL-HDBK-217F(25’C)		
	DIMENSION	32’125.21′ 02mm(W’H’ D)		
	PACKING	0.35Kg;28ps/1c0.8Kg/1.24 CUT		
NOTE	1. All parameters NOT specially mentioned are measured at normal input(12V/24V/48V), rated lo ad and 25″C of ambient temperature. 2. Operating may be needed over high ambient temperature. Please check the derating curve for more details. 3. The ambient temperature derating of 3.•s cn ooom with fanless models and of 5’C/1000m wit h fan models for operating altitude higher than 2000m(6500f)t. 4. The power supply is considered as an independent nit, but the final equipment still need to re-c onfirm that the whole system complies with the EMC directives. For guidance on how to perfor m these EMC tests, please refer to EMI testing of component power supplies.” (as available on **https://www.meanwell.com//Upload/POF/EMI_slatement_en.pdf**) ※ Product liability Disclaimer: For detailed information, please refer to **https://www.meanwell.com/serviceDisclaimer.aspx**		

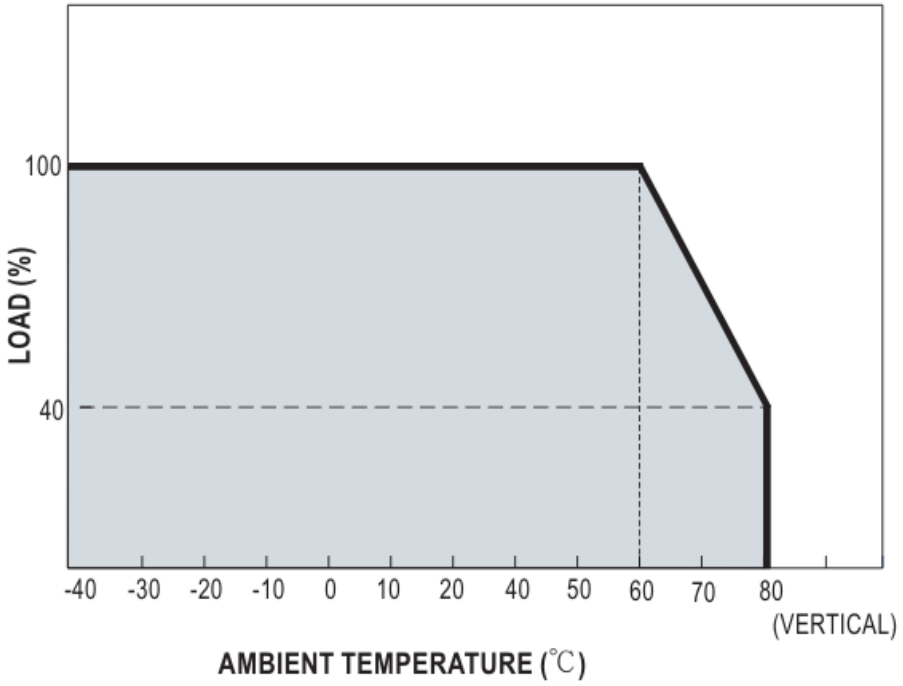
Block Diagram



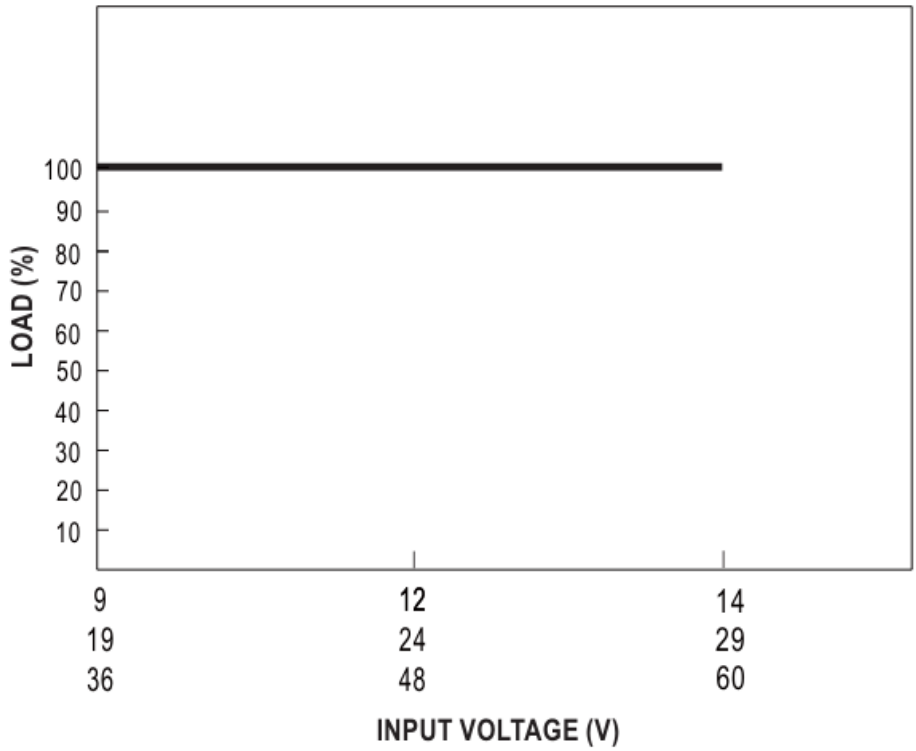
DC OK Rela Contact

Contact Ratinos (max.)	30V/1Aresistive load
Contact Close (DCOK)	PSU turns on
Contact Open (DC Fail)	PSU turns off/ over or under input voltage

Derating Curve



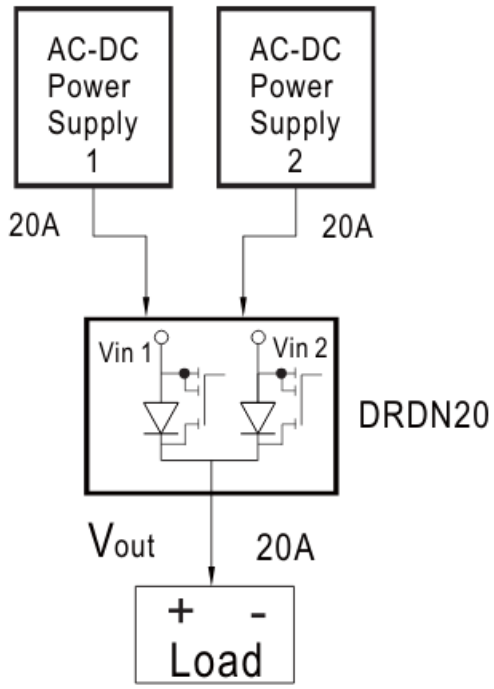
Output Derating VS Input Voltage



Typical Application Notes

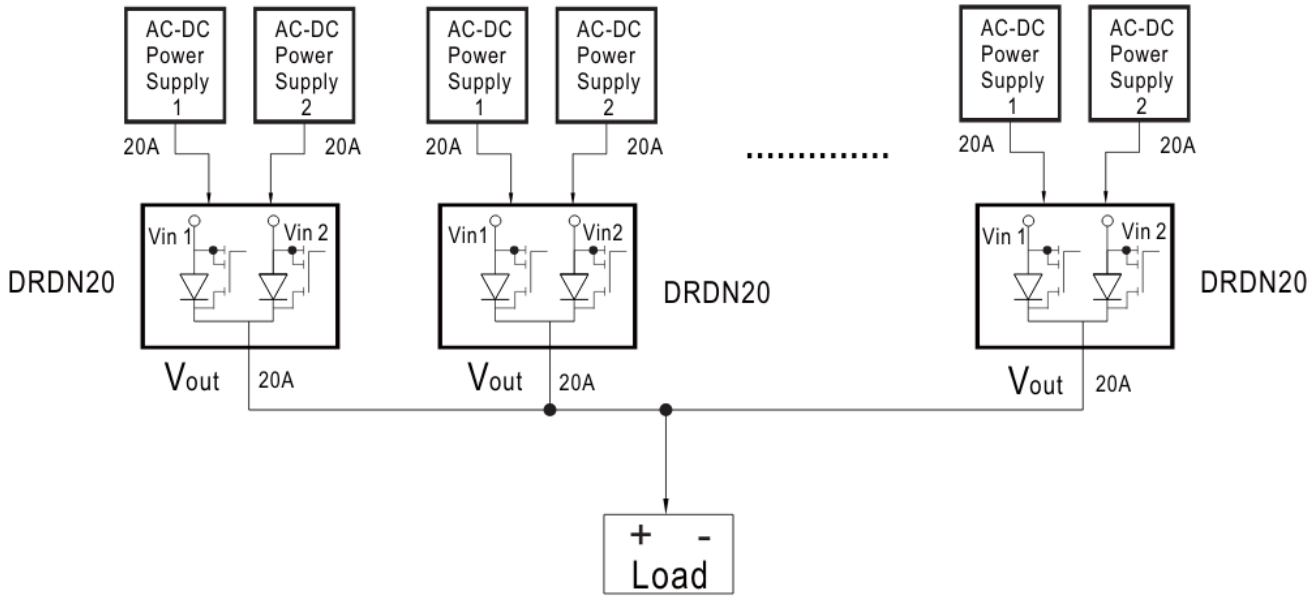
1. **1+1 Redundancy:**

   Using 1 more PSU as the redundant unit



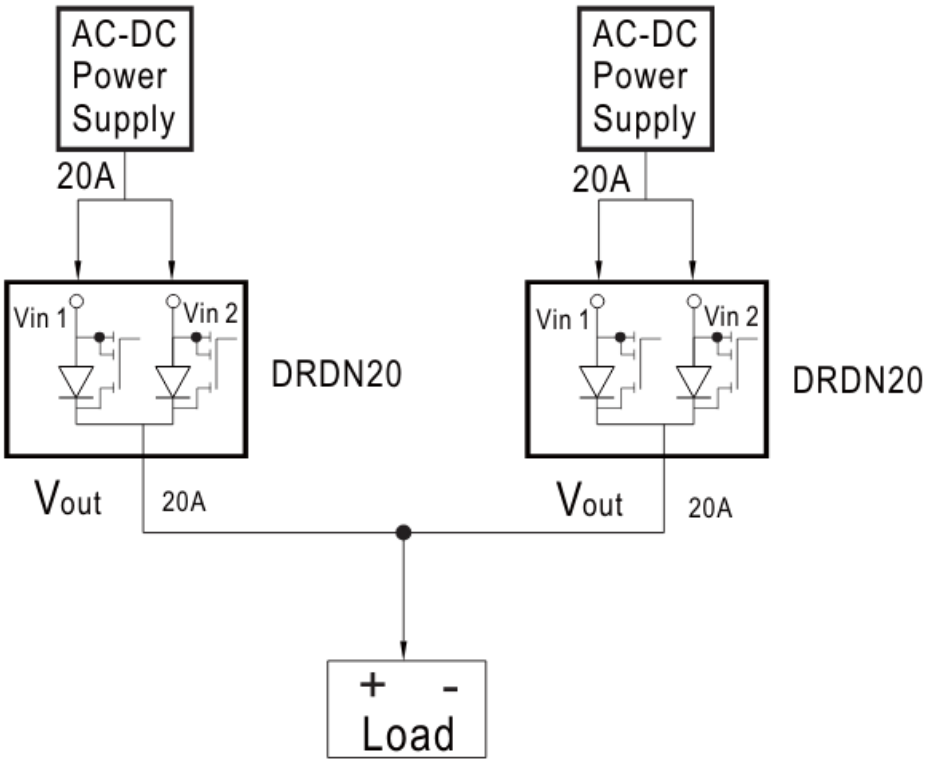
2. **1+N Redundancy:**

   Using more PS Us as the redundant units to increase the reliability

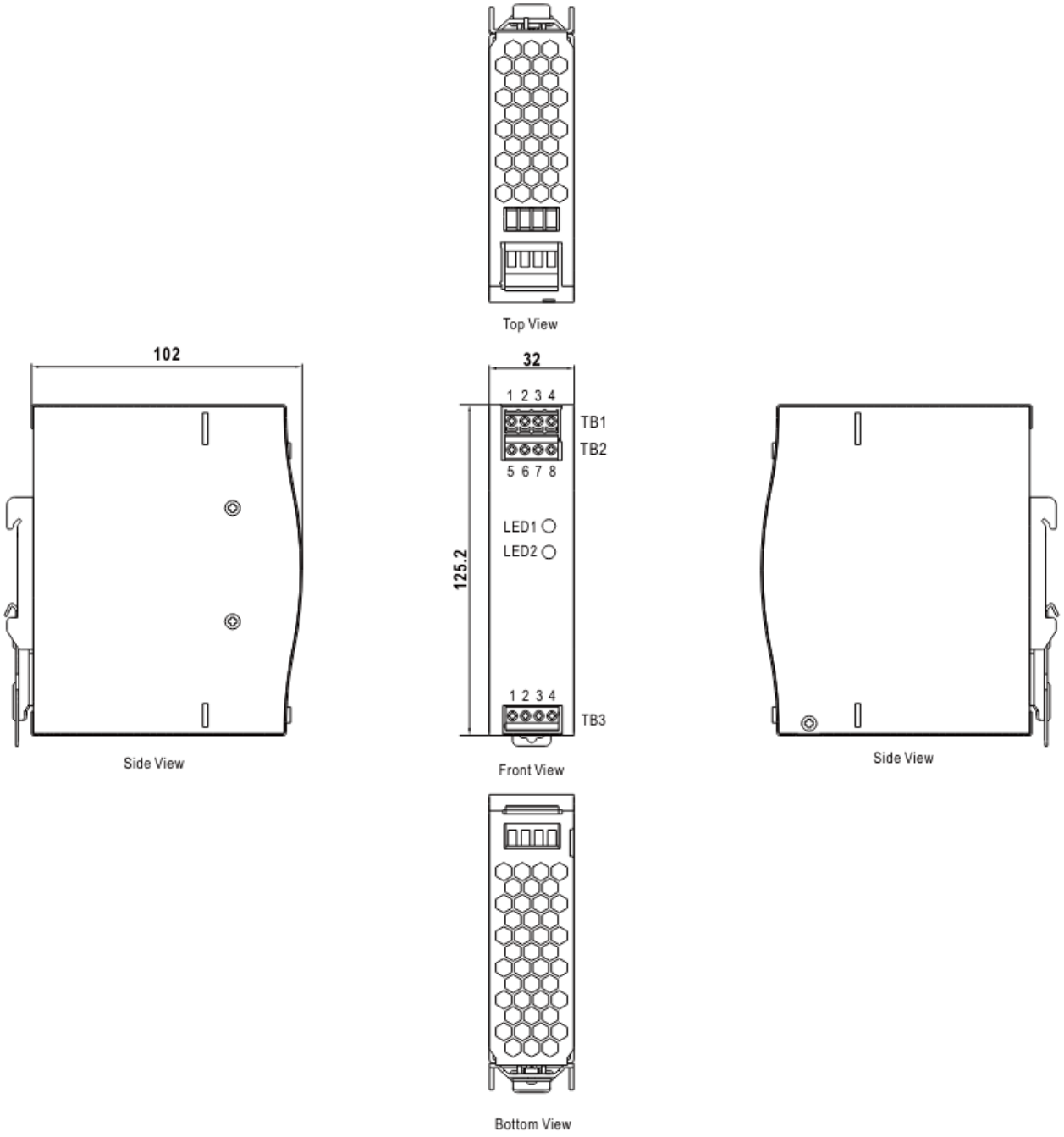


3. **Single Use:**

   Connecting only one PSU to one DRDN20 to reduce the stress of the MOSFET and hence increase the reliability



Mechanical Specification



Terminal Pin No. Assignment (TB 1,TB2)

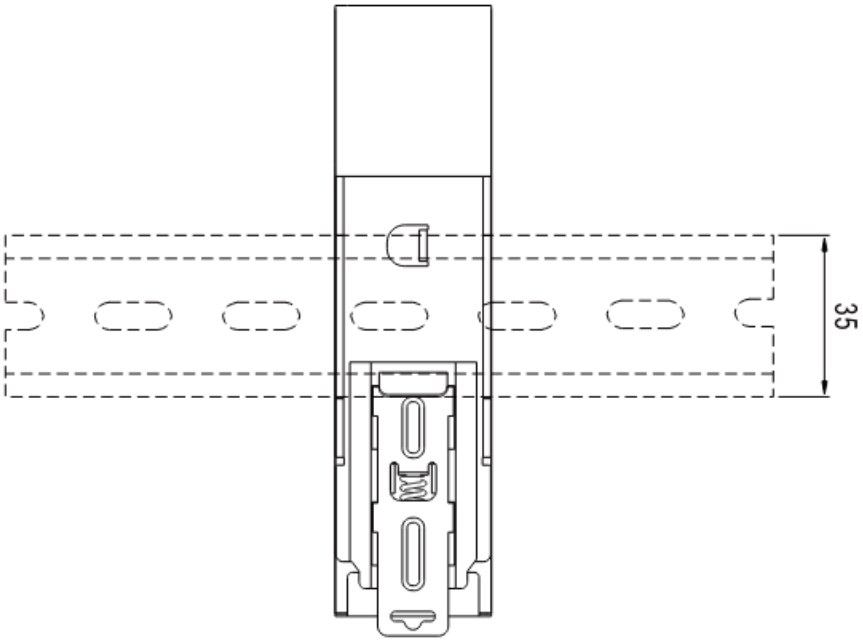
CaseNo. 221 D **Unit:** mm

Pin No.	**Assignment**
1,2	Alarm1 DC OK
3,4	Alarm2 DC OK
5	FG
6,7	DC output +Vout
8	DC output •Vout

Terminal Pin No. Assignment (TB3)

PinNo.	Assignment
1	DC input +Vint
2	DC input -Vinl
3	DC input +Vln2
4	DC input -Vin2

Installation Instruction



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

ADMISSIBLE DIN-RAIL:TS35n .5 OR TS35/15 (For retc, once only. Not included with unit.)

Installation Manual

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

Customer Support

c US UL62368-1 CB IEC62368-1 EAC TPTC004 CE UK CA

User Manual

Video

Documents / Resources

	MEAN WELL DRDN20 DIN Rail Type Redundancy Module [pdf] Owner's Manual DRDN20, DRDN20 DIN Rail Type Redundancy Module, DIN Rail Type Redundancy Module, Rail Type Redundancy Module, Redundancy Module, Module

References

- User Manual