Smun
XIMENG ELECTRIC

Zhejiang Ximeng Electronic Technology Co.,Ltd

XDDR-20A Redundant Module / Din Rail Type



Automate Industrial Security Network Telecom

■ Features

- Support 1+1 and N+1 redundancy system
- 2 channels input and 1 output
- Suitable for redundancy operation of 12V/24V/48V system
- Output current up to 20A
- Cooling by free air convection
- −40~+80℃ ultra-wide operating temperature (>+60℃ derating)
- 32mm slim width
- Built-in 2 channels DC OK signal and alarm relay contact
- Din rail mounting :TS35/7. 5 or TS35/15
- 3 years warranty

■ Applications

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

■Discription

The XDDR-20 Series is a 20A redundancy module that can be used with a power supply to improve Oveall system operation reliability.Product key features include:12V/24V/48V input voltage for Selection,support N+1 and 1+1 redundancy system,built in two rails DC input contacts and single output. The MOSFET technology implemented can reduce heat loss and reduce the voltage difference between

■Model Encoding

XDDR−20−24

- 24 — Input volage 12V/24V/48V
- 20 — Output current 20A
- XDDR — DIN Rail Redundancy Module

XDDR-20A Redundant Module / Din Rail Type

SPECIFICATION

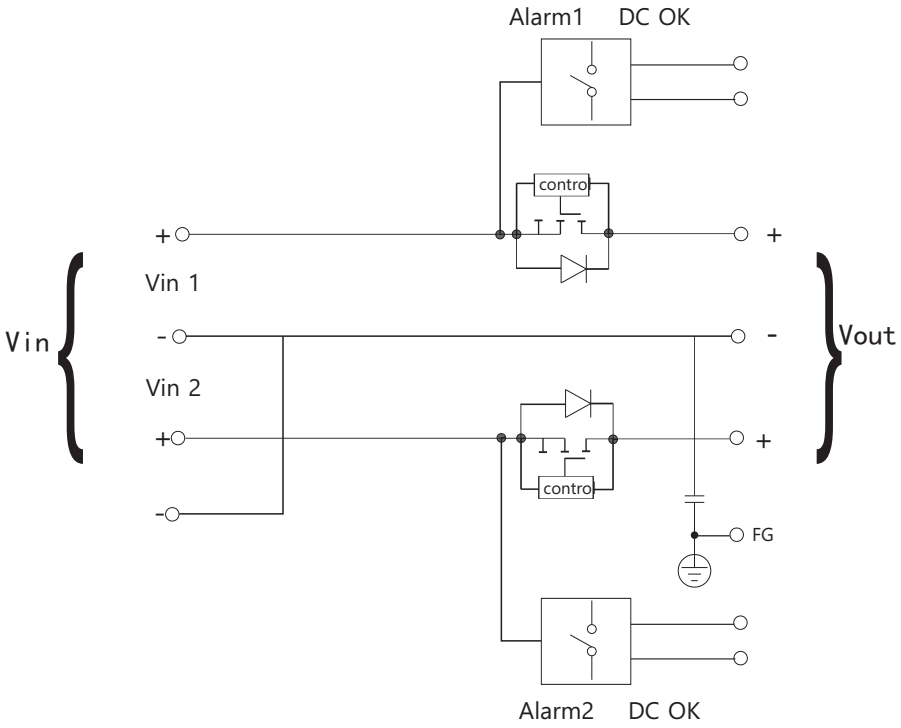
MODEL		XDDR-20-□		
		□= 12V, 24V, 48V		
INPUT	NUMBER OF INPUT	2 Channels		
	DC NORMAL VOLTAGE	12Vdc	24Vdc	48Vdc
	DC VOLTAGE RANGE	9~14Vdc	19~29Vdc	36~60Vdc
	RATED CURRENT	0~20A per input Continuous		
	VOLTAGE DROP (Vin-Vout)	0.25V		
	PEAK CURRENT	0~30A per input 5Sec.		
	EFFICIENCY (Typ.)	98%		
	INPUT REVERSE CURRENT (max.)	1mA		
	INPUT REVERSE VOLTAGE (max.)	40Vdc	40Vdc	65Vdc
OUTPUT	RATED CURRENT	0~20A, Continuous		
	PEAK CURRENT (max.)	30A, 5Sec.		
	CAPACITANCE (Typ.)	320uF		
	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	<8.5Vor>14.7V (±5%)	<18Vor>31V (± 5%)	<34.2Vor>63V (± 5%)
	RELAY	30Vdc/1A resistive load		
	LED STATUS DISPLAY	Green LED OK		
ENVIRONMENT	COOLING	Free air convection		
	WORKING TEMP.	-40 ~ +80℃ (Refer to "Derating Curve")		
	WORKING HUMIDITY	5 ~ 95% RH , non-condensing		
	STORAGE TEMP.	-40 ~ +85℃		
	TEMP. COEFFICIENT	± 0.03%/℃ (0 ~ 60℃)		
	VIBRATION	Component:10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC61373		
	OPERATING ALTITUDE	5000 meters/OVC II		
SAFETY & EMC (Note. 4)	SAFETY STANDARDS	IEC62368-1, EAC TP TC 004		
	WITHSTAND VOLTAGE	I/P-O/P - Chassis : 0.5KVac I/P-O/P- Relay : 0.5KVac Relay - Chassis : 0.5KVac		
	ISOLATION RESISTANCE	I/P-O/P - Chassis, I/P-O/P- Relay, Relay - Chassis:>100M Ohms / 500Vdc / 25℃/ 70% RH		
	EMC EMISSION	Parameter	Standard	Test Level / Note
		Conducted	BS EN/EN55032(CISPR32)	Class B
		Radiated	BS EN/EN55032(CISPR32)	Class B
		Voltage Flicker	-----	-----
		Harmonic Current	-----	-----
	EMC IMMUNITY	BS EN/EN55035, BS EN/EN61000-6-2(BS EN/EN50082-2)		
		Parameter	Standard	Test Level / Note
		ESD	BS EN/EN61000-4-2	Level 4, 15KV air ; Level 3, 8KV 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, 1KV/Line-Line ;Level 3, 2KV/Line-Line-Chassis ;criteria A
		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	1836.0K hrs min. Telcordia SR-332 (Bellcore) ; 482.1K hrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	32*125.2*102mm (W*H*D)		
	PACKING	0.35Kg;28psc/10.8Kg		

NOTE

1. All parameters NOT specially mentioned are measured at normal input(12V/24V/48V) , rated load and 25℃ of ambient temperature.
2. Derating may be needed over high ambient temperature. Please check the derating curve for more details.
3. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft)
4. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."

※ Product Liability Disclaimer For detailed information, please refer to http://www.smun.com

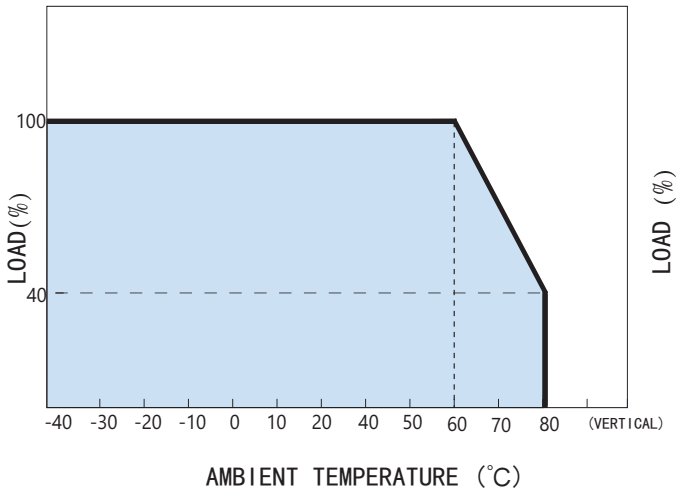
■ Block Diagram



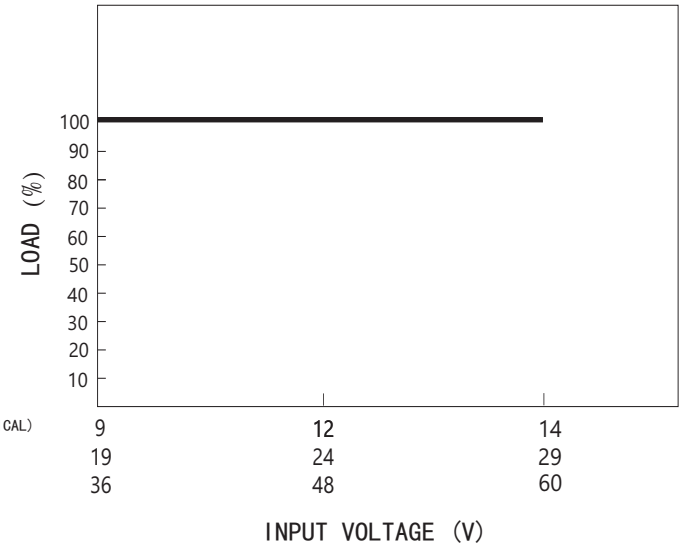
■ DC OK Relay Contact

Contact Ratings (max.)	30V/1A resistive load
Contact Close(DC OK)	PSU turns on
Contact Open(DC Fail)	PSU turns off / over or under input voltage

■ Derating Curve

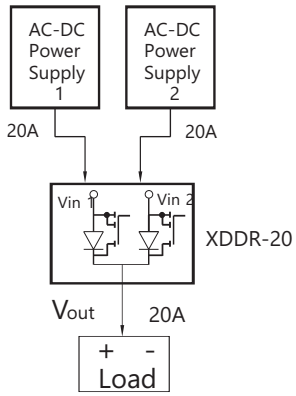


■ Output Derating VS Input Voltage

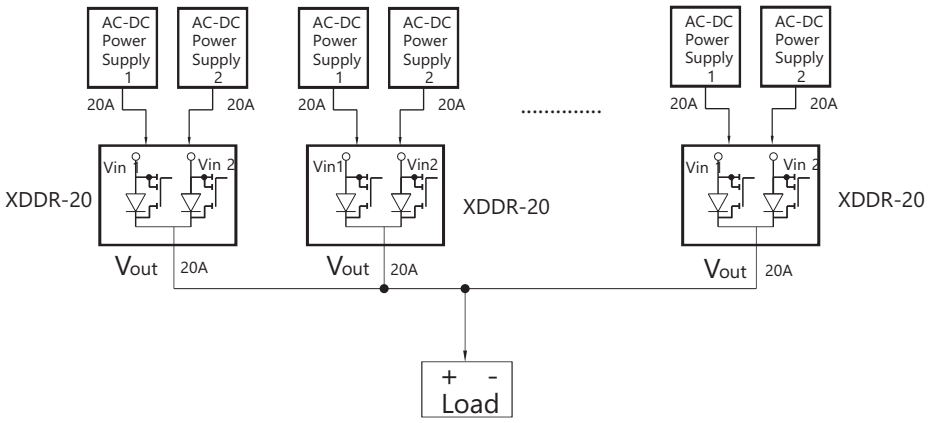


■ Typical Application Notes

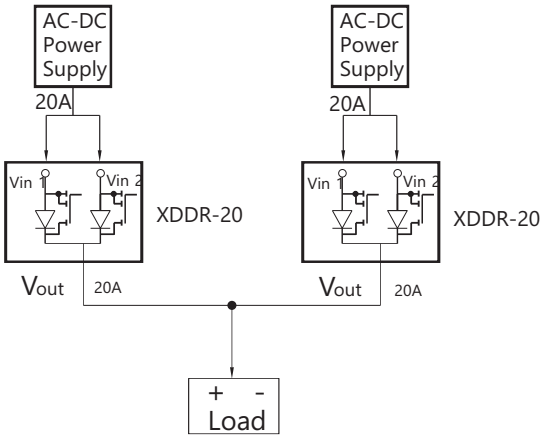
1.1+1 Redundancy:Using 1 more PSU as the redundant unit



2.1+N Redundancy:Using more PSUs as the redundant units to increase the reliability



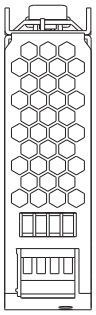
3.Single Use:Connecting only one PSU to one XDDR-20 to reduce the stress of theand hence increase the reliability



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■ Mechanical Specification

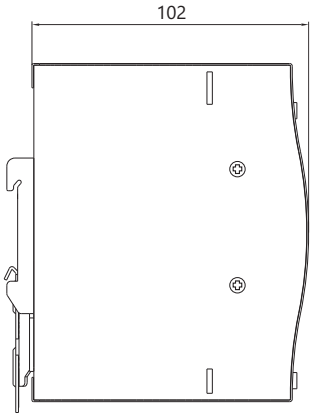
(Unit: mm , tolerance ± mm)



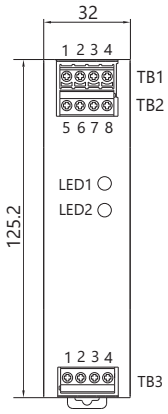
Top V i e w

Terminal Pin No. Assignment (TB1,TB2)

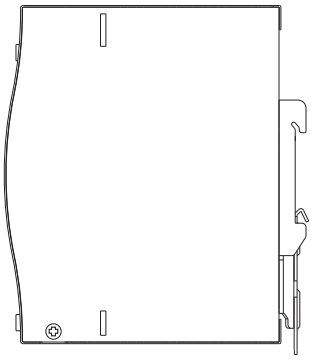
Pin No.	Assignment
1,2	Alarm1 DC OK
3,4	Alarm2 DC OK
5	FG
6,7	DC output +Vout
8	DC output −Vout



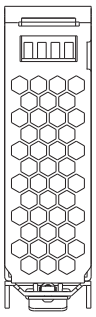
Side View



Front View



Side View

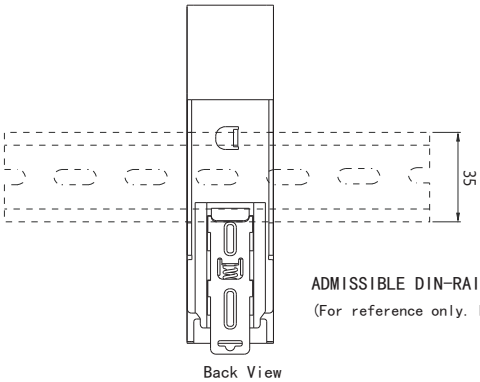


Bottom View

Terminal Pin No. Assignment (TB3)

Pin No.	Assignment
1	DC input +Vin1
2	DC input −Vin1
3	DC input +Vin2
4	DC input −Vin2

■ Installation Instruction



ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

(For reference only. Not included with unit.)

Back View

This series fits DIN rail TS35/7.5 or TS35/15.