

# YSDR20 Redundancy Module 20A



Yingjiao's redundancy module YSDR20 can be suitable for redundancy operation of 12V/24V/48V systems. With higher peak current, the entire series have built-in 2 channels DC OK signal and alarm relay contact. It can be used with a power supply to improve overall system operation reliability.



## Features



Support 1+1 and N+1 redundancy system



Suitable for redundancy operation of 12V/24V/48V systems



2 channels input and 1 output



Built-in 2 channels DC OK signal and alarm relay contact



Installation: DIN Rail TS-35/7.5 & 15



Three Years Warranty

## Model Information

Yingjiao Part number	INPUT VOLTAGE	INPUT VOLTAGE RANGE	INPUT RATED CURRENT	OUTPUT RATED CURRENT
YSDR20-12	12Vdc	9~14Vdc	0~20A per input Continuous	0~20A, Continuous
YSDR20-24	24Vdc	19~29Vdc	0~20A per input Continuous	0~20A, Continuous
YSDR20-48	48Vdc	36~60Vdc	0~20A per input Continuous	0~20A, Continuous

## Input

NUMBER OF INPUT	2 Channels
VOLTAGE DROP (Vin-Vout) (max.)	0.25V
PEAK CURRENT	0~30A per input, 5Sec.
EFFICIENCY (Typ.)	95%
INPUT REVERSE CURRENT (max.)	1mA
INPUT REVERSE VOLTAGE (max.)	40Vdc YSDR20-12 40Vdc YSDR20-24 65Vdc YSDR20-48

## Output

PEAK CURRENT (max.)	30A, 5Sec.
CAPACITANCE(Typ.)	320uF
STANDBY POWER LOSSES(Typ.)	1.5W

## Protection

OVER LOAD	<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	<8.5V or >14.7V (± 5%)	YSDR20-12
	<18V or >31V (± 5%)	YSDR20-24
	<34.2V or >63V (± 5%)	YSDR20-48
RELAY	30Vdc/1A resistive load	
LED STATUS DISPLAY	Green LED OK	

## Environment

COOLING	Free air convection	
WORKING TEMP. Note.2	-40 ~ +80 °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, 5G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC61373	
OPERATING ALTITUDE Note.3	5000 meters/OVC II	

## SAFETY & EMC (Note 4)

SAFETY STANDARDS	IEC62368-1	
WITHSTAND VOLTAGE	IP/OP - Chassis : 0.5KVac; IP/OP- Relay : 0.5KVac ; Relay - Chassis : 0.5KVac	
ISOLATION RESISTANCE	IP/OP - Chassis, IP/OP- Relay, Relay - Chassis:>100M Ohms / 500Vdc / 25 °C / 70% RH	
EMC EMISSION	BS EN/EN55032 ClassB	
EMC IMMUNITY	BS EN/EN55035, 'BS EN/EN61000-4-2,3,4,5,6,8, BS EN/EN55024	

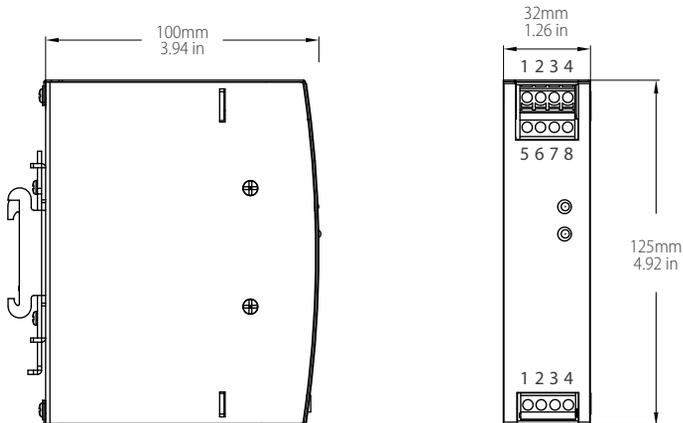
## Dimensions & Weight

Length:	32mm / 1.26in
Width:	100mm / 3.94in
Height:	125mm / 4.92in
Weight:	0.5kg

## Packing

Carton Size:	39.5 x 32.5 x 27.5 CM 15.55 x 12.8 x 10.83 in
Master Carton Quantities:	20pcs / Carton

## Mechanical Specification



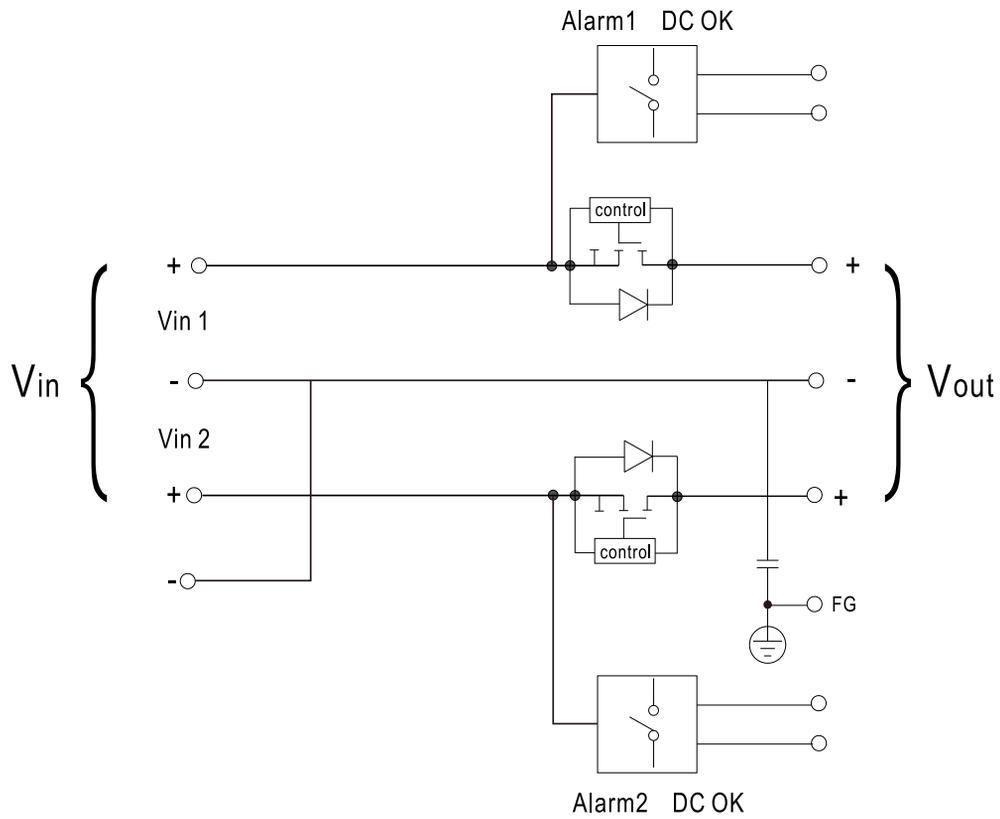
### Input

No.	Description
1	DC input +Vin2
2	DC input -Vin2
3	DC input +Vin1
4	DC input -Vin1

### Output

No.	Description
1,2	Alarm1 DC OK
3,4	Alarm2 DC OK
5	FG
6,7	DC output +Vout
8	DC output -Vout

## Block Diagram



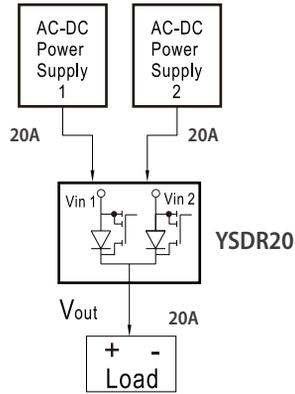
## DC OK Relay contact

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

# Typical Application Notes

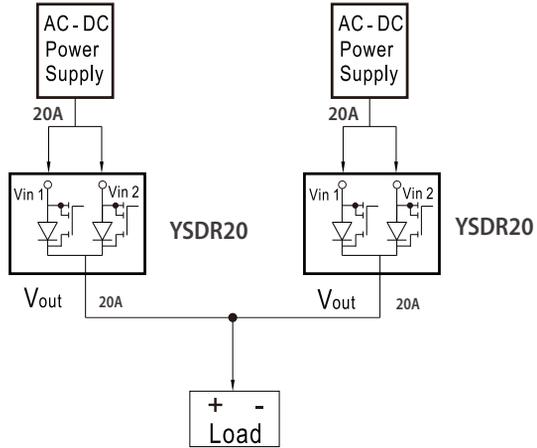
## 1. 1+1 Redundancy:

Using 1 or more AC-DC power supply as the redundant unit.



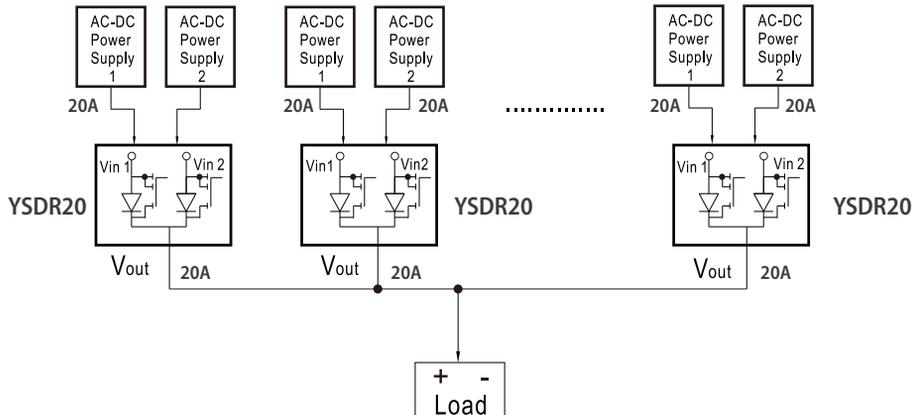
## 3. Single Use:

Only one AC-DC power supply is connected to ONE YSDR20 to reduce stress on the MOSFET in order to improve system reliability

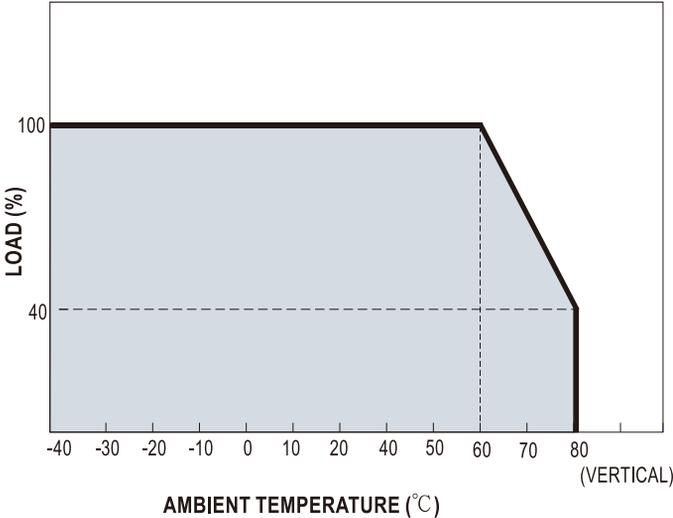


## 2. 1+N Redundancy:

The more AC-DC power supplies are used as redundancy to improve system reliability



# Deduction Curve And Temperature



# Minus Output And Input Voltage Curves

