

# YSDR20 Redundancy Module 20A



The redundancy module YSDR20 is 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

- CY** support 1+1 and N+1 redundancy system
- DC** suitable for redundancy operation of 12v/24v/48v systems
- Y** 2 channels input and 1 output
- ⚡** Built-in 2 channels DC OK signal and alarm relay contact
- DIN** Installation: DIN Rail Ts-35/7.5 & 15
- 3** Three years warranty

## Model Information

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 REVERSEVOLTAGE (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 INPUTSVOLTAGE ALARM	<8.5v or >14.7v ( $\pm 5\%$ )	YSDR20-12
	<18v or >31v ( $\pm 5\%$ )	YSDR20-24
	<34.2v or >63v ( $\pm 5\%$ )	YSDR20-48
RELAY	30vdc/1A resistive load	
LED STATUS DISPLAY	Green LED Ok	

## Environment

COOLING	Free air convection	
WORKINGTEMP. Note.2	-40 ~ +80 °C (Refer to "Derating curve")	
WORKING HUMIDITY	5 ~ 95% RH non-condensing	
STORAGETEMP.	-40 ~ +85 °C	
TEMP. COEFFICIENT	$\pm 0.03\%/^{\circ}\text{C}$ (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	
WITHSTANDVOLTAGE	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	

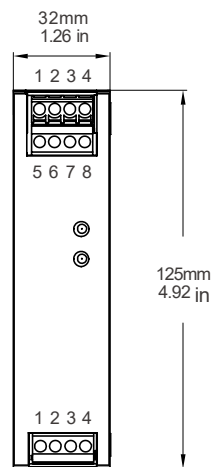
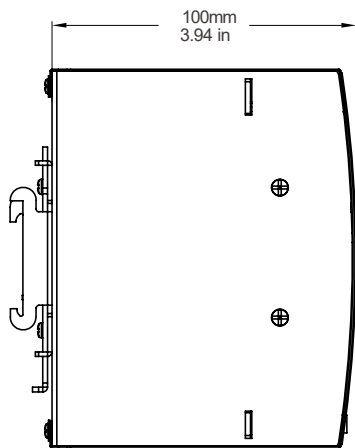
## Dimensions & weight

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

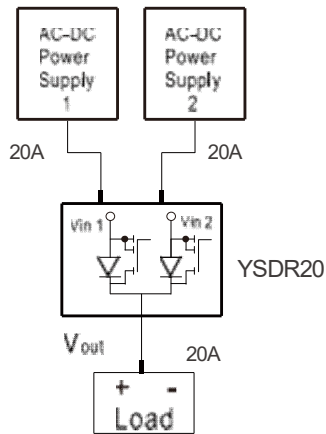
### Output

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

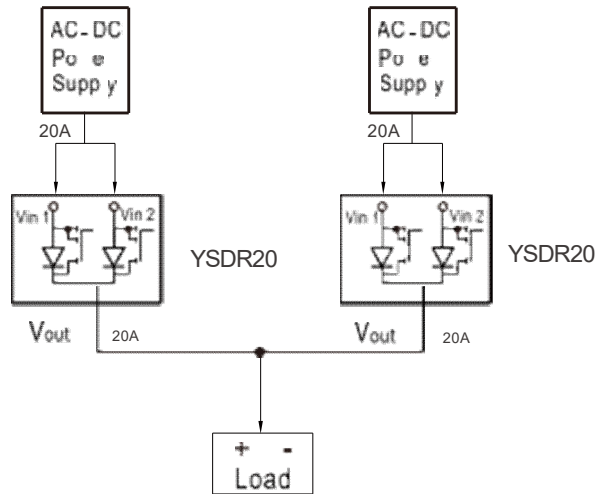


## Typical Application Notes

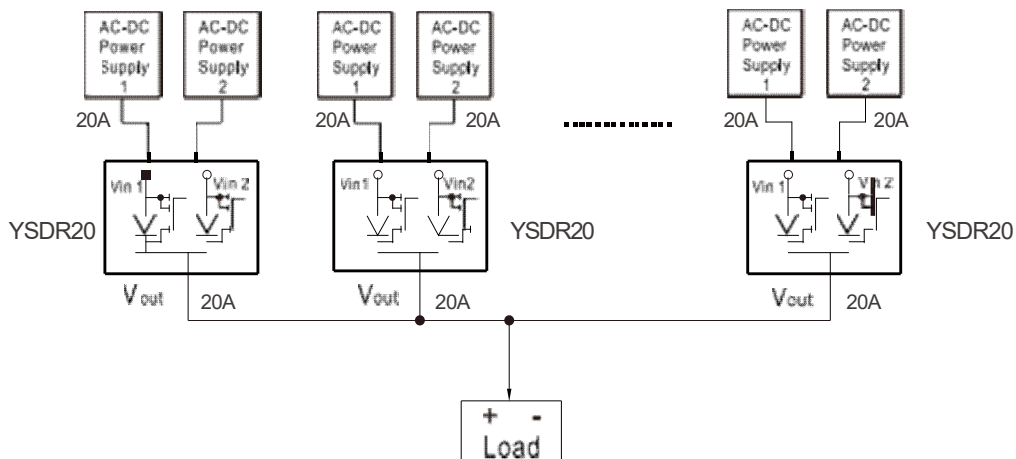
1. 1+1 Redundancy:  
using 1 or more AC-DC Power supply as the redundant unit.



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

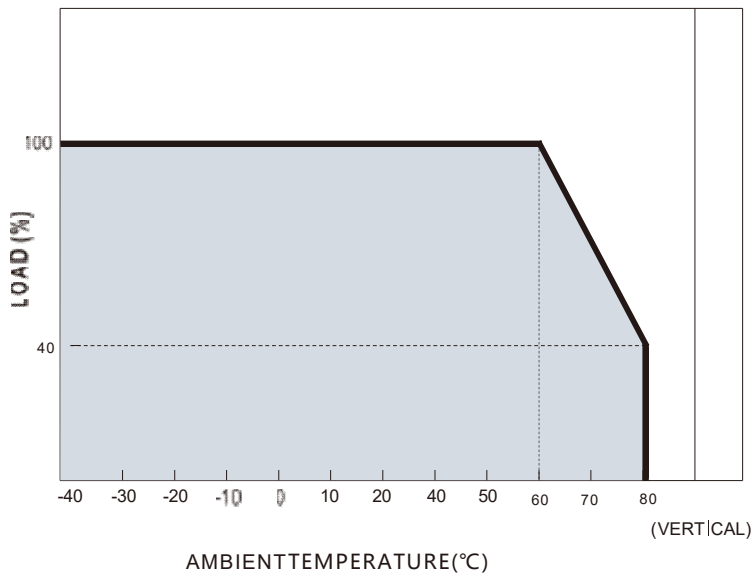


2. 1+N Redundancy:  
The more AC-DC Power supplies are used as redundancy to improve system reliability



## Deduction curve and Temperature

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## Minus output and input voltage curves

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