

YSDB40 SERIES 24V



yingjiao's bufer module is a supplementary device for regulated DC 24v power supplies. The bufer module utilizes maintenance-free electrolytic capacitors to store energy, thus eliminating the need of periodic replacement as compared to costlier batteries which also have shorter functional life span.



Features



Buferring with electrolytic capacitors instead of lead acid batteries



Type bufering time of 250ms @22vdc/20A



Bufere mode selectable by switch: fixed mode at 22vdc, Dynamic mode for vin-1vdc



Cooling by free air convection



supports parallel connection to extend bufering time



Three years warranty

BUFFER MODE

DC NORMAL OPERATINGVOLTAGE		22vdc/vin-1vdc
DC OPERATINGVOLTAGE RANGE		22-29vdc
OUTPUT CURRENT(max.)		40A
BUFFERTIME	outPut current	40A
(Refer to Bufering Curve at 22Vdc)	TYP.	250ms
	Min.	160ms
RIPPLE & NOISE (max.) Note.2		350mvp-p

CHARGING MODE

DC NORMAL OPERATINGVOLTAGE	24vdc
CHARGINGVOLTAGE	23~30vdc
CHARGING CURRENT	900mA Max.
CURRENT CONSUMPTION ATSTANDBY	100mA Max.
CHARGINGTIME	25sTYp. 35s Max.

PROTECTION

OVERVOLTAGE	31~37.5vonlYlshutdown o/p voltage
OVER LOAD	105%~ 125% rated output power atbufer mode protection tYpe:shutdown o/p voltageI re-power on to recover
SHORT CIRCUIT	protection tYpe:shutdown o/p voltageI re-power on to recover
TVS FOR SIGNALS (max.)	35v
REVERSE POLARITY PROTECTION	BY internal MOsFETI no damage I recovers automaticallY after fault condition removed

FUNCTION

SELECTABLE BY SWITCH	Fix 22vdc(Default)	Buferring starts if terminal Voltage falls below 22vdc	
	vin-1vdc	Buferring starts if terminal Voltage is decreased by > 1vdc	
CONTROL	Inhibit (I)	+vs -v(I) < 6vdc: Bufer module ON; vs -v(I) 10vdc: Bufer module OFF 35vdc /4mA Max.	
	Ready(R)	charged ready:v(R)>+vs - 2vdc; unready:v(R)<1vdc 35vdc /10mA Max.	
SIGNALS	Buferring (B)	Buferring:v(B)>+vs - 2vdc; Other mode:v(B)<1vdc 35vdc /10mA Max.	
	SuPPly voltage(+vs)	10~35vdc /10mA (connected to +v or external Voltage)	
LED STATUS DISPLAY	ON	Ready	
	OFF	Discharged	
	Flashing	1Hz	charging
		10Hz	Buferring

ENVIRONMENT

WORKING TEMP.	-25 °C to +75 °C Refer to Derating curve
WORKING HUMIDITY	5 ~ 95% RH non-condensing
STORAGE TEMP.	-25 °C to +80 °C
SHOCK TEST	IEc60068-2-27I30G (300m/s) for a duration of 18ms 1 time per direction 2 times in total
TEMP. COEFFICIENT	±0.03%/ °C (0 ~ 75 °C)
VIBRATION	component: 10 ~ 500Hz 1/2G 10min./1cycle 1/60min. each along X, Y, Z axes; Mounting clip: compliance to IEc60068-2-6
OPERATING ALTITUDE Note.3	5000 meters /Ovc II

SAFETY & EMC(Note.4)

SAFETY STANDARDS	IEC62368-1 IUL62368-1 approved		
WITHSTANDVOLTAGE	Ip/Op-FG:2.2 kvdc; Signals-FG: 2.2 kvdc		
ISOLATION RESISTANCE	IpOp-FG Signals-FG >100M Ohms / 500vdc / 25 °C/ 70% RH		
EMC EMISSION	parameter	Standard	Test Level / Note
	Conducted	Standard	Class B
	Radiated	BS EN/EN55032	Class B
	voltage Flicker	-	-
	Harmonic Current	-	-
EMC IMMUNITY	BS EN/EN55035I BS EN/EN61000-6-2		
	parameter	Standard	Test Level / Note
	ESD	BS EN/EN61000-4-2	Level 4I 15kv air ; Level 3I 8kv contact; criteriaA
	Radiated	BS EN/EN61000-4-3	Level 3I 10v/m ; criteriaA
	EFT / Burst	BS EN/EN61000-4-4	Level 4I 30A/m ; criteriaA
	Surge	BS EN/EN61000-4-5	Level 3I 1kv/Line-Line ;Level 3I 2kv/Line-Line-FG ;criteriaA
	Conducted	BS EN/EN61000-4-6	Level 3I 10v ; criteriaA
	Magnetic Field	BS EN/EN61000-4-8	Level 3I 2kv ; criteriaA

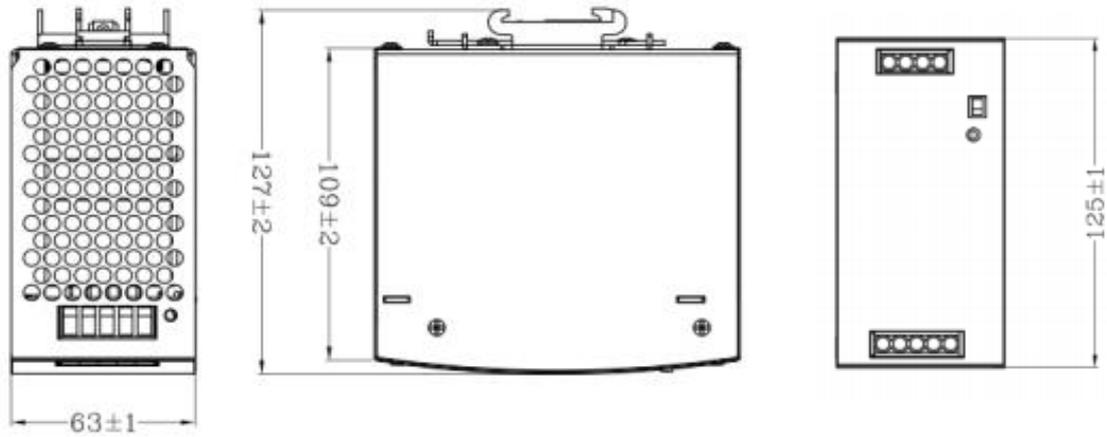
Dimensions & weight

Length	63mm / 2.48in
width	125mm / 4.92in
Height	109mm / 4.33in
weight	1.05kg

packing

Carton Size	52.5 X 33 X 17.5 CM 20.67 X12.99 X 6.9 in
Master Carton Quantities	10pcs/Carton

Mechanical SpecificatiOn



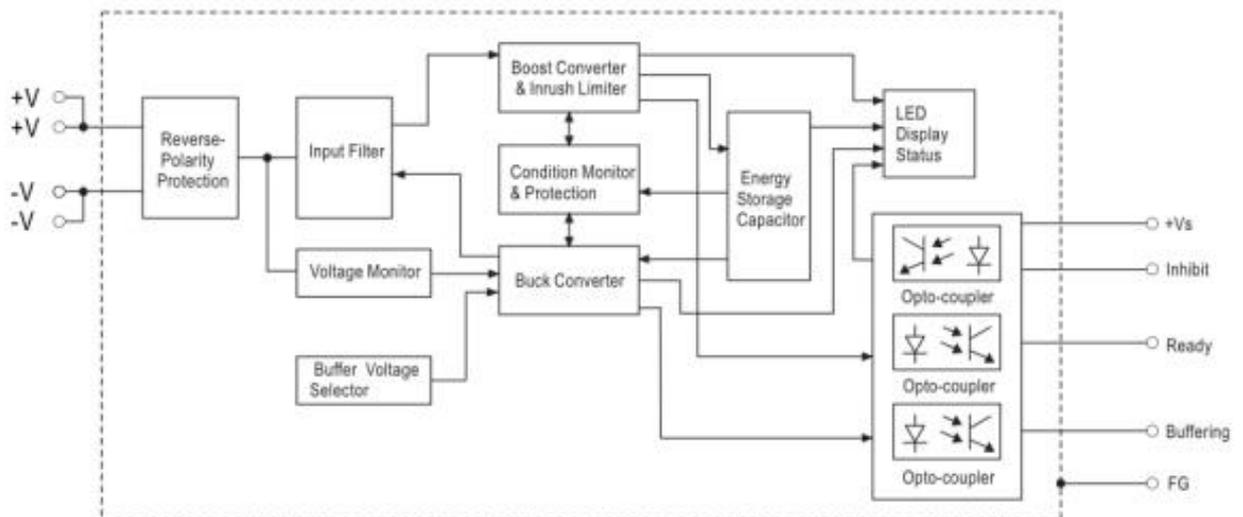
output

Pin No.	Assignment
1,2	DC +V
3,4	DC -V

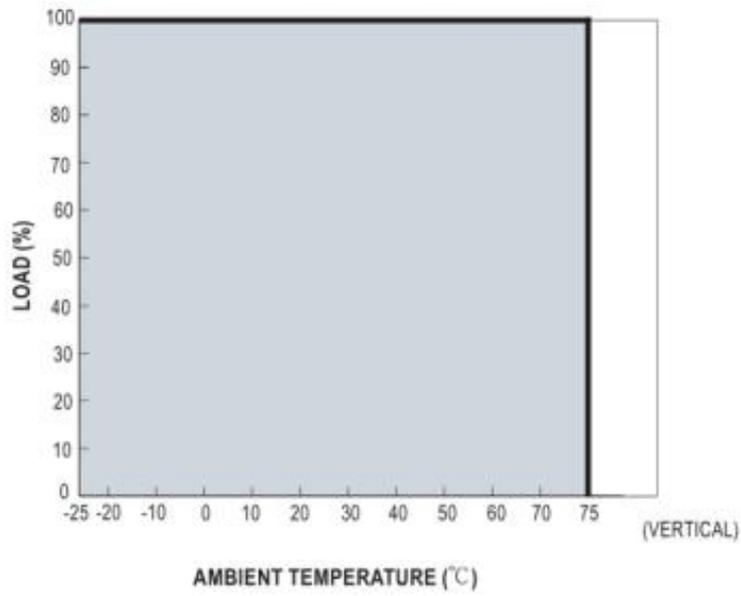
Input

Pin No.	Assignment
1	FG \oplus
2	Inhibit (I)
3	Ready (R)
4	Buffering (B)
5	Supply Voltage (+Vs)

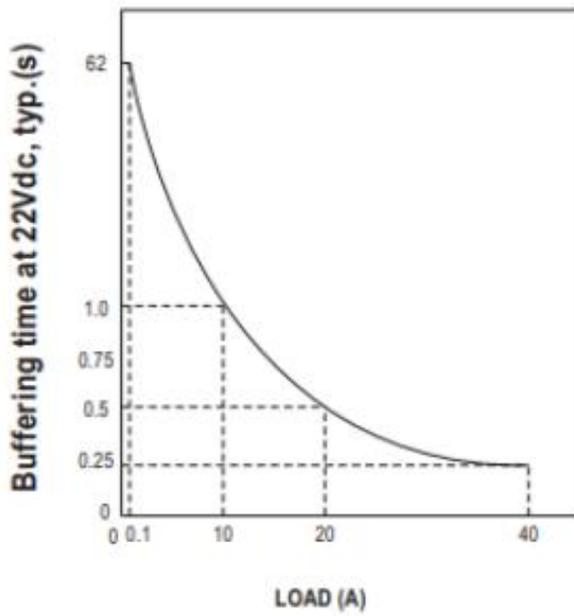
Block Diagram



Derating curve And Temperature

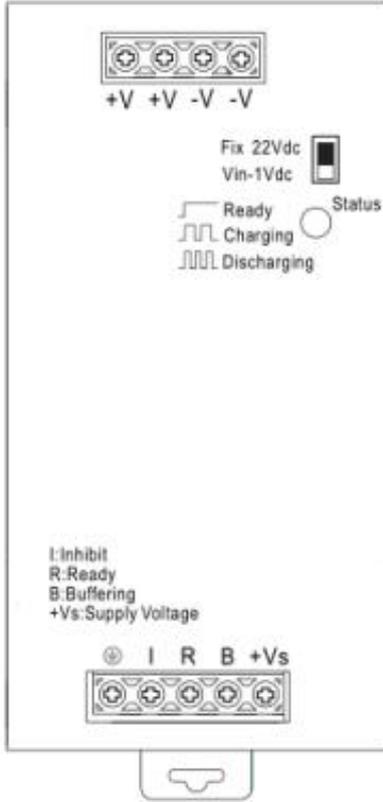


Bufering curve



Function Manual

1. user Elements



Back-upThresholdvoltage selectable by switch:

Option 1: Fixed mode (in switch Fix 22vdc)

The unitswitches to bufer mode as soon as the Voltage falls below 22vdc.

Option 2: mode (in - Dynamic switchv n 1vdc)

unitswitches to bufer mode when input Voltage decreases by 1vdc.

Note: Factory setting is fixed mode

LED Indicator status:

LED : OFF Capacitors are discharged.

LED . ON Capacitors are fully charged :

LED Flashing slowly (1Hz): Capacitors are getting charged.

LED Flashing quickly 10Hz): Capacitors are getting discharged.

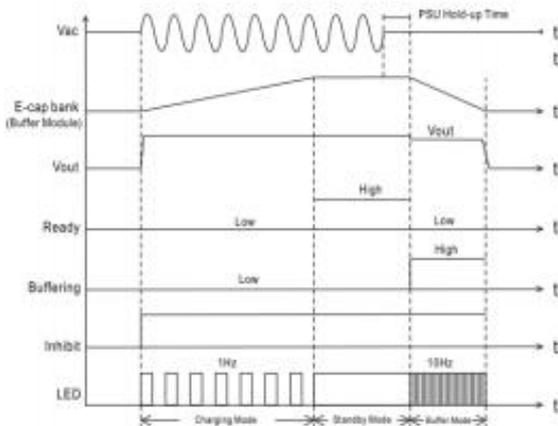
signal Connector:

-InhibitI+vs -v(I)<6vdc: Bufer moduleON; +vs -v(I)>10vdc: Bufer module OFF.

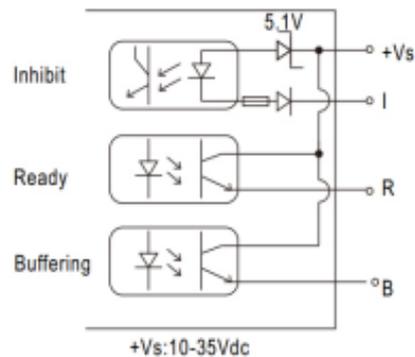
--ReadyICharged ready:v(R)>+vs - 2vdc; unready:v(R)<1vdc.

--BuferingI Buffering:v(B)>+vs - 2vdc; Other mode:v(B)<1vdc.

2.operating Diagram



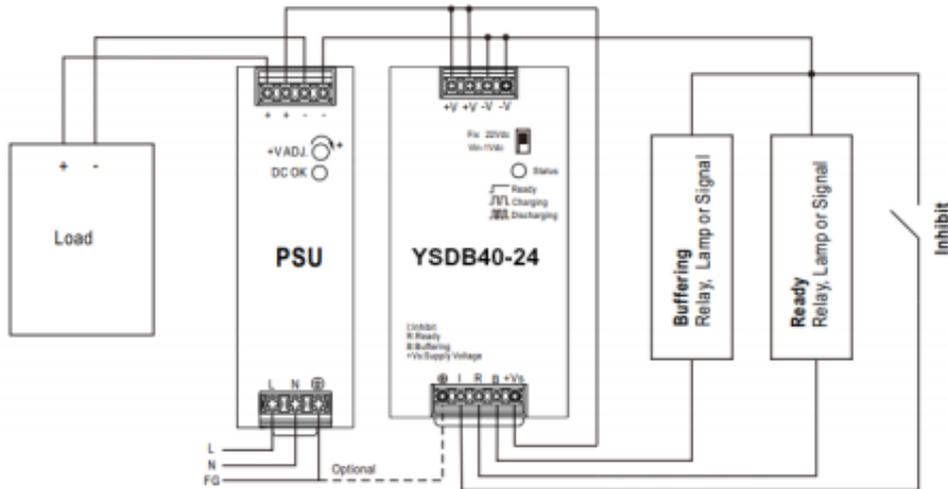
3. Signal Schematics



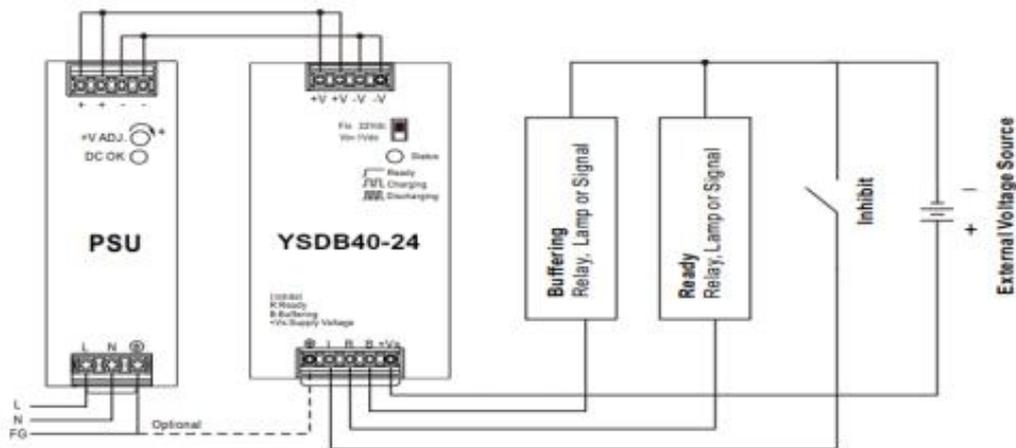
(+Vs can connected to YSDB40 "+V" or external voltage source,Please refer to "Typical Application Notes")

Typical Application Notes

1. General Wiring diagram



2. signals supplied from an external Voltage



3. paralleling of bufer units

