

Overdrive Digital Controller

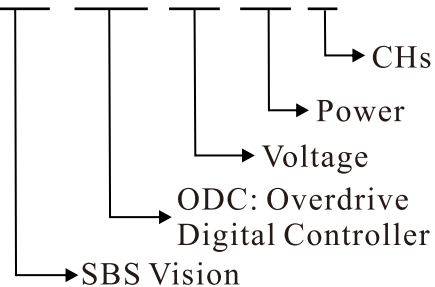


Products Features

- ▶ Overdrive voltage can be 48V, the brightness of the LED Lights can be increased by more than 3 times.
- ▶ With outsourcing trigger way, emitting time can be adjusted within 10-999us.
- ▶ Adjust the intensity by RS232, DIN or bottom mounting hole installation.
- ▶ The trigger delay time of the lighting and the output of the camera can be adjusted within 0-999us.

Model Description

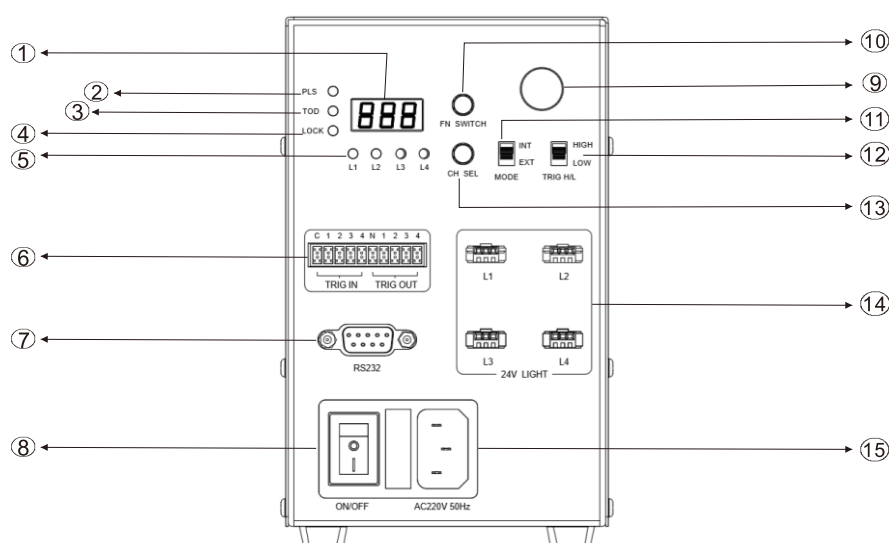
SBS-ODC-XX-XX-X



Parameter

Model Item	SBS-ODC48-120-4
Channels	4
Error inspection showing	digital bar showing with numbers
Over current protection	it works when the output current is more than 107%, and it shows OCP, restart the controller to recover
Input voltage	AC100-240V
Trigger function	bidirectional input, regardless of polarity
Trigger input voltage	DC5-24V
Total output power	120W (total power of 4 channels)
Peak output voltage	DC48V
Peak output current	<20A (single channel)
Trigger delay	<1μS
Strobe time	it can be set into 0-999μS
Trigger way	outsourcing trigger way and software trigger way
Usage environment	temperature: -10~50℃ humidity: 20-85% RH (not frozen)
Storage environment	temperature: -20~60℃ humidity: 20-85% RH (not frozen)
Cooling way	nature cooling

Panel



No.	Keys	Function
①	Digital screen	The selected data will be show in the screen (The selected data can be read in the screen)
②	Lighting flash time indicator	The lighting flash time can be set from 0 to 999 level (Press the "FN Switch" key until the lighting flash time indicator light is on)
③	Trigger delay time indicator	The lighting flash time can be set from 0 to 999 level (Press the "FN Switch" key until the lighting trigger time indicator light is on)
④	Lock data indicator	The set data can be locked after setting finished (Press the "FN Switch" key until the lock data indicator light is on)
⑤	Channels from 1 to 4	4 lights can be connected
⑥	Out signal input connector	For connection outside signal
⑦	RS232 connector	Connect with PC
⑧	Power switch key	Power turn on or off
⑨	Data adjust key	Adjust light flash time, trigger delay time, or light on time (turn right or left to adjust the selected data to set)
⑩	Function switch key	Select the light flash time, trigger delay time or light on time (Press "FN Swich" to select which time you want to set, when the "light flash time indicator"and "trigger delay time indicator"is on together, then press it longer to switch to "light on time" set)
⑪	Out signal trigger & internal trigger switch key	Select the trigger way by the signal source (4 sequences sets internal into controller)
⑫	High & low voltage trigger switch key	Select the trigger way by the input voltage (depend on the outside signal input voltage, 0-5V is low voltage trigger, 5V-24V is high voltage trigger)
⑬	Channels switch key	Select Channel from 1 to 4 (Select the Channel to adjust the related intensity)
⑭	Lighting connector	4 Channels
⑮	Power input connector	AC100-240V/50~60Hz

Serial communication description

Parameter of communication

Protocol	Working mode	Rate	Transport format			
RS-232	half-duplex mode	19200bps	Start bit	Data bits	Check bit	Stop bit
			1	8	0	1

Communication format

Identifier(0X40)	" Length LEN "	" Device CODE "	" Device CODE ID "	Command 1			Command	Checksum
				Command CMD	Channel No CHN	DATA		



vision solution Overdrive Digital Controller

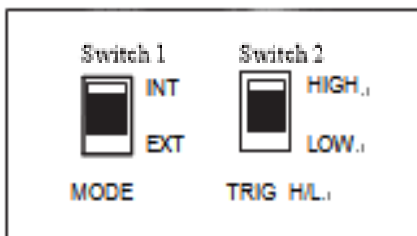
Command

Device Code:0x02	CMD	CHN	Data	Remark
Setting ID	0x09	NO	00-63	Factory default ID 0
Setting ON/OFF	0x2A	00-03	00-01	00-Off,01-ON
Setting Internal Trigger Frequency	0X11	NO	00-14	0Hz-Continuous Lighting
Settting Trigger Mode	0X23	NO	00-03	Trigger definition as follows chart
Designate channel operating parameters	0x22	00-03		Single or multi-channel optional
Setting Strobe light time	0xA0	00-03	0000-03E7	000-999
Setting light delaied time	0xA1	00-03	0000-03E7	000-999
Setting Trigger output delaied time	0XA2	00-03	0000-03E7	000-999
Setting Locked/unlock	0XA3	NO	00-01	00-Unlock,o1-Locked
Read Channel Parameters	0x31	00-03		Ending Channel>Beginning Channel
Reset	0xF0	NO	0XF0	Reset Code 0xF0
Device Correct	0X00	NO	Correct Code	40 03 02 00 00 45
Device Error	0x01	NO	Erroe Code	40 03 02 00 00 46
Note: Command collect all code,CHN and CMD are in hexadecimal				

Output channel

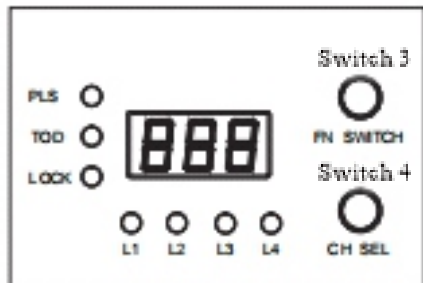
Channel	L1	L2	L3	L4
Setting index	0x00	0x01	0x02	0x03

Trigger mode



Trigger Mode	Switch 1	Switch 2	Settings
External rising edge	EXT	HIGH	0X00
External falling edge	EXT	LOW	0X01
Internal rising edge	INT	HIGH	0X02
Inrernal Falling edge	INT	LOW	0X03

Function Setting



Function Setting	Switch 3	Switch 4
Internal Trigger Frequency	Press 3s	/
ID NO	Press 3s	Press 3s
Reset	Press 6s	Press 6s
Locked	/	Press3s

*The continous Lights been setted n00 of internal trigger frequency or reset directly

Setting Example (Setting PBT4,Device ID IS 0)

Device No 01

Identifier	LEN	Device Code	Device Code ID	Command		Checksum
				CMD	NEW ID	
0X40	0x04	0x02	0x00	0x09	0x01	0x50

Reset

Identifier	LEN	Device Code	Device Code ID	Command		Checksum
0X40	0x04	0x02	0x00	CMD	Reset	
				0xF0	0xF0	0x26

Internal Trigger Frequency 10Hz

Identifier	LEN	Device Code	Device Code ID	Command		Checksum
0X40	0x04	0x02	0x00	CMD	Reset	
				0x11	0x0A	0x61

Trigger Mode-External falling edge

Identifier	LEN	Device Code	Device Code ID	Command		Checksum
0X40	0x04	0x02	0x00	CMD	Reset	
				0x23	0x01	0x6A

Channel L1 OFF (0x01 for ON,0x00 for OFF)

Identifier	LEN	Device Code	Device Code ID	Command			Checksum
0X40	0x04	0x02	0x00	CMD	CHN	ON/OFF	
				0x2A	0x00	0X00	0X71

Multi-Channel ON/OFF (L1 for ON,L2 for ON,L4 for OFF)

Identifier	LEN	Device Code	Device Code ID	Command						Checksum	
0X40	0x09	0x02	0x00	CMD	CHN	ON/OFF	CHN	ON/OFF	CHN	ON/OFF	
				0x2A	0x00	0X01	0x01	0X01	0x03	0X00	0X7B

Designate channel operating parameters

(L2 Strobe Light time 257us,light delay time 264us, trigger output delay time 32us)

Identifier	LEN	Device Code	Device Code ID	Command									Checksum
0X40	0x0B	0x02	0x00	CMD	CHN	strobe Light time		light delay time		trigger output delay time		ON/OFF	
						High 8	Low 8	High 8	low 8	High 8	Low 8		
				0x22	0x01	0X01	0x01	0X01	0x08	0X00	0X20	0X01	
													0X9C

L1 Strobe Light time 341us

Identifier	LEN	Device Code	Device Code ID	Command				Checksum
0X40	0x06	0x02	0x00	CMD	CHN	Strobe Light time		
						High 8	Low 8	
				0xA0	0x00	0X01	0x55	

L1 light delay time 342us

Identifier	LEN	Device Code	Device Code ID	Command				Checksum
0X40	0x06	0x02	0x00	CMD	CHN	light delaied time		
						High 8	Low 8	
				0xA1	0x00	0X01	0x56	

L1 Tigger output delay time 343us

Identifier	LEN	Device Code	Device Code ID	Command				Checksum
0X40	0x06	0x02	0x00	CMD	CHN	tigger output delay time		
						High 8	Low 8	
				0xA2	0x00	0X01	0x57	

Locked (0x01 for locked,0x00 for unlock)

Identifier	LEN	Device Code	Device Code ID	Command		Checksum
0X40	0x04	0x02	0x00	CMD	Locked/Unlock	
				0xA3	0x01	

Channel L2 parameter

Identifier	LEN	Device Code	Device Code ID	Command			Checksum
0X40	0x04	0x02	0x00	CMD	Start Channel	End Channel	
				0x31	0x01	0X01	

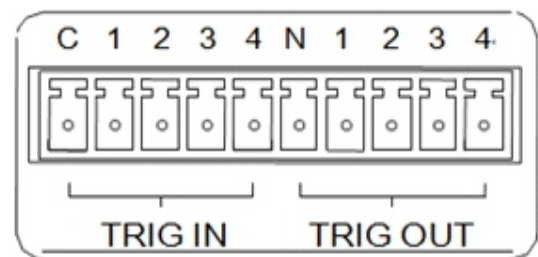
Command Return: 40 0B 02 00 31 01 01 A5 02 6D 02 09 01 A0

All Channel parameter

Identifier	LEN	Device Code	Device Code ID	Command			Checksum
0X40	0x05	0x02	0x00	CMD	Start Channel	End Channel	
				0x31	0x01	0X03	

Command Return: 40 23,02,00,31,00 00 79 01 41 00 DD 01 01 A5 02 6D 02 09 01 02 02 D1 03 99 03 35 01 03 00 15 03 E7 00 1F 01 1D 40 0B 02 00 31 00 00 79 01 41 00 DD 01 17

Connector

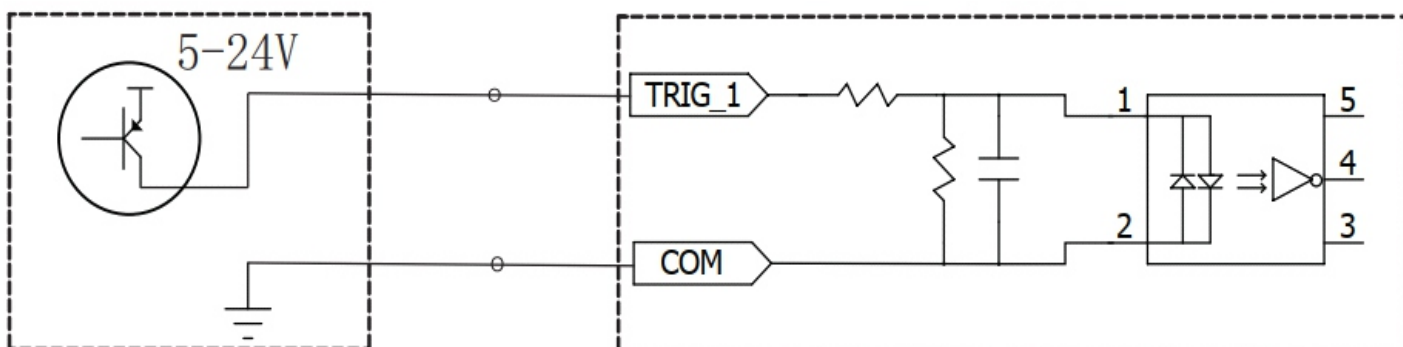


Trigger input is non-polar and support for bidirectional input.
Trigger output has polarity, N represents the output negative pole.
The voltage of the trigger output is 12V,and it can directly trigger the camera to take pictures.

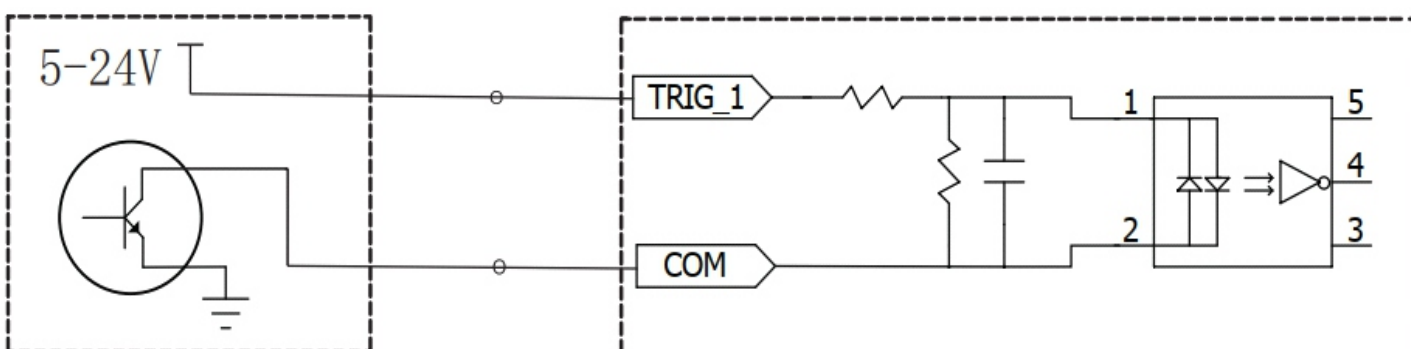
TRIG IN	Wiring definition	TRIG OUT	Wiring definition
C	common port of trigger input	N	common port of trigger output (-)
1	Channel 1 of trigger input	1	Channel 1 of trigger output
2	Channel 2 of trigger input	2	Channel 2 of trigger output
3	Channel 3 of trigger input	3	Channel 3 of trigger output
4	Channel 4 of trigger input	4	Channel 4 of trigger output

Trigger Wiring

PNP



NPN



* Switches with strong mechanical characteristics such as relays cannot be used as external actuation of the controller.

Control mode selection

Trigger mode to HIGH	Trigger mode to LOW
External(EXT).Rising Edge Triegger Mode Input signal: High, Low Light source output: not bright, bright, not bright Timing: <1us, 0~999us	External(EXT).Falling Edge Triegger Mode Input signal: High, Low Light source output: not bright, bright, not bright Timing: <1us, 0~999us
Internal (INT) trigger mode Internal signal: High, Low Light output: not bright, bright, not bright Timing: <1us, 0~999us	Internal (INT) Light Source Extinction mode Internal signal: high, Low Light output: not bright

Note:the camera should be set falling edge trigger mode when the controller trigger output function to trigger the camera to take the picture synchronously

[illegible]