

Control Units

Analog Control Unit (Constant Voltage)

PSB3-30024

High-capacity 300 W constant voltage
Analog Control Units adjustable
in 256-step intensity settings



The supplied AC cord is for use with 100 to 120 VAC.
If you want to use the Control Unit with 200 to 240 VAC,
you must procure another appropriate AC power cord.

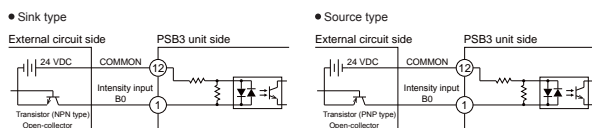
Features

- Light Unit output is compatible with 1 channel / 4 connectors (metal connector x 2, EL connector x 2).
- Each single unit is equipped with parallel, serial and analog control for external control.
- You can select the optimal output according to the Light Unit and optimize the intensity setting by switching the intensity range.

Example Connections

Refer to the "Instruction Guide" for details.

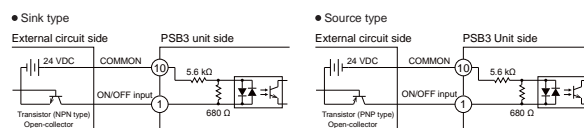
Parallel communication Example connections of external signal



| Connection specifications | | | | | |
|---------------------------|-----------------------|---------------------------------|----------------------------------|----------------|-----------------------|
| Rated input voltage | Maximum input voltage | Photocoupler ON voltage/current | Photocoupler OFF voltage/current | Response time | Input impedance |
| 24 VDC | 26.4 VDC | 20 VDC min. / 6 mA min. | 3 VDC max. / 1 mA max. | Approx. 100 ms | 5.6 kΩ (per terminal) |

| | Input signal | Photocoupler | Data |
|-------------|--------------|--------------|------|
| Sink type | HIGH | OFF | 1 |
| | LOW | ON | 0 |
| Source type | HIGH | ON | 0 |
| | LOW | OFF | 1 |

ON/OFF input Example connections of external signal



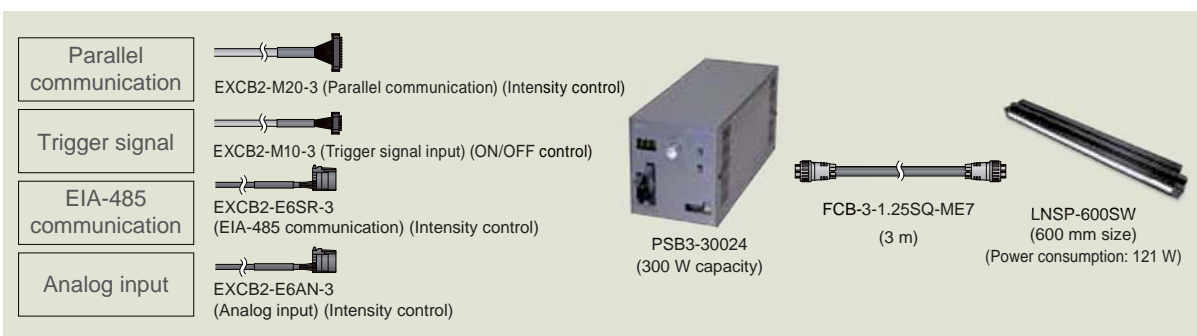
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| 24 VDC | 26.4 VDC | 20 VDC min. / 6 mA min. | 3 VDC max. / 1 mA max. | Approx. 100 ms | 5.6 kΩ (per terminal) |

| | Input signal | Photocoupler | Light Unit status |
|-------------|--------------|--------------|-------------------|
| Sink type | HIGH | OFF | On |
| | LOW | ON | Off |
| Source type | HIGH | ON | Off |
| | LOW | OFF | On |

Example System Configuration

Example:

External control devices — External control cables — Control Unit — Extension cable — LED Light

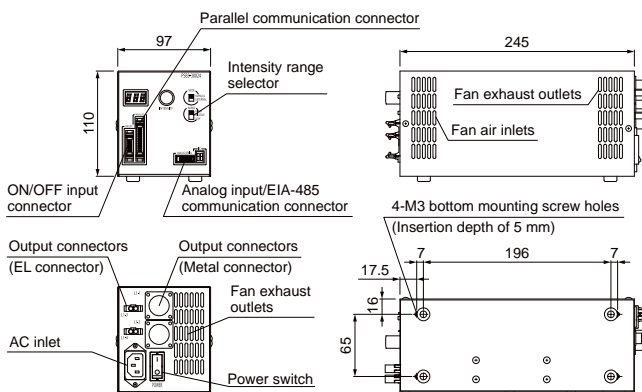


Specifications

| | | |
|--------------------------------|--|---|
| Model | PSB3-30024 | |
| Lighting method | Continuous lighting | |
| Drive method | Constant-voltage system | |
| Intensity control method | Variable voltage control | |
| Number of channels | 1 channel | |
| Applicable Light Unit (rated) | 24 V 300 W | |
| Intensity control | Manual and external intensity | Manual/External switch (MODE) |
| | Variable output voltage range | Select between 3 steps by using the intensity range selector (RANGE). |
| | Manual | Set any of 256 steps via the setting switch. Press and hold the switch for 2 seconds to lock the intensity value. |
| | External | 8-bit intensity value setting (B0 to B7) and write signal (WR) |
| | Parallel communication | Command input via EIA-485 communication |
| | Serial communication | Command input via EIA-485 communication |
| ON/OFF control | Parallel bit input | Lighting signal (OFF) |
| | Serial communication | Command input via EIA-485 communication |
| | Serial communication | Command input via EIA-485 communication |
| EIA-485 communication settings | ID | Set by using the ID switch (00 to 03) Connect up to four units |
| | Terminating resistance | Set by using the ID switch (Terminating resistance is ON only when ID = 00) |
| Lighting delay (typ.) | 0.1 s | |
| Error detection display | "Err" is displayed on the digital display. | |
| Error detection output | External control Connector | Errors are output and light output is stopped for an internal AC power error. |
| | External control Connector | Error output terminal (OC, OE), photocoupler insulation, open-collector output, alert open (load current of 10 mA or less), and error status (serial communication) |

| | |
|---------------------------------------|---|
| Overcurrent protection | Operates at 105% of the rated current or higher. Resets by cycling the Control Unit. |
| Overvoltage protection | Operates at 120% to 155% of the rated voltage. Resets by cycling the Control Unit. |
| Input voltage (rated) | 100 to 240 VAC (+10% - 15%), 50/60 Hz |
| Power consumption (typ.) | 410 VA |
| Frequency | 50/60 Hz |
| Inrush current (typ.) | 40 A at cold start |
| Ground leakage current | 3.5 mA max. (264 VAC, 60 Hz, with no load) |
| Output voltage variation range (typ.) | Select between 3 steps by using the intensity range selector. |
| | 12 V to 24 V with no load |
| | 15 V to 24 V with no load 18 V to 24 V with no load |
| Operating temperature and humidity | Temperature: 0 to 40°C, Humidity: 20% to 85%RH (with no condensation) |
| Storage temperature and humidity | Temperature: -20 to 60°C, Humidity: 20% to 85%RH (with no condensation) |
| Vibration resistance | Acceleration: 19.6 m/sec ² , Frequency: 10 to 55 Hz, Cycle: 3 min., Sweep cycle: each hour in the X, Y, and Z directions |
| Cooling method | Forced air cooling |
| CE marking | Safety standard: Conforms to EN61010-1, EMC standard: Conforms to EN61326-1 Class A |
| Environmental regulations | RoHS compliant |
| Material, coating, surface processing | Steel plate, Thickness of cover: 1.0, Thickness of chassis: 1.6, N3 leather tone finish |
| Weight | 2,300 g max. |
| Accessories | 3-prong AC cord with ground terminal (2 m) x 1, Instruction Guide x 1 |

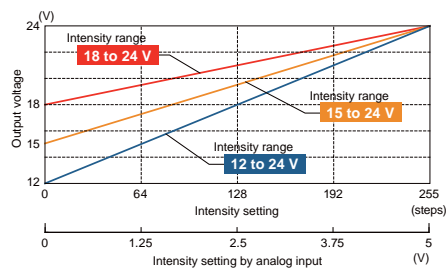
Dimensions (mm)



Intensity Range

Optimize your intensity setting with the intensity lower limit selection function.

You can choose an intensity range to match the Light Unit.

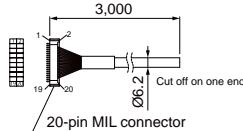


Options

These are cables for parallel communication, EIA-485 communication, and analog input. Select yours to match your control method.

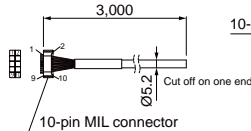
Parallel communication cable

EXCB2-M20-3 (3 m)



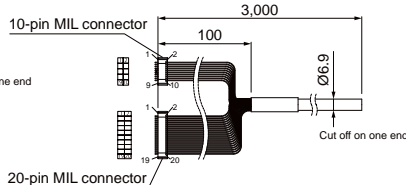
ON/OFF input cable

EXCB2-M10-3 (3 m)



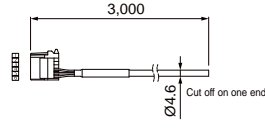
Parallel communication / ON/OFF input shared cable

EXCB2-M10M20-3 (3 m)



Analog input cable

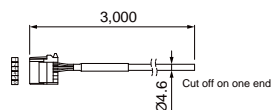
EXCB2-E6AN-3 (3 m)



Dimensions (mm)

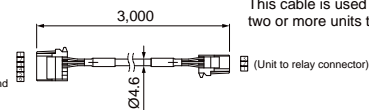
EIA-485 communication cable

EXCB2-E6SR-3 (3 m)



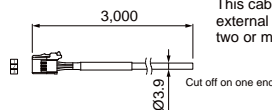
EIA-485 communication relay cable

EXCB2-E6SR-E3-3 (3 m)



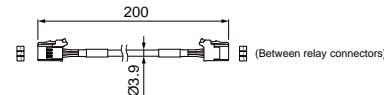
This cable is used to connect two or more units together.

EXCB2-E3-3 (3 m)



This cable is used to connect to an external device when connecting two or more Control Units together.

EXCB2-E3-E3-0.2 (0.2 m)



Relay connector

ECNR-E3CN4

