

## Dual-Output Power Supply (CC + PWM)

# OPPCW Series

## Dual-output power supply

- Dual output with 12 V PWM and constant current
- Digital dimming method (256 steps using front switch)
- Support for 8-bit parallel and 0 to 5 V analog input for external dimming control



### Specifications

| Model       | No. of Channels | Dimming Control                  | Capacity [W] | Weight [g] |
|-------------|-----------------|----------------------------------|--------------|------------|
| OPPCW-910M2 | 2               | 12 V PWM / Constant current (CC) | 26.4         | 1,030      |

### Options

External lighting control cable model: OP-ECB2-□ **OP. 63**

External dimming control cable

| Model       | Length [m] | Weight [g] |
|-------------|------------|------------|
| OP-ECBM20-3 | 3          | 230        |

### Range Setting

| Range | Function       | Range | Function       |
|-------|----------------|-------|----------------|
| 0     | Reserved       | 5     | CC 500 mA max. |
| 1     | CC 100 mA max. | 6     | CC 600 mA max. |
| 2     | CC 200 mA max. | 7     | CC 700 mA max. |
| 3     | CC 300 mA max. | 8     | Reserved       |
| 4     | CC 400 mA max. | 9     | 12 V PWM       |

### Illumination Output

■ 12 V PWM

| Pin No. | Signal Name |
|---------|-------------|
| 1       | +           |
| 2       | -           |

● Extension cable model: OP-CB1-□ (cable length)

■ CONSTANT CURRENT

| Pin No. | Signal Name |
|---------|-------------|
| 1       | NC          |
| 2       | -           |
| 3       | +           |

● Extension cable model: OP-CBCH1-□ (cable length)

### External Lighting Control Input

■ EXT ON/OFF external lighting connector

| Pin No. | Terminal Marking | Function                       |
|---------|------------------|--------------------------------|
| 1       | SYNC1            | LAMP1 ON                       |
| 2       | SYNC2            | LAMP2 ON                       |
| 3       | EXSYN            | External control switching COM |
| 4       | SCOM             |                                |

● External lighting control cable: OP-ECB2-□ (cable length)

### External Dimming Control Input

■ EXT CTRL external dimming control input connector

| Pin No. | Terminal Marking | Function                                       |
|---------|------------------|------------------------------------------------|
| 1       | COM              | Digital input common                           |
| 2       | EXCTRL           | Digital input switching                        |
| 3       | A0               | OFF: LAMP1, ON: LAMP2                          |
| 4       | HOLD             | Not configurable when ON                       |
| 5       | D7               | Bit 7 (MSB)                                    |
| 6       | D6               | Bit 6                                          |
| 7       | D5               | Bit 5                                          |
| 8       | D4               | Bit 4                                          |
| 9       | D3               | Bit 3                                          |
| 10      | D2               | Bit 2                                          |
| 11      | D1               | Bit 1                                          |
| 12      | D0               | Bit 0 (LSB)                                    |
| 13      | ANALOG           | Analog input switching (for use between 1 COM) |
| 14      | GND              | Ground                                         |
| 15      | 24 V             | 24 V output                                    |
| 16      | 24 V             | 24 V output                                    |
| 17      | AIN1             | LAMP1<br>0 to 5 V analog input                 |
| 18      | AIN2             | LAMP2<br>0 to 5 V analog input                 |
| 19      | 5 V              | 5 V output                                     |
| 20      | ACOM             | AIN1/2 common                                  |

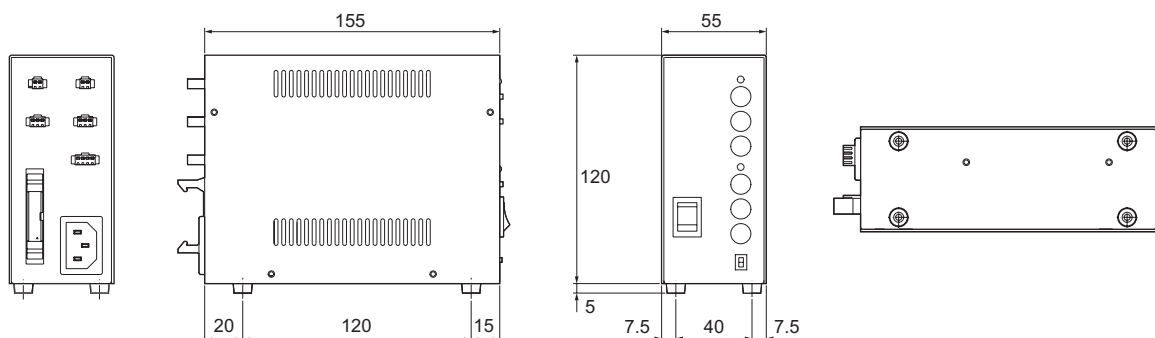
● External dimming control cable: OP-ECBM20-3

## Specifications

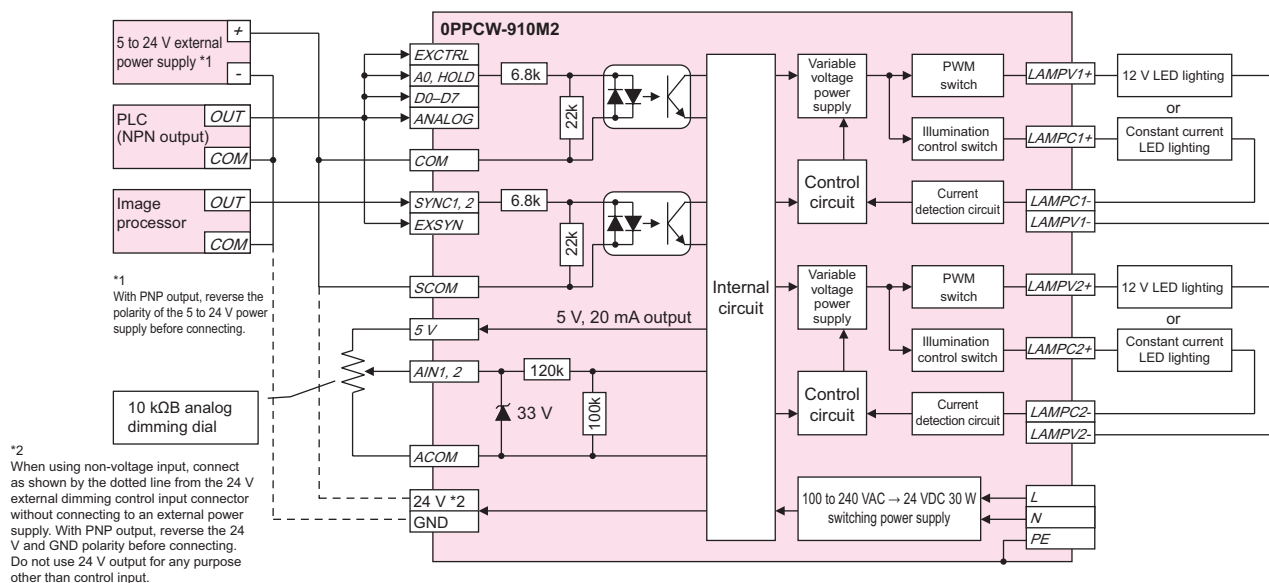
|                                     |                       |                                                                                                                          |
|-------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------|
| Power supply voltage                |                       | 100 to 240 VAC, 50/60 Hz                                                                                                 |
| Current consumption                 |                       | Max. 0.43 A (at 100 VAC)                                                                                                 |
| Dimming control                     | PWM                   | 78.125 kHz, PWM control, 256 steps                                                                                       |
|                                     | Constant current (CC) | Max. current 7-level range switching, 256 steps                                                                          |
| Output channels                     |                       | 2 (switching between PWM mode and constant mode for both channels)                                                       |
| Output voltage                      |                       | 12 V $\pm 5\%$ p-p (PWM mode), 1.5 to 17 V (constant current mode)                                                       |
| Output current                      |                       | 0 to 2.2 A / 2 ch total (PWM mode), 0.4 mA to 700 mA $\pm 5\%$ (constant current mode)                                   |
| External control                    |                       | Per-channel ON/OFF, Digital dimming, Analog dimming                                                                      |
| Digital input                       |                       | OFF: $\pm 1.2$ V or less, ON: $\pm 5$ V or more applied (max. $\pm 26.4$ V), Input resistance 6.8 k $\Omega$ , Insulated |
| Analog input                        |                       | 0 to 5 V (max. +30 V, -0.5 V), Input resistance: 220 k $\Omega$ , Non-insulated                                          |
| 5 V output current for analog input |                       | Max. 20 mA                                                                                                               |
| Response time                       |                       | SYNC: OFF $\rightarrow$ ON                                                                                               |
|                                     |                       | • PWM mode, 24 V input: 7 $\mu$ s, 12 V input: 14 $\mu$ s, 5 V input: 135 $\mu$ s                                        |
|                                     |                       | *Max. 12.8 $\mu$ s fluctuations per pulse cycle                                                                          |
|                                     |                       | • Constant current mode: 1 ms (common for each input voltage)                                                            |
|                                     |                       | SYNC: ON $\rightarrow$ OFF 120 $\mu$ s (common for each input voltage)                                                   |
|                                     |                       | Analog dimming input: Approx. 2 ms / Other digital control input: Approx. 2.5 ms                                         |
| Ambient temperature/humidity        |                       | -10 to 50°C / 35 to 85% RH (no condensation)                                                                             |
| Storage temperature/humidity        |                       | -20 to 70°C / 35 to 95% RH (no condensation)                                                                             |
| Applicable regulations              |                       | EMC (2014/30/EU) / Safety (2014/35/EU) / RoHS (2011/65/EU, MIIT Order No.32)                                             |
| Applicable standards                |                       | EN 61326-1: 2013, EN 61010-1: 2010                                                                                       |

## Dimensions

(unit: mm)



## Circuit Diagram



Note: The included power cord is for 100 V. Power cords that will be used with voltages in excess of the 125 V rating must be provided by the customer.