

PassiveSlave CA

**WU-ST-011-PassiveSlave CA (Ref. No.: 186172) and
WU-VB-004-Slave PCB CA (Ref. No.: 186140)**

1 Introduction

1.1 Product Description

PassiveSlave CA and Slave PCB CA units form part of 24 V CA LED assembly systems and are designed to enable system extension without signal amplification for "common anode (CA)" RGB(W) modules. The passive slave outputs supply the system with the additional power of the 24 V converters via the 24 V channel and are suitable for systems that consist solely of 24 V HighPower RGB CA modules (Triple, Line and Flood). The technical functions of both products – Slave PCB CA and PassiveSlave CA – are identical. The Slave PCB CA unit, however, is a board version without a casing.

2 Description of Functions

2.1 Functional Characteristics

24 V converters provide additional power via the two slave outputs of PassiveSlave CA or Slave PCB CA units so that the maximum 120 W rating is again made available to the two 24 V output channels. In addition, the input power is connected directly through (i.e. without further conversion/amplification) to output terminal X2. The signals sent via the four PWM channels are not amplified and supplied to all three outputs.

The control signals are suitable for use with every model of the Digiled CA series.

3 Technical Specifications

Operating voltage	23 to 25 V DC
Current draw	at Slave terminals (X3/X4): max. 5 A ± 5 %
Fuse	T5 A 250 V microfuse
Connection	6-pin push-in terminal for input and output signal (see Table of Terminal Connections) 8-pin push-in terminal for Slave operation voltage and LED assembly modules of 24 V CA system (see Table of Terminal Connections)
Ambient temperature	-20 °C to +45 °C
t _c point	max. 65 °C
Degree of protection	IP20

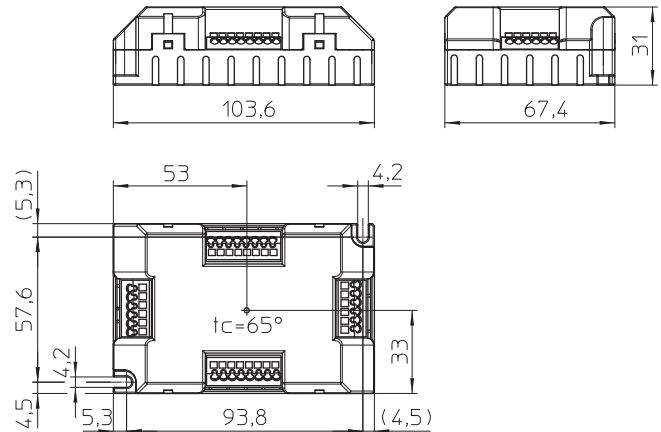
WU-ST-011-PassiveSlave CA

Casing	Kunststoff, PC weiß
Dimensions (LxWxH)	103.6 x 67.4 x 31 mm
Weight	87 g

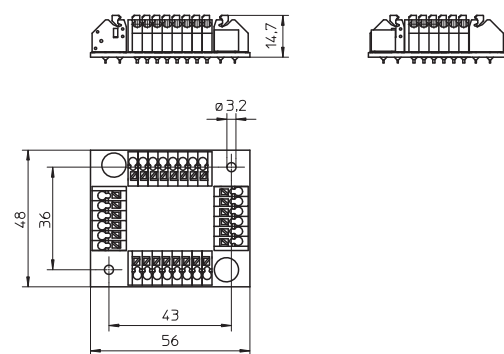
WU-VB-004-Slave PCB

Dimensions (LxWxH)	56 x 48 x 14.7 mm
Weight	25 g

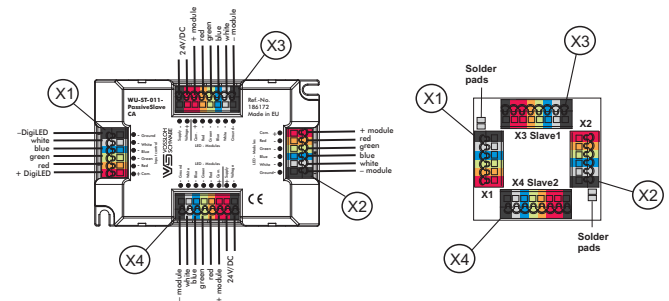
WU-ST-011-PassiveSlave CA



WU-VB-004-Slave PCB



4 Terminal connections



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4.1 Terminal Strip Input (X1)

Pole	Colour Coding	Max. Current-carrying Capacity	Function	Recommended Lead	Connection
1	• Red	5 A	Common anode of CA system (+24 V)	Standard six-strand lead (e.g.: UYY 6x0.75 mm ²)	Digiled CA output signal or Signal of PCB distributor or Slave PCB for 24 V CA system
2	• Orange	1.25 A	PWM signal line for channel 1/Red		
3	• Green	1.25 A	PWM signal line for channel 2/Green		
4	• Blue	1.25 A	PWM signal line for channel 3/Blue		
5	• Grey	1.25 A	PWM signal line for channel 4/White		
6	• Black	5 A	Cathode of CA system		

4.2 Terminal Strip Output (X2)

Pole	Colour Coding	Max. Current-carrying Capacity	Function	Recommended Lead	Connection
1	• Red	5 A	= Signal an X1 (Common anode of CA system (+24 V))	High Power feed in cable (Ref. No.: 535900) or Standard six-strand lead (e.g.: UYY 6x0.75 mm ²)	LED assembly modules or module group for 24 V CA system, esp. LEDLine Flex RGB2 or PCB Distributor or Slave PCB for 24 V CA system
2	• Orange	1.25 A	= Signal an X1 (PWM signal line for channel 1/Red)		
3	• Green	1.25 A	= Signal an X1 (PWM signal line for channel 2/Green)		
4	• Blue	1.25 A	= Signal an X1 (PWM signal line for channel 3/Blue)		
5	• Grey	1.25 A	= Signal an X1 (PWM signal line for channel 4/White)		
6	• Black	5 A	= Signal an X1 (Cathode of CA system)		

4.3 Terminal Strip Slave 1 (X3)

Pole	Colour Coding	Max. Current-carrying Capacity	Function	Recommended Lead	Connection
1	• Black	5 A	Supply line for optional 24 V converter (GND)	Standard two-strand supply lead 0.5–1.5 mm ²	24 V DC converter
2	• Red	5 A	Supply line for optional 24 V converter (+24 V)		
3	• Red	5 A	Supply line/Common anode for LED assembly module (+24 V)	Standard six-strand lead (e.g.: UYY 6x0.75 mm ²)	LED assembly modules or module group for 24 V CA-system, esp. LEDLine Flex RGB2 or PCB Distributor or Slave PCB for 24 V CA system
4	• Orange	1.25 A	PWM signal line for channel 1/Red		
5	• Green	1.25 A	PWM signal line for channel 2/Green		
6	• Blue	1.25 A	PWM signal line for channel 3/Blue		
7	• Grey	1.25 A	PWM signal line for channel 4/White		
8	• Black	5 A	Supply line/cathode for LED assembly module (GND)		

4.4 Terminal Strip Slave 2 (X4)

Pole	Colour Coding	Max. Current-carrying Capacity	Function	Recommended Lead	Connection
1	• Black	5 A	Supply line for optional 24 V converter (GND)	Standard two-strand supply lead 0.5–1.5 mm ²	24 V DC converter
2	• Red	5 A	Supply line for optional 24 V converter (+24 V)		
3	• Red	5 A	Supply line/Common anode for LED assembly module (+24 V)	Standard six-strand lead (e.g.: UYY 6x0.75 mm ²)	LED assembly modules or module group for 24 V CA-system, esp. LEDLine Flex RGB2 or PCB Distributor or Slave PCB for 24 V CA system
4	• Orange	1.25 A	PWM signal line for channel 1/Red		
5	• Green	1.25 A	PWM signal line for channel 2/Green		
6	• Blue	1.25 A	PWM signal line for channel 3/Blue		
7	• Grey	1.25 A	PWM signal line for channel 4/White		
8	• Black	5 A	Supply line/cathode for LED assembly module (GND)		

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5 PassiveSlave CA Connections

5.1 Input X1

The X1 input terminal (terminal connections in accordance with the table at 4.1) serves to supply the signals of an existing DigiLED CA (see example of a system shown at 5.3). The signals sent by the four PWM signal lines are not amplified and supplied to the three outputs (X2, X3 and X4).

5.2 Output X2

Output X2 supplies the same signals that are at input X1 in unchanged (i.e. not amplified) form to terminal X2: Input = Output.

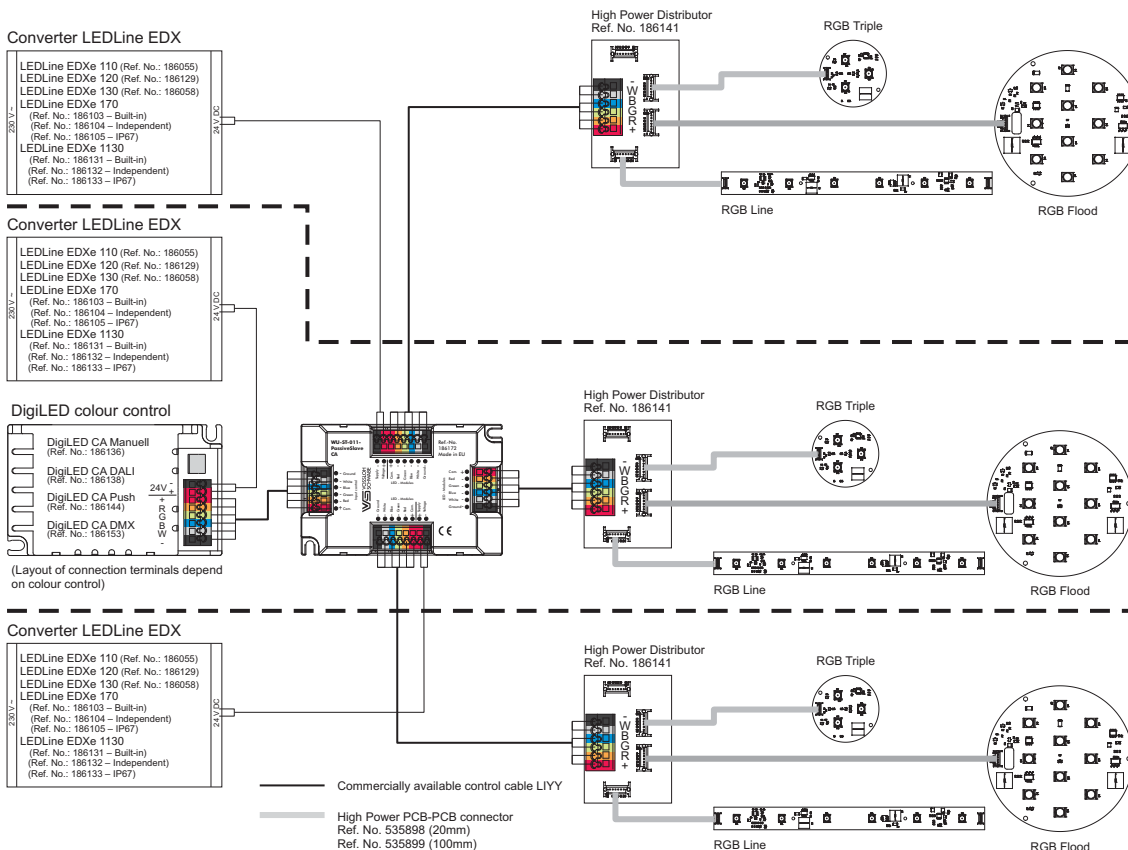
5.3 Slave 1 (X3) and Slave 2 (X4)

The X3 and X4 slave terminals are used to supply the additional 24 V converters with power, which serves to make a max. of 5 A available again for the 24 V channels (see terminal connections in accordance with the tables under 4.3). The additional power must be supplied to the slave terminals (X3 and X4) by suitable 24 V converters.

To this end, the installed 24 V converter must supply the power for the installed LED load (max.: $5 \text{ A} \times 24 \text{ V} = 120 \text{ W}$). The maximum permissible currents per individual terminal shown in the tables at 4.3 and 4.4 must not be exceeded.

The maximum number of connected LED assembly modules is limited by the power rating of the converter and by the max. current load of the outputs. The power and current draw values of the connected LED assembly modules can be found in the respective data sheets at www.vs-optoelectronic.com.

When connecting LowPower LED assembly modules to a Slave PCB CA unit using a four-strand "RGB+" connection at terminal X3 or X4, no further power supply unit can be connected to that particular terminal – a solder bridge would then have to be created.



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6 Notes on Installation and Safe Operation

6.1 Installation

Installation must be carried out under observation of the relevant regulations and standards. The components of the 24 V CA system are designed for operation within a casing or luminaire. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains). The following advice must be observed; non-observance can result in the destruction of the components, fire and/or other hazards.

- PassiveSlaves CA is exclusively designed for operating 24 V Common-Anode LED modules.
- The load range of the connected 24 V converter must be observed.
- The maximum output currents specified in topic 4 must not be exceeded.
- The temperature measured at the t_c point must not exceed the specified limit ($t_c \text{ max.} = 65^\circ\text{C}$) during operation.

6.2 Assembly

- Installation any way up
- Installation only in dry rooms or luminaires, box casings or similar. If PassiveSlave CA or Slave PCB CA is to be installed outdoors or in a damp location, a casing of a suitable protection class (IP) must be used
- Blf mounting the Slave PCB CA unit on an electrically conductive substrate, the underside of the PCB must be electrically insulated
- Attach using 4 mm screws
- Ensure solid and even surface for unit to rest on

7 Standards

7.1 Applied Standards

EN 61347-1
Lamp controlgear – Part 1: General requirements and tests (IEC 61347-1:2000);
German Version EN 61347-1:2001
EN 61347-2-11
Lamp controlgear – Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires (IEC 61347-2-11:2001);
German Version EN 61347-2-11:2001
EN 55015
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

7.2 Standards to adhere

EN 61347-2-13
amp controlgear – Part 2-13: Particular requirements for D.C. or A.C. supplied electronic controlgear for LED modules
EN 62384
D.C. or A.C. supplied electronic control gear for LED modules – Performance requirements