

DigiLED Push

WU-ST-006-DigiLED-Push (Ref. No.: 186143)



A New Lighting Experience

1 Introduction

1.1 Product Description

DigiLED Push units are used to control pre-programmed colour sequences of LED modules from Vossloh-Schwabe (LEDLine Flex RGB, EasyLED RGB, LEDLine 300/150 RGB, MarkerLED RGB). An externally connected push-button enables simple manual operation.

2 Description of Functions

2.1 Functional Characteristics

DigiLED Push generates three PWM signals for colour control of LED modules.

The three PWM signals are addressed using an externally connected bush-button and a pre-programmed colour sequence.

The following DigiLED Push functions can be adjusted:

- Calling up a colour sequence with three freely adjustable colour sequence speeds
- Calling up and saving a colour value (chromaticity) of the colour sequence

After mains voltage dis- and reconnection, DigiLED Push will restart with the last saved function (colour sequence or set colour value).

2.2 Description of push-button functions

DigiLED Push can be connected to a standard external push-button to enable the following functions:

a) Push < 1 sec:

- Switches the device on: the colour that was last saved will be activated.
- Stops the colour sequence and saves the current colour value: briefly pushing the push-button during the course of a colour sequence (see b) will stop the sequence so that the current colour is saved.
- Switching the device off: after pausing the colour sequence the device can be switched off by again briefly pressing the keypad.

b) Push and hold > 2sec:

Pushing and holding (>2s) causes the connected LED module to flash twice in succession (2 x 0.75s) in the single colours red (channel 1), green (channel 2) and blue (channel 3).

If the key is released while the individual colours are flashing, the programmed colour sequence will be activated (see Fig. 1) with the cycle time allocated to the respective flashing colour.

red: 40s colour sequence cycle time

green: 120s colour sequence cycle time

blue: 240s colour sequence cycle time

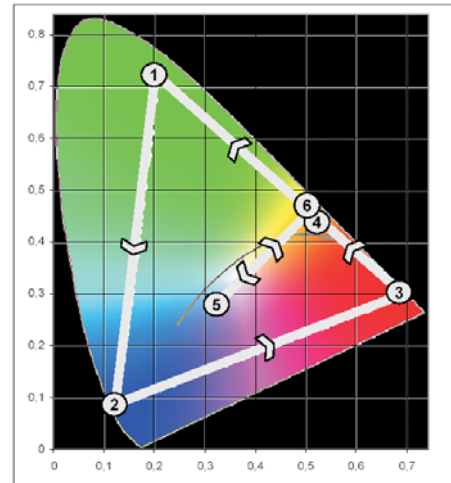
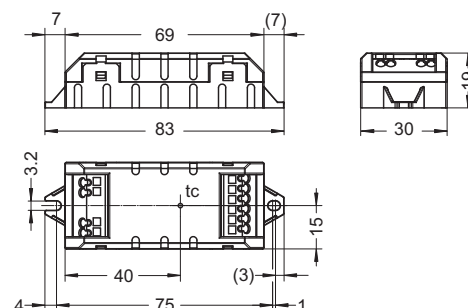


Fig. 1

3 Technical Specifications

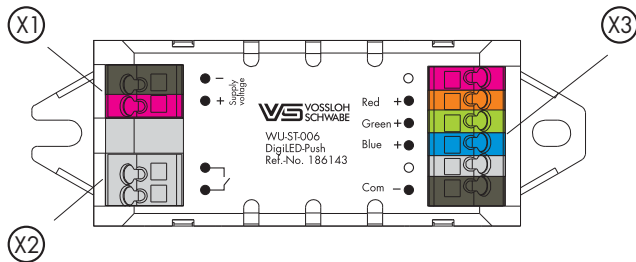
Operating voltage	11 to 25V DC, $U_{OUT} = U_{IN}$
Current draw	max. 3.75A \pm 5%
Fuse	T4 A 250 V microfuse
Connection	4-pin push-in terminal for LED assembly modules 2-pin push-in terminal for operating voltage 2-pin push-in terminal for bush-button
Ambient temperature	-20°C to +45°C
tc point	max. 60°C
Humidity	Protection class IP 20
Casing	Plastic, PA, white
Dimensions (LxWxH)	90 x 30 x 19 mm
Weight	21g



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4 Terminal Connections



4.1 Terminal Strip Input Voltage (X1)

Terminal	Colour Coding	Max. Current-carrying Capacity	Function	Recommended Lead	Connection
1	• Black	4 A	Supply line converter (GND)	Standard two-strand lead	DC converter
2	• Red	4 A	Supply line converter (+)	(0,25–1,5 mm ²)	

4.2 Terminal Strip for Keypad (X2)

Terminal	Colour Coding	Max. Current-carrying Capacity	Function	Recommended Lead	Connection
1	• Grey	n.a.	Connecting terminal for external keypad	Standard two-strand lead	Keypad*
2	• Grey	n.a.	Connecting terminal for external keypad	(0,25–1,5 mm ²)	

* Push-button specification: $U_{max} = 24V$; $I_{max} = 5mA$; total resistance bush-button + cable: $R < 1k\Omega$

4.3 Terminal Strip for Module Connection (X3)

Terminal	Colour Coding	Max. Current-carrying Capacity	Function	Recommended Lead	Connection
1	• Red	Unassigned	Unassigned	Standard four-strand lead	LED assembly modules or module groups: EasyLED RGB, MarkerLED RGB LEDLine Flex RGB LEDLine 300/150 RGB
2	• Orange	1,25 A	PWM signal line for channel 1/Red	(0,25–1,5 mm ²)	
3	• Green	1,25 A	PWM signal line for channel 2/Green	e. g. LIYY 4x0,75 mm ²	
4	• Blue	1,25 A	PWM signal line for channel 3/Blue	or	
5	• Grey	Unassigned	Unassigned	Direct connection to LED modules	
6	• Black	3,75 A	Common ground		

5 DigiLED Push Connections

5.1 Input

Voltage supply: DigiLED Push must be supplied with voltage via terminal X1.

Keypad connection: the external push-button is connected to terminal X2 (polarity insensitive).

5.2 Output

Connection of RGB Assembly Modules

RGB LED assembly modules with four connection elements (RGB-) can be connected directly to the X3 terminal strip of the DigiLED Push device under observation of the max. permissible power rating. Correct polarity must be observed in accordance with Table 4.3.

5.2 Output

Connection of RGB Assembly Modules

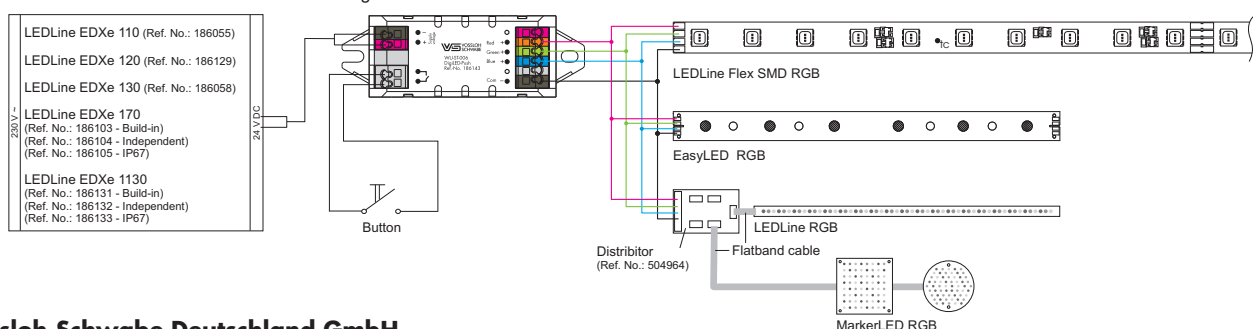
The maximum number of connected LED assembly modules is limited by the power rating of the connected converter and by the max. current load of channels 1 to 6 of terminal X3 (sum: 90 W) in accordance with Table 4.3. The power and current draw values of the connected LED assembly modules can be found at www.vs-optoelectronic.com.

The maximum power rating for a DigiLED Push unit totals 90 W.

Converter LEDLine EDX

LEDLine EDXe 110 (Ref. No.: 186055)
LEDLine EDXe 120 (Ref. No.: 186129)
LEDLine EDXe 130 (Ref. No.: 186058)
LEDLine EDXe 170 (Ref. No.: 186103 - Build-in) (Ref. No.: 186104 - Independent) (Ref. No.: 186105 - IP67)
LEDLine EDXe 1130 (Ref. No.: 186131 - Build-in) (Ref. No.: 186132 - Independent) (Ref. No.: 186133 - IP67)

DigiLED Push Color control unit



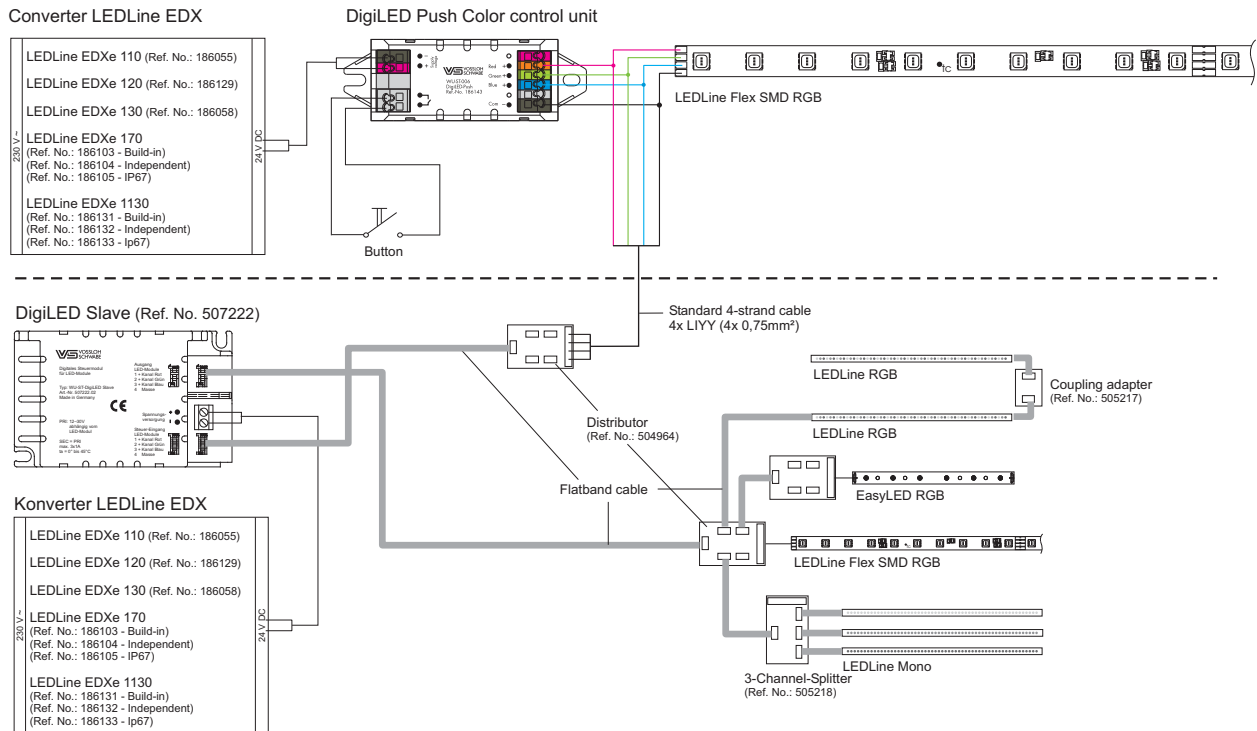
Vossloh-Schwabe Deutschland GmbH

Hohe Steinert 8 · 58509 Lüdenscheid, Germany · Phone: +49/23 51/101-0 · Fax: +49/23 51/101-217 + -384 · www.vossloh-schwabe.com

5.2 Output

Connection of RGB Assembly Modules

System performance can be extended by integrating a DigiLED slave (Product No. 507222) and an additional converter (see system architecture).



6 Notes on Installation and Safe Operation

6.1 Installation

Installation must be carried out under observation of the relevant regulations and standards. DigiLED Push devices 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.

- DigiLED Push is designed for operating common cathode LED modules.
- The load range of the connected converter must be observed
- The maximum output currents specified in Table 4.3 must not be exceeded
- The temperature measured at the tc point must not exceed the specified limit ($t_{cmax} = 60^{\circ}\text{C}$) during operation.

6.2 Assembly

- Installation any way up
- Installation only in dry rooms or luminaires, box casings or similar. If DigiLED Push is to be installed outdoors or in a damp location, a casing of a suitable protection class (IP) must be used
- Attach using 3 mm or 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
Lamp 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