

LED Dimmer LED-08T

General

The LED dimmer was especially developed to control LEDs in ground plan touch pads. For the first time this device enables you to control the brightness of LEDs between 0 and 100% so that it creates the same visual effect as the lights in the room. In the past small 230V bulbs, which were connected in parallel to the dimming circuits in the room, were installed for this type of application.

The LED-08T LED dimmer provides eight channels for dimming LEDs (2mA or 20mA). You can program a constant current of between 2mA and 21mA (same current for all eight channels) at a voltage of 12V DC. The 12V voltage determines the number of LEDs that can be connected in series. This means that if a LED has a rated voltage of 1.8V, you can connect between 1 and max. 6 LEDs to one output ($12V / 1.8V = 6.67 \gg 6$ units). The current is programmed for all eight channels. You can, however, still operate

different LEDs by simply limiting the range with the minimum and maximum parameters.

Alternatively, instead of the LEDs, you can control eight 0-10V LED bar displays. Two display functions can be parameterised by software parameterisation.

Soft = soft transition of LEDs in bar

Sharp = direct (abrupt) value display

CAUTION! You may only connect either LEDs or LED bar displays. Never mix the two types, even if there are separate connection options for both (i.e. use either X2 or X3).

Outputs

- 8 analogue PWM outputs 12V, with programmable constant current source (max. 21mA per channel) or
- 8 analogue 0-10V outputs to control LED bar displays

Function displays

- 1 red LED indicates the operating voltage
- 1 permanently lit yellow LED indicates that the ISYGLT subnet BUS is active, but that its own address is not recognised. When it flashes it indicates communication with the master (address is activated).

Connections

- 1 voltage connection 230V 45-65Hz (same phase as the master)
- 1 output 0-230V max. 1000W/VA (parallel to the output of the master modules)
- 1 slave control connection

Design

- PCB without casing, can be snapped onto 35 mm DIN rail mounting

Special function DIP switch 1

- reserve
switch must be „OFF“

Parameterisation

The ISYGLT Programm-Designer offers various parameterisation options.

- constant current for all LED
- setting of the operation mode for LED bar displays
- setting of the dimm curves
- minimum and maximum values
- the following table contains detailed information about these options:

Please note:

1. column = parameter tab
2. column = setting (function)
3. column = description of the parameter to be set
4. column = possible setting (default values) are in **bold italics**

Tab	Setting	Parameter	Value
Basic setting	LED current	current for all LEDs	<i>3mA</i> 6mA 9mA 12mA 15mA 18mA 21mA
	min. / max. LED 1	minimum value maximum value	<i>0 - 100%</i> <i>0 - 100%</i>
	LED 2 to LED 8		same as LED 1
Special	speed interpretation	speed value means (speed value speed means the specified fade time always refers to the time from 0-100% e.g. 10s. Dimming always occurs at the same speed, which means that dimming from 50-100 only takes 5 seconds. This is the default setting which should always be set except for light sequence controls (multiscene) (speed value time means the specified fade time is always calculated absolutely. If 10s is specified the change from 0-100% will take 10s. The change from 90-100% also takes 10s. This setting should be used for light sequence control (multiscene)	<i>speed</i> time

Tab	Setting	Parameter	Value
	speed resolution	1 digit equals (The speed resolution indicates the converted fade time. The default is 0,5s, which allows a fade time of 0-120s. A resolution of 0,1s is available for fast processes, which is equivalent to a fade time of 0-24s).	0,1 sec. 0,5 sec.
	switching off at dimm value „0“	at dimm value „0“	deactivate set min value
dimming curve	LED 1	dimming curve !!During the operation of the LED bar displays the parameter „bar displays soft“ or „sharp“ must be set!!	linear logarithmic quadratic bar display soft bar display sharp user curve
	LED 2 to LED 8		same as LED 1
user curve	usercurve for LED 1 to 8	for dimming value #1	0,00% - 100,00% (0,00%)
		for dimming value #25	0,00% - 100,00% (9,80%)
		for dimming value #50	0,00% - 100,00% (19,61%)
		for dimming value #75	0,00% - 100,00% (29,41%)
		for dimming value #100	0,00% - 100,00% (39,21%)
		for dimming value #125	0,00% - 100,00% (49,02%)
		for dimming value #150	0,00% - 100,00% (58,82%)
		for dimming value #175	0,00% - 100,00% (68,63%)
		for dimming value #200	0,00% - 100,00% (78,43%)
		for dimming value #225	0,00% - 100,00% (88,24%)
		for dimming value #255	0,00% - 100,00% (100,00%)

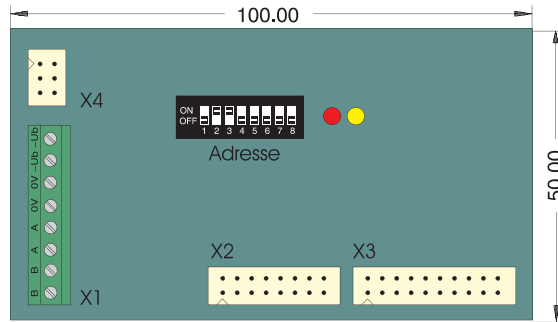
Technical data

Type	LED-08T
Art. Nr.	80027040
Operating voltage	12V to 35V DC (no operation at AC voltage possible)
Current consumption	200mA at 24V
Dimmed outputs	12V DC, current source programmable, max. 21mA pro channel
Analoge outputs	0-10V for control of LED bar displays
Subnet (RS-485)	max. 5,6V limited by Z-diodes
Dimensions	LxBxH 100x50x22mm
Weight	36g
Connections	Screw terminals 1,5mm ² , or tub plug for flat calbe
Operating temperature	-10...+50°C
Storage temperature	-25...+70°C
Humidity	0 ...85 % r.F. non condensing
Protection grade	IP00
EMV immunity	Use in typical industrial enviroment. Category 3 according to IEC-1000-4-4 (Test was carried out within a whole system)
CE sign	yes

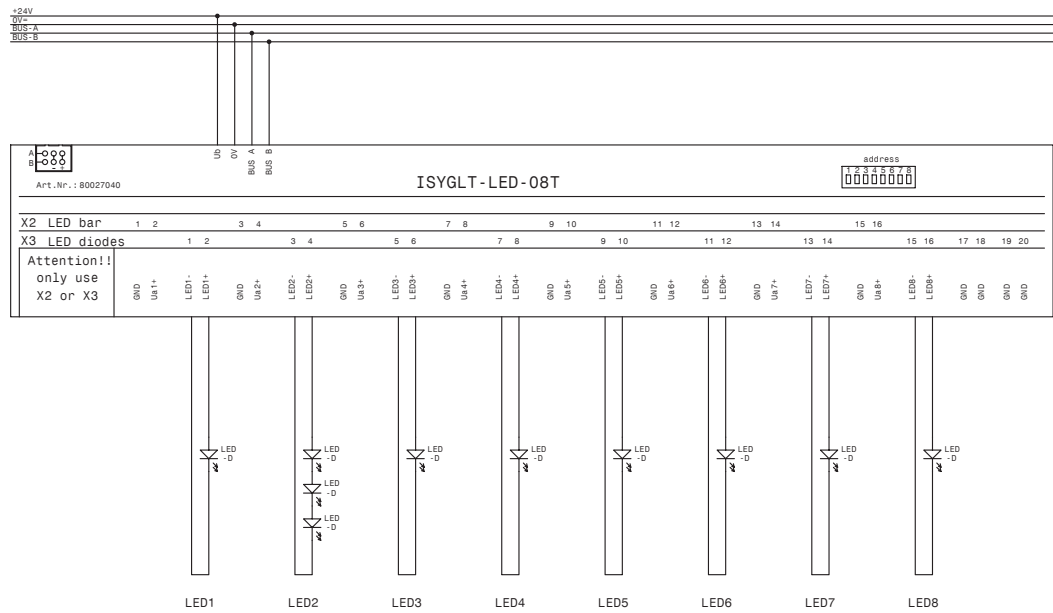
Terminal assignment

PIN	X1	X2	X3	X4
1	≅ Ub	GND	LED1 -	+Ub
2	≅ Ub	Ua1+	LED1+	+Ub
3	0V operating voltage	GND	LED2 -	0V
4	0V operating voltage	Ua2+	LED2+	0V
5	Subnet (BUS A, RS-485)	GND	LED3 -	BUS A
6	Subnet (BUS A, RS-485)	Ua3+	LED3+	BUS B
7	Subnet (BUS B, RS-485)	GND	LED4 -	
8	Subnet (BUS B, RS-485)	Ua4+	LED4+	
9		GND	LED5 -	
10		Ua5+	LED5+	
11		GND	LED6 -	
12		Ua6+	LED6+	
13		GND	LED7 -	
14		Ua7+	LED7+	
15		GND	LED8 -	
16		Ua8+	LED8+	
17			GND	
18			GND	
19			GND	
20			GND	

View

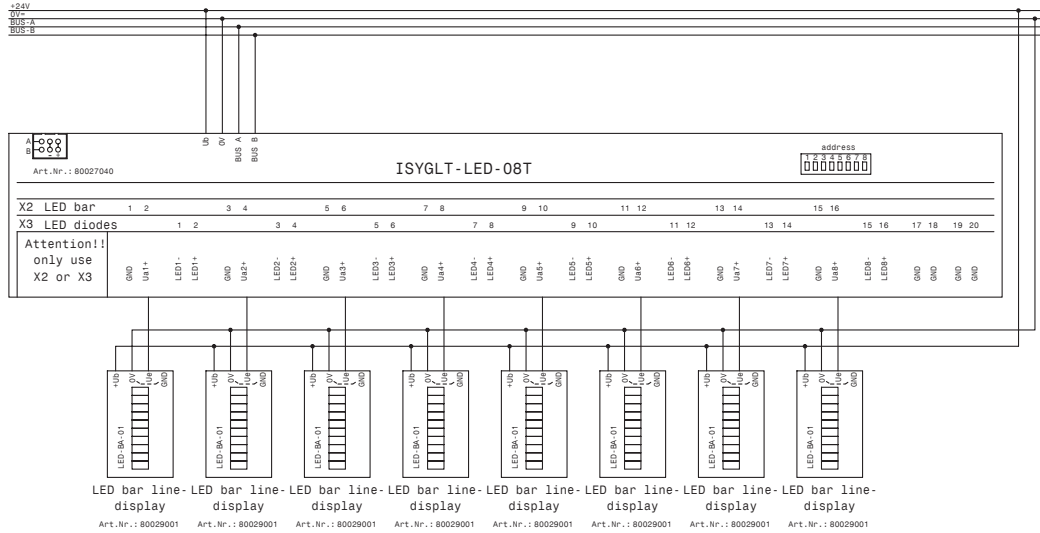


Wiring diagram



wiring diagram for single-LED

Wiring diagram



wiring diagram for LED bar displays