

2 channel leading edge dimmer

TD-500-M2/BP



General

TD-500-M2/BP is classical leading edge dimmer in 16bit „thyristor antiparallel technology“. This type of control is for sure the upper class of dimmers and not comparable to easier triac dimmers. Here occurs the control and monitoring of each half-wave separated, accordingly it is one thyristor each available. The dimmer characterizes the robustness in each circuit class. In the leading edge technic all ohmic loads (bulbs, NV halogen, heater) and inductive user (Halogen with magnetic Transformers, fluorescent lamps with VIP-90, engines, plastic welding equip-

ment with magnetic transformers) can be operated. The dimmer commands more types of control and could be used conventionally via potentiometer, key, 0-10V or 1-10V signal or digital via ISYGLT BUS, DMY512 8-Bit or DMX512 16-Bit. The basic parameterization of the dimmer is done by two DIP switches, detailed parameterization could only be realized by using the ISYGLT system.

Inputs / Outputs

- 2 dimming outputs leading edge 35W to 500W
- 2 control inputs 0(1)-10V for „emergency operation“ or „stand-alone operation“

Function display

	LED condition	Meaning
● 1 x LED (red)	OFF	No operating voltage
	ON	Operating voltage
● 1 x LED (yellow) Operating voltage / BUS	OFF	BUS signal detected, own address is not detected
	Steady flashing	Bus-Signal und eigene Moduladresse detektiert
● 2 x LED (green)	OFF	Output „OFF“
	ON	Output „ON“

Connection

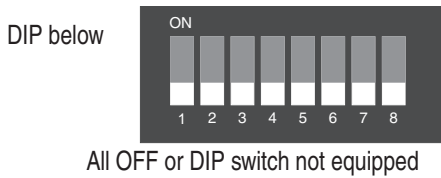
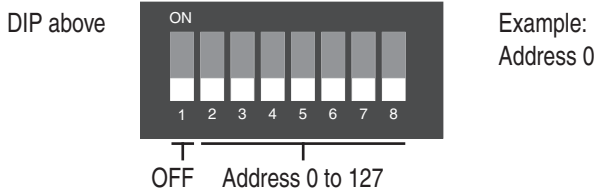
- 1 connection 230V 45-65Hz
- 2 outputs 0-230V maximum 500W/VA each
- 2 emergency operation inputs
- 1 connection for subnet (BUS A and B, RS-485) optionally ISYGLT or DMX512

Design

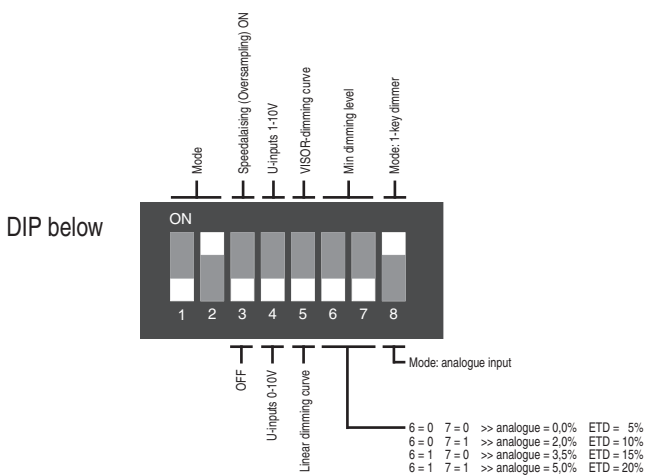
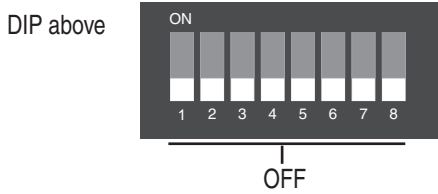
- Plastic cabinet black, can be snapped onto 35mm DIN rail mounting 6 separating units

Basic function parameterization via DIP switch

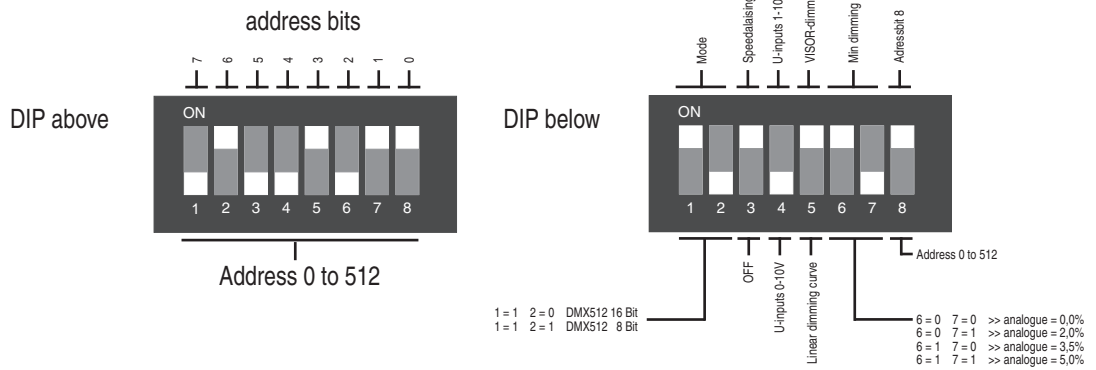
ISYGLT BUS operation



Standalone operation



DMX-512 operation



Parameterization

By using of the ISYGLT ProgrammDesigner wide parameterization possible exists.

- Setting of dimming curves
- Minimum- and maximum values
- Assignment of turn on- and turn off behavior
- Emergency operation at BUS breakdown
- Detailed annotations you can find in the following table.

Please attend:

1. column = Index card of the parameter
2. column = Setting (function)
3. column = Description of the settable parameter
4. column = Possible settable value (default values) are ***bold-oblique***

Index	Setting	Parameter	Value
Basec setting	230V net	Fixed network or generator	<i>Fixed network</i> Generator
	Channel 1	Minimum dimming value	0-100% <i>(Default 3%)</i>
		Maximum dimming value	<i>0-100%</i>
		Dimming curve	<i>linear power</i> User curve 1 (red) User curve 2 (green) VISO curve (blue)
		Turn off at value zero	not active <i>active</i>

Index	Setting	Parameter	Value
		Speed value 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 should be used for light sequence control (multiscene).	Speed Time
		Dissolution of speed The dissolution of speed indicates the conversion of the fade time. Standard is 0,5s, a fade time of 0-120s makes possible. For fast expiries is a resolution of 0,1s available, that corresponds to a fade time of 0-24s.	1/10 sec 1/2 sec 1 sec 10 sec 20 sec
		Speedalaising	only at SOFT (241) automatically
The following settings of channel 1 and 2 can be setted separated from the other channel			
Emergency operation	Manual change at BUS OK		
	Dimmer channel 1 (2)	Manual change at BUS OK	No change Poti adoption (>0) U-Input adoption (>0) Poti Merger U-Input Merger
	Manual change at BUS breakdown		
	Dimmer channel 1 (2)	Time - Cognition of BUS breakdown (Here you can declare the time of cognition of a BUS breakdown in seconds. It should be a little longer than the period of the programming in the master module.)	5 to 255 sec. (Default 20s)

Index	Setting	Parameter	Value
	Dimmer channel 1 (2)	Manual change at BUS breakdown. Setting (per channel), what should happen after cognition of a BUS breakdown.	No change Poti U-Input Poti adotion (>0) U-Input adoption (>0) Poti Merger U-Input Merger Fix 0% Fix 10% Fix 20% Fix 30% Fix 40% Fix 50% Fix 60% Fix 70% Fix 80% Fix 90% Fix 100%
	Tension inputs		
	Channel 1 (2)	U-Input min	0,00- 10,00 V (Default 1,00)
	Channel 1 (2)	U-Input max	0,00 - 10,00 V
ISYGLT extras			
	Feedbacks	Feedback to AEx.8	Frequency U-Input K1 U-Input K2 Poti K1 Poti K2
	Channel 2	like Channel 1	
User curves	red and green	Changes of pulling with the mouse on the dimming curves	

Parameters are transfused via BUS wire and saved permanently in the module.

Further special configurations like changes of VISO curve (blue) can only be done at Seebacher GmbH.

Technische Daten

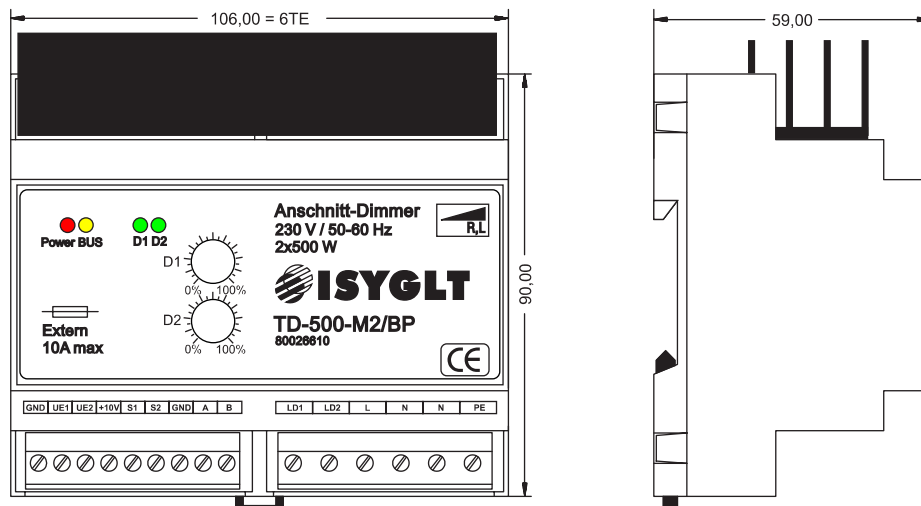
Type	TD-500-M2/BP
Art. No.	80026610
Mains supply	230V / 45 to 65 Hz
Fuse	1 x 230V automatic circuit breaker B6 or B10A
Output	2 x 230V 35W-500W
Power dissipation	2 ... 13W (stand-by ... full load) !! The control cabinet should be ventilated sufficiently !!
1 (0)-10V	Sink current at 1-10V = 1mA, Source current at hardware option 0-10V = 0,5mA to 20kOhm
Isulation voltage	3750V (ISYGLT-BUS / net)
Safety	EN 60669-T1+2 (IEC 60669-T1+2)
RFI	EN 55015, EN 50082-T1, EN 55103-T2
Overtemperature protection	Temperature protection (bimetall) 105°C +/-5K self-deactivate automatically in primary circuit of the dimmer (loadable 10A at Cos-Phi=1; 6,3A at Cos-Phi=0,6)
Subnet (RS-485)	maximum 5,6V limited by Z diodes
Dimension	BxHxT 106x90x59mm (6 TE)
Weight	410g
Connection	Srew terminals 1,5mm ² pluggable
Operating temperature	-10...+45°C > at +50°C maximum 60% connectable power > at +55°C maximum 50% connectable power > at +60°C maximum 30% connectable power
Storage temperature	-25...+70 °C
Humidity	0...85 % r.F. non condensing
Protection grade	IP 30
Protection class	I
ESD immunity	Klasse 3 according to IEC-1000-4-2
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

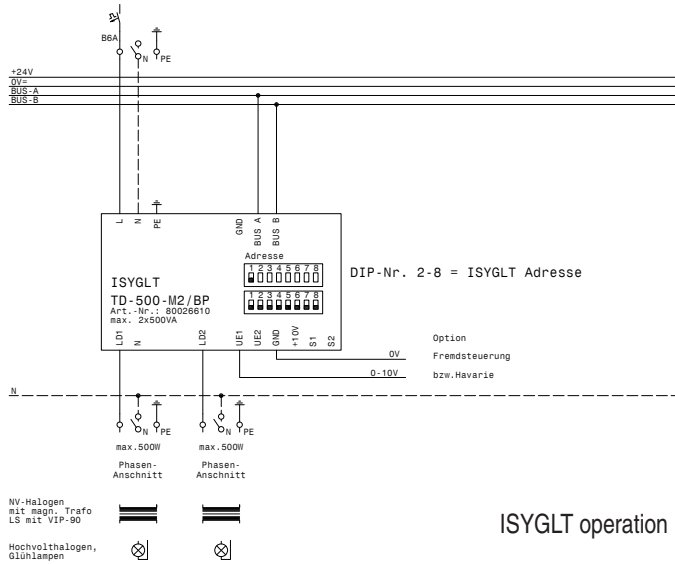
9 pole connector left side	
GND	Ground for tension inputs (0-10V) and Bus RS485 (internal by-passed at the seventh terminal)
UE1	Control tension input for dimming channel 1
UE2	Control tension input for dimming channel 2
+10V	10V for connection of an external potentiometer
S1	Tension channel 1 for sink current 1-10V (insert jumper to „UE1“)
S2	Tension channel 2 for sink current 1-10V (insert jumper to „UE2“)
GND	Ground for tension inputs (0-10V) and Bus RS485 (internal by-passed at the first terminal)
A	Subnet (BUS A, RS-485) optional „ISYGLT A“ or „DMX-512 +“
B	Subnet (BUS B, RS-485) optional „ISYGLT B“ or „DMX-512 -“

6 pole connector right side	
LD1	Dimmer 1 charge output 0...230V maximum 500W/VA leading edge
LD2	Dimmer 2 charge output 0...230V maximum 500W/VA leading edge
L	Net tension 230V (45Hz-65Hz)
N	Neutral conductor
N	Neutral conductor
PE	Earthing grounding conductor

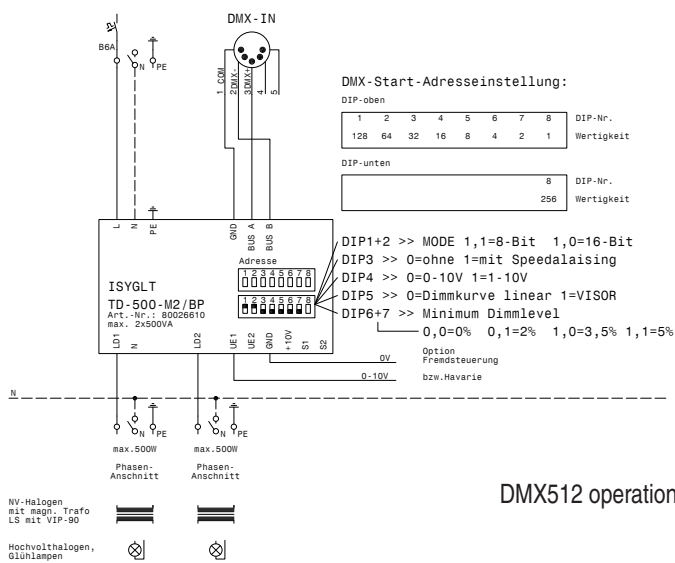
View



Wiring diagram

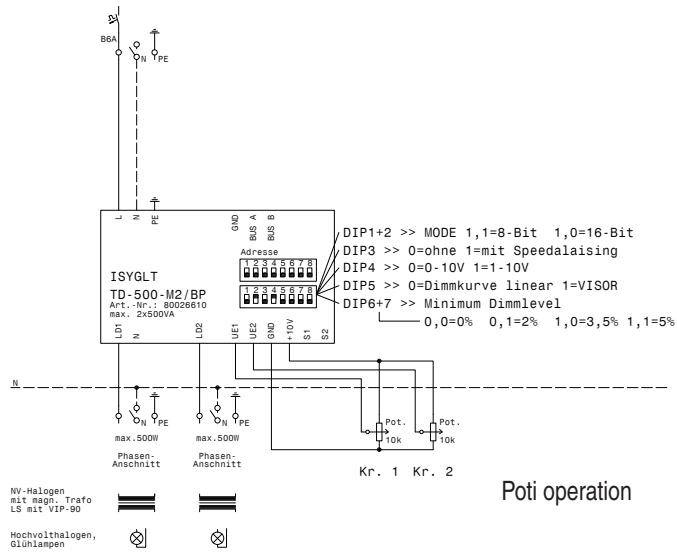


Beispiel: Ansteuerung DMX512 8-/16-Bit

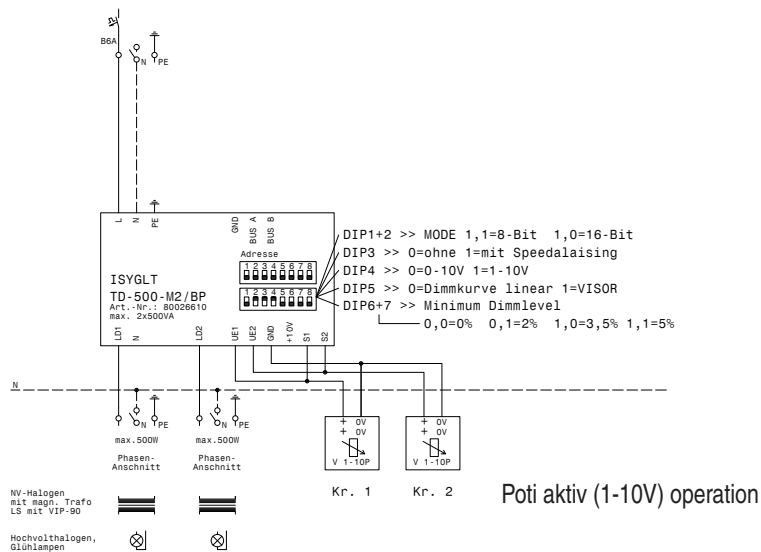


Wiring diagram

Beispiel: Ansteuerung mit Poti



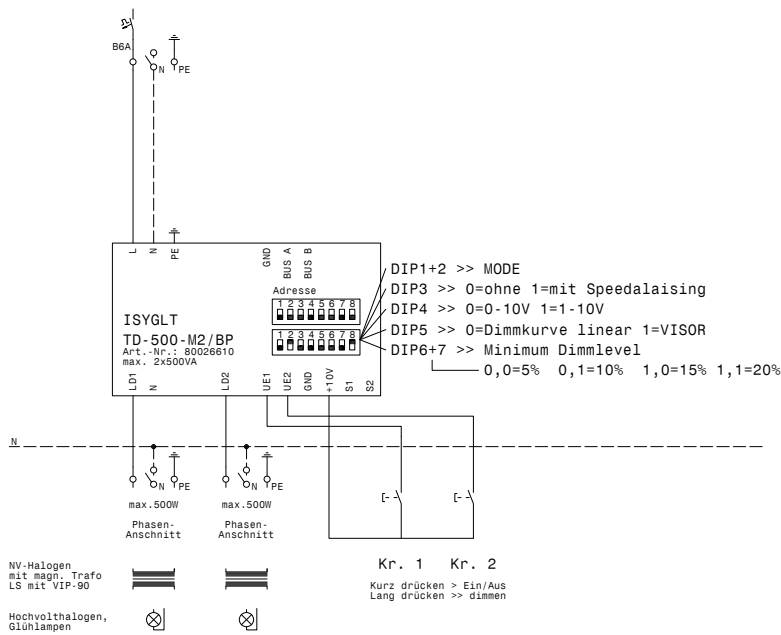
Beispiel: Ansteuerung mit 1-10V-Aktiv-Poti



Wiring diagram

1-key dimming operation

Beispiel: Ansteuerung mit 1-Tasten-Dimmer



Beispiel: Ansteuerung mit 1-Tasten-Dimmer
mit zusätzlicher Zentralfunktion

