inventronics
OSRAM Digital System is now Inventronics

IT D0P 480/12-48V/4C NFC L C RGBW

Constant Voltage LED dimmer

Benefits

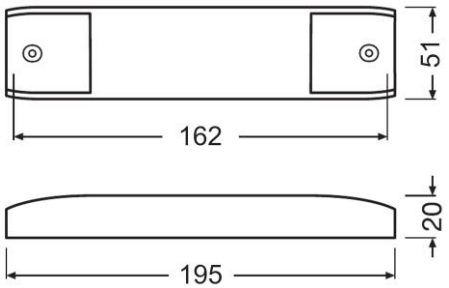
Specifically designed flex LED tapes and signage modules
High power handling on 4 channels
Multi-dim protocols: DALI-2, 0/1-10V, Resistor, PWM
1 to 4 channel output with DALI-2 certification
DALI-2 certified incl. Parts 251, 252, 253
DT6 and DT8 operations
TW in 0-10V compatible
NFC box programmability

Applications

Hospitality – decorative lighting, night light, dynamic lighting
Restaurants – decorative lighting
Shops – decorative lighting, shelf lighting
Residential – cove lighting, cabinet lighting

Housing material: plastic, white

* image for information purpose only



Approvals

Valid only if printed on product.
When not printed on product label, they are under evaluation.

5 Years Inventronics Guarantee

L	195 mm	Total length
L2	162 mm	Holes interaxis
B	51 mm	Width
H	20 mm	Height

Product Features

- 12-48 V SELV output constant voltage range
- Output power up to 480 W
- 10A handling allowed on one channel
- Overload/Over temperature/Short circuit protection, automatic, reversible
- 50.000h at t_c max*
- Screw terminals and integrated cable clamps
- Suitable for Class I & II luminaires
- Wide t_a range -25 … +50°C
- NFC programmability
- Touch DIM compatibility
- 5 years guarantee*

*10% cumulated failure

Electrical specification

	Item	Value	Unit	Remarks
INPUT	Nominal supply voltage	12 – 48	V_{DC}	
	Supply voltage range	11 – 54	V_{DC}	
	Supply input current	15	A	12 – 24 V, max
		10	A	48 V, max
	Power loss in no-load condition	≤1.2	W	Secondary switching is not allowed
	Standby power	≤1.1	W	
	Protection class	II		
	Suitable for fixtures with prot. Class	I & II		

OUTPUT								
	Output load range (max per channel)	Channel	DT6 / 1-10 / 0-10 / PWM (max)			DT8 TW / RGBW (max)		
			12 V	24 V	48 V	12 V	24 V	48 V
		CH1	120 W	240 W	480 W	120 W	240 W	480 W
		CH2	120 W	240 W	480 W	120 W	240 W	480 W
		CH3	120 W	240 W	480 W	120 W	240 W	480 W
		CH4	120 W	240 W	480 W	120 W	240 W	480 W
		All	180 W	360 W	480 W	120 W	240 W	480 W
	Output current (max per channel)	Channel	DT6 / 1-10 / 0-10 / PWM (max)			DT8 TW / RGBW (max)		
			12 V	24 V	48 V	12 V	24 V	48 V
		CH1	10 A	10 A	10 A	10 A	10 A	10 A
		CH2	10 A	10 A	10 A	10 A	10 A	10 A
		CH3	10 A	10 A	10 A	10 A	10 A	10 A
		CH4	10 A	10 A	10 A	10 A	10 A	10 A
		All	15 A	15 A	10 A	10 A	10 A	10 A

	Min load per channel	1	A	Min load that doesn't trigger open circuit detection
	Voltage ripple	900	mVp-p	
	Capacitive load	1	µF/A	
DIMMING	Dimming interface	DALI-2		With DALI part 251-252-253
	Dimming range	0,1 … 100	%	16-bit DALI dimming steps (0 … 254), log curve
	Dimming method	PWM		
	PWM frequency	2	kHz	Pst (LM) < 1, SVM < 0.4 for dim levels down to 5%
	Sensor function	Yes, in combination with inventronics Touch DIM sensor and normal PIR corridor sensors; sensor should be powered by other mains		
	TW control with double push-button	Allowed, refer to product printing and user instructions		
	TW control with 0-10V	Allowed, refer to product printing and user instructions		
	Galvanic insulation	DA/Input, DA/Output: reinforced insulation		
ENVIRONMENTAL	Ambient temperature range	-25…+50	°C	
	Max. temperature at t_c test point	65	°C	At t_c point of the product label, t_a not exceeded
	Mac case temperature in fault condition	110	°C	
	Storage temperature range	-25…+85	°C	
	Permitted rel. humidity during operation	5 – 85	%	Not condensing
	Surge capability (INPUT)	500	V	acc to. EN 61547
	Surge capability (DALI)	1/2	kV	acc to. EN 61547
	Surge capability (0-10V)	500	V	acc to. EN 61547
	IP protection class	IP 20		For indoor applications
	Mains switching cycles	>150000	cycles	@ t_a = 25°C
	Expected ECG lifetime	50000	h	t_c max,10% failure rate
	Expected ECG lifetime	100000	h	t_c max – 10°C,10% failure rate
	Overheating protection	Yes		Auto reversible
	Overload protection	Yes		Auto reversible
	Short-circuit protection	Yes		Auto reversible
	No load proof	Yes		Secondary switching is not allowed
	DALI interface polarity	No	DALI cables can be connected without observing polarity	

	Type of connection	screw terminals		
	Dimensions	195x51x20	mm	L x W x H
	Holes interaxis	162	mm	
	Weight	129	g	
	Casing material	Plastic		White RAL9010, 80% recycled material

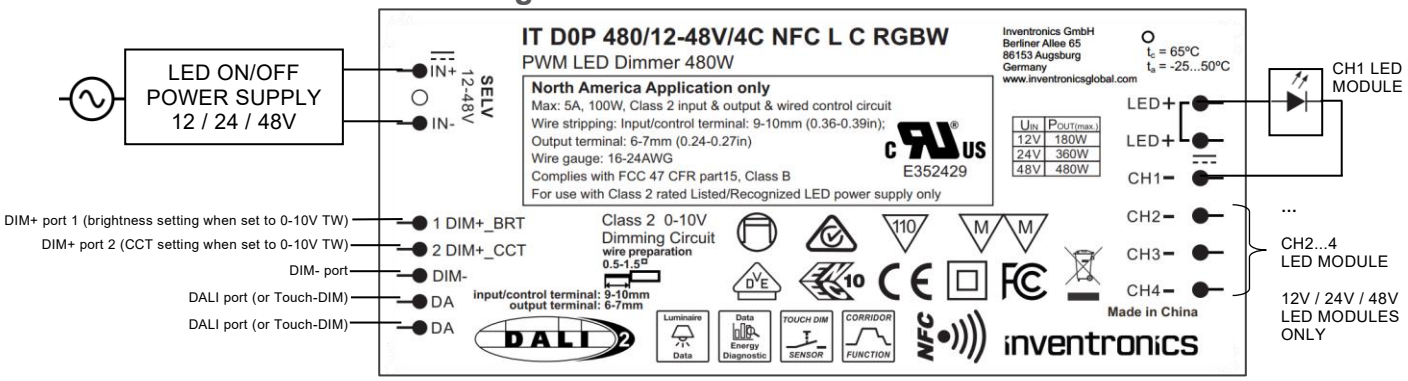
Note: All parameters are measured at 12-48V input, full load and 25°C of ambient temperature.

INPUT	Terminals	Screw terminals		
	Wire peeling length	9 - 10	mm	
	Cable cross section	0.5 - 1.5	mm²	Recommended cables for DC input: H03VV-F2x0,75 mm² H05RN-F/2x1.0 mm² H07RN-F/2x1.5 mm² NYM 3x1,5 mm² Recommended cables for DALI: H03VV-F2x0,75 mm² NYM 3x1,5 mm²
OUTPUT	Terminals	Screw terminals		1 LED+ / 1 LED-
	Wire peeling length	6 – 7	mm	
	Cable cross section	0.5 - 1.5	mm²	2 poles for V (+), 4 poles for V (-) Recommended cables: H03VV-F2x0,75 mm² NYM 3x1,5 mm²

Led wire length

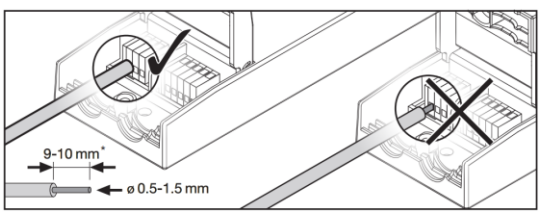
EMI pass verified with wire length below 3 m without consideration of ECG as system, from the dimmer to the LED module at full load.
Wiring longer than 3 m from ECG to LED module is possible, but site installation conditions may interfere with EMI with these longer cables. EMI is therefore not verified in this condition based on matching constant voltage driver.
For longer lengths than 3 m, appropriate cable cross section must be carefully selected to reduce voltage drop. The cables must be dimensioned correctly, and they should be isolated from every wiring or parts at voltage not SELV in the close surroundings. It is suggested to use double insulated shielded and twisted cables.

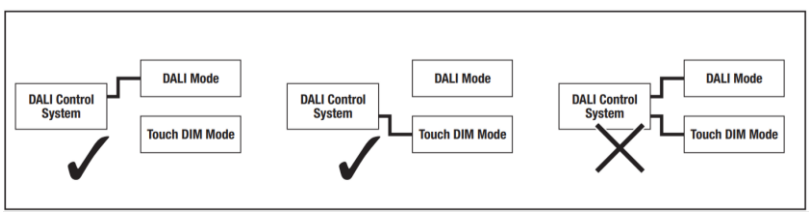
Installation and connection diagrams



It is recommended to use only ON/OFF type constant voltage LED power supplies as input source.

ATTENTION: it is mandatory to have good connections on IN+ and IN- terminals. Poor connections may result in overheat or irreversible product damage.

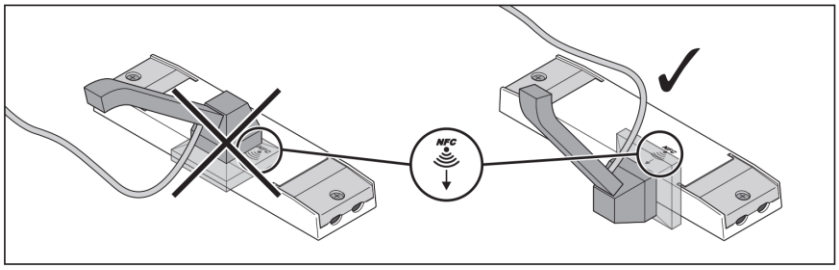




Programmable dimming modes

	Dimming Mode		Channels
	1x DT6	1 output	Addr.1: CH1
	2x DT6	2 independent outputs	Addr.1: CH1; Addr.2: CH2
	3x DT6	3 independent outputs	Addr.1: CH1, Addr.2: CH2, Addr.3: CH3
	4x DT6	4 independent outputs	Addr.1: CH1, Addr.2: CH2, Addr.3: CH3, Addr.4: CH4
	4sync DT6	4 synchronised outputs	Addr.1: CH1, CH2, CH3, CH4
	DT8 RGBW	RGBW	CH1: R; CH2: G; CH3: B; CH4: W
	DT8 TW	TW	CH1: Cold; CH2: Warm
	2x DT8	2xTW	Addr1: (CH1: Cold; CH2: Warm); Addr2: (CH3: Cold; CH4: Warm)
	D2W	DIM to Warm	Addr1: CH1 cold, CH2 warm
	2x D2W	2x DIM to Warm	Addr1: CH1 cold, CH2 warm Addr2: CH3 cold, CH4 warm
	Touch DIM	4 synchronised outputs	
	2x Touch DIM	TW Touch DIM	TD1 (CH1) / TD2 (CH2)
	Touch DIM D2W	DIM to Warm output	Cold (CH1) / Warm (CH2)
	2x Touch DIM D2W	2x DIM to Warm output	TD 1: Cold (CH1) / Warm (CH2) TD 2: Cold (CH3) / Warm (CH4)
	Touch DIM TW	Tunable White	Cold (CH1) / Warm (CH2)
	Corridor Functionality	4 synchronised outputs	
	0-10V	4 synchronised outputs	DIM1: CH1 + CH2 + CH3 + CH4
	0-10V 2x2	2x2 synchronised outputs	DIM1: CH1 + CH2, DIM2: CH3 + CH4
	0-10V D2W	DIM to Warm output	DIM1: Cold (CH1 + CH3) / Warm (CH2 + CH4)
	0-10V 2xD2W	2xDIM to Warm output	DIM 1: Cold (CH1) / Warm (CH2) DIM 2: Cold (CH3) / Warm (CH4)
	0-10V TW	Tunable White	Cold (CH1 + CH3) / Warm (CH2 + CH4)

NFC programming



This device is also compatible with box programming

Remarks

- **ATTENTION: it is mandatory to have good connections on IN+ and IN- terminals. Poor connections may result in overheat or irreversible product damage.**
- **Output short circuit protection**: auto reversible (x8 times max, then remove power for reset) when fault removed.
- **Output overload protection:** auto reversible when fault removed.
- **Over temperature protection:** the unit is protected against temporary overheating by shutting the unit down, auto reversible when temperature decreases.
- **No-load conditions:** hot plug-in or secondary switching of LEDs is not permitted.
- Intended for use with LED modules.
- **Application:** the dimmer is intended to manage 12 V, 24 V or 48 V LED light sources like – but not limited to – Inventronics LINEARlight FLEX®, Tec Flex LED, GinoLED Flex LED flexible strips, BackLED® and BoxLED® modules, LINEARlight® Rigid FINESSE systems.

Inventronics Constant Voltage LED power supplies are recommended. It is recommended to use only ON/OFF type constant voltage LED power supplies as input source.

- **Ecodesign regulation information:**

  Intended for use with LED modules. The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.
  Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

Standards

EN 61347-1
EN 61347-2-13
EN 55015
EN 61547
EN 60598-1
EN 62384
CISPR 15

Ordering information

Product name	EAN 10	EAN 40	S/Unit
IT D0P 480/12-48V/4C NFC L C RGBW	6937186134127	6937186134134	20

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