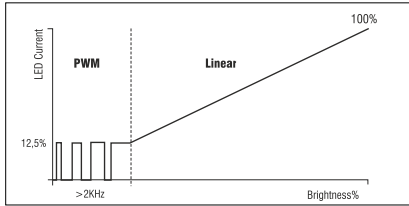# USER GUIDE LE20DP

2020 version

LEF Lighting

Multicurrent LED power supply dimmable by push button, DALI signal, 0/1-10V signal

- Multicurrent electronic LED driver with active PFC.
- Suitable for powering power LEDs supplied by current.
  The operating mode is selected through the DIP- SWITCH placed below the terminal cover.
- Brightness adjustment with DALI function, Push-button, 1-10V interface or 0-10V interface suitable for working with resistive potentiometers that active systems as Gateway, Konnex Interfaces, Touch Screen, etc. (selection through micro-switches, see the table on the side).

Energy efficiency at full load (900mA): 85%
Stand-by power: 0,49W

- With "LEVEL MEMORY" function and "STATUS MEMORY".
- Output current and voltage selection through DIP-SWITCH (see the table on the side).
- MASTER / SLAVE function with standard cables.

Type of "hybrid" dimming:
- **LINEAR** from 100% to 12.5%
- **PWM** from 12.5% to 0.5%.

DIMMING DIP-SWITCH

Comando Command	1	2	3	4	5
ON/OFF	-	-	-	-	-
Push Slow	ON	-	-	-	-
Push Fast	-	ON	-	-	-
Push Up/down	ON	ON	-	-	-
DALI	-	-	ON	-	-
1-10 passive	-	ON	ON	-	ON
1-10 active	-	ON	ON	-	-
0-10 active	ON	-	ON	-	-
0-10 passive	ON	-	ON	-	ON
Slave	ON	ON	ON	-	-

General Characteristics
Plastic case.
Driver for independent mounting.
Electric class of protection II.
Protection degree IP20.

CODICE CODE	Tensione di ingresso Input voltage (Vac)	Frequenza di rete Input frequency (Hz)	Potenza di uscita Output power (W)	n° LED Min-Max Vled≅3V	Tensione di uscita Output voltage (Vdc)	Corrente di uscita Output current (mA)	PFC (λ)	CC CV	Peso Weight (g)
			9,2	3-15	6-46	200	0,80		
			11,5			250	0,85		
			13,8			300	0,90		
			16,1			350			
			18,4	1-15	3-46	400			
			20,7			450			
LE20DP	220-240	50÷60	23			500		CC	145
			25,3			550			
			27,6			600	0,95		
			27,3	1-14	3-42	650			
			28	1-13	3-40	700			
			27,7	1-12	3-37	750			
			28	1-11	3-35	800			
			27,2	1-10	3-32	850			
			27	1-10	3-30	900			

<u>**Attention**</u>: **To maintain the SELV and prevent driver damage, connect to terminals 0..10 or 1..10 only systems with reinforced insulation!**

TECHNICAL FEATURES
INPUT:
Input voltage: 220-240Vac
- Input frequency: 50/60Hz
Input voltage: 176-280Vdc
- Input frequency: 0Hz

Power and DALI input:
spring terminals 2,5mmq
0-10V and 1-10V signal input:
spring terminals 1,5mmq
LED output: spring terminals 1,5mmq

OUTPUT:
- **Constant output current: 200-900mA**
  (setting through micro-switches)
- SELV insulation.
- Terminal block 1 x 0,5 ... 1,5 mmq
- Clamp for cables with diameter Ø = 3 ... 8 mm
- Output current selection through DIP-SWITCH (see table).
- Over-temperature protection (OTP)
- Overload protection (OLP)
- Short circuit protection (SCP)
- Open circuit protection (OCP)
- Ambient temperature Ta -25°C ÷ +45°C
- Power factor (PFC) λ ≥ 0,95
- Max temperature on Tc point 80°C

OPERATING MODE
- There are 6 distinct operating modes read at startup.
  Settings must be made by dip-switches (micro-switches) before switching on:

1) **ON / OFF (no dimming) (factory settings)**;
2) **PUSH dimming** (OFF regulation, 2-100%) - three profiles: slow, fast, up/down;
3) **DALI** (OFF regulation, 2-100%)
   -Power on: 100%,
   -System fail level: 100%;
4) **1-10V dimming**, brightness reduction down to a minimum without ever switching off;
5) **0-10V dimming**, brightness reduction until complete shutdown;
6) **SLAVE.**

The 1-10V / 0-10V and PUSH operating modes are in alternative between them.

- Dimming time (min-max; max-min): slow profile: 8 seconds; fast profile: 5 seconds; up/down profile: 8 seconds.
- Low level in Push is different from 0 to distinguish it from OFF.

Restarting after power failure:
-If in 1-10V / 0-10V dimming mode, the input value is read according to the programming;
-If in PUSH dimmer mode, it starts from the last data set;
-If in DALI dimmer mode, it starts from the last data set.

PRODUCT TO BE DISPOSED DIFFERENTLY FROM URBAN WASTE
AEE identification nr.IT18040000010321

LED EE 85% Psb 0,49W

[AA] Rev. v 8.12 04/05/2023

USER GUIDE
LE20DP

Wiring diagrams

LEF Lighting

PUSH MODE (Setting via DIP-SWITCH)
- Short press the key for ON / OFF (ramps on and off shutdown).
- Long press of the key for dimmer.
- Storage of the last dimming data. At each ON the driver starts from the last data set.
- **Alignment procedure** (necessary to compensate for errors of synchronization when there are many drivers in parallel): from position OFF / ON keep the key pressed for a long time (30sec) the drivers will be 100%; the next time the key is pressed, the luminous flux will start to decrease according to the set profile.
- Maximum recommended cable length PUSH: 15 meters.
- Maximum number of recommended power supplies: 10.

SLOW PROFILE (SLOW) (Setting via DIP-SWITCH)
- With each pressure, the dimming continues up to the maximum level (or minimum), after about 1sec, is reversed.
  Time from minimum to maximum: 8 seconds.

FAST PROFILE (FAST) (Setting via DIP-SWITCH)
- With each pressure, the dimming continues up to the maximum level (or minimum), after about 1sec, is reversed.
  Time from minimum to maximum: 5 seconds.

UP / DOWN PROFILE (UP / DOWN) (Setting via DIP-SWITCH)
- With every pressure the dimming reverses the sense. Arrived at the level minimum (or maximum), the state is maintained.
  Time from minimum to maximum: 8 seconds.

MODALITY 1-10 V (passive / active)
- Potentiometers up to 100 Kohm can be used. The brightness of the LEDs varies proportionally to the signal sent to the terminal from 2 to 100%.
- The brightness of the LEDs changes proportionally or logarithmic depending on the model of potentiometer used (recommended logarithmic).
- Set dip-switch 5 to ON position (1-10V for passive resistor) for resistive potentiometers: (Iout max 1,4mA).
- Set dip-switch 5 to the OFF position (1-10V for active systems) for active systems (Konnex interfaces, EIB, touch screen potentiometers, PC, home automation systems, etc.): (Input impedance 100 Kohm).

MODALITY 0 - 10V (passive / active)
- 0-10V systems can be used. The brightness of the LEDs varies from 0 to 100% proportionally to the signal sent to the terminal.
- Set dip-switch 5 to ON position (0-10V for passive resistor) for passive systems; you still have the possibility to switch off completely also using resistive potentiometers: (Iout max 1,4mA).
- Set dip-switch 5 to the OFF position (0-10V for active systems) for all active systems (Konnex interfaces, EIB, touch screen potentiometers, PC, etc.): (input impedance 100Kohm).
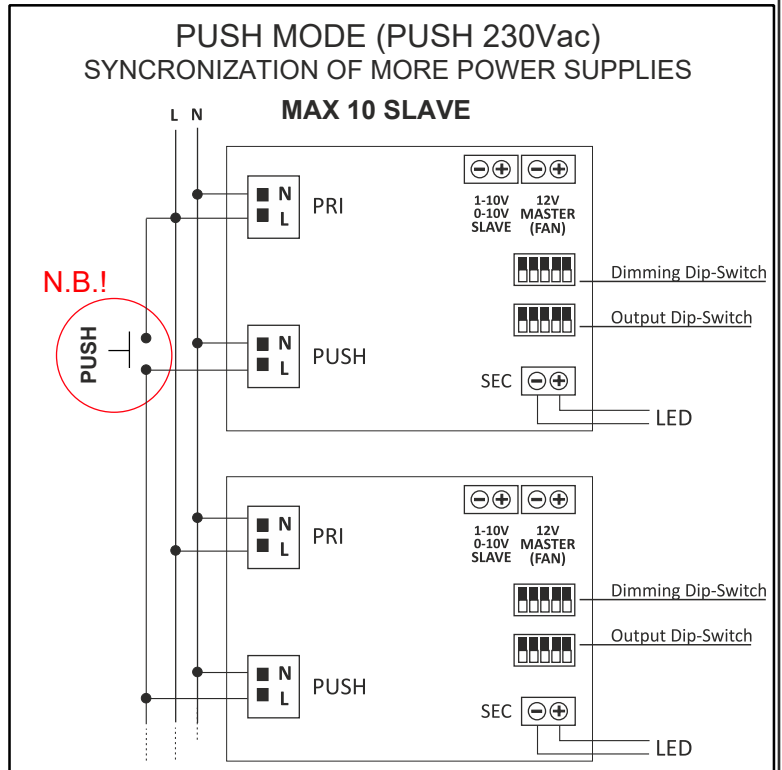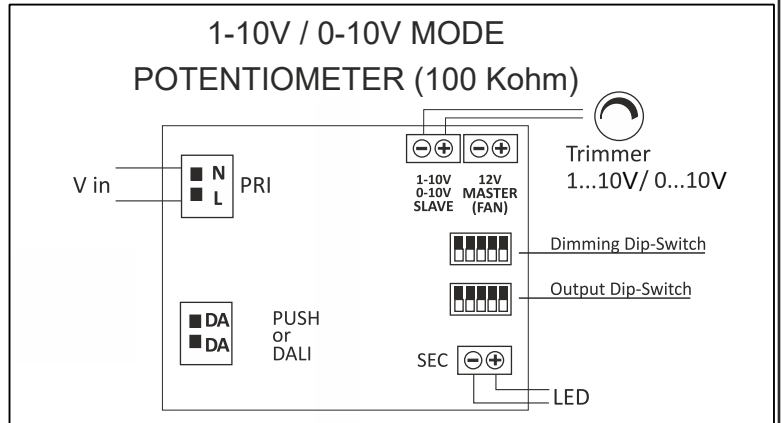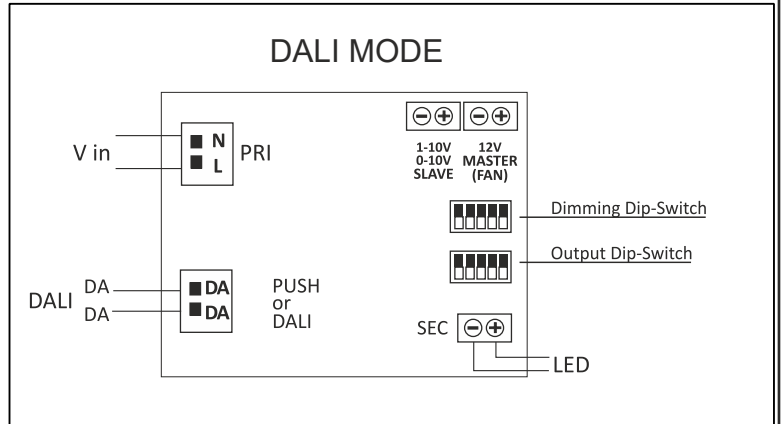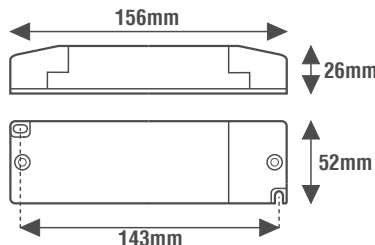
SLAVE MODE
- The SLAVE function can only be used in the presence of power supplies with MASTER function (eg LE42DP).
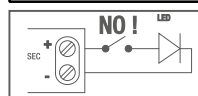
Note: In the case of incorrect setting of the Dip-Switches, when switched on, the Driver starts and flashes LEDs with frequency 1sec ON and 1sec OFF.

Reference Standards
EN 55015
EN 61000-3-2
EN 61347-1
EN 61347-2-13
EN 61547
EN 62386
EN 62384

MADE IN ITALY

156mm
26mm
143mm
52mm

DALI MODE

1-10V / 0-10V MODE
POTENTIOMETER (100 Kohm)

Trimmer 1...10V/ 0...10V

PUSH MODE (PUSH 230Vac)
SYNCRONIZATION OF MORE POWER SUPPLIES
MAX 10 SLAVE

N.B.!

N.B.
Power supply not suitable for no-load operation

www.leflighting.it

| | | | | | | | | | SELV | IP20 | | ta MAX 50°C | tc MAX 75°C | PFC λ≥0,95 | 28 WATT | CC | 60mm |