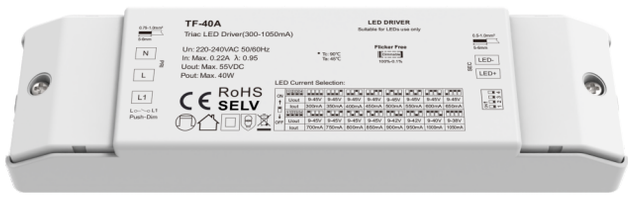
TF-30A, TF-40A

Triac

Triac Constant Current Dimming LED Driver

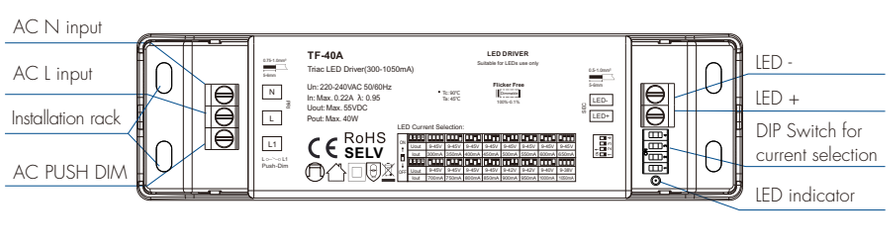
- Dimming interface: Triac/ELV, AC Push-Dim
- Apply to leading edge/trailing edge Triac dimmers and dimming system
- 1 channel constant current output, multi-current optional
- Built-in active PFC function: 0.95 Typ
- Connection of push switch for on/off and 0-100% dimming
- Over-heat / Over-load / Short circuit protection, recover automatically
- Class II design, SELV safety ultra-low voltage
- Suitable for indoor LED lighting application

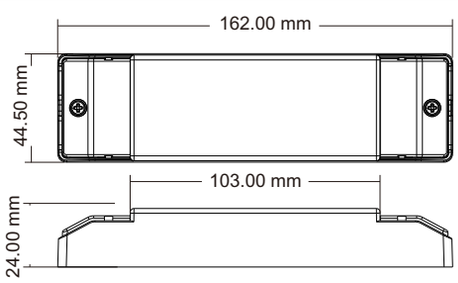


Applications

- Suitable for downlight, spotlight and decorative applications.
- Office / Commercial / Domestic Lighting, Hotels, Classrooms, Warehouse, Health care, Retail and Display.
- Use for retrofit upgrades & new luminaire designs.

Mechanical Structures and Installations





Technical Parameters

Model		TF-40A	TF-30A
Output	Output Voltage	9~45VDC	
	Max Output Voltage	Max. 55VDC	
	Output Current	300-1050mA	150-900mA
	Output Power	Max. 40W	Max. 30W
	Dimming Range	0~100%, dimming depth:0.1%	
	PWM Frequency	4KHz	
	Current Accuracy	± 5%	
	Ripple & Noise	<5%(Maximum current non dimming state)	
Input	Input Voltage Range	220~240VAC	
	Frequency Range	50/60Hz	
	Efficiency(TYP)	>85% (at full load)	>84%(at full load)
	Input Current	⩽0.22A/230AC	⩽0.17A/230AC
	Power Factor	>0.95/230VAC	
	THD	<10% / 230VAC(at full load)	
	Anti Surge	L-N:1.2KV	
	Inrush Current	Cold start 9.7A, 200us duration(50% Ipeak) / 230VAC	
	Leakage Current	< 0.5mA/230VAC	
	Standby Power/No Load Power	<1W(PUSH dimming off)	
Protection	Over Load Power	Current decrease or Hiccup, recovers automatically after fault condition is removed	
	Short Circuit	Output shutdown in case of short-circuit, automatic recovery when short-circuit is removed.	
	Over Temperature	Reduce the output current or turn off the output when the PCB temperature >110 °C, <90 °C automatically restore the output.	
Environment	Woking Temperature	-20°C~45°C	
	Tcase Max	90°C	
	Working Humidity	20%~90%RH, non-condensing	
	Storage Temp/Humidity	-40°C~80°C, 10%~95%RH	
	Temperature Coefficient	±0.03%/°C (0-50%)	
	Vibration Resistance	10-500Hz, 2G, 6min/cycle, X,Y,Zaxes/2min	
	IP Rating	IP20	
Safety&EMC	Security Specifications	IEC/EN61347-1, IEC/EN61347-2-13	
	Withstand Voltage	I/P-O/P: 3750VAC	
	Insulation Resistance	I/P-O/P: 100MΩ/500VDC/25℃/70%RH	
	EMC Emission	EN55015, EN61000-3-2 Class C, IEC61000-3-3	
	EMC Immunity	EN61000-4-2.3.4.5.6.8.11, EN61547	
	Certications	CE	

LED Current Selection: 1 2 3 4 ON OFF

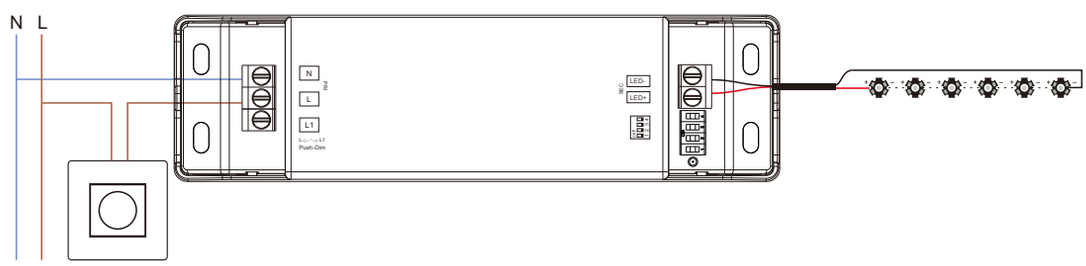
TF-40A	1 2 3 4							
	Output Voltage	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V
	Output Current	300mA	350mA	400mA	450mA	500mA	550mA	600mA	650mA
	Output Power	2.7-13.5W	3.15-15.75W	3.6-18W	4.05-20.25W	4.5-22.5W	4.95-24.75W	5.4-27W	5.85-29.25W
	1 2 3 4								
	Output Voltage	9-45V	9-45V	9-45V	9-45V	9-42V	9-42V	9-40V	9-38V
	Output Current	700mA	750mA	800mA	850mA	900mA	950mA	1000mA	1050mA
	Output Power	6.3-31.5W	6.75-33.75W	7.2-36W	7.65-38.25W	8.1-37.8W	8.55-39.9W	9-40W	9.45-39.9W

TF-30A	1 2 3 4							
	Output Voltage	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V
	Output Current	150mA	200mA	250mA	300mA	350mA	400mA	450mA	500mA
	Output Power	1.35-6.75W	1.8-9W	2.25-11.25W	2.7-13.5W	3.15-15.75W	3.6-18W	4.05-20.25W	4.5-22.5W
	1 2 3 4								
	Output Voltage	9-45V	9-45V	9-45V	9-45V	9-40V	9-37V	9-35V	9-33V
	Output Current	550mA	600mA	650mA	700mA	750mA	800mA	850mA	900mA
	Output Power	4.95-24.75W	5.4-27W	5.85-29.25W	6.3-31.5W	6.75-30W	7.2-29.6W	7.65-29.75W	8.1-29.7W

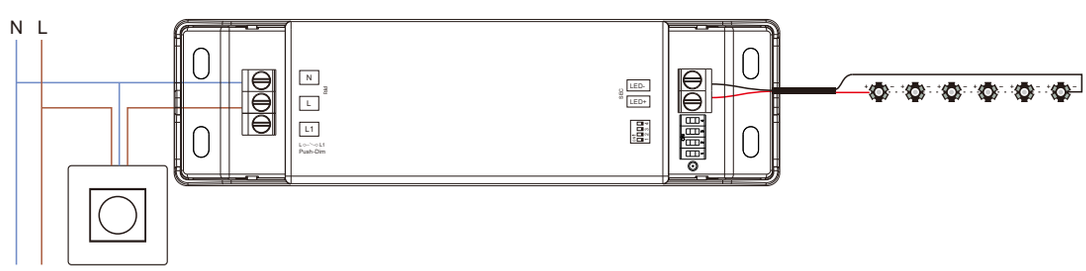
Note: Please select the current through the DIP switch on the board with power off.

Wiring diagram

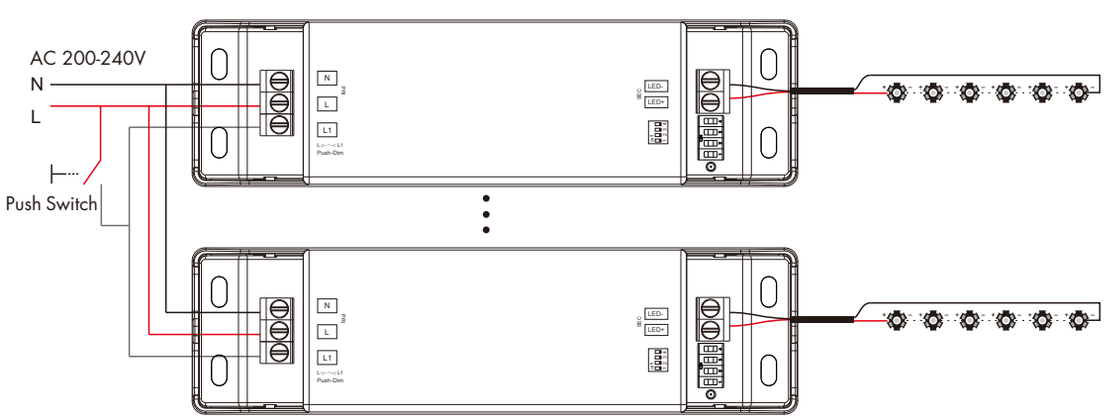
1. Connect Triac dimmer(no Neutral wire)



2. Connect Triac dimmer(with Neutral wire)



3. Connect AC Push switch



Triac dimming input

While connected with a Triac dimmer, such as Lutrom, Clipsal, Dynalite dimmer, different Triac dimmers from different suppliers may have different minimum dimming levels which the driver can not be dimmed below. To dim to 1%, please make sure the dimmer supports 1% minimum dimming level.

AC Push-Dim input

The provided AC Push-Dim interface allows for a simple dimming method using commercially available non-latching(momentary) wall switchs.

- Short press:
  Turn on or off light.
- Long press (1-6s):
  Press and hold to step-less dimming,
  With every other long press, the light level goes to the opposite direction.
- Dimming memory:
  Light returns to the previous dimming level when switched off and on again, even at power failure.
- Synchronization:
  If more than one LED driver are connected to the same push switch, do a long press for more than 10s,
  then the system is synchronized and all lights in the group dim up to 100%.
  This means there is no need for any additional synchrony wire in larger installations.
  We recommend the number of LED drivers connected to a push switch does not exceed 25 pieces,
  The maximum length of the wires from push to LED driver should be no more than 20 meters.

Note:

1. Triac dimming and PUSH dimming cannot be used at the same time.
2. If the product be used with the Push-Dim interface prior to using the Triac interface, the Triac dimming signal should change over 10% to return Triac control.
   (First, adjust the Triac dimming signal to the maximum, and then turn it down so that the signal changes by more than 10%.)

Installation note

1. This product must be installed and adjusted by a qualified professional.
2. This product is non-waterproof. When installed outdoors, please ensure it is mounted in a water proof enclosure.
3. LED driver should keep a certain distance from the heating stuff(such as the luminaries radiator).
   The installation interval between the product and the product is recommended to be 15cm, so as not to affect the service life due to poor heat dissipation.
4. Before you power on the product, please make sure all the wiring is correct in case of incorrect connection that may cause a short circuit and damage the components, or trigger a accident.
5. If a fault occurs, please do not attempt to fix the product by yourself. If you have any questions, please contact us in time.