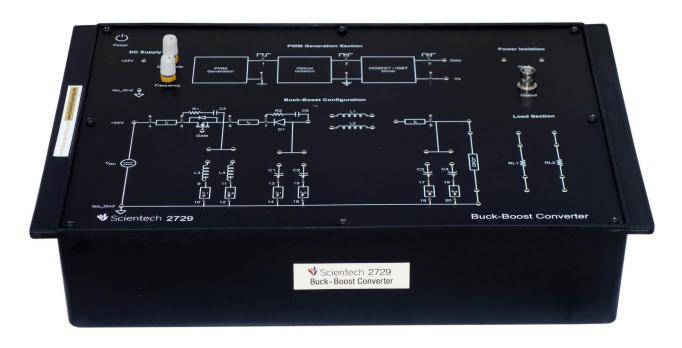
# Buck - Boost Converter

### Scientech 2729



Scientech 2729 is a compact and user friendly learning platform which is very useful for students to understand the concept of PWM generation technique, and Buck-Boost Converter topology on various load configurations. It is also helpful for understanding the converter output on various filter configurations. Platform explains PWM generation technique, Buck-Boost Converter operation, and power isolation circuit to measure the isolated output.

#### **Features**

- Easy to operate & understand
- Optically isolated PWM generation with Gate driver
- Inbuilt isolation section for measurement of the signal
- Test Points provided at output of each section to measure the signals

## **Scope of Learning**

- To study PWM generation
- To study Buck-Boost Converter with different filter components and loads

## **Technical Specifications**

Input DC Voltage : 24V/1A

**PWM Frequency Variation:** 1 KHz to 20 KHz

**Duty Cycle Variation**: 20% to 60%

**Load Assembly** : RL1 & RL2 ( $75\Omega$  &  $75\Omega$ )

Power device : MOSFET IRF450

MOSFET/IGBT Driver : IR2117

**Power Isolation Section** 

**Inductors** : L1 (5.7 μH); L2 (3.8 μH);

L3 (1.5mH); L4 (354µH)

**Capacitors** : C1 (1000 $\mu$ F/63V); C2 (470 $\mu$ F/63V)

: Single channel

C3 (1000µF/63V); C4 (470 µF/63V)

Test Points : 23 nos.

Banana Socket : 39 nos.

Product Tutorial : Online on www.ScientechLearnnig.com

Dimensions (mm) : W 326 x D 252 x H 52

**Power Supply** : 110V - 260V AC, 50/60Hz

Weight : 1.5Kg (approximately)

**Operating Conditions**: 0-40°C, 85% RH

Included Accessories : 2mm Patch Cord 16"-3 nos.

2mm Patch Cord 8" -9 nos. BNC to Test Probe-1 no.

BNC to BNC Cable-1 no.

Mains Cord.-1 no.