



# Electrical Vehicle Motors and Drives Workbench

## Nvis 7089EV



\* Image is for illustrative purpose and subject to change

Nvis 7089EV Electrical Vehicle Motors and Drives Workbench offers an excellent platform for teaching of electrical machines used in EV segment over a unique modular designed control unit. It provides flexibility for the students to carry out experiments using a large selection of Industry standard inbuilt components.

Nvis WorkBench comprises of separate AC and DC measuring sections equipped with all the necessary instruments such as digital meters, facility to connect AC and DC supplies along with protection devices such as fuses, MCB's, indicators, etc. The design of the control unit ensures to get the highest quality practical experience to users. All the necessary protective measures are taken to avoid any fault or danger.

### Technical Specifications:

<b>Mains Voltage</b>	:	Three phase, 415V $\pm$ 10%, 50Hz
<b>Three Phase Induction Motor</b>		
Three Phase Induction Motor Type	:	Squirrel Cage
Rating	:	1HP
Voltage Rating	:	415V $\pm$ 10%, 50Hz
Speed	:	1440 RPM $\pm$ 5%
Insulation	:	Class B
Loading arrangement	:	Mechanical
Brake Drum/Pulley	:	Aluminum Casted
<b>V/F Drive</b>		
Input Voltage	:	Three phase, 415V AC $\pm$ 10%,
Output frequency range	:	0 to 599Hz (default range) with resolution of 0.01Hz
Protection Class	:	IP20
<b>BLDC Motor</b>		
Rating	:	200W
Voltage Rating	:	24V
Current	:	8 A
Speed	:	2500 rpm $\pm$ 10%
Loading arrangement	:	Mechanical
Brake Drum/Pulley	:	Aluminum casted



### BLDC Drive

Voltage Rating	:	24V
Current	:	8 Amp.

### PMDC Motor

Rating	:	1HP
Speed	:	1500 RPM $\pm$ 5%
Insulation	:	Class B
Loading arrangement	:	Mechanical
Brake Drum/Pulley	:	Aluminum Casted
Rating	:	1HP
Speed	:	1440 RPM $\pm$ 5%

### PMDC Drive

Fixed DC Output Voltage	:	220V $\pm$ 10%, 2A
Variable Output DC Voltage	:	0-220V $\pm$ 10%, 12A

### PMSM Motor

Type	:	PMSM Motor
Rating	:	1HP
Voltage Rating	:	42V $\pm$ 10%
Rated Speed	:	2500RPM $\pm$ 7.5%
Insulation	:	Class 'H'
Loading Arrangement	:	Mechanical
Brake drum/Pulley	:	Aluminum Casted

### PMSM Drive

Input Voltage	:	90 – 245VAC $\pm$ 10%
Output Voltage	:	0 -42VAC $\pm$ 10%
Frequency	:	0 – 160Hz
Graphical LCD	:	(128 X 64Pixels)

### Digital Meters used

AC Voltmeter	:	450V
AC Ammeter	:	10A
DC Voltmeter	:	300V
DC Ammeter	:	20A
MCB (TPN)	:	10A

### Optional Accessories

10Amp, Three phase Variac