

# CPE-ER1601

## DC Motor (Shunt/Series) and DC Compound Generator



### FEATURES

- Designed to teach the characteristics of a DC shunt/series motor and a DC compound generator
- Equipped with digital indication meters such as a voltmeter, an ammeter and a RPM
- Coupling of a motor and a generator through the Electronic Clutch method

### EXPERIMENTAL CONTENTS

- DC shunt-wound motor's starting and load characteristics
- DC series-wound motor's starting and load characteristics
- Loss and efficiency of the DC motor
- Relationship between of motor's speed and electromotive force
- Load characteristics of the DC compound motor
- Comparison of cumulative compound characteristics with differential compound characteristics
- Generator's rotation speed and output characteristics
- DC compound generator's loss and efficiency

### SPECIFICATIONS

CPE-ER1601			
MOTOR		GENERATOR	
<b>Winding type</b>	Shunt/Series	<b>Winding type</b>	Compound-wound
<b>Speed</b>	1250 ~ 1800 RPM	<b>Speed</b>	1250 ~ 1800 RPM
<b>Input voltage</b>	DC 120V 3.5A Approx	<b>Output</b>	DC 0 ~ 120V 1A
<b>Horse power</b>	1/3HP	<b>Number of poles</b>	2 poles
<b>Number of poles</b>	2 poles	<b>Field excitation</b>	Self-excited
<b>Shunt Field Exc.</b>	0.4A(Sep.), 120V	<b>Shunt Field Rheostat</b>	0~300Ω, 50W
<b>Shunt Field Rheostat</b>	0~300Ω, 50W	<b>Series Field Rheostat</b>	0~50Ω, 50W
<b>Armature Rheostat</b>	0~10Ω, 80W	<b>Load resistance</b>	48Ω~480Ω, 500W
<b>Digital Meter</b>	Ammeter: 2ea Voltmeter: 1ea RPM: 1ea	<b>Digital Meter</b>	Ammeter: 2ea Voltmeter: 1ea RPM: 1ea
<b>Overload trip</b>	4A (approx.)	<b>Overload trip</b>	2A (approx.)
COUPLING		GENERAL INFORMATION	
<b>Type</b>	Electronic clutch	<b>Main power</b>	Single-phase AC 220V
<b>Friction torque</b>	1.0Kg•m	<b>Power switch</b>	MCCB 15A
<b>Input voltage</b>	DC 24V, 15W	<b>Normal operation</b>	30min.
<b>Max. speed</b>	6000 RPM	<b>Dimension</b>	870x390x630mm

### STANDARD ACCESSORIES

- Power cord: 1ea
- Circuit connection cable: 1set
- User's guide manual: 1ea

### OPTIONS

- Power Electronics & Green Energy CAD Software (CASPOC)

