

PTS-Series



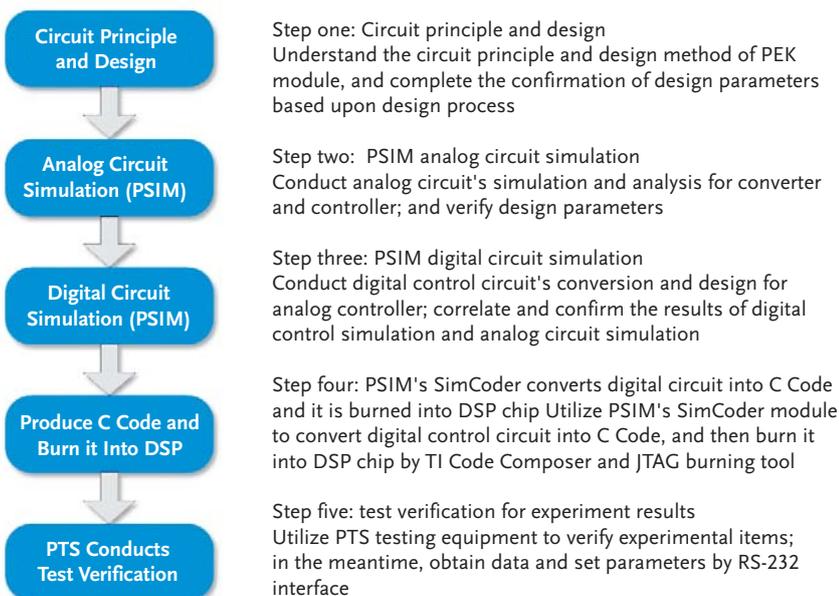
FEATURES

- Rack-mount Arrangement for Easy Movement and Saving Desktop Space
- PTS-800 Satisfies Single-phase AC/DC, DC/DC Power Electronics Hand-on Operation Requirements
- PTS-1000 Satisfies Single-phase AC/DC, DC/DC and Single-phase DC/AC Power Electronics Hand-on Operation Requirements
- PTS-3000 Satisfies Single/Three-phase AC/DC, DC/DC and Single/Three-phase DC/AC Power Electronics Hand-on Operation Requirements
- Collocating With PSIM (option) and PEK Training Kit (option) To Conduct Complete Teaching
- PEK-100 Series Utilizes TI F28335 Digital Control Chip to Swiftly Produce C Programming Code Via PSIM's SimCoder
- Provides PSIM Example Files for PEK Training Kit Experiment
- Provides a Complete User Manual for PEK Training Kit

NEW

GW Instek PTS power electronics training system, including oscilloscope, DC power supply, AC source, DC load and AC load, is the most ideal system for electronics students, teachers and researchers to conduct hand-on operation verification. For applying converters such as Buck, Boost, Flyback, etc. utilizing analog control, users can be fully familiarized with power converter structure by three procedures, including circuit design, PSIM analog circuit simulation and PTS hand-on operation verification. For applying converters such as Inverter, Motor Control, etc. utilizing digital control, users can be fully familiarized with power converter structure by five procedures, including circuit design, PSIM analog circuit simulation, PSIM digital circuit simulation, digital control circuit directly producing C Code and it is burned into DSP; and PTS hand-on operation verification.

LEARNING PROCESS :



APPLICATIONS

- Power Electronics Teaching
- R & D on Converter
- New Energy Teaching
- Motor Drive Control



PTS-1000 Series

20U Height Power Electronics Training System

1. GDS-2304A
Digital Storage Oscilloscope
2. PSW 160-7.2
Programmable DC Power Supply
3. GPM-8213
AC/DC Power Meter
4. APS-7050
Programmable AC Source
5. PEL-2004+2040
Programmable DC Electronic Load
6. GPL-100
Passive Single-Phase AC Electronic Load
7. PEK-110+005+006
Single-Phase Inverter Module
(including an auxiliary power supply and a burner)



PTS-1000 Series

25U Height Power Electronics Training System

1. GDS-2304A
Digital Storage Oscilloscope
2. PSW 160-7.2
Programmable DC Power Supply
3. GPM-8213
AC/DC Power Meter
4. APS-7050
Programmable AC Source
5. PEL-2004+2040
Programmable DC Electronic Load
6. GPL-100
Passive Single-Phase AC Electronic Load
7. PEK-110+005+006
Single-Phase Inverter Module
(including an auxiliary power supply and a burner)
8. Blank
Equipment Augmentation Slot



PTS-800 Series

25U Height Power Electronics Training System

1. GDS-2204E Digital Storage Oscilloscope
2. PSB-1400M Wide Range DC Power Source
3. PEL-3031E Programmable DC Electronic Load
4. APS-7050E Single-Phase AC Power Source
5. PEK-120+005A+006 Buck Converter Module (including an auxiliary power supply and a burner)
6. Blank Equipment Augmentation Slot
7. 4U Drawer Module and Accessories Compartment



PTS-3000 Series

25U Height Power Electronics Training System

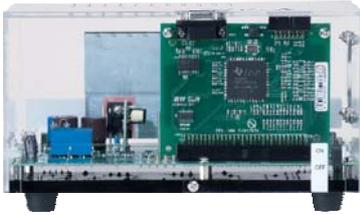
1. GDS-2204E Digital Storage Oscilloscope
2. PSW 160-7.2 Wide Range DC Power Source
3. PEL-3031E Programmable DC Electronic Load
4. APS-300 Single/Three-Phase AC Power Source
5. GPL-300A Single/Three-Phase Passive Load
6. PEK-130+005A+006 Three-Phase Inverter Converter Module (including an auxiliary power supply and a burner)
7. Blank Equipment Augmentation Slot

PEK-110 Experiment Module
(PTS-1000 Standard)



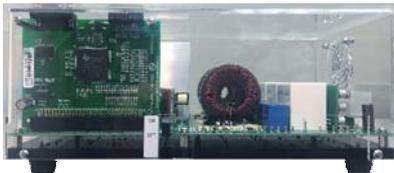
Description		Symbol	Min	Typ	Max	Units	Comment
DC Input	Voltage	V_{IN}	70		80	V	
	Current	I_{IN}			1.5	A	
AC Output	Voltage	V_{OUT}		40		V	
	Current	I_{OUT}	0		3	A	
	Power	P_{OUT}			120	W	
Dimensions (L x W x H)			285 x 170 x 110 (mm)				
Weight			Approx. 2kg				
Experiment	1. Unipolar SPWM Inverter						
	2. Stand Alone Inverter with Dual Loop Inductor Current Control						
	3. Grid Connected Single Phase Inverter						
	4. Bridgeless PFC AC/DC Converter						
	5. Full-bridge AC/DC Switching Rectifier						

PEK-120 Experiment Module
(PTS-800 Standard)



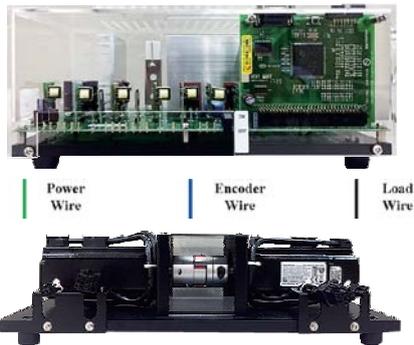
Description		Symbol	Min	Typ	Max	Units	Comment
DC Input	Voltage	V_{IN}	30	50	70	V	
	Current	I_{IN}		3		A	
DC Output	Voltage	V_{OUT}		24		V	
	Current	I_{OUT}	0		5	A	
	Power	P_{OUT}			120	W	
Dimensions (L x W x H)			220 x 150 x 110 (mm)				
Weight			Approx. 1.5kg				
Experiment	1. Pulse Width Modulation Buck Converter						
	2. Voltage Mode Control Buck Converter						
	3. Average Current Mode Control Buck Converter						
	4. MPPT Converter for PV System						
	5. PV Battery Charger						

PEK-130 Experiment Module
(PTS-3000 Standard)



Description		Symbol	Min	Typ	Max	Units	Comment
DC Input	Voltage	V_{IN}	90	100	110	V	
	Current	I_{IN}			3	A	
AC Output	Voltage	V_{LL}		50		V	
	Current	I_{OUT}	0		2.9	A	
	Power	P_{OUT}			250	W	
Dimensions (L x W x H)			285 x 170 x 110 (mm)				
Weight			Approx. 2.5kg				
Experiment	1. Three Phase SPWM Inverter						
	2. Three Phase Stand-alone Inverter						
	3. Grid Connected Three Phase Inverter						
	4. Three Phase Active Power Filter						
	5. Single-phase Three-arm Rectifier-Inverter						

PEK-190 Experiment Module
(Option)



Description		Symbol	Min	Typ	Max	Units	Comment
DC Input	Voltage	V_{IN}	130	140	150	V	
	Current	I_{IN}			2.6	A	
AC Output (Inverter Output)	Voltage	V_{LL}	45		65	V	
	Current	I_{OUT}			3	A	
	Power	P_{OUT}			300	W	
Dimensions (L x W x H)			285(mm)x170(mm)x110(mm)				
Weight			Approx. 2.5kg				
Motor Specifications		Delta (EMCAC30604PS) ; (3 Phase AC, 0.4KW)					
Experiment Items	1. Vector Control of PMSM						
	2. Parameter Identification of PMSM						
	3. Initial Angle Detection and Starting of PMSM						
	4. Position Sensor-less Control of PMSM with Sliding Mode Observer (SMO)						
	5. Position Sensor-less Control of PMSM with Self-adaptive Sliding Mode Observer						
	6. Position Sensor-less Control of PMSM with Model Reference Adaptive System (MRAS) Observer						

ORDERING INFORMATION

PTS-800	25U Height Power Electronics Training System
PTS-1000	20U Height Power Electronics Training System
PTS-1000	25U Height Power Electronics Training System
PTS-3000	25U Height Power Electronics Training System

ACCESSORIES

APS-300	Multi-Phase AC Source	PEK-130	Three Phase Inverter
GPL-300A	Multi-Phase Rectifier and Resistor Load	PEK-190	Three Phase PMSM Drive and Control
PEK-110	Single Phase Inverter	PEK-003	TMS320F28335 MCU Module
PEK-120	Buck Converter	PEK-005A	AMulti Output Auxiliary Power Supply
		PEK-006	JTAG Emulator

Specifications subject to change without notice. PTS-SERIESCD1DH

Global Headquarters

GOOD WILL INSTRUMENT CO., LTD.

No.7-1, Jhongsing Road, Tucheng Dist., New Taipei City 236, Taiwan

T +886-2-2268-0389 F +886-2-2268-0639

E-mail: marketing@goodwill.com.tw



www.gwinstek.com



www.facebook.com/GWInstek

GW INSTEK

Simply Reliable