

⇒ Highlights

- Laboratory and on-site meter measurements
- Easy evaluation of meters under precise load conditions, using the built-in compact current and voltage source
- Testing of meters with closed I-P links
- Automatic operation with predefined load points without the need for an external computer
- Each source channel can be programmed with user defined harmonic content or standardized signal test shape
- Each source channel can be modulated with programmable Ripple control telegram
- Independent generation of single or three-phase loading conditions for testing, calibration and verification of meters
- Active, reactive and apparent energy measurement for 3 phase, 3 or 4-wire, systems with integrated error calculator and pulse output
- Capable to test the ratio and burden of CT/PT

⇒ Description

The **Portable Test Equipment** consists of an integrated three-phase current and voltage source and a three-phase electronic reference standard of accuracy class 0.05% or 0.02%.



Portable Test Equipment

⇒ Available Models

Model	Phases	Class	Max. Output Power (per phase)	
			Voltage	Current
PTE 2100A	1	0.05	30 VA	60 VA
PTE 2100E	1	0.02	30 VA	60 VA
PTE 2300A	3	0.05	30 VA	60 VA
PTE 2300E	3	0.02	30 VA	60 VA

⇒ Technical Specification

Power Source (built-in / specification per phase)		General Specifications			
Voltage					
Range	3 ... 300 V (phase to neutral)	Operat. Temperature	-10 ... +50 °C		
Output Power	30 VA	Storage Temperature	-20 ... +60 °C		
Distortion Factor	< 0.3 %	Operating Humidity	≤ 85% at Ta ≤ 21°C ≤ 95% at Ta ≤ 25°C 30 days / year spread		
Resolution	0.01 V	Power Consumption	approx. 550 VA		
Stability	< 0.005 % (within 60 min period @ time base 150 s)	Power Supply	100 VAC ... 240 VAC		
Current		Degree of Protection	IP-67 (closed case)		
Range	1 mA ... 120 A	Safety Requirements	Isolation protection: EN 61010-1:2001 Measurement category: 300 V CAT IV, 600 V CAT III		
Output Power	120 A output	Dimensions (W x D x H)	470 x 370 x 180 mm (device)		
	12 A output	Weight (approx.)	16.5 kg (device) / 5 kg (accessories)		
Distortion Factor	< 0.3 %	Impulse Output			
Resolution	min. 100 uA	Type	LED or 5 V		
Stability	< 0.005 % (within 60 min period @ time base 150 s)	Impulses Assigned to	Active, Reactive, Apparent Energy or programmable constant frequency		
Phase Angle		Meter Constant	programmable		
Range	0 ... 360 °	Max. Imp. Frequency	70 kHz		
Resolution	0.001 ° (45 ... 100 Hz)	Impulse Input			
Harmonics		Suitable for	<ul style="list-style-type: none"> Optical Sensor OPTS 2100 Snap Switch Impulse SO 		
Fundamental Frequency Range	45 ... 70 Hz	Standard Accessories			
Bandwidth	30 ... 2200 Hz	<ul style="list-style-type: none"> Optical Sensor OPTS 2100, Fixing Clamp OPFC 1000 Optical Sensor Cable WSSC 2000 Power Supply Cord, Spare Fuses Current Cables, USB Cable Voltage Cables with Standard Voltage Clips Software for PC (Installation USB key) Printed User's Guide, Calibration Certificate 			
Phase Shift	0 ° ... 360 °	Optional Accessories			
Max. Amplitude	50 % (2 nd ... 6 th harmonics) 15 % (7 th ... 40 th harmonics)	<ul style="list-style-type: none"> Current Transducer CT 2x20x Current Clamps CC 2x12B, CC 3x24C, CC4x12B Flexible Current Probe FCP 3x21 Voltage Transducer VT 2x60x (VT 2x50x) Special Voltage Clips, Spike Volt. Clips, Omega Volt. Clips Snap Switch WSSS 3000, RS232 cable, Impulse SO cable Optical Communication Head OPTH 1200 Portable Printer with communication cable 			
Ripple Control					
Frequency Range	100 ... 1600 Hz				
Modulation	0 ... 15 %				
Channels Selection	any combination of Voltage and Current channels				
Reference Meter (built-in / specification per phase)					
Measurement Range					
Voltage	30 V ... 300 V (phase to neutral)				
Current	1 mA ... 120 A				
Power Factor	-1.000 ... +1.000 (with 0.001 step)				
Measurement Accuracy		PTE 2x00E	PTE 2x00A		
Voltage	0.015 %	0.035 %			
Current *1	0.015 %	0.035 %			
Power *1 *2	0.02 %	0.05 %			
Frequency	40 Hz ... 70 Hz				
Phase Angle	0.02 °				
Temperature Coefficient	0.0025 (0°C ... +40°C) 0.0040 (-10°C ... +50°C)				

*1 in range 1 mA ... 30 mA related to 30 mA

*2 related to apparent power

⇒ Current Output Limit Values

