



## ME110NSR

- Measurable elements: AC current, AC voltage, active/reactive power, power factor, frequency, active energy, reactive energy, voltage harmonics, current harmonics etc.
- Output functions suitable for power monitoring: Analog 4 circuits, pulse 1 point and alarm 1 point (Analog 4 circuits, pulse 2 points also available)

## Specifications

Model name		Multi-measuring instrument						
		ME110NSR		ME110NSR-4A2P		ME110NSR-4APH		
Phase wire system		1P2W/1P3W/3P3W (Common use)		1P2W/1P3W/3P3W (Common use)		1P2W/1P3W/3P3W (Common use)		
		3P4W		3P4W		3P4W		
Measuring elements (accuracy)	Current	Instantaneous value (0.5%)	●×3(1, 2, 3)	●×5(1, 2, 3, N, AVG)	●×3(1, 2, 3)	●×5(1, 2, 3, N, AVG)	●×3(1, 2, 3)	●×5(1, 2, 3, N, AVG)
		Demand (0.5%)	●×3(1, 2, 3)	●×5(1, 2, 3, N, AVG)	●×3(1, 2, 3)	●×5(1, 2, 3, N, AVG)	●×3(1, 2, 3)	●×5(1, 2, 3, N, AVG)
	Power	Voltage (0.5%)	●×3(12, 23, 31)	●×4(12, 23, 31, AVG)*1	●×3(12, 23, 31)	●×4(12, 23, 31, AVG)*1	●×3(12, 23, 31)	●×4(12, 23, 31, AVG)*1
		Instantaneous value (0.5%)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)
		Demand (0.5%)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)
		Apparent power (0.5%)	-	●×4(Σ, 1, 2, 3)	-	●×4(Σ, 1, 2, 3)	-	●×4(Σ, 1, 2, 3)
		Reactive power (0.5%)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)
		Power factor (2.0%)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)	●	●×4(Σ, 1, 2, 3)
		Frequency (0.5%)	●		●		●	
		Active energy (1.0%)	○		○		○	
Reactive energy (2.0%)	○		○		○			
Current harmonics (2.5%)	○(THD, h1...h13)		○(THD, h1...h13)		○(THD, h1...h13)			
Voltage harmonics (2.5%)	○(THD, h1...h13)		○(THD, h1...h13)		○(THD, h1...h13)			
Ratings	Rated voltage	110/220V 50-60Hz (Only 220V for 1P3W)	63.5/110-254/440V 50-60Hz	110/220V 50-60Hz (Only 220V for 1P3W)	63.5/110-254/440V 50-60Hz	110/220V 50-60Hz (Only 220V for 1P3W)	63.5/110-254/440V 50-60Hz	
	Rated current	AC 5A						
Maximum scale	Scale setting	Auto scale display by setting primary voltage/current, active/reactive power scale, power scale single/double deflection						
	Settable standard maximum scale	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>●Voltage scale</p> <p>3P3W/1P2W</p> <ul style="list-style-type: none"> <li>150V(110V) Direct</li> <li>300V(220V) Direct</li> <li>300V(220V) Direct</li> <li>600V(440V) Direct</li> </ul> </div> <div style="width: 45%;"> <p>1P3W</p> <ul style="list-style-type: none"> <li>300V(220V) Direct only</li> </ul> </div> <div style="width: 45%;"> <p>3P4W</p> <ul style="list-style-type: none"> <li>100/150V(63.5/110V) Direct</li> <li>150/300V(110/190V) Direct</li> <li>300/600V(220/380V) Direct</li> <li>300/600V(240/415V) Direct</li> <li>300/600V(254/440V) Direct</li> </ul> </div> <div style="width: 45%;"> <p>●Current scale</p> <ul style="list-style-type: none"> <li>1P2W : Max scale = 0.5kW×VT ratio×CT ratio</li> <li>1P3W : Max scale = 1kW×CT ratio</li> <li>3P3W : Max scale = 1kW×VT ratio×CT ratio</li> <li>3P4W : Max scale = Specific power×VT ratio×CT ratio</li> </ul> </div> </div> <p>*Instrument rated voltage with VT is fixed at 110V.      *Primary voltage should be set with VT.</p>						
Alarm setting	Upper limit setting	A, DA, V, W, DW, cosφ, var, Hz, HI, HV						
	Lower limit setting	A, DA, V, W, DW, cosφ, var, Hz						
	Setting accuracy	±1.0%						
Loading	Input circuit	Voltage circuit : 0.1VA/phase(@110VAC), 0.2VA/phase(@220VAC) Current circuit : 0.1VA/phase						
	Auxiliary power	11VA(@110VAC), 14VA(@220VAC) 6W(@100VDC)						
Output functions	Analog output			○(4 circuits)		○(4 circuits)		
	Pulse output			○(2 points)		○(1 point)		
	Alarm output					○(1 point)		
Back up		Stored In EEPROM (nonvolatile memory) : setting value, max/min value, active/reactive energy						
Auxiliary power		AC100-240V ±15% 50-60Hz/DC75-140V						
Weight		0.5kg	0.5kg	0.5kg	0.5kg	0.5kg	0.5kg	
Enclosure		Thermoplastic self-extinguish (UL94V0)						
Operating temperature		-5-50°C (Average operating temperature : below 35°C)						
Operating humidity		85% RH max (no condensation)						
Storage temperature		-20-60°C						
Standard		EN 61010-1/2001, EN61000-6-4/2001, EN61000-6-2/2001						

- including max, and min. value
- including max value
- counting value

Analog output	Range : 4-20mA, Load resistance : 600Ωmax
Alarm output	Relay contact 35VDC, 0.2A
Pulse output	Semiconductor relay contact 35VDC, 0.1A

Note \*1 : Phase voltage measurable (1N, 2N, 3N)

Remarks : 1. Accuracy of current, active/reactive power is at standard max scale value.

2. When used for 1P2W, accuracy of active power, active power demand & reactive power can exceed 0.5 due to the influence of power factor.

3. When input voltage falls to 11V, voltage related elements are displayed as follows : (Current is measured even when there is no voltage input)

· Voltage, active/reactive power : "0" is displayed.

· Power factor : "1" is displayed.

· Frequency, current/voltage harmonics : "\_\_\_\_\_" is displayed. (For 3P4W, "\_\_\_\_\_" is displayed when they fall to 80V (@ rated voltage 110V) or 160V (@ rated voltage 220V).)

## How to order

