

Industrial &amp; Electrical Components

# Multifunction Power Meter

Part No.

NRM08

## Description

- ◆ Measuring all usual parameters: 3-phase current, voltage, active power, reactive power, kwh, harmonic, extreme value etc.
- ◆ With high precision measuring IC and MCU design.
- ◆ With standard energy pulse output and RS485 communication interface.
- ◆ Optional extra function module.
- ◆ Conform to standard GB/T22264.1-2008, GB/T13978-2008.
- ◆ Outline size: 120X120, 96X96, 80X80 and 72X72mm etc.
- ◆ Used for controlling, SCADA and energy management system.

## Ordering information

**NRM08 E - 2 S 4**

①      ②      ③      ④

① Series: NRM08

② Function code:

E = Multifunction power meter

Z = Multifunction network meter

H = Multifunction harmonice meter

D = Multifunction demand meter

F = Multifunction multi-rate meter

M = Multifunction extreme value meter

UI = Three-phase voltage and current meter

③ Size:      Outline      Cut-out

2 =      120x120x85      108x108 (or 111x111)

3 =      80x80x85      76x76

9 =      96x96x85      88x88 (or 91x91)

A =      72x72x85      67x67

5 =      96x48x85      92x45

④ Display:

1 = Single phase LED

4 = Three phase LED

Y = Three phase LCD

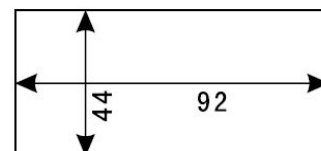
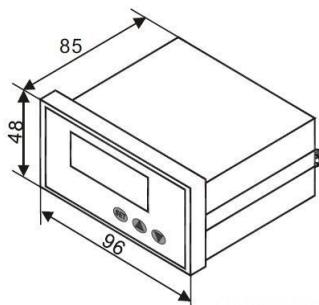
## Electromagnetic compatibility (EMC)

Oscillatory waves immunity test	III	IEC61000-4-12
Electrostatic discharge immunity test	IV	IEC61000-4-2
Radio-frequency electromagnetic field immunity test	III	IEC61000-4-3
Electrical fast transient burst immunity test	III	IEC61000-4-4
Surge immunity test	III	IEC61000-4-5
Power frequency magnetic field immunity test	IV	IEC61000-4-8
Damped oscillatory magnetic field immunity test	IV	IEC61000-4-10
Voltage dips, short interruptions and voltage variations immunity test		IEC61000-4-11

**Technical specifications**

Accuracy		Energy measuring: active energy class 0.5; reactive energy class 1.0; transmission output class 0.5	
Display		LCD / 12-bit LED	
Signal input	Network		Three-phase four-wire V34 / Three-phase three-wire V33
	Voltage	Rated value	AC380V / AC100V
		Overload	Continuous 1.2 times; Instant: 2 times (10 seconds)
		Power consumption	< 1VA (per phase)
		Impedance	> 300 kΩ
	Current	Rated value	AC5A / AC1A
		Overload	Continuous 1.2 times; Instant: 2 times (10 seconds)
		Power consumption	< 0.4VA (per phase)
		Impedance	< 2 mΩ
	Frequency		45-65Hz
Energy		Bi-directional active/reactive energy measurement.	
Power supply	Working range	AC/DC 85-264V	
	Power consumption	< 5 VA	
Function modules	Energy pulse	Passive optocoupler collector output	
	Communication interface	One-way RS485 communication interface; MODUBS-RTU communication protocol	
		Communication baud rate: 4800-9600, Parity mode N81	
	On-off input	Passive stem node input	
	On-off output	Excess limit alarm or remote relay output capacity 5A/250VAC, 5A/30VDC	
Transmission output	0-20mA / 4-20mA / 0-5V / 1-5V transmission output, programmable to set transmission items and corresponding output value.		
Working condition		-10~55℃; Relative humidity < 93%; Non-corrosive gas; Altitude < 2500M.	
Storage condition		-20~75℃; Relative humidity < 93%	
Safety	Insulation	Signal, power supply, output terminal resistant to case > 100MΩ	
	Dielectric strength	Input power supply > 2kV, input and output > 1kV, power supply and output > 2kV	
Dimensions	Outline	A: 72X72; 3: 80X80; 9: 96X96; 2: 120X120 mm	
	Cut-out	A: 67X67; 3: 76X76; 9: 88X88 (or 91X91); 2: 108X108 (or 111X111) mm.	

**Dimensions**



NRM08E-5S1

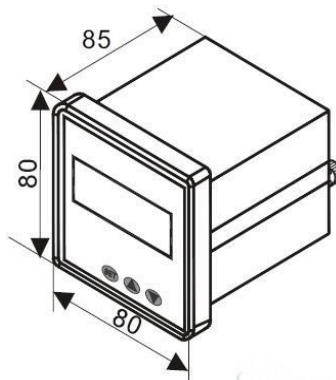
Outline size

Cut-out size

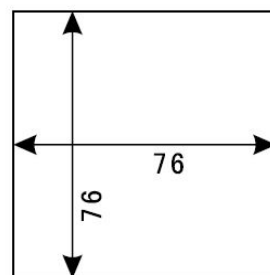
P/N	Functions
NRM08E-5S1	Single-phase I, U, kw, kvar, kw/h, cosΦ, Hz, RS485/Modbus



NRM08E-3S1

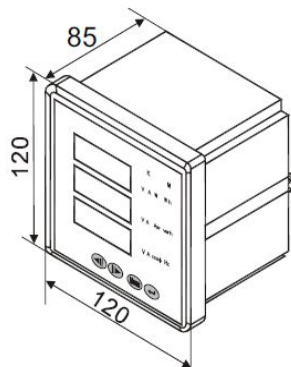


Outline size

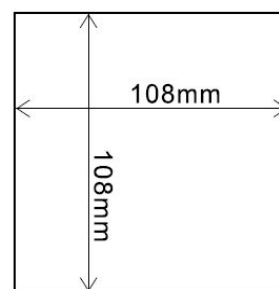


Cut-out size

P/N	Functions
NRM08E-3S1	Single-phase I, U, kw, kvar, kw/h, cosΦ, Hz, RS485/Modbus



Outline size

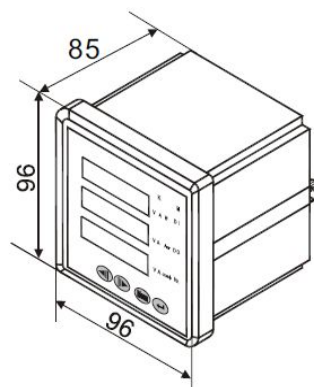


(or 111X111mm)

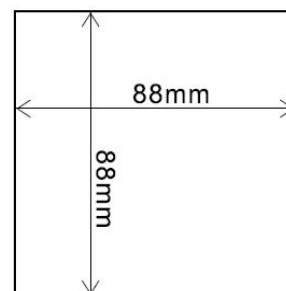
Cut-out size

NRM08□-2S□

P/N	Functions
NRM08UI-2S4	Three-phase I, U, RS485/Modbus
NRM08E-2S4	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus
NRM08Z-2S4	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus. Optional 4DI, 4DO and 4AO.
NRM08E-2SY	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus
NRM08Z-2SY	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus. Optional 4DI, 4DO and 4AO.



Outline size



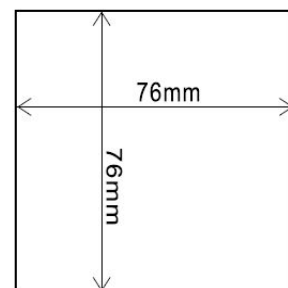
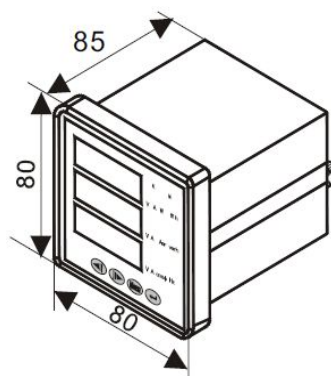
(or 91X91mm)

Cut-out size

NRM08□-9S□

P/N	Functions
NRM08UI-9S4	Three-phase I, U, RS485/Modbus
NRM08E-9S4	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus
NRM08Z-9S4	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus. Optional 4DI, 4DO and 4AO.
NRM08E-9SY	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus
NRM08Z-9SY	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus. Optional 4DI, 4DO and 4AO.

## NRM08 Series

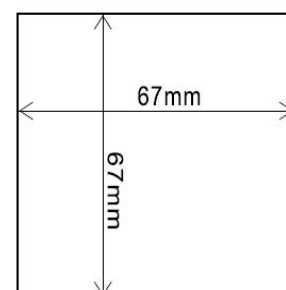
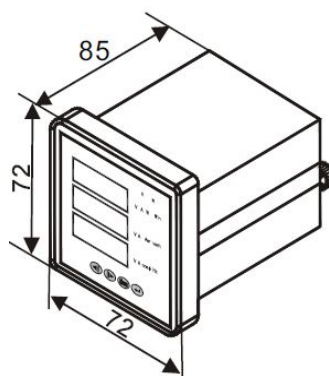


NRM08□-3S□

Outline size

Cut-out size

P/N	Functions
NRM08UI-3S4	Three-phase I, U, RS485/Modbus
NRM08E-3S4	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus
NRM08E-3SY	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus



NRM08□-AS□

Outline size

Cut-out size

P/N	Functions
NRM08UI-AS4	Three-phase I, U, RS485/Modbus
NRM08E-AS4	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus
NRM08E-ASY	Three-phase I, U, kw, kvar, kw/h, kvar/h, cosΦ, Hz, RS485/Modbus