MITSUBISHI ELECTRIC
Changes for the Better

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MITSUBISHI ELECTRONIC MULTI-MEASURING INSTRUMENT
MODEL
ME96SS Version“A”

New Product News

April 2016 | No.M012

Product Outline

Upgraded version of ME96SS Series of electronic multi-measuring instrument will be launched. New ME96SS Series (Version A) are improved measurement function and network support. It allows more effective and energy-saving monitoring systems with upgraded items.

Key Items
- Improved measurement accuracy of economy model to support active energy class 0.5S.
- Line-up MODBUS®TCP communication unit and support Ethernet communication.
- Line-up logging unit for data backup.

Launch Date April 2016

External Appearance

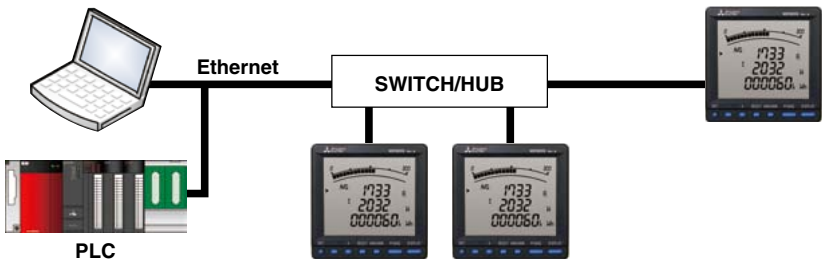
Special Feature Ⅰ Measuring function improvement

- Improved measurement accuracy of active energy, reactive energy and power factor. And also expanded measurement range of harmonic, demand and others.

		Economy model		Standard model		High-spec model	
		Before improvement	After improvement	Before improvement	After improvement	Before improvement	After improvement
Model		ME96SSE-MB	ME96SSEA-MB	ME96SSR-MB	ME96SSRA-MB	ME96SSH-MB	ME96SSHA-MB
Measurement items and accuracy	Active energy	Class1	Class0.5S	Class1	Class0.5S	Class0.5S	Class0.5S
	Reactive energy	–	–	Class2	Class1S	Class2	Class1S
	Power factor	±2.0%	±0.5%	±2.0%	±0.5%	±1.0%	±0.2%
	Harmonic	–	±2.0% THD	±2.0% (Up to 13th)	±1.0% (Up to 19th)	±2.0% (Up to 31st)	±1.0% (Up to 31st)
	Demand	–	A (thermal)	A (thermal)	A (thermal), W, var, VA (rolling)	A (thermal), W (rolling)	A (thermal), W, var, VA (rolling)

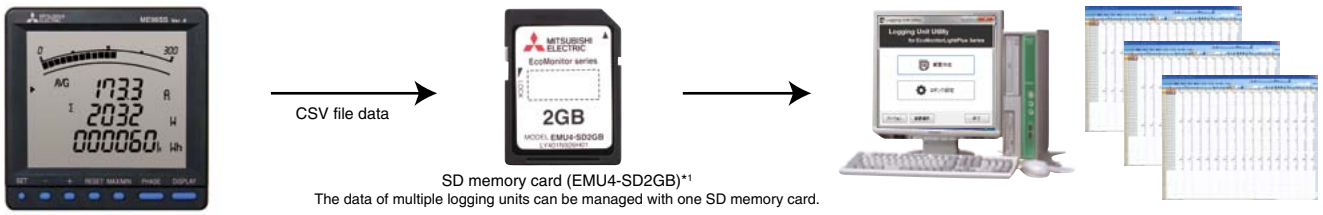
Special Feature Ⅱ MODBUS®TCP communication support (optional plug-in module: ME-0000MT-SS96)

- Line-up MODBUS®TCP communication unit that can be used in Ethernet environment in addition to the current MODBUS®RTU (RS-485) communication and CC-Link communication units.



Special Feature Ⅲ Data logging support (optional plug-in module: ME-0000BU-SS96)

- Line-up the option unit that can hold the data during a communication impossible period.



SD memory card (EMU4-SD2GB)*1
The data of multiple logging units can be managed with one SD memory card.

*1 Make sure to use the SD memory card manufactured by Mitsubishi Electric Corporation (Model EMU4-SD2GB).
Using the other types of the SD memory card may cause the trouble such as data destruction of the memory card or system failure.

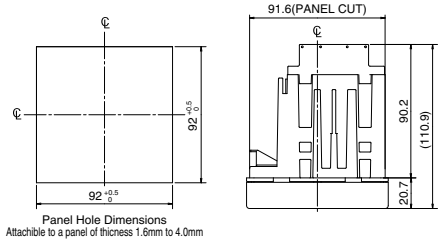
Specifications

Type		ME96SSHA-MB, ME96SSRA-MB, ME96SSEA-MB			
Phase wire system		3-PHASE 4-WIRE, 3-PHASE 3-WIRE (3CT, 2CT) 1-PHASE 3-WIRE, 1-PHASE 2-WIRE (common)			
Rating	Current	AC5A, AC1A (common)			
	Voltage	3-PHASE 4-WIRE: max AC277/480V 1-PHASE 3-WIRE: max AC220/440V	3-PHASE 3-WIRE: (DELTA) max AC220V, (STAR) max AC440V 1-PHASE 2-WIRE: (DELTA) max AC220V, (STAR) max AC440V		
	Frequency	50-60Hz (common)			

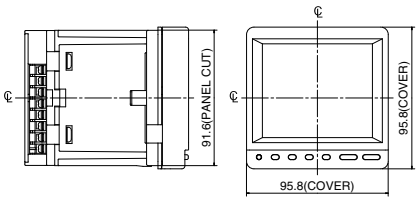
Item		Measurement Item	ME96SSHA-MB	ME96SSRA-MB	ME96SSEA-MB
Measurement elements	Current (A)	A1, A2, A3, AN, A_{AVG}	±0.1%	±0.2%	±0.5%
	Current Demand (DA)	DA1, DA2, DA3, DAN, DA_{AVG}			
	Voltage (V)	V12, V23, V31, V_{AVG} (L-L), V1N, V2N, V3N, V_{AVG} (L-N)			
	Active Power (W)	W1, W2, W3, ΣW	±0.2%	±0.5%	±0.5%
	Reactive Power (var)	var1, var2, var3, Σvar			–
	Apparent Power (VA)	VA1, VA2, VA3, ΣVA			–
	Power Factor (PF)	PF1, PF2, PF3, ΣPF	±0.2%	±0.5%	±0.5%
	Frequency (Hz)	Hz	±0.1%	±0.1%	±0.2%
	Active Energy (Wh)	Imported, Exported	class0.5S (IEC62053-22)	class0.5S (IEC62053-22)	class0.5S (IEC62053-22)
	Reactive Energy (varh)	Imported Lag, Imported Lead, Exported Lag, Exported Lead	class1S (IEC62053-24)	class1S (IEC62053-24)	–
	Apparent Energy (VAh)	Imported + Exported	±2.0%	±2.0%	–
	Harmonic current (HI)	Only odd number	±1.0% (1 to 31st)	±1.0% (1 to 19th)	±2.0% (THD only)
	Harmonic voltage (HV)	Only odd number			
	Rolling Demand (DW)	Rolling Block, Fixing Block	±0.2%	±0.5%	–
	Rolling Demand (Dvar)	Rolling Block, Fixing Block	±1.0%	±1.0%	–
	Rolling Demand (DVA)	Rolling Block, Fixing Block	±1.0%	±1.0%	–
	Periodic Active Energy (Wh)	Periodic Active Energy 1, Periodic Active Energy 2	class0.5S (IEC62053-22)	class0.5S (IEC62053-22)	–
	Operation time (h)	Operation time 1, Operation time 2	(Reference)	(Reference)	(Reference)
Communication Specification		MODBUS®RTU communication			
Accessible optional plug-in module (only ME96SSHA-MB, ME96SSRA-MB)	ME-4210-SS96	4-Analog output, 2-Pulse output, 1-Digital input			
	ME-0040C-SS96	CC-Link communication, 4-Digital input			
	ME-0052-SS96	5-Digital input, 2-Digital output			
	ME-0000BU-SS96	SD CARD			
	ME-0000MT-SS96	MODBUS®TCP communication			
Auxiliary power		AC100-240V (±15%), DC100-240V (-30% +15%)			
Weight		0.5kg			
Dimension		96 (H) × 96 (W) × 90 (D)			
Attachment Method		Embedding attachment			
Operating temperature/humidity		-5 to +55°C (average temperature: 35°C or less per day), 0 to 85%RH, non condensing			
Storage temperature/humidity		-25 to +75°C (average temperature: 35°C or less per day), 0 to 85%RH, non condensing			
Optional part (For ME-0000BU-SS96)		SD memory card (EMU4-SD2GB)*1			

*1 Make sure to use the SD memory card manufactured by Mitsubishi Electric Corporation (Model EMU4-SD2GB). Using the other types of the SD memory card may cause the trouble such as data destruction of the memory card or system failure.

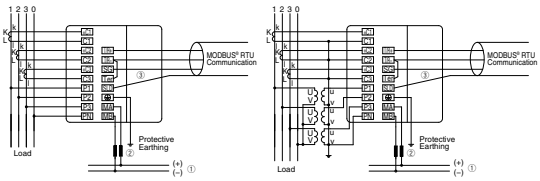
Dimensions & Wiring Diagrams



Panel Hole Dimensions
Attachible to a panel of thickness 1.6mm to 4.0mm

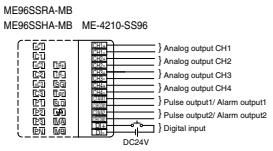


MODBUS® RTU communication
3P4W circuit

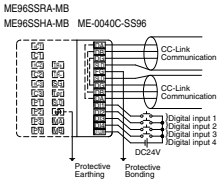


① Auxiliary power supply 100-240VAC or 100-240VDC
② Fuse : 0.5A
③ Some MODBUS® RTU equipment dosen't have SG.
In this case, the wiring between SG is unnecessary.
*1 For a low voltage circuit, grounding of the secondary sides of VT and CT is unnecessary.
*2 Do not connect to NC terminal.

Analog output
Pluse output
Alarm output



CC-Link communication



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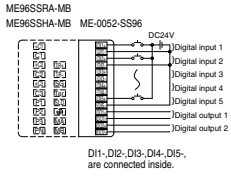
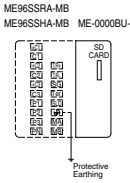
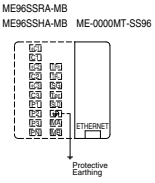


SD CARD



MODBUS® TCP communication



For Safety : Please read the instruction manual carefully before using the products in this catalog.
Wiring and connection must be done by the person have a specialized knowledge of electric construction and wiring.

eco Changes **for a greener tomorrow**

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

MITSUBISHI ELECTRIC CORPORATION

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