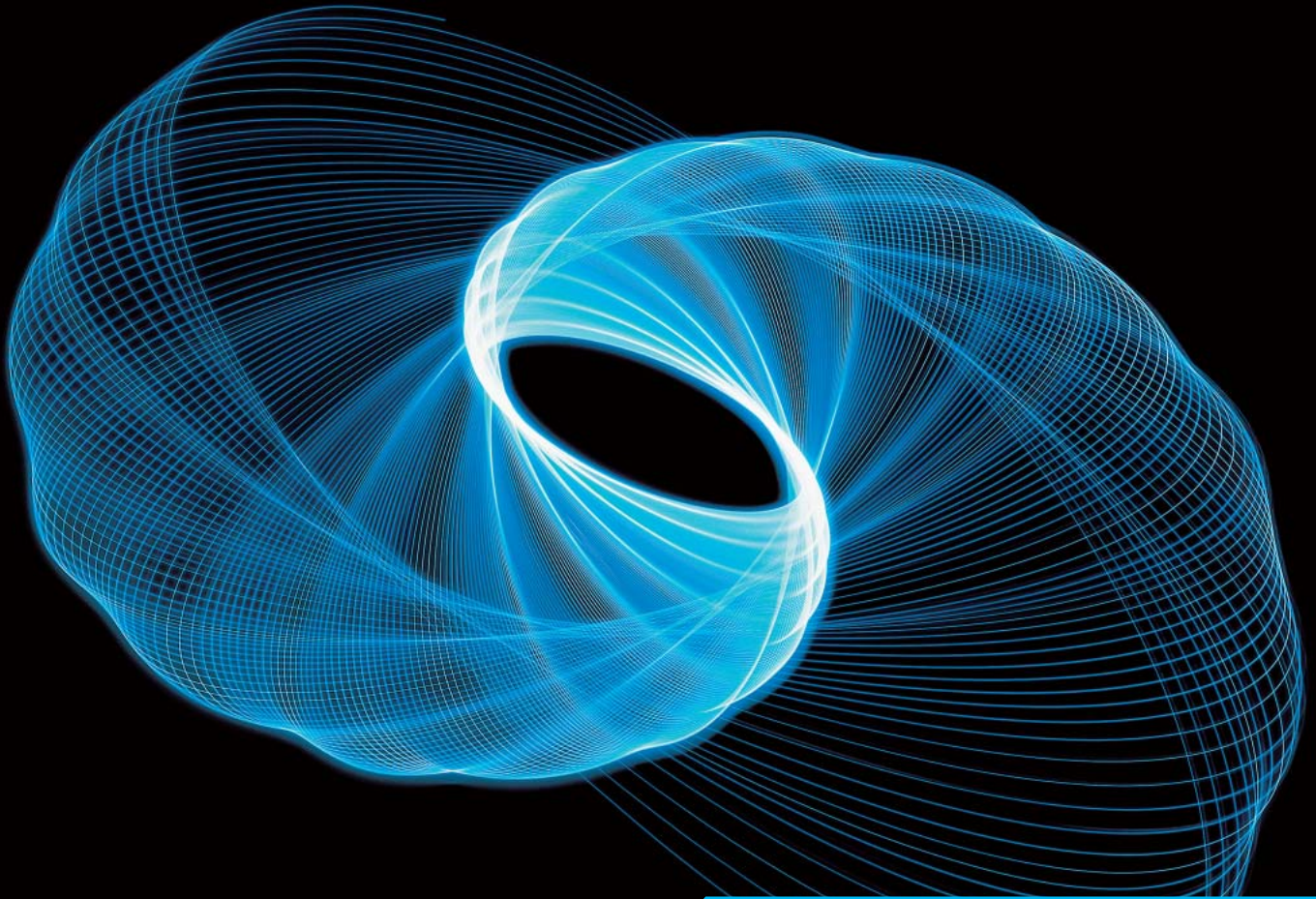


**MITSUBISHI
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Changes for the Better





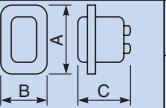
WATTHOUR METERS
INSTRUMENT TRANSFORMERS
ELECTRIC INDICATORS
TRANSDUCERS






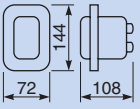


Contents



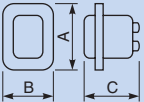
1. Watthour meters	1~2
2. Instrument Transformers	3~4
3. Electric indicators	5~8
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WATTHOUR METERS

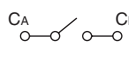
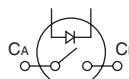

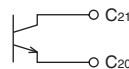

Watthour meters					
Circuit system		1-Phase 2-Wire	1-Phase 3-Wire	3-Phase 3-Wire	3-Phase 4-Wire
					
Type	Without transmitter	M1LHM-V	M2LHM-V	M2LHM-V	M3LHM-V
	With transmitter	M1LHM-K5V M1LHM-K11V M1LHM-K12VR	M2LHM-K5V M2LHM-K11V M2LHM-K12VR	M2LHM-K5V M2LHM-K11V M2LHM-K12VR	M3LHM-K5V M3LHM-K11V M3LHM-K12VR
Ratings	Voltage (V)	100. 110. 200 240	100	100. 110. 200	$\frac{110}{\sqrt{3}}/110.$ $\frac{100}{\sqrt{3}}/173$ $110/190.$ $240/415$
	Current (A)	5	5	5	5
	Frequency (Hz)	50, 60	50, 60	50, 60	50, 60
Accuracy Class	JIS	class 2.0	class 2.0	class 2.0	class 2.0
	IEC, BS	class 2.0	class 2.0	class 2.0	class 2.0
Outline Dimensions (mm)		A	204	204	204
		B	168	168	168
		C	165	165	165

Electronic watthour meters (with transmitter)						
Circuit system		1-Phase 2-Wire	1-Phase 3-Wire	3-Phase 3-Wire		3-Phase 4-Wire
Outline Dimensions (mm)						
						
Type		M7P-K30VR	M8P-K30VR	M8P-K30VR	WP3P-K30VR	M9P-K30VR WP4P-K30VR
Ratings	Voltage (V)	100. 110. 200 240	100	100. 110. 200	110	$\frac{110}{\sqrt{3}}/110.$ $\frac{100}{\sqrt{3}}/173$ $\frac{110}{\sqrt{3}}/190$ $110/190.$ $240/415$ $240/415.$
	Current (A)	5	5	5	5	5
	Frequency (Hz)	Both 50-60	Both 50-60	Both 50-60	Both 50-60	Both 50-60
Accuracy Class	JIS	class 2.0	class 2.0	class 2.0	class 1.0	class 2.0 class 1.0
	IEC, BS	—	—	—	—	— —

Var-hour meters

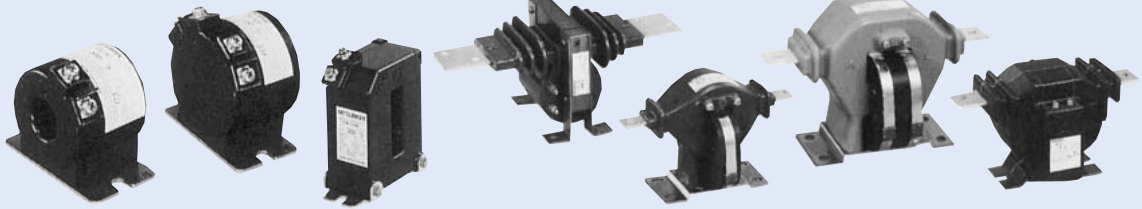
Meter type		Electronic varhour meters	
Circuit system		3-Phase 3-Wire	3-Phase 4-Wire
			
Type	Without transmitter	—	—
	With transmitter	WV3P-K30VR	WV4P-K30VR
Ratings	Voltage (V)	110	$\frac{110}{\sqrt{3}}/110.$ $\frac{110}{190}$ 240/415.
	Current (A)	5	5
	Frequency(Hz)	Both 50-60	Both 50-60
Outline Dimensions (mm)		A	144
		B	72
		C	108

Transmitters

Type	Output system		Output pulse unit (kWh/imp) (at the primary side)	Contact capacity	Pulse width	
	Switches	Contact configuration				
K5	Lead switch		Multiplier x 1	DC 100 ~ 50V 50 ~ 25V 25V or less	10mA or less 25mA or less 50mA or less	Inverse proportion to a rotor speed of a watthour meter (Min 21.6sec)
K11	Semiconductor relay			AC 10VA or less 0.1A or less	110V or less	0.1~0.3sec
K12			DC 10VA or less 0.1A or less	100V or less		
K30	Semiconductor relay		Multiplier x 10 Multiplier x 1 Multiplier x 1/10 Multiplier x 1/100	AC 10VA or less 0.1A or less	110V or less	0.1~0.15sec
	Transistor			DC 35V	30mA or less	
	Transistor			Pulse constant (at secondary side) 3-phase 3-wire 110V 5A 10000imp/kWh		

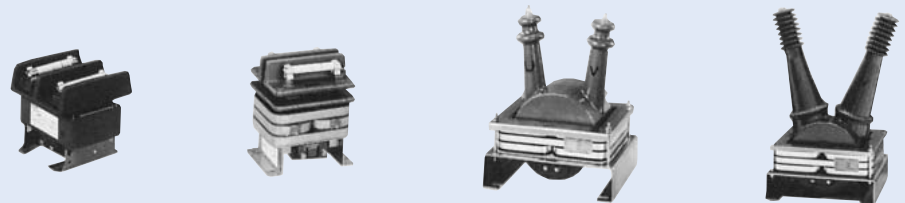
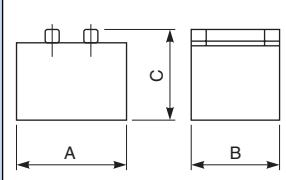
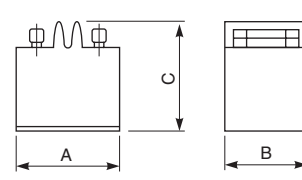
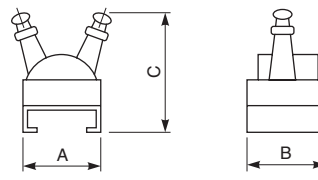
INSTRUMENT TRANSFORMERS

Current transformers


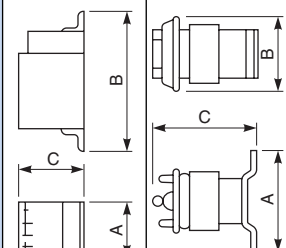
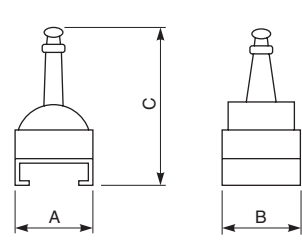


Circuit voltage		Up to 1.1kV																																									
Type		CW-5L				CW-15L				CW-40L				CW-5LP				CW-15LP				CW-40LP				CW-15LM				CW-40LM													
Rating current (A)		60/5-750/5				100/5-750/5				150/5-750/5				1.0 · 5VA				1.0 · 15VA				1.0 · 30VA				150/5-6000/5																	
Short time current		40 times																																									
Class burden	JIS	1.0 · 5VA				1.0 · 15VA				1.0 · 40VA				1.0 · 5VA				1.0 · 15VA				1.0 · 40VA				1.0 · 15VA				1.0 · 40VA													
	IEC, BS	1.0 · 5VA				1.0 · 15VA				1.0 · 30VA				1.0 · 5VA				1.0 · 15VA				1.0 · 30VA				1.0 · 15VA				1.0 · 30VA													
	ANSI	1.2B - 0.2				1.2B - 0.5				1.2B - 0.9				1.2B - 0.2				1.2B - 0.5				1.2B - 0.9				1.2B - 0.5				1.2B - 0.9													
Outlines and dimensions (mm)	Reference figure																																										
	Primary current	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg										
	1-30A	—				—				—				85	57.5	86	0.7	100	69	97	1.1	100	69	97	1.1	—				—													
	40,50A	—				—				—				100	69	97	1.1	100	69	97	1.1	100	69	97	1.1	—				—													
	~75A	115	87.5	97	1.9	—				—				—				—				—				—																	
	~100A	—				115	87.5	97	2.0	—				—				—				—				—																	
	~120A	—				—				—				—				—				—				—																	
	~150A	85	57	74	0.5	—				—				—				—				—				—																	
	~180A	—				100	57.5	90	1.0	115	87.5	97	2.0	—				—				—				—																	
	~200A	—				—				—				—				—				—				—																	
	~250A	—				—				—				—				—				—				—																	
	~300A	85	57.5	84.5	0.5	85	57.5	84.5	0.6	100	68.5	95	1.2	—				—				—				—																	
	~400A	—				—				—				—				—				—				—																	
	~500A	—				—				—				—				—				—				—																	
	~600A	100	59	100	0.5	100	59	100	0.8	100	59	100	0.8	—				—				—				—																	
	~750A	—				—				—				—				—				—				—																	
	~800A	—				—				—				—				—				—				—																	
	~1000A	—				—				—				—				—				—				—																	
	~1200A	—				—				—				—				—				—				—																	
	~1500A	—				—				—				—				—				—				—																	
	~2000A	—				—				—				—				—				—				—																	
	~3000A	—				—				—				—				—				—				—																	
	~4000A	—				—				—				—				—				—				—																	
	~6000A	—				—				—				—				—				—				—																	
Circuit voltage		Up to 6.6kV												Up to 11kV						Up to 22kV																							
Type		CD-40K				CD-40				CD-40NA				CD-40ENA				CD-40GNA				BN-0(LA)						BN-1(LA)						BN-2A									
Rating current (A)		5/5-750/5				800/5-2000/5				5/5-1200/5				5/5-400/5				5/5-200/5				10/5-1500/5A						10/5-1200/5															
Short time current		40 times												75 times						150 times						40 times						40 times						40 times					
Class burden	JIS, JEC	1.0 · 1PS 40VA																																									
	IEC, BS	1.0 30VA																																									
	ANSI	1.2B - 0.9																																									
Outlines and dimensions (mm)	Reference figure																																										
	Primary current	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg	A	B	C	kg						
	~75A	—				—				—				—				—				—				—				—				—				—					
	~80A	245	114	144	3.0	—				280	165	178	6.5	280	172	192	8.5	340	195	211	16	310	148	170	10	420	160	188	15	—				—				—					
	~120A	—				—				—				—				—				—				—				—				—				—					
	~200A	270	114	144	3.0	—				—				—				—				—				—				—				—				—					
	~250A	—				—				—				—				—				—				—				—				—				—					
	~400A	300	114	144	3.0	—				360	172	189	9.5	—				—				—				—				—				—				—					
	~500A	—				—				—				—				—				—				—				—				—				—					
	~750A	—				—				—				—				—				—				—				—				—				—					
	~800A	—				—				—				—				—				—				—				—				—				—					
	~1000A	—				375	155	159	7	—				—				—				—				—				—				—				—					
	~1200A	—				395	155	159	8	—				—				—				—				—				—				—				—					
	~1500A	—				495	155	159	8.5	—				—				—				—				—				—				—				—					
	~2000A	—				475	155	159	10	—				—				—				—				—				—				—				—					
	~3000A	—				—				—				—				—				—				—				—				—				—					
	~4000A	—				—				—				—				—				—				—				—				—				—					


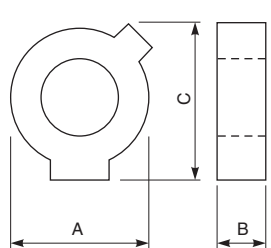
Voltage transformers

									
Circuit voltage		Up to 0.44kV		Up to 6.6kV			11kV	22kV	33kV
Type		PE-15F	PE-50F	PD-50HF	PD-100HF	PD-200KFH	EV-1	EV-2	EV-3
Rating voltage (V)		440/110 220/110		3300/110 6600/110			11000/110	22000/110	33000/110
Class burden	JIS, JEC	1.0 · 1P 15VA	3.0 · 3P 50VA	1.0 · 1P 50VA	1.0 · 1P 100VA	1.0 · 1P 200VA	1.0 · 1P 50~200VA		
	IEC, BS	1.0 15VA	3.0 50VA	1.0 50VA	1.0 75VA	1.0 200VA	1.0 50~200VA		
	ANSI	1.2W	—	1.2X	1.2X	1.2Y	1.2WXYZ		
Outlines and dimensions (mm)	Reference figure								
	A	125.5		155			135		
	B	112		195			176		
	C	102		173			208		
	kg	3.5		8.5			9.5		




Earthed voltage transformers

						
Circuit voltage		UP to 0.44kV	UP to 6.6kV	11kV	22kV	33kV
Type		EV-LX	EF-OXFC	EV-1X	EV-2X	EV-3X
Rating voltage (V)		$\frac{440}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$ $\frac{220}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	$\frac{3300}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$ $\frac{6600}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{190}{3}$	$\frac{11000}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{110}{3}$	$\frac{22000}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{110}{3}$	$\frac{33000}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{110}{3}$
Class burden	JEC	1P/3G 100/100VA	1P/3G	100/100VA,	200/200VA	
	IEC, BS	1.0/3P 100/100VA	1.0/3P	100/100VA,	200/200VA	
	ANSI	—	—	—	—	
Outlines and dimensions (mm)	Reference figure					
	A	105	160	375	375	375
	B	275	210	305	335	335
	C	135	250	460	580	595
	kg	11	18	57	64	80

Zero phase current transformers




					
Circuit voltage		—			
Type		BZ-60A	BZ-90A	BZ-110A	BZ-170A
Rating primary current (A)		300	600	1000	1500
Zero phase current ratio		200/1.5mA			
Window diameter (mm)		60	90	110	170
Class burden	JEC	L 10Ω			
	IEC, BS	—			
	ANSI	—			
Outlines and dimensions (mm)	Reference figure				
	A	155	195	215	285
	B	70	70	100	125
	C	163	197	218	288
	kg	5	7	10	20

ELECTRIC INDICATORS

		Square indicators (rectangular type)											
													
Series		Y-206N				Y-208N				Y-210N			
Size (W x H) (mm)		64 x 60				85 x 75				100 x 85			
Direct current ammeters	Type	YM-206NDA				YM-208NDA				YM-210NDA			
	Accuracy class (%)	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5
	Rating	DC60mV				DC60mV				DC60mV			
Direct current voltmeters	Type	YM-206NDV				YM-208NDV				YM-210NDV			
	Accuracy class (%)	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5
	Rating	(DC1mA)				(DC1mA)				(DC1mA)			
Alternating current ammeters	Type	YS-206NAA				YS-208NAA				YS-210NAA			
	Accuracy class (%)	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5
	Rating	AC5A				AC5A				AC5A			
Alternating current voltmeters	Type	YS-206NAV				YS-208NAV				YS-210NAV			
	Accuracy class (%)	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5	JIS 2.5	IEC 2.5	ANSI 2.0	BS 2.5
	Rating	AC150V				AC150V				AC150V			
Wattmeters (3 phase 3W)	Type	YP-206NW (with T-150 type rectifier)				YP-208NW (with T-150 type rectifier)				YP-210NW (with T-150 type rectifier)			
	Accuracy class (%)	JIS 2.5	IEC 2.5	ANSI —	BS —	JIS 2.5	IEC 2.5	ANSI —	BS —	JIS 2.5	IEC 2.5	ANSI —	BS —
	Rating	AC110V, 5A, 1000W				AC110V, 5A, 1000W				AC110V, 5A, 1000W			
Varmeters (3 phase 3W)	Type	YP-206NVAR (with T-150 type rectifier)				YP-208NVAR (with T-150 type rectifier)				YP-210NVAR (with T-150 type rectifier)			
	Accuracy class (%)	JIS 2.5	IEC 2.5	ANSI —	BS —	JIS 2.5	IEC 2.5	ANSI —	BS —	JIS 2.5	IEC 2.5	ANSI —	BS —
	Rating	AC110V, 5A, 1000VAR				AC110V, 5A, 1000VAR				AC110V, 5A, 1000VAR			
Power-factor meters (3 phase 3W, unbalance)	Type	YP-206NPFU (with T-150 type rectifier)				YP-208NPFU (with T-150 type rectifier)				YP-210NPFU (with T-150 type rectifier)			
	Accuracy class (%)	JIS 5.0	IEC 5.0	ANSI —	BS —	JIS 5.0	IEC 5.0	ANSI —	BS —	JIS 5.0	IEC 5.0	ANSI —	BS —
	Rating	AC110V, 5A				AC110V, 5A				AC110V, 5A			
Frequency meter	Type	YP-206NF				YP-208NF				YP-210NF			
	Accuracy class (%)	JIS 1.0	IEC 1.0	ANSI —	BS —	JIS 1.0	IEC 1.0	ANSI —	BS —	JIS 1.0	IEC 1.0	ANSI —	BS —
	Rating	AC110V				AC110V				AC110V			
Receiving indicator	Type	YM-206NRI				YM-208NRI				YM-210NRI			
	Accuracy class (%)	JIS 2.5	IEC 2.5	ANSI —	BS —	JIS 2.5	IEC 2.5	ANSI —	BS —	JIS 2.5	IEC 2.5	ANSI —	BS —
	Rating	DC1mA				DC1mA				DC1mA			





1. JIS: Electrical Indicating Instruments JIS C 1102-1997. Japanese' Industrial Standard.
2. IEC: Direct acting indicating electrical measuring instruments and their accessories. Pub 51-1984. International Electrotechnical Commission, IEC standard.

Square indicators (square type)











											
Y-8N				Y-10N				Y-12N			
82 x 82				102 x 102				122 x 122			
YM-8NDA				YM-10NDA				YM-12NDA			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
2.5	2.5	2.0	2.5	2.5	2.5	2.0	2.5	1.5	1.5	1.0	1.5
DC60mV				DC60mV				DC60mV			
YM-8NDV				YM-10NDV				YM-12NDV			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
2.5	2.5	2.0	2.5	2.5	2.5	2.0	2.5	1.5	1.5	1.0	1.5
(DC1mA)				(DC1mA)				(DC1mA)			
YS-8NAA				YS-10NAA				YS-12NAA			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
2.5	2.5	2.0	2.5	2.5	2.5	2.0	2.5	1.5	1.5	1.0	1.5
AC5A				AC5A				AC5A			
YS-8NAV				YS-10NAV				YS-12NAV			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
2.5	2.5	2.0	2.5	2.5	2.5	2.0	2.5	1.5	1.5	1.0	1.5
AC150V				AC150V				AC150V			
YP-8NW (with T-150 type rectifier)				YP-10NW (with T-150 type rectifier)				YP-12NW			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
2.5	2.5	—	—	2.5	2.5	—	—	1.5	1.5	1.0	1.5
AC110V, 5A, 1000W				AC110V, 5A, 1000W				AC110V, 5A, 1000W			
YP-8NVAR (with T-150 type rectifier)				YP-10NVAR (with T-150 type rectifier)				YP-12NVAR			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
2.5	2.5	—	—	2.5	2.5	—	—	1.5	1.5	1.0	1.5
AC110V, 5A, 1000VAR				AC110V, 5A, 1000VAR				AC110V, 5A, 1000VAR			
YP-8NPFU (with T-150 type rectifier)				YP-10NPFU (with T-150 type rectifier)				YP-12NPFU			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
5.0	5.0	—	—	5.0	5.0	—	—	5.0	5.0	2.0	5.0
AC110V, 5A				AC110V, 5A				AC110V, 5A			
YP-8NF				YP-10NF				YP-12NF			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
1.0	1.0	—	—	1.0	1.0	—	—	0.5	0.5	0.5	0.5
AC110V				AC110V				AC110V			
YM-8NRI				YM-10NRI				YM-12NRI			
JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS
2.5	2.5	—	—	2.5	2.5	—	—	1.5	1.5	1.0	1.5
DC1mA				DC1mA				DC1mA			

3. ANSI: American National Standard, requirements for electrical analog indicating instruments ANSI C39.1-1981.
 4. BS: British Standards Institution, specification for Direct acting indicating electrical measuring instruments and their accessories BS89:1977.


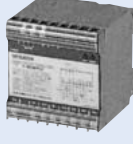
ELECTRIC INDICATORS

		Wide angle indicators								Meter relay							
																	
Series		L-80N				L-110N				Y-210MRN				L-11MRN			
Size (W x H) (mm)		80 x 80				110 x 110				100 x 83				110 x 110			
Direct current ammeters	Type	LM-80NDA				LM-110NDA				YM-210MRNDA				LM-11MRNDA			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	DC60mV				DC60mV				DC60mV				DC60mV			
Direct current voltmeters	Type	LM-80NDV				LM-110NDV				YM-210MRNDV				LM-11MRNDV			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	(DC1mA)				(DC1mA)				(DC1mA)				(DC1mA)			
Alternating current ammeters	Type	LS-80NAA				LS-110NAA				YR-210MRNAA				LR-11MRNAA			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	AC5A				AC5A				AC5A				AC5A			
Alternating current voltmeters	Type	LS-80NAV				LS-110NAV				YR-210MRNAV				LR-11MRNAV			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	AC150V				AC150V				AC150V				AC150V			
Wattmeters (3 phase 3W)	Type	LP-80NW (with T-150 type rectifier)				LP-110NW				YM-210MRNW (with T-150 type rectifier)				LM-11MRNW (with T-150 type rectifier)			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	AC110V, 5A, 1000W				AC110V, 5A, 1000W				AC110V, 5A, 1000W				AC110V, 5A, 1000W			
Varmeters (3 phase 3W)	Type	LP-80NVAR (with T-150 type rectifier)				LP-110NVAR				YM-210MRNVAR (with T-150 type rectifier)				LM-11MRNVAR (with T-150 type rectifier)			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	AC110V, 5A, 1000VAR				AC110V, 5A, 1000VAR				AC110V, 5A, 1000VAR				AC110V, 5A, 1000VAR			
Power-factor meters (3 phase 3W, unbalance)	Type	LP-80NPFU (with T-150 type rectifier)				LP-110NPFU				YM-210MRNPFU (with T-150 type rectifier)				LM-11MRNPFU (with T-150 type rectifier)			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	AC110V, 5A				AC110V, 5A				AC110V, 5A				AC110V, 5A			
Frequency meter	Type	LP-80NF				LP-110NF				YM-210MRNF (with T-100 type rectifier)				LM-11MRNF (with T-100 type rectifier)			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	AC110V				AC110V				AC110V				AC110V			
Receiving indicator	Type	LM-80NRI				LM-110NRI				YM-210MRNRI				LM-11MRNRI			
	Accuracy class (%)	JIS	IEC	ANSI	BS	JIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS	JEMIS	IEC	ANSI	BS
	Rating	DC1mA				DC1mA				DC1mA				DC1mA			



1. JEMIS: Meter-Relay JEMIS 019 - 1980. Japan Electric Measuring Instruments Manufacturers' association.

Special indicators							
Indicator with changeover switches		Alternating current ammeter			Alternating current voltmeter		
Size (W x H) (mm)		82 x 99	102 x 119	122 x 139	82 x 99	102 x 119	122 x 139
Type		YR-8UNAA	YR-10UNAA	YR-12UNAA	YR-8UNAV	YR-10UNAV	YR-12UNAV
Accuracy class (%)		2.5	2.5	1.5	2.5	2.5	1.5
Rating		AC5A	AC5A	AC5A	AC150V	AC150V	AC150V
							
Bimetallic demand indicator		Alternating current ammeter			Alternating current voltmeter		
Size (W x H) (mm)		80 x 80		110 x 110	80 x 80		110 x 110
Type		LB-8ZNAA		LB-11ZNAA	LB-8ZNAV		LB-11ZNAV
Accuracy class (%)		2.5		1.5	2.5		1.5
Rating	Response time (min)	2, 15		2, 5, 10, 15	2		2
	Input	AC5A		AC5A	AC150V		AC150V
							
Indicator with maximum pointer		Alternating current ammeter			Alternating current voltmeter		
Size (W x H) (mm)		110 x 110			110 x 110		
Type		LM-11ZNAA (with T-150 type rectifier)			LM-11ZNAV (with T-150 type rectifier)		
Accuracy class (%)		indicating pointer 1.5 max. idle pointer 2.0			indicating pointer 1.5 max. idle pointer 2.0		
Rating (Response & Input)		0.1 second, AC5A			0.1 second, AC5A		
							
Indicator with minimum and maximum pointers		Alternating current ammeter			Alternating current voltmeter		
Size (W x H) (mm)		110 x 110			110 x 110		
Type		LM-11YNAA (with T-150 type rectifier)			LM-11YNAV (with T-150 type rectifier)		
Accuracy class (%)		indicating pointer 1.5 max. idle pointer 2.0			indicating pointer 1.5 max. idle pointer 2.0		
Rating (Response & Input)		0.1 second, AC5A			0.1 second, AC150V		
							

Electrical measuring transducers

Size WxHxD (mm)	T-51 series			T-101 series					
		 50 x 100 x 104			 100 x 100 x 104				
Measured quantity	Current		Current (saturated power output)	Voltage		Frequency		Active power	
Type	T-51HAA	T-101SAA	T-51HSS	T-51HAV	T-101SAV	T-51HF	T-101SF	T-101HW	T-101SW
Class	0.5	0.25	0.5	0.5	0.25	1.0	0.5	0.5	0.25
JIS IEC BS									
Input (AC)	5A/1A		5A/1A	150V/300V		45~55Hz 110V 55~65Hz 110V		1000W 110V 5A 3P3W	
Output & Load	4~20mA ; 0~600Ω / 1mA ; 0 ~ 5kΩ / 5V ; 5kΩ~∞ / 10V ; 10kΩ~∞								
Output ripple	P-P1% or less								
Auxiliary supply	AC110V $\begin{matrix} +10 \\ -15 \end{matrix}$ % 50 - 60Hz								
Measured quantity	Reactive power		Power factor		Phase angle		Voltage phase angle		
Type	T-101HVAR	T-101SVAR	T-101HPF (U)	T-101SPF (U)	T-101HPA T-101HPA (U)	T-101SPA (U)	T-101SY		
Class	0.5	0.25	3.0	2.0	2.0	1.0	1.0		
JIS IEC BS									
Input (AC)	LEAD 1000~0~LAG1000var 110V 5A 3P3W		LEAD 0.5~1~LAG0.5 110V 5A 50/60Hz 3P3W		LEAD 60°~0~LAG60° 110V 5A 50/60Hz 3P3W		LEAD60°~0~LAG60° $\frac{110}{\sqrt{3}}$ / 110V		
Output & Load	±1mA ; 0~5kΩ / ±5V ; 5kΩ~∞ / ±10V ; 10kΩ~∞ 4~20mA ; 0~600Ω / 1mA ; 0 ~ 5kΩ / 5V ; 5kΩ~∞ / 10V ; 10kΩ~∞								
Output ripple	P-P1% or less								
Auxiliary supply	AC110V $\begin{matrix} +10 \\ -15 \end{matrix}$ % 50 - 60Hz								

Instrumentation transducers

Size WxHxD (mm)	T-51 series  50 x 100 x 104		T-101 series  100 x 100 x 104			
Measured quantity	DC level	Isolator	Limiter	Adder	Temperature (Resistance bulb)	Temperature (Thermocouple)
Type	T-51DL T-51DR	T-101IS T-101ISQ	T-51LM	T-101AD	T-101TPZ T-51TP	T-101TCZ T-101TC
Class	0.25	0.25	0.25	0.5	0.5	0.5
Input	5V/10V ; Input resistance 100kΩ or more 150V ; Input resistance 300kΩ or more 0~1mA/4~20mA ; Voltage depression 200mV or less		5V/10V ; Input resistance 100kΩ or more 1mA/4~20mA ; Voltage depression 200mV or less		Resistance bulb Pt100Ω at 0°C Cu100Ω at 25°C	Thermocouple K, T, J E, R, S
Output & Load	0~5V ; 500Ω~∞ 4~20mA ; 0~600Ω	4~20mA ; 0~600Ω / 1mA ; 0 ~ 5kΩ / 5V ; 5kΩ~∞ / 10V ; 10kΩ~∞				
Output ripple	P-P1% or less					
Auxiliary supply	AC110V $\begin{matrix} +10 \\ -15 \end{matrix}$ % 50 - 60Hz					
Measured quantity	Potential meter	Primary delay	Demand	DC/pulse	Pulse/DC	
Type	T-51RI	T-51DS	T-101DM T-101DMZ	T-101IF	T-51FI	
Class	0.25	0.5	0.5	0.5	0.5	
Input	1kΩ / 10kΩ	5V/10V ; Input resistance 100kΩ or more 1mA/4~20mA ; Voltage depression 200mV or less			ON - OFF pulse 50Hz~10kHz	
Output & Load	4~20mA ; 0~600Ω / 1mA ; 0~5kΩ 5V ; 5kΩ~∞ / 10V ; 10kΩ~∞			Transistor 10~9990P/h	5V ; 5kΩ~∞ 4~20mA ; 0~600Ω	
Output ripple	P-P 1% or less			—	P-P 1% or less	
Auxiliary supply	AC110V $\begin{matrix} +10 \\ -15 \end{matrix}$ % 50 - 60Hz					

WATTHOUR METERS
INSTRUMENT TRANSFORMERS
ELECTRIC INDICATORS
TRANSDUCERS

Safety Tips : Be sure to read the instruction manual fully before using this product.

 **mitsubishi electric corporation**
FACTORY AUTOMATION SYSTEM: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN