

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	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		

# ● TRANSDUCERS ●

## Electrical measuring transducers

Size WxHxD (mm)	T-51 series  50 x 100 x 104	T-101 series  100 x 100 x 104		T-48 series  48 x 170 x 281																
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											
	T-48HAA	T-48SAA	T-48HSS	T-48HAV	T-48SAV	T-48HF	T-48SF	T-48HW	T-48SW											
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 <sup>+10</sup> <sub>-15</sub> % 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													
	T-48HVAR	T-48SVAR	T-48HPF (U)	T-48SPF (U)	T-48HPA T-48HPA (U)	T-48SPA (U)	T-48SY													
Class	0.5	0.25	3.0	2.0	2.0	1.0	1.0	LEAD60°~0~ LAG60° $\frac{110}{\sqrt{3}}/110V$	LEAD60°~0~ LAG60° $\frac{110}{\sqrt{3}}/110V$											
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 <sup>+10</sup> <sub>-15</sub> % 50 - 60Hz																			

## Instrumentation transducers

Size WxHxD (mm)	T-51 series		T-101 series		T-48 series	
		50 x 100 x 104		100 x 100 x 104		48 x 170 x 281
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
	T-48DL T-48DR	T-48IS T-48ISQ	T-48LM	T-48AD	T-48TPZ T-48TP	T-48TCZ T-48TC
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 Cu10Ω 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-P 1% or less				
Auxiliary supply		AC110V $\frac{+10}{-15}$ % 50 - 60Hz				
Measured quantity	Potential meter	Primary delay	Demand	Alarm setter	DC/pulse	Pulse/DC
Type	T-51RI	T-51DS	T-101DM T-101DMZ	T-51MRH T-51MRL	T-101IF	T-51FI
	T-48RI	T-48DS	T-48DM T-48DMZ	T-48MRH T-48MRL	T-48IF	T-48FI
Class	0.25	0.5	0.5	1.0	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~∞			1a contact relay (non voltage)	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 $\frac{+10}{-15}$ % 50 - 60Hz					

WATTHOUR METERS  
INSTRUMENT TRANSFORMERS  
ELECTRIC INDICATORS  
TRANSDUCERS

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



**MITSUBISHI ELECTRIC CORPORATION**

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