

**§ Wide Angle METER § L Series**  
**WATT METER / VAR METER (TRANSDUCER TYPE) WL WV L**

**1. WATT METER**

Application	Type	Rating	Approx. VA Consumption		Attachment (transducer)	
			Voltage side	Current side	80C	65C
Single phase	<b>WL-110NC-12</b> <b>80C-12</b> <b>65C-12</b>	110V, 5A(1A) 220V, 5A(1A)	1.7VA 3.7VA	0.5VA 0.5VA	WT-53MC-12	WT-62M-12
Single phase 3-wire	<b>WL-110NC-13</b> <b>80C-13</b> <b>65C-13</b>	110V, 5A(1A)	1.7VA each phase	0.5VA each phase	WT-53MC-13	WT-83M-13
3-phase 3-wire	<b>WL-110NC-33</b> <b>80C-33</b> <b>65C-33</b>	110V, 5A(1A) 220V, 5A(1A)	1.7VA each phase 3.7VA each phase	0.5VA each phase 0.5VA each phase	WT-53MC-33	WT-83M-33
3-phase 4-wire	<b>WL-110NC-34</b> <b>80C-34</b> <b>65C-34</b>	110/√3V, 5A(1A) 220/√3V, 5A(1A)	0.8VA each phase 2.5VA each phase	0.5VA each phase 0.5VA each phase	WT-53MC-34	WT-83M-34

- ▶ 3-phase 4-wire is voltage balancing.
- ▶ In the case of rating exceeding those above, use an 110V, 5A (1A) meter together with a CT or a VT respectively.
- ▶ Applicable voltage range: 90~130V for 110V; 180~260V for 220V.

**2. VAR METER**

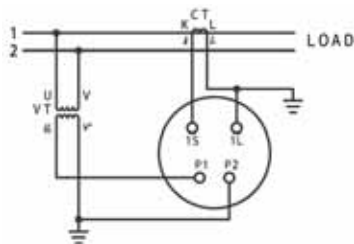
Application	Type	Rating	Approx. VA Consumption		Attachment (transducer)	
			Voltage side	Current side	80C	65C
Single phase	<b>WVL-110NC-12</b> <b>80C-12</b> <b>65C-12</b>	110V,5A(1A) 220V,5A(1A)	1.7VA 1.4VA	0.5VA 0.5VA	WVT-53MC-12	WVT-62M-12
3-phase 3-wire	<b>WVL-110NC-33</b> <b>80C-33</b> <b>65C-33</b>	110V,5A(1A) 220V,5A(1A)	1.7VA each phase 3.7VA each phase	0.5VA each phase 0.5VA each phase	WVT-53MC-33	WVT-83M-33
3-phase 4-wire	<b>WVL-110NC-34</b> <b>80C-34</b> <b>65C-34</b>	110V,5A(1A) 220V,5A(1A)	1.7VA each phase 3.7VA each phase	0.5VA each phase 0.5VA each phase	WVT-53MC-34	WVT-83M-34

- ▶ 3-phase 4-wire is voltage balancing.
- ▶ Specify please the frequency either 50Hz or 60Hz for a meter for single phase circuit.
- ▶ The scale of var meter is Lead var~0~Lag var.
- ▶ In the case of rating exceeding those above, use an 110V, 5A (1A) meter together with a CT or a VT respectively.
- ▶ Applicable voltage range: 90~130V for 110V; 180~260V for 220V.
- ▶ 3-phase 3-wire and 3-phase 4-wire are voltage balanced, use in positive phase sequence, please.

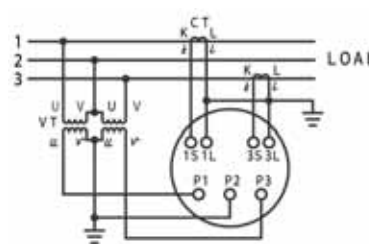
**CONNECTION DIAGRAM**

**L-110NC**

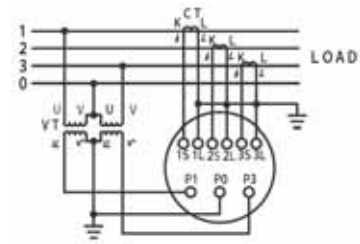
Single Phase Watt Meter / Var Meter



Single Phase 3-Wire & 3-phase 3-wire Watt Meter/ Var Meter



3-phase 4-wire Watt Meter

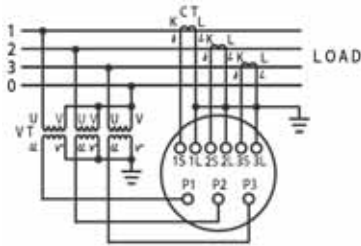


# § Wide Angle *METER* § L Series

WATT METER / VAR METER (TRANSDUCER TYPE) WL WV L

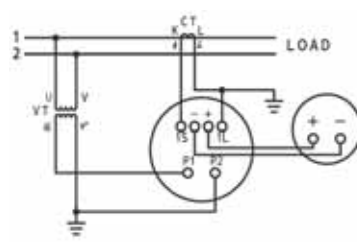
## L-110NC

3-phase 4-wire Var Meter

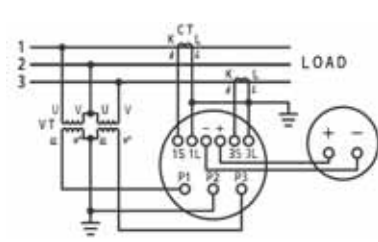


## L-80C

Single Phase Watt Meter/ Var Meter with External WT (WVT)-53MC-12

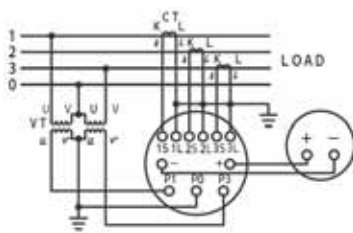


Single Phase 3-wire & 3-phase 3-wire Watt Meter/ Var Meter with External WT (WVT)-53MC-33

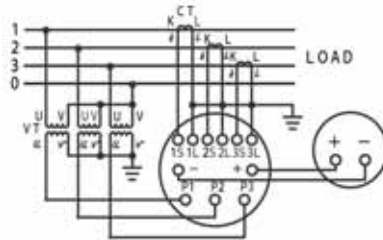


## L-80C

3-phase 4-wire Watt Meter with External WT-53MC-34

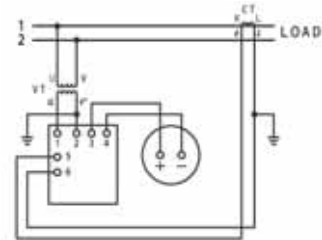


3-phase 4-wire Var Meter with External WVT-53MC-34



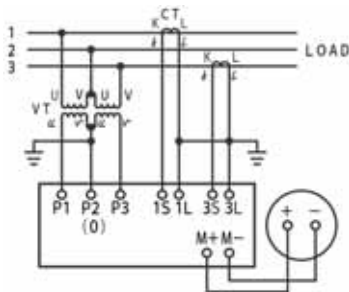
## L-65C

Single Phase Watt Meter/ Var Meter with External WT (WVT)-62M-12

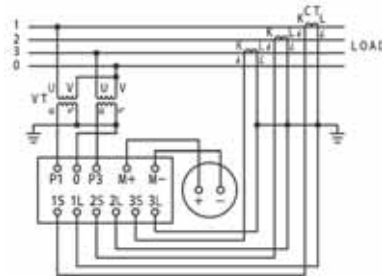


## L-65C

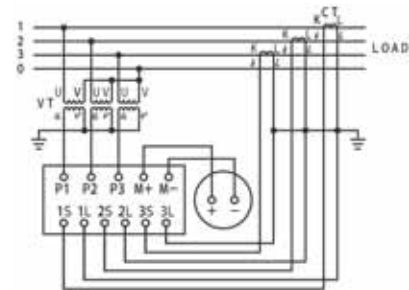
Single Phase 3-Wire Watt Meter/Var Meter, 3-phase Watt Meter/Var Meter with External WT (WVT)-83M-33



3-phase 4-wire Watt Meter with External WT-53MC-34

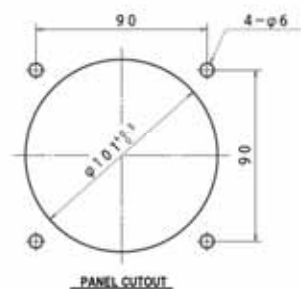
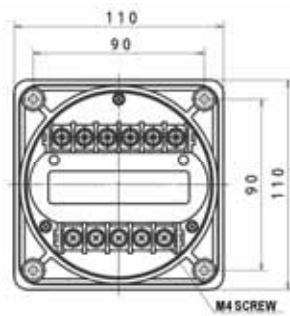
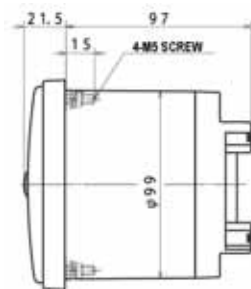


3-phase 4-wire Var Meter with EXTERNAL WVT-83M-34



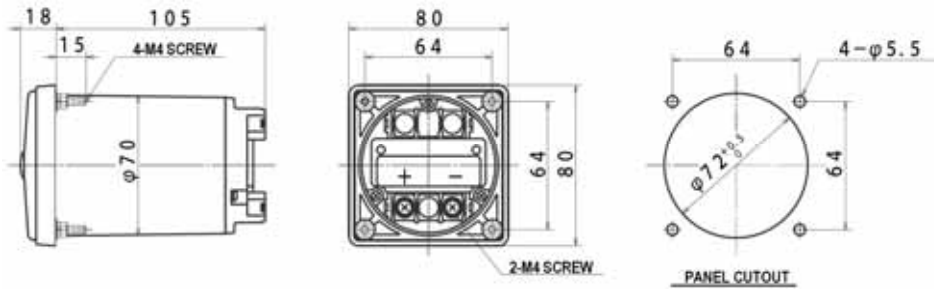
## DIMENSIONS

### L-110NC

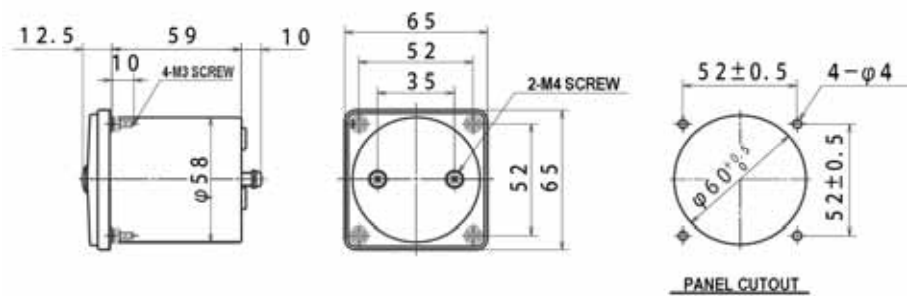


**§ Wide Angle *METER* § L Series**  
 WATT METER / VAR METER (TRANSDUCER TYPE) **WL WVL**

**L-80C**



**L-65C**



**MANUFACTURABLE CHARACTERISTIC RANGE OF MAXIMUM SCALE VALUE**

The characteristic ranges of maximum scale value listed in the table can be manufactured. However, in the case of a meter with external VT / CT, the characteristic ranges of maximum scale value can be calculated with the following formula.

$$\text{Characteristic range of maximum scale value} = \frac{\text{Maximum Scale Value}}{(\text{VT ratio} \times \text{CT ratio})}$$

Circuit	Rating			Manufacturable Characteristic Range	
				Watt Meter	Var Meter
Single phase	110V, 5A(1A)			350~600W (70-120W)	350~600var (70-120var)
	220V, 5A(1A)			700~1200W (140-240W)	700~1200var (140-240var)
Single phase 3-wire	110V, 5A(1A)			600~1200W (120-240W)	-
3-phase 3-wire	110V, 5A(1A)			600~1200W (120-240W)	600~1200var (120-240var)
	220V, 5A(1A)			1200~2400W (240-480W)	1200~2400var (240-480var)
3-phase 4-wire	Line	Phase	Current	-	-
	110V	110/√3V	5A(1A)	600~1200W (120-240W)	600~1200var (120-240var)
	220V	220/√3V	5A(1A)	1200~2400W (240-480W)	1200~2400var (240-480var)

## § Wide Angle *METER* § L Series

WATT METER / VAR METER (TRANSDUCER TYPE) **WL WV**

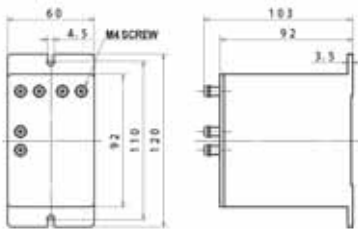
### MAXIMUM SCALE VALUE OF 3 PHASE WATT METER

This table is the standard of 3-phase watt meter. 3-phase 4-wire and single-phase 3-wire watt meter, var meter are pursuant to this standard, too. Single phase watt meter values equal the values in the table multiplying 1/2.

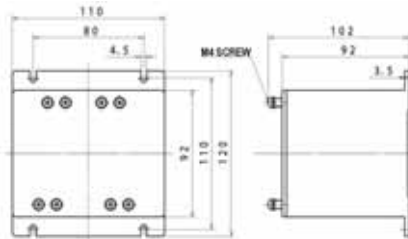
Line voltage CT ratio	6600V (VT6600/110V)			3300V (VT3300/110V)			440V (VT440/110V)			220V			110V		
	kW 60	kW 50	kW 40	kW 30	kW 25	kW 20	kW 4	kW 5	kW 3	kW 2	kW 1.5	kW 1.2	kW 1	kW 0.8	kW 0.6
5/5A															
7.5/5A	90	75	60	45	40	30	6	5	4	3	2.5	2	1.5	1.2	1
10/5A	120	100	80	60	50	40	8	7.0	6	4	3	2.5	2	1.5	1.2
15/5A	200	150	120	100	75	60	12	10	8	6	5	4	3	2.5	2
20/5A	240	200	150	120	100	80	15	-	12	8	6	5	4	3	2.5
25/5A	300	250	200	150	120	100	20	-	15	10	8	7.5	5	4	3
30/5A	400	300	240	200	150	120	24	-	20	12	10	8	6	5	4
40/5A	480	400	300	240	200	150	30	-	24	15	12	10	8	7.5	5
50/5A	600	500	400	300	250	200	40	-	30	20	15	12	10	8	6
60/5A	750	600	480	400	300	240	48	-	40	24	-	20	12	10	8
75/5A	900	750	600	450	400	300	60	50	40	30	25	20	15	12	10
100/5A	1200	1000	800	600	500	400	80	75	60	40	30	25	20	15	12
150/5A	2000	1500	1200	1000	750	600	120	100	80	60	50	40	30	25	20
200/5A	2400	2000	1500	1200	1000	800	150	-	120	80	60	50	40	30	25
250/5A	3000	2500	2000	1500	1200	1000	200	-	150	100	80	75	50	40	30
300/5A	4000	3000	2400	2000	1500	1200	240	-	200	120	100	80	60	50	40
350/5A	4000	-	3000	2000	-	1500	300	250	200	150	120	100	75	60	50
400/5A	4800	4000	3000	2400	2000	1500	300	-	250	150	120	100	80	75	50
450/5A	6000	5000	4000	3000	2500	2000	400	300	250	200	150	120	100	75	60
500/5A	6000	5000	4000	3000	2500	2000	400	-	300	200	150	120	100	75	60
600/5A	7500	6000	4800	4000	3000	2400	500	-	400	240	-	200	120	100	70
750/5A	9000	7500	6000	4500	4000	3000	650	500	400	300	250	200	150	120	100
800/5A	10MW	8000	7500	5000	-	4000	700	600	500	300	250	200	150	120	100
1000/5A	12MW	10MW	8000	6000	5000	4000	800	750	600	400	300	250	200	150	120
1200/5A	15MW	12MW	10MW	7500	6000	5000	1000	800	750	500	400	300	250	200	150
1500/5A	20MW	15MW	12MW	10MW	7500	6000	1200	1000	800	600	500	400	300	250	200

### DIMENSIONS OF ATTACHMENT TRANSDUCER

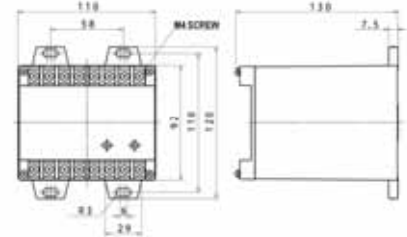
T-62M -



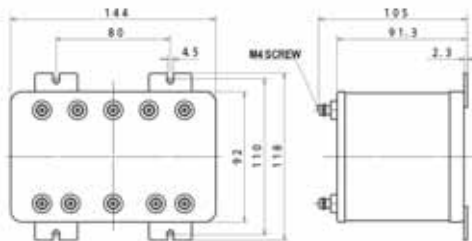
PT-63M-33



T-83M-



T-64M-



T-53MC-

