

Watt-hour and Var-hour Meters

With pulse initiator

Solid-state type

Watt-hour and var-hour meters with pulse initiator

■ Description

These watt-hour and var-hour meters are small in size –72mm wide, 144mm high and 99.5mm deep.

They have easy to read display and operation status indicator using a solid-state circuit.

■ Features

Very compact

- Thin type of 89mm deep (without the front panel)

Easy-to-read display

- Watt-hour/var-hour count shown in large LCD figures
- Operation status indicators for counting, stop, reverse current, and operating

- Bar-type load indicator

Wide variety of output pulses

- Four types of signal outputs available
- One of four output pulse multiplying factors can be selected.
- The meter front has an output pulse terminal for calibration.

Easy parameter setting

- Preset operation can be displayed on the LCD for checking.
- Parameters can be preset even when power to the meter is off.
- Parameters can be preset for all combined transformation ratios.



F3C-S22VR

■ Ordering information

Specify the following:

- Type number or ordering code
- Rated voltage, max. current and frequency
- VT and CT ratio

■ Specifications

Type	Normal watt-hour meter				Precision watt-hour meter		Var-hour meter		
	F1C-S22VR	F2C-S22VR	F3C-S22VR	F4A-S22VR	FP3C-S22VR	FP4C-S22VR	FV3C-S22VR	FV4A-S22VR	
Phase and wiring	1φ2W	1φ3W	3φ3W	3φ4W	3φ3W	3φ4W	3φ3W	3φ4W	
Mounting	Flush mounting rear connection								
Rated voltage (V)	■ □/110: 1 100: 2 200: 3 240: 5	100	■ □/110: 1 200: 3	■ □/63.5: 1 □/110: 2 100: 3 240: 5	110	■ □/63.5: 1 □/110: 2 240: 5	110	■ □/63.5: 1 □/110: 2 240: 5	
Rated current (A)	□/5		□/5 or □/1						
Rated frequency (Hz)	50 or 60								
Multiplying factor	Integral power of 10 composite transformation ratio or 1/10 of composite transformation ratio								
Indication	Measured value: 6 digits (5 integer digits) 00000.0 (LCD display) Operation: Indicate loading state every 10% within the range 0 to 120% with bar indicator (LCD) Measuring state: Indicate measuring state with blinking speed (LCD display) Operating state: Indicate operation state (Operation, No-load, Reverse current, Power ON: LCD display)								
Burden	Voltage circuit	P ₁ -P ₂ : 1.0VA Other : 0.1VA			P ₁ -P ₀ : 3.0VA Other : 0.1VA		P ₁ -P ₂ : 1.0VA Other : 0.1VA		P ₁ -P ₀ : 10VA Other : 0.1VA
	Current circuit	Each phase : 0.1VA							
Dimensions (mm)	72(W) × 144(H) × 99.5(D)								
Mass (g)	850		870		850		870		

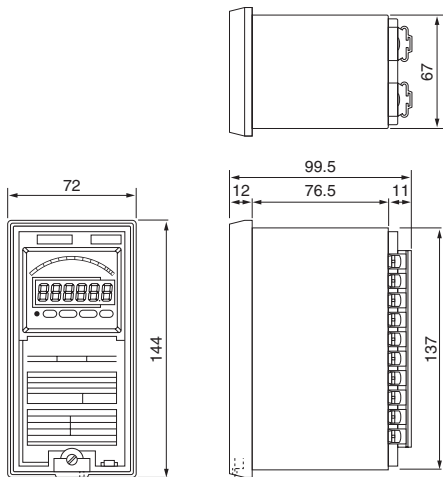
Note: □ : VT primary voltage or CT primary current

■ Pulse output

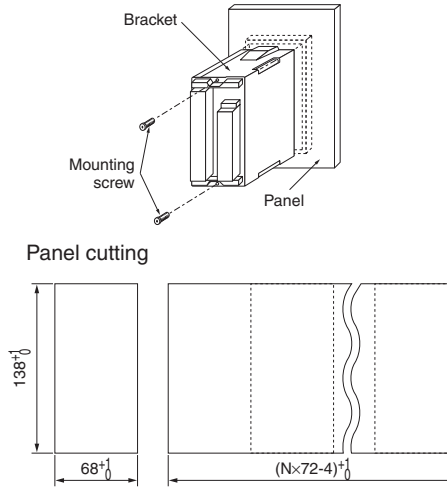
Type	Output	Contact capacity	Pulse width	Pulse factor	Output pulse unit
Output pulse 1	Non-voltage 1NO contact	125V AC 0.1A or less 125V DC 0.1A or less	200 ±50ms	Inherent pulse, or 10 ⁿ pulse	Composite transformation ratio Inherent pulse constant
Output pulse 2	Open collector (Transistor)	35V DC 50mA or less	200 ±50ms or 1050 ±50ms	10 ⁿ pulse	Multiplying factor ×10, ×1, ×0.1, ×0.01
Output pulse 3	Open collector (Transistor)	35V DC 50mA or less	15 ±2ms	Inherent pulse	Composite transformation ratio Inherent pulse constant
For test	Open collector (Transistor)	35V DC 50mA or less	32μs	Just same as the factor of the meters	Composite transformation ratio Inherent pulse constant ×3600

Notes: 10ⁿ of output 1 and pulse width of output pulse 2 are changed to 30 ±10ms by setting contents of composite transformation ratio and output pulse unit.

■ Dimensions, mm



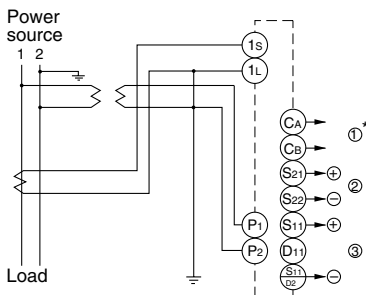
■ Mounting



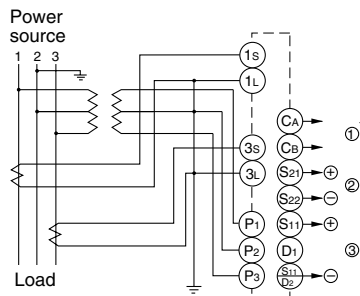
■ Wiring diagrams

● VT/CT operated meters

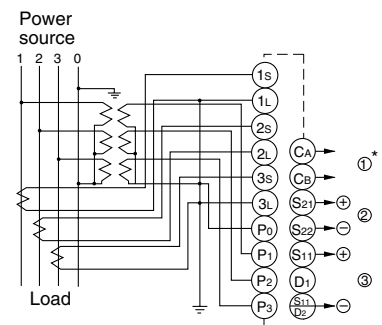
1φ 2W



1φ 3W / 3φ 3W

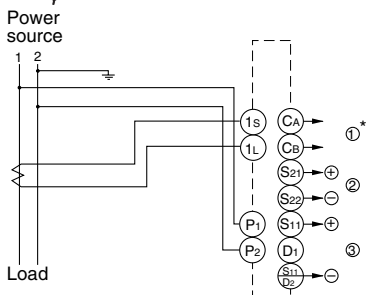


3φ 4W

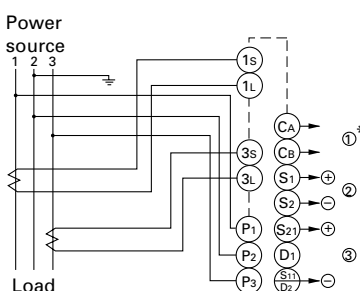


● CT operated meters

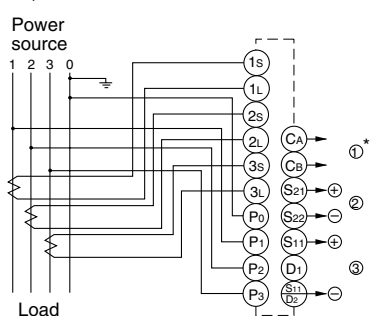
1φ 2W



1φ 3W / 3φ 3W



3φ 4W



- Notes: * ① Non-voltage "NO" contact output
② Open collector output: Integral power of 10 (primary conversion)
③ Open collector output: Inherent (secondary conversion)

■ Circuits of pulse output initiating unit

