

CF SERIES

CF-5 **CF-6** **CF-8**
CF-10 **CF-12N** **CF-12NB**

Voltage Test: AC 2210V for 5 seconds
 (Note) AC 3320v for 5 seconds when using the insulating rubber
 Insulation Test: More than 10MΩ (at 500V mega)

Features

1. Meter has a bright scale face due to the wide cover lighting surface.
2. Accuracy of readability has increased due to the long scale length compared to the meter's size.
3. A variety of sizes are available so you can choose a meter that best suits the size of your switchboard.

Cover eliminates static electricity.


- Equipped with special anti-static resin.
- Maintaining an **anti-static finish is not necessary.**
- Static phenomena will not occur even in low humidity.

About Model Names

First Character

- Indicates the meter type as follows
- D DC ammeter or voltmeter
- S Rectifier type AC ammeter or voltmeter
- A Moving-iron type AC ammeter or voltmeter
- E Wattmeter (1P, 3W or 4W)
- R Varmeter (")
- U Power Factor Meter (1P or 3P Balanced)
- Uu Unbalanced Power Factor Meter (3P or 3P4W)
- F Frequency meter
- C Tachometer

Second and Third Character

- Indicates design shape.
- CF  90° deflection angle type rounded body recessed type (special anti-electric resin cover)

DCF-12 N □

Numbers

- | | | | |
|----|-------|------------------------|-----------|
| 5 | | Meter front dimensions | 56 × 52 |
| 6 | | " | 65 × 60 |
| 8 | | " | 87 × 80 |
| 10 | | " | 100 × 83 |
| 12 | | " | 120 × 100 |

Final Characters

- As follows:
- NIndicates an improved model.
- VResistor for Sensitivity adjustment
- NBImproved model

CF Series List

Applicable Standards: JIS C 1102-1, 2, 3, 4, 5, 9

Product Name	□CF-5			□CF-6			□CF-8			□CF-10			□CF-12N			Notes Page														
	Model Name	Operating Principles	Accuracy Class	Model Name	Operating Principles	Accuracy Class	Model Name	Operating Principles	Accuracy Class	Model Name	Operating Principles	Accuracy Class	Model Name	Operating Principles	Accuracy Class															
Direct Current	Ammeter	Permanent Magnet Moving-Coil Type	2.5	DCF-6	Permanent Magnet Moving-Coil Type	2.5	DCF-8	Permanent Magnet Moving-Coil Type	2.5	DCF-10	Permanent Magnet Moving-Coil Type	2.5	DCF-12N	Permanent Magnet Moving-Coil Type	1.5	5														
	Voltmeter															7														
	Reception Meter															5, 7														
Alternating Current	Ammeter	Rectifier Type	2.5	SCF-6	Rectifier Type	2.5	SCF-8	Rectifier Type	2.5	SCF-10	Rectifier Type	2.5	SCF-12N	Rectifier Type	2.5	9														
	Voltmeter															11														
	Ammeter															13														
	Voltmeter	15																												
	Reception Meter	Rectifier Type	2.5	SCF-6	Rectifier Type	2.5	SCF-8	Rectifier Type	2.5	SCF-10	Rectifier Type	2.5	SCF-12N	Rectifier Type	2.5	9, 11														
	1P Wattmeter															Electronic Device Type	2.5	ECF-6	Electronic Device Type	2.5	ECF-8	Electronic Device Type	2.5	ECF-10	Electronic Device Type	2.5	ECF-12NB	Electronic Device Type	1.5	17
	3P Wattmeter																													
	3P4W Wattmeter																													
	1P Varmeter	Electronic Device Type	2.5	RCF-6	Electronic Device Type	2.5	RCF-8	Electronic Device Type	2.5	RCF-10	Electronic Device Type	2.5	RCF-12NB	Electronic Device Type	1.5	17														
	3P Varmeter																													
	3P4W Varmeter																													
	1P Power Factor Meter	Electronic Device Type	5.0	UCF-6	Electronic Device Type	5.0	UCF-8	Electronic Device Type	5.0	UCF-10	Electronic Device Type	5.0	UCF-12NB	Electronic Device Type	5.0	20														
	3P Balanced Power Rate Meter																													
	3P Unbalanced Power Factor Meter																													
	3P4W Power Factor Meter																													
Frequency Meters	Electronic Device Type	1.0	FCF-6	Electronic Device Type	1.0	FCF-8	Electronic Device Type	1.0	FCF-10	Electronic Device Type	1.0	FCF-12NB	Electronic Device Type	0.5	22															
Tachometer																Rectifier Type	Intrinsic Error ±2.5%	Rectifier Type	Intrinsic Error ±2.5%	Rectifier Type	Intrinsic Error ±2.5%	Rectifier Type	Intrinsic Error ±2.5%	Rectifier Type	Intrinsic Error ±1.5%	26				

CF SERIES AC Ammeter (Moving-iron Type, R.M.S.-Response)

Model Name ACF-5 ACF-6 ACF-8 ACF-10 ACF-12_{NB}

Specifications

Measurement Range Value	Extended Scale Value			ACF-5		ACF-6		ACF-8		ACF-10		ACF-12 _{NB}		Note
	Double	Triple (Standard)	Five Times	VA Consumption	Weight	VA Consumption	Weight	VA Consumption	Weight	VA Consumption	Weight	VA Consumption	Weight	
100 mA	200 mA	300 mA	500 mA	1VA	Approx. 0.06kg	1VA	Approx. 0.08kg	1VA	Approx. 0.12kg	1VA	Approx. 0.13kg	1VA	Approx. 0.25kg	Direct Measurement
200 mA	400 mA	600 mA	1000 mA											
500 mA	1000 mA	1500 mA	2500 mA											
1 A	2 A	3 A	5 A											
5 A	10 A	15 A	25 A											
7.5 A	15 A	22.5 A	37.5 A											
10 A	20 A	30 A	50 A											
15 A	30 A	45 A	75 A											
20 A	40 A	60 A	100 A											
30 A	60 A	90 A	150 A											
50 A	100 A	150 A	250 A	Combine 5A (1A) meter with CT										
?	?	?	?											
10 kA	20 kA	30 kA	50 kA											

Note 1. The standard scale meters and extended scale meters shown below are standard specification displays. (For standard scale meters, the above measurement range is full-scale.)

Note 2. Terminal cap is not included. (Optional) Specify if required.

Note 3. ACF-5 is only compatible with current input.

Remarks

When Using CT

1. Use a **combination of CT and 5A (1A) meter** if 30A is exceeded.
2. When circuit voltage of 500V is exceeded at 30A or below, **combine CT with the meter** for insulation.

Extended Scale Meter

Use a **triple** (or double or five-times) **extended scale meter-standard meter** to measure the current flow of electric motor-class of starting current.

Usage example For a triple extended scale: ACF-12_{NB} 0-100-(300)A (CT ratio 100A/5A)

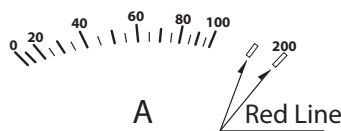
Note1) The standard scale of the extended scale meter is a triple extended scale.

- 2) In the case of extended scale meters, the 70% point on the scale length represents the upper limit (upper limit value of the effective measurement range), and the section that exceeds 70% up to 100% is the extended scale section. (**Extended scale part intrinsic error: ±10% of indicated values**)

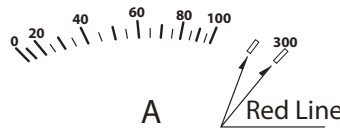
- 3) The **red color extended scale lines** are the points below for extended scale meters.

2 Times Extended	1.5 Times and 2 Times Measurement Range Value
3 Times Extended	2 " 3 "
5 Times Extended	2 " 5 "

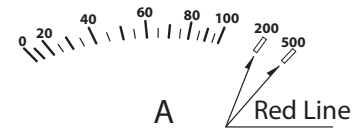
Scale Example



2 Times Extended Scale



3 Times Extended Scale



5 Times Extended Scale

Scale Calibration Conducted via sine waves.

Frequency Combine with a rectifier type meter or converter and DC meter for use when measuring AC outside of commercial frequencies.

Note Telemetering For direct feed type telemetering, you can reduce line loss if the second rated value uses a 1A CT combined with a 1A meter. (The rated value of 5A is 1/25.)
 To further reduce loss, use an AC current transducer combined with a DC meter.
 (For details on AC current transducers, see the dedicated catalog.)