96 FW…, 144sFW…

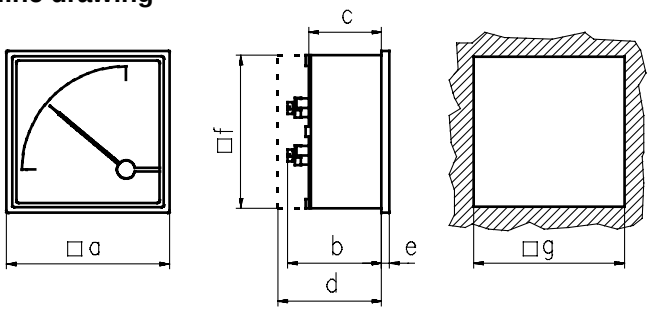
For measuring active and reactive power in single-phase or three-phase networks

Technical data:

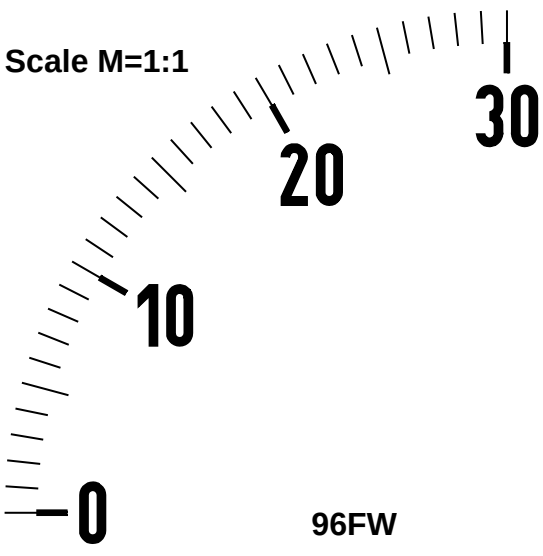
Movement: Iron-core, ferrodynamic, spring-type oil filled pivot bearing
Instrument case: steel-plate
Scale length: 85 mm (96FW…), 140 mm (144sFW…)
Upper measuring ranges: 1 - 1.2 - 1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7.5 - 8 and their decimally multiplied values
Rated voltages: 100 V, 110 V, 115 V, 230 V, 400 V, 500 V
Rated current: 1 A, or 5 A
Class of accuracy: 1.5
Frequency range: 45 ... 50 ... 60 Hz
Permanent overloading: 1.2 x rated current and 1.2 x rated voltage at $\cos\varphi=1$
Consumption: max. 3.5 VA for all types without types …FWd and …FWdm of which is max. 5,5 VA
Protection: casing IP50; adapter box IP20 and terminals IP00
Weight: between 0.9 ÷ 1,6 kg, depending on type
Fixing elements: with two screw-type fastening clips (DIN 43835 "B")

Type assortment			
Active power	**Reactive power**	**Movement**	**Network**
96 FWa **144 sFWa**	**-------**	one meas. syst.	single phase
96 FWb **144 sFWb**	**96 FWbm** **144 sFWbm**	one meas. syst.	three-phase balanced
96 FWb1 **144 sFWb1**	**-------**	one meas. syst.	three-phase balanced, four wires
96 FWc **144 sFWc**	**96 FWcm** **144 sFWcm**	two meas. syst.	three-phase unbalanced
96 FWd **96 FWd**	**96 FWdm** **96 FWm**	two meas. syst.	three-phase unbalanced, four wires

Outline drawing



Scale M=1:1



Type	dimensions in mm						
	a	**b**	**c**	**d**	**e**	**f**	**g**
96FWa, b, b1, bm	**96 x 96**	**87**	**73**	**96**	**7**	**90**	**$92^{+0.8}$**
96FWc, d, cm, dm	**96 x 96**	**120**	**106**	**129**	**7**	**90**	**$92^{+0.8}$**
144sFWa, b, b1, bm	**144 x 144**	**90**	**78**	**....**	**7**	**135**	**138^{+1}**
144sFWc, d, cm, dm	**144 x 144**	**121**	**109**	**....**	**7**	**135**	**138^{+1}**

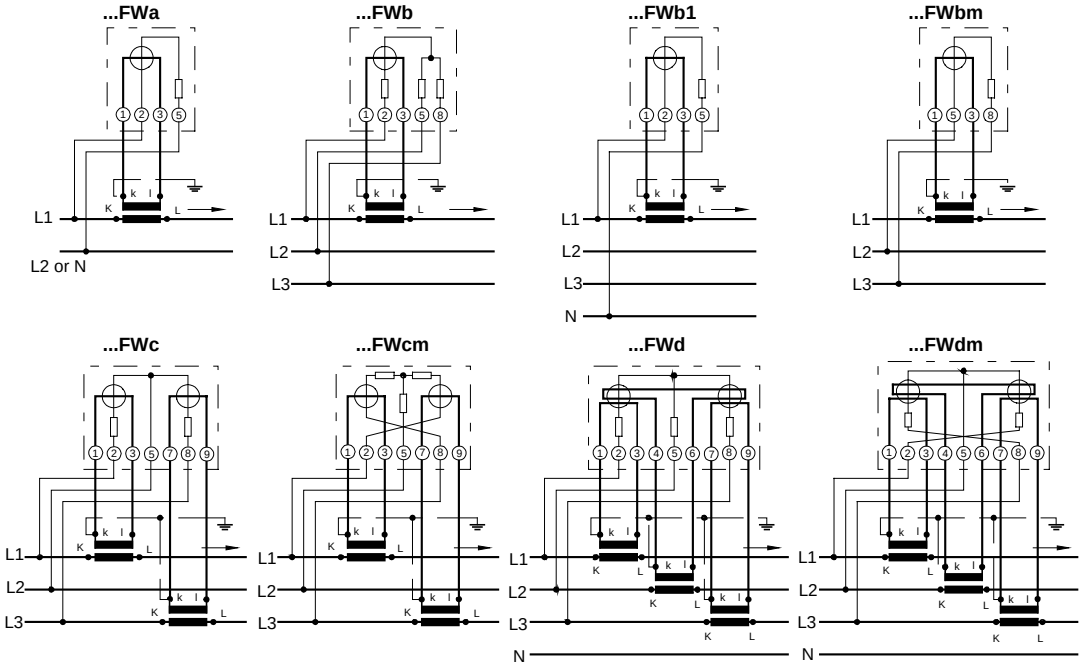
Datas to be stated in the order

1. Rated voltage. (In three-phase system the rated voltage is understood as the voltage between two line (L1-L2). In four-wire, three-phase system should be given as: phase voltage/line voltage, for example 400/230 V)
2. Rated current
3. The ratio of the current or voltage transformer applied
4. Scale range selected from the series of 1 - 1.2 - 1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7.5 - 8 or their decimally multiplied values, given in W, kW, MW or var, kvar, Mvar units. (Consider the deviation from the UxI or $\sqrt{3}$xUxI apparent power should not exceed ±20%)
5. Description of special execution

ACTIVE POWER	Type 96FWa 144sFWa		Type 96FWb 144sFWb		Type 96FWb1 144sFWb1		Type 96FWc 144sWFc		Type 96FWd 144sFWd	
	Single phase ~		Three-phase balanced ≈		Three-phase balanced, four wires ≈		Three-phase unbalanced ≈		Three-phase unbalanced, four wires ≈	
Rated voltage	Rated secondary curr. of current transformer		Rated secondary curr. of current transformer		Rated secondary curr. of current transformer		Rated secondary curr. of current transformer		Rated secondary curr. of current transformer	
	… / 5 A	… / 1 A	… / 5 A	… / 1 A	… / 5 A	… / 1 A	… / 5 A	… / 1 A	… / 5 A	… / 1 A
… / 100 V	x	x	x	x	x	x	x	x	x	x
… / 110 V	x	x	x	x	x	x	x	x	x	x
230 V	x	x	x	x	x	x	x	x	x	x
400 V	x	x	x	x	x	x	x	x	x	x
500 V	x	x	x	x	x	x	x	x	x	x

REACTIVE POWER	Type 96FWbm 144sFWbm		Type 96FWcm 144sFWcm		Type 96FWdm 144sFWdm	
	Three-phase balanced ≈		Three-phase unbalanced ≈		Three-phase unbalanced, four wires ≈	
Rated voltage	Rated secondary curr. of current transformer		Rated secondary curr. of current transformer		Rated secondary curr. of current transformer	
	… / 5 A	… / 1 A	… / 5 A	… / 1 A	… / 5 A	… / 1 A
… / 100 V	x	x	x	x	x	x
… / 110 V	x	x	x	x	x	x
230 V	x	x	x	x	x	x
400 V	x	x	x	x	x	x
500 V	x	x	x	x	x	x

Connection diagrams:



Order specification:

- Power meter for active power, three-phase for three wire unbalanced circuits
- Voltage transformer ratio: 6000/100 V
- Current transformer ratio: 250/5 A
- Scale range: 0 … 2.5 MW

Ordering data:

- Power meter type: **96FWc**
- VT: **6000/100 V**
- CT: **250/5 A**
- Scale range: **0 … 2.5 MW**