

## *Analogue Meters ZQ1x08 series*

### **🔌 ZQ - Moving-coil Panel instruments used for measuring frequencies in two networks ZQ1108 & ZQ1208**

- Used for measuring frequencies in two networks
- Good read-out survey on larger distance
- Moving-coil Panel instruments
- Resistance to mechanical vibrations
- Protective cover for terminals

## PROPERTIES

- Used for measuring frequencies in two networks
- Good read-out survey on larger distance
- Moving-coil Panel instruments
- Resistance to mechanical vibrations
- Protective cover for terminals (optional)

## APPLICATION

Instruments are intended for incorporation into control panels of electric plants (power plant, transformer stations) or any location where measurement and comparison of frequency of alternating voltages or currents.

Measuring system with moving coil measures frequency in two networks between 10 and 450 Hz,

Measuring system is pivoted on the tips and is not sensitive on other magnetic field.

## DESCRIPTION

Measuring system is pivoted on the tips and is not sensitive on other magnetic field.

## SHIP'S VERSION

For the use of increased mechanical-vibration resistance we provide special »marine versions«. This are mechanicly resisted instruments, which correspond installation regulations in specific operating conditions. Instruments have sign ⚓ of anchor on the case.

## TECHNICAL DATA

### ACCURACY:

Accuracy class 0.5

### DESIGN:

Material of housing: PC  
unflammable, according to **UL 94 V-0**

Enclosure protection: Case IP 52, terminal contacts IP 00  
(IP 20 for connection terminals)  
according to **EN 60529**

Operating position Vertical

Test voltage 2 kV ef.

in accordance with **EN 61010-1**

Consumption 2 mA (60 V – 690 V => 0.1 W – 1.2 W)

### AMBIENT CONDITIONS

### JVF (DIN 40 040)

Climatic conditions:

Standards **EN 60051-1**

**EN 60051-2**

**EN 60051-9**

Temperature:

Reference range of operation +18 ... +28°C

Nominal range of operation -25 ... +55°C

Storing -40 ... +70°C

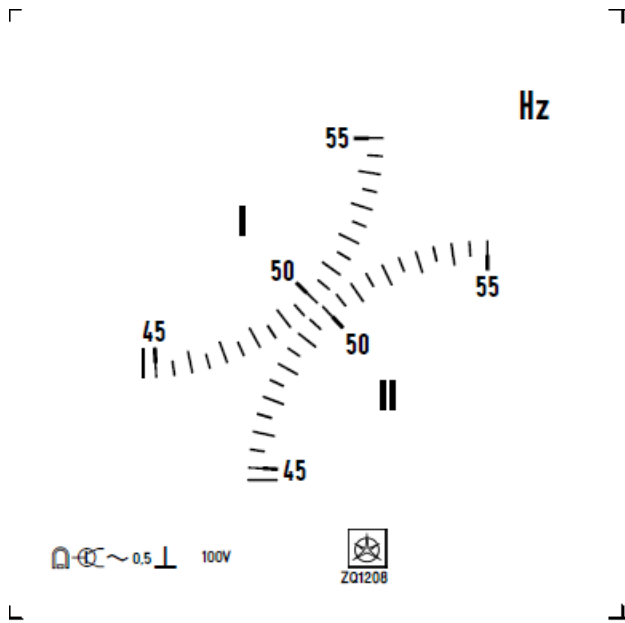
Humidity up to 80% (without condensing)

## MEASURING RANGE:

Frequency ranges (Hz)	45-55, 55-65, 48-52, 45-65 <sup>1)</sup>
Measuring range (V)	50-120, 85-265, 300-500, 500-700

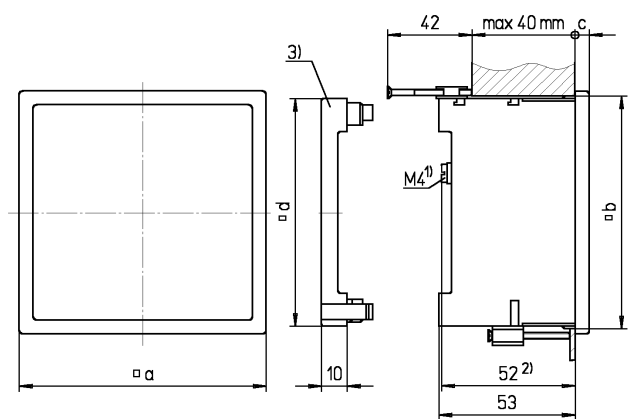
<sup>1)</sup> Listed are standard ranges. Upon order measuring system can be within 10 – 450 Hz

## SCALE



Picture 1: Drawing of scale: Standard version

## DIMENSIONAL DRAWING

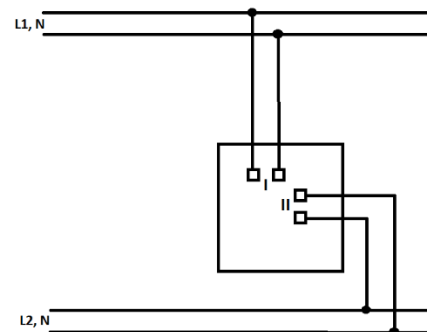


Picture 2: Dimensional drawing ZQ1x08 (all dimensions are in mm)

Type		ZQ1108	ZQ1208
Bezel (mm)	□ a	144	96
Panel cut-out (mm)	□ b	138 <sup>+1,0</sup>	92 <sup>+0,8</sup>
Bezel height (mm)	c	8,0	5,5
Protect cover (mm)	□ d	90	90
Scales length (mm)		2×50	2×50
Weight approx. (kg)			

Table 1: Dimensions and weight

## CONNECTION



**DATA FOR ORDERING**

- Instrument type,
- Measuring range and scale,
- Voltage range

**ORDERING EXAMPLE:**

Frequency meter, range from 45 to 55 HZ, voltage 85-265 V, housing size 96 x 96 mm.

ZQ1208, 45-55 Hz, 85-265 V

**ORDERING CODE**

\*Standard version.

Type	Class	Rating	Voltage Range	Finish	Window	Dial	Index Type	Zero Adjuster Colour	Protection Cover	Mounting Position
ZQ1x08	X	X	X	X	X	X	X	X	X	X
										A 30° B 60° C 0° - Horizontally S 90° - Vertically *
										N No Y Yes*
								S Black *		
							S Single Scale *			
						N Bianco Dial				
						S Standard with Scale *				
						W Black, White Scale				
						X No Dial				
				A Clear Glass *						
				L Anti-Glare Glass						
				A Standardna *						
				G HVE + IP54						
				H HVE (Tropical Seal)						
				M Inc. Mech. Resistance						
				P IP54						
				R Ship Ver. + IP54						
				S Ship Ver.						
				T Ship Ver. + HVE						
				V Ship Ver. + HVE + IP54						
			50-120V, 85-265V, 300-500V, 500-700V							
			45-55Hz, 45-65Hz, 48-52Hz, 55-65Hz*							
		S	cl. 0.5							
ZQ1108										Front frame (mm) 144x144
ZQ1208										Front frame (mm) 96x96

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