Technical Data Sheet

Sigma Series FQ Meter

The reed type frequency meters, FQ 72 / 96 housed in moulded polycarbonate cases are suitable for the measurement of These instruments offer several advantages in switchboard and Generating Set Panels. Number of meters can be mounted in a single Cut out (Mosaic mounting). Front glass, Bezel & Dial can frequencies in the range of 45 to 65 Hz can be easily replaced.

Special Features

- Glass filled polycarbonate housing (UL 94 V-0)
- Easily replacement of glass and bezel.
- Easy installation with swivel screws.

Application

The pointer type frequency meters, FM 48/ 72 / 96 / 144 housed in moulded polycarbonate cases are suitable for the measurement of frequencies in the range of 45 to 450 Hz. For maximum accuracy, the essential measuring range is obtained by supressing the unwanted frequency span. These instruments offer several advantages in switchboard and Generating Set Panels. Number of meters can be mounted in a Panel Cut out (Mosaic mounting). Front glass, Bezel & Dial can be easily replaced.

Functional Principal

The reed type frequency meters, FQ 72 / 96 housed in moulded polycarbonate cases are suitable for the measurement of These instruments offer several advantages in switchboard and Generating Set Panels. Number of meters can be mounted in a single Cut out (Mosaic mounting). Front glass, Bezel & Dial can frequencies in the range of 45 to 65 Hz. be easily replaced.

Mechanical Data

Case details	Moulded square case suitable for mounting in Control / switchgear panels Machinery consoles.
Case material	Glass filled polycarbonate, flame retardant and drip proof as per UL 94 V-0.
Front facia	Glass
Colour of bezel	Black
Position of use	Vertical
Panel fixing	Swivel screws
Mounting	Stackable in a single cutout
Panel thickness	≤ 25 mm
Terminals	Hexagon studs, M4 screws and wire clamps E3
Mechanical properties	VDE 0411, Part 1 Clause 43/44

Electrical Data

Measured Quantity	Frequency
Input quantity	Alternatingv voltage in sine waveform
Overload capacity acc. to IEC 51	1.2 times rated Voltage Continuously 2 times rated voltage, 5 Sec Short duration
Protection against ingress of foreign bodies	IEC 529 (DIN 40050)
Enclosure code (IEC529)	IP 52 case, IP 00 for terminals without back cover, IP 20 for terminals with back cover
Insulation class	Group A according to VDE 0110
Rated insulation voltage	660V
Proof voltage	2KV
Installation catagory	300V CAT III
Insulation resistance	> 50 Mohm at 500 V d.c
Power consumption	≤5VA

Standard Measuring Ranges

Freuency Range	45.....50.....55Hz 45.....55.....65Hz 55.....60.....65Hz 47.....50.....53Hz
Rated input voltage	110 V 220 V 230 V 240 V 400 V 415 V 440 V

Accuracy at Reference Conditions

Accuracy class	1.5 according to IEC 51/DIN EN 60051

Reference conditions

Ambient	23°C ± 2°C
Position of use	Nominal position ±1°
Input	Rated voltage ± 2%
Other Conditions	IEC 51/ DIN EN 60051

Nominal range of use

Ambient Temperature	0...50 °C
Position of use	Nominal position Vertical ± 5°
External Magnetic Field	At 0.5mT
Voltage	Rated voltage + 15%

Environmental Conditions

Climatic Suitability	Climate category II as per IS : 1248, IS 9000 (climatic class 3 according to VDE/VDI 3540)
Operating Temperature	- 10... + 55° C
Storage temperature	- 25...+65° C
Relative humidity	≤ 75% annual average, non condensing
Shock resistance	15 g. 11ms
Vibration resistance	10-55-10Hz for ampli. 0.15mm (1.5g at50Hz)
Pollution degree	2

Applicable Standards

Specifications for direct acting indicating analogue electrical instruments & their accessories.	IEC 51
Dimensions for panel mounted indicating and recording electrical measuring instruments	DIN 43700
Front frames for indicating measuring instruments Principle dimensions	DIN 43718
Safety requirements for indicating and recording electrical measuring instruments	VDE 0410 - 10.76, VDE 0106
Degrees of protection provided by the enclosures for electrical instruments	IEC 529, DIN 40050, VDE 0411
Climate class; determination and testing	IS 1248, IS 9000 VDE / VDI 3540
Electrical panel mounting measuring instruments; terms of delivery.	DIN 43701
UL Compatibility	UL 94 V-0

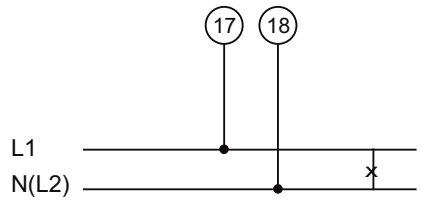
Safety Terminal Protection

Full sized polycarbonate back cover to provide protection against accidental contact (hand and fingers).

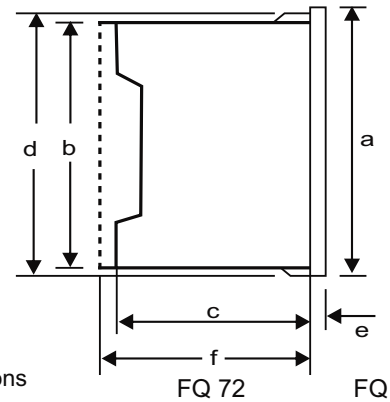
Safety Precautions

1) Instruments with damaged be zels or window glasses must be disconnected from mains.
2) Adequate safety clearance must be maintained to control panel fasteners and to sheet metal housing, if non - insulated connector wires are used.
3) The back cover must be snapped into place after the connector wires have been clamped for protection against accidental contact.
4) Scales should be replaced under Voltage- free conditions.
5) Be zels and window glasses should be replaced under Voltage - free conditions.

Connections



Dimensions



Dimensions (in mm)		FQ 72	FQ 96
Bezel	a	☐ 72	☐ 96
Case	b	☐ 66	☐ 90
Depth	c*	☐ 53	☐ 53
	d	☐ 67.5	☐ 91.5
	e	5.5	5.5
Cutout Size		☐ $68^{+0.7}$	☐ $92^{+0.8}$
Depth with Back cover	f **	64	64
Weight (approx.)		0.21 kg.	0.28 kg.

Ordering Information- Only For Representative Products

Size 72 x 72

Part No.	Description	Class
FL74-46053N1BAW0ST	45-55-65 Hz, 100V	CL-0.5
FL74-46083N1BAW0ST	45-55-65 Hz, 120V	CL-0.5
FL74-46123N1BAW0ST	45-55-65 Hz, 220V	CL-0.5
FL74-46243N1BAW0ST	45-55-65 Hz, 100-125V	CL-0.5
FL74-46263N1BAW0ST	45-55-65 Hz, 200-250V	CL-0.5

Part No.	Description	Class
FL74-56053N1BAW0ST	55-60-65 Hz, 100V	CL-0.5
FL74-56083N1BAW0ST	55-60-65 Hz, 120V	CL-0.5
FL74-56123N1BAW0ST	55-60-65 Hz, 220V	CL-0.5
FL74-56243N1BAW0ST	55-60-65 Hz, 100-125V	CL-0.5
FL74-56263N1BAW0ST	55-60-65 Hz, 200-250V	CL-0.5

Size 96 x 96

Part No.	Description	Class
FL94-46053N1BAW0ST	45-55-65 Hz, 100V	CL-0.5
FL94-46083N1BAW0ST	45-55-65 Hz, 120V	CL-0.5
FL94-46123N1BAW0ST	45-55-65 Hz, 220V	CL-0.5
FL94-46243N1BAW0ST	45-55-65 Hz, 100-125V	CL-0.5
FL94-46263N1BAW0ST	45-55-65 Hz, 200-250V	CL-0.5

Part No.	Description	Class
FL94-56053N1BAW0ST	55-60-65 Hz, 100V	CL-0.5
FL94-56083N1BAW0ST	55-60-65 Hz, 120V	CL-0.5
FL94-56123N1BAW0ST	55-60-65 Hz, 220V	CL-0.5
FL94-56243N1BAW0ST	55-60-65 Hz, 100-125V	CL-0.5
FL94-56263N1BAW0ST	55-60-65 Hz, 200-250V	CL-0.5

For more details and product codes, please contact our local office

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