

# Elapsed Time Meter - (Hours Run Meter)

ETM 72  
ETM 96

## Data Sheet

Elapsed Time Meters ETM  
Hour Run Meter



## Application

Elapsed Time Meters ETM 72/96 housed in moulded polycarbonate cases are suitable for the measurement of run time of machines, equipments and other devices.

Applications :- Business Machines, Control Panels, Compressors, Generators, Pumps, Air Conditioning

## Feature / Benefits

- Elapsed Time Meters (Hours Run Meters) are used to monitor ON/RUN time of plant/equipment which allows the user to check functions such as Production Efficiency, Cost and service period monitoring.
- The time is measured in increments of 0.01 to 99999.99 hour.
- Non resettable to prevent accidental resetting.

## 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 single cut out < 40 mm
Panel thickness	
Terminals	Hexagon studs, M4 screws And wire clamps E3

## Electrical Data

Measured quantity	Time in Hours
Input quantity	AC Voltage.
1) AC Voltages	100-125 V a.c. 200-250 V a.c. 380-440 V a.c. Frequency : 50/60Hz
Enclosure code (IEC 529)	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 category	600V CAT III
Insulation resistance	≥ 50 Mohm at 500V d.c
Power consumption (Burden)	0.75VA (110V AC) 1.70VA (415V AC)

## Standard Measuring Ranges

1) AC Voltages	100-125 V a.c. 200-250 V a.c. 380-440 V a.c. Frequency : 50/60Hz
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## Reference Conditions

Ambient temperature	23 °C ± 2 °C
Position of use	Nominal position ± 1°
Input	Rated Value of measured quantity

## Nominal range of use

Ambient temperature	0...50 °C
Position of use	Nominal position ± 5°
External magnetic field	0.5 mT
Voltage	Rated Voltage ± 20%

## Environmental Conditions

Climatic suitability	Climate category II as per IS : 1248(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	15g, 11 ms
Vibration resistance	10-150-10Hz / 0.15mm (1.5 g at 50Hz)

## Applicable Standards

Nominal case and cutout dimensions for IS 2419	DIN 43700
Connections and Terminal markings for IS 1248	DIN 43802
Terminal bolts / leads.	DIN 46200/46282
Clamp Straps for connections	DIN 46282
Safety Requirements and protective measures for electrical Indicating Instruments and their accessories	IS 9249 IS 9249 DIN40050/8-70, VDE 0110/11-72 VDE 0410/10-76 IEC 529, IEC 1010
Front frames for indicating measuring instruments Principle dimensions	DIN 43718
UL Combustibility Class	UL 94 V-0
Mechanical strength (Free fall test, vibration test)	IS 1248/IEC 51 IS9000 VDE0411, part 1, sec. 43/44, IEC 1010

## Options

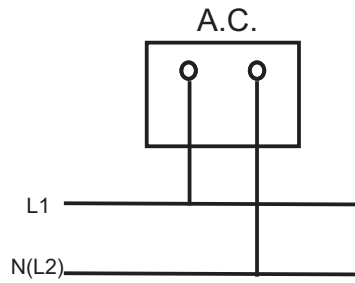
Case	
Front facia	Antiglare glass
Colour of bezel	Red, Yellow, Blue, White.
Position of use	on request 0 to 180
Dial	
Blank Dial	Yes
Special markings	Numbering / Lettering

## Accessories

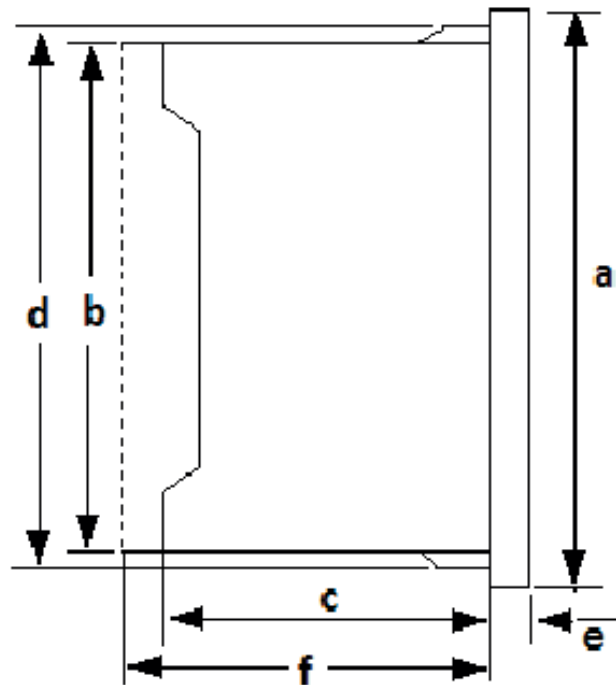
### SAFETY TERMINAL PROTECTION

Full sized polycarbonate back cover to provide protection against accidental contact (hand and fingers) according to IS 9249, VDE 0410.

## Connection Diagram



## Dimensions



Dimensions (in mm)		ETM72	ETM96
Bezel	a	<input type="checkbox"/> 72	<input type="checkbox"/> 96
Case	b	<input type="checkbox"/> 66	<input type="checkbox"/> 90
Depth	c*	<input type="checkbox"/> 53	<input type="checkbox"/> 53
	d	<input type="checkbox"/> 67.5	<input type="checkbox"/> 91.5
Cutout Size	e	<input type="checkbox"/> 5.5	<input type="checkbox"/> 5.5
	f**	<input type="checkbox"/> 68+0.7	<input type="checkbox"/> 92+0.8
Depth with Back Cover	f**	64	64
Weight (approx.)		0.21 kg	0.28 kg

## Ordering Information

Type	ETM	Elapsed Time Meter
Front Dimension	72 96	72mm x 72mm 96mm x 96mm
Input Ranges		Refer to table inside
Terminal Protection		Full sized polycarbonate back cover
Front facia		Normal glass <sup>1</sup> , PC glass <sup>3</sup> Antiglare glass <sup>3</sup>
Colour of Bezel		Black <sup>1</sup> Red, Blue, Yellow, White <sup>3</sup>
Position of use		Vertical <sup>1</sup> on request 0...180°
Dial		Standard Blank
Logo		RISHABH <sup>1</sup> Others <sup>3</sup>

<sup>1</sup>Standard

<sup>3</sup>Please clearly add the desired specifications while ordering

## Ordering Example

ETM72 Rated Voltage AC 100-125V 50Hz.

## Safety Precautions

- ✗ Instruments with damaged bezels or window glasses must be disconnected from main.
- ✗ Adequate safety clearance must be maintained to control panel fasteners and to sheet metal housing, if non-insulated connecting wires are used.
- ✗ The back cover must be snapped into place after the connector wires have been clamped for protection against accidental contact.
- ✗ Scales should be replaced under Voltage - free condition.
- ✗ Bezels and window glasses should be replaced under Voltage - free conditions.

**Specifications are subject to change without notice (02/09)**



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