Ziegler

Redefine Innovative Metering

Technical Datasheet

ELAPSED TIME METER ETM

ANALOG PANEL METERS

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ETM

ELAPSED TIME METER(ETM) or Run hour meter monitor ON or RUN time of machines equipment's or other devices, allowing the user to effectively control production efficiency, cost estimation and service period monitoring for preventive maintenance. Time is measured in increments of 0.01 to 99999.99 hours after which the meter automatically resets to zero. Meters are non re-settable before this time to prevent accidental resetting.

Product Features

- Linear scale.
- The time is measured in increments of 0.01 to 99999.99 hour .
- Non re-settable to prevent accidental resetting.

Specifications:

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 UL94 V-0.
Front facia	Glass
Colour of bezel	Black
Position of use	Vertical
Panel fixing	Swivel screws
Mounting	Stack-able in a single cutout
Panel thickness	≤40mm
Terminals	Hexagon studs, M4 screws & wire clamps E3 (DIN 46282)
Electrical Data	
Measured quantity	Time in hours
Input Quantity	AC or DC Voltage
Enclosure code (IEC 60529)	IP52 for 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 MΩ at 500V DC
Power Consumption (Burden)	0.75 VA (110 V AC) 1.70 VA (415 V AC) 80mW (12 V DC)
Reference Conditions	
Ambient temperature	23°C ± 2°C
Position of use	Nominal position ± 1°

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Input	Rated value of measured quantity
Nominal range of use Ambient Temperature	0…50°C
Position of use	Nominal ± 5°
External Magnetic Field	0.5 mT
Voltage	Rated voltage ±20%
Environmental conditions	
Climatic suitability	Climate category II as per IEC 60051(climatic class 3 acc to VDE/VDI 3540)
Operating temperature	-10 … +55°C
Storage temperature	-25 … +65°C
Relative Humidity	≤ 75% annual average, non-condensing
Shock resistance	15g, 11ms
Vibration resistance	10-150-10 Hz/0.15mm, 1.5 g at about 50 Hz

STANDARD MEASURING RANGES

AC VOLTAGES	DC VOLTAGES
100 – 125 V AC 200 – 250 V AC 380 – 440 V AC Frequency : 50/60Hz	10/27 V(12,24V)DC 38/58V(48 V)DC 90/132 V (110 V)DC

Applicable standards	
Nominal case & cutout dimensions for indicating electrical instruments	DIN 43700
Connections and terminal markings for panel meters	IEC 60051, DIN 43807
Terminal bolts / leads	DIN 46200/46282
Clamp straps for connections	DIN 46282
Safety requirements and protective measures for Electrical indicating instruments and their accessories	DIN ,40050/8-70, VDE 0110/ 11-72,VDE 0410/ 10-76 IEC 60529, IEC 61010
Front frames for indicating measuring instruments principle dimensions	DIN 43718
UL Combustibility class	UL94 V-0
Mechanical strength (Free fall test , vibration test)	IEC 60051, VDE 0411,part 1, Sec. 43/44, IEC 61010

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Options	
Front facia	Anti glare glass
Colour of bezel	Red, Yellow, Blue, White
Red Index pointer	Front adjustable on site
Position of use	On request 0°…180°
Blank Dial	Yes
Special markings	Numbering / Lettering

Accessories

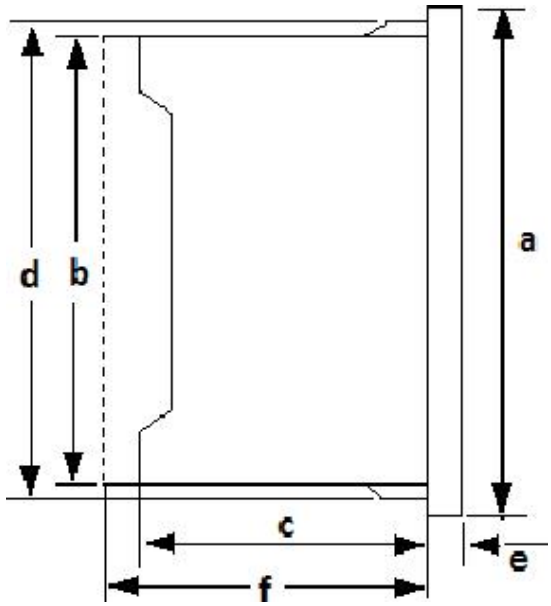
Safety Terminal Protection

Full sized polycarbonate back cover to provide protection against accidental contact (hand and fingers) acc to VDE 0410.

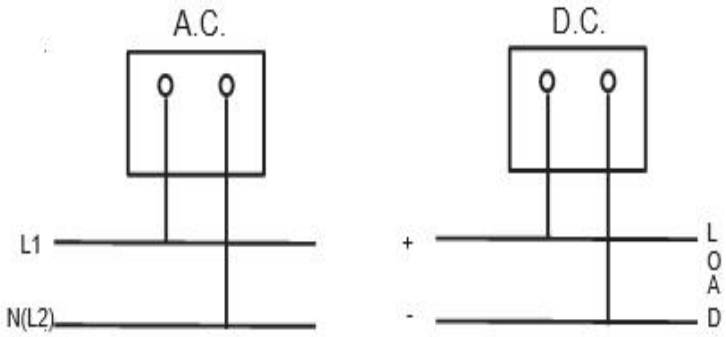
Safety Precautions

1) Instruments with damaged bezels or window glasses must be disconnected from the 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 connection wires have been clamped for protection against accidental contact.
4) Scales should be replaced under voltage-free conditions.
5) Bezels and window glasses may only be replaced under voltage-free conditions.

Dimensions:



Connection Diagram :



Dimensions (in mm)		ETM72	ETM96
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

VQ/VL	
Front dimension	72X72mm, 96X96mm
Input ranges	Refer to table inside
Terminal Protection	Full sized polycarbonate back cover
Front facia	Normal glass *1, PC glass *3, Anti glare glass *3
Colour of bezel	Black *1 Red, Blue, Yellow, White *3
Position of use	Vertical *1 On request 0°...180° *3
Dial	Standard Blank
Logo	Ziegler*1, Others*3

*1 Standard
*3 Please clearly add the desired specifications while ordering

Example – ETM 72 Rated Voltage AC 100 – 125 V,50 Hz

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Ziegler Instrumentation UK Ltd.

Central Buildings, Woodland close old woods Trading Estate, Torquay Devon, TQ2 7BB, United Kingdom
+441803 616 800 | info@ziegler-instrument.com | ziegler-instrument.com