

mm inch

Silver panel



Black panel

Features

1. Driven on DC power

The hour meters can be built in DC-powered control panels. Machine tools and similar machinery are monitored from the control panel for added safety.

2. High-performance compact sync motor with ultra-accurate quartz oscillator

The quartz oscillator helps keep the monthly error shorter than 15 seconds (for 720 hours). The accurately turning motor is employed to provide for longer period of measurement.

3. Dimensions as per DIN 43700 standard

The units are in the 48 × 48 DIN standard size. They can be fitted in panels and give refined metallic appearance.

4. Rotary indicator

The rotary indicator makes one turn every 2 minutes for monitoring.

RoHS Directive compatibility information
<http://www.nais-e.com/>

Specifications

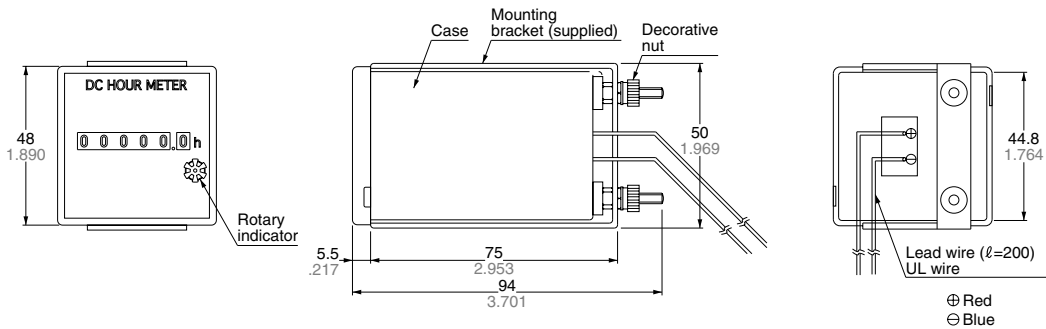
Rated operating voltage		12 V DC, 24 V DC
Allowable operating voltage range		80 to 120% of rated operating voltage
Counting range		0 to 9999.9 hours
Minimum time display		0.1 hours (6 min)
Rated power consumption		Approx. 1.5 W
Insulation resistance (Initial value)		Min. 100 MΩ Between live and dead metal parts (At 500 V DC)
Breakdown voltage (Initial value)		2,000 Vrms Between live and dead metal parts
Max. temperature rise		55°C 131°F
Vibration resistance	Functional	10 to 55 Hz: 1 cycle/min double amplitude of 0.5 mm (10 min on 3 axes)
Shock resistance	Functional	
	Destructive	Min 980 m/s² {100 G} (5 times on 3 axes)
Ambient temperature		-10 to +50°C +14 to +122°F
Ambient humidity		Max. 85% RH (non-condensing)
Power supply ripple		Approx. 48% or less (single phase all-wave rectification)
Weight		170 g 6.00 oz

Product types

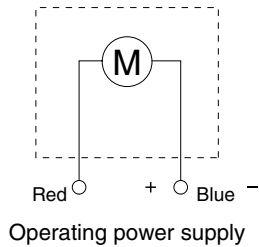
Type	Operating voltage	Part number	
		Silver panel	Black panel
TH70 series	12V DC	TH703S	TH703
	24V DC	TH704S	TH704

Dimensions

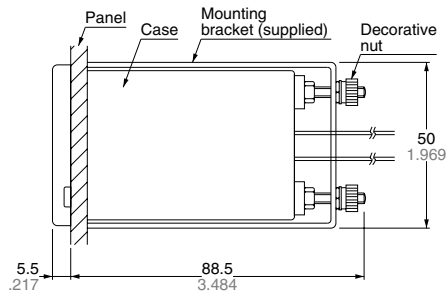
mm inch
General tolerance: $\pm 1.0 \pm .039$



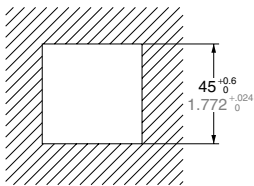
Wiring diagram



Panel mounting



• Panel cutout dimensions



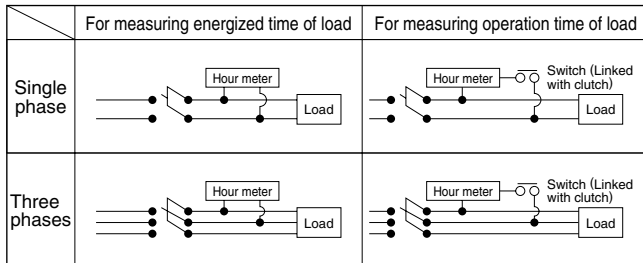
PRECAUTIONS IN USING THE HOUR METERS

1. Frequency setting

Frequency is specified for AC motor-driven hour meters. Before installing, be sure to check your local power frequency.

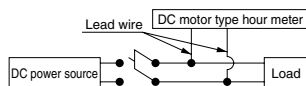
2. Connections

- TH13,23,14,24,40,50,63,64



Note) Make the connection with the accompanying flat connector first and then with the hour meter's terminal (#187). In such case, be sure to cover the connection with the accompanying insulating sleeve.

- TH70, TH8



Note) Solder the lead wires in position.

3. Safety precautions

Do not use the hour meters in the following places.

- Where ambient temperature is below -10°C or above $+50^{\circ}\text{C}$
- In wet, dusty or gaseous environments
- Where exposed to vibrations and shocks
- Outdoors, or where exposed to rain or direct sunlight

4. Compliant with CE.

- LH2H

Ambient conditions:

Overvoltage category III, contamination factor 2, indoor use.

Ambient temperature and humidity -10 and $+55^{\circ}\text{C}$ and 35% to 85%RH respectively.

- TH13, 23, 14, 24, 40, 50, 63, 64

Ambient conditions:

Overvoltage category II, contamination factor 2, indoor use.

Ambient temperature and humidity -10 and $+50^{\circ}\text{C}$ and below 85%RH respectively.

5. Reset-type hour meter

- Precautions for use

If the number indications are off before use, press the reset button and confirm that all zeroes ("0") are displayed.

- Resetting caution

Exercise due caution as an insufficient amount of pressure on the reset button may result in abnormal readings.

6. Acquisition of CE marking

Please abide by the conditions below when using in applications that comply with EN 61010-1/IEC 61010-1

1) Ambient conditions

- Overvoltage category II, pollution level 2
- Indoor use
- Acceptable temperature and humidity range: -10 to $+55^{\circ}\text{C}$, 35 to 85%RH (with no condensation at 20°C)
- Under 2000 m elevation

2) Use the main unit in a location that matches the following conditions.

- There is minimal dust and no corrosive gas.
- There is no combustible or explosive gas.
- There is no mechanical vibration or impacts.
- There is no exposure to direct sunlight.
- Located away from large-volume electromagnetic switches and power lines with large electrical currents.

3) Connect a breaker that conforms to EN60947-1 or EN60947-3 to the voltage input section.

4) Applied voltage should be protected with an overcurrent protection device (example: T 1A, 250 V AC time lag fuse) that conforms to the EN/IEC standards. (Free voltage input type)