

# TM200 Timer



- Rugged and compact
- Precise
- Broad application range
- Contact or voltage trig

## DESCRIPTION

A timer is often needed for use with the CSU600A current supply unit or ODEN A primary current injection test system. Testing relays with SVERKER 650 also requires an extra timer if more than one timing cycle is to be measured.

Timer TM200 is ideal for these tasks thanks to its precise accuracy, its broad application range and its compact dimensions. TM200 is the obvious choice for maintenance work in substations.

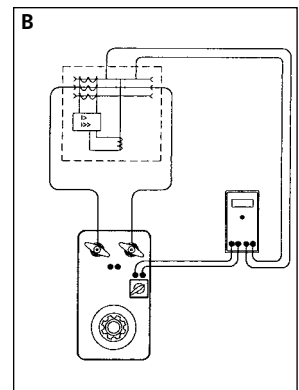
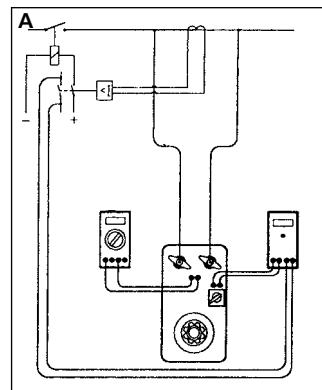
## APPLICATION EXAMPLE

IMPORTANT!

Read the User's manual before using the instrument.

### Primary test of protective relay equipment and low-voltage circuit breaker

1. Connect the instruments to protective ground (earth).
2. Connect the CSU600A's current outputs across the current transformer (diagram A) or to the breaker terminals (diagram B).
3. Connect TM200's start input to output T and the stop input to the protective relay equipment's auxiliary contact.
4. Set the current.
5. Execute the test.
6. Read the time from TM200.



## SPECIFICATIONS

Specifications are valid at nominal input voltage and an ambient temperature of +25°C, (77°F). Specifications are subject to change without notice.

### Environment

**Application field** The instrument is intended for use in medium-voltage substations and industrial environments.  
Altitude <2000 m (6500 ft) above sea level.

### Temperature

**Operating** 0°C to +50°C (32°F to +122°F)

**Storage & transport** -20°C to +70°C (-4°F to +158°F)

**Humidity** 5% – 95% RH, non-condensing

### CE-marking

**LVD** 2006/95/EC

**EMC** 2004/108/EC

### General

**Power supply 5 V DC via separate adapter** Input: 100/240 V AC, 50/60 Hz  
Output: 5.0 V DC, 2.40 A

### Dimensions

**Instrument, excl. handle** 194 x 115 x 49 mm  
(7.7" x 4.5" x 1.9")

**Instrument, incl. handle** 252 x 132 x 49 mm  
(9.9" x 5.2" x 1.9")

**Weight** 1.0 kg (2.2 lbs)  
2.8 kg (6.2 lbs) with accessories and carrying case

**Test lead set, with touch-proof contacts** 4 x 2 m (6.6 ft), 2.5 mm<sup>2</sup>

## Measurement section

**Range** 0-999.999 s

**Resolution** 1 ms

**Inaccuracy** ±0.02% + 1 digit of displayed value

## Timer inputs

**Max input voltage** 250 V AC/DC

## Voltage mode

Parameter	Min	Max	Unit
Threshold level, Positive at red terminal	8	20	V DC
Threshold level, Negative at red terminal	-20	-8	V DC
Input current at threshold level Positive at red terminal	0.7	2.0	mA DC
Input current at threshold level Positive at black terminal	4	12	mA DC
Threshold level, low to high, 50 Hz	5	15	V AC <sub>RMS</sub>
Threshold level, high to low, 50 Hz	15	45	V AC <sub>RMS</sub>

## Contact mode

Parameter	Min	Max	Unit
Closed contact detection	0	1	kΩ
Open contact detection	4	-	kΩ
Open circuit voltage	17	20	V DC
Short circuit current	8	13	mA DC

## Input current at maximum input voltage, inrush

Parameter	Max	Unit
At 250 V DC, Positive at red terminal	8	mA DC
At 250 V DC, Positive at black terminal	150	mA DC
At 250 V AC	80	mA DC

## Input current at maximum input voltage, continuous

Parameter	Max	Unit
At 250 V DC, Positive at red terminal	8	mA DC
At 250 V DC, Positive at black terminal	12	mA DC
At 250 V AC	15	mA DC

## ORDERING INFORMATION

Item	Art. No.
<b>TM200</b>	BE-29090

Including:

AC/DC adapter, 5 V	HC-04125
Test lead set, 4x2 m (6.5 ft)	GA-00082
Protective cable, 5 m (16 ft)	GA-00200
Carrying case	GD-00230