

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. Timer TM200 is the obvious choice for maintenance work in substations.

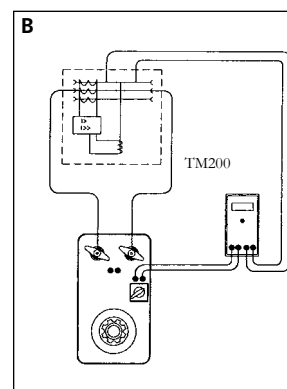
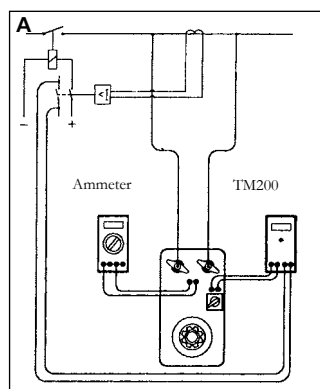
Application example

IMPORTANT!

Read the User's manual before using the instrument.

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

1. Connect the CSU600A's current outputs across the current transformer (diagram A) or to the breaker terminals (diagram B).
2. Connect TM200's start input to output T and the stop input to the protective relay equipment's auxiliary contact.
3. Set the current.
4. Execute the test.
5. 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 Low Voltage Directive 73/23/ EEC am. by 93/68/EEC

EMC EMC Directive 89/336/EEC am. by 91/263/EEC, 92/31/EEC and 93/68/EEC

General

Mains voltage 115/230 V AC (switchable), 50/60 Hz

Power consumption (max) 20 VA

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)
2.7 kg (6 lbs) with accessories and carrying case

Test lead set, with touch-proof contacts 4 x 2 m (6.6 ft), 2.5 mm²

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
<i>Threshold level, Positive at red terminal</i>	8	20	V DC
<i>Threshold level, Negative at red terminal</i>	-20	-8	V DC
<i>Input current at threshold level Positive at red terminal</i>	0.7	2.0	mA DC
<i>Input current at threshold level Positive at black terminal</i>	4	12	mA DC
<i>Threshold level, low to high, 50 Hz</i>	5	15	V AC _{RMS}
<i>Threshold level, high to low, 50 Hz</i>	15	45	V AC _{RMS}

Contact mode

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

Input current at maximum input voltage, inrush

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

Input current at maximum input voltage, continuous

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

Ordering information

Item	Art. No.
TM200	
Incl. Test lead set GA-00082 and Carrying case GD-00230	BE-29090