

TM200

Timer



TM200



Timer

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.

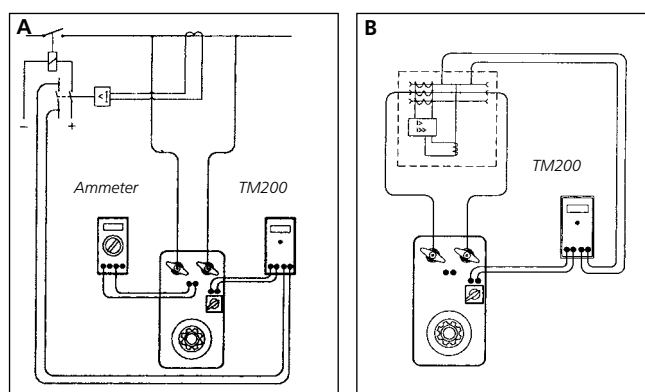
Application example

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 Timer 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 Timer TM200.



Specifications TM200

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

Environment

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

<i>Operating</i>	0°C to +50°C (32°F to +122°F)
<i>Storage & transport</i>	-20°C to +70°C (-4°F to +158°F)

<i>Humidity</i>	5% – 95% RH, non-condensing
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CE-marking

<i>LVD</i>	Low Voltage Directive 73/23/ EEC am. by 93/68/EEC
<i>EMC</i>	EMC Directive 89/336/EEC am. by 91/263/EEC, 92/31/EEC and 93/68/EEC

General

<i>Mains voltage</i>	115/230 V AC (switchable), 50/60 Hz
<i>Power consumption (max)</i>	20 VA
<i>Dimensions</i>	
<i>Instrument, excl. handle</i>	194 x 115 x 49 mm (7.7" x 4.5" x 1.9")
<i>Instrument, incl. handle</i>	252 x 132 x 49 mm (9.9" x 5.2" x 1.9")
<i>Weight</i>	1.0 kg (2.2 lbs) 2.7 kg (6 lbs) with accessories and carrying case
<i>Test lead set, with touch-proof contacts</i>	4 x 2 m (6.6 ft), 2.5 mm ²

Measurement section

<i>Range</i>	0-999.999 s
<i>Resolution</i>	1 ms
<i>Inaccuracy</i>	±0.02% + 1 digit of displayed value

Timer inputs

<i>Max input voltage</i>	250 V AC/DC
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Voltage mode

<i>Parameter</i>	<i>Min</i>	<i>Max</i>	<i>Unit</i>
<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

<i>Parameter</i>	<i>Min</i>	<i>Max</i>	<i>Unit</i>
<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

<i>Parameter</i>	<i>Max</i>	<i>Unit</i>
<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

<i>Parameter</i>	<i>Max</i>	<i>Unit</i>
<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

TM200

Complete with:
Test lead set GA-00082
Carrying case GD-00230

Art.No.

BE-29090

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