## Megger.

# 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.

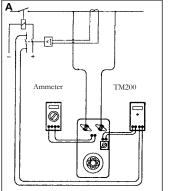
Timer TM200 is ideal for these tasks thanks to its precise accuracy, its broad application range and its compact dimensions. Timer TM200 is the obvious choice for maintenance work in substations.

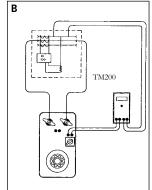
#### **Application example**

#### IMPORTANT! Read the User's manual before using the instrument.

#### Primary test of protective relay equipment and lowvoltage 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  $+25^{\circ}$ C, (77°F). Specifications are subject to change without notice.

#### **Environment**

2	
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
ΕΜC	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
<i>Test lead set, with touch- proof contacts</i>	4 x 2 m (6.6 ft), 2.5 mm²

#### Measurement section

Range	0-999.999 s			
Resolution	1 ms			
Inaccuracy	$\pm 0.02\% + 1$ 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 ACRMS
Threshold level, high to low,	50 Hz	15	45	V ACRMS
Contact mode				
Parameter				
Parameter		Min	Мах	Unit
<b>Parameter</b> Closed contact detection		<b>Min</b> 0	<b>Max</b> 1	<b>Unit</b> kΩ
Closed contact detection		0		kΩ
Closed contact detection Open contact detection		0 4	1 -	kΩ kΩ
Closed contact detection Open contact detection Open circuit voltage	um input v	0 4 17 8	1 - 20 13	kΩ kΩ V DC mA DC
Closed contact detection Open contact detection Open circuit voltage Short circuit current	um input v	0 4 17 8	1 - 20 13	kΩ kΩ V DC mA DC
Closed contact detection Open contact detection Open circuit voltage Short circuit current Input current at maxim		0 4 17 8	1 - 20 13 <b>e, inru</b>	kΩ kΩ V DC mA DC
Closed contact detection Open contact detection Open circuit voltage Short circuit current Input current at maxim Parameter	terminal	0 4 17 8	1 - 20 13 e, inru Max	kΩ kΩ V DC mA DC sh Unit
Closed contact detection Open contact detection Open circuit voltage Short circuit current Input current at maxim Parameter At 250 V DC, Positive at red	terminal	0 4 17 8	1 - 20 13 <b>e, inru</b> Max 8	kΩ kΩ V DC mA DC sh Unit mA DC
Closed contact detection Open contact detection Open circuit voltage Short circuit current Input current at maxim Parameter At 250 V DC, Positive at red At 250 V DC, Positive at blac	terminal k terminal	0 4 17 8 <b>voltag</b>	1 - 20 13 <b>e, inru</b> Max 8 150 80	kΩ kΩ V DC mA DC sh Unit mA DC mA DC mA DC
Closed contact detection Open contact detection Open circuit voltage Short circuit current Input current at maxim Parameter At 250 V DC, Positive at red At 250 V DC, Positive at blac At 250 V AC	terminal k terminal	0 4 17 8 <b>voltag</b>	1 - 20 13 <b>e, inru</b> Max 8 150 80	kΩ kΩ V DC mA DC sh Unit mA DC mA DC mA DC
Closed contact detection Open contact detection Open circuit voltage Short circuit current Input current at maxim Parameter At 250 V DC, Positive at red At 250 V DC, Positive at blac At 250 V AC Input current at maxim	terminal k terminal num input v	0 4 17 8 <b>voltag</b>	1 - 20 13 <b>e, inru</b> <b>Max</b> 8 150 80 <b>e, con</b>	kΩ kΩ V DC mA DC sh Unit mA DC mA DC mA DC mA DC
Closed contact detection Open contact detection Open circuit voltage Short circuit current Input current at maxim Parameter At 250 V DC, Positive at red At 250 V DC, Positive at blac At 250 V AC Input current at maxim Parameter	terminal k terminal <b>hum input v</b> terminal	0 4 17 8 <b>voltag</b>	1 - 20 13 <b>e, inru</b> <b>Max</b> 8 150 80 <b>e, con</b> <b>Max</b>	kΩ kΩ V DC mA DC sh Unit mA DC mA DC mA DC mA DC tinuous Unit

### **Ordering information**

# ItemArt. No.TM200Incl. Test lead set GA-00082 and<br/>Carrying case GD-00230BE-29090

SWEDEN

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