



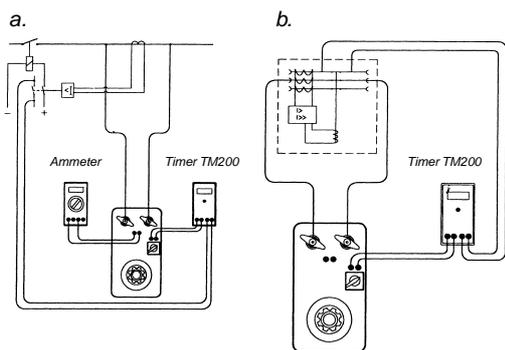
TM200™

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



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

Measurement section

Range	0-999.999 s
Resolution	1 ms
Accuracy	± 0.02% + 1 digit of displayed value

Timer inputs

Potential state				
Parameter	Min	Typ	Max	Unit
Changeover level, DC. Positive at red Terminal	10	12.5	15	V DC
Changeover DC. Positive at red Terminal	0.7	1.5	1.5	mA DC
Changeover DC. Positive at black Terminal	4	6	8	mA DC
Low to high level, 50 Hz	5	10	15	V ACrms
High to low level, 50 Hz	60	90	140	V ACrms

Contact state				
Parameter	Min	Typ	Max	Unit
Changeover resistance	1	2	4	kΩ
Short circuited input	8	10	13	mA DC
Output voltage at open input	17	18.5	20	V DC

Maximum input voltage		
Parameter	Max	Unit
Max input voltage DC	275	V DC
Max input voltage AC	250	V AC

Input current at maximum input voltage, initial values				
Parameter	Min	Typ	Max	Unit
At 275 V DC, Positive at red terminal	4	4.5	5	mA DC
At 275 V DC, Positive at black terminal	120	130	150	mA DC
At 250 V AC,	40	55	80	mA DC

Input current at maximum input voltage, steady state values				
Parameter	Min	Typ	Max	Unit
At 275 V DC, Positive at red terminal	4	4.5	5	mA DC
At 275 V DC, Positive at black terminal	7	8	9	mA DC
At 250 V AC,	2.5	3.3	4	mA DC

Other

Application field: The instrument is intended for use in high-voltage substations and industrial environments.

Storage temperature: -20 to +55°C (-4 to + 131°F)

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

Mains voltage: 115 / 230 V AC (switchable) ± 10%, 50-60 Hz.

Dimensions: 194 x 113 x 44 mm (7.6" x 4.4" x 1.7") excl. handle

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

Weight: 1.0 kg (2.2 lbs). 2.7 kg (6.0 lbs) with accessories and carrying case

Warranty: 1 year.

The above specifications are valid at nominal input voltage and an ambient temperature of +25°C (+77 °F).

Specifications are subject to change without notice.

ORDERING INFORMATION

TM200 Timer

Complete with test lead set GA-00082 and carrying case GD-00230.

Mains voltage: 115/230 V

Art.No: BE-29090