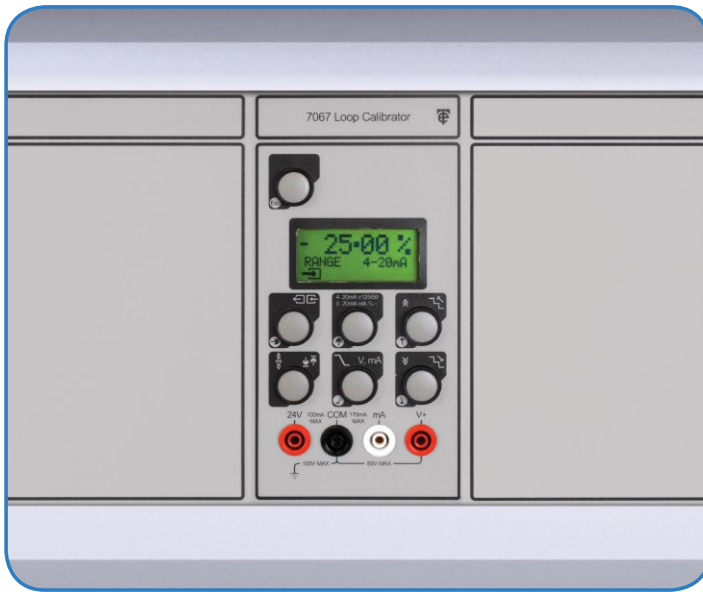




# Time Electronics

## 7067 Loop Calibrator Module



- **Current measure: 125mA, source: 50mA**
- **Voltage measure: 25V, source: 21V**
- **Loop Current Sink**
- **Resolution 1 $\mu$ A or 1mV**
- **Accuracy 0.01%**
- **Transmitter and square root functions**
- **Auto-ranging feature**
- **Programmable steps and ramp**

### DESCRIPTION

A precision module primarily used for the calibration and simulation of voltage and current loops. The 7067 is a high accuracy calibrator incorporating source and measure capabilities. With user friendly controls and simple operation the 7067 is an excellent module for both process engineers and calibration technicians.

The three operating modes provide a fast and easy solution to process applications; Loop current/voltage source for simulating a transmitter and the loop supply, sink of loop current for simulating a transmitter, and measurement of loop current/voltage for simulating a loop indicator.

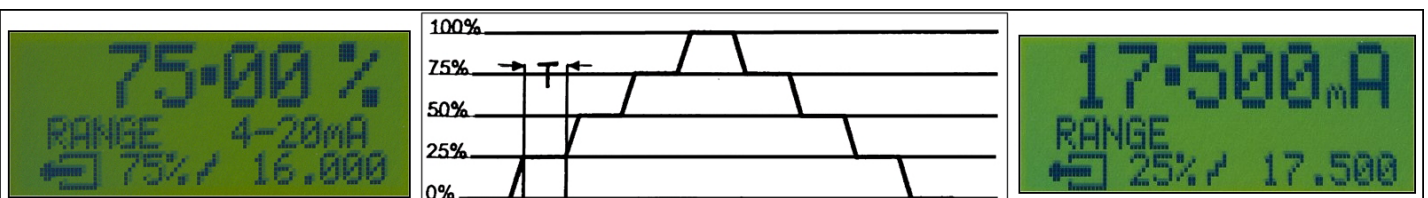
Manual step of the output is possible at five calibration points; 0%, 25%, 50%, 75% and 100% of span. Automatic stepping of the output is also available, both up and down with programmable dwell times.

Continuous up/down ramping can also be performed, with user programmable ramp rates and dwell time (top and bottom).

In source mode the range can be user programmed to any value between 0mA and 50mA, or 0V and 21V. For example a low point of 10mA and a high point of 50mA could be set giving a span of 40mA.

Measure mode provides both voltage and current measuring capability with 5 digit resolution. Ranges are 0 to  $\pm 5$ V and  $\pm 5$  to  $\pm 25$ V, 0 to  $\pm 25$ mA and  $\pm 25$  to  $\pm 125$ mA.

Alternatively the signal can be measured as a % of span for the following ranges; 4 to 20mA, 0 to 20mA, square root 4 to 20mA, or square root 0 to 20mA. For all measurements a Min/Max recording function is available on demand.



# 7067 Specifications

## TECHNICAL SPECIFICATION

### DC VOLTAGE SOURCE

| Range    | Resolution | Accuracy               | Output Current | Output Resistance |
|----------|------------|------------------------|----------------|-------------------|
| 0 to 21V | 1mV        | ±0.01% of setting ±4mV | 50mA           | < 1Ω              |

### DC VOLTAGE MEASURE (0 to ±25V, Auto-ranging)

| Range    | Resolution | Accuracy                 | Measure Load |
|----------|------------|--------------------------|--------------|
| 0 to 5V  | 0.1mV      | ±0.01% of reading ±0.4mV | 10MΩ         |
| 5 to 25V | 1mV        | ±0.01% of reading ±2mV   | 10MΩ         |

### DC CURRENT SOURCE

| Range     | Resolution | Accuracy               | Output Voltage | Loop Resistance  |
|-----------|------------|------------------------|----------------|------------------|
| 0 to 50mA | 1μA        | ±0.01% of setting ±2μA | 22V Max        | 1100Ω @ 20mA max |

### DC CURRENT MEASURE (0 to ±125mA, Auto-ranging)

| Range       | Resolution | Accuracy                | Measure Load |
|-------------|------------|-------------------------|--------------|
| 0 to 25mA   | 1μA        | ±0.01% of reading ±2μA  | 24.5Ω        |
| 25 to 125mA | 10μA       | ±0.01% of reading ±20μA | 24.5Ω        |

### DC CURRENT SINK

| Range     | Resolution | Accuracy               | Min external drive | Max external drive |
|-----------|------------|------------------------|--------------------|--------------------|
| 0 to 50mA | 1μA        | ±0.01% of setting ±2μA | 4V                 | 40V                |

## SUMMARY OF FUNCTIONS

### SOURCE MODE

- User programmable ranges - any values between 0 and 50mA or 0 and 21V.
- Fixed ranges are available: 4 to 20mA, 0 to 20mA, sqrt 4 to 20mA, sqrt 0 to 20mA.
- Fine adjustment (inching) is available for precise deviation from the calibration point.
- Manual step output - five calibration points 0%, 25%, 50%, 75%, and 100%
- Automatic step output (up/down) - five cal points with programmable dwell period.
- Ramp output - programmable ramp rate (0 to 20mA/sec or 0 to 20V/sec). Programmable dwell period (0 to 1000 seconds)

### MEASURE MODE

- Voltage and current measuring capability with 5 digit resolution.
- Ranges: 0 to ±5V and ±5 to ±25V, 0 to ±25mA and ±25 to ±125mA.
- Signal can also be measured as a % of span on ranges: 4 to 20mA, 0 to 20mA, square root 4 to 20mA, square root 0 to 20mA.
- For all measurements a Min/Max recording function is available on demand.

## GENERAL SPECIFICATION

Module Dimensions ..... H201 x W97mm (primary or secondary console fitting)

Operating temperature ..... -10 to 50°C. Storage temperature -30 to 70°C.

Operating humidity ..... 0 to 90% non-condensing at 25°C

Optional Extras ..... Calibration Certificates – traceable to NPL and UKAS

## ORDERING INFORMATION

7067 ..... Loop Calibrator Module  
C184 ..... Factory (NPL traceable) Calibration Certificate  
C195 ..... UKAS Calibration Certificate (ISO 17025)

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.

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