

# Tachometers

## Models CA1725 & CA1727



**Universal  
tachometers  
that you can  
count on!**



AEMC® introduces two new tachometers for Industrial and Lab applications - the Model CA1725 and CA1727. These tachometers can measure the rotation speed of any moving part or device. Easy to use, these tachometers can measure using a non-contact method. A photo reflective strip facilitates distance measurements. The optical sensor avoids external interference by incorporating an active, modulated infrared beam ensuring measurement accuracy.

They can perform measurements of up to 100,000rpm, which further extends their applicability: linear velocity on conveyor belts, piece counting, test rigs, speed control and measurements for monitoring and supervision are just a few examples.

The Model CA1727 includes a USB connection and software specific to tachometers, which facilitates recording and data analysis. The LCD display includes both a digital readout and a 42-segment bar graph. Other functions include Min, Max., Hold and Alarms.

The Model CA1725 and CA1727 both include an adapter for traditional contact type measurement. Additionally, these instruments can measure from sensors with voltage outputs through an external input.

## Features

- Measurements up to 100,000 rpm
- Multiple of functions and automatic routines for data acquisition and storage: measurement of rotational speed, linear speed, count, frequency and period
- Extensive programming possibilities
- Digital display with analog bargraph
- USB interface for processing results on a PC (CA1727 only)
- Includes TachoGraph software on CD-Rom (CA1727 only)
- Stores up to 4000 measurements results

## Applications

- Measure rotation speed with or without contact



## Specifications

SPECIFICATIONS	
<b>MODELS</b>	<b>CA1725 &amp; CA1727</b>
<b>MEASUREMENTS</b>	
<b>Rotational Speed Function</b>	Range: 6 to 100,000rpm Resolution: 0.0006 to 6 depending on range Accuracy: $1 \times 10^{-4}$ of reading $\pm 6$ counts
<b>Linear Speed Function</b>	Range: 0.1 to 10,000m/min or ft/min Resolution: 0.0006 to 6 depending on range Accuracy: $1 \times 10^{-4}$ of reading $\pm 1$ increment
<b>Frequency Function</b>	Range: 0.1 to 10,000Hz Resolution: 0.0004 to 0.4 depending on range Accuracy: $4 \times 10^{-5}$ of reading $\pm 4$ counts
<b>Period Function</b>	Range: 0.1 to 10,000ms Resolution: 0.0003 to 0.3 depending on range Accuracy: $1 \times 10^{-4}$ of reading $\pm 5$ counts
<b>Duty cycle Function</b>	Range: 10 to 10,000% Resolution: 0.1 to 1% depending on range Accuracy: 0.1% of scale from 0.2 to 50Hz • 0.2% of scale from 50 to 125Hz • 1% of scale otherwise
<b>Count function</b>	Range: 0 to 99,999 events; Accuracy: $\pm 1$ event (Model CA1727)
<b>GENERAL</b>	
<b>Power Source</b>	9V battery Alkaline (included)
<b>Battery life</b>	250 x 5 min measurements with optical sensor; 600 x 5 min measurements with external sensor
<b>Data Storage</b>	4,000 measurements (Model CA1727)
<b>Dimensions</b>	8.5 X 2.83" (216 x 72 x 47mm)
<b>Weight</b>	8.8 oz (250g)
<b>Weatherproofing</b>	IP 51
<b>Environment</b>	Storage: -20°C to +70°C 95% RH; Operation: 0 to 55°C 90% RH
<b>SENSOR</b>	
<b>Optical</b>	Reflective area: 10 to 90% of the target area. Measurement distance: 1 to 50cm. The maximum distance is given for a reflective adhesive strip with a minimum area of 10 cm <sup>2</sup> . Measurement angle: $\pm 15^\circ$ in relation to the perpendicular of the reflective surface.
<b>Mechanical</b>	Mechanical adapter: End-fittings: elastomer with a durometer hardness of 80 Pressure on moving part: between 2 and 40N; Maximum speed: 10,000rpm Service life: approx. 1,000 hours at 3000rpm with a pressure of 20N. Conical end-fitting accessory: Minimum diameter of measurement shaft: 5mm Cylindrical end-fitting accessory: Speed measurements on shafts with a diameter greater than 5mm or flat-ended shafts End-fitting accessory with wheel; Wheel diameter: 30.183mm; Wheel development: 10cm $\pm$ 0.1mm



## Construction

### 1. Optical Sensor

### 2. HOLD key

- Holds last digital value displayed.
- Disable automatic stop.

### CA1727 only

- For programming : shift the selection of the active digit or of the decimal point to the right.

### 3. SMOOTH key

- Smooth the display of measurements.

### CA1727 only

- For programming : increment the active digit.

### 4. ALARM key on CA1727 only

- Activate the audible and visual alarms.
- Program the alarm thresholds.

### 5. PRINT key on CA1727 only

- Prints recording of the measurements in memory.

### SCAN key on CA1727 only

- Program the rate at which the measurements are recorded in memory.

### 6. Connector external input.

### 7. USB output connector on CA1727 only.

### 8. Rotary switch.

### 9. PGRM key on CA1727 only

- Programming.
- Initialize the program memory.

### 10. COUNT key on CA1727 only

- Event counter.

### K key on CA1727 only

- Program the scale factor : coefficient K.

### 11. RANGE key

- Manual or automatic change of range.
- Extend the measurement range at low frequency.

### CA1727 only

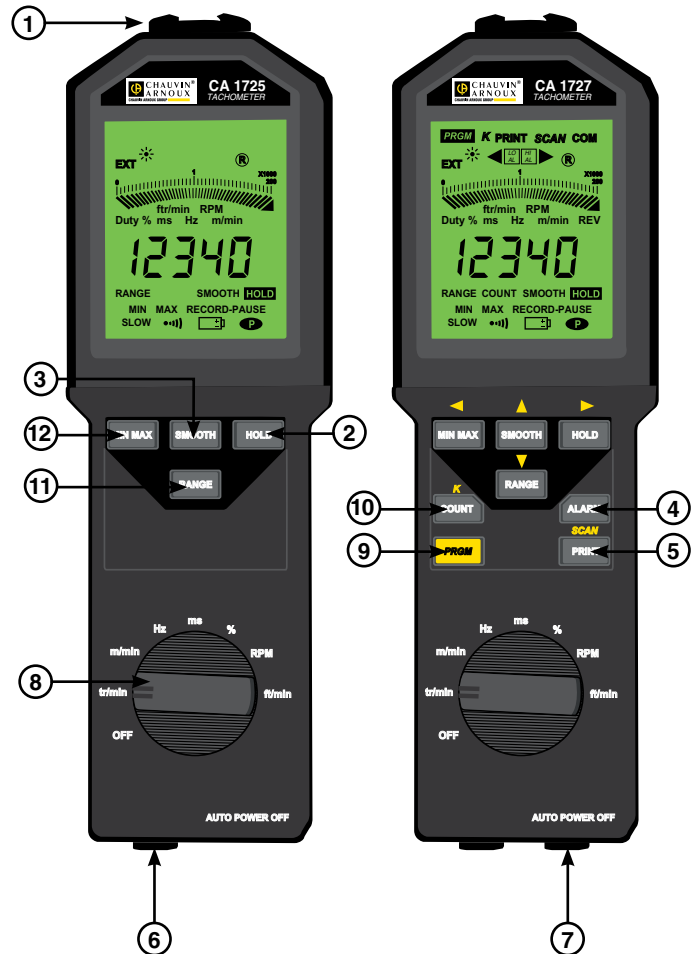
- For programming : decrement the active digit.

### 12. MIN MAX key

- Record min and max values.
- Disable the buzzer.

### CA1727 only

- For programming : shift the selection of the active digit or of the decimal point to the left.



# Accessories



*Each model includes hard case, FRB F connector, 9V battery, a set of 15 reflective strips, user manual, USB cable, TachoGraph software on CD-Rom (CA1727 only) and quick start-up guide.*



ORDERING INFORMATION	CATALOG NO.
Tachometer Model CA1725 .....	Cat. #1748.10
Tachometer Model CA1727 .....	Cat. #1748.30
Mechanical accessories kit .....	Cat. #1749.02

## Contact Us

### United States & Canada:

Chauvin Arnoux<sup>®</sup>, Inc.  
d.b.a. AEMC<sup>®</sup> Instruments  
200 Foxborough Blvd.  
Foxborough, MA 02035 USA  
(508) 698-2115 • Fax (508) 698-2118  
[www.aemc.com](http://www.aemc.com)

**Customer Support – for placing an order, obtaining price & delivery:**  
[customerservice@aemc.com](mailto:customerservice@aemc.com)

**Sales Department – for general sales information:**  
[sales@aemc.com](mailto:sales@aemc.com)

**Repair and Calibration Service – for information on repair & calibration, obtaining a user manual:**  
[repair@aemc.com](mailto:repair@aemc.com)

**Technical and Product Application Support – for technical and application support:**  
[techinfo@aemc.com](mailto:techinfo@aemc.com)

**Webmaster – for information regarding [www.aemc.com](http://www.aemc.com):**  
[webmaster@aemc.com](mailto:webmaster@aemc.com)

### South America, Central America, Mexico, Caribbean, Australia & New Zealand:

Chauvin Arnoux<sup>®</sup>, Inc.  
d.b.a. AEMC<sup>®</sup> Instruments  
15 Faraday Drive  
Dover, NH 03820 USA  
(978) 526-7667 • Fax (978) 526-7605  
[export@aemc.com](mailto:export@aemc.com)  
[www.aemc.com](http://www.aemc.com)

### All other countries:

Chauvin Arnoux<sup>®</sup> SCA  
190, rue Championnet  
75876 Paris Cedex 18, France  
33 1 44 85 45 28 • Fax 33 1 46 27 73 89  
[info@chauvin-arnoux.com](mailto:info@chauvin-arnoux.com)  
[www.chauvin-arnoux.com](http://www.chauvin-arnoux.com)