CHAUVIN® ARNOUX
CHAUVIN ARNOUX GROUP

ICS SCHNEIDER MESSTECHNIK

C.A 1725
C.A 1727

Universal tachometers that you can count on!

Industrial Tachometers

IP 51

◗ *Measurements up to 100, 000 rpm*

◗ *Large number of functions, memories and automatic routines for data acquisition: measurement of rotation speed, linear speed, count, frequency and period*

◗ *Extensive programming possibilities*

◗ *USB link for processing the results on a PC (C.A 1727)*

Comprehensive and easy to use!

One position, one unit!

The rotary switch gives access to 7 measurement units:

– tr/min	– m/min	– Hz	– ms
– Duty %	– RPM	– ft/min.	

The counting function can be used to measure directly in metres, feet or number of pulses.

This means it is possible to measure a motor's rotation speed, the pulse frequency or the contact opening time of a relay with the same instrument.
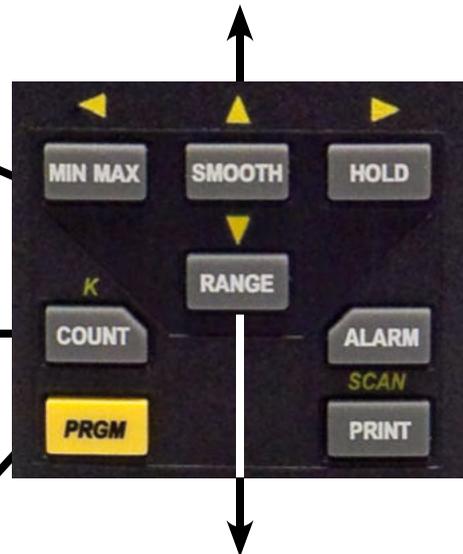
One key, one function!

(The functions indicated in italics are only available on the C.A 1727)

When an object's speed is irregular, it may prove necessary to apply smoothing to the measurement. This function computes a sliding average of the last 10 measurements. This makes it easier to read.

The MIN / MAX function does your work for you. Vary the load on a motor and let the tachometer record the variations on its own!

Pressing this key locks the digital display on the last measurement. The analogue display continues to show the real-time measurement.

The count function allows you to measure the number of revolutions, metres or pulses directly.

Two thresholds (high and low) can be programmed on each unit. The instrument indicates when they are overrun by sounding a buzzer and displaying a visual symbol

This key can be used to switch the C.A 1727 to programming mode. It no longer performs any measurements, the bargraph is deactivated, and the optical transmitter is shut down. The key functions become those indicated in yellow.

For some applications, the measurement range has to be locked. The analogue scale then remains fixed throughout the measurement.

This key can be used to record the value displayed. When the Scan function is programmed, you can press this key to start the measurement recording cycle according to the interval programmed.

Particularly easy to read

The display is the control panel for the instrument. At a glance, you can use it to check that the operating conditions are satisfactory: confirmation of infrared signal transmission and reception, alarm thresholds activated, etc. All the functions activated are clearly indicated. A 42-segment bargraph is available in addition to the digital display.

3 possible types of measurement

No-contact measurement...

This involves measurement by photoreflection. The reflective strip placed on the part to be checked reflects the infrared beam.

The optical sensor avoids problems with external interference and absence of light. Use of an active modulated infrared beam guarantees accurate measurements.

... Contact measurement...

A mechanism is available for converting a rotation speed into pulses measured by the tachometer.

The mechanical adapter can be used with one of the three end-fittings:

▶ The cylinder and the cone for rotation speeds at the end of a drive shaft
▶ The calibrated wheel for linear speeds

## ... or measurement via the external input

An external input allows you to connect the tachometer to a large number of sensors delivering voltage signals.

C.A 1727 :
data recording and analysis capabilities!

USB link

The C.A 1727 tachometer is equipped with a USB link as standard. This means it can dialogue with a PC to transfer the data stored in the instrument!

TACHOGRAPH software
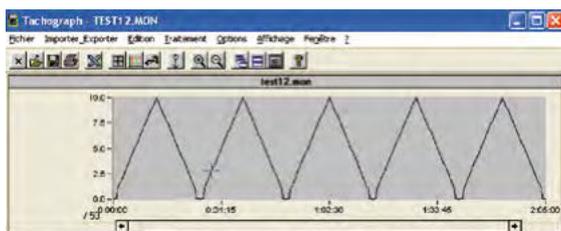
The TACHOGRAPH software enables two-way management of the data contained in the C.A 1727.

It can be used for acquisition, processing and re-use of the measurements made by the C.A 1727 tachometer, as well as for transferring the result files onto a PC hard disk. It can also be used to convert them into a format compatible with EXCEL, so that end-users can then process the results digitally at their convenience. In addition, it allows the instrument's programming parameters to be transferred and displayed.

The TACHOGRAPH software can also be used for digital processing of the results, such as calculating the mean value, the position or the acceleration, and viewing

Metrological specifications

rpm function	Range: 60 to 100,000 rpm Resolution: 0.006 to 6 according calibre Accuracy: 1×10^{-4} of reading ± 6 counts
m/min function	Range: 6 to 10,000 m/min Resolution: 0.006 to 6 depending on calibre Accuracy: 1×10^{-4} of reading ± 1 increment
Hz function	Range: 1 to 10,000 Hz Resolution: 0.004 to 0.4 depending on calibre Accuracy: 4×10^{5} of reading ± 4 counts
ms function	Range: 0.1 to 1,000 ms Resolution: 0.0003 to 0.03 depending on calibre Accuracy: 1×10^{-4} of reading ± 5 counts
Duty cycle function	Range: 0.1 to 100 % Resolution: 0.1 to 1 % depending on calibre Accuracy: 0.1 % of scale from 0.2 Hz to 50 Hz • 0.2 % of scale from 50 Hz to 125 Hz • 1 % of scale otherwise
Count function (C.A 1727)	Range: 0 to 100,000 events Accuracy: ± 1 event

General specifications

Power supply	9 V
Battery life	250 x 5 min measurements with optical sensor 600 x 5 min measurements with external sensor
Memory (C.A 1727)	4,000 points
Dimensions	21 x 72 x 47 mm
Weight	250 g
Leakproofing	IP 51
Environment	Storage: -20 °C to +70 °C 95 % RH Operation: 0 to 55°C 90 % RH

Sensor specifications

Optical	Reflective area: 10 to 90 % of the target area. Measurement distance: 1 to 50 cm. The maximum distance is given for a reflective adhesive strip with a minimum area of 10 cm². Measurement angle: ± 15° in relation to the perpendicular of the reflective surface.
Mechanical	Mechanical adapter: End-fittings: elastomer with a hardness of 80 shores Pressure on moving part: between 2 and 40 N. Maximum speed: 10,000 rpm. Service life: approx. 1,000 hours at 3000 rpm with a pressure of 20 N. Conical end-fitting accessory: Minimum diameter of measurement shaft: 5 mm. Cylindrical end-fitting accessory: Speed measurements on shafts with a diameter greater than 5 mm or flat-ended shafts End-fitting accessory with wheel Wheel diameter: 30.183 mm. Wheel development: 10 cm ± 0.1 mm.

TO ORDER:

C.A 1725 TACHOMETER.. **P01174810**
C.A 1727 TACHOMETER..P01174830

The tachometers   are delivered in a hard case with 1 FRB F
connector, a 9V battery, 1 set of 15 reflective strips
(length 0.1 m), 1 operating manual and the TACHOGRAPH software
on CD-Rom (C.A 1727), 1 quick start-up guide on paper.

ACCESSORIES and SPARES

Mechanical accessories kit... **P01174902**
End-fittings (set of 3)... **P01174903**
Reflective tape (15 strips of 0.1 m).................................... **P01101797**
Prise FRB F **P01101785**
TACHOGRAPH software on CD-Rom **P01174835**
USB-A <–> USB-B lead **P01295293**

For assistance and ordering