

# Two-channel measurement

## CENTOR Dual

Thanks to its ability to read two sensors simultaneously with a 1,000 Hertz sampling rate, **CENTOR Dual** is a true test console. It offers all of the functionality of an efficient force gauge, **its calculating power enables it to save values from two different sensors simultaneously**, to monitor set points and to perform calculations on each channel. It also traces an F1/F2 graph on its display or even a Force/Displacement graph, as it can also read potentiometric rules and incremental encoders.

It is the simplest and most complete scalable system for approaching the most diverse and thorough tests in a workshop or laboratory.

### Technical characteristics

- Simultaneous reading on two channels
- Operates in tension and compression
- Accuracy 0.1% FS
- Resolution 1/10,000 FS
- Peak function for tension and compression
- Simultaneous display of the peak and the current reading
- Display of the Force/Displacement graph
- Calculation of specific points of the graph for each channel:
  - Maxima
  - Force at time T
  - Break point
  - Derivative
  - First peak
  - Force on opening/closing of contact
  - Average force
  - Force for a given displacement
- Memorization of the last graph curve measured
- Bar graph
- 5 units available: N, kg, lbs, g, oz
- Sampling rate 1,000 Hertz
- Can be used with a pedal
- Tare function, independent on each channel
- Automatic tare possible at the beginning of the graph
- Auto-off adjustable from 5 to 15 min, can be deactivated
- Programmable set point functions for each channel
- Complete two-way RS232 output
- Running transmission of 25 value pairs per second
- Possibility of transmitting the graph curve memorized
- Digimatic output
- Memorization of 2 configurations
- Protection function for the current configuration
- Automatic recognition of additional force or torque sensors
- Recognition of sensors for incremental displacements (angular encoders or linear rules)
- Reversible display
- Backlit display
- Sensor protected from overloads up to 200% of its capacity
- Operates on rechargeable batteries
- 8 hours of operation without recharging
- Fast charge
- Low battery indicator
- Metal casing and protective elastomer overmould
- Threaded fixing holes on the back for use on test stand
- Calibration certificate included
- Supplied in a carrying case with a mains adaptor and a set of accessories (hook, Ø 19 mm plate, extension cable)



### CENTOR DUAL internal sensor version

MODELS	CAPACITIES	RESOLUTIONS
CNR DL 5	5 N	0.0005 N
CNR DL 10	10 N	0.001 N
CNR DL 25	25 N	0.002 N
CNR DL 50	50 N	0.005 N
CNR DL 100	100 N	0.01 N
CNR DL 250	250 N	0.02 N
CNR DL 500	500 N	0.05 N
CNR DL 1000	1,000 N	0.1 N



Also available as tabletop unit with external sensor

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## CENTOR Dual Force and Couple

Thanks to the possibilities of the instruments in the CENTOR family and in particular to the power of the **CENTOR W Dual torque gauge with its combined force/torque measurements** it is possible to show on the same display values provided by multi-component sensors.

By associating a Dual box and static TL twin component force/torque sensor, we can easily make combined measurements.

MODELS	CAPACITIES FORCE	RESOLUTIONS FORCE	CAPACITIES TORQUE	RESOLUTIONS TORQUE
CNR DL TF 2	250 N	0.02 N	10 Nm	1 mNm
CNR DL TF 5	500 N	0.05 N	15 Nm	1.5 mNm
CNR DL TF 10	1,000 N	0.1 N	20 Nm	2 mNm



## TWIST torsion test stand

To carry out a precise, repetitive torque measurement, it is often necessary to use a torsion test stand.

**The TWIST, 1 to 60 Nm torsion test stand with combined Torque/Angle measurement** provides this function.

The torsion meter enables torsion tests to be made on various samples such as springs, metal or plastic parts.

It is made up of a horizontal, rigid test stand, with two rails to provide precision guidance.

On the test stand, there are two working heads that are fitted with vertical circular plates.

Thanks to its ability to read two sensors at the same time and with a sampling rate of 1,000 Hertz, the CENTOR W Dual makes an ideal test console for the TWIST test stand.

Its calculating power enables it to record values coming from two different sensors simultaneously, monitor the set points and make a calculation for each channel.

On its display, it shows a Torque/Angle graph curve.

It provides the simplest, most versatile system for dealing with the most wide ranging torsion tests in the workshop or in the laboratory.



MODELS	TWIST 1	TWIST 6	TWIST 12	TWIST 24	TWIST 60
Maximum capacity	1 Nm	6 Nm	12 Nm	24 Nm	60 Nm
Torque resolution	0.1 mNm	0.6 mNm	1 mNm	2 mNm	5 mNm
Angle resolution	0.1°	0.1°	0.1°	0.1°	0.1°
Space between plates	200 mm	200 mm	200 mm	200 mm	200 mm
Overall dimensions	H 300 x L 200 x 500 mm				

## Motorized dynamic torque gauge

In order to measure the quality or the lifespan of rotative systems, it is often necessary to measure the torque evolution based on the number of revolutions or the angle.

This motorized system combines a CENTOR Dual and a dynamic torque and angle sensor to measure these characteristics on assembled parts. It is particularly suitable for measuring revolving switches, bearings, etc.

MODELS	CNR DLDT6	CNR DLDT12	CNR DLDT24
Maximum capacity	6 Nm	12 Nm	24 Nm
Torque resolution	0.6 mNm	1 mNm	2 mNm
Angle resolution	0.1°	0.1°	0.1°

