Lehr– und Didaktiksysteme
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Instruction sheet 524 082

Rotary motion sensor S (524 082)

1 Description

The rotary motion sensor S is used in conjunction with the CASSY® computer-assisted measurement system. It enables the frictionless measurement of rotational motions, linear displacements, amplitudes, periods and rotary frequencies with Sensor-CASSY (524 010), Pocket-CASSY (524 006) or Universal Measuring Instrument Physics (531 835).

Experiment examples are found on the CD of the CASSY Lab software (524 200) or in the download version of the software under http://www.ld-didactic.com or in the manual of the CASSY Lab software (524 202).

2 Scope of delivery:

Rotational sensor S

Wheel for measuring linear displacements

Stand rod for fixing the sensor with stand material

Coupling plug for mounting on rastered socket panel or at hot-air engine

3 Measurement quantities

Measurement quantity	CASSY Lab /1/ (524 020)	CASSY-Display /2/ (524 200)	UMI Physik (531 835)
Angle	α	✓	✓
Path	s	✓	✓
Amplitude	A	—	—
Period time	T /3/	✓	✓
Rotary frequency	f	✓	✓

/1/ for Sensor-CASSY (524 010), Pocket-CASSY (524 006) or the Uiversal Measuring Instrument Physics (531 835) at a PC

/2/ in conjunction with Sensor-CASSY (524 010)

/3/ also simultaneously with the amplitude

4 Operation

- Plug the rotary motion sensor S on a CASSY module.
- Select measurement quantity.
- Perform the experiment.
- Read the measured value.

5 Technical data

Measuring quantities:	angle, path, oscillation amplitude and period, rotary frequency
Derived quantities:	velocity, acceleration (with CASSY Lab)
Measuring range:	without mechanical stop (incremental encoder)
Angular resolution:	0.18°
Path resolution:	0.08 mm
Time resolution:	0.001 s
Frequency resolution:	0.001 Hz
Axis:	double ball-bearing

6 Compatibility

The rotary motion sensor S (NTC) can be used in conjunction with the following CASSY modules:

	Sensor-CASSY (524 010)	Pocket-CASSY (524 006)	UMI Physics (531 835)
With PC	CASSY Lab software 1.55 or higher version		
Without PC	CASSY-Display firmware 1.24 or higher version	—	Firmware 1.03 or higher version

As a member of the CASSY family this sensor has the following features:

- The sensor can be plugged in at any time.
- The connected sensor is recognized automatically.
- Measurement quantities and measuring ranges are set using the menu-driven software.

7 Updates

If the software or firmware used is older than that given above, an update of the software or firmware is required. The current version of the CASSY Lab software is available on the internet under http://www.ld-didactic.com.

- Install the current version of the CASSY Lab software and start it.
- Connect all available CASSY modules to the PC one after another.
- As soon as you are prompted, bring the firmware up to date with "Update CASSY Modules" so that it matches with CASSY Lab.