

CDS-GPS

Type CGPSLA

100 Hz GPS Logger

The CDS-GPS is an easy-to-use, lightweight data logger for various vehicle dynamics testing applications.

- Easy connection to Kistler sensors by identical housing style
- High measurement frequency: GPS 100 Hz/Logger 500 Hz
- High protection class: IP67
- Pre-defined driving maneuvers for longitudinal vehicle tests
- Power supply for external devices at the CAN connector
- Easy data transfer by exchangeable CF card, USB flash drive or LAN/USB connection

Description

Newly developed CDS-GPS logger with a built-in 100 Hz GPS receiver, user display, and pre-defined driving maneuvers for longitudinal vehicle tests. Used as GPS sensor, all sensor signals are put out via CAN bus.

The CDS-GPS logger system primarily delivers the following measured variables: Absolute speed, distance travelled, position (latitude, longitude), time, height, status information (number of satellites, signal quality etc.). Further measurement values can be calculated, e.g. acceleration, triggered distance, etc. An optionally available printer can be used to provide table prints after the measurement.

Being an in-house development, the new CDS-GPS system provides full compatibility to the established product range. Coupled with further, adequate sensors (e.g. wheel force transducers and sensors for measuring sideslip angle, height, rotation rate, acceleration, pressure, etc.) the CDS-GPS may also be used for extended vehicle testing in the field of transversal dynamics.

Application

High-precision, slip-free measurement of distance, longitudinal speed and acceleration for vehicle dynamics testing, e.g. ISO 70028 brake path measurement with straightforward ABS braking, ISO 14512 braking on one-sided slippery track surface when driving straight-ahead.

The compatible design and high protection class of IP67 make the CDS-GPS system optimally suited for motorcycle applications too.



Technical Data

Performance Specifications

Speed range	km/h	0,1 ... 1 600
Resolution	km/h	0,036
Measurement accuracy	km/h	0,1
Measurement frequency		
GPS	Hz	100
Logger	Hz	500
Latency logger		internally compensated
Absolute positioning		
Accuracy		3 m 95 % CEP
Update rate	Hz	100
Resolution	mm	1,8
Heading		
Accuracy ¹⁾	°	0,1
Resolution	°	0,01
Distance		
Accuracy ²⁾	%	0,05
Update rate	Hz	100
Resolution	cm	1
Height accuracy	m (RMS)	<2

¹⁾ valid for velocity >30 km/h

²⁾ <50 cm per km

Technical Data (Continuation)

Interfaces

CAN (2 independent lines) ³⁾			2.0B
Baud rate	from	kBd	5
	to	MBd	1
USB (Full Speed), Host/Client			1.1
Printer			yes
Ethernet/LAN			yes
Display interface (CAN) for connecting display units			yes
Light barrier/brake switch			yes
Port for additional modules			yes
CF-Slot			yes

Storage

CF memory card, max.	GB	8
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System Specifications

Power supply	V	10 ... 28
Power consumption	W	<15
Temperature range		
Operation	°C	-20 ... 50
Storage	°C	-20 ... 70
Protection standard		IP67
Dimensions (LxWxH – without cable)	mm	180x125x95
Weight	grams	<600
Shock	g	50 half sine
	ms	6
Vibration	g	10
	Hz	10 ... 150

³⁾ the CAN connectors can power external devices. The power lines of the Power Input are directly connected to the CAN connectors. A resettable fuse allows a maximum current of 1,5 A

Dimensions

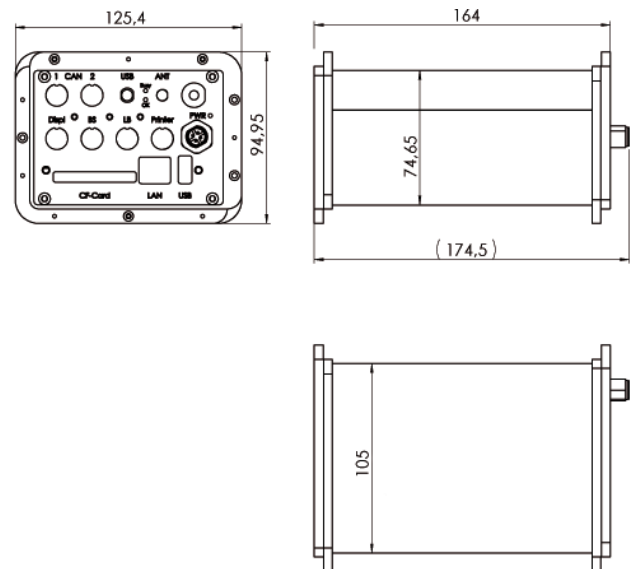


Fig. 1: Dimensions CDS-GPS logger

Included Accessories

- GPS logger
- DAS display/control unit
- Power cable 4 pin banana, l = 2 m
- Signal cable display/control unit, l = 2 m
- Connection cable CAN, l = 2 m
- Connection cable CAN, l = 0,4 m
- Connection cable CAN, l = 2 m open end
- Connection cable USB, l = 2 m
- Compact flash card, 8 GB
- Multi card reader
- Suction holder ø90 mm with ball joint
- Hexagon spacer bolt M6x7
- Multimedia CD
- GPS antenna
- Antenna cable
- Transport case, complete

Type/Art. No.

- KCD17391
- KCD10090
- KCD10398
- KCD16943
- KCD16944
- KCD16946
- KCD16993
- KCD13947
- KCD17145
- KCD15414
- KCD16908
- KCD11666
- KCD11343
- KCD17423
- KCD17454
- KCD17426

Optional Accessories

- Printer
- Light barrier including mount
- Brake switch red, cable l = 3 m
- Brake switch green, cable l = 3 m

Type/Art. No.

- KCD17000
- KCD17472
- KCD17468
- KCD17471

Ordering Code

- CDS-GPS System

Type CGPSLA