

On-Board Electronics Telemetry

Type 9813A2

for RoaDyn® P106 with Telemetry Module

The on-board electronics telemetry Type 9813A2 is designed for measurements with torque wheel force transducer RoaDyn P106. The signals are transmitted via far field telemetry module by radio. Beside the main output traction-torque, it is possible to measure additional up to four temperature channels (K-type thermocouples) at each wheel. For control purposes two additional signals, the current battery voltage and the temperature of the torque sensor electronic can be monitored in parallel.

- On-board electronics for RoaDyn P106 with telemetry module
- Digital data transmission on 2,4 GHz ISM-band
- For up to four measuring wheels
- Self-identification of all sensors
- CAN data output for all channels
- Analog data output for 6 configurable channels
- Online display of measured signals
- Configuration by USB, Ethernet and click-wheel

Description

The sensor automatically logs on to the on-board electronics after power-up and performs a self-identification. All sensor specific data are automatically downloaded and after short time the system is operational without any additional user interaction. Signal output is available through CAN-bus (all signals) and analog output (6 configurable channels).

The zero setting of the torque can be executed by means of a click-wheel and the user display at the on-board electronics or via Ethernet and USB.

The measuring chain consists of three main components: torque wheel force transducer RoaDyn P106 (Type 9294B11), telemetry module (Type 9811A) and on-board electronics (Type 9813A2) located inside the vehicle. In addition a third-party data acquisition system favourably with CAN-bus input is needed to store the data.

System configuration can be flexibly handled via the click-wheel and the user display or via Ethernet and USB. In addition to the measuring range selection, all parameter of the CAN-bus output like identification numbers and baud rate can be set-up. The transmitted signals can be checked online on the user display.



Application

Applications are vehicle engineering based with emphasis in dynamic stability and traction control, anti-lock brake systems, investigations of fading effects, brake jitter, power measurements, determination of friction values, coast down and safety tests such as procedure FMVSS 135.

Technical Data

Control Unit Type 9813A2

Dimensions (LxVxH)	mm	206,7x181,9x125,4
Weight	kg	approx. 2,5
Operating temperature range	°C	-40 ... 80
Power supply	VDC	9 ... 36
Power consumption	W	5

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Technical Data (Continuation)

Data Output

Digital Output		
CAN BUS (Standard 2.0B)	kbit/s	≤1 000
Resolution (ADC)	bit	16
Connector		2x D-Sub 9 pin, female
Analog Output (6 signals, configurable)		
Output range	V	±10
Resolution (DAC)	bit	16
Connector		BNC neg.

Data Input

Conform to the directives		EN61326-1/2006
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Control Interface

USB-device	USB Type A, female
USB-host	USB Type B, female
Ethernet	RJ45

Transmission Channels

In <-	1 x M _y
	4 x T
	1 x Battery voltage
	1 x Electronic temperature
Out ->	1 x Operate, before measuring
	1 x Range, before measuring

Dimensions

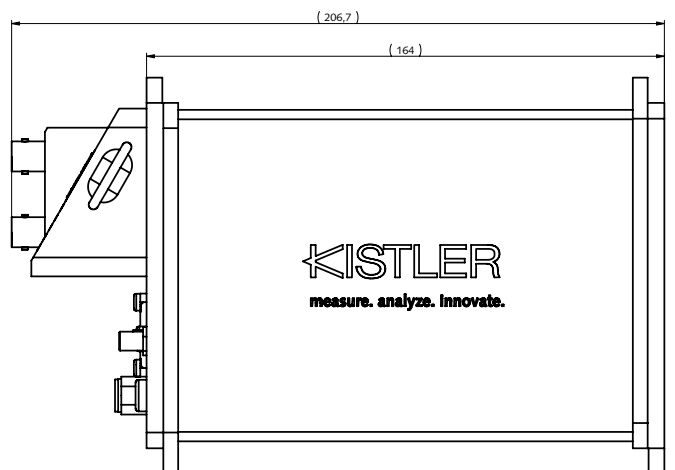
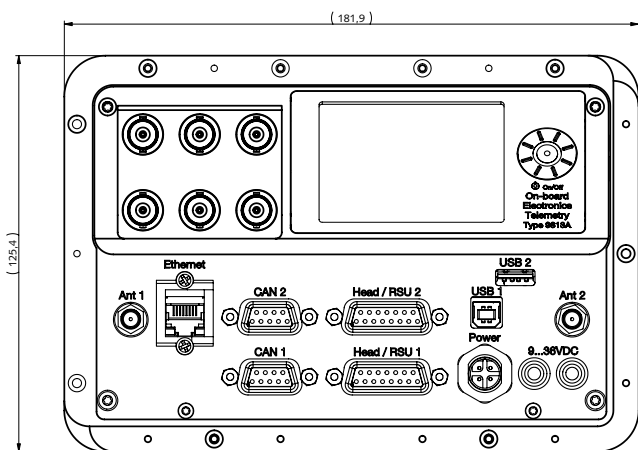


Fig. 1: Dimensions of Control Unit Type 9813A2

Included Accessories

- USB cable
- Power cable
- Ethernet connection cable with lock, 2 m
- CAN terminating resistor, 120 Ω
- External antenna, 5 m, incl. fixation (2x)
- Rod antenna (2x)

Type/Art. No.

- 5.590.303
- 5.590.350
- 5.590.364
- 5.311.088
- 5.211.588
- 5.211.589

Ordering Code

- On-board electronics telemetry for RoaDyn P106 with telemetry module **Type 9813A2**

Optional Accessories

- Analog output cable
- CAN connection cable, 3 m
- Ethernet connection cable, 5 m

Type/Art. No.

- 1601B2
- 5.590.168
- 1200A117A5

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