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DTI-Logger

Type 5343B

Data acquisiton

The DTI-Logger Type 5343B is a powerful data acquisition for the applications of vehicle dynamics, fatigue strength and tire tests based on the standard DTI bus (Digital Transducer Interface).

- 8 DTI ports connection of up to 96 sensors
- Data transfer, synchronization, configuration and power supply via one cable
- Crosslinking of of up to three DTI-Loggers via SyncSwitch Type 5614A
- Configuration via Ethernet and KiCenter software
- Data recording and online display of the measurement signals via KiCenter
- Option for decentralized data acquisition

Description

The DTI-Logger is based on DTI technology, which represents a universal bus system for the complete application. Signals are digitized as needed and a DTI signal is converted. This occurs directly in the DTI sensors or – in the case of existing sensors – via corresponding DTI converters. Therefore, as an example, signals can easily be transferred via the Kistler CAN/DTI converter into DTI signals.

Because the DTI-Logger also takes care of supplying power to the connected DTI sensors, the required cabling can be done substantially more easily and rationally so that the installation of the measuring system can be done more efficiently. Together with the daisy chain capability, this approach enables decentralized data acquisition, in which the signals can be digitized and converted directly at the point of acquisition. The sensor data then flow in a fail-safe manner into the central Kistler DTI-Logger and are transferred via Ethernet into the computer and recorded there.

The calibration values and the relevant physical variables are automatically detected by the KiCenter (Kistler software). Moreover, the KiCenter permits the configuration of all DTI sensors that are part of the measuring system. This guarantees maximum process safety and efficient use of time.

Application

The system is designed for recording measuring data as well as for configuration, synchronization and power supply. The system can be used for, among other things:

- Braking distance measurements
- CO_2 measurements
- Transverse dynamics applications
- Customer-specific applications

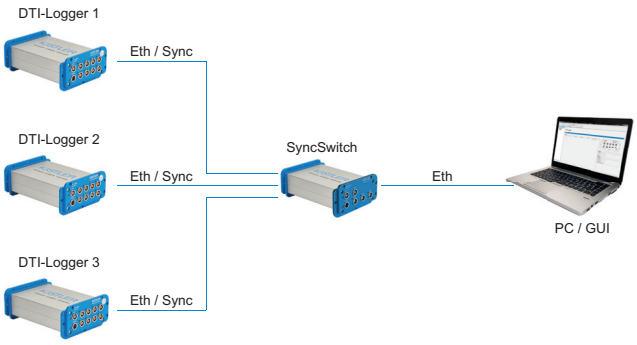

Fig. 1: Central and decentral setup possible. When using three DTI-Loggers in conjunction with the SyncSwitch, measurements with up to 288 sensors can be performed.

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Technical data

System specifications		
Power supply	VDC	10 ... 28
Power consumption max. [1]	W	35
Temperature range		
Operation	°C	–25 ... 50
Storage	°C	–40 ... 85
Relative humidity (non-condensing)	%	5 ... 80
Degree of protection (cable mounted)		IP40
Dimensions (LxWxH), approx.	mm	164x125x65
Weight	grams	900

Data inputs		
Digital input – DTI [2]		
Sampling rate max.	kS/s	20 [3]
Number of DTI ports [4]		8

Data outputs		
Ethernet TCP/IP		yes

[1] Excl. sensor power supply
[2] For detailed information, see instruction manual 002-793e
[3] Depending on the connected sensor
[4] Per port, 12 Slots at 40 bytes/ms are available

Dimensions

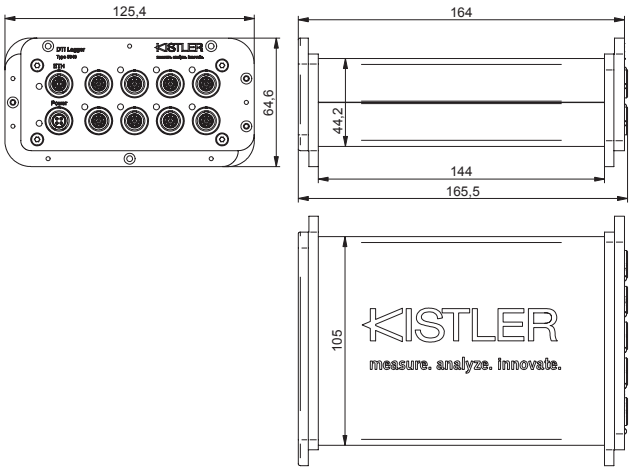

Fig. 2: DTI-Logger dimensions

Included accessories	Ordering no.
• Evaluation electronics DTI-Logger	55191866
• Power cable DTI-Logger, l = 1 m	55155613
• Connecting cable Ethernet, l = 2 m	55184398
• Screw set for evaluation electronics	55123001
• USB stick, software + manuals	55158846
• Transport case	55091649

Optional accessories	Ordering no.
• Ethernet-to-USB adapter	22007428
• Connecting cable DTI, l = 0,5 m	55155607
• CAN/DTI converter 1-channel	18033804
• CAN/DTI converter 4-channel	18034831
• SyncSwitch	18037868

Ordering code	
• DTI-Logger (art. no. 18032939)	**Type 5343B**

Kistler DTI technology

With the DTI technology, a single end-to-end bus wiring system is all that is required to take the measurement signals from every sensor to the data recorder. DTI converts each signal into a unique, time stamped digital output either directly in the Kistler DTI sensors, or via suitable DTI converters for use with any existing sensors. The sensor data is collected at the central DTI logger and is transmitted via Ethernet to your laptop for evaluation. A single cable is all that is needed to configure the sensors, to transmit and synchronize the measurement data and to supply power. The automated sensor detection simplifies the test setup. The installation position, calibration values and relevant physical parameters are detected automatically by the Kistler measuring software (KiCenter) and can be configured using the GUI.

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