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Stationary DTI Recorder

Type K0375AS.08

Stationary system

The Stationary DTI Recorder Type K0375AS.08 is an expansion module for the Stationary System Base Unit Type K3800AS. The module detects digitized measurement values that arise during a test and stores them in a central memory. The transfer of the measured data to the data recorder which are provided decentrally and close to the sensor by so-called DiMod modules (digitization modules) takes place via bus lines.

The Stationary DTI Recorder is characterized by the following technical features:

- 8 DTI ports for connecting up to 96 measuring channels
- Central memory with a capacity of more than 400 s measurement data acquisition at 20 kHz sampling frequency
- Measurement data storage in non-volatile flash memory
- Support of SR/T0 double trigger functionality
- Support of ring buffer mode and recorder mode for data recording
- Compatible with CrashDesigner from version 2.10

Description

The stationary DTI data recorder Type K0375AS.08 can be used via its signal interface module with 8 DTI ports for data acquisition of up to 96 DiMod channels. Up to 12 DiMod channels can be connected via the DTI bus. For the power supply on the connected DTI bus, each DTI port has its own short-circuit-proof controller that sets the output voltage to 5.7 V (with a load of 500 mA). With the voltage set to 5.7 V, a voltage reserve of 0.5 V remains on the DTI bus cable which is sufficient for a cable length of up to 5 m under full load (standard cable cross-section required, e.g. AWG26). Furthermore, each DTI port has its own RS-485 driver and receiver for data transmission on the bus.

Technical data

Power consumption, max.	W	30
DTI ports		8
Measuring channels		96
Synchronization frequency (input)	Hz	1 000
DTI port supply line		
Voltage	V	5.4 ... 5.9
Max. current (per port)	mA	500
Sampling rate, max.	kHz	20
Memory type		Non-volatile, flash
Memory	Gbyte	2
Recording time (96 Ch @ 20 kHz)	s	>400
Trigger		T-Zero Start Recording (SR) Channel Trigger
Communication		100Base TX Ethernet

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Application

The Stationary DTI Data Recorder Type K0375AS.08 is the stationary counterpart to the in-dummy data recorder type DTI375.08 and is designed for use under stationary, non-crash-like conditions. Possible applications include test dummy preparations or component tests.

The data recorder records the measurement data during a test and saves the decentrally processed and digitized measurement values in a dedicated flash memory. The digitization modules close to the sensors are connected to the central recorder unit via bus lines. Because of the bus concept, only one minimal wiring is required. It is a 4-wire bus with two lines for the power supply of the sensors and two lines for data transmission at 6 Mbit/s in differential RS-485 format. The data is read out after the test using the CrashDesigner application software via an appropriate Ethernet connection.

The Stationary DTI Data Recorder can store data for a 300 s cycle with a sampling frequency of 20 kHz, therefore recording the data can be started before the test is actually started. This ensures that the measuring system works properly and data loss is avoided.

The trigger point is registered and recorded. As soon as a valid trigger point is stored in the data storage of the stationary recorder module, the user only has to select current measurement data for transfer to a PC. It is no longer necessary to read out the entire system memory. The stationary system base unit Type K3800AS is equipped with various trigger inputs and trigger outputs for synchronization with other devices. In addition, each DTI channel of the DTI data recorder Type K0375AS.08 can be configured as a trigger source. The trigger threshold and the trigger criterion can be freely selected.

An uninterruptible power supply is not necessary for data conservation, since flash memory modules are used. The data remain available for many years.

Ordering key

• Stationary DTI Recorder	Type K0375AS.08

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