IFLEXRAY.1

Communication Module for SMT Systems for Connecting to FlexRay Clusters

The IFLEXRAY.1 is an interface module for recording FlexRay cluster bus communication. Both complete bus traces and the targeted acquisition of selected signals are supported.

AREAS OF APPLICATION
- Acquisition of ECU signals (measured values, status information, etc.)
- Recording of the entire communication of a FlexRay cluster

ADVANTAGES
- Extraction of signals from FlexRay messages directly in the interface module
- Logging of a cluster up to the full bus bandwidth
- Cold start of a cluster without additional nodes
- Recovery after disconnection
- Wake-Up of the entire measuring system through bus communication
- Combined acquisition of ECU signals and physical measured values

Interface
The two nodes of the module are galvanically isolated from one another and from the system. In addition, each FlexRay node is led through via two ports. This enables the connection of additional bus subscribers, such as classical monitoring tools, reduces cabling and also helps to avoid stubs.

Data Processing
The module supports up to 250 freely usable measurement channels which can be selected from the FIBEX file of the connected cluster. The total number of supported signals can be spread over the two FlexRay nodes as necessary. It is also possible to trace a cluster's communication in full at frame level.

SMT - More Than Measuring
The Softing Measurement Technology combines sophisticated measurement technology with signal generation, communication, computing power and storage depth. The unique module concept enables optimal adaptation to the relevant application. Apart from standard measurements, SMT is also used in control and regulation, process monitoring and automation, real-time simulation and data logging.

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Technical Data

General

Number of nodes	2
Number of channels per node	2 (A&B)
Bit rate	10 MBit/s
Network description	FIBEX 3.1.0
Number of signals	≤250 measurement channels per module
Data types	1 … 32 bit, 64 bit
Data rate	1 SPS … 500 SPS online, can be set per module

Nodes

Physical layer specification	FlexRay V2.1 Revision A
Transceiver	NXP TJA1080A
Protocol specification	FlexRay V2.1 Revision A
Controller	Freescale MFR4310
Cold-start-capable	Yes
Termination	Split termination, 2x47 Ω / 2x1.3 kΩ, can be connected
Galvanic isolation	Per node

Wake output

Supply voltage	7 … 48 V, external
Current consumption	≤1.0 mA (normal power mode)
	≤0.1 mA (low power mode)
Output voltage	≤15 V (supply voltage, limited)
	High-active, current-limited, short-circuit-proof

Environmental conditions

Storage	-30 °C … +85 °C, 10 % … 90 % rel. humidity, non-condensing
Use	-30 °C … +70 °C, 10 % … 90 % rel. humidity, non-condensing

Order Numbers

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