FlexOpto

www.star-cooperation.com

BENEFITS

- Complete EMC optimized design with best-in-class low emissions
- Best-in-class unsusceptible against noise
- Integrated battery, up to 40 h operation
- Supports WUP and symbols (CAS, MTS, ...)
- Integrated, switchable network termination with power resistors
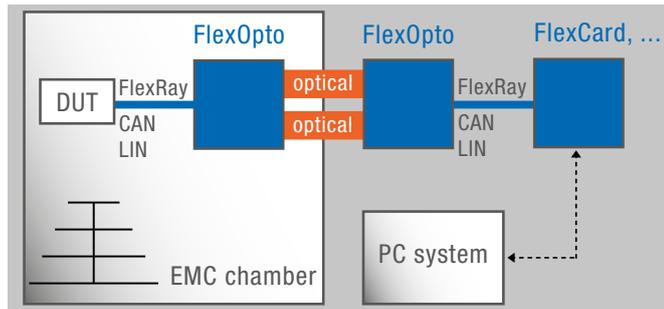
FLEXOPTO – OVERVIEW

FlexOpto is a bidirectional media converter which transmits electrical FlexRay, CAN or LIN signals via optical fibre. For an independent use, a high capacity lithium ion battery allows an operation up to 40 h without charging. The PCB design is optimized for EMC tests, emits very little noise and is unsusceptible against high levels of electromagnetic noise.
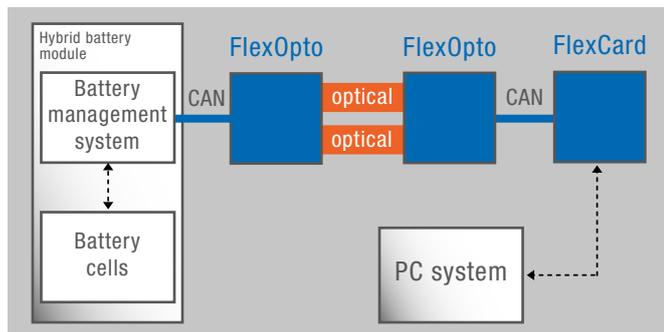
FlexOpto

APPLICATION AREAS

EMC TESTING

FlexOpto has a PCB that is optimized for EMC testing. Operating on internal, a rechargeable lithium ion battery, it can transmit the signals from a DUT into an EMC chamber to the FlexOpto outside via optical fibre. Using an interface e.g. a FlexCard family interface, the communication can be monitored.
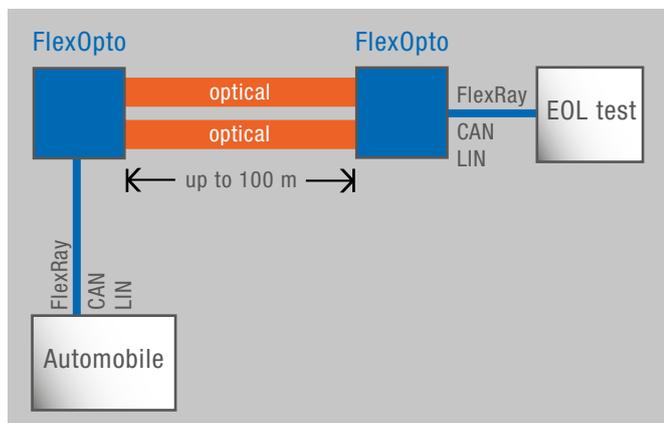

GALVANIC ISOLATION

FlexOpto can be used as galvanic isolation for FlexRay, CAN or LIN networks. Areas with high voltage can be isolated and groundshifts can be eliminated. Measurement equipment can be protected and the operator is safe because of the non conducting connection.

RANGE EXTENDER

FlexOpto works as a range extender for FlexRay, CAN or LIN networks. It avoids reflexions because of unterminated tabs or distortion, e.g. caused by magnetic fields from electric motors etc. Because of the optical connection, the signal is not affected.

Timings	FlexOpto
FlexRay pulsewidth distortion	±2 ns at 10 m HCS
FlexRay bit delay	195 ns at 10 m HCS
FlexRay TSS truncation	145 ns at 10 m HCS
CAN pulsewidth distortion	±4 ns at 10 m HCS
CAN delay	275 ns at 10 m HCS
LIN pulsewidth distortion	±4 µs at 10 m HCS
LIN delay	12 µs at 10 m HCS

FEATURES

Application areas	
EMC testing	✓
Galvanic isolation	✓
Range extender	✓
EMC characteristics	
emissions (CISPR 25: 2008-03 ALSE-method)	Class 5
unsusceptible against noise (ISO 11452-2:2004-11)	min. 270 V/m
Battery supply	
Battery operation	up to 40 h
Connectivity	
FlexRay	Binder 712, 4 Pin
CAN	Binder 712, 4 Pin
LIN	Binder 712, 4 Pin
Optical fibre	850 nm, ST connector, 1x Rx, 1x Tx (SMA connector available on request)
Supply	Binder 712, 4 Pin
Switchable termination	✓
Device	
Housing	145 x 125 x 35 mm³
Supply voltage	Li-Ion charger 8,4 V
Temperature range	Operating mode: 0°C – 40°C Charging: 10°C – 30°C Storage (short-term): -20°C – 60°C
Scope of delivery	
Device	2x
Documentation in PDF format	✓
Cables	2x Li-Ion charger 1x fibre optic cable 1x bus cable 1x bus connector set 1x gender changer

ORDER INFORMATION FLEXOPTO

Product	Description	Ordering number
FlexOpto	FlexOpto is a media converter which converts bidirectional elecrical signals like FlexRay, CAN-HS or LIN into optical signals	3-V030-0P03