BiSS Interface User Group defines BiSS-LINE the first Open Source Interface in One-Cable-Technology

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BiSS Line

• Motivation
• BiSS protocol
• BiSS Line
• Roadmap

• Conclusion
Hardware, sensors and protocol

• Propietary One-Cable-Technologies on the market
• RS485 halbduplex
• Base band
• 2-wire with combined energy transmission
• 4-wire with separate energy transmission
• Available connection technology and cable
• Available hardware updated with firmware (iP)
BiSS C protocol

• Open standard
• 2 x RS422 unidirectional communication
• Permanent bidirectional
• Safety capable and certified
BiSS Line basic data

- RS485 half duplex
- 12 MBaud
- 2- and 4-wire possible
- 8B10B clock recovery
- Forward Error Correction optional
BiSS Line with 2-wire

- RS485 half duplex with sensor supply
BiSS Line  with 4-wire

- RS485 half duplex and separate sensor supply
BiSS Line communication

- Master – Slave based
- Pause signal
- Request
- Pause signal
- Reply
BiSS Line robust symbols

• Transition pause signal to request
BiSS Line  minimized jitter

- synchrone trigger for process data acquisition
- Transmitting the measured time difference
BiSS Line roadmap

• Presentation at the show SPS IPC Drives November 2016
• Evaluation boards
• iP-BLM
• iC-BLS
BiSS Line partner

• Fritz Kübler GmbH
  SPS IPC Drives 2016, Halle 7A Stand 506

• Schneider Electric GmbH
  SPS IPC Drives 2016, Halle 1 Stand 324

• FRABA GmbH
  SPS IPC Drives 2016, Halle 7A Stand 146

• BiSS User (n.n.)
BiSS Line conclusion

• Open standard
• 100 % BiSS C functionality and content
• Use of available hardware and sensors
• Robust transmission, FEC optional
• Minimized jitter for equidistant data acquisition
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