

Table of Contents

Foreword

1. What is an electrical connector?
2. Connector components
3. Different termination techniques
4. Insulator materials
5. Contact materials
6. Contact point 33
7. Various contact surfaces
8. Contact resistance
9. Shielding measures
10. Locking the plug connectors
11. Housing and mechanics
12. Why are new connectors being developed?
13. Connectors in power electronics
14. Connectors for high data rates
15. Processing of connectors in the production process
16. Connector selection

Expert contributions

1. Qualifying and evaluating connectors^
2. Press-fit technology
3. Whiskers in press-fit technology
4. Surfaces for press-fit pins
5. Component design for automated wire harness production
6. Materials for connector contacts
7. Contact physics
8. Surfaces for connector contacts
9. New high-performance coatings for connector systems
10. Technological challenges in the use of coaxial connectors at high data rates
11. USB-C - A plug connection, not just for USB applications!
12. M12 push-pull connector 209
13. Connectors for Single Pair Ethernet 213
14. Will Single Pair Ethernet replace the RJ45? 219
15. Connectors for new vehicle architectures and vehicle electrical systems 228
16. Quality assurance of the tightness of connectors in the production process 243
17. Developments for special applications
18. Thermal characteristic of a electrical connector
19. CAE simulation as a supporting tool in the development process for connectors
20. Modular connectors: Compact and flexible interfaces for production systems
21. Optical connectors for communication networks
22. Connector selection in the digital world
23. The somewhat different connection - wireless transmission

Closing words

Abbreviations

CVs of the authors

Bibliography

List of sources

Glossary