



- Supporting test preparation and drafting test plans
- Organising, coordinating, and conducting several, different tests
- Development phase tests
- Assistance for disturbance suppression
- Tests for product approval
- Supervising type-approval procedures
- Controlling and monitoring the test specimen via our TestProcessManager "TPM"

## Training and workshops

In addition to our test services, we share our expertise in different training and consulting programmes.

- EMC specialist workshops
- Individual training
- General support e.g. when preparing the EMC risk assessment

Contact us, we are happy to get you ready for your EMC test and certification.









# **FMC Test NRW GmbH** electromagnetic compatibility

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Independent EMC test laboratory and certification provider for electromagnetic compatibility

Accredited test laboratory Notified Body EMC Technical Service

(German Federal Motor Transport Authority KBA and Dutch authority RDW)







### Vehicles and vehicle components

#### Products:

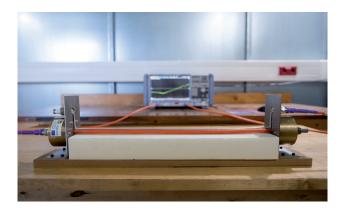
- Cars, trucks, busses, two- and three-wheeled vehicles, electric vehicles, industrial trucks, agricultural machinery, forestry machinery, construction machinery and more
- Control units, sensors, actuators, lighting systems, motors/drives, HMI, safety systems and more

#### Tests bases:

- Manufacturer's specifications (VW, BMW, Mercedes Benz, Ford, Jaguar, Land Rover, GM, Volvo, Renault, CNH, PSA and more)
- Directives and regulations (RL 2007/46/EG, VO (EU) 167/2013, VO (EU) 168/2013, UNECE R10 and more)
- Product standards (such as EN 13309, ISO 14982, ISO 13766)

## Electric mobility

- Measuring high-voltage/low-voltage decoupling
- Testing hybrid and e-vehicles in AC-DC charging mode
- Development and simulation of high-voltage dummy loads and peripherals for electric powertrain components
- Testing of AC and DC charging stations as well as wireless charging systems (WPT) and Mode 2 charging cables with ICCPD



## Rail vehicles and components

- Testing in compliance with product standards (EN 50121-series and EN 50155)
- Support with formal and technical aspects of EMC

## Shielding effectiveness

- Testing in compliance with OEM specifications and product standards (VW 80332, MBN 10284, LV 215, VG 95214 and more)
- Measuring the shielding effect of HV cables, connectors, and housing
- Determining the intrinsic shielding effectiveness of material samples in the TEM cell according to ASTM D4935
- Shielding effectiveness and (delta-) transfer impedance measurement using the parallel wire method
- EMC behaviour of communication channels for Ethernet connections BroadR-Reach
- Validation of shield concepts

# Medical technology

- Tests on medical electrical equipment (EN 60601-1-2, IEC TR 60601-4-2)
- Medical in-vitro diagnostic equipment (IVD) (EN 61326-2-6)



#### Industry

- Tests according to EMC Directive 2014/30/EU
- Tests according to technical standards and various product standards (EN 61800-3, EN 61326-1, EN 55011, IEC 61851-21-2 and more)
- Interference field strength at 3 m or 10 m antenna distance
- Conformity assessment by a Notified Body according to the German EMC Act

## Radio technology

- EMC testing of systems with radio interfaces acc. to Radioequipment Directive (RED) 2014/35/EU
- Support from our Bluetooth Qualification Consultant BQC

#### **EMF**

- Measurements to ensure the safety of personnel exposed to electromagnetic fields
- e.g. EN 50664, EN 50665, EN 62233, EN 62311

#### On-site testing

- Testing of oversized vehicles and systems and fixed installations
- Conformity assessment by a Notified Body according to the German EMC Act