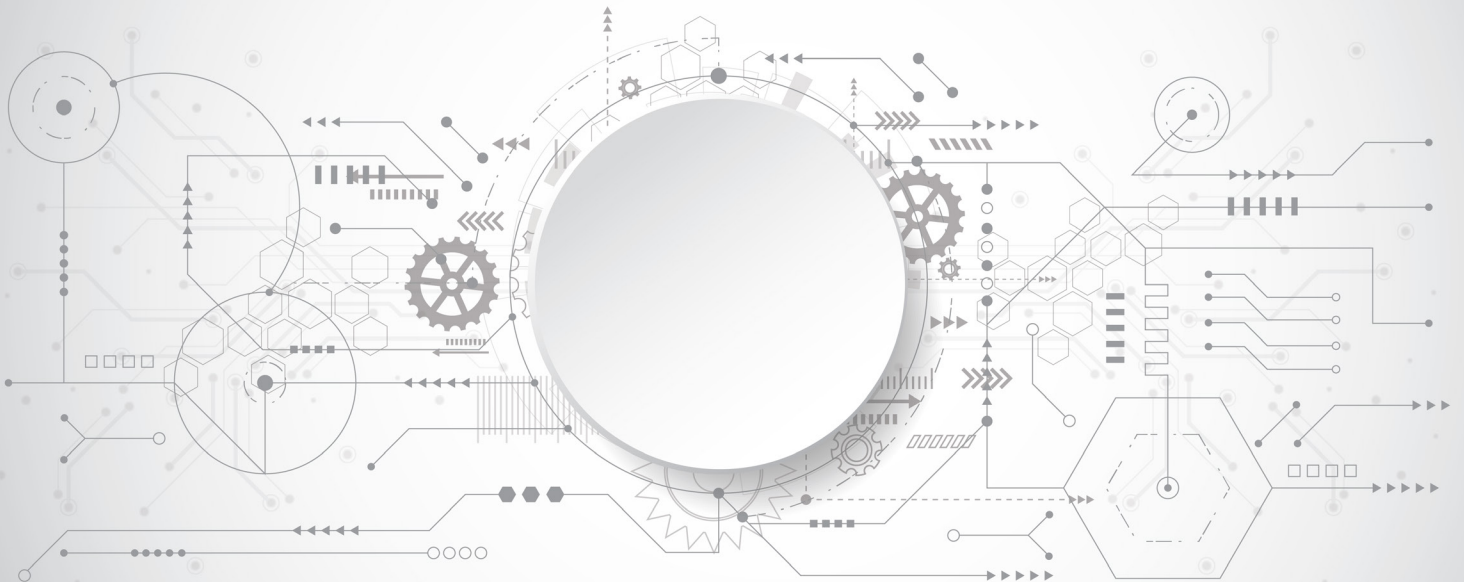




ELEKTRONIK
BEYOND CONNECTIONS



MD Group APPLICATION INSTRUCTION

Contents

1.	Application Area	2
2.	Use	2
3.	Product Properties	2
4.	Application-dependent Use	2
5.	Use in Safety-relevant Systems	3
6.	Installation and Auxiliary Means	3
7.	Flexibility of the Cable Material	3
8.	Watertightness	3
9.	Thermal and Chemical Resistance	4
10.	Coloring and Surface	4
11.	Use of Recyclates	4
12.	Customer Nominated Parts	4
13.	Warranty	5
14.	Development, Prototypes and Pre-series	5
15.	Military Use	5
16.	Marketability, Export and Re-export	5
17.	Protection Note	5
18.	Additional Notes	5

1. Application Area

Use of the products for data transmission and if applicable power transmission in vehicles (limitation to the maximum power and/or the values specified in the respective data sheet).

2. Use

The product is solely intended to be used in data transmission, infotainment and communication systems that are not safety-relevant in the vehicle interior. In case of waterproof connector systems, the use at exposed positions is permitted within the limits of the selected protection class.

3. Product Properties

The product properties result from the properties of the selected combination of different components and primary materials – especially cable material, connectors and electronic components – that are released by the customer, e.g. system supplier or OEM (“user”). These properties can be influenced or adversely affected by the following issues:

- technical processing (e.g. printing, hot stamping, overmolding, etc.),
- by the individual construction of the product (e.g. cable length, attaching labels, cable ties, fixing aids, etc.; assembly of ground clamps, ferrite cores, etc.),
- by common and unavoidable variations of processes and raw materials (e.g. different tolerance limits due to various suppliers, varying sheath thickness of the goods on reels, varying thermal properties of plastic granules or electronic components),
- the specific installation situation in the vehicle (for instance due to interactions with other electrical components, batteries, engines, etc.).

As a possible result, the suitability of the product for the vehicle-specific use over the entire transmission path has to be tested by the user.

4. Application-dependent Use

The serial use of the product is permitted only after the application-dependent testing by the user. Vehicle-specific testing of all product properties that are not explicitly specified in this application instruction as well as the suitability and functionality within the entire system is recommended.

5. Use in Safety-relevant Systems

The use of the product in safety-relevant systems, including the pure connection or linking of safety-critical components with this product, is exclusively permitted after MD ELEKTRONIK GmbH has expressly confirmed the requirements to be defined by the user. Included are also driver assistance systems, emergency communication systems and systems for detecting the vehicle condition, the vehicle occupancy as well as the driving and environmental situation. Please contact Application Engineering of MD ELEKTRONIK GmbH regarding the confirmation as early as possible.

6. Installation and Auxiliary Means

The product can be damaged by not allowed mechanical loads, especially tensile, torsional and kinking loads. During the installation of the product in the on-board power system or the vehicle, the corresponding MD handling instructions have to be observed. It is only allowed to move and install the product manually. The use of auxiliary means and tools (e.g. pliers, grippers, clamps, loops, etc.) is prohibited. In general, it is also prohibited to insert materials (especially greases, oils and other lubricants) into the product and/or into the mating connector or installation space cutouts intended for the connection/combination with the product. Only auxiliary means and tools that are explicitly indicated in the MD handling instruction are excluded from this rule, but only under the consideration of the requirements included in the MD handling instruction. The MD handling instructions are accessible online and will be made available also upon request.

7. Flexibility of the Cable Material

The cable material of the product is suitable for both the static and the flexible use, provided that the corresponding goods on reels are released for flexible applications by the cable material manufacturer. In case of the flexible use, the flexibility data of the cable material manufacturer has to be observed. The requirements of the MD handling instruction regarding bending radii and bending loads have to be strictly observed in case of both the static and the flexible use. In case of flexible installation situations with high stress or frequently recurring movement, the suitability of the product for the vehicle-specific use has to be tested by the user.

8. Watertightness

In general, connectors are not waterproof unless the drawing explicitly contains an information about watertightness. The watertightness can be adversely affected by an installation situation that does not comply with the specification such as a high level of thermal variations, mechanical loads (e.g. kinking, vibration) or by splash water, etc. If waterproof connectors are used, the user is responsible for testing the vehicle-specific suitability and the sufficient protection within the entire system.

9. Thermal and Chemical Resistance

The thermal resistance of the product depends on the weakest thermal resistance of the primary materials. The product does not have any special chemical resistance unless the drawing explicitly contains an information about chemical resistance. If the product is used in thermally or chemically sophisticated installation situations, the user is responsible for testing the vehicle-specific suitability and the sufficient protection within the entire system.

10. Coloring and Surface

It is only allowed to use the product in the vehicle interior visible for the end user ("visible part") if this is explicitly indicated on the drawing. Solely in case of visible parts the condition of the surface as well as a certain and even color shade are quality characteristics. For all other products, complaints due to surface defects, color deviations or color defects will not be accepted.

11. Use of Recyclates

The product can contain plastic parts which partly consist of recyclates. In general, MD ELEKTRONIK GmbH decides about the use of recyclates at its own discretion, but only if the product properties are not significantly changed due to this use. No claim arises for a certain percentage of recyclate or the non-use of recyclate.

12. Customer Nominated Parts

Components of the product that are stipulated or recommended by the customer, for which only one supplier is released by the customer or which were not freely selected by the MD Group due to other reasons ("customer nominated parts"), are solely assembled according to the regulations of the component manufacturer. Further applicable technical regulations, norms and standards are not separately verified and only observed if this was explicitly agreed and/or explicitly indicated on the drawing.

13. Warranty

Solely the properties and characteristics explicitly specified in this application instruction and in the corresponding sampling documents are warranted properties and characteristics whereby the influencing factors indicated above under "Product Properties" have to be also considered with regard to the warranty. Warranty exclusively refers to the condition when being delivered. Properties and characteristics that are not explicitly specified in this application instruction and/or in the corresponding sampling documents are deemed to be not agreed and not warranted. Properties and characteristics can be adversely affected or changed by handling, further processing and installation. In general, product properties qualified by the users have to be re-qualified by the users themselves.

14. Development, Prototypes and Pre-series

During the development, prototype and pre-series phases, characteristics and properties of the products delivered by the MD Group can change until the start of the series phase. Thus, all data has to be considered as preliminary until serial production starts.

15. Military Use

The military use of the product and/or the installation in defense products is/are not allowed. This also applies to so-called dual-use items as laid down in the Annex I of the Council Regulation (EC) No 428/2009.

16. Marketability, Export and Re-export

The product is marketable when being delivered within the country of manufacture and if applicable in the country of transfer by the MD Group to the direct purchaser. In case of a later transfer to a third country, solely the respective exporter is responsible for considering and observing the export and/or re-export regulations. The same applies to the marketability of the product in third countries.

17. Protection Note

If protectable information is transmitted in this application instruction or the related drawing, MD ELEKTRONIK GmbH reserves all rights for a patent and/or protective right application. Each power of disposition, including the right of reproduction and disclosure, is the sole property of MD ELEKTRONIK GmbH.

18. Additional Notes

Subject to errors and changes. The original version of this application instruction was created in German. Additionally, other language versions can be made available. If the contents of two language versions differ from each other, solely the original version applies.



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