

All dimensions are in mm; tolerances according to ISO 2768 m-H
 EMC-screening must be assured by chassis compartment. Control box manufacturer is responsible for EMC-screening.

Interface

side according to RN 066-02

Documents

Assembly instruction MA_D4V033
 Pinning instruction RN_053-01
 Test specification – HSD side RN 061-01

Preliminary

Material and plating**Connector parts**

Center contact

Material

Spring bronze

PlatingGold, 0.15 μm (Interface)Tin, min.1 μm (Crimp)

Outer contact

Brass

Nickel, 3-6 μm

Dielectric

PA12

Crimping ferrule

Spring bronze

Tin, 0.5-2 μm

Housing

PBT

Secondary lock

PBT

Electrical data HSD side

Impedance, even mode

 $\approx 32 \Omega$ common mode only

Impedance, differential mode

100 Ω differential signalling, for one pair or quad cable **shielded**

Frequency

DC to 2.0 GHz

Return loss

 ≥ 20 dB to 1.0 GHz ≥ 17 dB to 2.0 GHz

Insertion loss

 ≤ 0.1 dB @ 1.0 GHz

Skew (between signal contacts)

 ≤ 20 psec. (can be reduced by layout)

Nearend-Crosstalk

 ≤ 30 dB

Farend-Crosstalk

 ≤ 35 dB

Insulation resistance

 $\geq 1 \times 10^3 \text{ M}\Omega$

Signal contact resistance

 $\leq 10 \text{ m}\Omega$

Outer contact resistance

 $\leq 7.5 \text{ m}\Omega$

Test voltage

500 V rms

Working voltage

100 V rms

Test current capability at 80°C

 ≤ 1.5 A DC

Test current capability at 80°C MQS pins

 ≤ 5.0 A DC (dependent on mating connector and cable)

RF-leakage (shielding effectiveness)

 ≥ 75 dB up to 1 GHz (IEC 62153-4-7) ≥ 65 dB up to 2 GHz (IEC 62153-4-7)**Mechanical data HSD side**

Mating cycles

 ≥ 25

Engagement force each contact

 ≤ 30 N

Disengagement force each contact

 ≥ 5 N

Retention force latch

 ≥ 110 N

Coding efficiency

 ≥ 80 N**Environmental data**

Temperature range

-40°C to +105°C

Thermal shock

DIN IEC 60068-2-14 Test Na

Temperature and humidity

USCar 2 – 4 5.6.2

Vibration (Random)

DIN IEC 60068-2-64

Mechanical Shock

DIN IEC 60068-2-27

High-Temp. Exposure

DIN IEC 60068-2-2

2002/95/EC (RoHS)

compliant

Preliminary**Tooling**

Crimping tool

on request

Crimp insert

on request

Suitable cables

Cable type Dacar 535

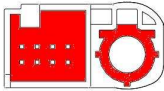
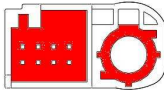
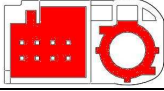
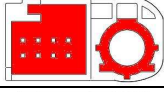
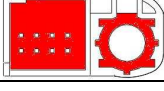
Packing

Standard TBD in Box
Weight 10.3 g/pce

Preliminary

Coding

Part Number has to be accomplished by codification

Standard coding	Plug	Colour	RAL	Part-Number
A (A+A)		graphite black	sim. 9011	99S15A-1D5A5-A
B (B+B)		creme	sim. 9001	99S15A-1D5A5-B
C (C+C)		light blue	sim. 5012	99S15A-1D5A5-C
D (D+D)		bordeauxviolet	sim. 4004	99S15A-1D5A5-D
Z		waterblue	sim. 5021	99S15A-1D5A5-Z

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Volker Pangritz	03/12/10	W. Lankes	29/11/11	100	11-v025	Volker Pangritz	29/11/11