

cable length [mm]			
Range length "A"	50 to 100	101 to 1000	1001 to 5000
Tolerance for "A"	±5	±10	±20

All dimensions are in mm; tolerances according to ISO 2768 C

General Information

MultiMag 6 cable assembly consisting of

Break-off plug with magnets
 Number and type of contacts 6 spring-loaded contacts

USB 2.0 cable
 USB-A connector

Color Black, similar RAL 9005

Available Versions

Type	Description
L99-029-XXX	Black, similar RAL 9005
L99-A0039-XXX	White, similar RAL 9010

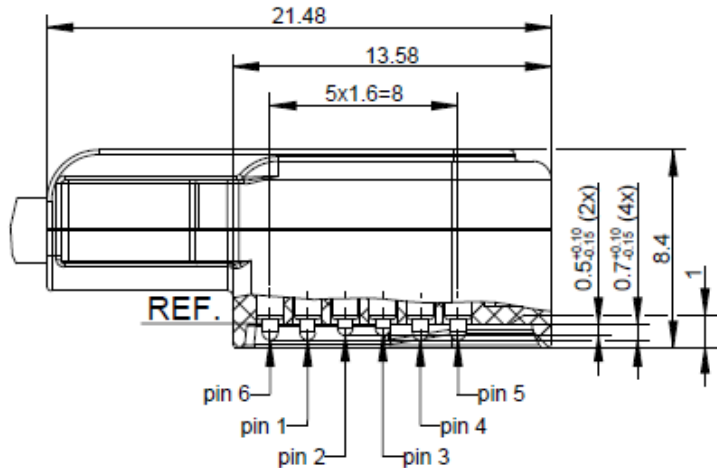
"XXX" = coding for length "A" in mm

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RF_35/09.14/6.2

Technical Data break-off plug

Belegungsplan / pin and cable table		
USB 2.0 A	Kabel / cable	Magnet-schnittstelle magnetic interface
pin 1	Rot / red	pin 1
pin 2	Weiss / white	pin 2
pin 3	Grün / green	pin 3
pin 4	Schwarz / black	pin 4
pin 5	--- / shell	pin 5
pin 6	--- / shell	pin 6



All dimensions are in mm; tolerances according to ISO 2768 C

Interface

Mating with

MultiMag 6 Receptacle

Material and Plating break-off plug

Connector parts

Housing bottom and top
Magnets

Material

PC+ABS
NdFeB

Plating / Color

Black, similar RAL 9005
Nickel plated

Spring loaded contacts

Piston
Ferrule
Spring

Material

Brass
Brass
Stainless steel wire

Plating / Color

Gold plated
Gold plated

Connectors

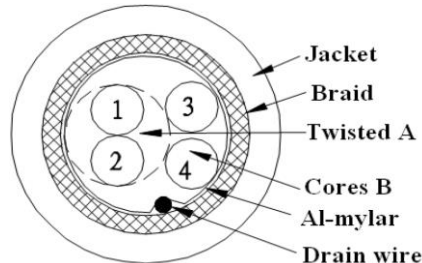
USB-A

According to USB 2.0 specification

Cable

USB 2.0 cable

According to USB 2.0 specification



Twisted pair (1, 2)

Stranded tinned copper wire with PE insulation

2x
28 AWG, Ø 0.40 mm
Ø 0.80 mm, green and white

Wire (3, 4)

Stranded tinned copper wire with PVC insulation

2x
28 AWG, Ø 0.40 mm
Ø 0.80 mm, black and red

Drain wire

Tinned copper

1x
Ø 0.127 mm

Foil coverage

Al mylar

Braid shield

Tinned copper

Jacket

TPE

Ø 3.40 mm

Electrical Data

Designed for USB 2.0 specification

5 V DC, 0.5 A

Maximum voltage

24 V DC

Maximum current

1 A

Test voltage

500 V DC

Insulation resistance

≥ 100 MΩ

Contact resistance

typically ≤ 50 mΩ

Mechanical Data

Magnetic disengagement force average ~ 8 N
 Mating cycles without load min. 5.000
 Expected Mating cycles with load:

Max. Voltage	Max. Current	Mating cycles
5.0 V DC	0.5 A	min. 5.000
12.6 V DC	1.0 A	min. 2.000
24.0 V DC	0.5 A	min. 800

Environmental Data

Temperature range -20 °C to +65 °C
 Magnets start losing their magnetic properties above 65 °C

Compliance

RoHS compliant



Packing

Standard 1 pc in plastic bag, 100 bags in box
 Weight Depending on cable length

Caution!

Magnets can impact the function of pace makers and implantable cardioverter-defibrillators (e.g. actuation of reed switch). Keep a minimum distance of 0.2 m (20 cm) between the magnetic connector and the implanted devices to prevent malfunction and danger to health.

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
M. Portenkirchner	23.01.15	T. Scheuerlein	23.01.20	c00	20-0163	S. Kirchhofer	23.01.20