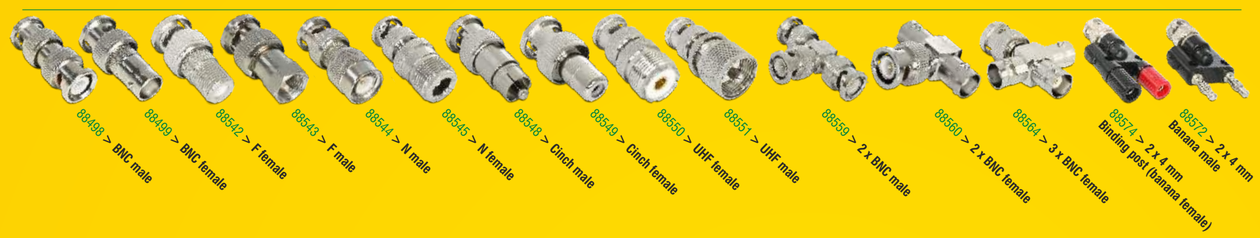
Adapters / Connectors

All adapters and connectors can be found here:
www.delock.com > Products > RRF radio frequency technology > Adaptors / Connectors

Adapter BNC

BNC male to:



BNC female to:

Connectors

These connectors can be attached to coaxial cables and can be connect with high frequency- / laboratory technology devices

- Material: nickel-plated brass
- For crimp installation

BNC male

88491 for RG 58/U

88492 for RG 59/U

88493 for RG 6/U

BNC female

88495 for RG 58/U

88496 for RG 59/U

88497 for RG 6/U

RF adapter

65610
Adapter
F female >
Coax plug

65618
Adapter
F male >
Coax plug

65616
F male for
cable with
Ø 5 mm

88411
Adapter
RP-SMA female >
RP-TNC male

Caps

These caps can be mounted on antenna jack or plug in order to protect them against dirt and splash.

88488 for SMA / RP-SMA female

88714 for SMA male

88489 for BNC female

88717 for BNC male

88490 for N female

88716 for N male

88715 for F female

88718 for TNC male

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without password in
desired quantity

www.delock.com > Infothek > Catalogs & Flyers

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www.delock.com

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RF Cables

All RF Antenna cables can be found here:
www.delock.com > Products > RF radio frequency technology > Antenna cable

88409 - 50 mm 88340 - 200 mm
88379 - 350 mm 88408 - 500 mm
RP-SMA female for installation > MHF male U.FL compatible

88419 - 200 mm
88417 - 350 mm 88418 - 500 mm
SMA female for installation > MHF male U.FL compatible

88430 - 2 m
88431 - 5 m 88432 - 10 m
antenna extension cable RP-SMA male > RP-SMA female CFD200 low loss

88443 - 2 m
88444 - 5 m 88445 - 10 m
antenna extension cable SMA male > SMA female CFD200 low loss

88458 - 100 mm
RP-SMA female for installation > MHF male U.FL compatible **splashproof**

88464 - 200 mm
RP-TNC female for installation > MHF male U.FL compatible **200 mm, splashproof**

88467 - 100 mm 88465 - 200 mm
RP-SMA female for installation > CRC-9 male 90°

88468 - 100 mm 88466 - 200 mm
SMA female for installation > CRC-9 male 90°

88648 - 3 m 88649 - 5 m
SMB male > SMB female RG-174

88660 - 2 m
88661 - 5 m 88662 - 10 m
SMA female > SMA female LMR195

88471 - 120 mm
SMA male > MMCX male 1.13

88472 - 320 mm
RP-SMA female for installation > MCX 90°

88473 - 125 mm
FME male > SMB female

88474 - 70 mm
88647 - 3 m 88646 - 5 m
SMA male > SMB male

88475 - 320 mm
RP-SMA male > RP-SMA male

88483 - 200 mm
RP-SMA female for installation > TS-9 male

88484 - 200 mm
SMA female for installation > TS-9 male

88487 - 145 mm
SMA female for installation > TS-9 male 90°

88592 - 200 mm 88593 - 1 m
88594 - 3 m 88595 - 5 m
FME female > FME female RG-174

88596 - 200 mm 88597 - 5 m
SMA male > FME female RG-174

88651 - 3 m 88650 - 5 m
SMB male > FME female RG-174

88631 - 5 m 88632 - 200 mm
FME female > FME male RG-174

88633 - 200 mm
88634 - 2 m 88635 - 5 m
SMB male > MCX male RG-174

88656 - 2 m
88657 - 5 m 88658 - 10 m
RP-SMA male > RP-SMA male LMR195

88682 - 3 m 88683 - 6 m
N male > N female LMR195

88680 - 1 m 88681 - 3 m
N male > N male

88467 - 1 m
RP-SMA female for installation > MC-Card male 90° splashproof

88468 - 1 m
SMA female for installation > MC-Card male 90° splashproof

88684 - 1 m
88685 - 1,5 m 88686 - 3 m
RP-SMA male > N female LMR195 low loss

RF cable find faster easily: Delock Cable Tool

www.delock.com > Infothek > Cable Tool

DELOCK®
we move the world

RADIOFREQUENCY TECHNOLOGY

The ideal solution for users of

SAT / TV Technology
High Frequency Technology
Laboratory Equipment
Measurement
Mobile radio
Wireless LAN

Large antenna overview

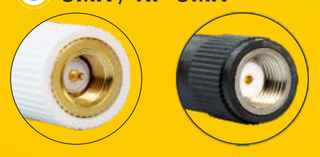
Scale 1:2

Connectors / Adapters / Cables

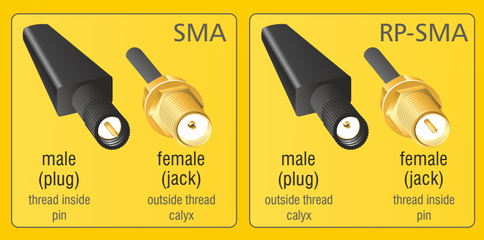
RF Connectors – their characteristics and use

- Coaxial connectors for radio frequency applications; coaxial = neutral, surrounded by shielding
- Low electromagnetic interference and good electrical shielding

SMA / RP-SMA



SMA RP-SMA



- Standard antenna connection
- For high-frequency applications from 1 GHz to ca.16 GHz
- With screw thread
- Defined wave impedance 50 ohm

SMA: LTE / GSM / UTMS antennas
RP-SMA: WLAN antennas

RP-SMA (Reverse Polarity-SMA) was developed to avoid unauthorized access of a stronger antenna. The RP-SMA connector also has a female thread, but unlike SMA, which has a pin in the middle, RP-SMA has a cup in the middle (see picture). As a result, an SMA antenna connector is mechanically compatible with an RP-SMA jack, but not electrically compatible.

N-male

- Professional antenna connection
- For high frequency applications up to ca. 11 GHz
- Used for frequencies up to microwave region (range)
- With screw thread
- Defined wave impedance of 50 ohm

N-male WLAN outdoor antennas

A solid outer conductor provides a higher mechanical precision and avoids dirt and damage, thus antennas with N connectors are splash-proof and maintain their position against high wind speed.

TNC / RP-TNC

- Robust antenna connection
- For high frequency applications up to ca. 11 GHz
- With screw thread
- Defined wave impedance of 50 ohm

TNC / RP-TNC: WLAN antennas

The RP-TNC is a special form of the TNC connector with reversed inner part.
TNC / RP-TNC antennas are provided with a screw thread and can be installed stable, e.g. in vehicles that are exposed to strong vibrations.

BNC

- For high frequency applications up to ca. 1 GHz
- With bajonet lock
- Defined wave impedance of 50/75 ohm

BNC: Measurement Devices, Video, Digital Video

The bajonet lock ensures a quick and easy usage, e. g. for oscilloscopes, measurement devises or frequency generator BNC connections are also used to transfer weak direct currents, low frequency alternating currents and impulses in laboratories.
High frequency signals are transferred in the video sector.

F-male

F: TV Satellite Technology

- SAT / TV connection
- For high frequency applications up to about ca. 5 GHz
- With screw thread
- Defined wave resistance impedance of 75 ohm

MHF (I-PEX)

U.FL (Hirose) compatible

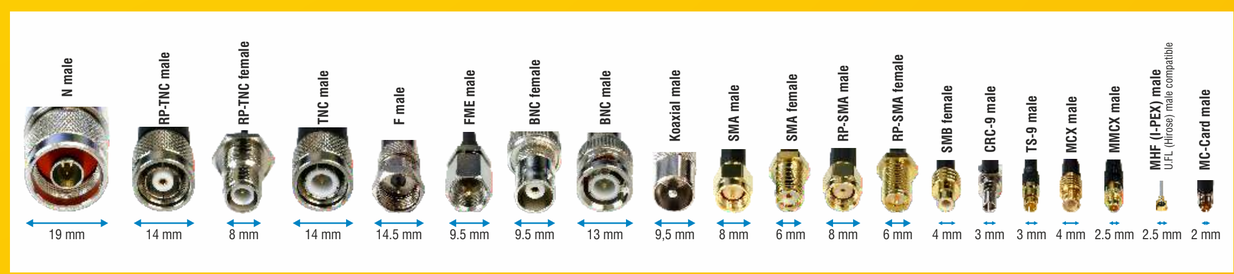
- Miniature coax connection
- For high frequency applications up to 6 GHz
- Defined wave impedance of 50 ohm

MHF: GPS, GSM, WiFi, antennas in mobile devices such as smartphone, tablet, etc. mini PCIe cards in embedded systems

Due to their small size, I-PEX MHF connectors are often used for small and portable devices.
Delock is using the I-Pex MHF plug for its own products, which is compatible to the Hirose U.FL connector, thus providing powerful but cost efficient solutions.

RF Connectors – compared

Scale ca. 1:1 (all millimeter data are only approximate values for size comparison)



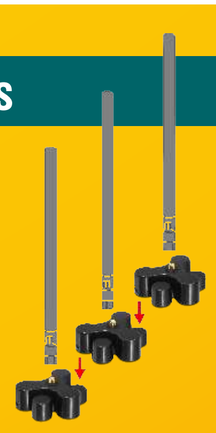
Stands for antennas

88439
RP-SMA

- Stand: RP-SMA female
  Cable: RP-SMA male
- Cable length: ca. 1 m RG 174 cable
- Operating temperature: -10°C ~ 55°C
- ABS UV resistant

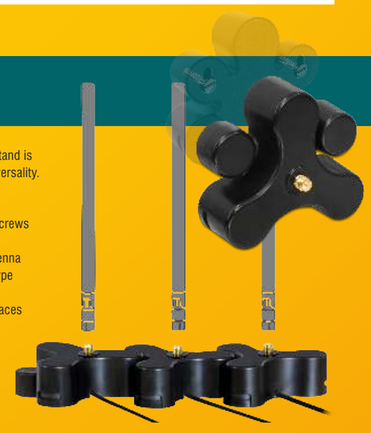
88440
SMA

- Stand: SMA female
  Cable: SMA male
- Cable length: ca. 1 m RG 174 cable
- Operating temperature: -10°C ~ 55°C
- ABS UV resistant



This practical antenna stand is characterized by its universality. It can be used:

1. on the wall fixed by screws
2. standing on the table
3. with one or more antenna stands of the same type cascaded to an array
4. sticking to metal surfaces by magnetism



scale ca. 1:2

Number
RF
Length
Gain dBi
Features

omnidirectional
directional
flexible joint
splash protected
magnetic stand
with connection cable
outdoor

88393
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
195 mm (with flexible joint)
165 mm (without flexible joint)
5 dBi
black
Ø 12.5 mm
RP-SMA

88394
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
89 mm
2 dBi
black
Ø 10 mm
RP-SMA

88395
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
108 mm (with flexible joint)
82.5 mm (without flexible joint)
2 dBi
black
Ø 10 mm
RP-SMA

88396
WLAN
802.11 b/g/n
2.4 GHz
200.3 mm (with flexible joint)
167.8 mm (without flexible joint)
5 dBi
black
Ø 12.5 mm
RP-SMA

88397
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
177 mm
5 dBi
black
Ø 12.5 mm
RP-SMA

88449
WLAN
802.11 b/g/n
2.4 GHz
286.3 mm (with flexible joint)
254 mm (without flexible joint)
7 dBi
black
Ø 13.5 mm
RP-SMA

88450
WLAN
802.11 b/g/n
2.4 GHz
384.1 mm (with flexible joint)
352.1 mm (without flexible joint)
9 dBi
black
Ø 13.5 mm
RP-SMA

88461
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
158.4 mm (with flexible joint)
125.9 mm (without flexible joint)
3 dBi
black
Ø 13.5 mm
RP-SMA

88460
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
137.7 mm (with flexible joint)
109.7 mm (without flexible joint)
2 – 4 dBi
white
Ø 10 mm
RP-SMA

88412
WLAN
802.11 b/g/n
2.4 GHz
77 mm
2 dBi
white
Ø 13.4 mm
RP-SMA

88410
WLAN
802.11 b/g/n
2,4 GHz
298 mm (with flexible joint)
260 mm (without flexible joint)
6.5 dBi
1 m
black
Ø 7 mm
RP-SMA

88413
WLAN
802.11 b/g/n
2,4 GHz
200 mm (with flexible joint)
165 mm (without flexible joint)
4 dBi
1 m
black
Ø 7 mm
RP-SMA

88454
WLAN
802.11 b/g/n
2.4 GHz
510 mm
8 dBi
white
with bracket
Ø 15.6 mm
N

88447
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
90 x 120 x 13 mm (with flexible joint)
90 x 95 x 13 mm (without flexible joint)
5 – 7 dBi
black
180°
90°
Ø 12.9 mm
RP-SMA

88448
WLAN
802.11 b/g/n
2.4 GHz
90 x 120 x 13 mm (with flexible joint)
90 x 95 x 13 mm (without flexible joint)
7 dBi
black

88452
WLAN
802.11 b/g/n
2.4 GHz
183 mm
2.5 dBi
white
Ø 22 mm
N

88462 NEW
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
172.3 mm
2 dBi
black
Ø 14.5 mm
RP-TNC

88463 NEW
WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
172.3 mm
2 dBi
black
Ø 14.5 mm
TNC

88455
WLAN
802.11 b/g/n
2.4 GHz
122 x 122 x 47 mm
7.5 dBi
grey

88456
WLAN
802.11 b/g/n
2.4 GHz
210 x 210 x
73 mm
12.5 dBi
grey

88457
WLAN MIMO
802.11 b/g/n
2.4 GHz
210 x 210 x 73 mm
13 dBi
grey

Ø 15.6 mm
N
without scale

outdoor antennas

internal antennas
Miniature RF Coaxial
MHF (I-PEX), U.FL (Hirose) compatible

WLAN
802.11 b/g/n
2.4 GHz
-5 dBi
86135 **60 mm**
86136 **60 mm**
86137 **75 mm**
86151 **200 mm**

WLAN
802.11 a/b/g/n
Dual Band
2.4 GHz /
5.8 GHz
-4 dBi
86214 **134 mm**
NEW

Ø 2.5 mm
without scale

88453
LTE
GSM
UMTS
LTE Band 1/2/3/4/5/
8/9/10/25
183 mm
2.5 dBi
white
Ø 22 mm
N

88415
LTE
GSM
UMTS
LTE Band 1/2/3/
4/8/9/10/25
77 mm
0 – 1 dBi
black
Ø 13.4 mm
SMA

88423
LTE
GSM
UMTS
LTE Band 1/2/3/
4/8/9/10/25
77 mm
0 – 1 dBi
white
Ø 13.4 mm
SMA

88436
LTE
UMTS
LTE Band
1/2/3/4/
9/20
296.1 mm (with flexible joint)
270 mm (without flexible joint)
0,1 – 4.5 dBi
black
Ø 13 mm
SMA

88437
LTE
UMTS
LTE Band
1/2/3/4/
5/9/20
296.1 mm (with flexible joint)
270 mm (without flexible joint)
0,1 – 4.5 dBi
black
Ø 13 mm
RP-SMA

88438
LTE
GSM
UMTS
LTE Band 1/2/
3/4/5/9/20
137.7 mm (with flexible joint)
115 mm (without flexible joint)
-0.1 – 2.5 dBi
black
Ø 10 mm
SMA

88424
LTE
GSM
UMTS
LTE Band 1/2/3/
4/5/8/9/10/25
163.1 mm (with flexible joint)
137 mm (without flexible joint)
1 – 3.5 dBi
white
Ø 13.5 mm
SMA

88416
LTE
GSM
UMTS
LTE Band 1/2/3/
4/5/8/9/10/25
163.1 mm (with flexible joint)
137 mm (without flexible joint)
1 – 3.5 dBi
black
Ø 13.5 mm
SMA

88451
LTE
GSM
UMTS
LTE Band 1/2/3/4/7/
9/10/13/14/17/20/25
163.1 mm (with flexible joint)
137 mm (without flexible joint)
1 – 4 dBi
black
Ø 13.5 mm
SMA

88428
LTE
GSM
UMTS
LTE Band 1/3/7/
9/20
197.1 mm (with flexible joint)
167 mm (without flexible joint)
-0.9 – 2.3 dBi
black
Ø 13.5 mm
RP-SMA

LTE – Long Term Evolution

LTE, Long Term Evolution, is the new mobile radio standard that offers data transfer rates of up to 100 Mb/s which is its predecessor UMTS (3G standard). The various Delock LTE antennas cover these frequency ranges and are compatible with an RP-SMA or SMA connector. The rotating flexible joint also allows an optimal reception.

LTE devices are able to send and receive data in these four frequency ranges:

LTE Band 1
1920 – 2170 Mhz

LTE Band 3
1710 – 1880 Mhz

LTE Band 7
2500 – 2690 Mhz

LTE Band 20
791 – 862 Mhz

NEW

ZigBee

The new antennas are now available at Delock

88476

This MIMO LTE antenna can be installed indoors or outdoors and covers all four LTE bands.

LTE Quad Band 20 / 1 / 3 / 7 MIMO Antenna SMA 2 – 4 dBi Omnidirectional Outdoor Low loss cable

NEW

- 790 – 870 MHz, 1710 – 2690 Mhz
- 2 dBi, 4 dBi
- Linear vertical polarization
- 50 ohm
- VSWR: 2.5:1
- 2 x SMA plug
- Dimensions: 239.4 x 176 x 35 mm
- Cable length: 2 x 5 m
- Operating temperature: -10°C – 55°C
- ABS UV protected
- Incl. pole and wall mounting kit
- Incl. low loss cable CFD200