FEINMETALL
Contact Technologies



RADIO FREQUENCY TESTING

Test in any application

> FEINMETALL.COM

DIVERSE & INNOVATIVE

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OUR EXPERTISE

Competence

FEINMETALL is your partner for the reliable contacting of electronic components. The wide range of applications for spring contact probes includes board tests with fine centers up to wire harness and connector tests or high-current applications with individual and intelligent solutions.

Innovative capacity
Since more than 60 years FEINMETALL represents a high level of innovation. Many patent-registered solutions have been mile-stones in the world of test engineering.

Broad competence in-house
The development and manufacturing of spring contact probes, special contact solutions and Semiconductor Test products in one company are a wide basis for our competence in precision technology and micro-mechanics. This combination is unique at the market and represents “German Technology” at its best.

International customer service
We are operating in a high-tech industry that presents us with constantly increasing demands. At FEINMETALL, we understand these demands and manage to adapt our processes accordingly. With 15 subsidiaries worldwide and a strong network of well trained partners we are always connected closely to the markets and to our customers, wherever they are. Local stocks and special customs certificates provide a high delivery performance.
(e.g. AEO - Authorised Economic Operator).

Quality

Quality controls all process steps at FEINMETALL. From product development and construction up to manufacturing and delivery all operation steps are perfectly aligned.

FEINMETALL is certified according to DIN ISO 9001. Additionally a wide range of measures like e.g. risk analysis by FMEA during the whole product development process ensure a maximum of technical as well as delivery reliability.

Environment and health protection
FEINMETALL is committed to the goals of the up-to-date legislation regarding environment as well as health protection and conformance to all necessary measures. The current statements regarding the various European environment and health regulations are available on our homepage.

Customer focus
Our engineers and technicians work closely together with our customers and have a deep knowledge of the practical applications. Our know-how is your advantage!

FM Choice

What is FM Choice?

FM Choice is our specially curated selection of the most reliable and frequently used probes in the market. Based on our expertise and experience, we have pre-selected the top-performing probes, so you don’t have to choose from hundreds of options. With FM Choice, we make your decision easier by offering the most trusted solutions that meet your needs.

One of the greatest advantages of FM Choice is high availability and fast delivery, as we can often ship directly from our stock. This enables us to meet your demands whenever you need them. Plus, FM Choice offers competitive pricing, even for smaller quantities, making it an attractive solution for all kinds of projects.

Our portfolio includes over 700 contact probes for pitches between 6 and 100 mil, covering a wide range of applications and ensuring we meet most technical requirements quickly and efficiently.

Benefits at a glance



Most trusted solutions



Competitive prices



Fast delivery & high availability

Discover FM Choice products online

With our new Product Finder, we offer you a complete overview of all FM Choice products that you can easily search through. This high-performance tool allows you to search for specific products and compare them based on their technical features.

In addition to the FM Choice products, we invite you to explore the other categories to discover our complete product portfolio. Start your selection now and experience the variety and quality of our products.

> FEINMETALL.COM/PRODUCT-FINDER

ELECTRICAL INFORMATION

Electrical conductivity
In a contact probe the primary current flow typically leads through the plunger, the barrel and the receptacle. A secondary current flow leads through the plunger, the spring and the barrel. The transition points cause certain transfer resistances that are influenced by the following factors:

- Conductivity of the base material
- Conductivity of the plating material
- Condition of the surface of the probe
- Size of the contact surface
- Contact forces at the transition points

FEINMETALL is taking measures to guarantee a constant low contact resistance during the whole lifetime of the probes. The maximum continuous currents (referred to the FEINMETALL standard high current test) and the typical resistances of each probe are shown in the data sheets. A pulse current can be higher depending on pulse and rest time, cooling and various other influences.

Max. Operating voltage
Voltmeters must always be connected in parallel with the electrical device or component on which the voltage is to be measured. This is necessary in order to measure the voltage applied to this component, because for the parallel connection the voltage in both branches is the same.
If the user operates our probes with a higher voltage than defined by DIN VDE 0100, part 410 as low voltage not dangerous to touch, *FEINMETALL does not assume any liability. Furthermore, the user himself is obliged to determine and implement the legally required protective measures for people and equipment.*

Temperature operating range
Depending on the electrical load, self-heating occurs as a result of power loss. The permissible environmental temperature decreases accordingly (derating). Exposure to additional loads such as high humidity, rapid and extreme temperature changes (thermal shock) and extreme loads (e.g. far above nominal travel) can lead to a shortened lifetime. For high current applications where temperature can rise up to +200°, our FEINMETALL High current products are designed to withstand this challenge and remain constant performance.

Electrical protection class
According to VDE0100 part 410, our probes are only to be operated with low voltage that is not dangerous to touch (25 V rms AC, 60 V DC). These values include all occurring surge voltages, e.g. due to overvoltage, switching peaks, etc.

If the user operates our probes with a higher voltage than defined by DIN VDE 0100, part 410 as low voltage not dangerous to touch, FEINMETALL does not assume any liability. Furthermore, the user himself is obliged to determine and implement the legally required protective measures for people and equipment.

Dielectric / electric strength of bipolar probes
The dielectric strength (usually stated in kV/mm) of an insulator is the maximum electric field strength that may prevail in the material (including air) without a voltage breakdown (arc or spark) occurring. The creepage distances must be much longer, especially when exposed to dirt and moisture. The dielectric strength depends on the geometry of the probe, the material (dielectric), the ambient conditions and the degree of contamination. This comes into play in all our products with electrically insulating functions, e.g. switching probes, switching receptacles, combination receptacles, coaxial probes and insulating caps.

TEST APPLICATIONS

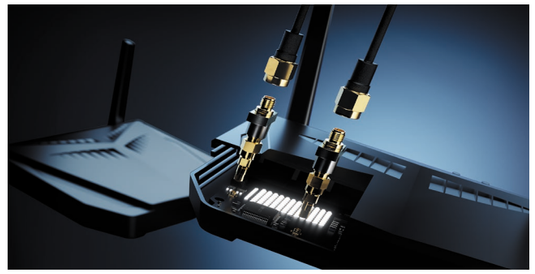
Automotive

The RF automotive sector is concerned with testing the function of electrical-components in the automotive sector. For this purpose, the automotive-specific connectors are contacted (Fakra, mini-Fakra, HSD, MateNet and H-MTD). Examples of DUTs are ECUs, antennas, cameras.



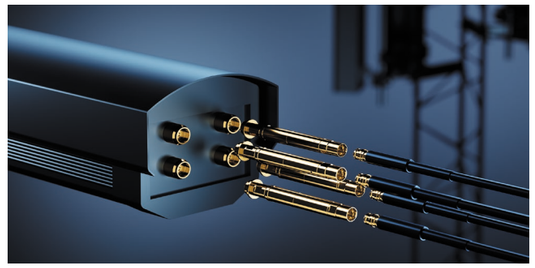
Consumer

We offer RF-Probes for validating all different kinds of electronic devices in the consumer electronic area. This includes test-solutions for micro- and switch-connectors and PCB-Pads.



Industrial

The 5G/Industrial-sector is using a huge variety of different coaxial-connectors. Feinmetalls portfolio covers test-solutions for every standard-connector for the highest frequencies.



Accessoires

We offer a comprehensive selection of tools and accessories specifically designed for the assembly and maintenance of contact probes and receptacles. These tools and accessories ensure precise installation and guarantee flawless contact functionality.



OVERVIEW OF RF-CONNECTORS

Automotive Connectors

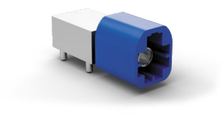
H-MTD-MALE



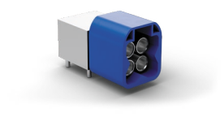
H-MTD-FEMALE



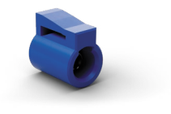
HFM-MALE



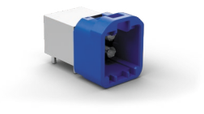
HFM-MALE (4-FOLD)



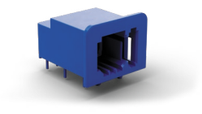
HFM-FEMALE



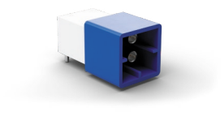
MATE-AX-MALE (4-FOLD)



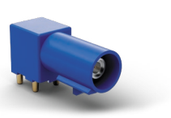
MATE-NET-MALE



KET MINIFAKRA-MALE



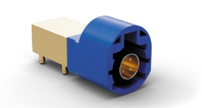
FAKRA-MALE



FAKRA-FEMALE



HSD-MALE

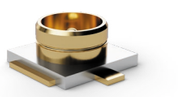


HSD-FEMALE



Communication Connectors

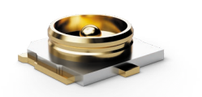
U.FL-MALE



MHF4-MALE



MHF5-MALE



HSC-MALE



SWD-SWITCH



SWF-SWITCH



SWG-SWITCH



SWJ-SWITCH



Communication Connectors

SWH-SWITCH



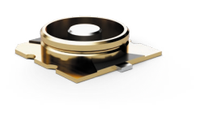
JSC-MALE



KSC-MALE



LSC-MALE



Industrial Connectors

BMA-MALE



BNC-FEMALE



GT16-MALE



MMBX-FEMALE



MMCX-FEMALE



RF-MALE



QMA-FEMALE



R-TNC-FEMALE



FME-MALE



SMA-FEMALE



R-SMA-FEMALE



SMB-MALE



SMB-FEMALE



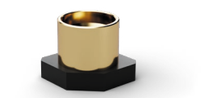
SMC-MALE



mSMP-MALE / SSMP / GPPO



SMP-MALE



OVERVIEW OF TIP STYLES

01 
Conical 90°

02 
Conical 90° stepped

03 
Conical 60°

04 
Conical 60° stepped

05 
Concave stepped

06 
Serrated stepped

07 
Hexagonal 90° stepped

08 
Hexagonal 60° stepped

09 
6-point crown stepped

10 
Flexible needle

11 
Spherical

12 
Spherical stepped

14 
4-point crown stepped (self-cleaning)

15 
Triangular 45° stepped

16 
Flat

17 
Flat stepped

18 
Conical 30°

19 
Flat stepped with lens

20 
4-point crown stepped (self-cleaning)

21 
4-point crown (self-cleaning)

22 
Special version for contacting into conn.-housings

27 
Conical 120° stepped

28 
4-point crown stepped

29 
4-point crown

30 
Triangular 45°

31 
Flat stepped with drill hole

32 
Rigid needle 10°

33 
Square lance 38°

34 
Rigid needle 15° stepped

35 
3-point crown stepped (self-cleaning)

36 
6-point crown stepped, middle pin longer

37 
4-point crown stepped

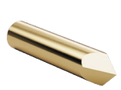
38 
Square lance 140°

39 
Conical flat 30°

40 
6-point crown

41 
6-point crown stepped (self-cleaning)

42 
5-point crown stepped

43 
Square lance 90°

44 
Rigid needle with eccentric-cut

45 
Conical 120° with eccentric-cut

46
W-profile

47
Square 70°

50
Concave with drill hole stepped

51
Concave Head with special type inside

52
Concave stepped & annular spring inside

53
Square lance 55°

54
Square lance stepped

55
Concave stepped (self-cleaning)

60
3-point crown stepped

61
Special Head for VG Connectors (female)

62
Triangular 30°

63
8-point crown stepped (self-cleaning)

64
Mini-serrated stepped

65
Conical 45°

66
Serrated stepped (self-cleaning)

67
3-point needle stepped

68
6-point crown stepped, with middle pin

70
Hexagonal 90° stepped

90
Rolling ball

Spade versions

71
Half Moon

72
Half Crown

80
SpadeØ < plungerØ

81
SpadeØ < plungerØ stepped

82
SpadeØ = plungerØ

83
SpadeØ > plungerØ

84
SpadeØ > plungerØ stepped

85
Square Spade

86
Square Spade not centric

89
Special version of spade tips

Special versions

A
Silver alloy for high current

IK
Insulating cap

11 SP
Step Probe

12 SP
Step Probe with round plate

IP
Insulating pin

17K
Synthetic head

17K
Synthetic head with slot

17H
Synthetic head with slot and metall ring

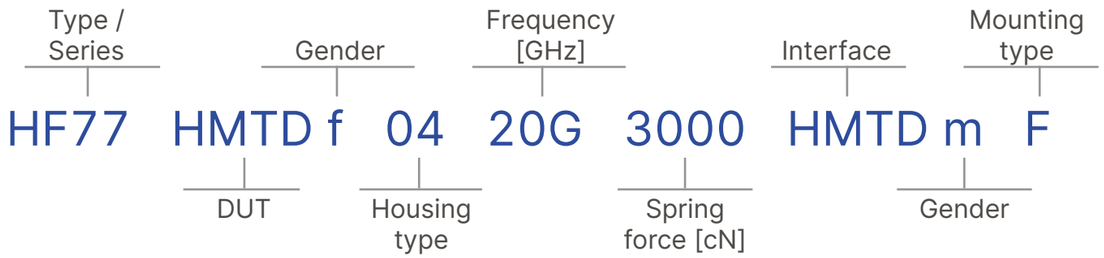
17
Metall head with slot

17T
Metall head insulated with slot

NUMBER CODE SYSTEM

Explanation of our product names for Radio Frequency Probes

In order to improve the clarity of the material code, the self-explanatory it has been partially further developed. The currently valid number code is shown below.



DUT

Connector e.g. H-MTD, FAKRA, HSD...

Gender

m = Plug (Male)
f = Jack (Female)

Housing type

01 = 1-fold (Single)
02 = 2-fold (Double)
04 = 4-fold (Quad)
06 = 6-fold (Six)

Frequency

20 = 20 GHz

Spring force

4080 = 4080 cN

Interface

Connector e.g. H-MTD, MCX, mSMP...
m = Plug (Male)
f = Jack (Female)

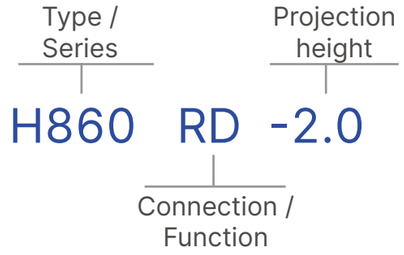
Mounting type

P = Pluggable
S = Screwable
F = Flange

NUMBER CODE SYSTEM

Explanation of our product names for receptacles

In order to improve the clarity of the material designations, the self-explanatory number code has been partially further developed. The currently valid number code is shown below.

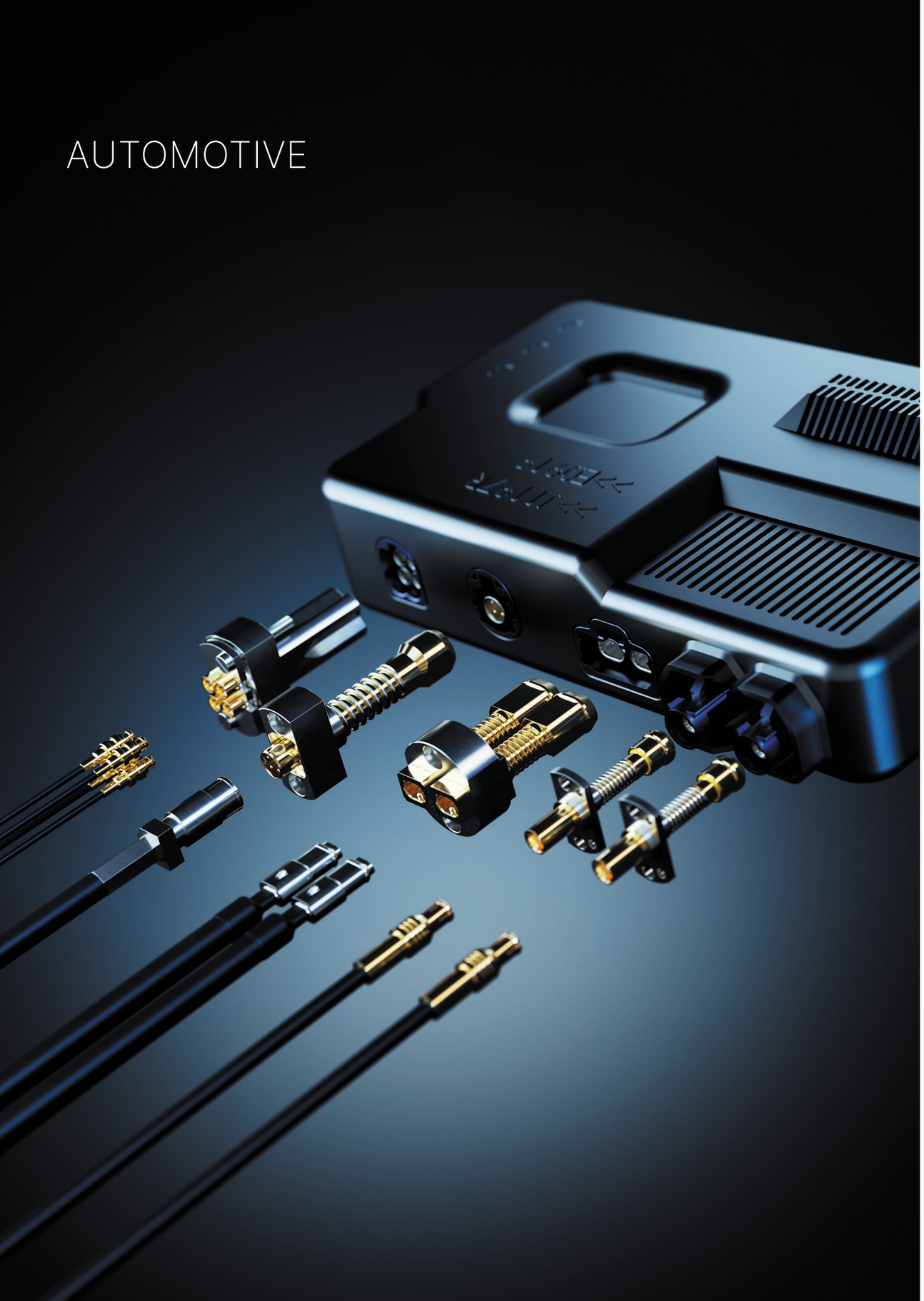


Connection / Function

FL = Floating function
RD = With knurl
KB = Combi receptacle
SH = With switch function
CR = Crimp
LA = Solder
WW = Wire wrap
WR = Round pin
WL = Wireless

Projection height (optional)

2.0 = 2.0 mm
7.6 = 7.6 mm
10.0 = 10.0 mm

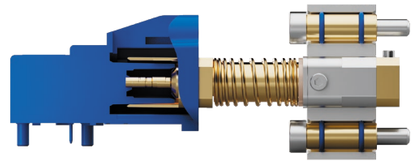


NEW OPTIMIZED HMTD

Based on several years of experience and customer feedback we developed our HMTD-solution further to what we think is the best solution in the market. Versions for all standard and special housing types are available.

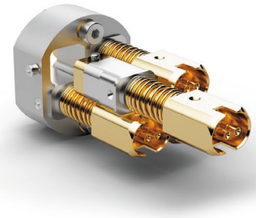
Floating-mechanism

The integrated compensation of misalignments has been optimised by implementing a 2-stage-centering. In addition to the floating-mechanism inside the flange each probe has an individual wobbling-function. This feature will increase your FPY significantly and at the same time the risk of damage or wear-off is reduced.



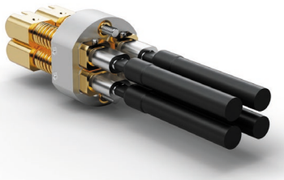
Exchange of Contact Probes

It is now possible to remove individual probes out of the flange for maintenance reasons. With this new feature you can reduce the costs per test even more, adding to your competitiveness.



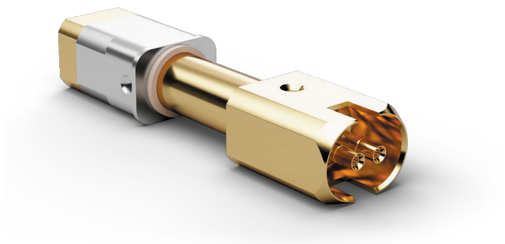
Connection

The probe has a HMTD-interface. The cables can be secured reliable in the interface via grub-screws. You always have a reliable connection to your test-system, even with dynamic movements.



Optimized RF-performance

The new generation of our HMTD-probes has an even better RF-performance. All probes are suitable for frequencies up to 20Ghz. This performance ensures reliable functional testing for the most complex ADAS-functions.



HMTD MALE - HF77

20 GHz | H-MTD Male 1-fold or GEMnet

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	2x Signal	1x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

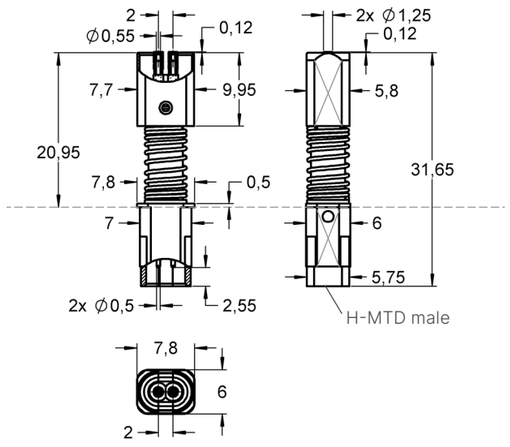
Accessories

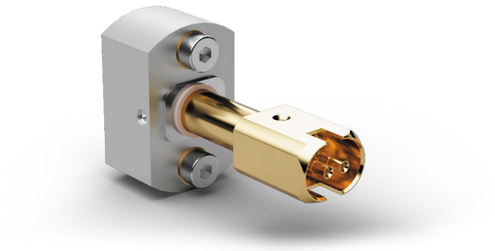
1170468	F07751B135G115	Inner pin
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1170426	HF77HMTDm0120G750HMTDmP

Series drawing

All measurements are in mm.





HMTD MALE - HF77

20 GHz | H-MTD Male 1-fold or GEMnet

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	2x Signal	1x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

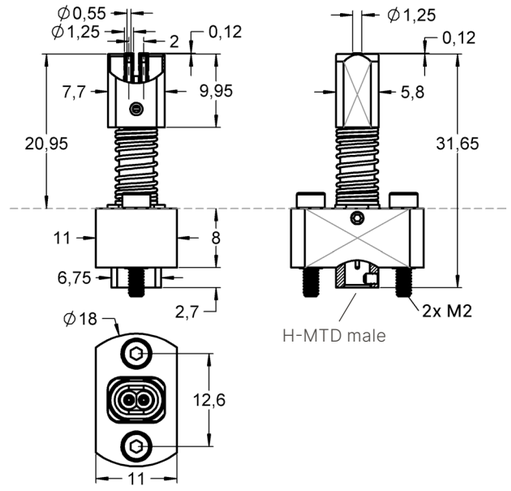
Accessories

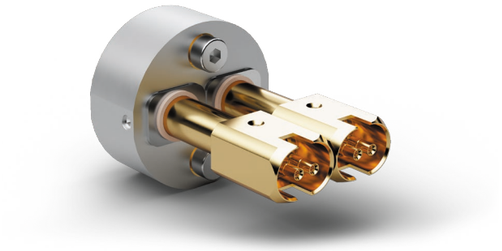
1170468	F07751B135G115	Inner pin
1170426	HF77HMTDm01-20G750HMTDmP	Basic HF Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1170659	HF77HMTDm0120G750HMTDmF

Series drawing

All measurements are in mm.





HMTD MALE - HF77

20 GHz | H-MTD Male 2-fold or GEMnet

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	4x Signal	2x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

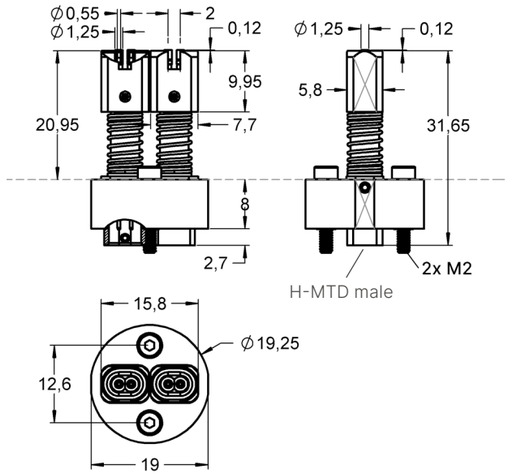
Accessories

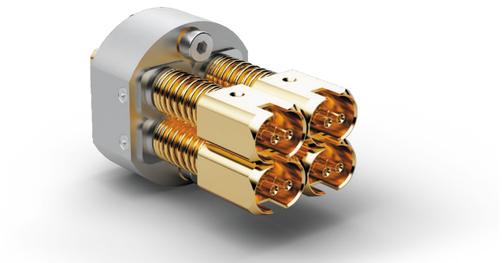
1170468	F07751B135G115	Inner pin
1170426	HF77HMTDm01-20G750HMTDmP	Basic HF Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1170660	HF77HMTDm0220G1500HMTDmF

Series drawing

All measurements are in mm.





HMTD MALE - HF77

20 GHz | H-MTD Male 4-fold or GEMnet

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	8x Signal	4x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

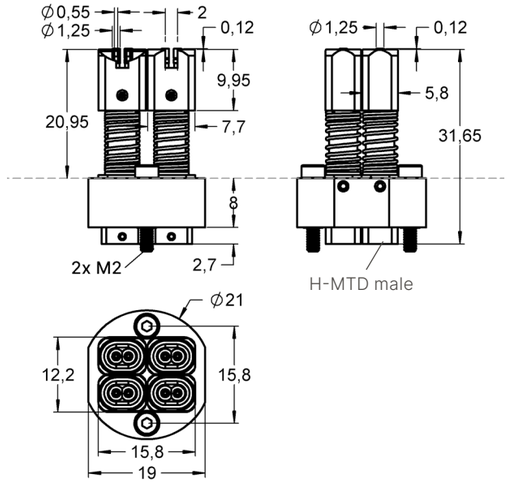
Accessories

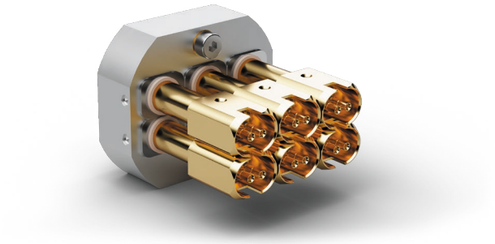
1170468	F07751B135G115	Inner pin
1170426	HF77HMTDm01-20G750HMTDmP	Basic HF Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1170427	HF77HMTDm0420G3000HMTDmF

Series drawing

All measurements are in mm.





HMTD MALE - HF77

20 GHz | H-MTD Male 6-fold or GEMnet

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	12x Signal	6x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

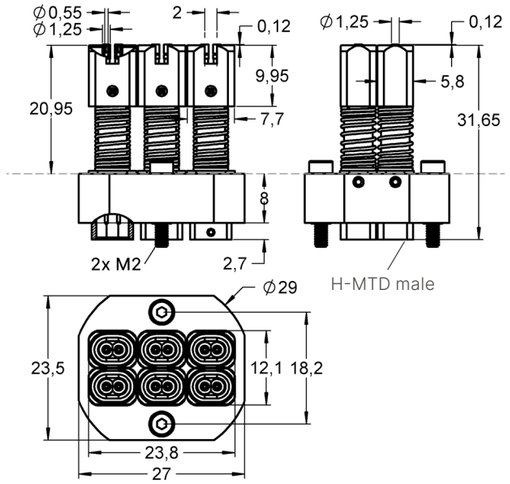
Accessories

1170468	F07751B135G115	Inner pin
1170426	HF77HMTDm01-20G750HMTDmP	Basic HF Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1171054	HF77HMTDm0620G4500HMTDmF

Series drawing

All measurements are in mm.





HMTD MALE - HF77

20 GHz | HMTD Male 1-fold for PCB | Water proof

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	2x Signal	1x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

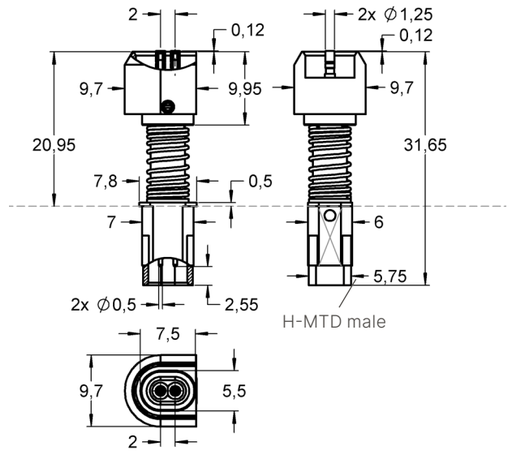
Accessories

1170468	F07751B135G115	Inner pin
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1176855	HF77HMTDmWP0120G750HMTDmP

Series drawing

All measurements are in mm.





HMTD MALE - HF77

20 GHz | HMTD Male 1-fold for cable | Water proof

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	2x Signal	1x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

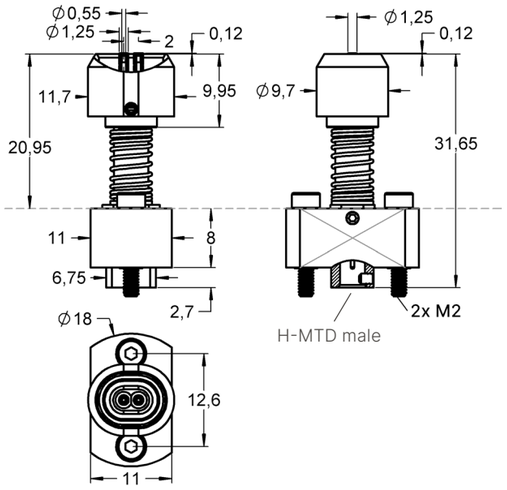
Accessories

1170468	F07751B135G115	Inner pin
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1176857	HF77HMTDmWP0120G750HMTDmF

Series drawing

All measurements are in mm.





HMTD MALE - HF77

20 GHz | HMTD Male 2-fold for PCB | Water proof

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	4x Signal	2x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

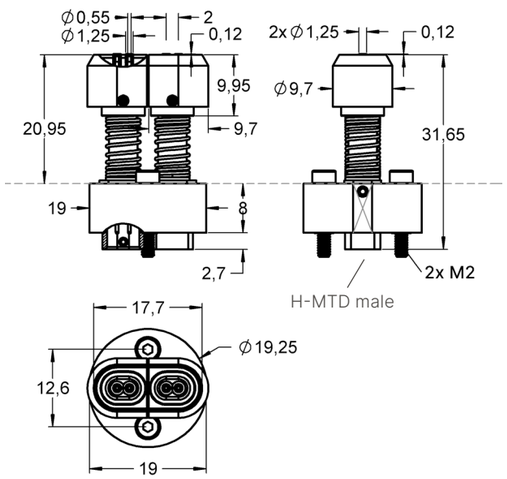
Accessories

1170468	F07751B135G115	Inner pin
1176855	HF77HMTDmWP-0120G750HMTDmP	Basic HF Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1176860	HF77HMTDmWP0220G1500HMTDmF

Series drawing

All measurements are in mm.





HMTD FEMALE - HF77

20 GHz | H-MTD Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	2x Signal	1x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

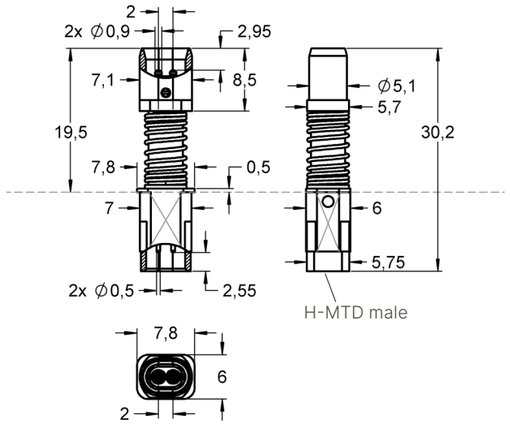
Accessories

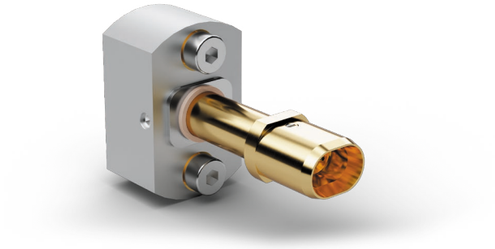
1170795	F07702B090G075	Inner pin
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1170798	HF77HMTDf0120G750HMTDmP

Series drawing

All measurements are in mm.





HMTD FEMALE - HF77

20 GHz | H-MTD Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	2x Signal	1x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

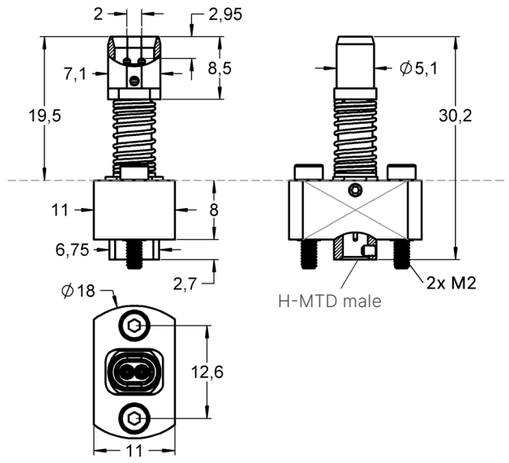
Accessories

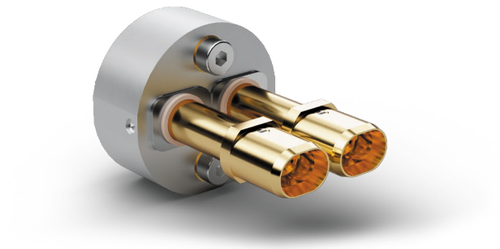
1170795	F07702B090G075	Inner pin
1170798	HF77HMTDf01-20G750HMTDmP	Basic HF-Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1170998	HF77HMTDf0120G750HMTDmF

Series drawing

All measurements are in mm.





HMTD FEMALE - HF77

20 GHz | H-MTD Female 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	4x Signal	2x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

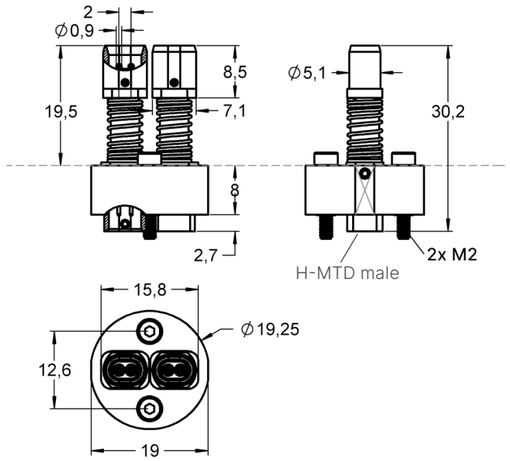
Accessories

1170795	F07702B090G075	Inner pin
1170798	HF77HMTDf01-20G750HMTDmP	Basic HF-Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

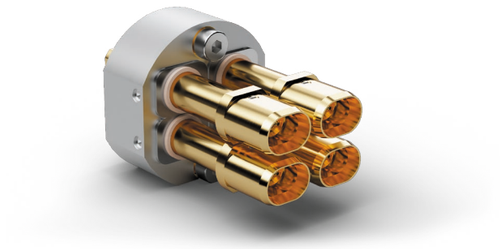
Order code	Product name
1171006	HF77HMTDf0220G1500HMTDmF

Series drawing

All measurements are in mm.



H-MTD male



HMTD FEMALE - HF77

20 GHz | H-MTD Female 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	8x Signal	4x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

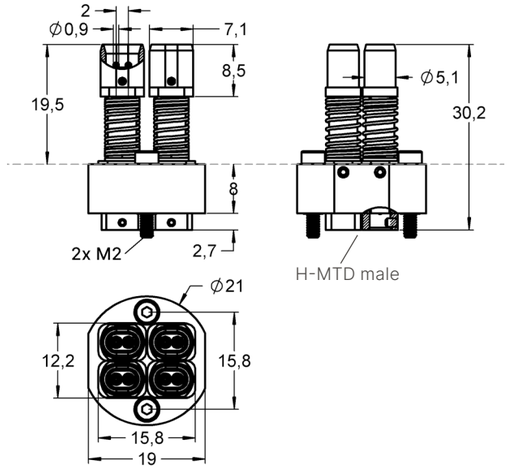
Accessories

1170795	F07702B090G075	Inner pin
1170798	HF77HMTDf01-20G750HMTDmP	Basic HF-Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

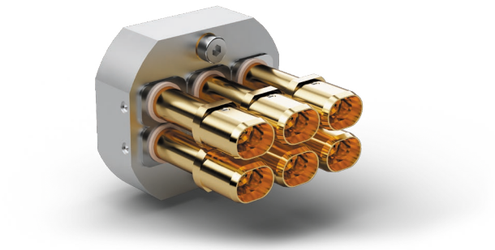
Order code	Product name
1171007	HF77HMTDf0420G3000HMTDmF

Series drawing

All measurements are in mm.



H-MTD male



HMTD FEMALE - HF77

20 GHz | H-MTD Female 6-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	20

Mechanical specifications

	12x Signal	6x Ground
Preload (cN)	50	450
Spring force at nt (cN ±20%)	75	600
Nominal travel (mm)	0.5	2.5
Maximum travel (mm)	0.8	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	gold plated
Spring Ground	Stainless steel	gold plated
Flange	Brass	nickel plated

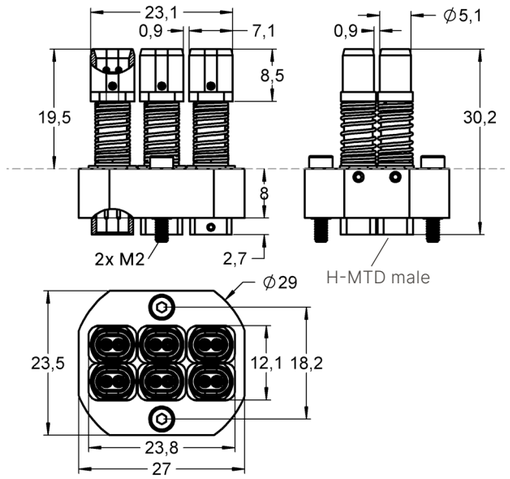
Accessories

1170795	F07702B090G075	Inner pin
1170798	HF77HMTDf01-20G750HMTDmP	Basic HF-Probe
1176613	FWZ077HF50	Assembly tool
Interface	H-MTD male	see page 152

Order code	Product name
1171053	HF77HMTDf0620G4500HMTDmF

Series drawing

All measurements are in mm.





F077

Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R typ [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°	
Preload [cN]	50	80
Spring force [cN] at nt ±20%	75	115
Nominal travel [mm]	0.5	0.8
Maximum travel [mm]	0.8	1.4

Materials and plating

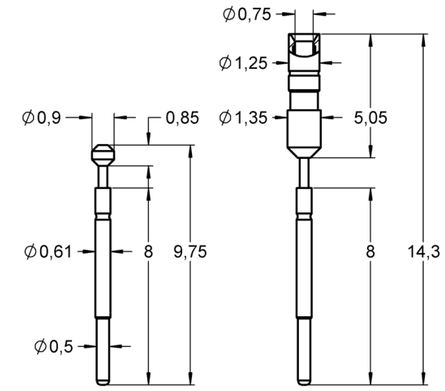
Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Stainless steel	gold plated

Accessories

1035933	FZWZ-005	Assembly tool
1003576	FDWZ-050	Insertion tool probe

Series drawing

All measurements are in mm.



Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version	FM Choice
1170795	F07702B090G075	02	0.90	B / G	075	-	-	-
1170468	F07751B135G115	51	1.35	B / G	115	-	-	-



MateNet MALE - HF77

1 GHz | MateNet Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1
Current Circular [A]	1
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	2x Signal	2x Ground
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Spring steel	gold plated
Flange	Brass	nickel plated

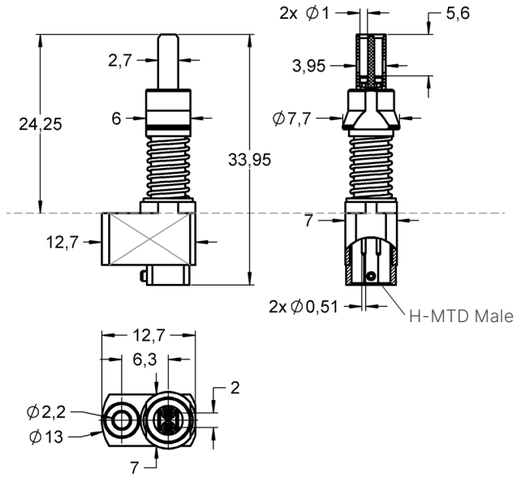
Accessories

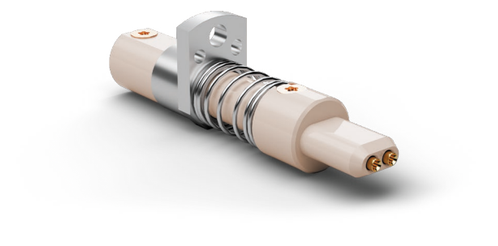
1097776	F07706B100G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD Male	see page 152

Order code	Product name
1097821	HF77MATENETm011G1020HMTDmFV01

Series drawing

All measurements are in mm.





MTD MALE - HF76

1 GHz | MTD Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	Signal	Ground
Preload (cN)	75	250
Spring force at nt (cN ±20%)	100	400
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	0.9	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

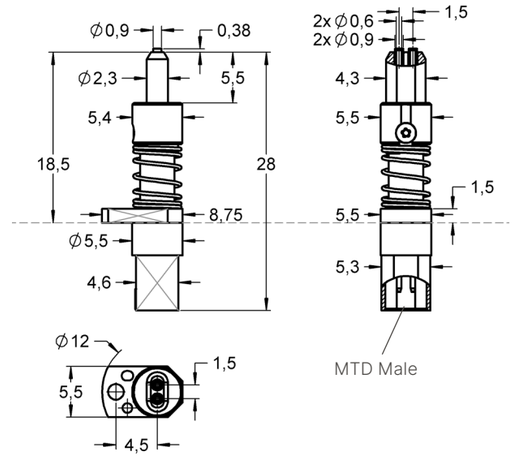
Accessories

1144335	F07651B090G075	Inner pin
1031897	FZWZ-001	Assembly tool
Interface	MTD Male	see page 152

Order code	Product name
1144744	HF76MTDm011G600MTDmF

Series drawing

All measurements are in mm.





MateAX MALE - HF76

20 GHz | MateAX Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	20

Mechanical specifications

	Signal	Ground
Preload (cN)	100	165
Spring force at nt (cN ±20%)	120	510
Nominal travel (mm)	0.7	5.0
Maximum travel (mm)	1.5	6.3

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

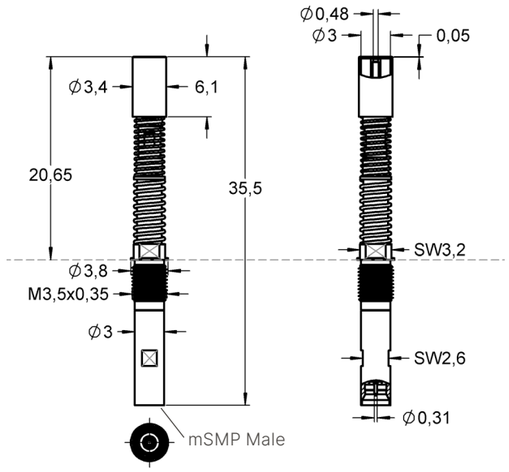
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1139313	HF76MATEAXm0120G630MSMPmS

Series drawing

All measurements are in mm.





MateAX MALE - HF77

12 GHz | MateAX Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

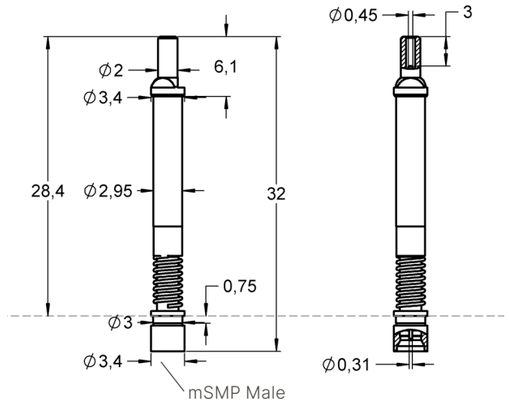
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1035527	HF77MATEAXm0112G540MSMPmP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX MALE - HF77

12 GHz | MateAX Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

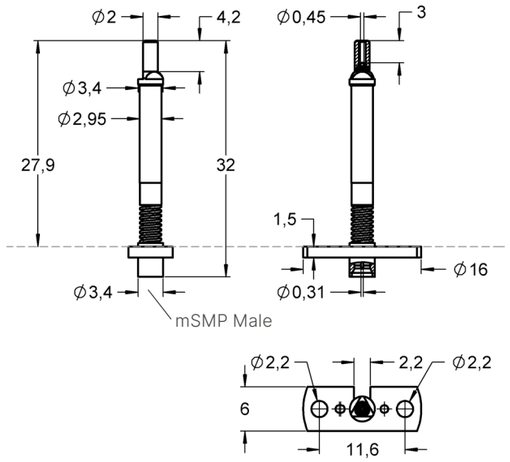
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1036172	HF77MATEAXm0112G540MSMPmFV01

Series drawing

All measurements are in mm.



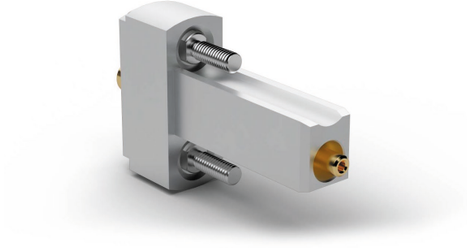
The worn contact probe can be removed from the flange and replaced with the spare probe (1035527) HF77MATEAXm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.

AUTOMOTIVE



MateAX MALE - HF77

12 GHz | MateAX Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

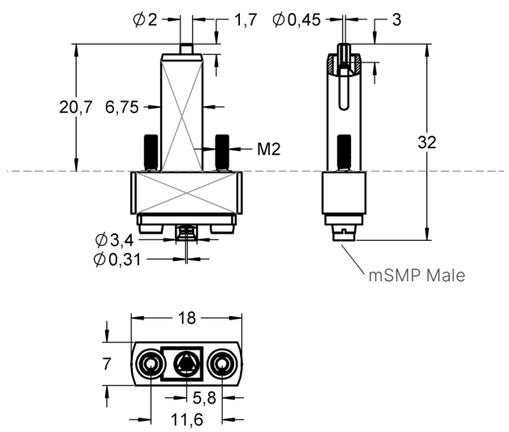
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1116970	HF77MATEAXm0112G540MSMPmFV02

Series drawing

All measurements are in mm.

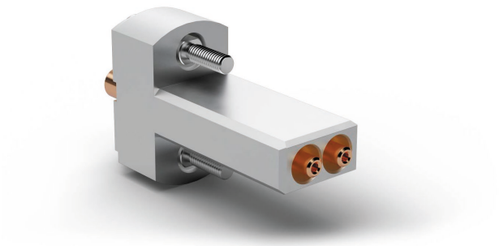


The worn contact probe can be removed from the flange and replaced with the spare probe (1035527) HF77MATEAXm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX MALE - HF77

12 GHz | MateAX Male 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	2x Signal	2x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

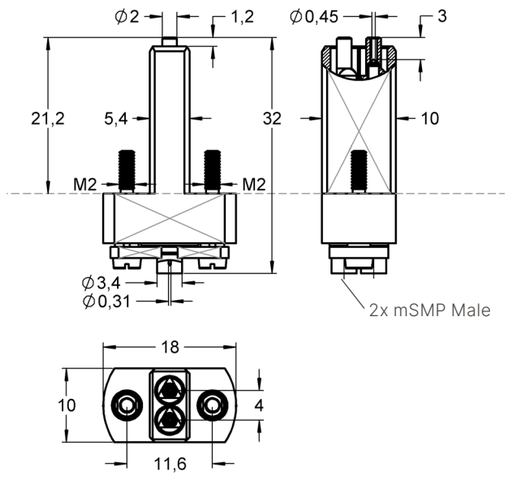
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1142276	HF77MATEAXm0212G1080MSMPmF

Series drawing

All measurements are in mm.

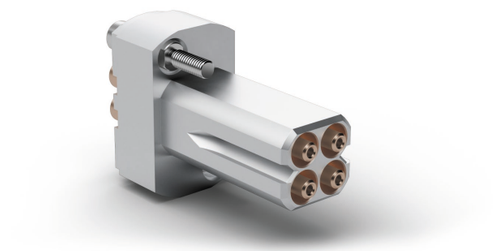


The worn contact probe can be removed from the flange and replaced with the spare probe (1035527) HF77MATEAXm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX MALE - HF77

12 GHz | MateAX Male 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	4x Signal	4x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

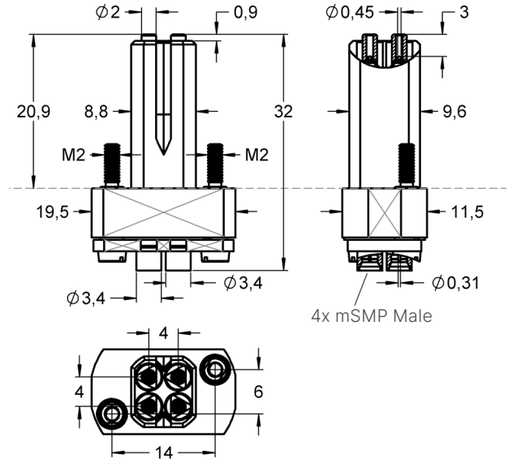
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1035528	HF77MATEAXm0412G2160MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1035527) HF77MATEAXm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX MALE Sealed - HF77

12 GHz | MateAX Male Sealed 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

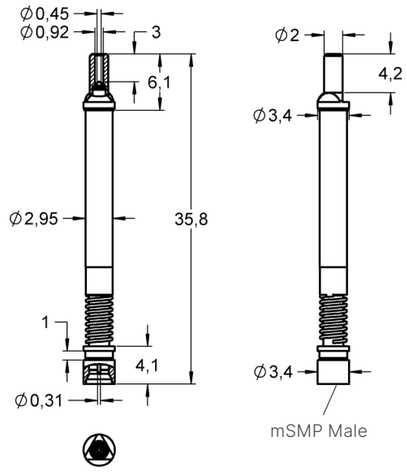
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1156393	HF77MATEAXmSealed0112G540MSMPmP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX MALE Sealed- HF77

12 GHz | MateAX Male Sealed 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	4x Signal	4x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

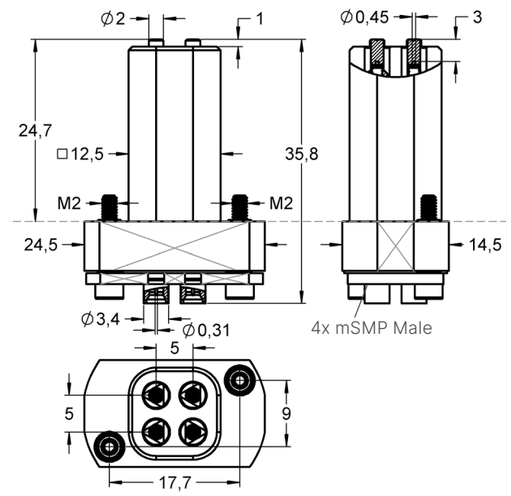
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1156412	HF77MateAXmSealed0412G2160MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1156393) HF77MATEAXmSealed0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX FEMALE - HF76

16 GHz | MateAX Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	16

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

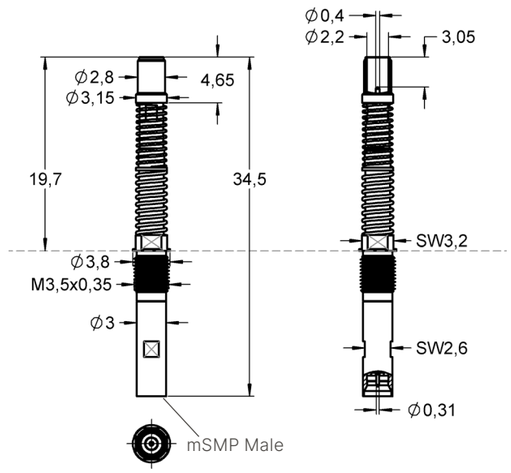
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1139314	HF76MATEAXf0116G635MSMPmS

Series drawing

All measurements are in mm.





MateAX FEMALE - HF77

12 GHz | MateAX Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

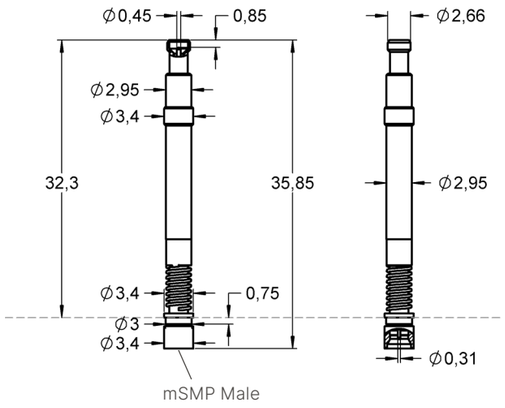
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1056232	HF77MATEAXf0112G540MSMPmP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX FEMALE - HF77

12 GHz | MateAX Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

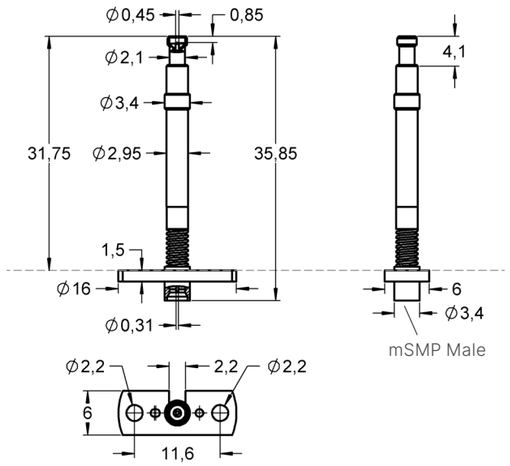
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1142274	HF77MATEAXf0112G540MSMPmF

Series drawing

All measurements are in mm.

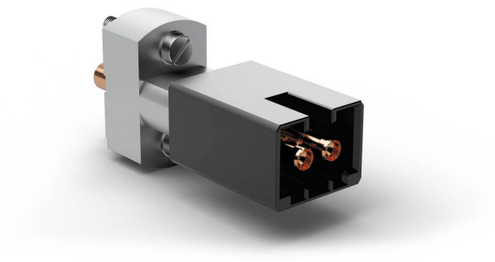


The worn contact probe can be removed from the flange and replaced with the spare probe (1056232) HF77MATEAXf0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX FEMALE - HF77

12 GHz | MateAX Female 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	2x Signal	2x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

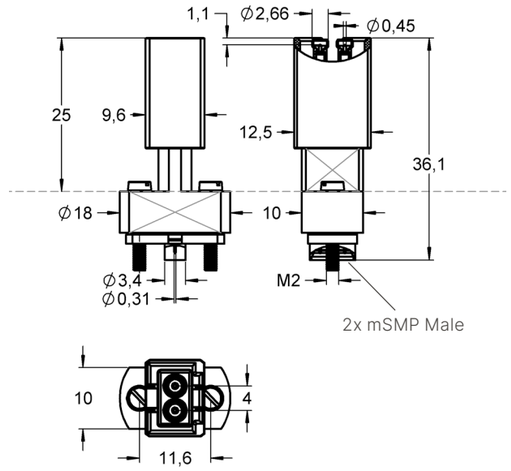
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1112868	HF77MATEAXf0212G1080MSMPmF

Series drawing

All measurements are in mm.

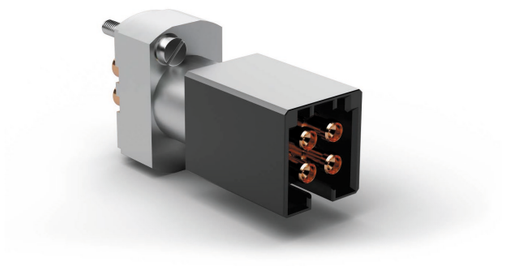


The worn contact probe can be removed from the flange and replaced with the spare probe (1056232) HF77MATEAXf0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MateAX FEMALE - HF77

12 GHz | MateAX Female 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	4x Signal	4x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

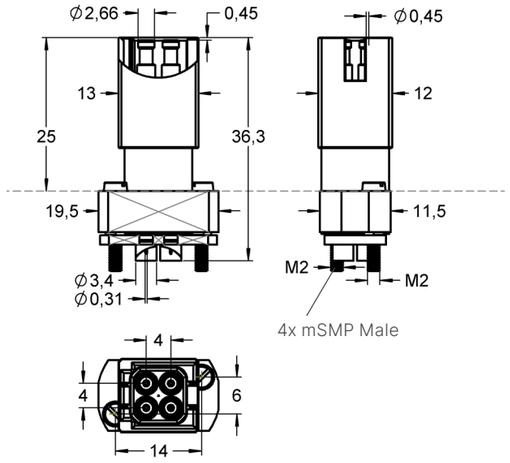
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1051198	HF77MATEAXf0412G2160MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1056232) HF77MATEAXf0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HFM MALE - HF76

20 GHz | HFM Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	20

Mechanical specifications

	Signal	Ground
Preload (cN)	100	160
Spring force at nt (cN ±20%)	120	510
Nominal travel (mm)	0.7	5.5
Maximum travel (mm)	1.5	6.4

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

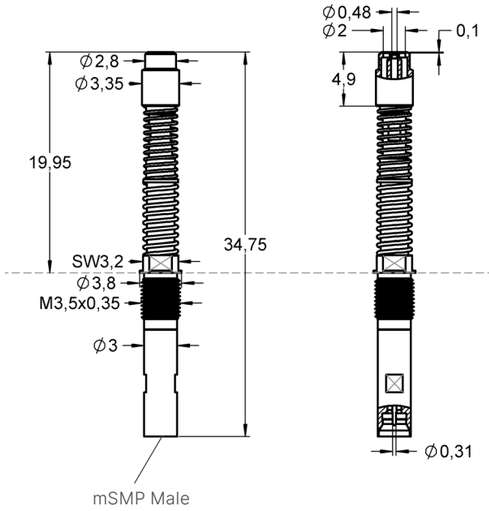
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1138954	HF76HFMm0120G630MSMPmS

Series drawing

All measurements are in mm.





HFM MALE - HF77

12 GHz | HFM Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

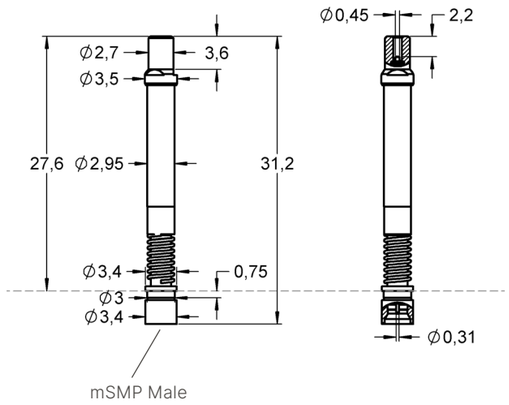
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1034900	HF77HFMm0112G540MSMPmP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HFM MALE - HF77

12 GHz | HFM Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

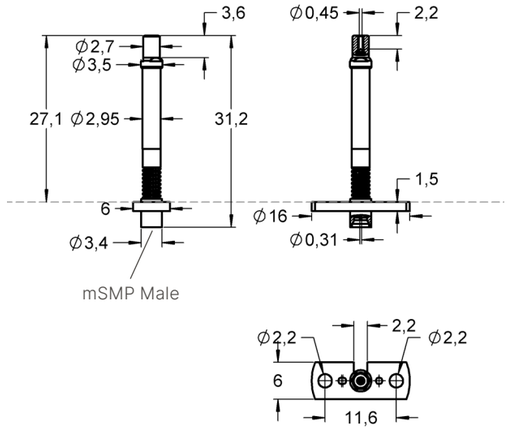
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1036171	HF77HFMm0112G540MSMPmFV01

Series drawing

All measurements are in mm.

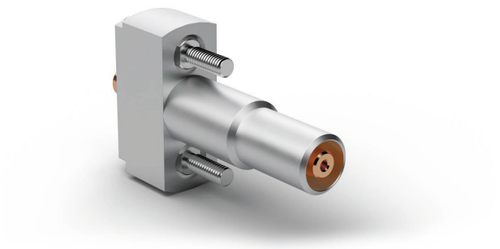


The worn contact probe can be removed from the flange and replaced with the spare probe (1034900) HF77HFMm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HFM MALE - HF77

12 GHz | HFM Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

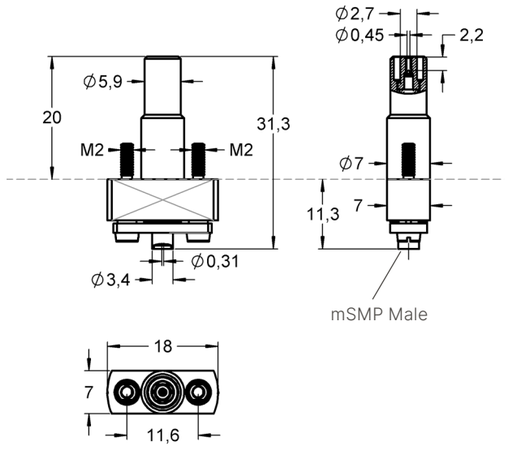
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1105444	HF77HFMm0112G540MSMPmFV02

Series drawing

All measurements are in mm.

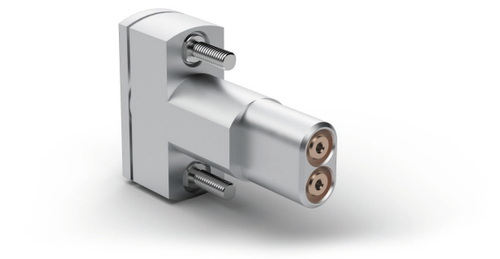


The worn contact probe can be removed from the flange and replaced with the spare probe (1034900) HF77HFMm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HFM MALE - HF77

12 GHz | HFM Male 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	2x Signal	2x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

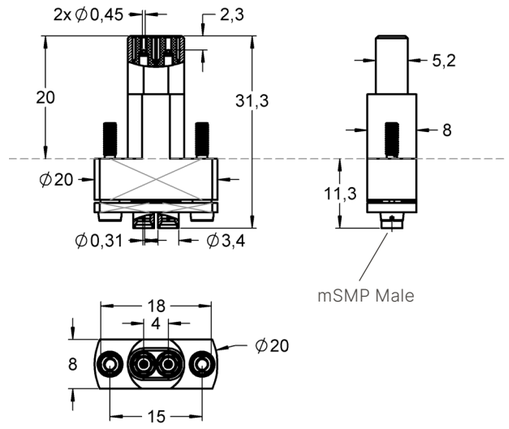
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1120793	HF77HFMm0212G1080MSMPmFV01

Series drawing

All measurements are in mm.

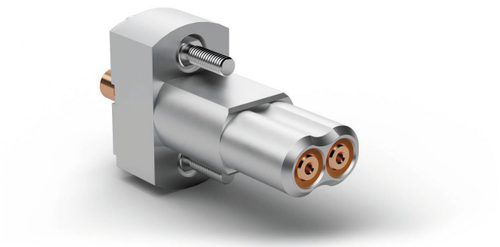


The worn contact probe can be removed from the flange and replaced with the spare probe (1034900) HF77HFMm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HFM MALE - HF77

12 GHz | HFM Male 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	2x Signal	2x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

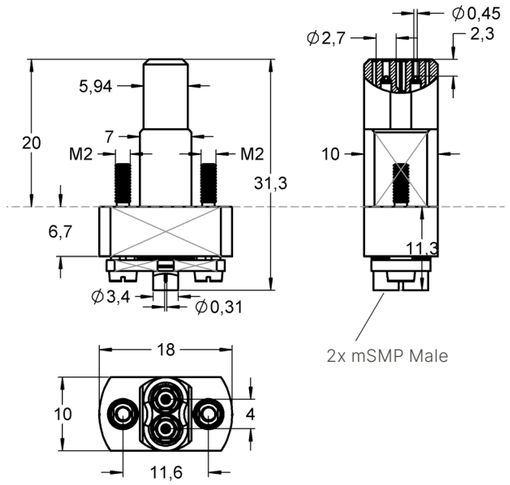
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1057696	HF77HFMm0212G1080MSMPmFV02

Series drawing

All measurements are in mm.

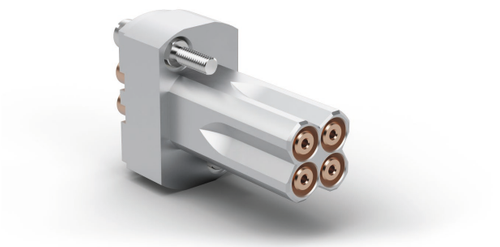


The worn contact probe can be removed from the flange and replaced with the spare probe (1034900) HF77HFMm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HFM MALE - HF77

12 GHz | HFM Male 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	4x Signal	4x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

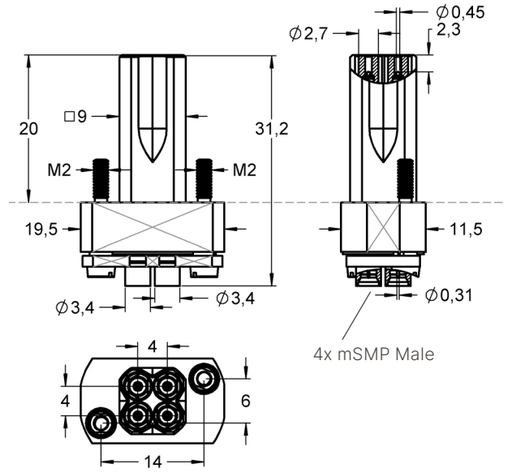
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1034901	HF77HFMm0412G2160MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1034900) HF77HFMm0112G540MSMPmP.

Radio Frequency performance

Typical **insertion loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical **return loss**	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HFM FEMALE - HF76

20 GHz | HFM Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	20

Mechanical specifications

	Signal	Ground
Preload (cN)	100	175
Spring force at nt (cN ±20%)	125	510
Nominal travel (mm)	0.7	3.2
Maximum travel (mm)	1.5	4.1

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

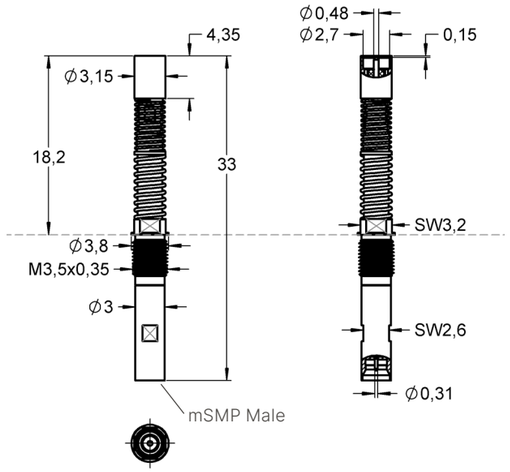
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1139303	HF76HFMf0120G635MSMPmS

Series drawing

All measurements are in mm.





HFM FEMALE - HF77

12 GHz | HFM Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

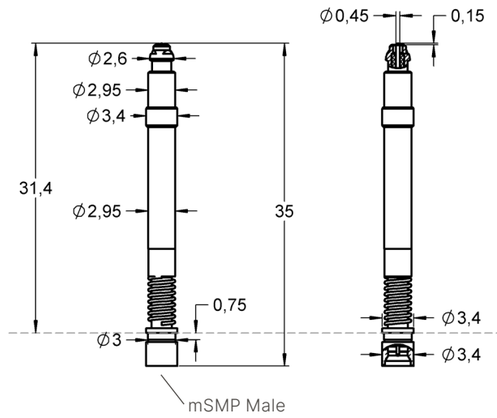
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1051683	HF77HFMf0112G540MSMPmP

Series drawing

All measurements are in mm.





HFM FEMALE - HF77

12 GHz | HFM Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

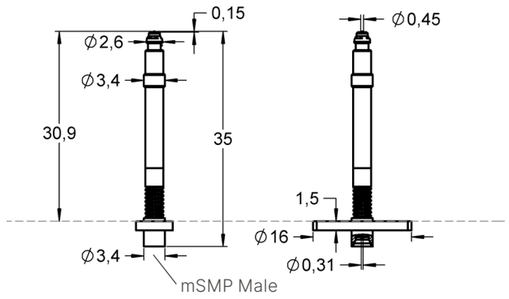
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

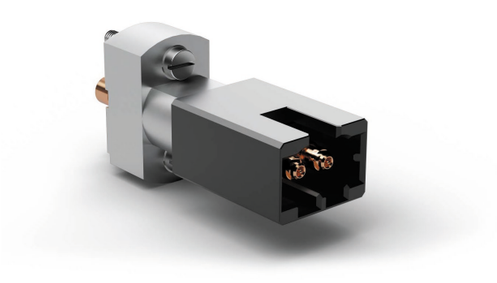
Order code	Product name
1051503	HF77HFMf0112G540MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1051683) HF77HFMf0112G540MSMPmP.



HFM FEMALE - HF77

12 GHz | HFM Female 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	2x Signal	2x Ground
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

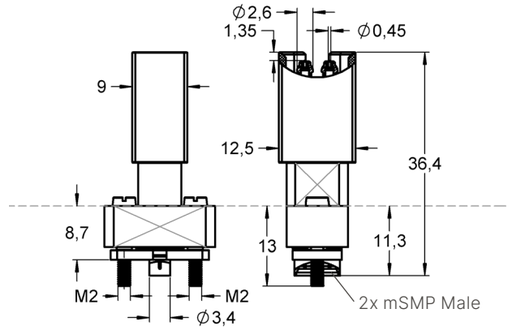
Accessories

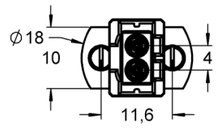
1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1114067	HF77HFMf0212G1080MSMPmF

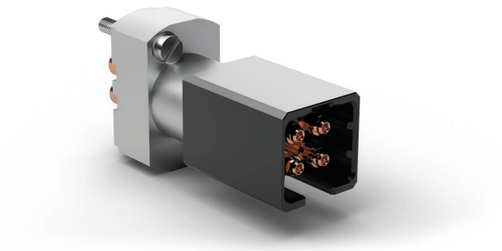
Series drawing

All measurements are in mm.





The worn contact probe can be removed from the flange and replaced with the spare probe (1051683) HF77HFMf0112G540MSMPmP.



HFM FEMALE - HF77

12 GHz | HFM Female 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1.0
Current Circular [A]	1.0
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	4x Signal	4x Ground
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

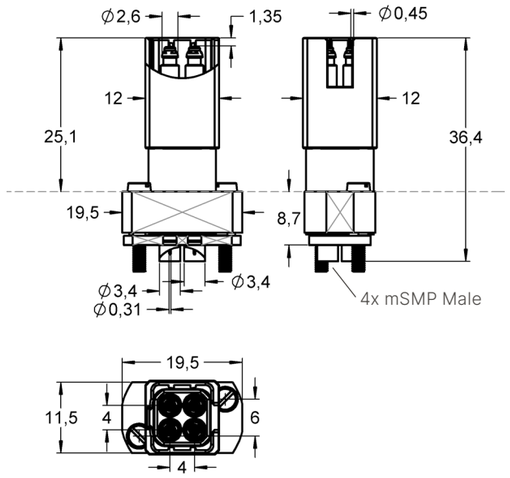
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1050858	HF77HFMf0412G2160MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1051683) HF77HFMf0112G540MSMPmP.



SMK miniFAKRA MALE - HF77

12 GHz | SMK miniFAKRA Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	nickel plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

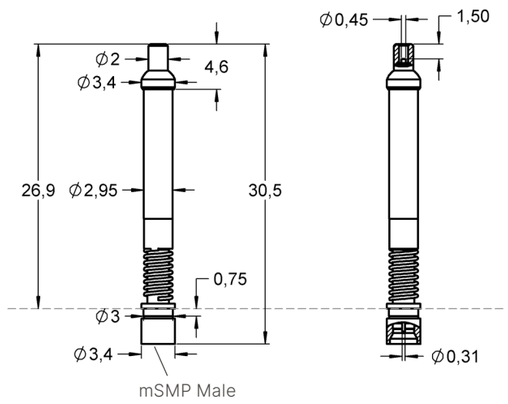
Accessories

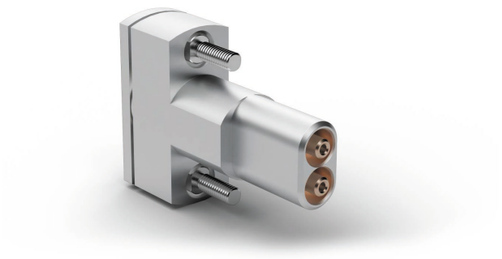
Interface	mSMP Male	see page 152

Order code	Product name
1134945	HF77SMKMINIFAKRAm0112G540MSMPmP

Series drawing

All measurements are in mm.





SMK miniFAKRA MALE - HF77

12 GHz | SMK miniFAKRA Male 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	2x Signal	2x Ground
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.4
Maximum travel (mm)	1.8	2.2

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	nickel plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

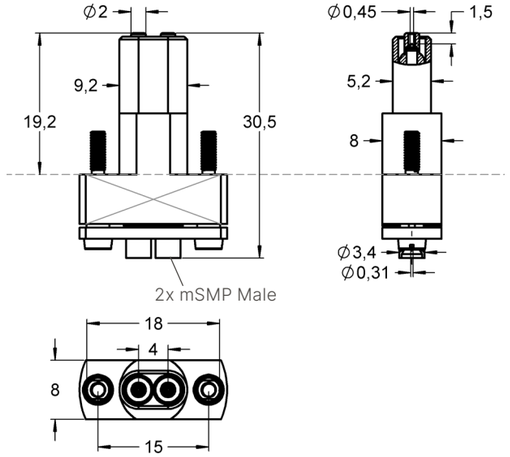
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

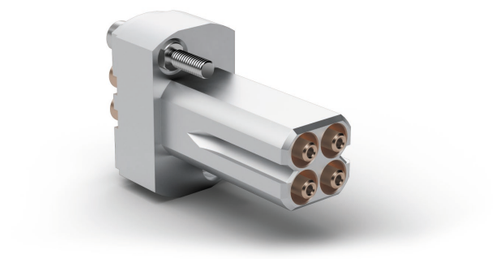
Order code	Product name
1139613	HF77SMKMINIFAKRAm0212G1080MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1134945) HF77SMKMINIFAKRAm0112G540MSMPmP.



SMK miniFAKRA MALE - HF77

12 GHz | SMK miniFAKRA Male 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	4x Signal	4x Ground
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.4
Maximum travel (mm)	1.8	2.2

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	nickel plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

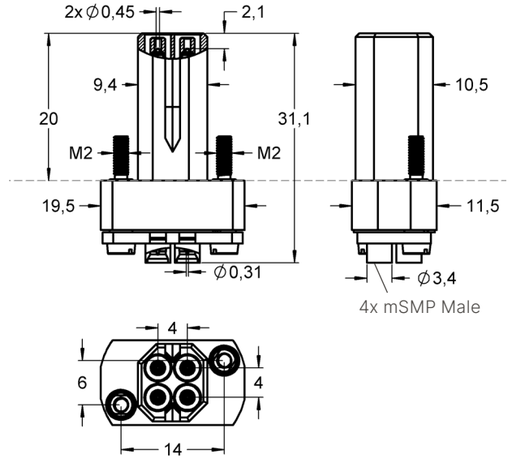
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1134946	HF77SMKMINIFAKRAm0412G2160MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1134945) HF77SMKMINIFAKRAm0112G540MSMPmP.



KET miniFAKRA MALE - HF77

12 GHz | KET miniFAKRA Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

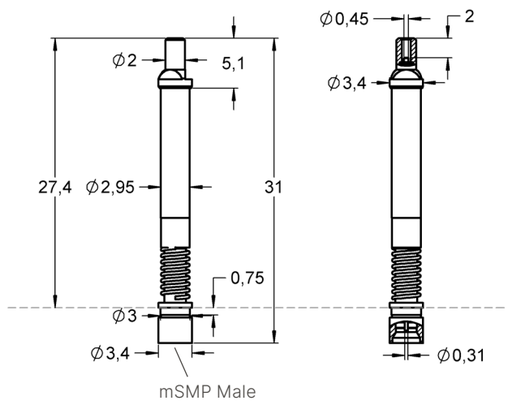
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1109576	HF77KETMINIFAKRAm0112G540MSMPmP

Series drawing

All measurements are in mm.





KET MINIFAKRA MALE - HF77

12 GHz | KET miniFAKRA Male 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

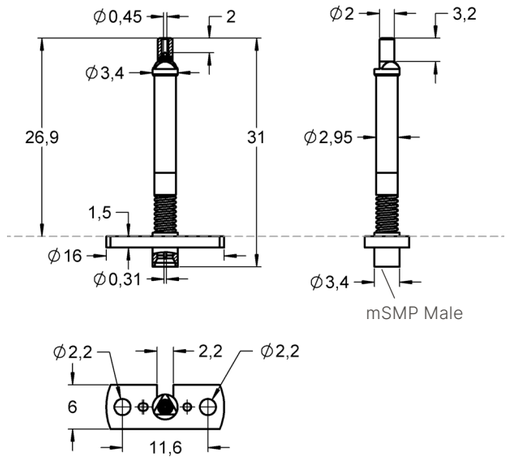
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

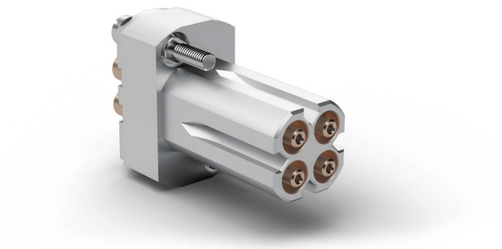
Order code	Product name
1141543	HF77KETMINIFAKRAm0112G540MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1109576) HF77KETMINIFAKRAm0112G540MSMPmP.



KET MINIFAKRA MALE - HF77

12 GHz | KET miniFAKRA Male 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	4x Signal	4x Ground
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

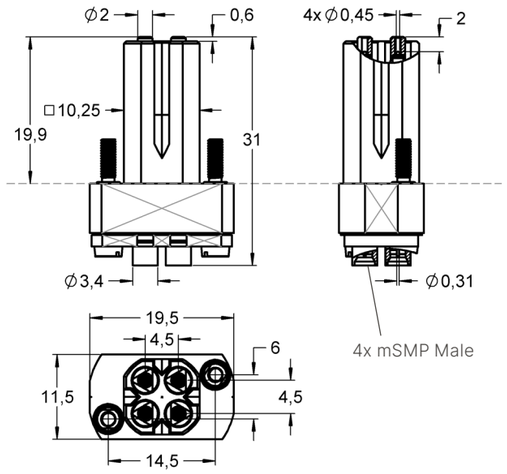
Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 152

Order code	Product name
1109577	HF77KETMINIFAKRAm0412G1080MSMPmF

Series drawing

All measurements are in mm.



The worn contact probe can be removed from the flange and replaced with the spare probe (1109576) HF77KETMINIFAKRAm0112G540MSMPmP.



FAKRA MALE - HF860

6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	150	320
Nominal travel (mm)	2.7	3.0
Maximum travel (mm)	3.7	3.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

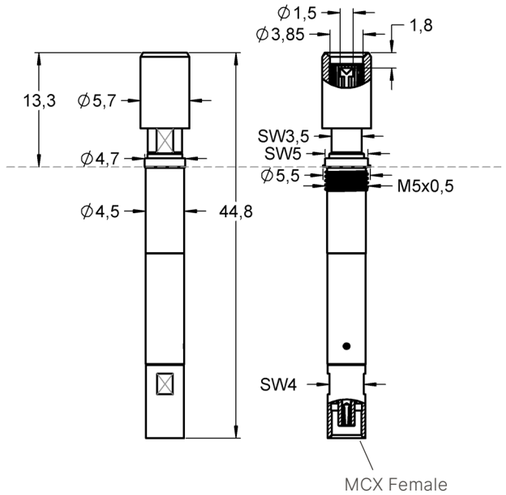
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1038817	HF860FAKRAm016G470MCXfS
1020923	HF860FAKRAm016G470MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.18 dB	0.60 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA MALE - HF860

6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground	
Preload (cN)	75	90	450
Spring force at nt (cN ±20%)	150	400	800
Nominal travel (mm)	2.0	4.0	4.0
Maximum travel (mm)	3.7	5.0	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

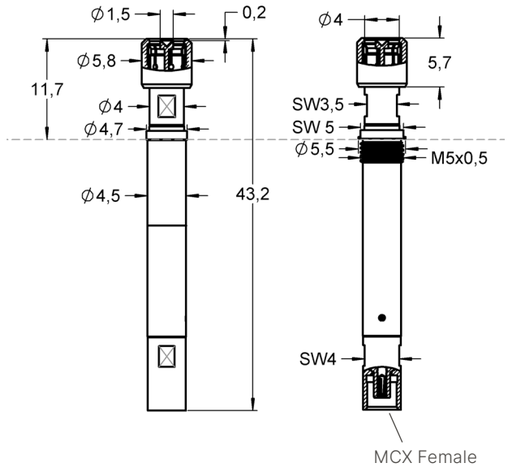
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1038942	HF860FAKRAm016G550MCXfS
1033408	HF860FAKRAm016G550MCXfP
1035672	HF860FAKRAm016G950MCXfS
1033407	HF860FAKRAm016G950MCXfPV01

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.18 dB	0.60 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA MALE - HF860

6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	450
Spring force at nt (cN ±20%)	150	800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

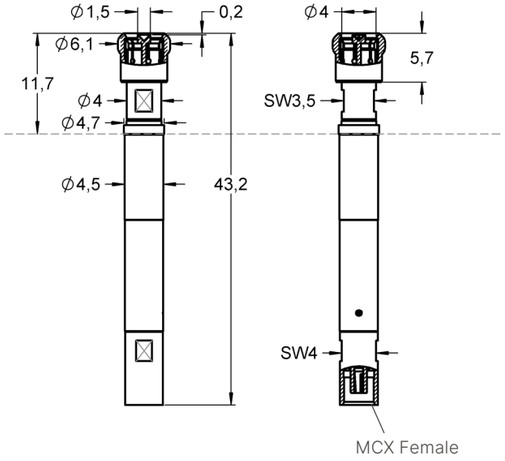
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1103186	F08655B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1054896	HF860FAKRAm016G950MCXfPV02
1142361	HF860FAKRAm016G950MCXfPV03

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.18 dB	0.60 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA MALE - HF860

6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	450
Spring force at nt (cN ±20%)	150	800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

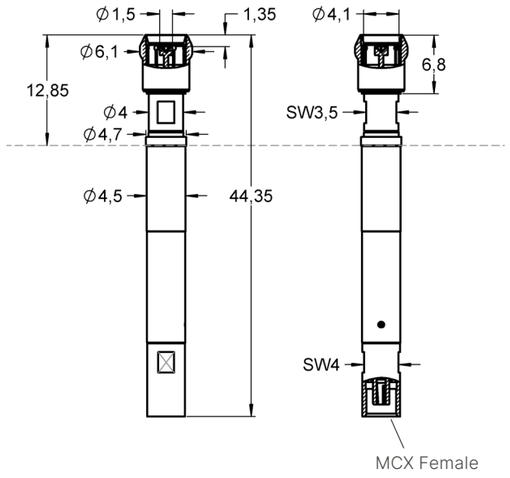
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1103186	F08655B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1110093	HF860FAKRAm016G930MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.18 dB	0.60 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA MALE - HF830

6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	100
Spring force at nt (cN ±20%)	140	400
Nominal travel (mm)	2.5	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

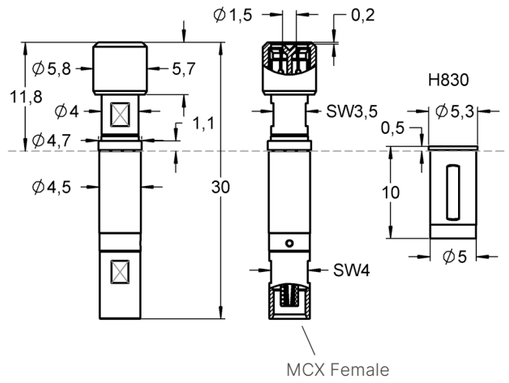
Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1050705	HF830FAKRAm016G540MCXmP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	17 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA MALE - HF66

6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	110	500
Spring force at nt (cN ±20%)	150	665
Nominal travel (mm)	1.0	2.0
Maximum travel (mm)	1.3	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

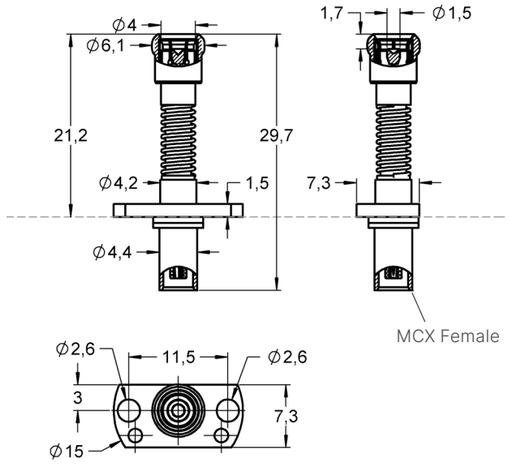
Accessories

1037622	F08305B150G150	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1037623	HF66FAKRAm016G775MCXfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.40 dB	0.60 dB
Typical **return loss**	DC up to 10 GHz	3 GHz up to 20 GHz
Minimum	17 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA FEMALE - HF86

6 GHz | FAKRA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

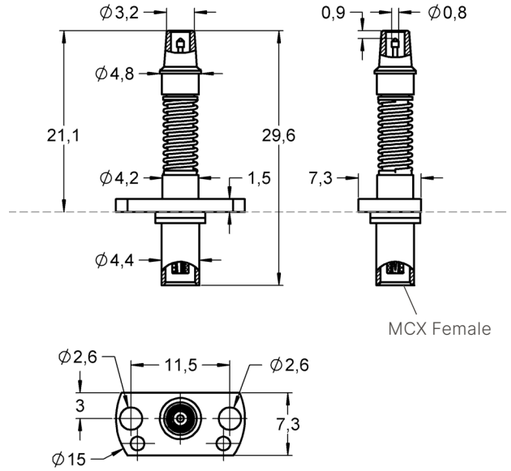
Accessories

1012578	F08605B150G130	Inner pin
1035932	FZWZ-004	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1142304	HF86FAKRAf016G775MCXmF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	17 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA FEMALE - HF830

6 GHz | FAKRA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	100
Spring force at nt (cN ±20%)	90	400
Nominal travel (mm)	1.0	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

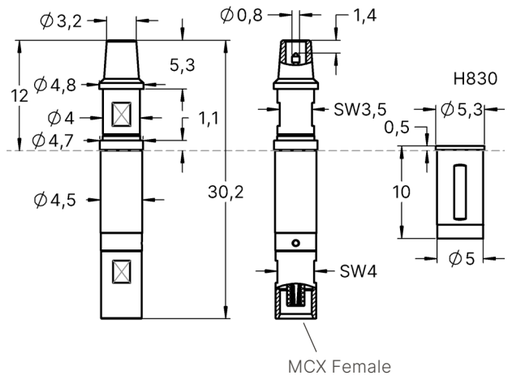
Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1051175	F08302B080G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1051176	HF830FAKRAf016G490MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.35 dB	0.50 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	16 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA FEMALE - HF860

6 GHz | FAKRA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	100	450
Spring force at nt (cN ±20%)	130	800
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

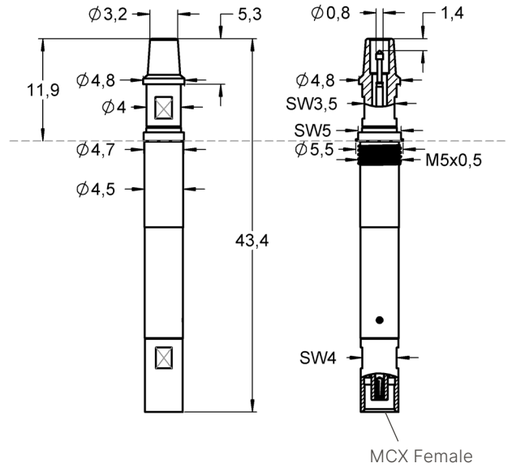
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1029637	F08602B-080G130L350	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1037081	HF860FAKRAf016G930MCXfSV01
1029428	HF860FAKRAf016G930MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.15 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	30 dB	20 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



FAKRA FEMALE - HF860

6 GHz | FAKRA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	450
Spring force at nt (cN ±20%)	130	800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

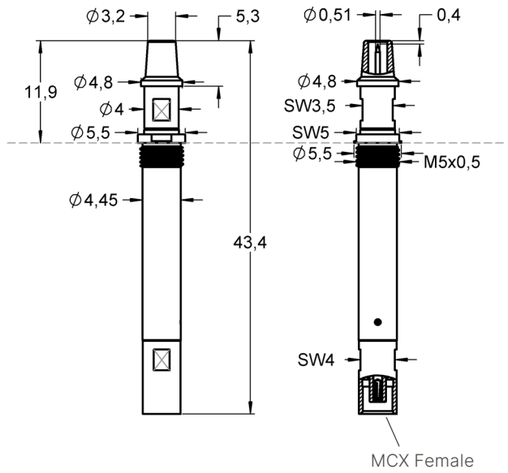
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
Interface	MCX Female	see page 153

Order code	Product name
1139669	HF860FAKRAf016G930MCXfSV02

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.15 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	30 dB	20 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HSD MALE - HF819

3 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	3

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	2.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

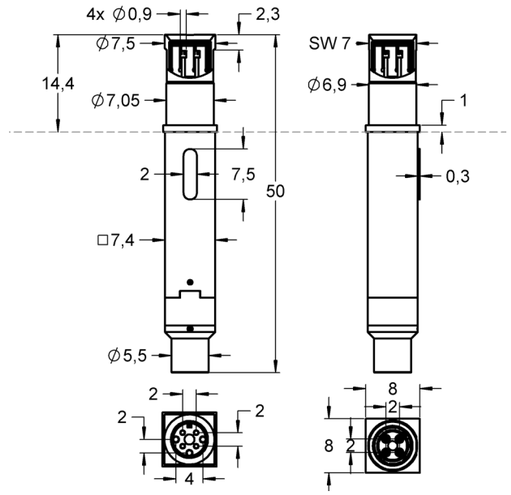
1013563	H819AEPHSDmL023	Connector
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 83.

Order code	Product name
1023277	HF819HSDm013G2020HSDmPV01

Series drawing

All measurements are in mm.





HSD MALE - HF819

3 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	3

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

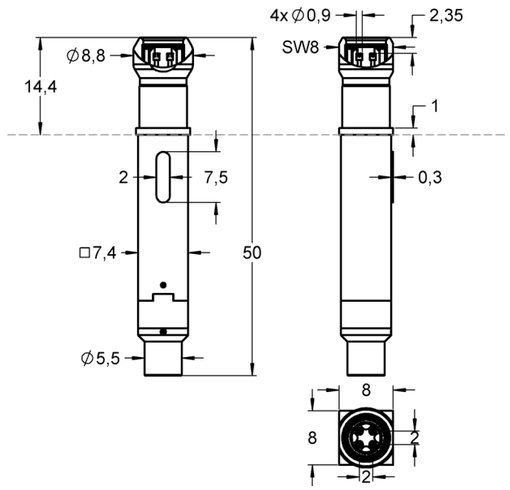
1013563	H819AEPHSDmL023	Connector
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 83.

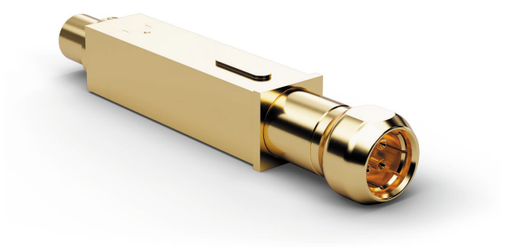
Order code	Product name
1142275	HF819HSDm013G2020HSDmP

Series drawing

All measurements are in mm.



AUTOMOTIVE



HSD MALE - HF819

3 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	3

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.1	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

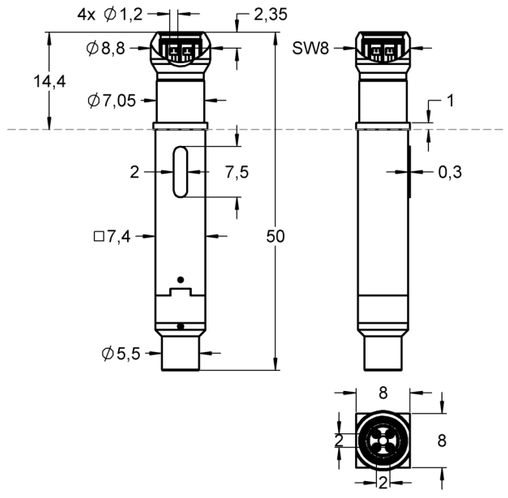
1013563	H819AEPHSDmL023	Connector
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

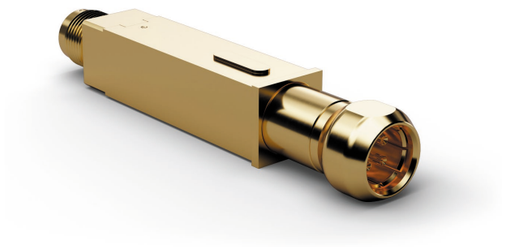
Connecting elements for HF819 see page 83.

Order code	Product name
1034670	HF819HSDm013G2020HSDmPV02

Series drawing

All measurements are in mm.





HSD MALE - HF819

3 GHz | HSD Male | Threaded Connecting cable

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	3

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	300
Spring force at nt (cN ±20%)	130	750
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.1	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

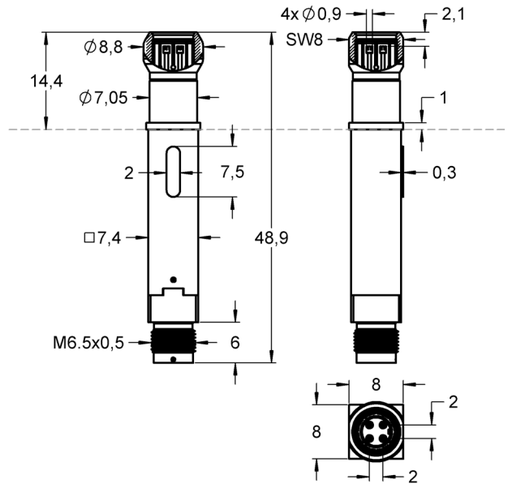
1034922	H819AESLAL027	Connector
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 83.

Order code	Product name
1090175	HF819HSDm013G1270H819AESP

Series drawing

All measurements are in mm.





HSD MALE - HF819

2 GHz | HSD Male | Threaded Connecting cable

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	2

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

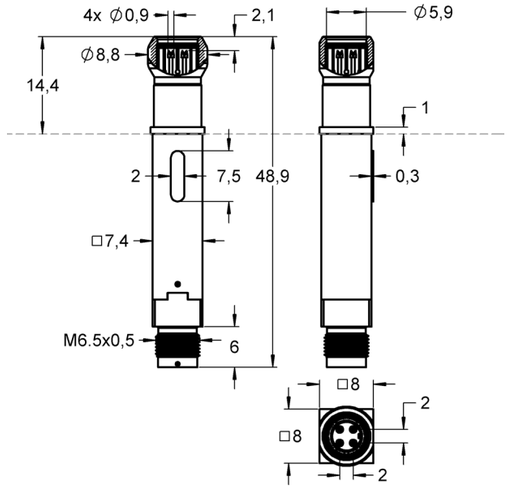
1034922	H819AESLAL027	Connector
1012728	F08614S090L130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

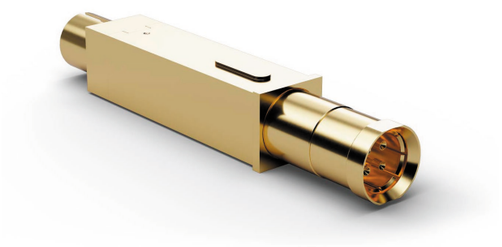
Connecting elements for HF819 see page 83.

Order code	Product name
1088117	HF819HSDm012G2020H819AESP

Series drawing

All measurements are in mm.





HSD MALE - HF819

1 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	300
Spring force at nt (cN ±20%)	130	750
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

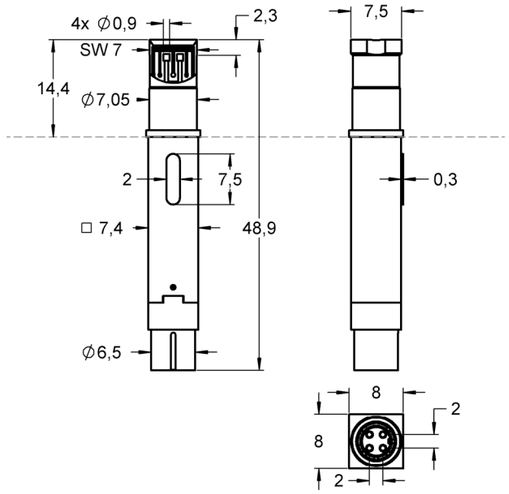
1013562	H819AEPLAL020	Connector
1012728	F08614S090L130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

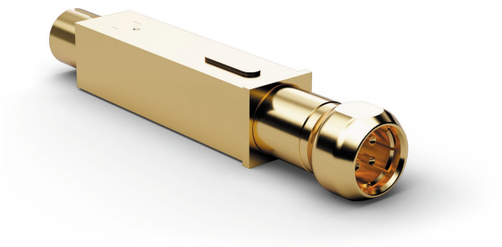
Connecting elements for HF819 see page 83.

Order code	Product name
1012608	HF819HSDm011G1270H819AEPP

Series drawing

All measurements are in mm.





HSD MALE - HF819

1 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	300
Spring force at nt (cN ±20%)	130	750
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

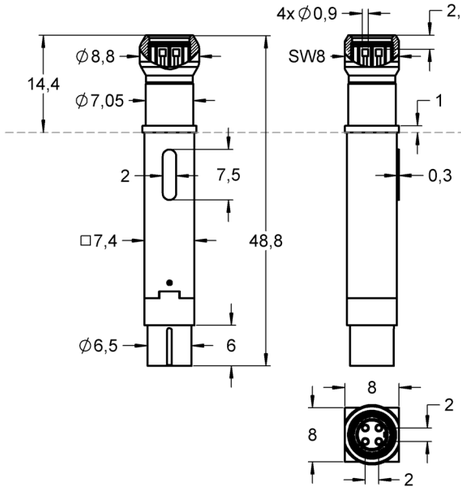
1013562	H819AEPLAL020	Connector
1012577	F08605B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

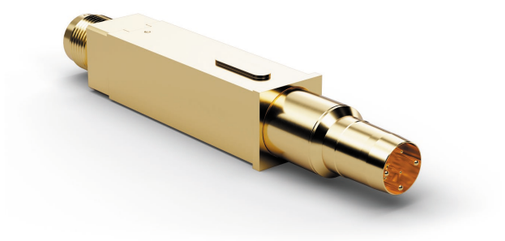
Connecting elements for HF819 see page 83.

Order code	Product name
1145252	HF819HSDm011G1270H819AESP
1145253	HF819HSDm011G2020H819AESP

Series drawing

All measurements are in mm.





HSD FEMALE - HF819

1 GHz | HSD Female | Threaded Connecting cable

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

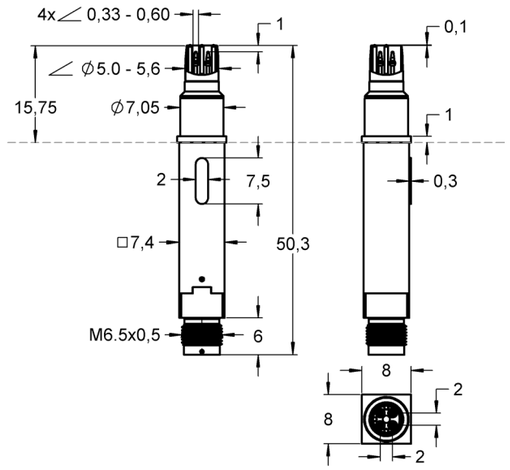
1034922	H819AESLAL027	Connector
1029008	F08612B-060150090G130L384	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

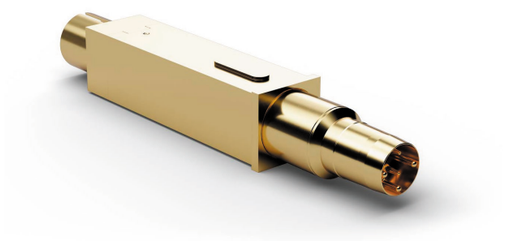
Connecting elements for HF819 see page 83.

Order code	Product name
1039288	HF819HSDf011G2020H819AESP

Series drawing

All measurements are in mm.





HSD FEMALE - HF819

1 GHz | HSD Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

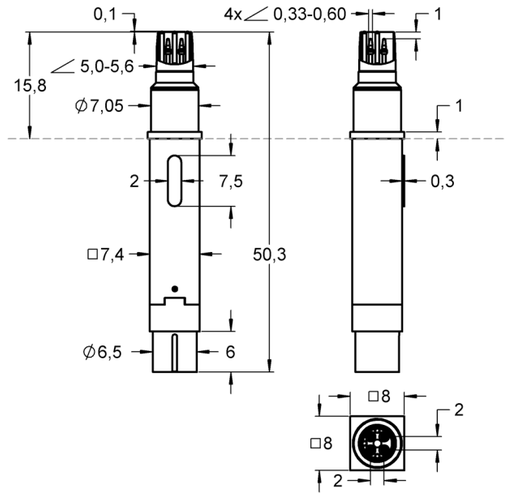
1013562	H819AEPLAL020	Connector
1029008	F08612B-060150090G130L384	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

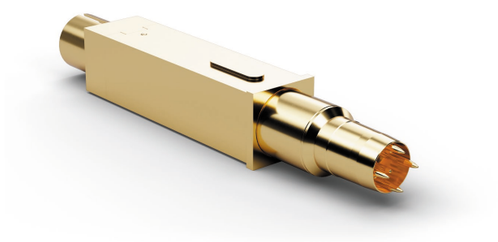
Connecting elements for HF819 see page 83.

Order code	Product name
1033153	HF819HSDf011G2020H819AEPP

Series drawing

All measurements are in mm.





HSD FEMALE - HF819

1 GHz | HSD Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	75	900
Spring force at nt (cN ±20%)	105	1500
Nominal travel (mm)	1.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

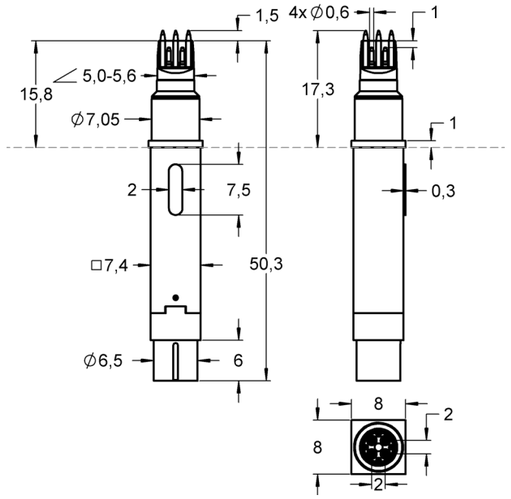
1013562	H819AEPLAL020	Connector
1039263	F08612B-060210090G130L384	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 83.

Order code	Product name
1039269	HF819HSDf011G1920H819AEPP

Series drawing

All measurements are in mm.

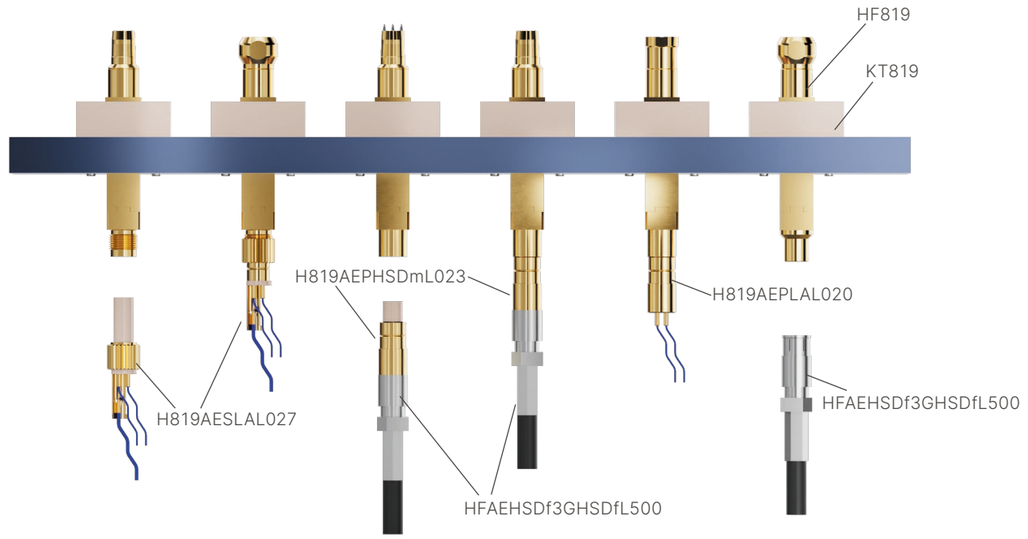


H819AE - CONNECTING ELEMENTS

Connection and combination options for HF819

There are various connection options for the HF819.

- It can be soldered to connectors H819AEPLAL020 (plug versions) and H819AESLAL027 (screw versions).
- By combining the connection elements H819AEPHSDmL023 and HFAEHSDf3GHSDfL500 a defined and reproducible measuring setup with fix parameters can be realized.
- The RF cable HFAEHSDf3GHSDfL500 can be connected directly.



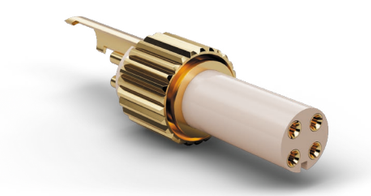
1013562 - H819AEPLAL020 (Plugged version)



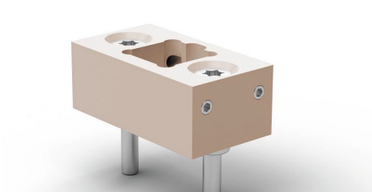
1013563 - H819AEPHSDmL023 (Plugged version)



1034922 - H819AESLAL027 (Threaded version)



1092029 - KT819





HSD MALE - HF829

3 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1
Current Circular [A]	5
Impedance [Ohm]	100
Frequency [GHz]	3

Mechanical specifications

	4x Signal	1x Ground
Preload (cN)	50	900
Spring force at nt (cN ±20%)	120	1380
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.0	6.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

Accessories

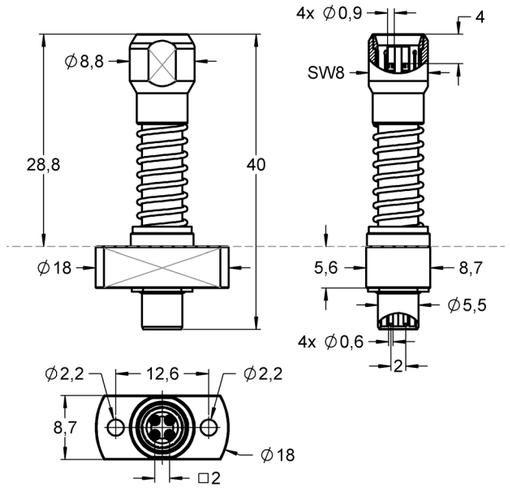
1043433	F82955B090G120	Inner pin
1035933	FZWZ-005	Assembly tool

Connecting elements for HF829 see page 83.

Order code	Product name
1044571	HF829HSDm013G1860HSDmF

Series drawing

All measurements are in mm.





GT13 - HF860

1 GHz | GT13

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	1

Mechanical specifications

	Signal	Ground	
Preload (cN)	75	90	450
Spring force at nt (cN ±20%)	150	400	800
Nominal travel (mm)	2.0	4.0	4.0
Maximum travel (mm)	3.7	5.0	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

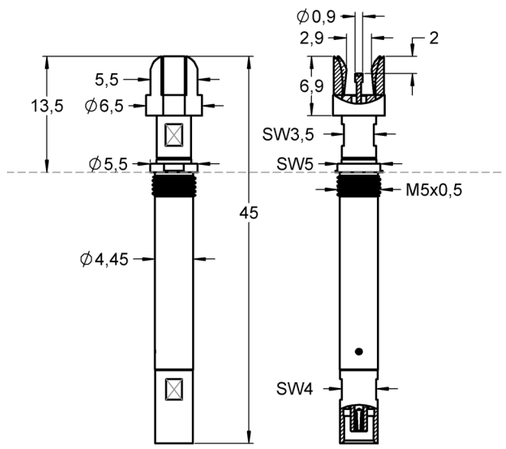
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012577	F08605B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1041700	HF860GT13m011G530MCXfS
1109014	HF860GT13m011G930MCXfS

Series drawing

All measurements are in mm.







PCB TEST - HF05

6 GHz | PCB PAD GSG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Ground Pins	Signal (Rigid)	Body
Preload (cN)	65	-	240
Spring force at nt (cN ±20%)	80	-	270
Nominal travel (mm)	0.3	-	0.5
Maximum travel (mm)	0.6	-	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Ground Pin	Spring steel	silver plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

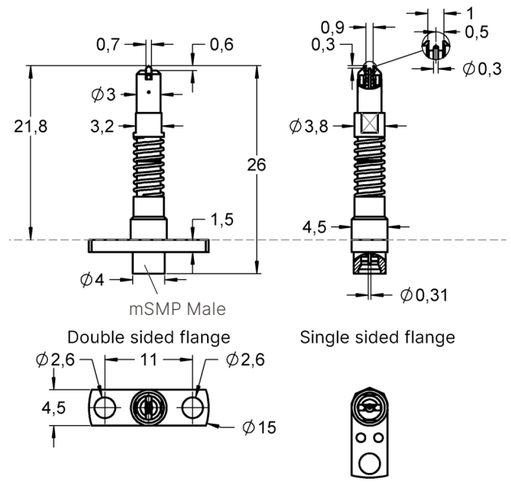
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1024471	HF05PCBGSG016G430MSMPmFV01 (Double sided flange)
1024472	HF05PCBGSG016G430MSMPmFV02 (Single sided flange)

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.6 dB	1.0 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	14 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

4 GHz | PCB PAD GGSGG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Ground Pins	Signal (Rigid)	Ground Body
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Ground Pin	Spring steel	silver plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

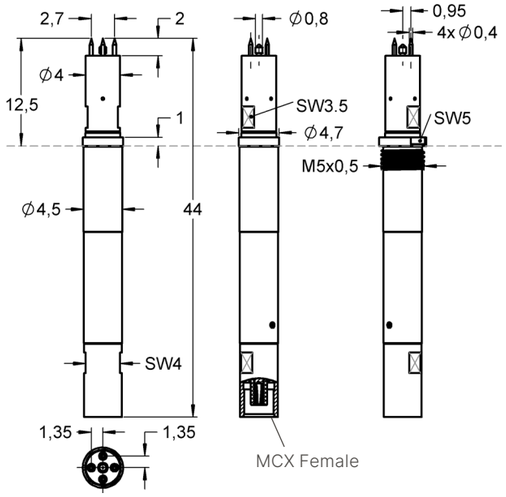
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1039131	HF860PCBGGSGG014G960MCXfS
1033127	HF860PCBGGSGG014G960MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.08 dB	0.20 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	28 dB	17 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

6 GHz | PCB PAD GSG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Ground Pins	Signal (Rigid)	Ground Body
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Ground Pin	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

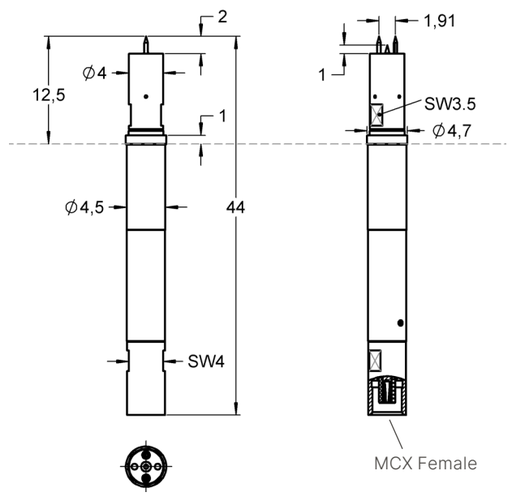
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1043726	HF860PCBGSG016G960MCXfPV02

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.40 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	24 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

6 GHz | PCB PAD GSG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Ground Pins	Signal (Rigid)	Ground Body
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Ground Pin	Spring steel	silver plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

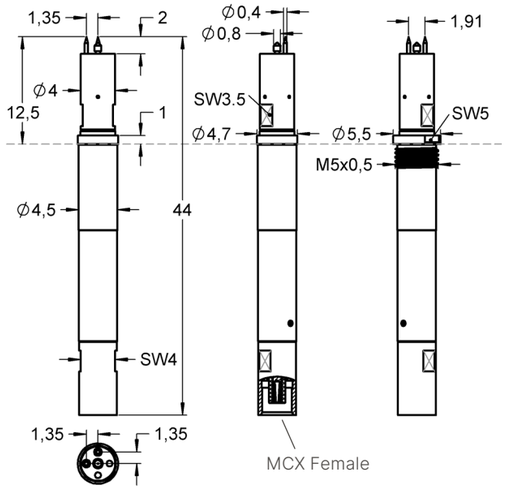
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1038964	HF860PCBGSG016G960MCXfS
1021449	HF860PCBGSG016G960MCXfPV01

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.40 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	24 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

6 GHz | PCB PAD SG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Ground Pins	Signal (Rigid)	Ground Body
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Ground Pin	Spring steel	silver plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

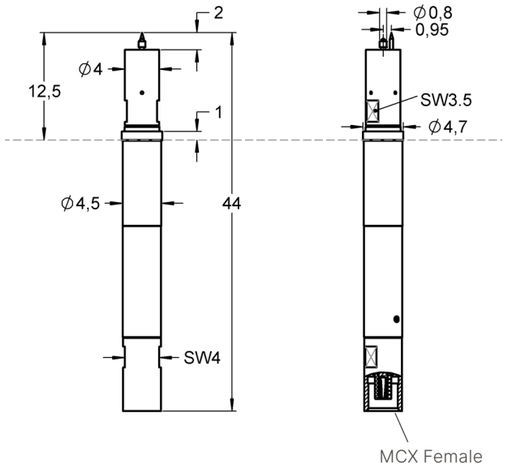
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1052669	HF860PCBGS016G880MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.40 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	24 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

6 GHz | PCB PAD SG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Ground Pins	Signal (Rigid)	Ground Body
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	750
Nominal travel (mm)	1.0	-	3.0
Maximum travel (mm)	1.5	-	4.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Ground Pin	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

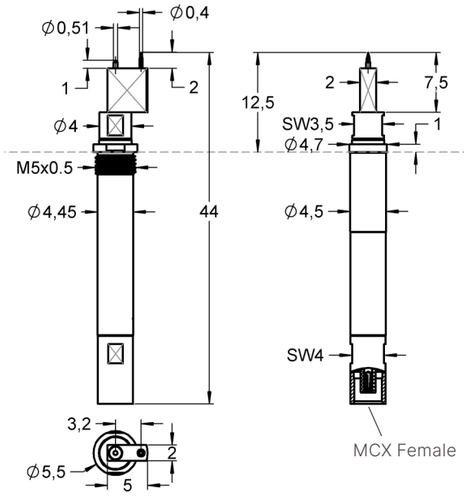
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1118503	HF860PCBGS016G830MCXfS
1021014	HF860PCBGS016G830MCXfP

Series drawing

All measurements are in mm.





PCB TEST - HF860

6 GHz | PCB Coax open

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

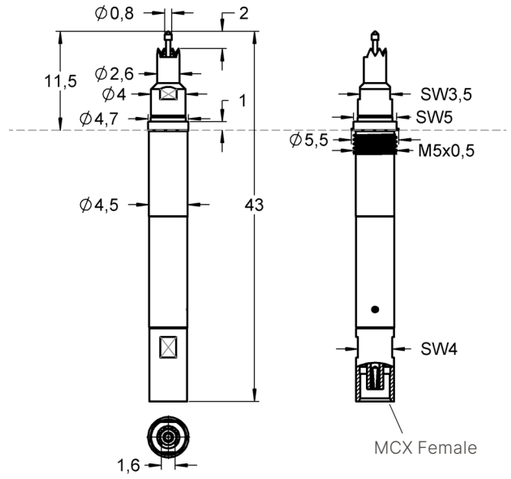
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1038951	HF860PCBCO016G530MCXfSV01
1021450	HF860PCBCO016G530MCXfPV01

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.70 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

6 GHz | PCB Coax open

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90 / 450
Spring force at nt (cN ±20%)	130	400 / 800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

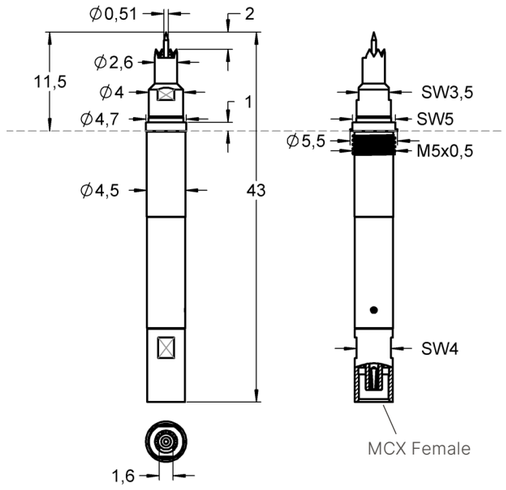
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
Interface	MCX Female	see page 153

Order code	Product name
1038941	HF860PCBCO016G530MCXfSV02
1023017	HF860PCBCO016G530MCXfPV02
1038921	HF860PCBCO016G930MCXfS
1031632	HF860PCBCO016G930MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.70 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

4 GHz | PCB Coax kidney shaped

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

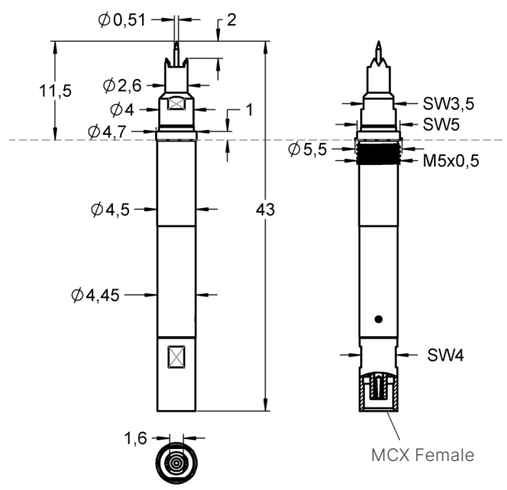
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
Interface	MCX Female	see page 153

Order code	Product name
1038920	HF860PCBCK014G530MCXfS
1032697	HF860PCBCK014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.34 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	27 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

4 GHz | PCB coax closed

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

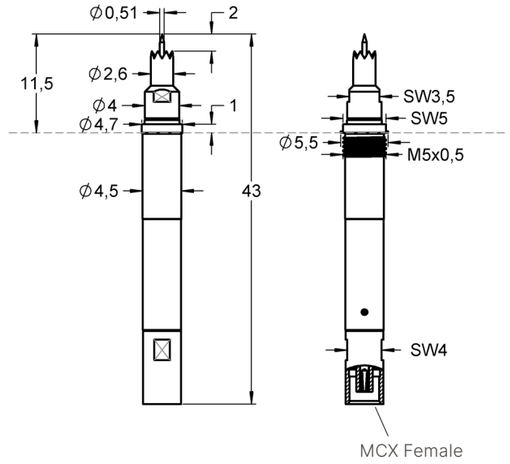
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1032689	HF860PCBCC014G530MCXmPV02
1038337	HF860PCBCC014G530MCXmS

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.30 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	26 dB	23 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF860

4 GHz | PCB coax closed

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

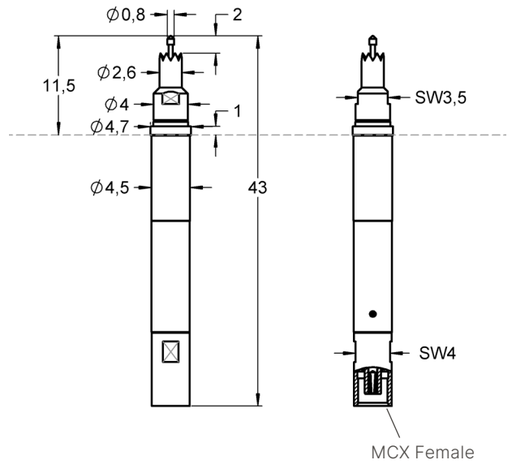
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1101325	HF860PCBCC014G530MCXfPV01

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.30 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	23 dB	26 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



PCB TEST - HF830

8 GHz | PCB coax closed

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	8

Mechanical specifications

	Signal	Ground
Preload (cN)	50	100
Spring force at nt (cN ±20%)	100	400
Nominal travel (mm)	1.3	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

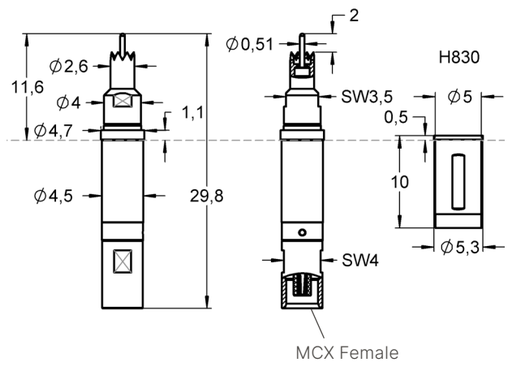
Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1090027	HF830PCBCC018G500MCXfP

Series drawing

All measurements are in mm.





DIN 1,0/2.3 - HF860

4 GHz | DIN 1.0 / 2.3

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

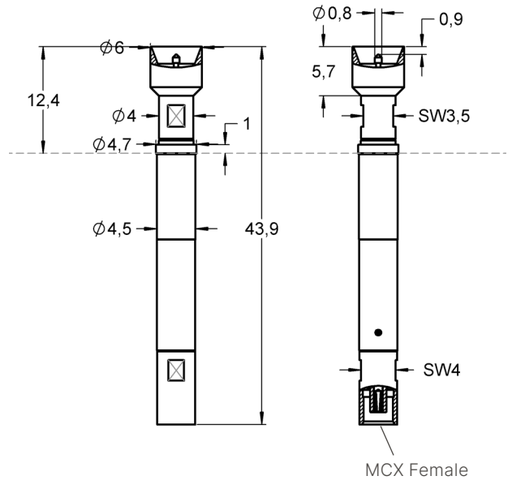
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1032825	HF860DIN 1,0/2,3014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.15 dB	0.39 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	17.5 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



U.FL MALE - HF860

5 GHz | U.FL Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	5

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

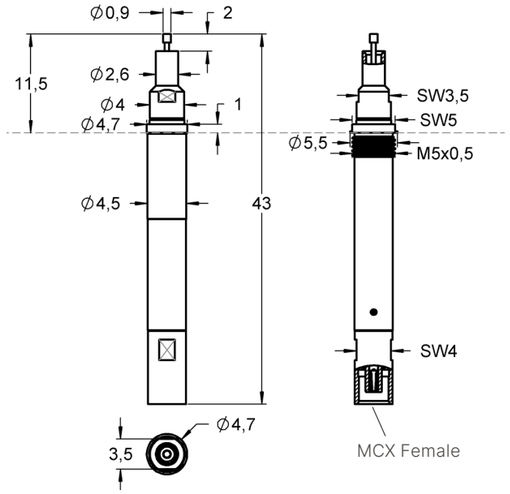
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1038302	HF860UFLm015G530MCXfS
1012584	HF860UFLm015G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.28 dB	0.5 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	15 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



U.FL MALE - HF66

6 GHz | U.FL Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	0.8	2.2

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

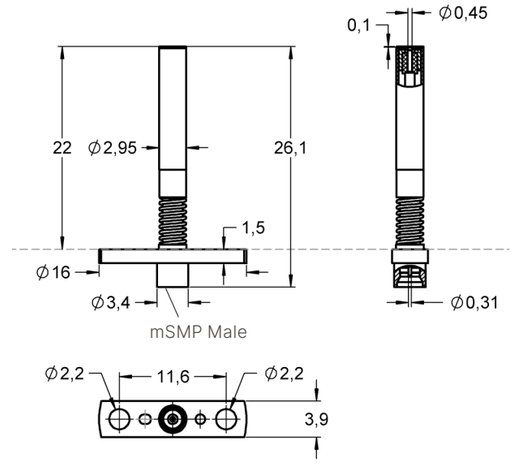
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1024470	HF66MHF/UFL016G540MSMPmF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.7 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



U.FL MALE - HF66

8 GHz | U.FL Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	8

Mechanical specifications

	Signal	Ground
Preload (cN)	95	300
Spring force at nt (cN ±20%)	120	540
Nominal travel (mm)	0.5	1.0
Maximum travel (mm)	0.9	1.7

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

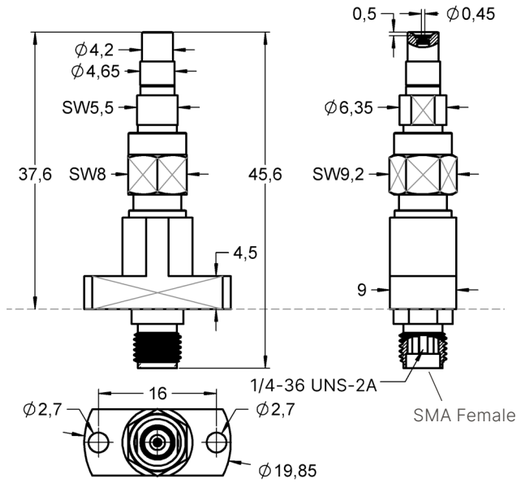
Accessories

1036871	KKHF66-0043	Changeable head
Interface	SMA Female	see page 152+153

Order code	Product name
1036633	HF66UFL018G620SMAfF

Series drawing

All measurements are in mm.





MHF4 - HF66

6 GHz | MHF4

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

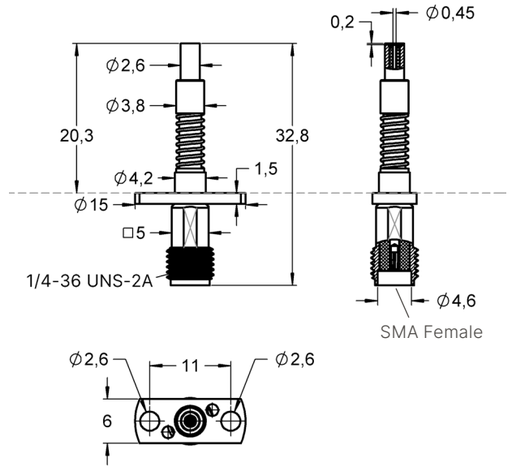
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1024464	HF66HSC016G480SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HSC - HF66

6 GHz | HSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	1
Current Circular [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

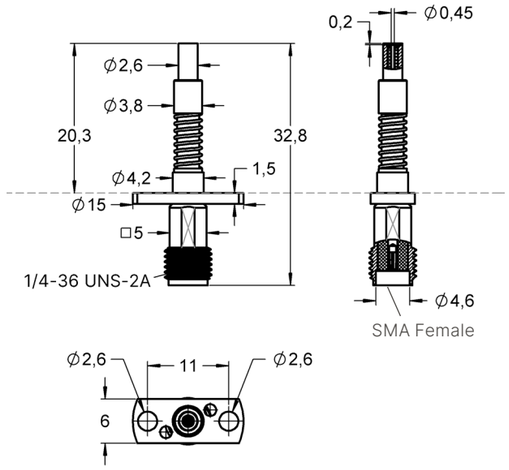
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1024464	HF66HSC016G480SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SWD/SWF/SWG - HF66

6 GHz | SWD/SWF/SWG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	120	240
Spring force at nt (cN ±20%)	210	450
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	3.0	4.5

Materials and plating

Contact Signal	Brass	gold plated
Contact Ground	Brass	gold plated
Barrel	BeCu	gold plated
Spring Signal	Spring steel	silver plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

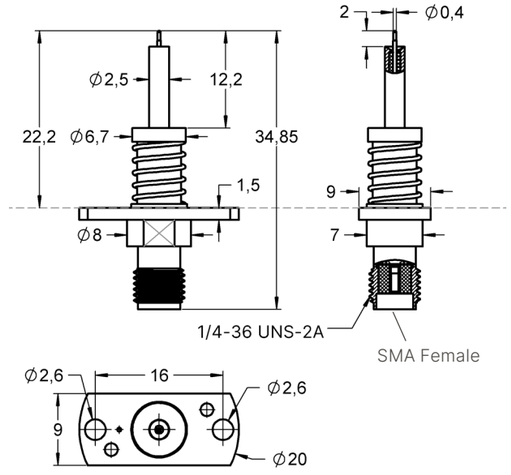
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1024469	HF66SWD/F/G016G660SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	21 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SWD/SWF - HF66

6 GHz | SWD/SWF

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	50
Spring force at nt (cN ±20%)	120	400
Nominal travel (mm)	0.5	4.2
Maximum travel (mm)	0.8	5.3

Materials and plating

Contact Signal	Brass	gold plated
Contact Ground	Brass	gold plated
Barrel	BeCu	gold plated
Spring Signal	Spring steel	silver plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

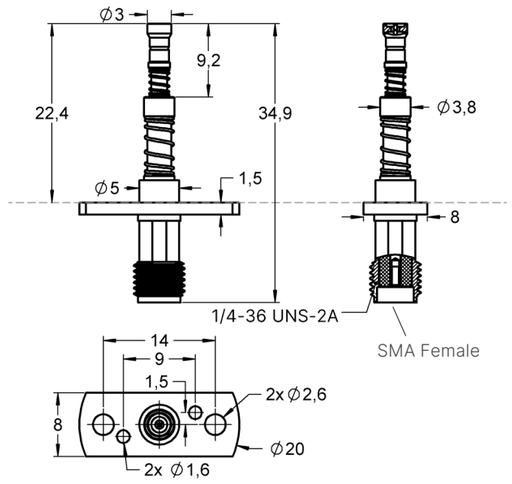
Accessories

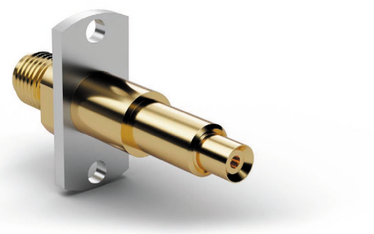
Interface	SMA Female	see page 152+153

Order code	Product name
1167513	HF66SWD-F016G520SMAfF

Series drawing

All measurements are in mm.





SWF - HF66

6 GHz | SWF

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	110	120
Spring force at nt (cN ±20%)	180	240
Nominal travel (mm)	0.8	2.2
Maximum travel (mm)	3.3	4.0

Materials and plating

Contact Signal	Brass	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Spring steel	gold plated
Flange	Brass	nickel plated

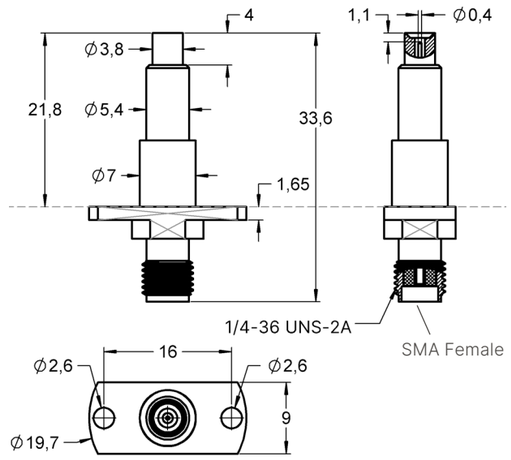
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1029250	HF66SWF016G420SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.5 dB	0.7 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	12 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SWG - HF66

6 GHz | SWG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	100	220
Spring force at nt (cN ±20%)	120	400
Nominal travel (mm)	0.3	0.8
Maximum travel (mm)	1.1	1.5

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	BeCu	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Spring steel	gold plated
Flange	Brass	gold plated

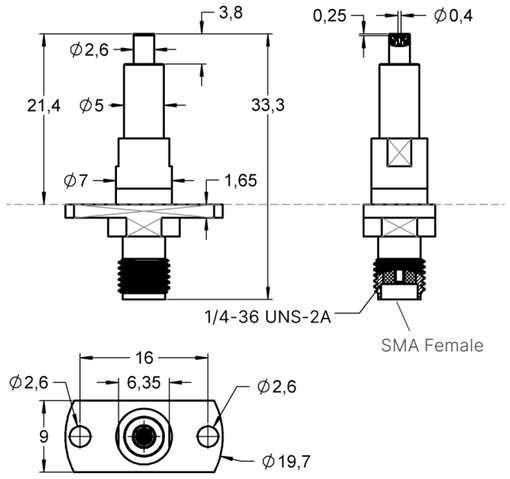
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1105636	HF66SWG016G520SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.5 dB	0.7 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	12 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SWG - HF66

6 GHz | SWG

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	140
Spring force at nt (cN ±20%)	120	220
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	1.5	1.8

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

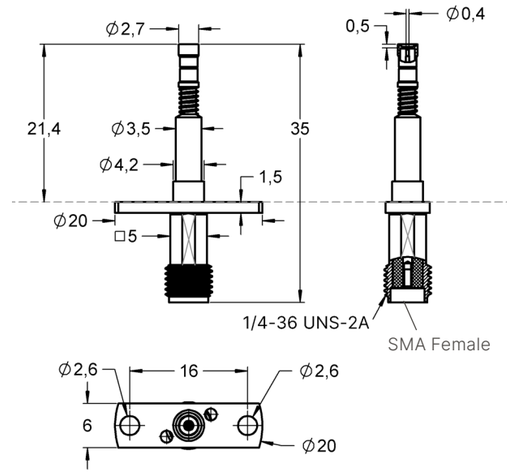
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1024463	HF66SWG016G340SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.6 dB	0.8 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SWJ - HF66

6 GHz | SWJ

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	150
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.2
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

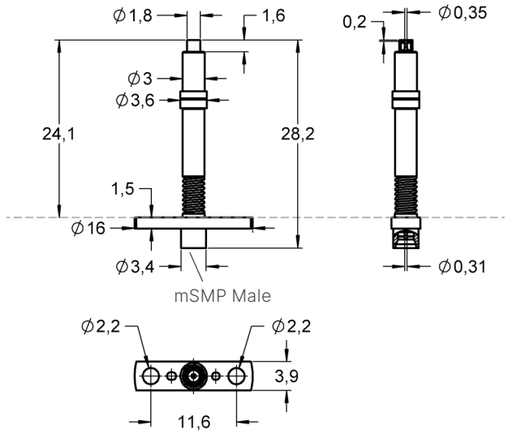
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1024455	HF66SWJ016G540MSMPmF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	22 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SWJ - HF66

6.5 GHz | SWJ

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6.5

Mechanical specifications

	Signal	Ground
Preload (cN)	95	190
Spring force at nt (cN ±20%)	120	500
Nominal travel (mm)	0.5	3.2
Maximum travel (mm)	0.8	3.9

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

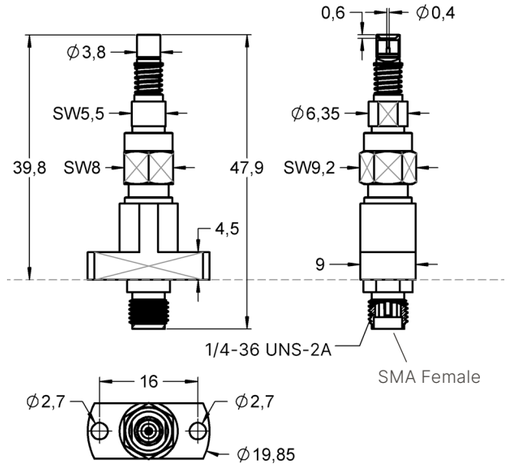
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1042572	HF66SWJ016.5G620SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	22 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



JSC - HF66

6.5 GHz | JSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	0.8	2.2

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

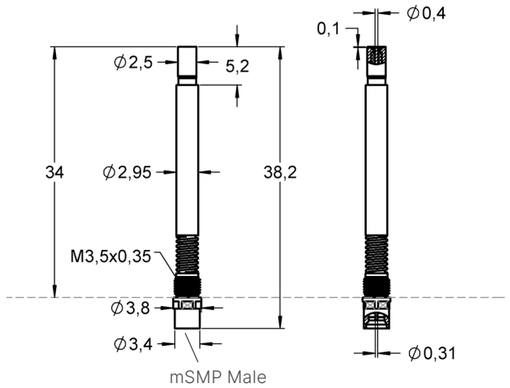
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1024458	HF66JSC016G640MSMPmS

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.5 dB	0.7 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



JSC - HF66

6 GHz | JSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

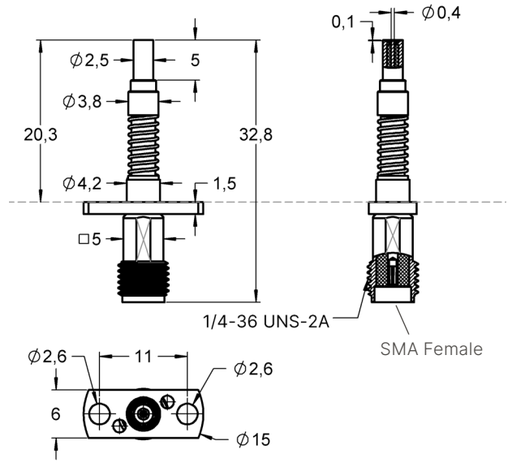
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1024468	HF66JSC016G480SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



JSC - HF66

6 GHz | JSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	190
Spring force at nt (cN ±20%)	120	500
Nominal travel (mm)	0.5	3.2
Maximum travel (mm)	0.8	3.9

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

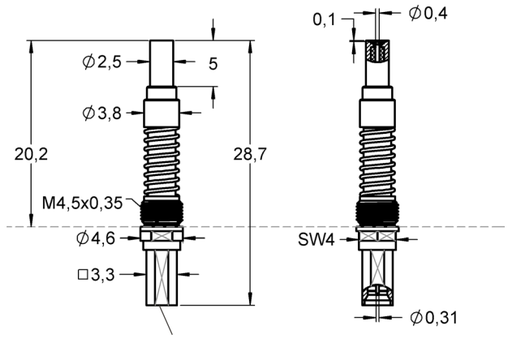
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1024466	HF66JSC016G480MSMPmS

Series drawing

All measurements are in mm.



mSMP Male

Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.7 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SWH - HF66

6 GHz | SWH

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated

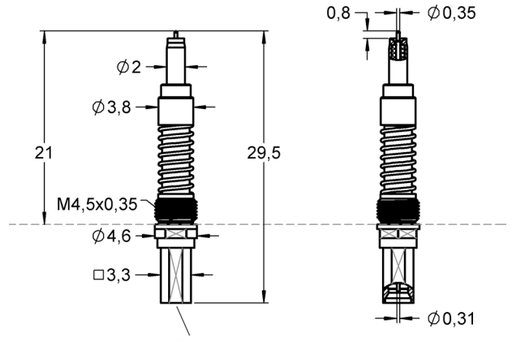
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1024465	HF66SWH016G480MSMPmS

Series drawing

All measurements are in mm.



mSMP Male

Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.7 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



KSC - HF66

6 GHz | KSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	150
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.7

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

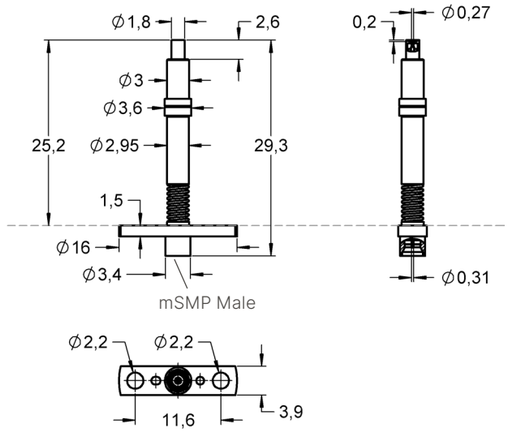
Accessories

Interface	mSMP Male	see page 152

Order code	Product name
1024461	HF66KSC016G540MSMPmF

Series drawing

All measurements are in mm.



mSMP Male

Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	22 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



KSC - HF66

6 GHz | KSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

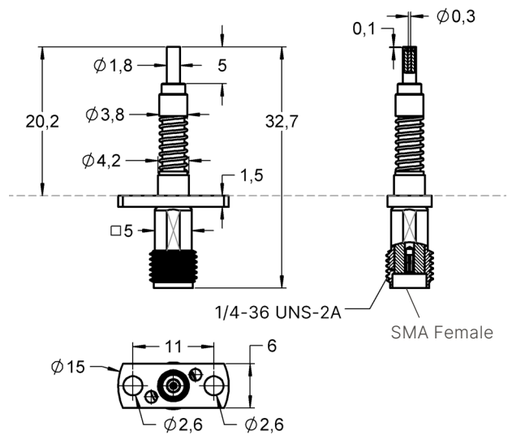
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1024459	HF66KSC016G480SMAfF

Series drawing

All measurements are in mm.



SMA Female

Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



LSC - HF66

6 GHz | LSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	0.8	2.2

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

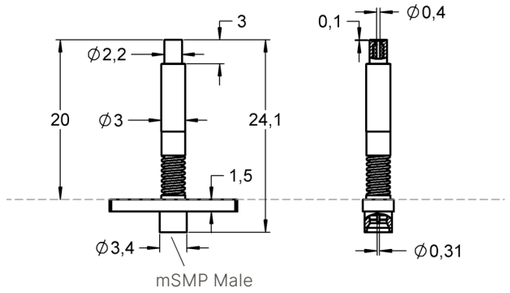
Accessories

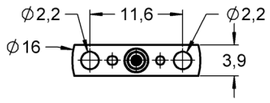
Interface	mSMP Male	see page 152

Order code	Product name
1024460	HF66LSC016G540MSMPmF

Series drawing

All measurements are in mm.





Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.5 dB	0.8 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



LSC - HF66

6 GHz | LSC

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

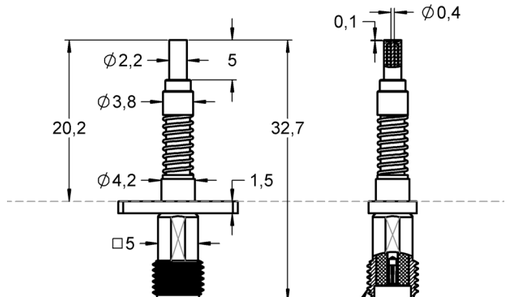
Accessories

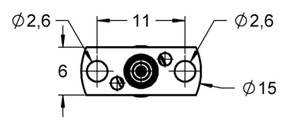
Interface	SMA Female	see page 152+153

Order code	Product name
1024467	HF66LSC016G480SMAfF

Series drawing

All measurements are in mm.

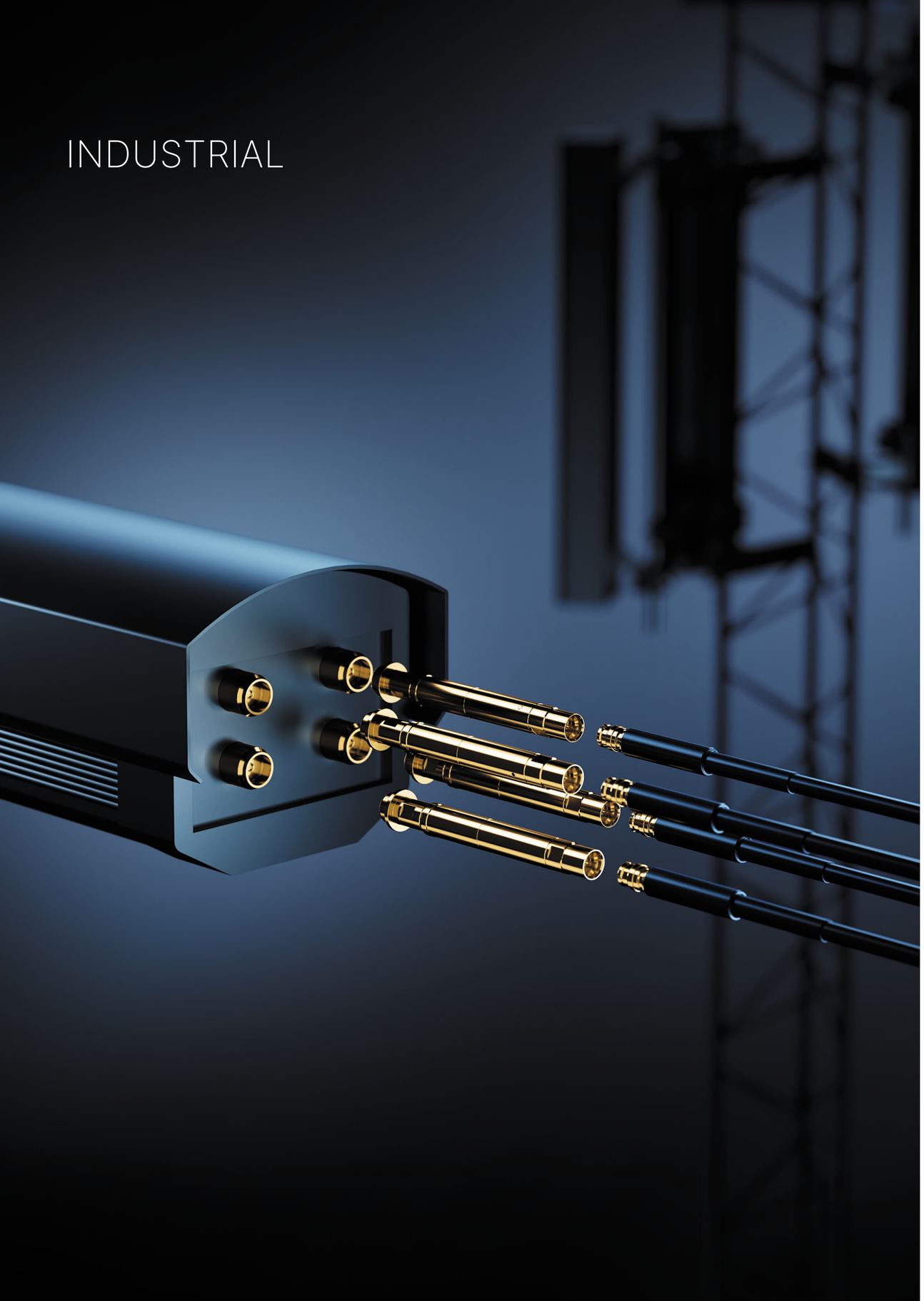




Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





BMA MALE - HF860

4 GHz | BMA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

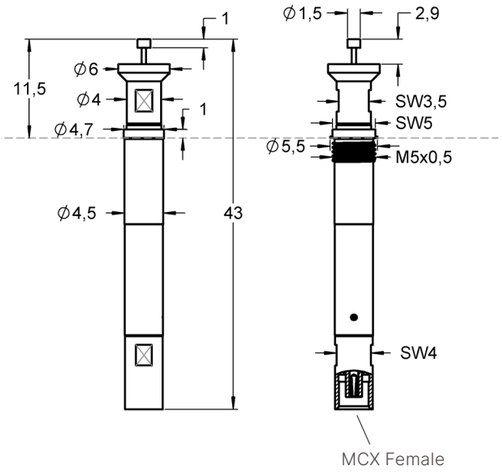
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1039103	HF860BMAm014G530MCXfS
1023932	HF860BMAm014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.50 dB	0.70 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



BNC FEMALE - HF860

4 GHz | BNC Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	150	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

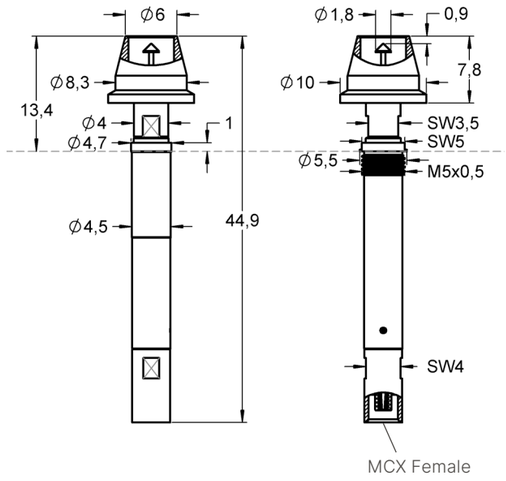
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1039082	HF860BNCf014G550MCXfS
1032634	HF860BNCf014G550MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0,10 dB	0.20 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	28 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



BNC FEMALE - HF86

6 GHz | BNC Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

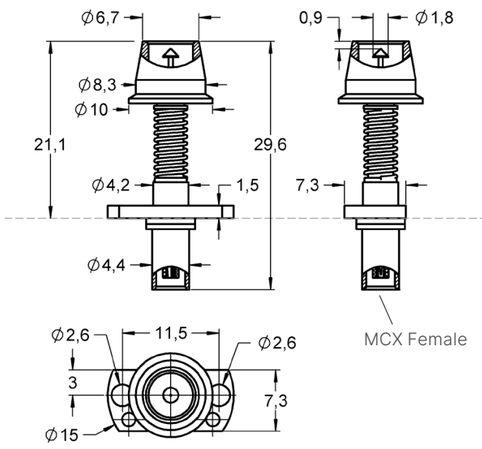
Accessories

1106277	F08302B180G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1106447	HF86BNCf016G775MCXfF

Series drawing

All measurements are in mm.





TNC FEMALE - HF86

6 GHz | TNC-Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

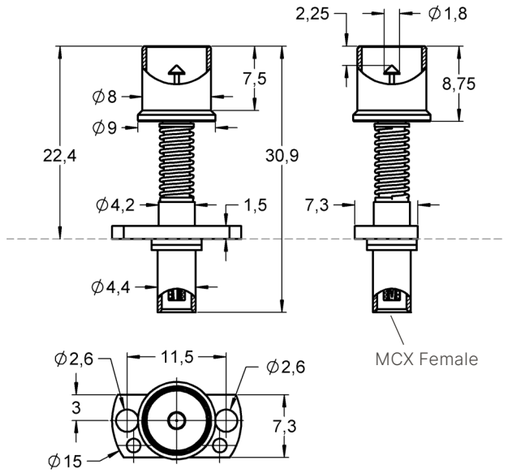
Accessories

1106277	F08302B180G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1171358	HF86TNCf016G775MCXfF

Series drawing

All measurements are in mm.





GT16 MALE - HF860

4 GHz | GT16 Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

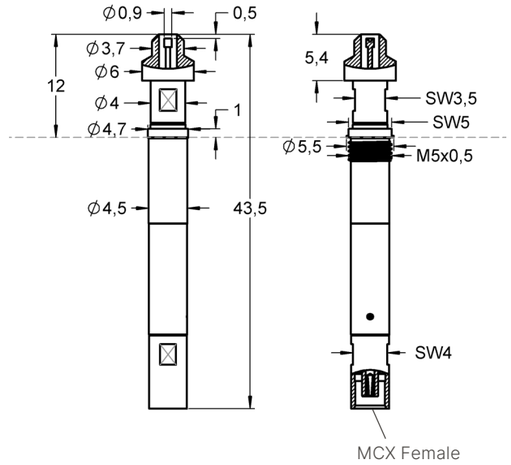
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1032960	HF860GT16m014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.14 dB	0.42 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MMBX FEMALE - HF860

4 GHz | MMBX Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

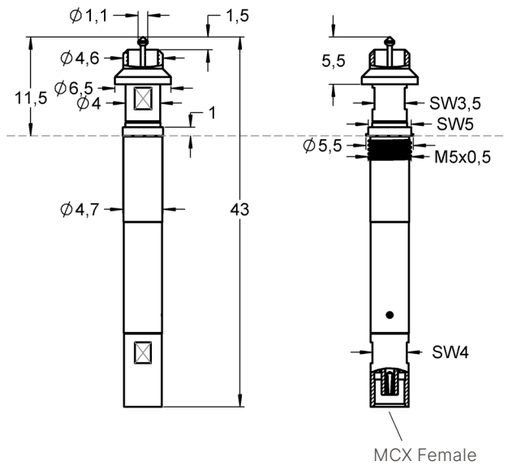
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1032963	F08602B110G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1039120	HF860MMBXf014G530MCXfS
1032966	HF860MMBXf014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.20 dB	0.52 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	16 dB	10.5 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MMBX FEMALE - HF890

12 GHz | MMBX Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	75	450
Spring force at nt (cN ±20%)	110	800
Nominal travel (mm)	1.2	4.0
Maximum travel (mm)	1.9	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

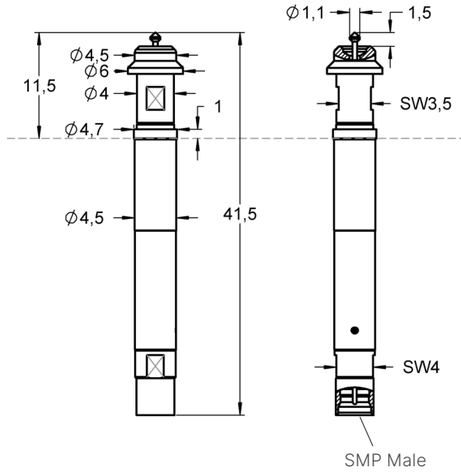
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1032963	F08602B110G130	Inner pin
Interface	SMP Male	

Order code	Product name
1042148	HF890MMBXf/SMAf0112G910SMPmP

Series drawing

All measurements are in mm.





MMCX FEMALE - HF860

6 GHz | MMCX Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	100	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	1.2	4.0
Maximum travel (mm)	1.9	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

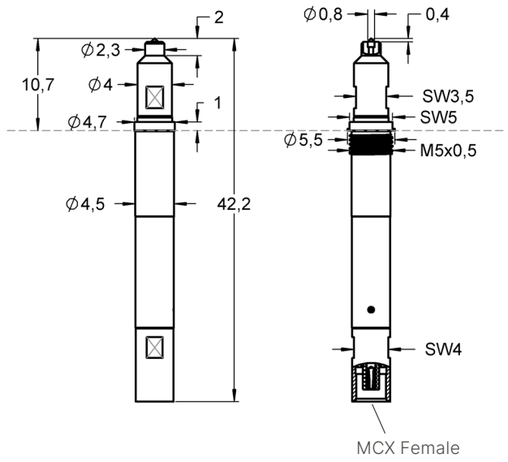
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1039074	HF860MMCXf016G530MCXfS
1032011	HF860MMCXf016G530MCXfP

Series drawing

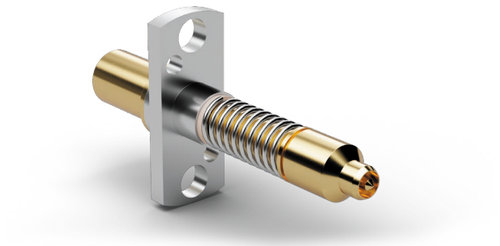
All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.08 dB	0.20 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	30 dB	18 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



MMCX FEMALE - HF86

6 GHz | MMCX Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	500
Spring force at nt (cN ±20%)	120	665
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

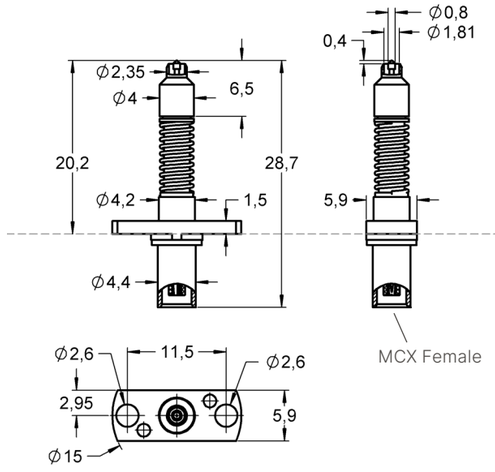
Accessories

1051175	F08302B080G120	Inner pin
Interface	MCX Female	see page 153

Order code	Product name
1134718	HF86MMCXf016G785MCXfFS01

Series drawing

All measurements are in mm.





MCX FEMALE - HF860

6 GHz | MCX Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	100	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	1.2	4.0
Maximum travel (mm)	1.9	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

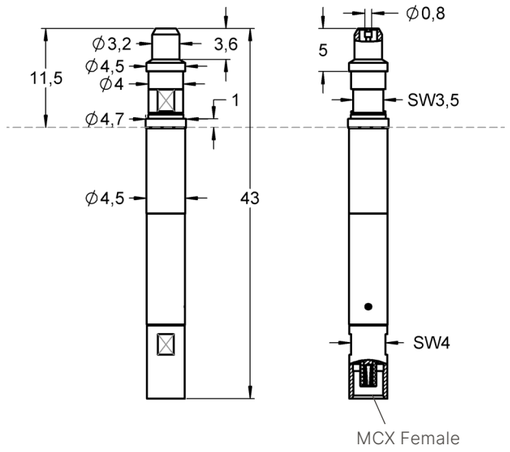
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1145246	FZWZ-002	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1156155	HF860MCXf016G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.08 dB	0.20 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	30 dB	18 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



RF MALE - HF860

2 GHz | RF Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	2

Mechanical specifications

	Signal	Ground
Preload (cN)	115	400
Spring force at nt (cN ±20%)	190	600
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

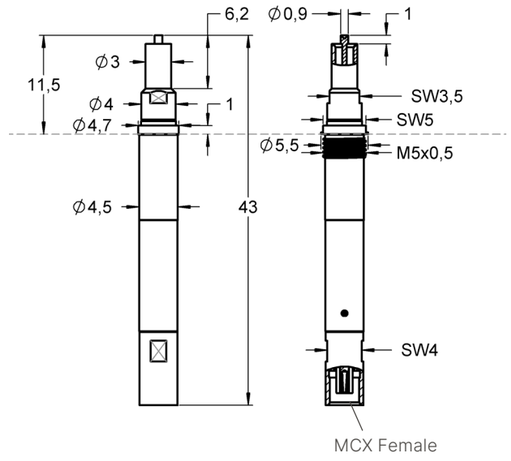
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1032932	F08605B150G190	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1012588	HF860RFm016G530MCXmP
1039104	HF860RFm016G530MCXmS

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.38 dB	0.65 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	15 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



QMA FEMALE - HF860

6 GHz | QMA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	400
Spring force at nt (cN ±20%)	130	600
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

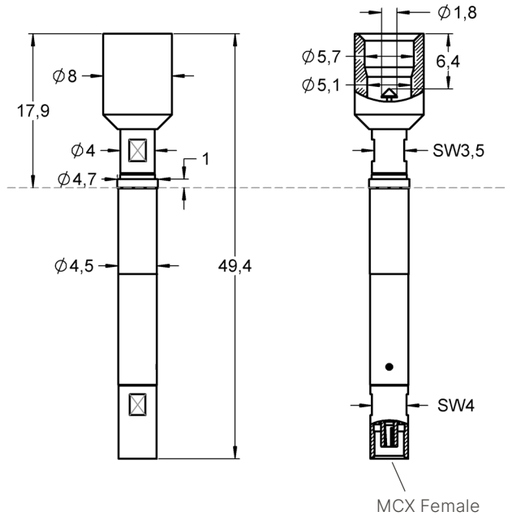
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 153

Order code	Product name
1032350	HF860QMAf016G730MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.08 dB	0.22 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	26 dB	17 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



R-NTC FEMALE - HF860

2 GHz | R-NTC Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	2

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	320
Nominal travel (mm)	2.0	3.0
Maximum travel (mm)	3.7	4.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Stainless steel	unplated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

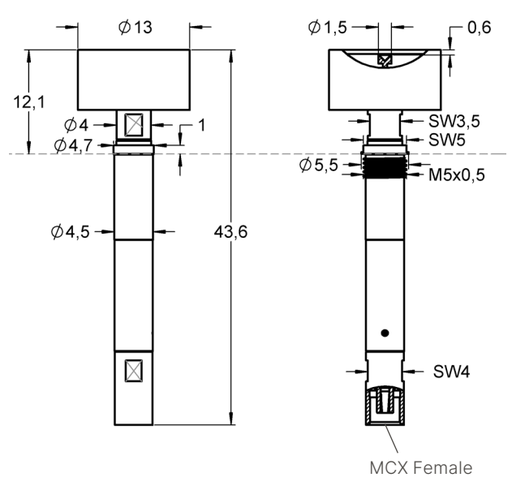
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1039072	HF860RTNCf012G450MCXfS
1036849	HF860RTNCf012G450MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.12 dB	0.32 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



N FEMALE - HF860

6 GHz | N-Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	300
Nominal travel (mm)	2.0	2.7
Maximum travel (mm)	2.7	3.3

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

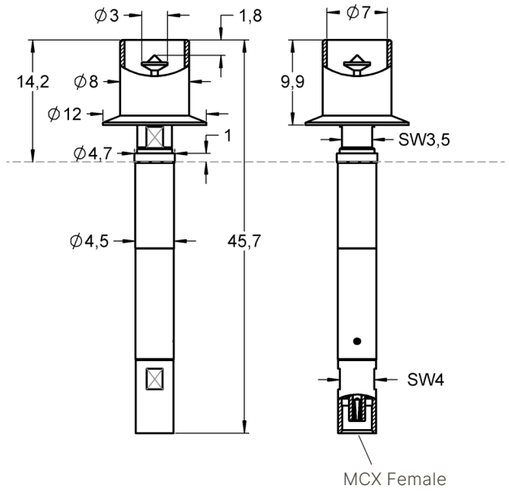
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1034753	F08602B-080G130L360	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1033766	HF860Nf016G430MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.16 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	26 dB	25 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



N FEMALE - HF86

6 GHz | N-Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	3.4	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

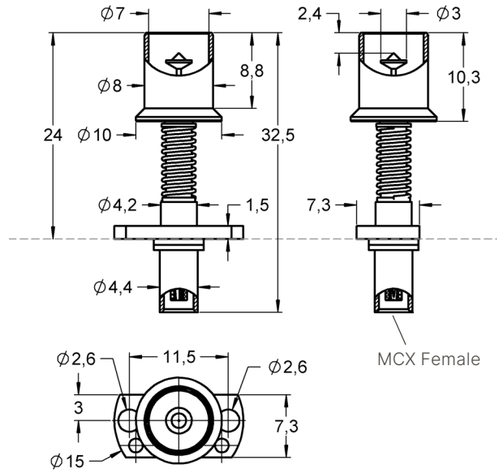
Accessories

1171472	F08302B180G120S01	Inner pin
Interface	MCX Female	see page 153

Order code	Product name
1171528	HF86Nf016G775MCXfF

Series drawing

All measurements are in mm.





FME MALE - HF860

2 GHz | FME Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	2

Mechanical specifications

	Signal	Ground
Preload (cN)	115	400
Spring force at nt (cN ±20%)	190	600
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

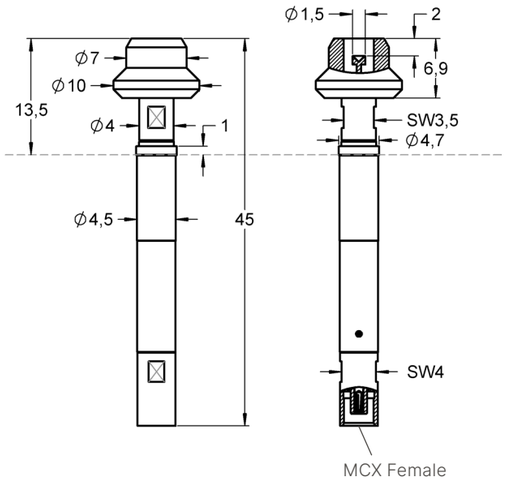
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1032932	F08605B150G190	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1032933	HF860FMEm012G790MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.18 dB	0.40 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	17 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SMA MALE - HF830

4 GHz | SMA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	50	100
Spring force at nt (cN ±20%)	100	400
Nominal travel (mm)	1.7	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

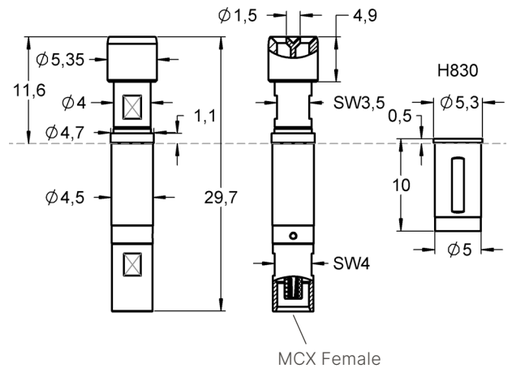
Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1133673	HF830SMAm014G500MCXfP

Series drawing

All measurements are in mm.





SMA MALE - HF860

4 GHz | SMA Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

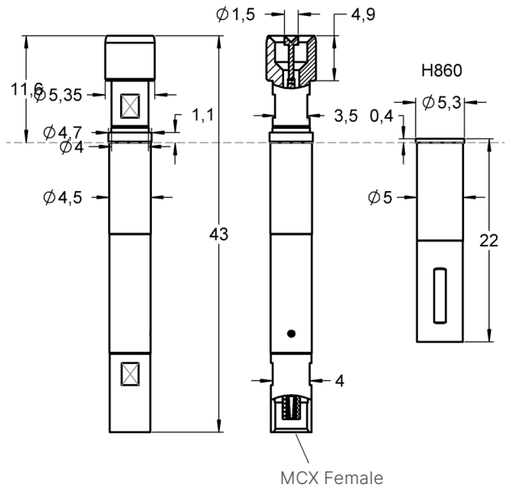
Accessories

1012573	H860	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1160679	HF860SMAm014G530MCXfP

Series drawing

All measurements are in mm.





SMA FEMALE - HF860

8 GHz | SMA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	8

Mechanical specifications

	Signal	Ground
Preload (cN)	75 / 115	90 / 450
Spring force at nt (cN ±20%)	130 / 190	400 / 800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

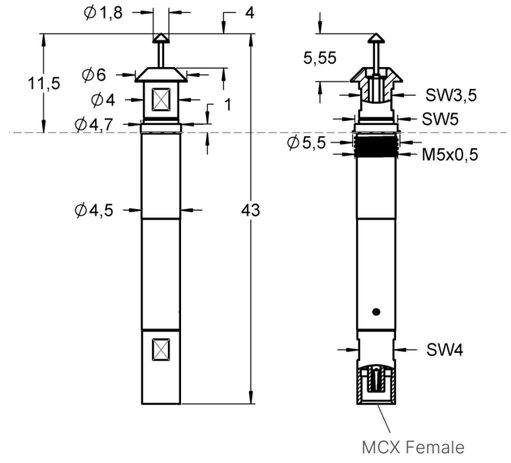
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012575	F08602B180G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1038913	HF860SMAf018G530MCXfS
1012583	HF860SMAf018G530MCXfP
1038922	HF860SMAf018G990MCXfS
1033156	HF860SMAf018G990MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.1 dB	0.2 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	22 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



R-SMA FEMALE - HF860

6 GHz | R-SMA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75 / 115	90
Spring force at nt (cN ±20%)	130 / 190	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

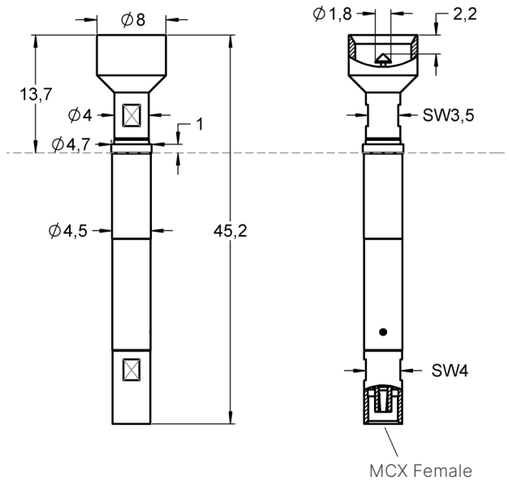
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1133017	HF860RSMAf016G590MCXfP
1032627	HF860RSMAf016G530MCXfP
1039071	HF860RSMAf016G530MCXfS

Series drawing

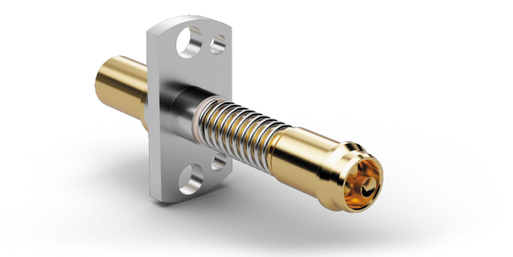
All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.20 dB	0.30 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	25 dB	26 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



RP SMA FEMALE - HF86

6 GHz | RP SMA Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	500
Spring force at nt (cN ±20%)	120	665
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	3.4	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

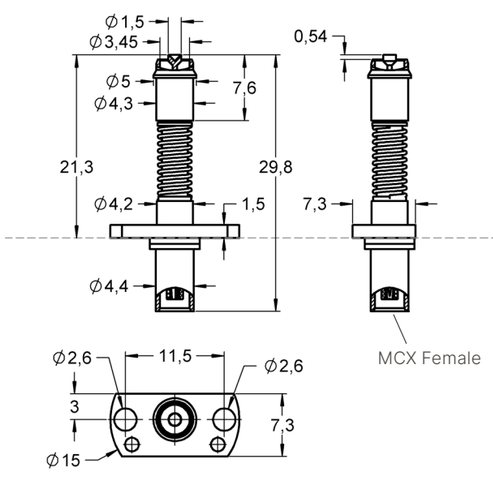
Accessories

1043444	F08305B150G120	Inner pin
Interface	MCX Female	see page 153

Order code	Product name
1159786	HF86RPSMAf016G785MCXfF

Series drawing

All measurements are in mm.





SMB MALE - HF830

5 GHz | SMB Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	5

Mechanical specifications

	Signal	Ground
Preload (cN)	50	100
Spring force at nt (cN ±20%)	120	400
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

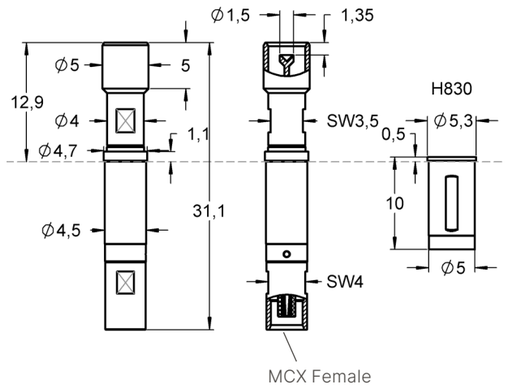
Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1043724	HF830SMBm015G520MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.40 dB	0.55 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	15 dB	11 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SMB MALE - HF860

5 GHz | SMB Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	5

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

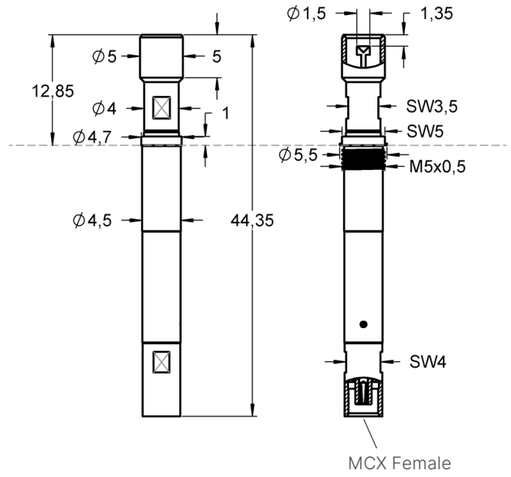
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1039105	HF860SMBm015G530MCXfS
1012586	HF860SMBm015G530MCXfP

Series drawing

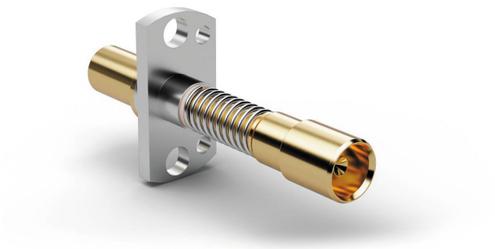
All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.35 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	15 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SMB MALE - HF86

6 GHz | SMB Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

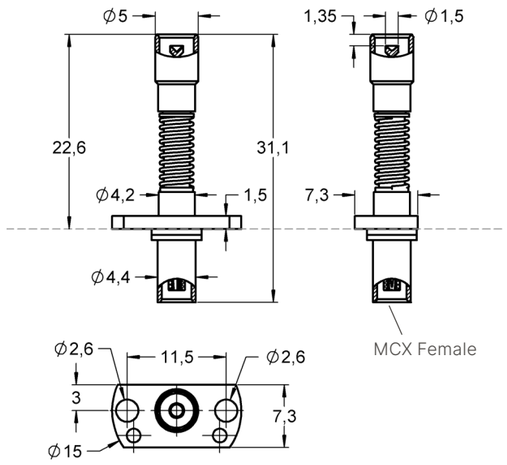
Accessories

1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1106446	HF86SMBm016G775MCXfF

Series drawing

All measurements are in mm.





SMB FEMALE - HF860

6 GHz | SMB Female

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

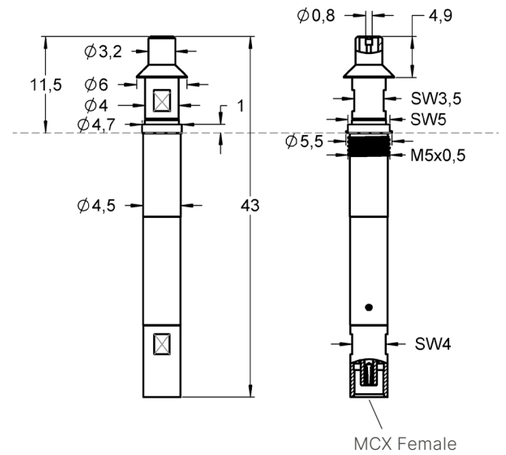
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1038930	HF860SMBf016G530MCXfS
1012587	HF860SMBf018G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.70 dB	0.70 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SMC MALE - HF830

5 GHz | SMC Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	5

Mechanical specifications

	Signal	Ground
Preload (cN)	50	100
Spring force at nt (cN ±20%)	120	400
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

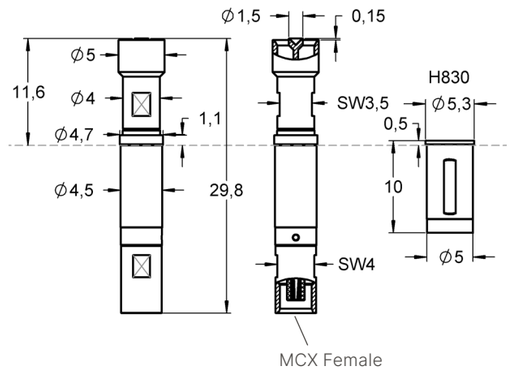
Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1043723	HF830SMCm015G520MCXfP

Series drawing

All measurements are in mm.





SMC MALE - HF860

5 GHz | SMC Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	5

Mechanical specifications

	Signal	Ground
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

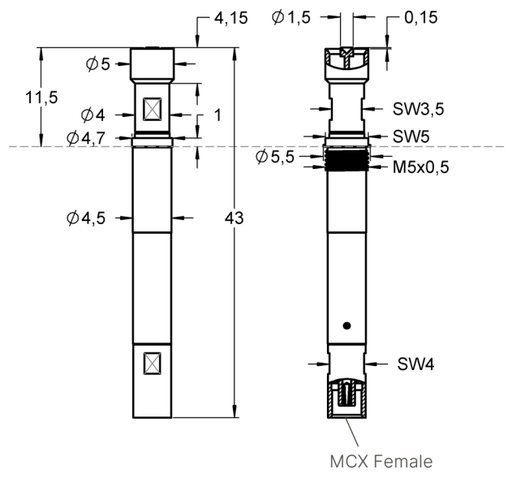
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1039106	HF860SMCm015G530MCXfS
1012585	HF860SMCm015G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.42 dB	0.62 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	23 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



mSMP MALE - HF860

6 GHz | mSMP Male / SSMP / GPPO

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	Signal	Ground
Preload (cN)	100	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	1.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

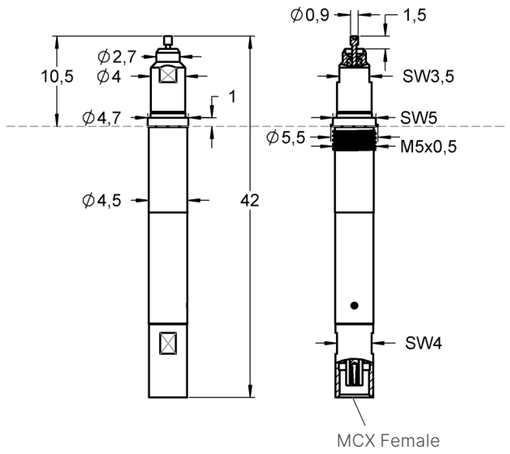
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 153

Order code	Product name
1039073	HF860MSMPm016G530MCXfS
1032010	HF860MSMPm016G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.08 dB	0.20 dB
Typical **return loss**	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	30 dB	18 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



mSMP MALE - HF890

12 GHz | mSMP Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	100	90
Spring force at nt (cN ±20%)	130	800
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	1.7	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

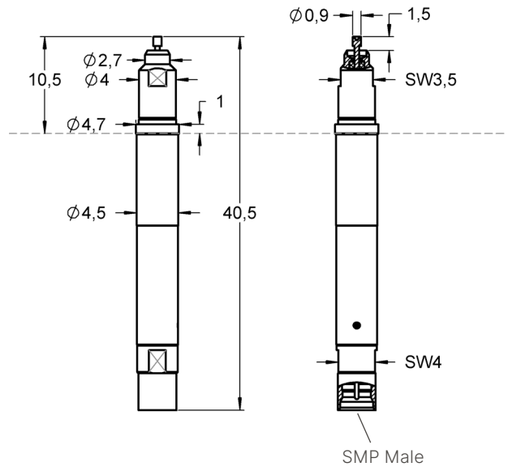
Receptacles H860 see page 154.

1017393	FEWZ-822E0	Insertion tool receptacle
Interface	SMP Male	

Order code	Product name
1051266	HF890MSMPm0112G930SMPmP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 8 GHz	3 GHz up to 16 GHz
Maximum	0.3 dB	0.6 dB
Typical **return loss**	DC up to 8 GHz	3 GHz up to 16 GHz
Minimum	17 dB	11 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



mSMP MALE - HF890

12 GHz | MSMP Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	3
Current Circular [A]	10
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	Signal	Ground
Preload (cN)	75	450
Spring force at nt (cN ±20%)	100	800
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	1.5	5.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	BeCu	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Receptacle	Brass	gold plated

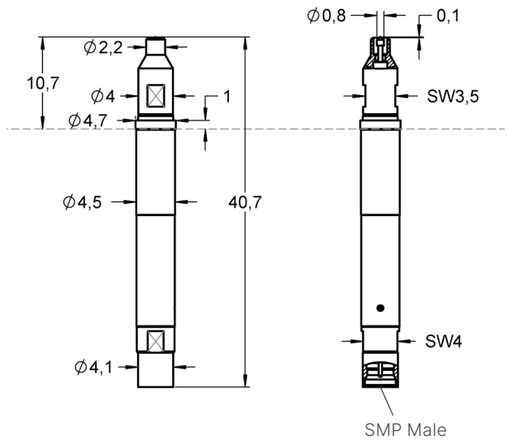
Accessories

Receptacles H860 see page 154.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	SMP Male	

Order code	Product name
1042145	HF890MSMPm0112G900SMPmP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical **insertion loss**	DC up to 8 GHz	8 GHz up to 16 GHz
Maximum	0.38 dB	0.90 dB
Typical **return loss**	DC up to 8 GHz	8 GHz up to 16 GHz
Minimum	20 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



SMP MALE - HF66

18 GHz | SMP Male

Electrical specifications

Temperature [°C]	-45°...+100°
Current Internal [A]	0.1
Current Circular [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	18

Mechanical specifications

	Signal	Ground
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact Signal	BeCu	gold plated
Contact Ground	Brass	gold plated
Barrel	Brass	gold plated
Spring Signal	Spring steel	gold plated
Spring Ground	Stainless steel	unplated
Flange	Brass	nickel plated

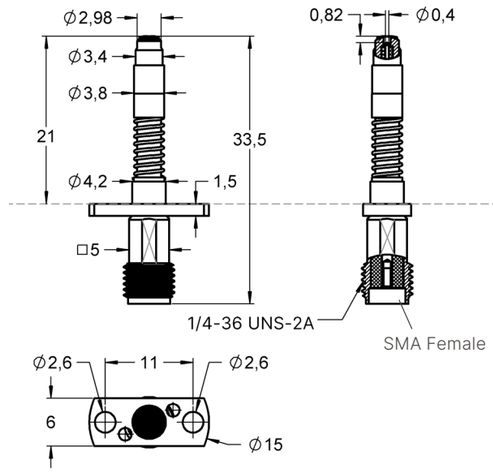
Accessories

Interface	SMA Female	see page 152+153

Order code	Product name
1039136	HF66SMPm0118G480SMAfF

Series drawing

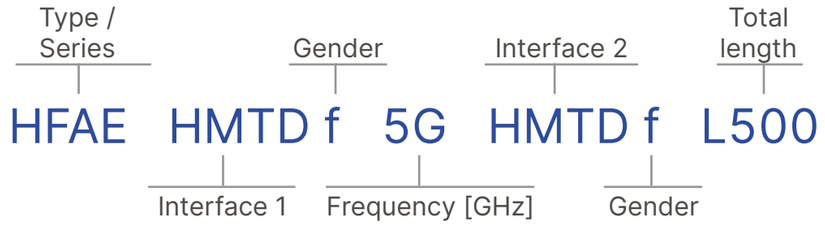
All measurements are in mm.



CONNECTION CABLES

Explanation of our product names for connecting cables

In order to improve the clarity of the material code, the self-explanatory it has been partially further developed. The currently valid number code is shown below.



Interface 1/2

Connector
e.g. H-MTD

Gender

m = Plug (Male)
f = Jack (Female)

Frequency

20 = 20 GHz

Length

L500 = Cable length 500 mm

1032462 - HFAEMSMPf6GSMAmL300



Mini SMP Female



SMA Male (angled)

1057640 - HFAEMSMPf12GSMAmL500



Mini SMP Female



SMA Male

1044573 - HFAEHMTDf5GHMTDfL500



HMTD Female with housing



HMTD Female without housing

1051281 - HFAEHMTDf5GHMTDfL1000



HMTD Female with housing



HMTD Female without housing

1148845 - HFAEMTDf1GMTDfL1000



MTD Female with housing



MTD Female without housing

CONNECTION CABLES

1012656 - HFAEHSDf3GHSDfL500



HSD Female



HSD Female

1012574 - HFAEMCXfLAL700

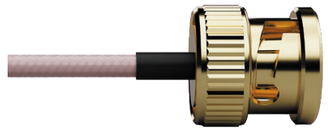


MCX Female

1022553 - HFAEMCXf3GBNCmL700



MCX Female



BNC Male

1022552 - HFAEMCXf3GSMAmL700



MCX Female



SMA Male

1012580 - HFAEMCXf10GSMAmL700



MCX Female



SMA Male

1033199 - HFAEMCXf6GSMAmL1500



MCX Female



SMA Male

1033562 - HFAEMCXangledm6GSMAmL800



MCX Female (angled)



SMA Male



H860

Receptacles

Materials and plating

Receptacle	Brass	gold plated

Accessories

1017393	FEWZ-822E0	Insertion tool receptacle

Drill size recommendation (mm)

H860	4.99 - 5.00
H860RD	5.51 - 5.53
H860FL	7.99 - 8.01

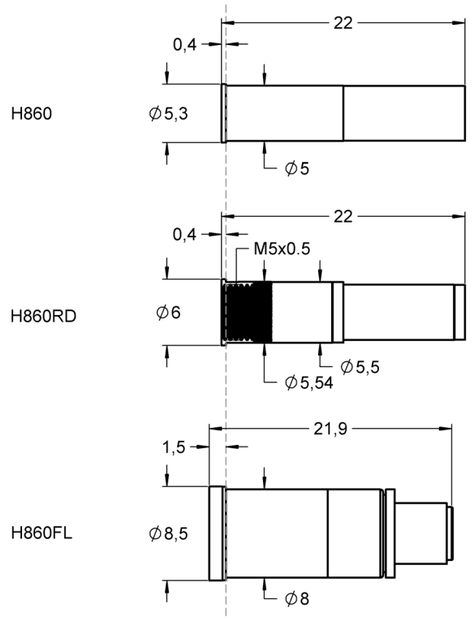
Order code	Product name	Version
1012573	H860	-
1037072	H860RD	RD
1020933	H860FL	FL

Mounting options

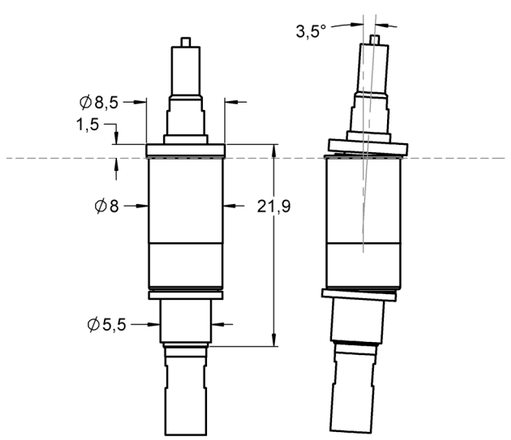
The receptacle H860FL allows a flexible (floating) mounting of the high frequency probe HF860. It permits a wobbling by 360 degrees in case of a small offset to the DUT. Such a possible offset is compensated without damaging the DUT. In released mode the HF probe is returned to its zero point position.

Series drawing

All measurements are in mm.



H860FL



TOOLS

FWZ860HF50

The FWZ860HF50 is used to screw the probes HF860...M into the screwable receptacle H860RD.



FEWZ-822E0

The FEWZ-822E0 is used to insert the receptacles H860... into the mounting plate.



FDWZ-050

The FDWZ-050 is used to insert the signal pin of the HF860 and HF819 if it is possible to replace the signal pin without damaging it.



FZWZ-001

With the release tool FUWZ-001 the pin can be released from the flange. The Mini SMP cable connection can also be easily removed without pulling on the cable.



FZWZ-004 / FZWZ-005 / FZWZ-006

With the removal tool, the signal pin of the HF860 or HF819 can be disconnected and replaced.
FZWZ-004 - Ø0,50 - 0,95mm
FZWZ-005 - Ø0,95 - 1,55mm
FZWZ-006 - Ø1,55 - 1,85mm





F829

Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R TYP [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°
Preload [cN]	50
Spring force [cN] at nt ±20%	100
Nominal travel [mm]	2.0
Maximum travel [mm]	3.0

Materials and plating

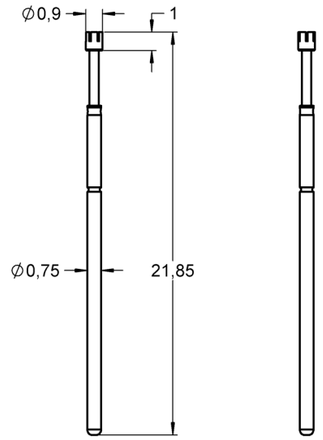
Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035932	FZWZ-004	Assembly tool

Series drawing

All measurements are in mm.



Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version	FM Choice
1043433	F82955B090G120	55	0.90	B / G	120	-	-	-



F066

Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R TYP [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°
Preload [cN]	50
Spring force [cN] at nt ±20%	100
Nominal travel [mm]	2.0
Maximum travel [mm]	3.0

Materials and plating

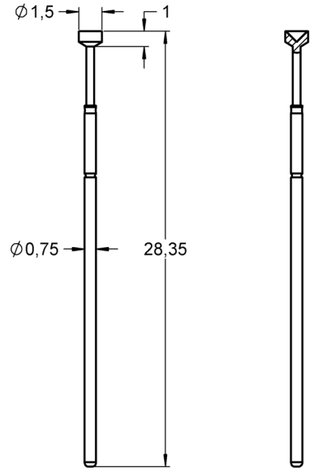
Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035932	FZWZ-004	Assembly tool

Series drawing

All measurements are in mm.



Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version	FM Choice
1131521	F06605B090G100	05	0.90	B / G	100	-	-	-
1131367	F06605B150G100	05	1.50	B / G	100	-	-	-
1102408	F06611B040G120	11	0.40	B / G	120	-	-	-



F077

Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R TYP [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°
Preload [cN]	130
Spring force [cN] at nt ±20%	195
Nominal travel [mm]	0.9
Maximum travel [mm]	1.2

Materials and plating

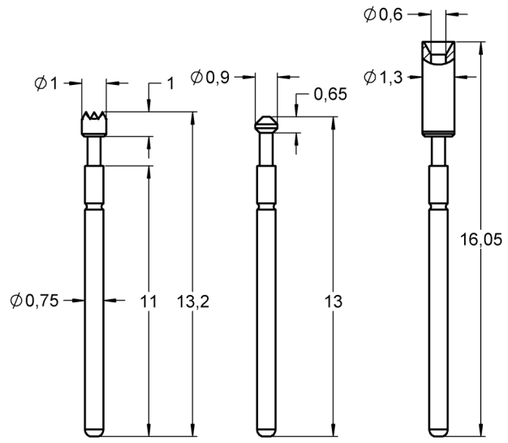
Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035933	FZWZ-005	Assembly tool
1003576	FDWZ-050	Insertion tool probe

Series drawing

All measurements are in mm.



Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version	FM Choice
1104597	F07702B090G195	02	0.90	B / G	195	-	-	-
1097776	F07706B100G195	06	1.00	B / G	195	-	-	-
1053952	F07751B130G195	51	1.30	B / G	195	-	-	-
1159392	F07751B150G195	51	1.50	B / G	195	-	-	-



F083

Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R TYP [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°
Preload [cN]	50
Spring force [cN] at nt ±20%	120
Nominal travel [mm]	2.0
Maximum travel [mm]	2.9

Materials and plating

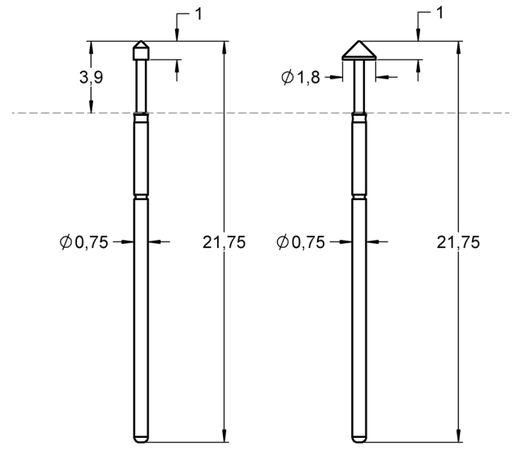
Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035933	FZWZ-005	Assembly tool
1003576	FDWZ-050	Insertion tool probe

Series drawing

All measurements are in mm.



Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version	FM Choice
1051175	F08302B080G120	02	0.80	B / G	120	-	-	-
1106277	F08302B180G120	02	1.20	B / G	120	-	-	-
1043444	F08305B150G120	05	1.50	B / G	120	-	-	-
1129244	F08318B051G120	18	0.51	B / G	120	-	-	-



F086

Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R TYP [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°
Preload [cN]	130
Spring force [cN] at nt ±20%	195
Nominal travel [mm]	0.9
Maximum travel [mm]	1.2

Materials and plating

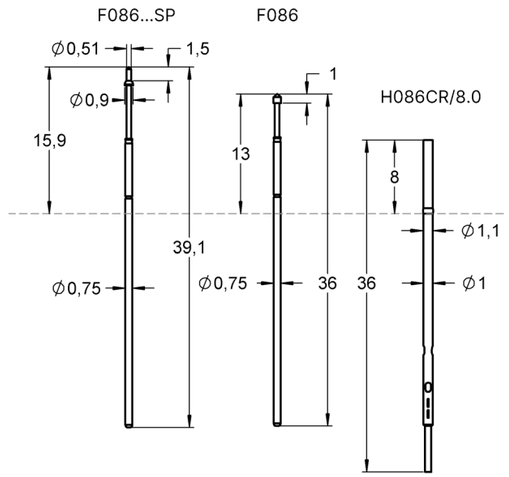
Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035933	FZWZ-005	Assembly tool
1003576	FDWZ-050	Insertion tool probe

Series drawing

All measurements are in mm.



Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version
1022549	F08602B060150090G130L391	02	0.60	B / G	130	-	L391
1012603	F08602B080G130	02	0.80	B / G	130	-	-
1029637	F08602B080G130L350	02	0.80	B / G	130	-	L350
1034753	F08602B080G130L360	02	0.80	B / G	130	-	L360
1032963	F08602B110G130	02	1.10	B / G	130	-	-
1012575	F08602B180G130	02	1.80	B / G	130	-	-
1033155	F08602B180G190	02	1.80	B / G	190	-	-
1012577	F08605B090G130	05	0.90	B / G	130	-	-

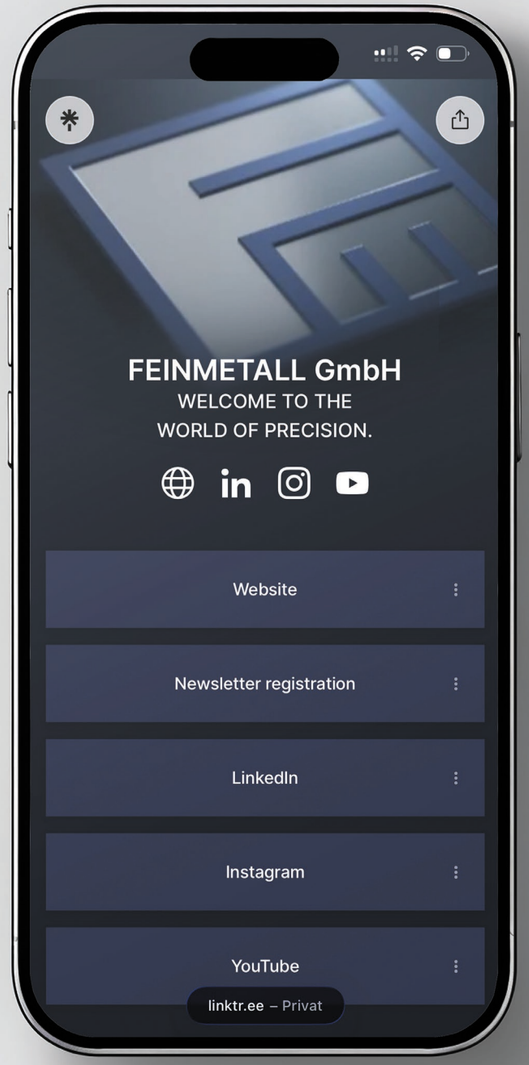
Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version
1012578	F08605B150G130	05	1.50	B / G	130	-	-
1012605	F08611B051G130	11	0.51	B / G	130	-	-
1107629	F08611B051G130L341	11	0.51	B / G	130	-	-
1013855	F08612B051150090G130L391	12	0.51	B / G	130	-	-
1029008	F08612B060150090G130L384	12	0.60	B / G	130	-	-
1039263	F08612B060210090G130L384	12	0.60	B / G	130	-	-
1012728	F08614B090G130	14	0.90	B / G	130	-	-
1137488	F08618B048G130	18	0.48	B / G	130	-	-
1023016	F08618B051G130	18	0.51	B / G	130	-	-
1022361	F08655B090G130	55	0.90	B / G	130	-	-
1023251	F08655B120G130	55	1.20	B / G	130	-	-
1103186	F08655B150G130	55	1.50	B / G	130	-	-

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