

KOAXIALE STECKVERBINDER – SERIE N

COAXIAL CONNECTORS – TYPE N



Das Stecksystem N kann bis 11 GHz eingesetzt werden (Präzisionsausführung bis 18 GHz).

Der Einsatz ist vorwiegend in Mobilfunkanwendungen mit hohen mechanischen und elektrischen Anforderungen.

SPINNER liefert aus diesem Grund ausschließlich Steckverbinder mit ungeschlitzter Außenleiterkontakthülse und einer speziellen Profildichtung im Steckerkopf anstelle der nach IEC oder CECC vorgesehenen Flachdichtscheibe, um eine zuverlässige Abdichtung sicherzustellen.

Die spezielle SPINNER Überwurfmutter unserer N-Stecker wird durch Einrollen am Außenleiter fixiert. Hierdurch wird das zulässige Anzugsdrehmoment wesentlich erhöht und der Kontaktdruck deutlich verbessert.

Type N connectors can be used at frequencies up to 11 GHz, high-precision types up to 18 GHz.

It is typically used in mobile communication applications with demanding mechanical and electrical requirements.

That is why SPINNER exclusively manufactures connectors with non-slotted outer conductor contacts and a special sealing profile in the connector head instead of the flat seal disk, specified by IEC or CECC. This ensures the most reliable sealing function.

The coupling nut on N connectors has the special SPINNER profile and is fastened by flaring in the outer conductor. This leads to a much higher tightening torque and unmatched contact pressure.

Die Steckverbinder der Serie N sind benannt nach Ihrem Erfinder Paul Neill, der diese Norm 1942 entwickelte. Der Name wird allerdings auch häufig aus der Bezeichnung Navy Connector abgeleitet.

The N connectors have been named after their inventor, Paul Neill, who developed this standard in 1942. But frequently the name is also related to Navy Connector.

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COAXIAL CONNECTORS – TYPE N

Elektrisch/Electrical	IEC 61169-16	Bemerkung/Remark
Nennimpedanz Nominal impedance	50 Ω	
Frequenzbereich Frequency range	11 GHz 18 GHz	Stufe/Grade 2 Stufe/Grade 0 +1
VSWR	≤ 1.30	gerader Steckverbinder bei 11 GHz straight connector at 11 GHz
	≤ 1.50	Winkel-Steckverbinder bei 11 GHz right angle connector at 11 GHz
Durchgangswiderstand des Innenleiters Center contact continuity	≤ 1.50 mΩ	anfänglich initial
Durchgangswiderstand des Außenleiters Outer contact continuity	≤ 1.00 mΩ	anfänglich initial
Isolationswiderstand Insulation resistance	≥ 5 GΩ	anfänglich initial
Spannungsfestigkeit in Meereshöhe Proof voltage at sea level	2.5 kV	50...60 Hz
Schirmwirksamkeit Screening effectiveness	≥ 90 dB (≥ 100 dB Spinner)	nur gerade Kabelsteckverbinder straight cable connectors only bei 1 GHz / at 1 GHz

Mechanisch/Mechanical	IEC 61169-16	Bemerkung/Remark
Kupplungsdrehmoment Coupling torque	0.7 - 1.1 Nm (3.0 Nm Spinner)	
Prüfdrehmoment Proof torque	1.7 Nm (4.0 Nm Spinner)	
Zugfestigkeit des Kupplungsmechanismus Tensile strength of coupling mechanism	450 N	
Mechanische Lebensdauer Mechanical lifetime	500	Zyklen Operations
Fesselung des Innenleiters Center contact captivation		ja yes

Umwelt/Environmental	IEC 61169-16	Bemerkung/Remark
Klimakategorie Climatic category	55/155/21	
Schutzgrad Degree of protection	(IP68 Spinner)	gesteckt/mated

Werkstoffe und Oberflächenbehandlung/Materials and Surface Finish	
Federnde Kontaktteile Resilient contact members	hochfeste Cu-Legierung, versilbert high strength copper alloy, silver plated
Isolation Insulation	PTFE/FEP
Innen- und Außenleiterkontaktteile Center and outer conductor parts	Cu-Legierung, versilbert bzw. CuSnZn Copper alloy, silver plated and/or CuSnZn
Sonstige Metallteile Other metal parts	Cu-Legierung, glanzvernickelt bzw. verzinkt Copper alloy, bright nickel plated and/or tin plated
Dichtungen Gaskets	Silikonkautschuk Silicone rubber

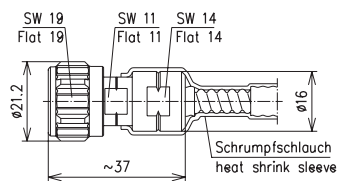
KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

Kabelsteckverbinder für SF 1/4"-50 Kabel | Cable connectors for SF 1/4"-50 cables

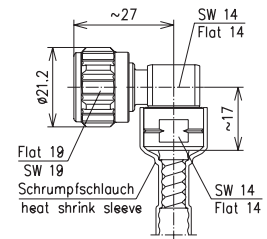
Ausführung Version	Ω	Bestellnummer Part Number
CAF® Schrumpfschlauch CAF® Heat shrink sleeve	50	BN 84 47 60 BN 75 78 60 BN 84 55 60



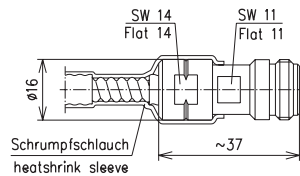
BN 84 47 60



BN 75 78 60



BN 84 55 60



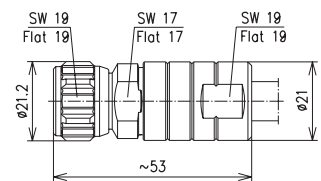
Kabelsteckverbinder für SF 3/8"-50 Kabel | Cable connectors for SF 3/8"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Profildichtung CAF® Profile gasket	50	BN 87 01 63 BN 87 01 65* BN 87 01 73* BN 84 60 63

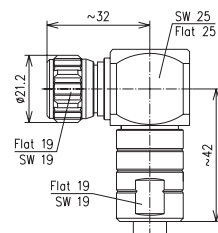
*Innenleiter vergoldet/Inner conductor gold plated



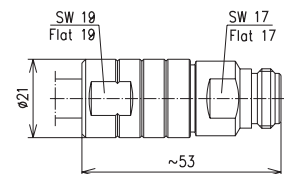
BN 87 01 63 / BN 87 01 65



BN 87 01 73



BN 84 60 63

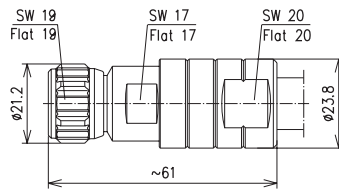


KOAXIALE STECKVERBINDER – SERIE N
 COAXIAL CONNECTORS – TYPE N

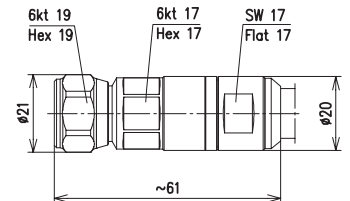
Kabelsteckverbinder für SF 1/2"-50 Kabel | Cable connectors for SF 1/2"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Profildichtung CAF® Profile gasket	50	BN 87 01 57
MultiFit Profildichtung MultiFit Profile gasket		BN 87 01 71
CAF® Profildichtung CAF® Profile gasket	50	BN 87 01 56*
MultiFit Profildichtung MultiFit Profile gasket		BN 87 01 74
CAF® Profildichtung CAF® Profile gasket	50	BN 84 60 57
MultiFit Profildichtung MultiFit Profile gasket		BN 84 60 71

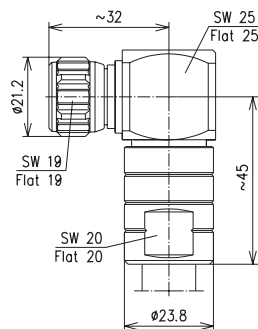
*Innenleiter vergoldet/Inner conductor gold plated



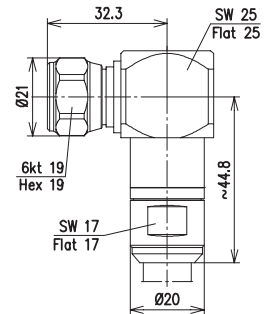
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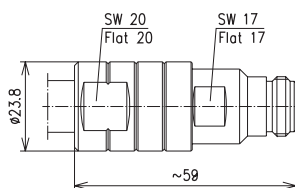
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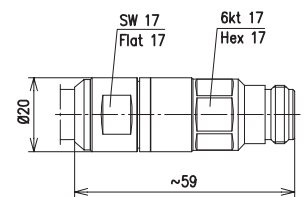
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BN 87 01 74



BN 84 60 57



BN 84 60 71

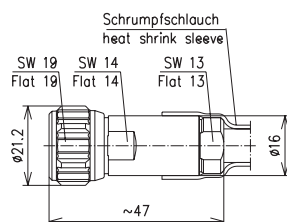
KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

Kabelsteckverbinder für LF 1/4"-50 Kabel | Cable connectors for LF 1/4"-50 cables

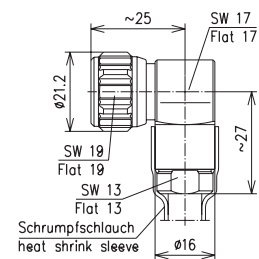
Ausführung Version	Ω	Bestellnummer Part Number
CAF® O-Ring	50	BN 84 47 55 BN 75 78 55 BN 84 55 55 BN 74 76 45



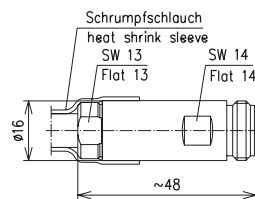
BN 84 47 55



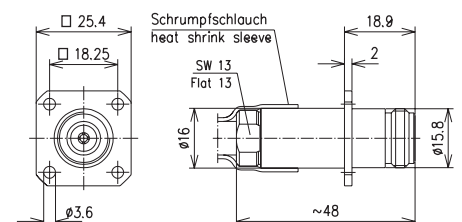
BN 75 78 55



BN 84 55 55



BN 74 76 45

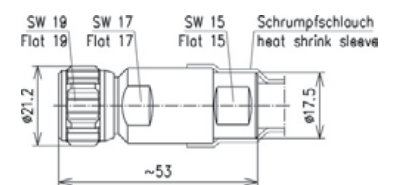


Kabelsteckverbinder für LF 3/8"-50 Kabel | Cable connectors for LF 3/8"-50 cables

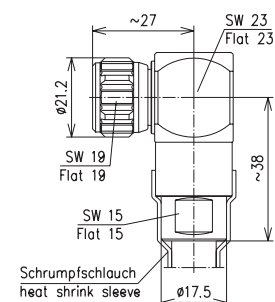
Ausführung Version	Ω	Bestellnummer Part Number
CAF® O-Ring	50	BN 87 01 69 BN 87 01 70 BN 84 60 69



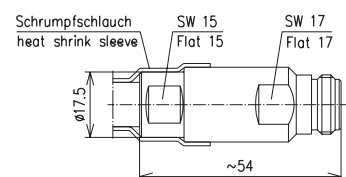
BN 87 01 69



BN 87 01 70



BN 84 60 69



KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

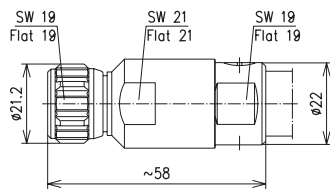
Kabelsteckverbinder für LF 1/2"-50 Kabel | Cable connectors for LF 1/2"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 87 01 68
CAF® O-Ring	50	BN 87 01 89
MultiFit*	50	BN 70 64 17
CAF® Plast2000®	50	BN 87 01 67
CAF® O-Ring	50	BN 87 01 87
MultiFit*	50	BN 70 64 16

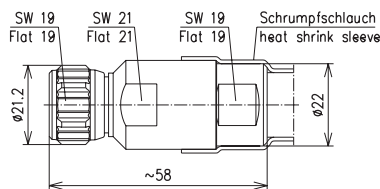
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



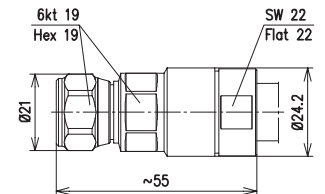
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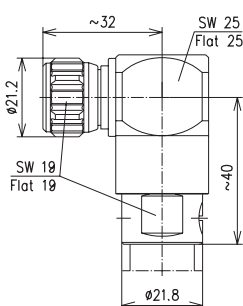
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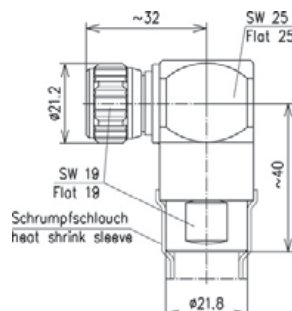
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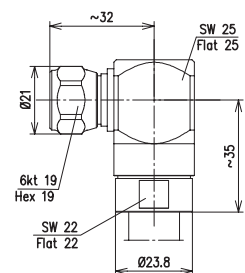
BN 87 01 67



BN 87 01 87



BN 70 64 16



KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

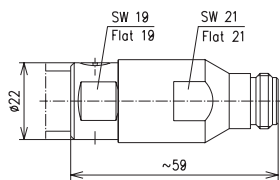
Kabelsteckverbinder für LF 1/2"-50 Kabel | Cable connectors for LF 1/2"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 84 60 68
CAF® O-Ring	50	BN 84 60 89
MultiFit*	50	BN 84 64 17
CAF® Plast2000®	50	BN 74 75 44

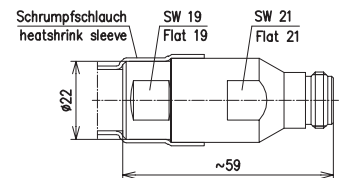
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



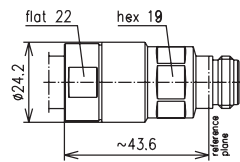
BN 84 60 68



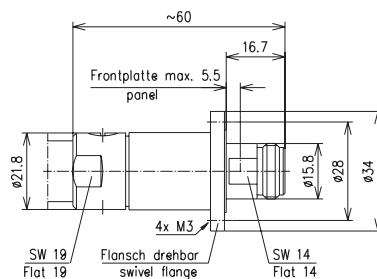
BN 84 60 89



BN 84 64 17



BN 74 75 44

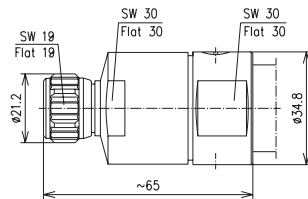


KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

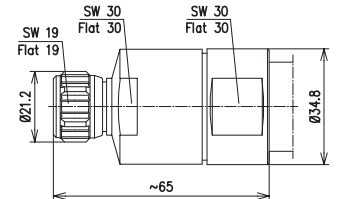
Kabelsteckverbinder für LF 7/8"-50 Kabel | Cable connectors for LF 7/8"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 70 67 40
CAF® O-Ring	50	BN 70 67 41
TOPSPIN® O-Ring*	50	BN 70 67 18
MultiFit*	50	BN 70 64 02
CAF® Plast2000®	50	BN 84 63 40
CAF® O-Ring	50	BN 84 63 41
TOPSPIN® O-Ring*	50	BN 84 63 18
MultiFit*	50	BN 84 64 02

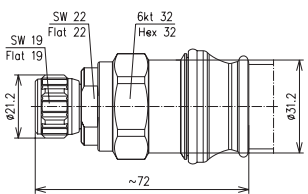
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



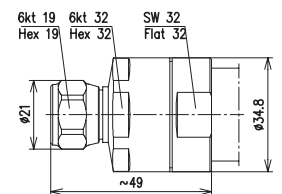
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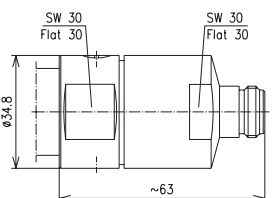
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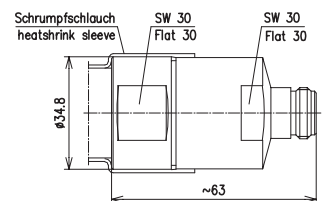
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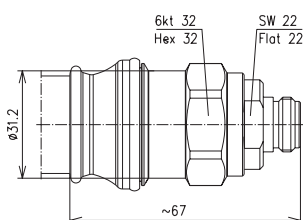
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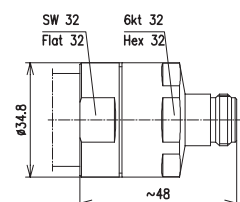
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BN 84 63 41



BN 84 63 18



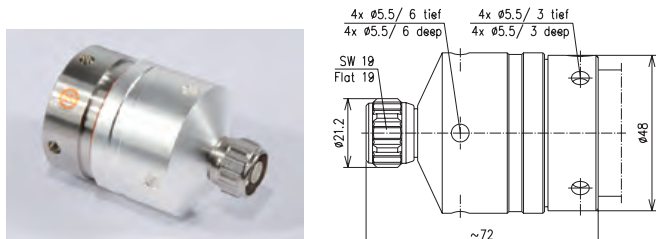
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KOAXIALE STECKVERBINDER – SERIE N
 COAXIAL CONNECTORS – TYPE N

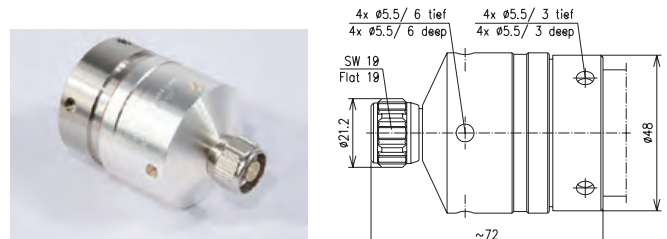
Kabelsteckverbinder für LF 1 1/4"-50 Kabel | Cable connectors for LF 1 1/4"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 70 67 42
CAF® O-Ring	50	BN 70 67 43
MultiFit*	50	BN 70 64 20
CAF® Plast2000®	50	BN 84 63 42
CAF® O-Ring	50	BN 84 63 43
MultiFit*	50	BN 84 64 20

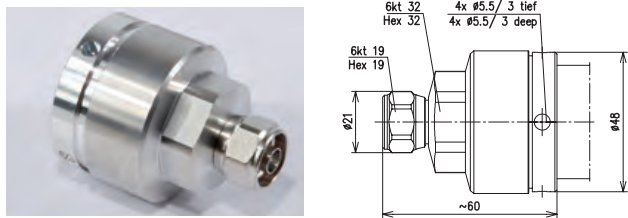
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



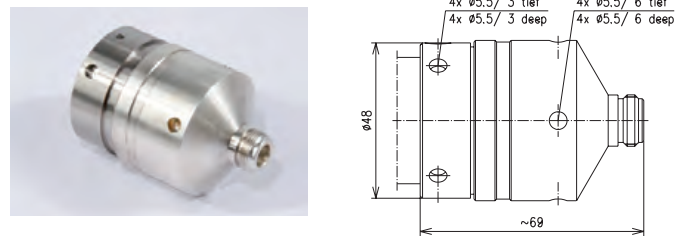
BN 70 67 42



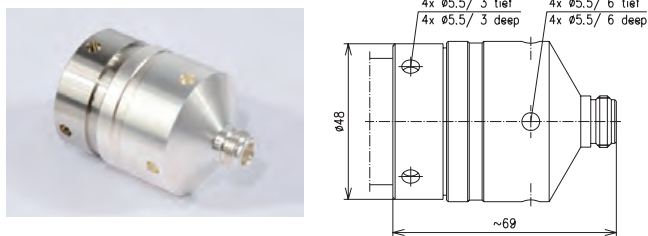
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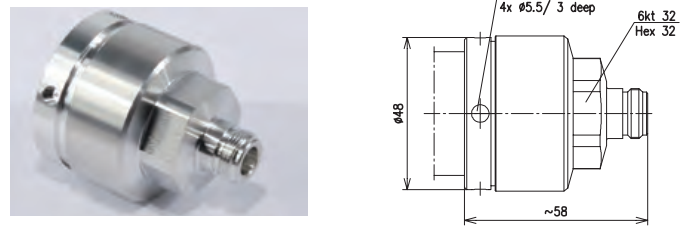
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BN 84 63 42



BN 84 63 43



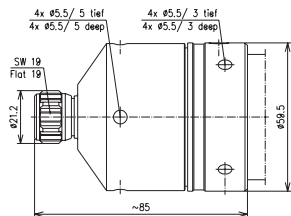
BN 84 64 20

KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

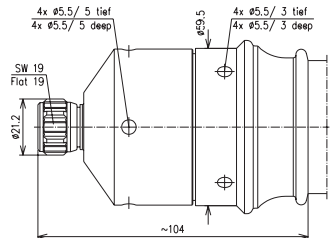
Kabelsteckverbinder für LF 1 5/8"-50 Kabel | Cable connectors for LF 1 5/8"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 70 67 44
TOPSPIN® O-Ring*	50	BN 70 67 60
MultiFit*	50	BN 70 64 22
CAF® Plast2000®	50	BN 84 63 44
TOPSPIN® O-Ring*	50	BN 84 63 60
MultiFit*	50	BN 84 64 22

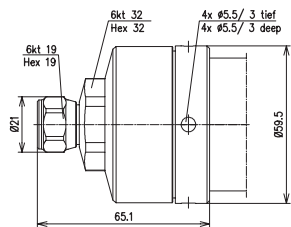
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



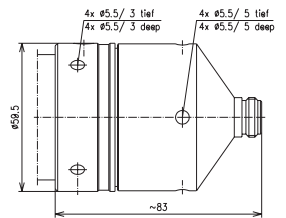
BN 70 67 44



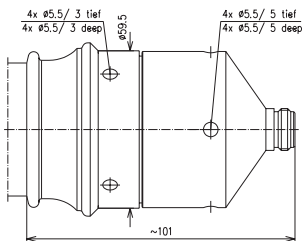
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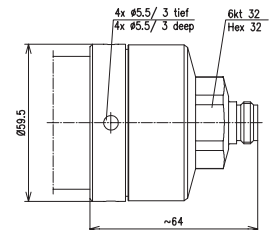
BN 70 64 22



BN 84 63 44



BN 84 63 60

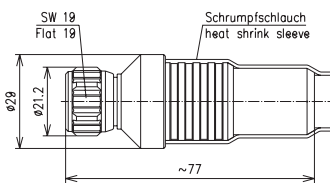


BN 84 64 22

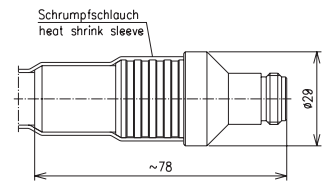
KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

Kabelsteckverbinder für Strahlungskabel | Cable connectors for radiating cables

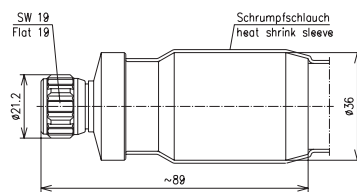
Kabeltyp Cable Type	Ω	Ausführung Version	Bestellnummer Part Number
RADIAFLEX® 12-50	50	Schrumpfschlauch Heat shrink sleeve	BN 55 71 10 BN 55 71 11
RADIAFLEX® 78-50	50	Schrumpfschlauch Heat shrink sleeve	BN 55 71 50 BN 55 71 51
RADIAFLEX® 114-50 A	50	Schrumpfschlauch Heat shrink sleeve	BN 55 71 61
RADIAFLEX® 158-50 A	50	Schrumpfschlauch Heat shrink sleeve	BN 55 71 71



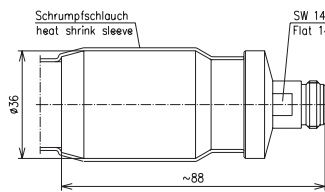
BN 55 71 10



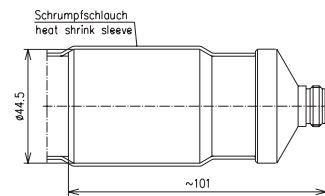
BN 55 71 11



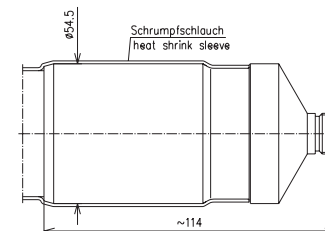
BN 55 71 50



BN 55 71 51



BN 55 71 61

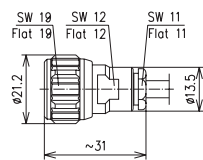


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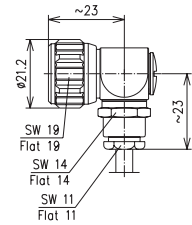
KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

Kabelsteckverbinder für RG-Kabel | Cable connectors for RG-cables

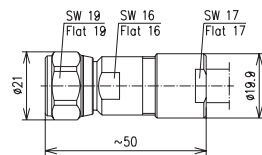
Kabeltyp Cable Type	Ω	Ausführung Version	Bestellnummer Part Number
RG 58 C/U RG 142 B/U RG 223/U RG 400/U	50	geklemmt clamped	BN 29 66 50 BN 72 12 80
RG 8 Typen (low loss)	50	geklemmt clamped	BN 94 50 60 BN 94 50 61
RG 213/U RG 214/U	50	geklemmt clamped	BN 92 24 50 BN 92 25 50
RG 214/U RG 393/U	50	gecrimpt crimped	BN 92 24 75
RG 214/U RG 393/U	50	geklemmt clamped	BN 72 12 83



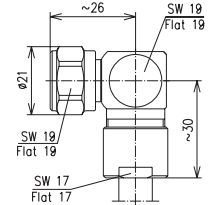
BN 29 66 50



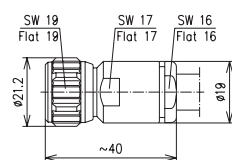
BN 72 12 80



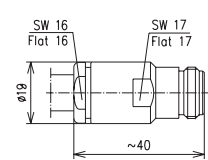
BN 94 50 60



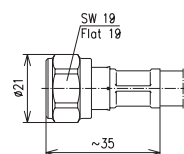
BN 94 50 61



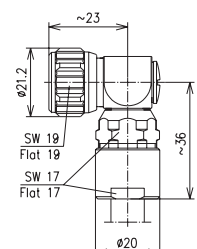
BN 92 24 50



BN 92 25 50



BN 92 24 75



BN 72 12 83

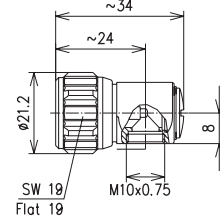
KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

Steckerkopf | Connector head

Ausführung Version	Bestellnummer Part Number
gerade und im Winkel montierbar straight and right angle mounting	BN 45 09 40



BN 45 09 40

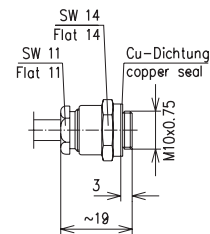


Kabelabfahrungen | Cable entries

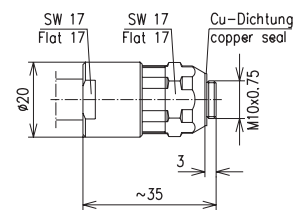
Kabeltyp Cable Type	Ausführung Version	Bestellnummer Part Number
RG 55 B/U RG 58 C/U RG 142 B/U RG 223/U RG 400/U	geklemmt clamped	BN 41 94 00
RG 213/U	geklemmt clamped	BN 42 01 00
RG 214/U RG 216/U RG 393/U	geklemmt clamped	BN 98 29 00
RG 214/U RG 393/U	gecrimpt crimped	BN 98 29 11



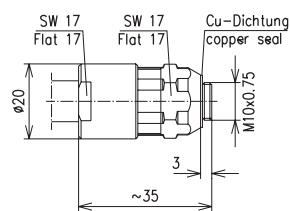
BN 41 94 00



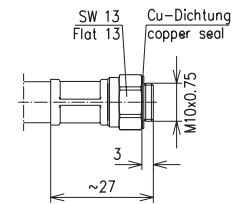
BN 42 01 00



BN 98 29 00



BN 98 29 11



Schutzkappen | Protective caps



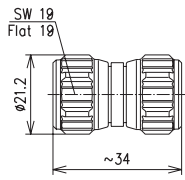
BN 99 88 00
Schutzkappe
(Cu-Legierung)
für Stecker, mit Kette
Protective cap
(copper alloy)
for plug, with chain



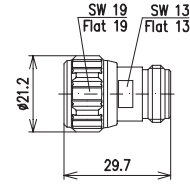
BN 29 63 00
Schutzkappe
(Cu-Legierung)
für Kuppler, mit Kette
Protective cap
(copper alloy)
for socket, with chain

KOAXIALE STECKVERBINDER – SERIE N
COAXIAL CONNECTORS – TYPE N

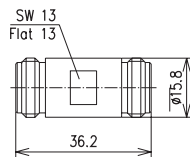
Zwischensteckverbinder | Within type adaptors



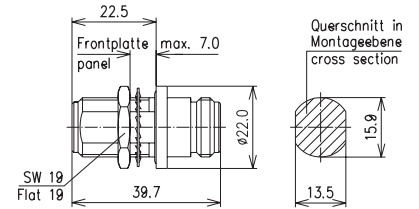
BN 29 36 50
Zwischenstecker
Adaptor, plug-plug



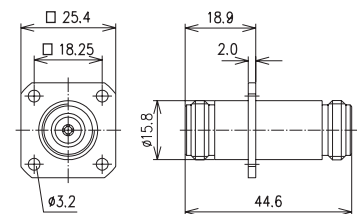
BN 95 08 90
Steckerkupplung
Adaptor, plug-socket



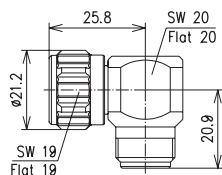
BN 29 37 50
Kupplung
Adaptor, socket-socket



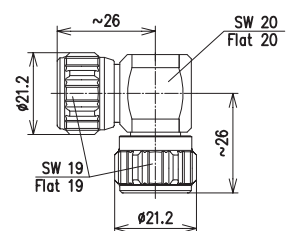
BN 94 49 50
Durchführungskupplung für Einlochmontage (einbau- und längsdicht)
Fixed adaptor, socket-socket, for single hole mounting
(panel and barrier sealed)



BN 94 49 51
Durchführungskupplung mit Viereckflansch
Fixed adaptor, socket-socket,
with four hole mounting flange



BN 29 97 50
Winkelsteckerkupplung
Right angle adaptor, plug-socket



BN 70 82 50
Winkelzwischenstecker
Right angle adaptor, plug-plug

KOAXIALE STECKVERBINDER – SERIE 4,1-9,5

COAXIAL CONNECTORS – TYPE 4.1-9.5



SPINNER 4,1-9,5 Steckverbinder eignen sich bestens für Anwendungen in Mobilfunksystemen wie GSM oder UMTS.

Sie haben das gleiche mechanische Konstruktionsprinzip der Steckverbindung 7-16, jedoch mit deutlich geringeren Abmessungen, und sind dadurch bis 14 GHz einsetzbar. Die robuste und stabile Schraubverbindung erfüllt nicht nur alle Anforderungen der Messtechnik, sondern auch extreme Anforderungen an Wetter- und Klimabeständigkeit für Außenmontage. Durch die verwendeten Materialien und das mechanische Konstruktionsprinzip werden dämpfungs- und intermodulationsarme Übertragungen in Nachrichtensystemen gewährleistet.

Durch die elektrische und mechanische Charakteristik ist die 4,1-9,5 Steckverbindung für den Einsatz in Mobilfunknetzen bestens geeignet.

SPINNER 4.1-9.5 connectors are perfectly suited for applications in mobile communication systems such as GSM or UMTS.

The mechanical design is the same as in the 7-16 connector, but the dimensions are a great deal more compact, making the unit suitable for frequencies up to 14 GHz. The robust, stable threaded connection does not only meet all requirements of measuring technology, but any extreme demands regarding resistance to weather and climate influence in outdoor applications, too. The special selection of materials and the mechanical design ensure good transmission performance in communication systems with low attenuation and intermodulation.

The electrical and mechanical characteristics of the 4.1-9.5 connector system are best suited for use in mobile communication systems.

Der Name 4,1-9,5 ist abgeleitet aus den Abmessungen des Innen- und Außenleiters, d.h. der Innenleiter hat einen Außendurchmesser von 4,1 mm und der Außenleiter einen Innendurchmesser von 9,5 mm.

The designation 4.1-9.5 is derived from the dimensions of the inner and outer conductors. The inner conductor has a rated outer diameter of 4.1 mm and the outer conductor has a rated inner diameter of 9.5 mm

KOAXIALE STECKVERBINDER – SERIE 4,1-9,5
COAXIAL CONNECTORS – TYPE 4.1-9.5

Elektrisch/Electrical	IEC 60169-11	Bemerkung/Remark
Nennimpedanz Nominal Nominal impedance	50 Ω	
Frequenzbereich Frequency range	14 GHz	Stufe 1 Grade 1
VSWR	≤ 1.22	Stufe 1 Grade 1
Innenleiter-Kontaktwiderstand Center contact resistance	≤ 1 mΩ	anfänglich initial
Außenleiter-Kontaktwiderstand Outer contact resistance	≤ 0.1 mΩ	anfänglich initial
Isolationswiderstand Insulation resistance	≥ 5 GΩ	anfänglich initial
Spannungsfestigkeit in Meereshöhe Proof voltage at sea level	2.5 kV	50 - 60 Hz
Schirmungswirksamkeit Screening effectiveness	≥ 114 dB	

Mechanisch/Mechanical	IEC 60169-11	Bemerkung/Remark
Kupplungsdrehmoment Coupling torque	10 Nm	
Mechanische Lebensdauer Mechanical lifetime	500	Betätigungen Operations
Fesselung des Innenleiters Center contact captivation		ja yes

Umwelt/Environmental	IEC 60169-11	Bemerkung/Remark
Klimaklasse Climatic category	55/155/56	
Schutzgrad Degree of protection	IP68 (SPINNER)	gesteckt/mated

Werkstoffe und Oberflächenbehandlung/Materials and Surface Finish	
Federnde Kontaktteile Resilient contact members	hochfeste Cu-Legierung, versilbert high strength copper alloy, silver plated
Isolation Insulation	PTFE/FEP
Innen- und Außenleiterkontaktteile Center and outer conductor parts	Cu-Legierung, versilbert copper alloy, silver plated
Sonstige Metallteile Other metal parts	Cu-Legierung, glanzvernickelt copper alloy, bright nickel plated
Dichtungen Gaskets	Silikonkautschuk silicone rubber

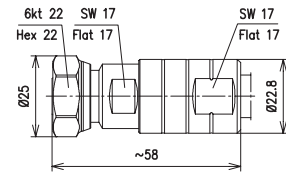
KOAXIALE STECKVERBINDER – SERIE 4,1-9,5
 COAXIAL CONNECTORS – TYPE 4.1-9.5

Kabelsteckverbinder für SF 1/2"-50, LF 3/8"-50, LF 1/2"-50 | Cable connectors for SF 1/2"-50, LF 3/8"-50, LF 1/2"-50

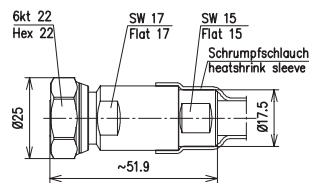
Kabeltyp Cable Type	Ω	Ausführung Version	Bestellnummer Part Number
SF 1/2"-50	50	CAF® Profildichtung CAF® Profile gasket	BN 45 03 59
LF 3/8"-50	50	CAF® O-Ring	BN 45 03 44
LF 1/2"-50	50	CAF® Plast2000®	BN 45 03 68



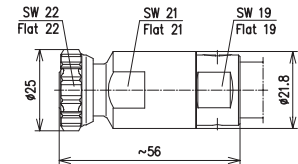
BN 45 03 59



BN 45 03 44



BN 45 03 68

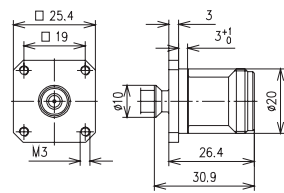


Kabelsteckverbinder für RG-Kabel | Cable connectors for RG-Cables

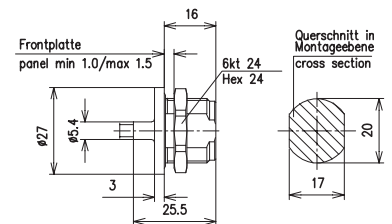
Kabeltyp Cable Type	Ω	Ausführung Version	Bestellnummer Part Number
RG 402/U Semirigid flexible 141	50	gelötet soldered	BN 98 17 03 BN 98 17 22



BN 98 17 03



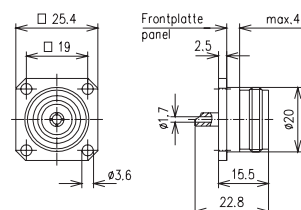
BN 98 17 22



Gehäusesteckverbinder | Fixed connectors



BN 98 12 42

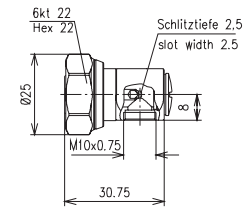


Gehäusekuppler mit Viereckflansch
 Fixed socket with four hole mounting flange

KOAXIALE STECKVERBINDER – SERIE 4,1-9,5
COAXIAL CONNECTORS – TYPE 4.1-9.5

Steckerkopf | Connector head

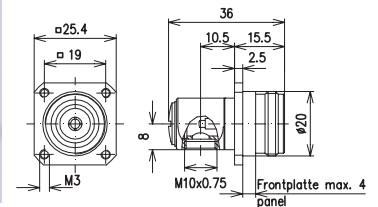
Ausführung Version	Bestellnummer Part Number
gerade und im Winkel montierbar straight and right angle mounting	BN 45 09 60



BN 45 09 60

Gehäusekupplerkopf | Connector head fixed socket

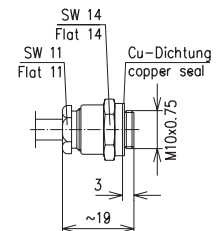
Ausführung Version	Bestellnummer Part Number
gerade und im Winkel montierbar straight and right angle mounting	BN 45 09 63



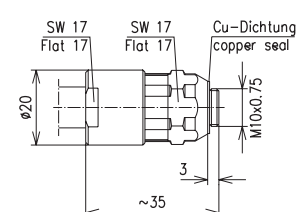
BN 45 09 63

Kabelabfangungen | Cable entries

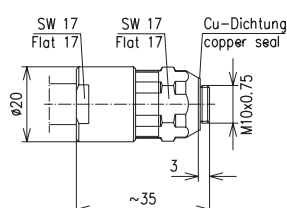
Kabeltyp Cable Type	Ausführung Version	Bestellnummer Part Number
RG 55 B/U RG 58 C/U RG 142 B/U RG 223/U RG 400/U	geklemmt clamped	BN 41 94 00
RG 213/U	geklemmt clamped	BN 42 01 00
RG 214/U RG 216/U RG 393/U	geklemmt clamped	BN 98 29 00
RG 214/U RG 393/U	gecrimpt crimped	BN 98 29 11



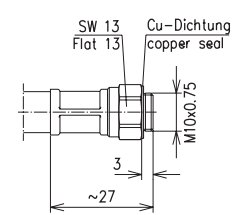
BN 41 94 00



BN 42 01 00



BN 98 29 00



BN 98 29 11

KOAXIALE STECKVERBINDER – SERIE 7-16

COAXIAL CONNECTORS – TYPE 7-16



Der 7-16 Steckverbinder hat sich durch seine herausragenden mechanischen und elektrischen Eigenschaften zum weltweit am meisten verwendeten koaxialen Stecksystem für Mobilfunk-Sendeanlagen entwickelt. Um eine optimale Intermodulationsdämpfung von typ. -165 dBc zu erhalten, sind alle Innen- und Außenleiterteile der SPINNER Standardausführung versilbert. Unterstützend werden ausschließlich nichtmagnetische Werkstoffe verwendet und die Anzahl der HF-Kontaktstellen ist minimiert.

Die Steckverbindung ist besonders geeignet für die Übertragung mittlerer und hoher Leistungen, u. a. im Outdoor-Bereich, bis zu einer Frequenz von 8,3 GHz.

Wie bei allen anderen SPINNER Steckverbindern sind auch unsere 7-16 Stecker mit der speziellen SPINNER Überwurfmutter versehen. Diese ermöglicht in Verbindung mit der Befestigung durch Einrollen ein erhöhtes Prüfdrehmoment von bis zu 55 Nm.

The 7-16 connector has become the most widely used coaxial connection system for mobile communication systems, due to its excellent mechanical and electrical properties.

In order to achieve the industry leading intermodulation performance (typically -165 dBc), SPINNER applies silverplating on all inner and outer conductor parts of the standard connector. As a supporting measure we use exclusively non-magnetic materials, and we have minimized the number of RF contact points.

The connection is especially suited for transmitting medium or high power signals (indoors and outdoors), up to a frequency of 8.3 GHz. Like all other SPINNER connectors our 7-16 connectors are also equipped with the special SPINNER coupling nut. This nut, which is fastened by flanging, allows a high test torque up to 55 Nm.

Die 50 Ω Steckverbindung 7-16 ist eine Variante des 1954 von Dr. Spinner entwickelten 6-16 Stecksystems (60 Ω). Die Bezeichnung ist abgeleitet von den metrischen Abmessungen des Innen- und Außenleiters.

The 50 Ω connector 7-16 is a variant of the connector system 6-16 (60 Ω) developed 1954 by Dr. Spinner. The designation is derived from the metric dimensions of the inner and outer conductor.

KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

Elektrisch/Electrical	IEC 61169-4	Bemerkung/Remark
Nennimpedanz Nominal impedance	50 Ω	
Frequenzbereich Frequency range	7.5 GHz (8.3 GHz SPINNER)	
VSWR	≤ 1.22	gerader Steckverbinder bis 6 GHz straight connector up to 6 GHz
Innenleiter-Kontaktwiderstand Center contact resistance	≤ 0.4 mΩ	anfänglich initial
Durchgangswiderstand des Außenleiters Outer conductor continuity	≤ 1.50 mΩ	anfänglich initial
Isolationswiderstand Insulation resistance	≥ 10 GΩ	anfänglich initial
Spannungsfestigkeit in Meereshöhe Proof voltage at sea level	3 kV	50...60 Hz
Schirmungswirksamkeit Screening effectiveness	≥ 110 dB	nur gerade Kabelsteckverbinder straight cable connectors only bei 1 GHz / at 1 GHz

Mechanisch/Mechanical	IEC 61169-4	Bemerkung/Remark
Kupplungsdrehmoment Coupling torque	30 Nm	
Prüfdrehmoment Proof torque	(55 Nm SPINNER)	
Zugfestigkeit des Kupplungsmechanismus Tensile strength of coupling mechanism	445 N (1000 N SPINNER)	
Mechanische Lebensdauer Mechanical lifetime	500	Zyklen Operations
Fesselung des Innenleiters Center contact captivation		ja yes

Umwelt/Environmental	IEC 61169-4	Bemerkung/Remark
Klimakategorie/Climatic category	55/155/56	
Schutzgrad/Degree of protection	(IP68 SPINNER)	gesteckt/mated

Werkstoffe und Oberflächenbehandlung/Materials and Surface Finish	
Federnde Kontaktteile Resilient contact members	hochfeste Cu-Legierung, versilbert high strength copper alloy, silver plated
Isolation Insulation	PTFE/FEP
Innen- und Außenleiterkontaktteile Center and outer conductor parts	Cu-Legierung, versilbert bzw. CuSnZn Copper alloy, silver plated and/or CuSnZn
Sonstige Metallteile Other metal parts	Cu-Legierung, glanzvernickelt bzw. verzinkt Copper alloy, bright nickel plated and/or tin plated
Dichtungen Gaskets	Silikonkautschuk Silicone rubber

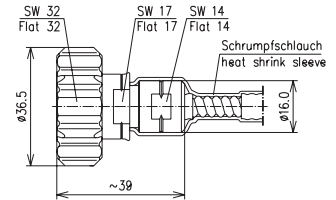
KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

Kabelsteckverbinder für SF 1/4"-50 Kabel | Cable connector for SF 1/4"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Schrumpfschlauch CAF® Heat shrink sleeve	50	BN 74 14 60



BN 74 14 60

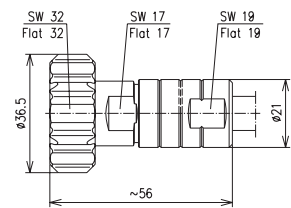


Kabelsteckverbinder für SF 3/8"-50 Kabel | Cable connectors for SF 3/8"-50 cables

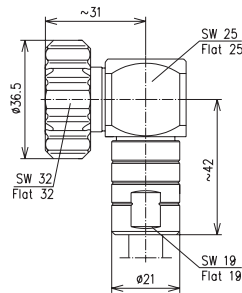
Ausführung Version	Ω	Bestellnummer Part Number
CAF® Profildichtung CAF® Profile gasket	50	BN 84 73 39 BN 84 73 73 BN 71 03 39



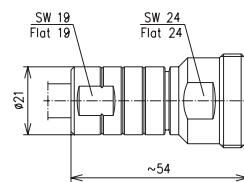
BN 84 73 39



BN 84 73 73



BN 71 03 39



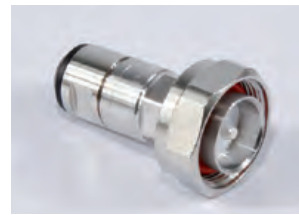
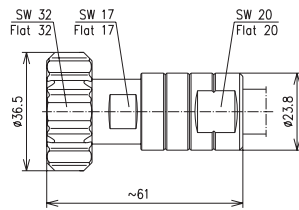
KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

Kabelsteckverbinder für SF 1/2"-50 Kabel | Cable connectors for SF 1/2"-50 cables

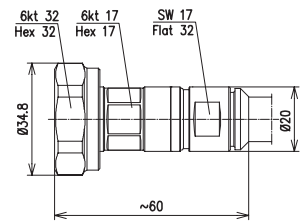
Ausführung Version	Ω	Bestellnummer Part Number
CAF® Profildichtung CAF® Profile gasket	50	BN 84 73 59
MultiFit MultiFit		BN 84 73 71
CAF® Profildichtung CAF® Profile gasket	50	BN 84 73 57
MultiFit MultiFit		BN 84 73 74
CAF® Profildichtung CAF® Profile gasket	50	BN 71 03 59
MultiFit MultiFit		BN 71 03 71



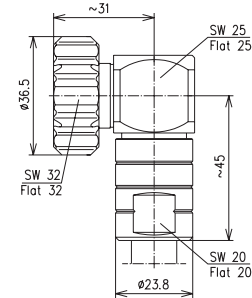
BN 84 73 59



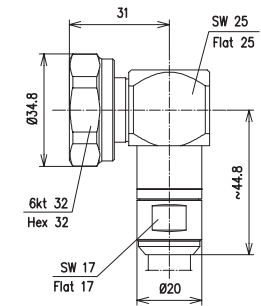
BN 84 73 71



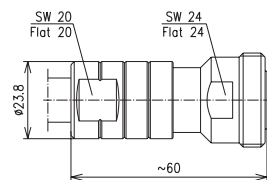
BN 84 73 57



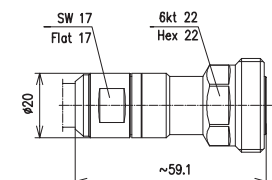
BN 84 73 74



BN 71 03 59



BN 71 03 71



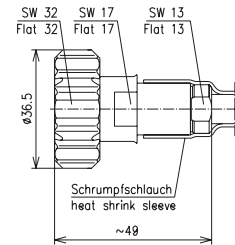
KOAXIALE STECKVERBINDER – SERIE 7-16
COAXIAL CONNECTORS – TYPE 7-16

Kabelsteckverbinder für LF 1/4"-50 Kabel | Cable connector for LF 1/4"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® O-Ring	50	BN 74 14 45



BN 74 14 45

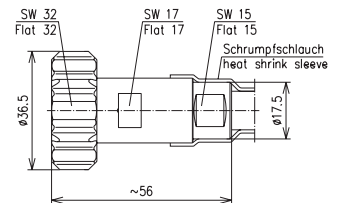


Kabelsteckverbinder für LF 3/8"-50 Kabel | Cable connector for LF 3/8"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® O-Ring	50	BN 84 73 69



BN 84 73 69

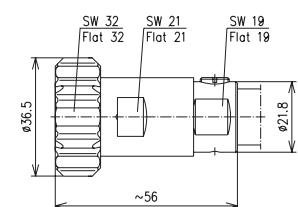


Kabelsteckverbinder für LF 1/2"-50 Kabel | Cable connectors for LF 1/2"-50 cables

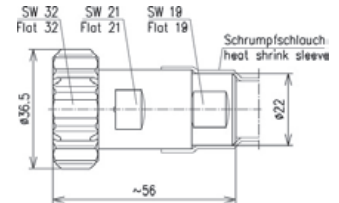
Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 84 73 68
CAF® O-Ring	50	BN 84 73 89
MultiFit*	50	BN 85 43 17
CAF® Plast2000®	50	BN 84 73 56
CAF® O-Ring	50	BN 84 73 91
MultiFit*	50	BN 85 43 16
CAF® Plast2000®	50	BN 71 03 68
CAF® O-Ring	50	BN 71 03 89
MultiFit*	50	BN 65 43 17



BN 84 73 68



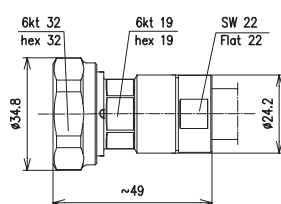
BN 84 73 89



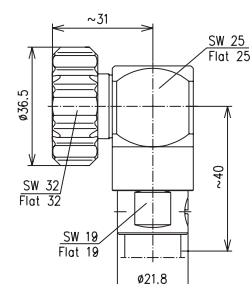
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



BN 85 43 17



BN 84 73 56

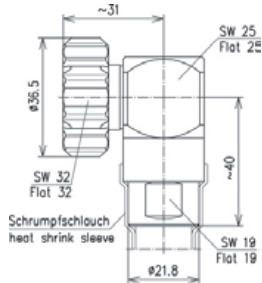


KOAXIALE STECKVERBINDER – SERIE 7-16
COAXIAL CONNECTORS – TYPE 7-16

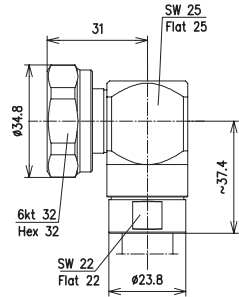
Kabelsteckverbinder für LF 1/2"-50 Kabel | Cable connectors for LF 1/2"-50 cables



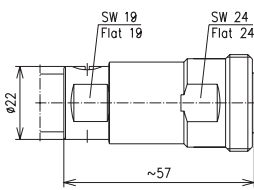
BN 84 73 91



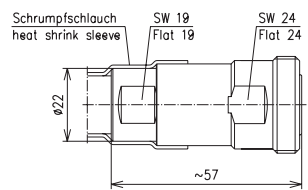
BN 85 43 16



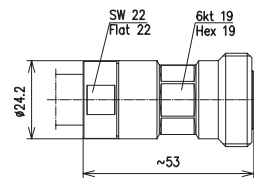
BN 71 03 68



BN 71 03 89



BN 65 43 17



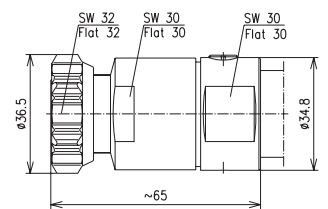
Kabelsteckverbinder für LF 7/8"-50 Kabel | Cable connectors for LF 7/8"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 84 48 40
CAF® O-Ring	50	BN 84 48 41
TOPSPIN® O-Ring*	50	BN 85 43 18
MultiFit*	50	BN 85 43 02
CAF® Plast2000®	50	BN 84 48 50
CAF® O-Ring	50	BN 84 48 51
CAF® Plast2000®	50	BN 65 56 40
CAF® O-Ring	50	BN 65 56 41
TOPSPIN® O-Ring*	50	BN 65 43 18
MultiFit*	50	BN 65 43 02

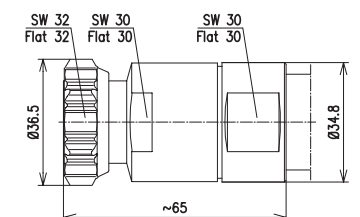
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



BN 84 48 40



BN 84 48 41

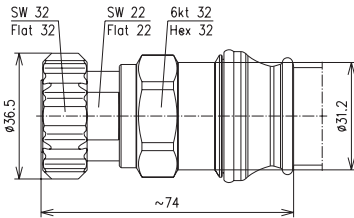


KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

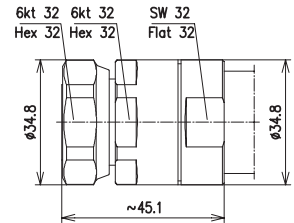
Kabelsteckverbinder für LF 7/8"-50 Kabel | Cable connectors for LF 7/8"-50 cables



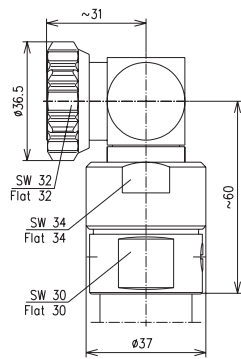
BN 85 43 18*



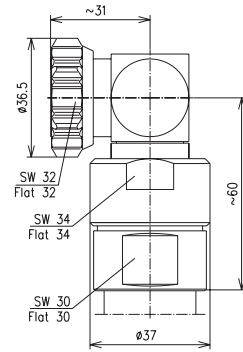
BN 85 43 02



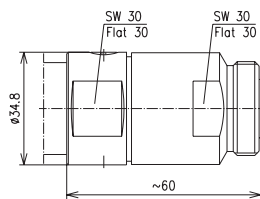
BN 84 48 50



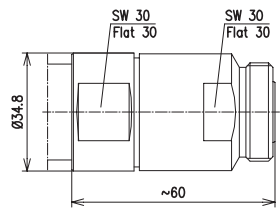
BN 84 48 51



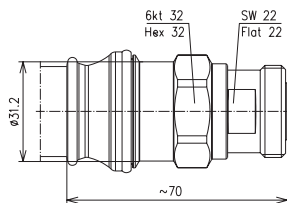
BN 65 56 40



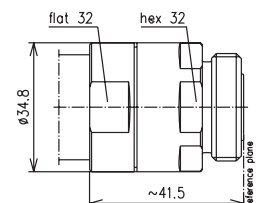
BN 65 56 41



BN 65 43 18*



BN 65 43 02



KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

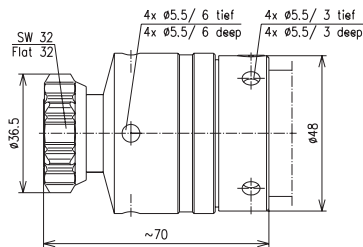
Kabelsteckverbinder für LF 1 1/4"-50 Kabel | Cable connectors for LF 1 1/4"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 84 48 42
CAF® O-Ring	50	BN 84 48 43
MultiFit*	50	BN 85 43 20
CAF® Plast2000®	50	BN 65 56 42
CAF® O-Ring	50	BN 65 56 43
MultiFit*	50	BN 65 43 20

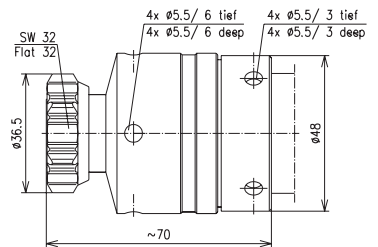
*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables



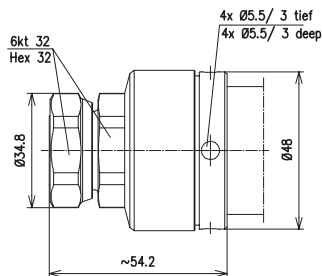
BN 84 48 42



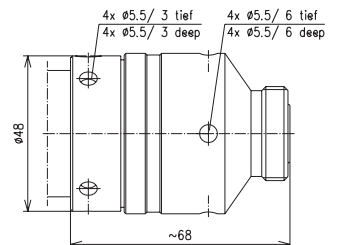
BN 84 48 43



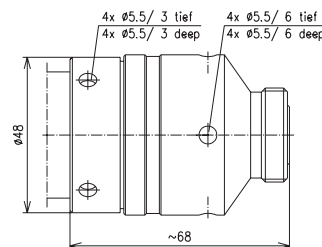
BN 85 43 20



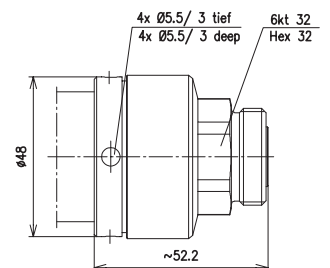
BN 65 56 42



BN 65 56 43



BN 65 43 20



KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

Kabelsteckverbinder für LF 1 5/8"-50 Kabel | Cable connectors for LF 1 5/8"-50 cables

Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 84 48 44
TOPSPIN® O-Ring*	50	BN 84 48 60
MultiFit*	50	BN 85 43 22
CAF® Plast2000®	50	BN 65 56 44
TOPSPIN® O-Ring*	50	BN 65 56 60
MultiFit*	50	BN 65 43 22

*verwendbar für Al- und Cu-Kabel/suitable for aluminium and copper cables

<p>BN 84 48 44</p>		<p>BN 84 48 60</p>	
<p>BN 85 43 22</p>		<p>BN 65 56 44</p>	
<p>BN 65 56 60</p>		<p>BN 65 43 22</p>	

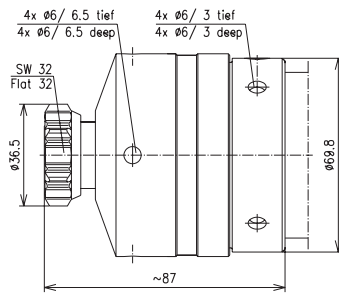
KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

Kabelsteckverbinder für LF 2 1/4"-50 Kabel | Cable connectors for LF 2 1/4"-50 cables

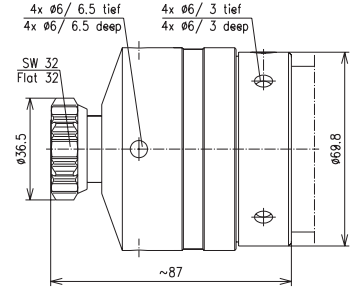
Ausführung Version	Ω	Bestellnummer Part Number
CAF® Plast2000®	50	BN 84 48 73
CAF® O-Ring	50	BN 84 48 63
CAF® Plast2000®	50	BN 65 56 73
CAF® O-Ring	50	BN 65 56 63



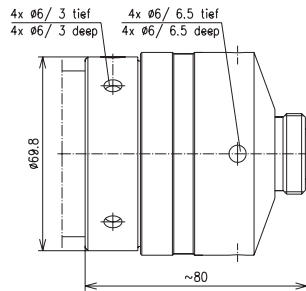
BN 84 48 73



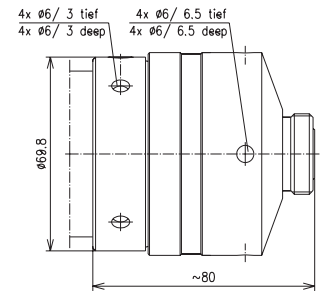
BN 84 48 63



BN 65 56 73



BN 65 56 63



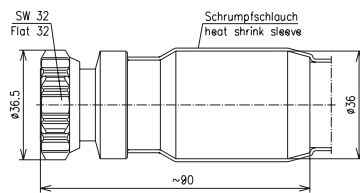
KOAXIALE STECKVERBINDER – SERIE 7-16
COAXIAL CONNECTORS – TYPE 7-16

Kabelsteckverbinder für Strahlungskabel | Cable connectors for radiating cables

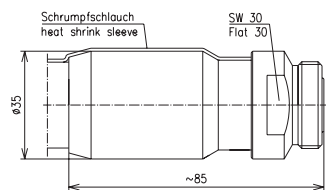
Kabeltyp Cable Type	Ω	Ausführung Version	Bestellnummer Part Number
RADIAFLEX® 78-50	50	Schrumpfschlauch Heat shrink sleeve	BN 55 71 52 BN 55 71 53
RADIAFLEX® 114-50A	50	Schrumpfschlauch Heat shrink sleeve	BN 55 71 63
RADIAFLEX® 158-50A	50	Schrumpfschlauch Heat shrink sleeve	BN 55 71 73



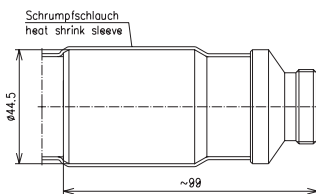
BN 55 71 52



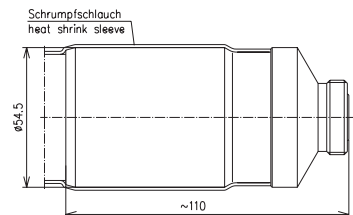
BN 55 71 53



BN 55 71 63



BN 55 71 73

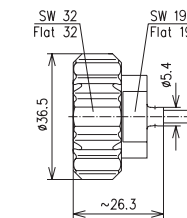


Kabelsteckverbinder für RG-Kabel | Cable connectors for RG-cables

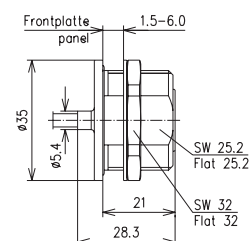
Kabeltyp Cable Type	Ω	Ausführung Version	Bestellnummer Part Number
RG 402/U Semirigid flexible 141	50	gelötet soldered	BN 80 76 25 BN 80 77 88 BN 80 77 06 BN 80 77 50
RG 401/U Semirigid flexible 250	50	gelötet soldered	BN 80 76 21
RG 401/U	50	gelötet soldered	BN 80 77 33 BN 80 77 52
RG 214/U RG 393/U	50	geklemmt clamped	BN 95 18 20 BN 80 76 80 BN 95 19 20



BN 80 76 25



BN 80 77 88

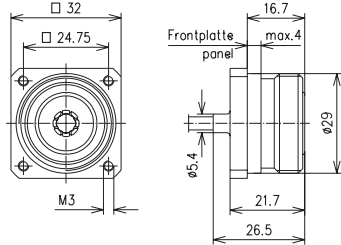


KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

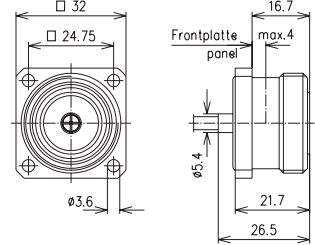
Kabelsteckverbinder für RG-Kabel | Cable connectors for RG-cables



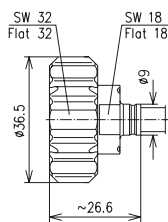
BN 80 77 06



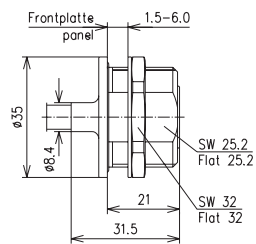
BN 80 77 50



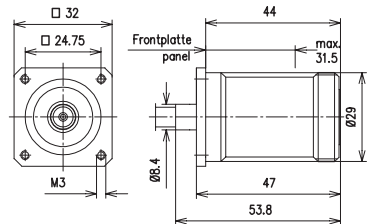
BN 80 76 21



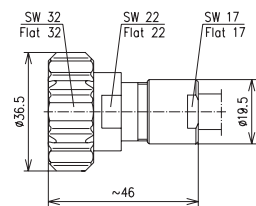
BN 80 77 33



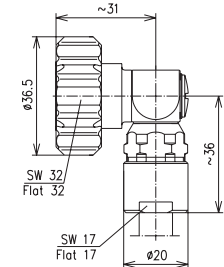
BN 80 77 52



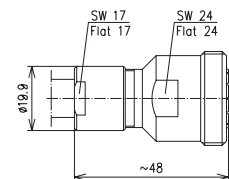
BN 95 18 20



BN 80 76 80



BN 95 19 20



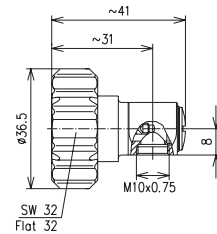
KOAXIALE STECKVERBINDER – SERIE 7-16
COAXIAL CONNECTORS – TYPE 7-16

Steckerkopf | Connector head

Ausführung Version	Bestellnummer Part Number
gerade und im Winkel montierbar straight and right angle mounting	BN 45 09 95



BN 45 09 95

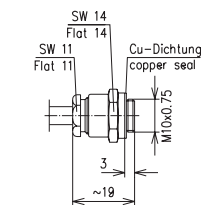


Kabelabfangungen | Cable entries

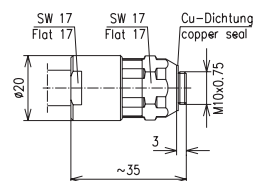
Kabeltyp Cable Type	Ausführung Version	Bestellnummer Part Number
RG 55 B/U RG 58 C/U RG 142 B/U RG 223/U RG 400/U	geklemmt clamped	BN 41 94 00
RG 213/U	geklemmt clamped	BN 42 01 00
RG 214/U RG 216/U RG 393/U	geklemmt clamped	BN 98 29 00
RG 214/U RG 393/U	gecrimpt crimped	BN 98 29 11



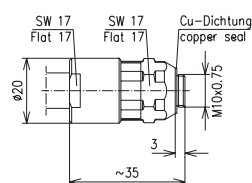
BN 41 94 00



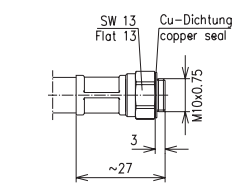
BN 42 01 00



BN 98 29 00



BN 98 29 11



Schutzkappen | Protective caps



BN 23 90 02
Schutzkappe (Cu-Legierung)
für Stecker, mit Kette
Protective cap (copper alloy)
for plugs with chain



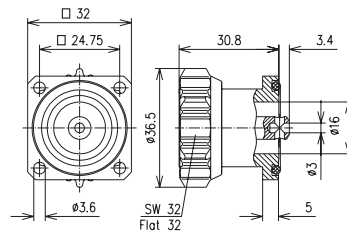
BN 23 89 50
Schutzkappe (Cu-Legierung)
für Kuppler, mit Kette
Protective cap (copper alloy)
for sockets with chain

KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

Gehäusesteckverbinder | Fixed connectors



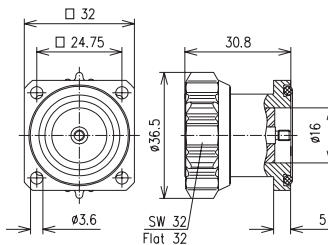
BN 95 47 16



Gehäusestecker mit Viereckflansch
 Abdichtung zum Gehäuse mit O-Ring,
 Innenleiter mit Lötanschluss
 Fixed plug with four hole mounting flange,
 sealing to the panel with O-Ring,
 inner conductor with soldering connection



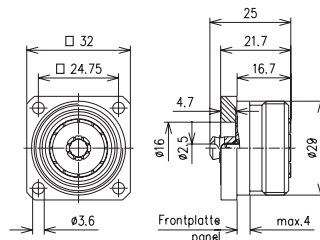
BN 95 47 65



Gehäusestecker mit Viereckflansch
 Abdichtung zum Gehäuse mit O-Ring,
 Innenleiter mit Außengewinde M3
 Fixed plug with four hole mounting flange,
 sealing to the panel with O-Ring,
 inner conductor with M3 male thread



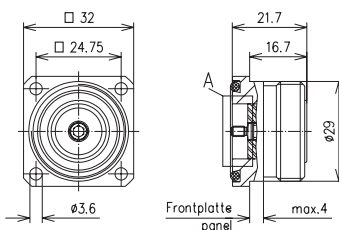
BN 95 45 10



Gehäusekuppler mit Viereckflansch,
 mit Innenleiter-Lötanschluss
 (Außenleiterkontaktbuchse geschlitzt)
 Fixed socket with four hole mounting flange,
 with inner conductor soldering connection
 (with slotted outer conductor)



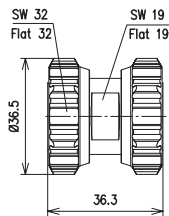
BN 95 46 84



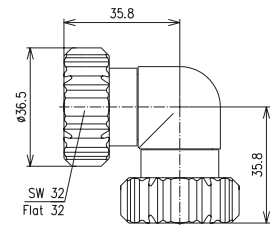
Gehäusekuppler mit Viereckflansch
 Abdichtung zum Gehäuse mit O-Ring,
 Innenleiter verdrehungsgesichert
 mit Außengewinde M3
 Fixed socket with four hole mounting flange,
 sealing to the panel with O-Ring, captivated
 inner conductor with M3 male thread

KOAXIALE STECKVERBINDER – SERIE 7-16
 COAXIAL CONNECTORS – TYPE 7-16

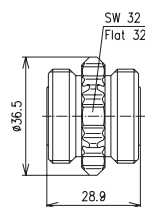
Zwischensteckverbinder | Within type adaptors



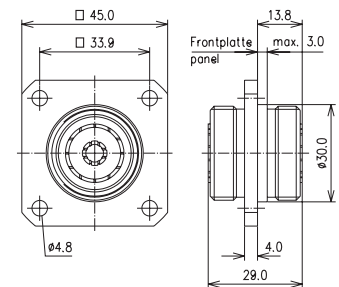
BN 39 33 70
 Zwischenstecker
 Adaptor, plug-plug



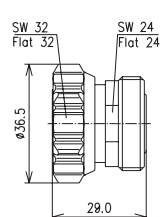
BN 94 47 02
 Winkelzwischenstecker
 Right angle adaptor, plug-plug



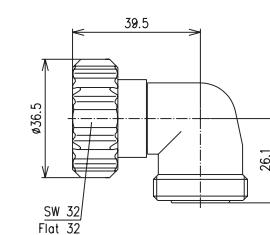
BN 19 64 00
 Kupplung
 Adaptor, socket-socket



BN 80 84 00
 Durchführungskupplung
 mit Viereckflansch
 Fixed adaptor, socket-socket
 with four hole mounting flange



BN 75 64 04
 Steckerkupplung
 (Schutz für Messanschluss)
 Adaptor, plug-socket
 (port saver)



BN 29 64 00
 Winkelsteckerkupplung
 Right angle adaptor, plug-socket

ÜBERGANGSVERBINDER INTER-TYPE ADAPTORS



Übergangsverbinder dienen zur Verbindung von Koaxianschlüssen unterschiedlicher Steckverbindersysteme.

Die in diesem Katalog enthaltenen Bestellnummern (BN...) geben die häufigsten und wichtigsten Kombinationen im Mobilfunkbereich an. Nicht enthaltene Kombinationen sind auf Anfrage lieferbar.

Die Angabe Stecker oder Kuppler bezeichnet die jeweilige Ausführung der Anschlüsse des Übergangsverbinders.

Grundsätzlich werden Übergangsverbinder mit möglichst niedrigen Reflexionsfaktoren entwickelt.

Präzisions-Übergangsverbinder der HF-Qualitätsstufe 0 können auf Anfrage geliefert werden.

Inter-type adaptors are used to link up one connector type to another type.

The part numbers (BN...) listed in this catalogue include the most common and important combinations for mobile communication systems.

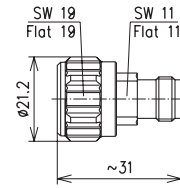
Combinations not listed here are available upon request. We specify the items as either plug (male) or socket (female) in order to describe the connector style of the inter-type adaptor.

Our inter-type adaptors are designed for the lowest possible reflection factors.

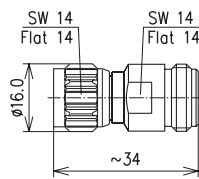
Precision inter-type adaptors with RF quality grade 0 are available upon request.

ÜBERGANGSVERBINDER
INTER-TYPE ADAPTORS

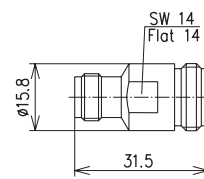
Anschluss 1 Connector 1 N	Anschluss 2 Connector 2 TNC	Bestellnummer Part Number
Stecker/plug	Kuppler/socket	BN 72 58 10
Kuppler/socket	Stecker/plug	BN 72 59 10
Kuppler/socket	Kuppler/socket	BN 72 60 10



BN 72 58 10

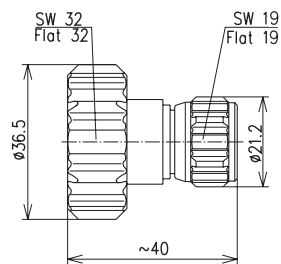


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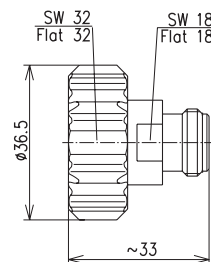


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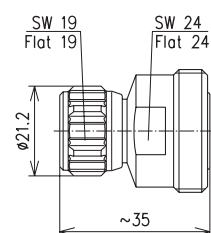
Anschluss 1 Connector 1 7-16	Anschluss 2 Connector 2 N	Bestellnummer Part Number
Stecker/plug	Stecker/plug	BN 29 38 00
Stecker/plug	Kuppler/socket	BN 19 44 00
Kuppler/socket	Stecker/plug	BN 29 39 00
Kuppler/socket	Kuppler/socket	BN 29 40 00



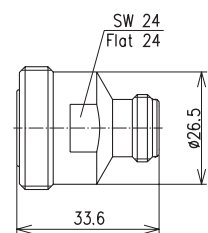
BN 29 38 00



BN 19 44 00



BN 29 39 00



BN 29 40 00