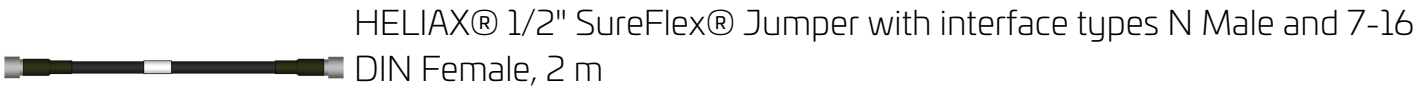


# F4A-PNMDF-2M



## Product Classification

Product Type	SureFlex® standard
Product Brand	HELIAX®   SureFlex®
Product Series	RSJ4-50

## General Specifications

Body Style, Connector A	Straight
Body Style, Connector B	Straight
Interface, Connector A	N Male
Interface, Connector B	7-16 DIN Female
Specification Sheet Revision Level	A

## Dimensions

Length	2 m   6.562 ft
Nominal Size	1/2 in

## Electrical Specifications

DTF, Connector A	-32 dB
DTF, Connector B	-32 dB

## VSWR/Return Loss

Frequency Band	VSWR, typical	Return Loss, typical (dB)
0–3000 MHz	1.106	25.96
2.2–2.7 GHz	1.083	27.99

## Jumper Assembly Sample Label

# F4A-PNMDF-2M



## Environmental Specifications

**Immersion Test Method** Meets IEC 60529:2001, IP68 in mated condition

## Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

## Included Products

F4DR-C	- 7-16 DIN Male Right Angle for 1/2 in FSJ4-50B cable
F4NR-HC	- Type N Male Right Angle for 1/2 in FSJ4-50B cable
L4DR-PS	- 7-16 DIN Male Right Angle Positive Stop™ for 1/2 in LDF4-50A cable
L4NR-PS	- Type N Male Right Angle Positive Stop™ for 1/2 in LDF4-50A cable

# F4DR-C



7-16 DIN Male Right Angle for 1/2 in FSJ4-50B cable

## Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®
Product Series	FSJ4-50B   FSJ4RK-50B
Ordering Note	ANDREW® standard product (Global)

## General Specifications

Body Style	Right angle
Cable Family	FSJ4-50B
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Gold   Silver
Interface	7-16 DIN Male
Mounting Angle	Right angle
Outer Contact Attachment Method	Self-flare
Outer Contact Plating	Trimetal
Pressurizable	No

## Dimensions

Height	42.42 mm   1.67 in
Width	34.54 mm   1.36 in
Length	70.87 mm   2.79 in
Right Angle Length	18.03 mm   0.71 in
Nominal Size	1/2 in

## Outline Drawing



# F4DR-C

Frequency Band	VSWR	Return Loss (dB)
50–1000 MHz	1.04	34.16
1000–1900 MHz	1.04	34.16
1900–2200 MHz	1.07	29.42
2200–2700 MHz	1.1	26.45
2700–3600 MHz	1.13	24.29
3600–6000 MHz	1.25	19.09
6000–8800 MHz	1.67	12.01
8000–10200 MHz	1.67	12.01

## Mechanical Specifications

Connector Retention Tensile Force	444.82 N   100 lbf
Connector Retention Torque	5.42 N-m   47.998 in lb
Coupling Nut Proof Torque	24.86 N-m   220.003 in lb
Coupling Nut Retention Force	1,000.85 N   225 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:9.5
Mechanical Shock Test Method	MIL-STD-202F, Method 213B, Test Condition C

## Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Attenuation, Ambient Temperature	20 °C   68 °F
Average Power, Ambient Temperature	40 °C   104 °F
Corrosion Test Method	MIL-STD-1344A, Method 1001.1, Test Condition A
Immersion Depth	1 m
Immersion Test Mating	Unmated
Immersion Test Method	IEC 60529:2001, IP68
Moisture Resistance Test Method	MIL-STD-202F, Method 106F
Thermal Shock Test Method	MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C
Vibration Test Method	MIL-STD-202F, Method 204D, Test Condition B
Water Jetting Test Mating	Unmated

# F4DR-C

Water Jetting Test Method IEC 60529:2001, IP66

## Packaging and Weights

Weight, net 197.2 g | 0.435 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant
UK-ROHS	Compliant



## \* Footnotes

Insertion Loss Coefficient, typical 0.05√~freq (GHz) (not applicable for elliptical waveguide)

Immersion Depth Immersion at specified depth for 24 hours

# F4NR-HC



Type N Male Right Angle for 1/2 in FSJ4-50B cable

## Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®
Product Series	FSJ4-50B   FSJ4RK-50B
Ordering Note	ANDREW® standard product in Asia Pacific   ANDREW® standard product in Europe, the Middle East, and Africa

## General Specifications

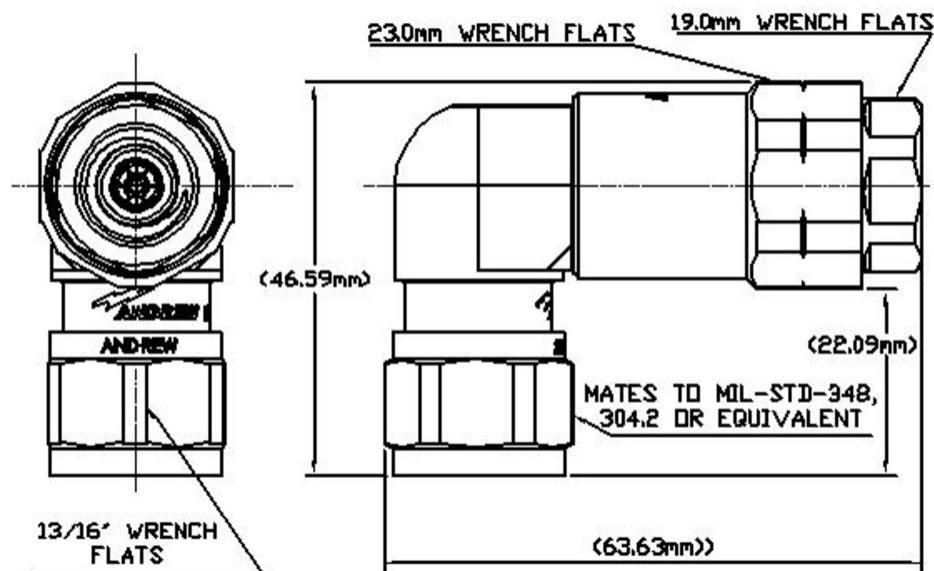
Body Style	Right angle
Cable Family	FSJ4-50B
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Gold   Silver
Interface	N Male
Mounting Angle	Right angle
Outer Contact Attachment Method	Self-flare
Outer Contact Plating	Trimetal
Pressurizable	No

## Dimensions

Height	46.48 mm   1.83 in
Width	24.38 mm   0.96 in
Length	63.75 mm   2.51 in
Right Angle Length	22.1 mm   0.87 in
Nominal Size	1/2 in

## Outline Drawing

# F4NR-HC



## Electrical Specifications

3rd Order IMD at Frequency	-116 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss Coefficient, typical	0.05
Average Power at Frequency	0.6 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	2000 V
Inner Contact Resistance, maximum	2 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 10200 MHz
Outer Contact Resistance, maximum	0.3 mOhm
Peak Power, maximum	10 kW
RF Operating Voltage, maximum (vrms)	707 V
Shielding Effectiveness	-110 dB

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
50–1000 MHz	1.05	32.26



# F4NR-HC

1000–1900 MHz	1.06	30.72
1900–2200 MHz	1.06	30.72
2200–2700 MHz	1.08	28.3
2700–3600 MHz	1.19	21.24
3600–6000 MHz	1.19	21.24
6000–8800 MHz	1.25	19.09
8800–10200 MHz	1.29	-18

## Mechanical Specifications

Connector Retention Tensile Force	444.82 N   100 lbf
Connector Retention Torque	5.42 N-m   47.998 in lb
Coupling Nut Proof Torque	4.52 N-m   39.997 in lb
Coupling Nut Retention Force	444.82 N   100 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.23, 4.6.22
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:9.5
Mechanical Shock Test Method	MIL-STD-202F, Method 213B, Test Condition C

## Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Attenuation, Ambient Temperature	20 °C   68 °F
Average Power, Ambient Temperature	40 °C   104 °F
Corrosion Test Method	MIL-STD-1344A, Method 1001.1, Test Condition A
Immersion Depth	1 m
Immersion Test Mating	Unmated
Immersion Test Method	IEC 60529:2001, IP68
Moisture Resistance Test Method	MIL-STD-202F, Method 106F
Thermal Shock Test Method	MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C
Vibration Test Method	MIL-STD-202F, Method 204D, Test Condition B
Water Jetting Test Mating	Unmated
Water Jetting Test Method	IEC 60529:2001, IP66

## Packaging and Weights

# F4NR-HC

Weight, net 160.9 g | 0.355 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



### \* Footnotes

Insertion Loss Coefficient, typical	0.05√~freq (GHz) (not applicable for elliptical waveguide)
Immersion Depth	Immersion at specified depth for 24 hours

# L4DR-PS

7-16 DIN Male Right Angle Positive Stop™ for 1/2 in LDF4-50A cable



## Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®
Product Series	LDF4-50A
Ordering Note	ANDREW® standard product (Global)

## General Specifications

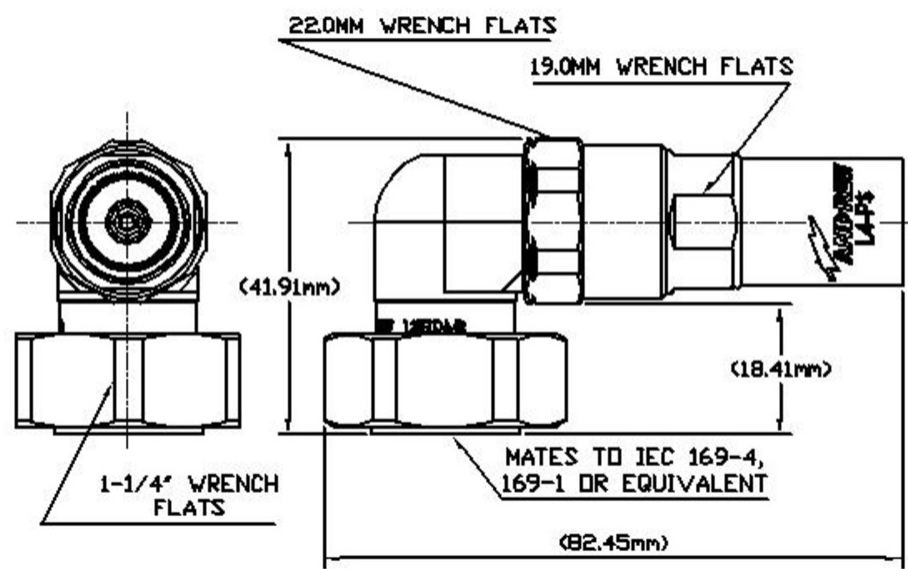
Body Style	Right angle
Cable Family	LDF4-50A
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Gold   Silver
Interface	7-16 DIN Male
Mounting Angle	Right angle
Outer Contact Attachment Method	Self-flare
Outer Contact Plating	Trimetal
Pressurizable	No

## Dimensions

Height	41.91 mm   1.65 in
Width	34.54 mm   1.36 in
Length	82.55 mm   3.25 in
Right Angle Length	18.29 mm   0.72 in
Nominal Size	1/2 in

## Outline Drawing

# L4DR-PS



## Electrical Specifications

3rd Order IMD at Frequency	-120 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss Coefficient, typical	0.05
Average Power at Frequency	1.0 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	2500 V
Inner Contact Resistance, maximum	0.8 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 7500 MHz
Outer Contact Resistance, maximum	1.5 mOhm
Peak Power, maximum	15.6 kW
RF Operating Voltage, maximum (vrms)	884 V
Shielding Effectiveness	-110 dB

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
50–1000 MHz	1.018	41

# L4DR-PS

1000–1900 MHz	1.03	36.61
1900–2200 MHz	1.058	31
2200–2700 MHz	1.07	29.42
2700–3600 MHz	1.09	27.32
3600–6000 MHz	1.19	21.24
6000–8800 MHz	1.671	12

## Mechanical Specifications

Connector Retention Tensile Force	889.64 N   200 lbf
Connector Retention Torque	5.42 N-m   47.998 in lb
Coupling Nut Proof Torque	24.86 N-m   220.003 in lb
Coupling Nut Retention Force	1,000.85 N   225 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:9.5
Mechanical Shock Test Method	MIL-STD-202F, Method 213B, Test Condition C

## Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Attenuation, Ambient Temperature	20 °C   68 °F
Average Power, Ambient Temperature	40 °C   104 °F
Corrosion Test Method	MIL-STD-1344A, Method 1001.1, Test Condition A
Immersion Depth	1 m
Immersion Test Mating	Unmated
Immersion Test Method	IEC 60529:2001, IP68
Moisture Resistance Test Method	MIL-STD-202F, Method 106F
Thermal Shock Test Method	MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C
Vibration Test Method	MIL-STD-202F, Method 204D, Test Condition B
Water Jetting Test Mating	Unmated
Water Jetting Test Method	IEC 60529:2001, IP66

## Packaging and Weights

# L4DR-PS

**Weight, net** 166.9 g | 0.368 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



### \* Footnotes

**Insertion Loss Coefficient, typical** 0.05√freq (GHz) (not applicable for elliptical waveguide)

**Immersion Depth** Immersion at specified depth for 24 hours

# L4NR-PS



Type N Male Right Angle Positive Stop™ for 1/2 in LDF4-50A cable

## Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®   Positive Stop™
Product Series	LDF4-50A
Ordering Note	ANDREW® standard product (Global)

## General Specifications

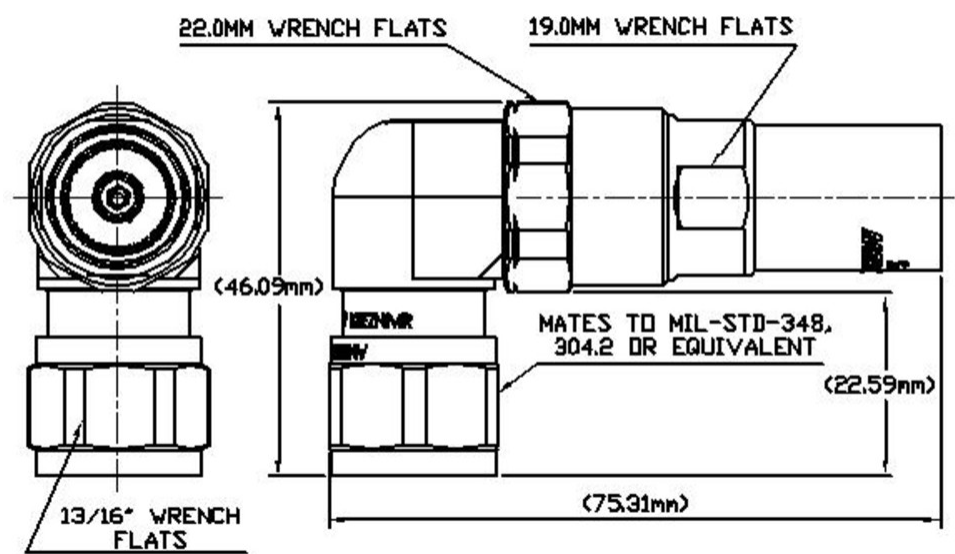
Body Style	Right angle
Cable Family	LDF4-50A
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Gold   Silver
Interface	N Male
Mounting Angle	Right angle
Outer Contact Attachment Method	Self-flare
Outer Contact Plating	Trimetal
Pressurizable	No

## Dimensions

Height	45.97 mm   1.81 in
Width	23.62 mm   0.93 in
Length	75.18 mm   2.96 in
Right Angle Length	22.61 mm   0.89 in
Nominal Size	1/2 in

## Outline Drawing

# L4NR-PS



## Electrical Specifications

3rd Order IMD at Frequency	-116 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss Coefficient, typical	0.05
Average Power at Frequency	0.6 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	2000 V
Inner Contact Resistance, maximum	2 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 8800 MHz
Outer Contact Resistance, maximum	0.3 mOhm
Peak Power, maximum	10 kW
RF Operating Voltage, maximum (vrms)	707 V
Shielding Effectiveness	-110 dB

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
50–1000 MHz	1.02	40.09



# L4NR-PS

1000–1900 MHz	1.04	34.16
1900–2200 MHz	1.05	32.26
2200–2700 MHz	1.08	28.3
2700–3600 MHz	1.1	26.45
3600–6000 MHz	1.119	25.01
6000–8800 MHz	1.29	-18

## Mechanical Specifications

Connector Retention Tensile Force	889.64 N   200 lbf
Connector Retention Torque	5.42 N-m   47.998 in lb
Coupling Nut Proof Torque	4.52 N-m   39.997 in lb
Coupling Nut Retention Force	444.82 N   100 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.23, 4.6.22
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:9.5
Mechanical Shock Test Method	MIL-STD-202F, Method 213B, Test Condition C

## Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Attenuation, Ambient Temperature	20 °C   68 °F
Average Power, Ambient Temperature	40 °C   104 °F
Corrosion Test Method	MIL-STD-1344A, Method 1001.1, Test Condition A
Immersion Depth	1 m
Immersion Test Mating	Unmated
Immersion Test Method	IEC 60529:2001, IP68
Moisture Resistance Test Method	MIL-STD-202F, Method 106F
Thermal Shock Test Method	MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C
Vibration Test Method	MIL-STD-202F, Method 204D, Test Condition B
Water Jetting Test Mating	Unmated
Water Jetting Test Method	IEC 60529:2001, IP66

## Packaging and Weights

# L4NR-PS

**Weight, net** 133.1 g | 0.293 lb

## Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.andrew.com/ProductCompliance">www.andrew.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant

## \* Footnotes

**Insertion Loss Coefficient, typical** 0.05√freq (GHz) (not applicable for elliptical waveguide)

**Immersion Depth** Immersion at specified depth for 24 hours