

## Fire Rated N Male to N Male Right Angle Low Loss Cable Using LMR-400-FR Coax with HeatShrink, LF Solder



### PE3W12590LF/HS

#### Configuration

- Connector 1: N Male
- Connector 2: N Male Right Angle
- Cable Type: LMR-400-FR
- Coax Flex Type: Flexible

#### Features

- Max Frequency 8 GHz
- Shielding Effectivity > 90 dB
- 84% Phase Velocity
- Double Shielded
- FRPE Jacket

#### Applications

- General Purpose
- Laboratory Use

#### Description

Pasternack's PE3W12590LF/HS type N male to type N male right angle cable using LMR-400-FR coax is part of our full line of RF components available for same-day shipping. Pasternack's flexible RF cable assemblies are ideal for applications where tight bends and flexure are required. This Pasternack type N to type N cable assembly has a male to male gender configuration with 50 ohm flexible LMR-400-FR coax. The PE3W12590LF/HS type N male to type N male cable assembly operates to 8 GHz. The right angle type N interface on the LMR-400-FR cable allows for easier connections in tight spaces. The double shielding of this Pasternack cable assembly provides excellent shielding effectiveness of better than 90 dB.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other available RF cable assembly value added services include connector orientation or clocking, heat shrink booting and custom labeling. RF testing can also be performed to document the electrical performance of your cable assembly.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		8	GHz
VSWR			1.4:1	
Velocity of Propagation		84		%
RF Shielding	90			dB
Group Delay		1.2 [3.94]		ns/ft [ns/m]
Capacitance		23.9 [78.41]		pF/ft [pF/m]
Inductance		0.06 [0.2]		uH/ft [uH/m]
DC Resistance Inner Conductor		1.39 [4.56]		Ohms/1000ft [Ohms/Km]
DC Resistance Outer Conductor		1.65 [5.41]		Ohms/1000ft [Ohms/Km]

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**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Jacket Spark			8,000	Vrms

**Specifications by Frequency**

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency					MHz	
PE3W12590LF/HS	Custom Lengths Available	Insertion Loss (Typ.)	0.028	0.041	0.06	0.079	0.108	dB/ft	
			0.1	0.14	0.2	0.26	0.36	dB/m	
PE3W12590LF/HS-12	12 inch	Insertion Loss (Typ.)	0.33	0.35	0.36	0.38	0.41	dB	0.265
PE3W12590LF/HS-24	24 inch	Insertion Loss (Typ.)	0.36	0.39	0.42	0.46	0.52	dB	0.346
PE3W12590LF/HS-36	36 inch	Insertion Loss (Typ.)	0.39	0.43	0.48	0.54	0.63	dB	0.427
PE3W12590LF/HS-48	48 inch	Insertion Loss (Typ.)	0.42	0.47	0.54	0.62	0.74	dB	0.508
PE3W12590LF/HS-60	60 inch	Insertion Loss (Typ.)	0.44	0.51	0.6	0.7	0.84	dB	0.589

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

Loss due to Connector 1:	0.1 dB
Loss due to Connector 2:	0.2 dB
Base Weight:	0.265 pounds
Additional Weight per Inch:	0.00675 pounds

**Mechanical Specifications**

**Cable Assembly**

Width/Diameter	0.5 in [12.7 mm]
Weight	0.265 lbs [120.2 g]

**Cable**

Cable Type	LMR-400-FR
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper
Dielectric Type	Foam PE
Number of Shields	2
Shield Layer 1	Aluminum Tape
Shield Layer 2	Tinned Copper
Jacket Material	FRPE, Black
Jacket Diameter	0.405 in [10.29 mm]
One Time Minimum Bend Radius	1 in [25.4 mm]
Repeated Minimum Bend Radius	4 in [101.6 mm]
Bending Moment	0.5 lbs-ft [0.68 N-m]
Flat Plate Crush	40 lbs/in [0.71 Kg/mm]
Tensile Strength	160 lbs [72.57 Kg]

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## PE3W12590LF/HS

### Connectors

Description	Connector 1	Connector 2
Type	N Male	N Male Right Angle
Specification		MIL-STD-348A
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Right Angle
Mating Cycles		500
Contact Material and Plating	Brass, Gold	Brass, Gold
Contact Plating Specification	15 µin minimum	30 µin minimum
Dielectric Type	PTFE	PTFE
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Coupling Nut Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Hex Size	18 mm	

### Environmental Specifications

Operating Range Temperature -40 to +85 deg C

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

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**PE3W12590LF/HS**

**Typical Performance Data**

**How to Order**

Part Number Configuration:

**PE3W12590LF/HS - xx uu**



Example: PE3W12590LF/HS-12 = 12 inches long cable  
PE3W12590LF/HS-100cm = 100 cm long cable

Fire Rated N Male to N Male Right Angle Low Loss Cable Using LMR-400-FR Coax with HeatShrink, LF Solder from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

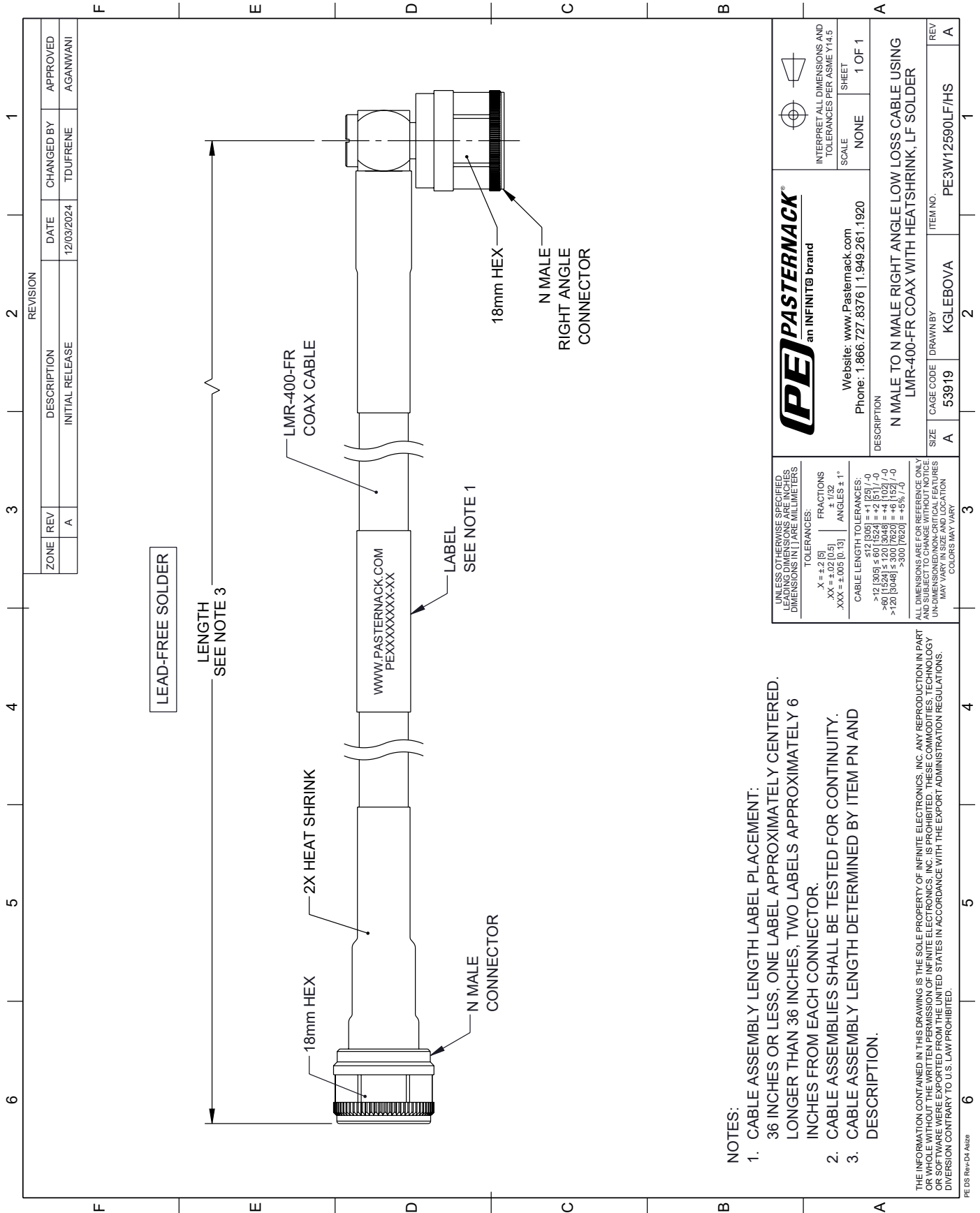
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Fire Rated N Male to N Male Right Angle Low Loss Cable Using LMR-400-FR Coax with HeatShrink, LF Solder PE3W12590LF/HS](#)

URL: <https://www.pasternack.com/fire-rated-n-male-to-n-male-low-loss-cable-using-lmr-400-fr-with-heatshrink-lf-solder-pe3w12590lf-hs-p.aspx>

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# PE3W12590LF/HS CAD Drawing

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**NOTES:**

1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED. LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
2. CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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PE DS Rev-04 A1822

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN PARENTHESIS ARE MILLIMETERS		 INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5	
TOLERANCES:	FRACTIONS	SCALE	SHEET
.X = ±.2 [5]	± 1/32	NONE	1 OF 1
.XX = ±.02 [0.5]	± 1/64		
.XXX = ±.005 [0.13]	ANGLES ± 1°		
CABLE LENGTH TOLERANCES:		Website: <a href="http://www.Pasternack.com">www.Pasternack.com</a>	
>12 [305] ≤ 60 [1524] = +1 [25] / -0		Phone: 1.866.727.8376   1.949.261.1920	
>60 [1524] ≤ 120 [3048] = +4 [102] / -0		DESCRIPTION	
>120 [3048] ≤ 300 [7620] = +5 [127] / -0		N MALE TO N MALE RIGHT ANGLE LOW LOSS CABLE USING LMR-400-FR COAX WITH HEATSHRINK, LF SOLDER	
>300 [7620] = +5 [127] / -0		SIZE	
ALL DIMENSIONS ARE FOR REFERENCE ONLY DIMENSIONS OF CRITICAL FEATURES UNLESS OTHERWISE SPECIFIED MAY VARY IN SIZE AND LOCATION COLORS MAY VARY		CAGE CODE	ITEM NO.
		A 53919	PE3W12590LF/HS
		DRAWN BY	REV
		KGLEBOVA	A

REVISION			
ZONE	REV	DESCRIPTION	DATE
	A	INITIAL RELEASE	12/03/2024
		CHANGED BY	AGANWANI
		APPROVED	