

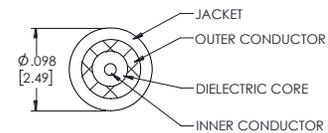
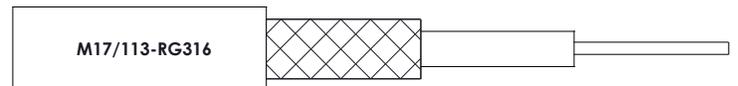
## MIL Size 16 D38999 Contact Pin to SMA Male Cable Using M17/113-RG316 Coax with HeatShrink, LF Solder



### PE3M0270

#### Configuration

- Connector 1: Push-on M39029 Pin PEMACTR16P02
- Connector 2: SMA Male PE45145
- Cable Type: M17/113-RG316
- Coax Flex Type: Flexible



#### Features

- Max Frequency: 1 GHz
- Can be installed in all D38999 size 16 inserts
- Lot traceability
- High speed RF cable assembly

#### Applications

- Military and Aerospace
- Avionics
- Industrial Automation

#### Description

The PE3M0270 from Pasternack is a D38999 contact cable assembly that is built with a size 16 M39029 pin contact on one end and a SMA male connector on the other. Pasternack MIL-DTL-38999 (also known as D38999 or 38999) coaxial cable assembly products are used in applications requiring high quality such as laboratory RF test and measurement, rugged and designed for defense/military, production environments, general use, etc. This M39029 to SMA cable assembly is a part of one of the largest selections of same-day ship coaxial cables for RF, microwave, and millimeter wave interconnect solutions. This high frequency D38999 cable assembly operates at a maximum frequency of 700 GHz.

The PE3M0270 RF cable has a FEP jacket of 0.098-inch diameter. This radio frequency cable assembly can withstand temperatures ranging from -65 to 165 degrees C. Our M39029 pin to SMA male cable has a maximum VSWR of 1.4:1. This flexible RF cable assembly with a 0.5-inch diameter has steel as the cable's inner conducting material and PTFE dielectric type.

M39029 pin to SMA male cable assembly is built with M17/113-RG316, which is a flexible coax type. The Pasternack PE3M0270 flexible cable assembly has a 50 Ohm impedance and is single shielded. Additional dimensions, specifications, and CAD drawings for this M39029 to SMA RF cable are available on our downloadable PDF datasheet.

M39029 pin to SMA male cable assembly is just one of more than one million in-stock RF products available. Pasternack is where to buy high quality custom RF cable assembly products for rugged and MIL-STD designed military/defense, aerospace, outdoor and harsh environment, microwave and millimeter wave radio transmitter receiver, component inter-connection and more for RF test & measurement labs, telecom, phase stable, phase and delay matching, and other radio frequency applications can be manufactured. Variations of M39029 and SMA cable assemblies can also be built and will ship on the same day as well, search this website or contact us for assistance. For further information on similar products, our expert technical support and trained sales team can get you the ideal M39029 to SMA RF cable assembly as per your requirements.

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**PE3M0270**

**Referenced Specifications**

IPC J-STD-001	Requirements for Soldered Electrical and Electronic Assemblies
IPC J-STD-006	Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications
IPC/WHMA-A-620	Requirements and Acceptance for Cable and Wire Harness Assemblies
MIL-DTL-17	Cables, Radio Frequency, Flexible and Semirigid, General Specification for
MIL-PRF-39012	Connectors, Coaxial, Radio Frequency, General Specification for
MIL-STD-348	Radio Frequency Connector Interfaces for MIL-DTL-3643, MIL-DTL-3650, MIL-DTL-3655, MIL-DTL-25516, MIL-PRF-31031, MIL-PRF-39012, MIL-PRF-49142, MIL-PRF-55339, MIL-DTL-83517
SAE AS22520	Crimping Tools, Wire Termination, General Specification For
SAE AS23053	Insulation Sleeving, Electrical, Heat Shrinkable, General Specifications For
SAE AS5942	Marking of Electrical Insulating Materials
IPC J-STD-001	Requirements for Soldered Electrical and Electronic Assemblies

**Material Specifications**

Component	Specification
Cable	M17/113-RG316 in accordance with MIL-DTL-17
Connector 1	PEMACTRF16P02 in accordance with MIL-DTL-38999
Connector 2	PE45145 in accordance with MIL-STD-348A
Heat Shrink 1	M23053/5-104-0 in accordance with SAE AS23053
Heat Shrink 2	M23053/5-104-0 in accordance with SAE AS23053
Solder	SAC305 in accordance with J-STD-006

**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		700	MHz
VSWR			1.4:1	
Velocity of Propagation		69.5		%
Capacitance		32 [104.99]		pF/ft [pF/m]
DC Resistance Inner Conductor		0.84 [2.76]		Ω/1000ft [Ω/Km]
Dielectric Withstanding Voltage (AC)			2,000	Vrms
Jacket Spark			2,000	Vrms

**Specifications by Frequency**

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**PE3M0270**

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency	50	100	250	500	700	
PE3M0270	Custom Lengths Available	Insertion Loss (Typ.)	0.08	0.11	0.16	0.24	0.295	dB/ft	
			0.25	0.37	0.53	0.79	0.97	dB/m	
PE3M0270-6	6 inch	Insertion Loss (Typ.)	0.24	0.26	0.28	0.32	0.35	dB	0.0225
PE3M0270-12	12 inch	Insertion Loss (Typ.)	0.28	0.31	0.36	0.44	0.5	dB	0.025
PE3M0270-24	24 inch	Insertion Loss (Typ.)	0.35	0.42	0.52	0.68	0.79	dB	0.03
PE3M0270-36	36 inch	Insertion Loss (Typ.)	0.43	0.53	0.68	0.92	1.09	dB	0.035
PE3M0270-48	48 inch	Insertion Loss (Typ.)	0.5	0.64	0.84	1.16	1.38	dB	0.04
PE3M0270-60	60 inch	Insertion Loss (Typ.)	0.58	0.75	1	1.39	1.68	dB	0.045

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: 0.1 dB  
 Base Weight: 0.025 pounds  
 Additional Weight per Foot: 0.005 pounds

Electrical Specification Notes:  
 Values at 25°C, sea level.

**Mechanical Specifications**

**Cable Assembly**

Description	Minimum	Typical	Maximum	Units
Length*			0 [0]	in [mm]
Cable Outer Diameter		0.098		in
Weight		0.025 [11.34]		lbs [g]

**Cable Characteristics**

Description	Specification
Cable Type	M17/113-RG316
Impedance	50 Ohms
Inner Conductor Type	Stranded
Inner Conductor Material and Plating	Steel, Silver
Dielectric Type	PTFE
Number of Shields	1
Shield Layer 1	Silver Coated Copper
Jacket Material	FEP

**Connector Characteristics**

Description	Connector 1	Connector 2
Type	M39029 Pin	SMA Male

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**PE3M0270**

**Connector Characteristics**

Description	Connector 1	Connector 2
Specification	MIL-DTL-38999	MIL-STD-348A
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Connection Method	Push-on	
Contact Size	16	
Mating Cycles	500	
Contact Material and Plating	Beryllium Copper, Gold	Brass, Gold
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating	Brass, Gold	
Body Material and Plating	Brass, Gold	Brass, Gold
Coupling Nut Material and Plating		Brass, Gold
Hex Size		5/16 inch
Torque		5 in-lbs [0.57 Nm]

Mechanical Specification Notes:

**Environmental Specifications**

Description	Specification
Temperature Operating Range	-65 to +85 deg C

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

**Plotted and Other Data**

Notes:  
Values at 25°C, sea level.

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**PE3M0270**

**How to Order**

Part Number Configuration:

**PE3M0270**

- **xx**

**uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches  
Length  
Base Number

Example: PE3M0270-12 = 12 inches long cable  
PE3M0270-100cm = 100 cm long cable

Cable Assembly Length Tolerances:

Imperial English		Metric	
"L" ≤ 1 ft	+0.5 in / -0 in	"L" ≤ 0.3 m	+12.5 mm / -0 mm
1 ft < "L" ≤ 5 ft	+1 in / -0 in	0.3 m < "L" ≤ 1.5 m	+25 mm / -0 mm
5 ft < "L" ≤ 10 ft	+2 in / -0 in	1.5 m < "L" ≤ 3 m	+50 mm / -0 mm
10 ft < "L" ≤ 25 ft	+3 in / -0 in	3 m < "L" ≤ 7.5 m	+75 mm / -0 mm
25 ft < "L"	+2%"L" / -0%"L"	7.5 m < "L"	+2%"L" / -0%"L"

\* Cable Length = "L"

MIL Size 16 D38999 Contact Pin to SMA Male Cable Using M17/113-RG316 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.

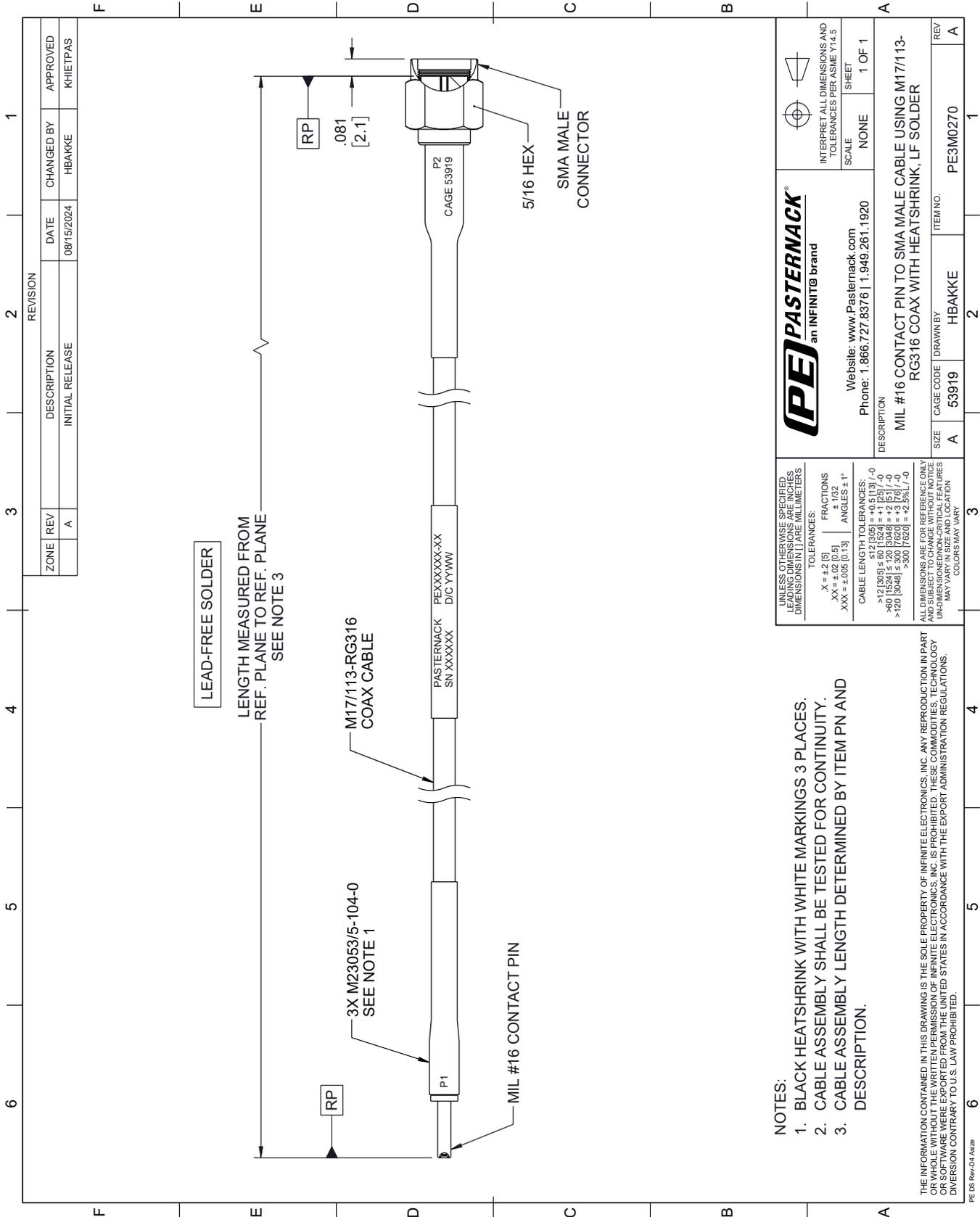
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [MIL Size 16 D38999 Contact Pin to SMA Male Cable Using M17/113-RG316 Coax with HeatShrink, LF Solder PE3M0270](https://www.pasternack.com/mil-16-d38999-contact-pin-to-sma-male-cable-using-m17-113-rg316-coax-with-heatshrink-lf-solder-pe3m0270-p.aspx)

URL: <https://www.pasternack.com/mil-16-d38999-contact-pin-to-sma-male-cable-using-m17-113-rg316-coax-with-heatshrink-lf-solder-pe3m0270-p.aspx>

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# PE3M0270 CAD Drawing

MIL Size 16 D38999 Contact Pin to SMA Male Cable Using M17/113-RG316 Coax with HeatShrink, LF Solder



REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV			
	A	08/15/2024	HBAKKE	KHIEPPAS
DESCRIPTION				
INITIAL RELEASE				

**PE PASTERNAK**  
an INFINITE brand

Website: [www.Pasternack.com](http://www.Pasternack.com)  
Phone: 1.866.727.8376 | 1.949.261.1920

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES, DIMENSIONS IN [ ] ARE MILLIMETERS.

TOLERANCES:  
 .X = ±.2 [5]  
 .XX = ±.02 [0.5]  
 .XXX = ±.005 [0.13]  
 FRACTIONS ± 1/32  
 ANGLES ± 1°

CABLE LENGTH TOLERANCES:  
 <math>+12 [305] \le 60 [1524] = +0.15 [3.8] / -0</math>  
 <math>+60 [1524] \le 120 [3048] = +2.5 [63.5] / -0</math>  
 <math>+300 [7620] \le 300 [7620] = +2.5 [63.5] / -0</math>

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED/UNCLEAR FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

DESCRIPTION: MIL #16 CONTACT PIN TO SMA MALE CABLE USING M17/113-RG316 COAX WITH HEATSHRINK, LF SOLDER

SIZE: A CAGE CODE: 53919 DRAWN BY: HBAKKE ITEM NO.: PE3M0270

SCALE: NONE SHEET: 1 OF 1

NOTES:

1. BLACK HEATSHRINK WITH WHITE MARKINGS 3 PLACES.
2. CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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PE DS Rev-04 Add2