SURE-SEAL

SURE-SEAL® IP67 RJ45 SERIES CATALOG

PEI-Genesis™

Table of Contents

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Technical Information

Wire Gauge Conversion Chart

Conversion between American Wire Gauge (AWG), Circular Mil Area (CMA), and approximate metric millimeter squared (mm2) wire sizes.

	Diameter		Area	
AWG	in.	mm	CMA	mm²*
4/0 (0000)	0.46	11.68	212000	120
3/0 (000)	0.41	10.41	168000	95
2/0 (00)	0.365	9.27	133000	70
1/0 (0)	0.325	8.26	106000	50
1	0.289	7.34	83700	-
2	0.258	6.55	66400	35
3	0.229	5.82	52600	-
4	0.204	5.18	41700	25
5	0.182	4.62	33100	-
6	0.162	4.11	26300	16
7	0.144	3.66	20800	-
8	0.128	3.25	16500	10
9	0.114	2.90	13100	-
10	0.102	2.59	10400	6
11	0.091	2.31	8230	-
12	0.081	2.06	6530	4
13	0.072	1.83	5180	-

	Diameter		Area	
AWG	in.	mm	CMA	mm²*
14	0.062	1.57	4110	2.5
15	0.057	1.45	3260	-
16	0.051	1.30	2580	1.5
17	0.045	1.14	2050	1
18	0.040	1.02	1620	0.75
19	0.036	0.91	1290	-
20	0.032	0.81	1020	0.5
21	0.0285	0.72	810	-
22	0.0253	0.643	642	0.34
23	0.0226	0.574	509	-
24	0.0201	0.511	404	0.25
25	0.0179	0.45	320	-
26	0.0159	0.404	254	0.14
27	0.0142	0.361	202	-
28	0.0126	0.320	160	0.08
29	0.0113	0.29	127	-
30	0.01	0.254	101	0.05

*Nearest metric wire size
Use to Convert American Wire Gauge to Diameter and Circular Mil Area.

How to Order

RJ45 Plugs & Cable Assemblies

1		2	3		4
IPMOD	**-**	**45**	**WPP**	**-**	**1M**
SERIES		TYPE	CONNECTOR STYLE		LENGTH

SERIES
IPMOD   = RJ45 COMPOSITE
IPMODM = RJ45 METAL

TYPE
45 = RJ45 (Cat5e)

CONNECTOR STYLE*
WPP   = RJ45 molded plug to RJ45 plug
WPL   = RJ45 molded plug to blunt cut
WPWP   = RJ45 molded plug to RJ45 molded plug
WM-FT = RJ45 field installable plug
WJP   = RJ45 molded receptacle to RJ45 plug
WJL   = RJ45 molded receptacle to blunt cut
WJWP   = RJ45 molded receptacle to RJ45 molded plug

LENGTH**
05M = 0.5 meter
1M   = 1 meter
5M   = 5 meters
10 M = 10 meters

*Molded receptacle only available in composite.

** Additional lengths are available upon request

RJ45 Receptacle

1		2	3	4
IPMOD	**-**	**-45**	**FSP**	**-0.5M**
SERIES		TYPE	CONNECTOR STYLE	LENGTH

SERIES
IPMOD   = RJ45 Composite
IPMODM = RJ45 Metal

TYPE
-45 = RJ45 (Cat5e)

CONNECTOR STYLE
FSP   = RJ45 jam nut receptacle to printed circuit board
FSBHD = RJ45 jam nut receptacle to female RJ45 feed thru
FSLP   = RJ45 jam nut receptacle to RJ45 plug
FSL   = RJ45 jam nut receptacle to blunt cut
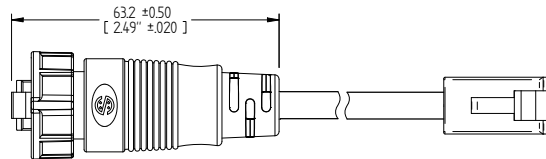
LENGTH*
05M = 0.5 meter
1M   = 1 meter

*Length only required on "FSLP" and "FSL" options, otherwise leave blank.

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RJ45 Molded Straight Plug to RJ45 Plug Cable Assembly

Composite
Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
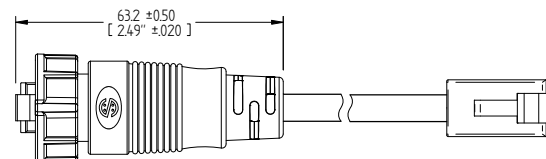Part No.: IPMOD-45WPP-XM
X refers to cable length

63.2 ±0.50
[2.49" ±.020]

General Information

Standard:	IEC 60603-7
Temperature range:	-20°C ~ +80°C
Terminal:	Copper alloy, gold plated
Contact number:	8 contacts
Contact housing:	Nylon + CF
Screw nut:	Nylon + GF
Mating style:	Screw thread

Contact resistance:	≤ 40MΩ
Withstanding voltage:	AC 1000V/1 minute
Salt spray:	48 hr.
Protection class:	IP67 (mated)
Durability:	1000 times
Current rating:	1A
Voltage rating:	48V
Wiring schematic:	T568-B

Metal
Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
Part No.: IPMODM-45WPP-XM
X refers to cable length

63.2 ±0.50
[2.49" ±.020]
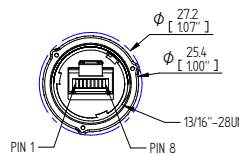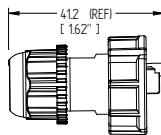
General Information

Standard:	IEC 60603-7
Temperature range:	-20°C ~ +80°C
Terminal:	Copper alloy, gold plated
Contact number:	8 contacts
Contact housing:	Nylon + GF
Screw nut:	Zinc, nickel plated
Mating style:	Screw thread

Contact resistance:	≤ 40MΩ
Withstanding voltage:	AC 1000V/1 minute
Salt spray:	48 hr.
Protection class:	IP67 (mated)
Durability:	1000 times
Current rating:	1A
Voltage rating:	48V
Wiring Schematic:	T568-B

Notes

• Please refer to Page 5 for part number breakdown.

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RJ45 Molded Straight Plug Single Ended Cable Assembly

Composite

Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
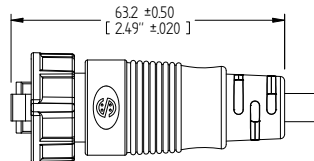Part No.: IPMOD-45WPL-XM

X refers to cable length

63.2 ±0.50
[2.49" ±.020]

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C ~ +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 Contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon + CF		Durability:	1000 times
Screw nut:	Nylon + GF		Current rating:	1A
Mating style:	Screw thread		Voltage rating:	48V
			Wiring Schematic:	T568-B

Metal

Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
Part No.: IPMODM-45WPL-XM

X refers to cable length

63.2 ±0.50
[2.49" ±.020]

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C - +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon + GF		Durability:	1000 times
Screw nut:	Zinc, nickel plated		Current rating:	1A
Mating style:	Screw thread		Voltage rating:	48V
			Wiring Schematic:	T568-B

Notes

• Please refer to Page 5 for part number breakdown.

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RJ45 Molded Straight Plug to Molded Straight Plug Cable Assembly

Composite

Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
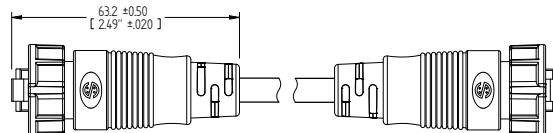Part No.: IPMOD-45WPWP-XM

X refers to cable length

63.2 ±0.50
[2.49″ ±.020]

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C ~ +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon+CF		Durability:	1000 times
Screw nut:	Nylon + GF		Current rating:	1A
Mating style:	Screw Thread		Voltage rating:	48V

Metal

Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
Part No.: IPMODM-45WPWP-XM

X refers to cable length

63.2 ±0.50
[2.49″ ±.020]

General Information

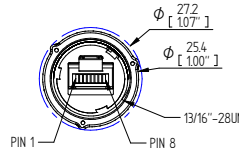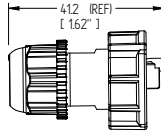|				
Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C ~ +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon+GF		Durability:	1000 times
Screw nut:	Zinc, Nickel Plated		Current rating:	1A
Mating style:	Screw Thread		Voltage rating:	48V

Notes

• Please refer to Page 5 for part number breakdown.

RJ45 Field Wireable Plug

Composite

Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
Part No.: IPMOD-45WM-FT

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-40°C ~ +85°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon + GF		Durability:	1000 times
Screw nut:	Nylon + GF		Current rating:	1A
Mating style:	Screw Thread		Voltage rating:	48V

Metal

Connector series: RJ45
Gender: Plug
Performance: Cat 5e
Mounting type: Straight
Part No.: IPMODM-45WM-FT

General Information

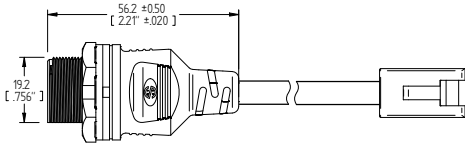|				
Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-40°C ~ +85°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon + GF		Durability:	1000 times
Screw nut:	Zinc, nickel plated		Current rating:	1A
Mating style:	Screw thread		Voltage rating:	48V

Notes

• Please refer to Page 5 for part number breakdown.
• Please refer to Page 20 for assembly instructions.

RJ45 Molded Straight Jamnut Receptacle To RJ45 Plug Cable Assembly

Composite

Connector series: RJ45

Gender: Jack

Locking type: Fix screw
Part No.: IPMOD-45WJP-XM

X refers to cable length

56.2 ±0.50
[2.21" ±.020]

19.2
[.756"]

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C ~ +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon+CF		Durability:	1000 times
Screw nut:	Nylon + GF		Current rating:	1A
Mating style:	Screw Thread		Voltage rating:	48V

RJ45 Molded Straight Jamnut Receptacle Single Ended Cable Assembly

Composite

Connector series: RJ45

Gender: Jack

Locking type: Fix screw
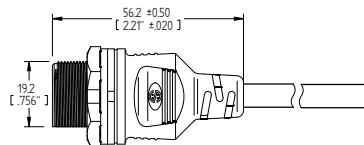Part No.: IPMOD-45WJL-XM

X refers to cable length

56.2 ±0.50
[2.21" ±.020]

19.2
[.756"]

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C ~ +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon+CF		Durability:	1000 times
Screw nut:	Nylon + GF		Current rating:	1A
Mating style:	Screw Thread		Voltage rating:	48V

Notes

• Please refer to Page 5 for part number breakdown.

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RJ45 Molded Straight Jamnut Receptacle To RJ45 Plug Cable Assembly

Composite

Connector series: RJ45
Gender: Jack
Locking type: Fix screw
Part No.: IPMOD-45WJWP-XM

X refers to cable length

56.2 ±0.50
[2.21" ±.020]

19.2
[.756"]

General Information

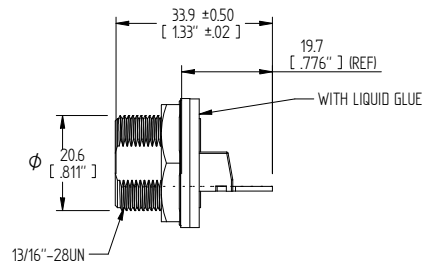| Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C ~ +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon+CF		Durability:	1000 times
Screw nut:	Nylon + GF		Current rating:	1A
Mating style:	Screw Thread		Voltage rating:	48V

Notes

• Please refer to Page 5 for part number breakdown.

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RJ45 Jamnut Receptacle To PCB

Composite
Connector series: RJ45
Gender: Receptacle
Performance: Cat 5e & Cat 6a
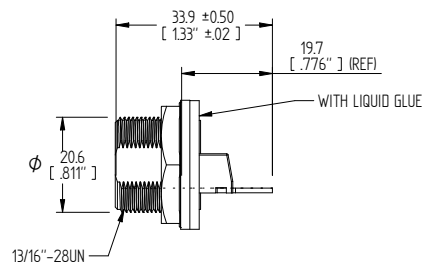Mounting type: Straight
Part No.: IPMOD-45FSP

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature Range:	-40°C ~ +105°C		Withstanding Voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt Spray:	48 hr.
Contact Number:	8 contacts		Protection Class:	IP68 (mated)
Contact Housing:	Nylon+CF		Durability:	1000 times
Screw Nut:	Nylon + GF		Current Rating:	1A
Mating Style:	Screw Thread		Voltage Rating:	48V

Metal
Connector series: RJ45
Gender: Receptacle
Performance: Cat 5e & Cat 6a
Mounting type: Straight
Part No.: IPMODM-45FSP

General Information

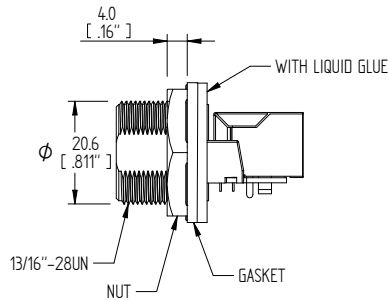|				
Standard:	IEC 60603-7		Contact Resistance:	≤ 40MΩ
Temperature Range:	-40°C ~ +105°C		Withstanding Voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt Spray:	48 hr.
Contact Number:	8 contacts		Protection Class:	IP68 (mated)
Contact Housing:	Nylon+GF		Durability:	1000 times
Screw Nut:	Zinc, Nickel Plated		Current Rating:	1A
Mating Style:	Screw Thread		Voltage Rating:	48V

Notes
• Please refer to Page 5 for part number breakdown.

RJ45 Jamnut Receptacle To Female Feed Thru

Composite

Connector series: RJ45
Gender: Plug
Performance: Cat 5e & Cat 6a
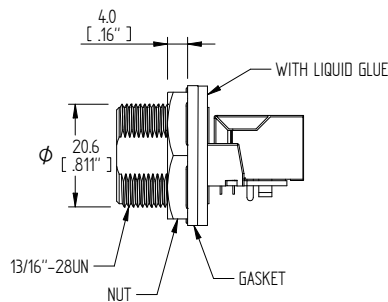Mounting type: Straight
Part No.: IPMOD-45FSBHD

General Information

Standard:	IEC 60603-7
Temperature range:	-40°C ~ +105°C
Terminal:	Copper alloy, gold plated
Contact number:	8 contacts
Contact housing:	Nylon+CF
Screw nut:	Zinc alloy, nickel plated
Mating style:	Screw Thread
Max panel thickness	4.0 mm (without cap chain)

Contact resistance:	$\leq$ 40MΩ
Withstanding voltage:	AC 1000V/1 minute
Salt spray:	48 hr.
Protection class:	IP68 (mated)
Durability:	1000 times
Current rating:	1A
Voltage rating:	48V
Insulation resistance	$\geq$ 5000MΩ at DC 100v

Metal

Connector series: RJ45
Gender: Plug
Performance: Cat 5e & Cat 6a
Mounting type: Straight
Part No.: IPMODM-45FSBHD

General Information

Standard:	IEC 60603-7
Temperature range:	-40°C ~ +105°C
Terminal:	Copper alloy, gold plated
Contact number:	8 contacts
Contact housing:	Nylon+CF
Screw nut:	Zinc alloy, nickel plated
Mating style:	Screw Thread
Max panel thickness	4.0 mm (without cap chain)

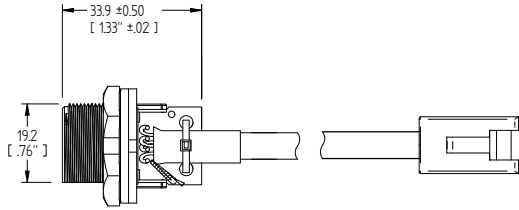|	
Contact resistance:	$\leq$ 40MΩ
Withstanding voltage:	AC 1000V/1 minute
Salt spray:	48 hr.
Protection class:	IP68 (mated)
Durability:	1000 times
Current rating:	1A
Voltage rating:	48V
Insulation resistance	$\geq$ 5000MΩ at DC 100v

Notes

• Please refer to Page 5 for part number breakdown.

RJ45 Jamnut Receptacle To RJ45 Plug

Composite
Connector series: RJ45
Gender: Receptacle
Performance: Cat 5e
Mounting type: Straight
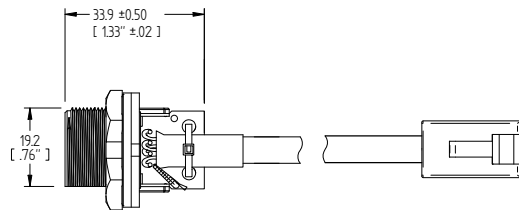Part No.: IPMOD-45FSLP-XM
X refers to cable length

General Information

Standard:	IEC 60603-7	Contact resistance:	≤ 40MΩ
Temperature Range:	-20°C ~ +80°C	Withstanding Voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated	Salt Spray:	48 hr.
Contact Number:	8 contacts	Protection Class:	IP68 (mated)
Contact Housing:	Nylon+CF	Durability:	1000 times
Screw Nut:	Nylon + GF	Current Rating:	1A
Mating Style:	Screw Thread	Voltage Rating:	48V
*Cable Length:	500 mm		

Metal
Connector series: RJ45
Gender: Receptacle
Performance: Cat 5e
Mounting type: Straight
Part No.: IPMODM-45FSLP-XM
X refers to cable length

General Information

Standard:	IEC 60603-7	Contact resistance:	≤ 40MΩ
Temperature Range:	-40°C ~ +85°C	Withstanding Voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated	Salt Spray:	48 hr.
Contact Number:	8 contacts	Protection Class:	IP68 (mated)
Contact Housing:	Nylon+GF	Durability:	1000 times
Screw Nut:	Zinc alloy, nickel plated	Current Rating:	1A
Mating Style:	Screw Thread	Voltage Rating:	48V
*Cable Length:	500 mm		

Notes
• Please refer to Page 5 for part number breakdown.
* If no cable length is defined, the standard is 500 mm.

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RJ45 Jamnut Receptacle To Blunt Cut

Composite

Connector series: RJ45
Gender: Receptacle
Performance: Cat 5e
Mounting type: Straight
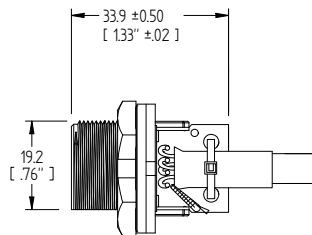Part No.: IPMOD-45FSL-XM

X refers to cable length

33.9 ±0.50
[1.33" ±.02]

19.2
[.76"]

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature Range:	-20°C ~ +80°C		Withstanding Voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt Spray:	48 hr.
Contact Number:	8 contacts		Protection Class:	IP68 (mated)
Contact Housing:	Nylon+CF		Durability:	1000 times
Screw Nut:	Nylon + GF		Current Rating:	1A
Mating Style:	Screw Thread		Voltage Rating:	48V
*Cable Length:	500 mm			

Metal

Connector series: RJ45
Gender: Receptacle
Performance: Cat 5e
Mounting type: Straight
Part No.: IPMODM-45FSL-XM

X refers to cable length

33.9 ±0.50
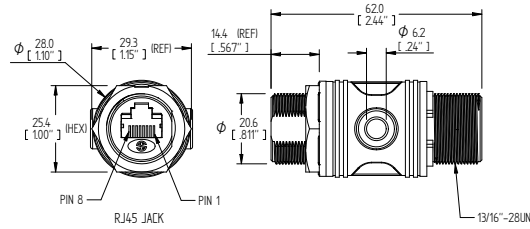[1.33" ±.02]

19.2
[.76"]

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature Range:	-20°C ~ +85°C		Withstanding Voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt Spray:	48 hr.
Contact Number:	8 contacts		Protection Class:	IP68 (mated)
Contact Housing:	Nylon+GF		Durability:	1000 times
Screw Nut:	Zinc alloy, nickel plated		Current Rating:	1A
Mating Style:	Screw Thread		Voltage Rating:	48V
*Cable Length:	500 mm			

Notes

• Please refer to Page 5 for part number breakdown.

* If no cable length is defined, the standard is 500 mm.

Accessories

RJ45 Feedthru Adapter

Connector series: RJ45
Gender: Adapter
Locking type: Fix screw
Part No.: IPMOD-45FSWBHD

General Information

Standard:	IEC 60603-7		Contact resistance:	≤ 40MΩ
Temperature range:	-20°C ~ +80°C		Withstanding voltage:	AC 1000V/1 minute
Terminal:	Copper alloy, gold plated		Salt spray:	48 hr.
Contact number:	8 contacts		Protection class:	IP67 (mated)
Contact housing:	Nylon+GF		Durability:	1000 times
Screw nut:	Nylon + GF		Current rating:	1A
Mating style:	Screw Thread		Voltage rating:	48V

RJ45 Receptacle Cap

Connector series: RJ45
Part No.: IPCAP-1316

General Information
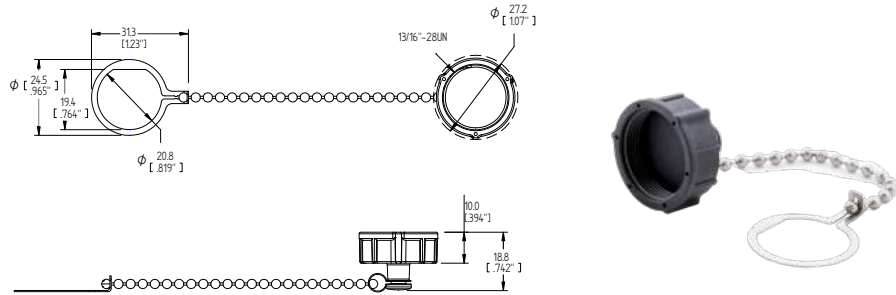
Temperature range:	-40°C ~ +105°C		Protection class:	IP67
Material, cap:	Nylon, black		Material, gasket:	EPDM, black
Material, holder:	Nylon, black		Material, chain:	Stainless steel

RJ45 Receptacle Metal Cap

Connector series: RJ45
Part No.: IPCAPM-1316

General Information
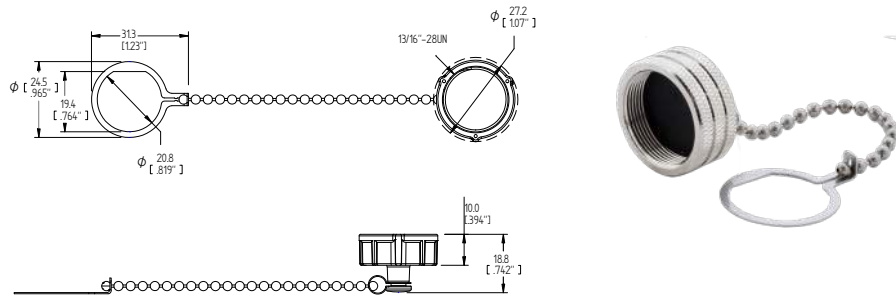
Temperature range:	-40°C ~ +105°C		Protection class:	IP67
Material, cap:	Copper alloy, nickel plated		Material, gasket:	EPDM, black
Material, holder:	Nylon, black		Material, chain:	Stainless steel

SURE-SEAL

RJ45 Gasket

Connector series: RJ45
Part No.: IPGSK-1316
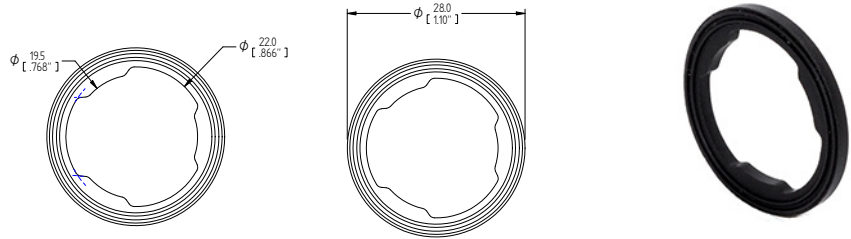
General Information

Material:	Silicone (UL94V-0)		Color:	Gray
Packaging:	Pack of 10			

RJ45 Lock Nut

Connector series: RJ45
Part No.: IPNT-1316

General Information

Material:	Nylon		Color:	Black
Packaging:	Pack of 10			

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SURE-SEAL
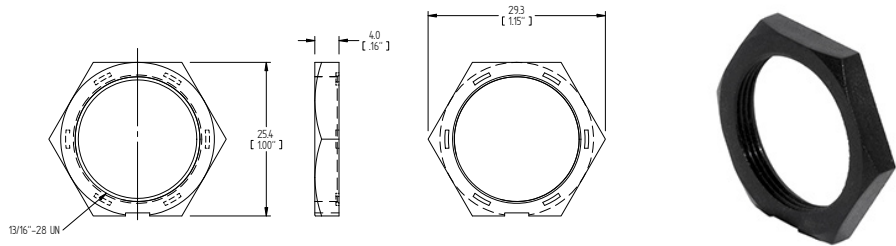
RJ45 Field Wireable Assembly Instructions

Gasket
Plug
Housing
Screw Nut
Seal
Clip
Sealing Nut
Cable
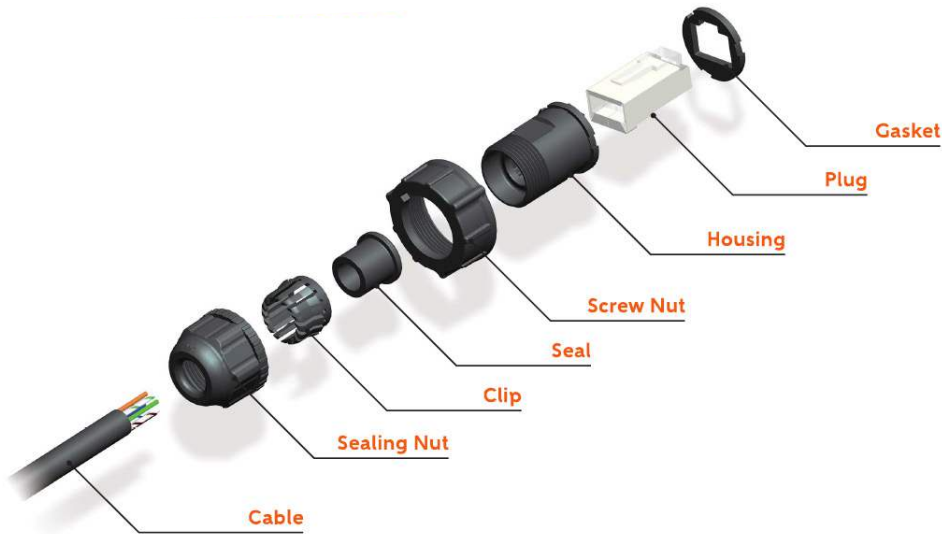
Step 1
Strip the cable sheath and insulation.
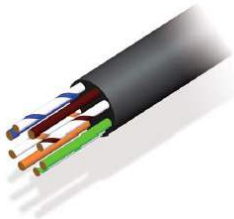
Step 2
Insert the cable through the sealing nut, clip, seal, screw nut and housing.

Step 3
Insert cable into plug using hand tool.

Step 4
Insert the screw nut.

Step 5
Connect the seal and the clip respectively.

Step 6
Connect the sealing nut and tighten using hand tool (optional) or your hand while holding assy.

Step 7
Insert the gasket.

Part Numbers

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IPMOD-45WPP-5M	6
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IPMODM-45WPP-3M	6
IPMODM-45WPP-5M	6
IPMOD-45WPL-1M	7
IPMOD-45WPL-3M	7
IPMOD-45WPL-5M	7
IPMODM-45WPL-1M	7
IPMODM-45WPL-3M	7
IPMODM-45WPL-5M	7
IPMOD-45WPWP-1M	8
IPMOD-45WPWP-3M	8
IPMOD-45WPWP-5M	8
IPMODM-45WPWP-1M	8
IPMODM-45WPWP-3M	8
IPMODM-45WPWP-5M	8
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IPMODM-45WM-FT	9
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