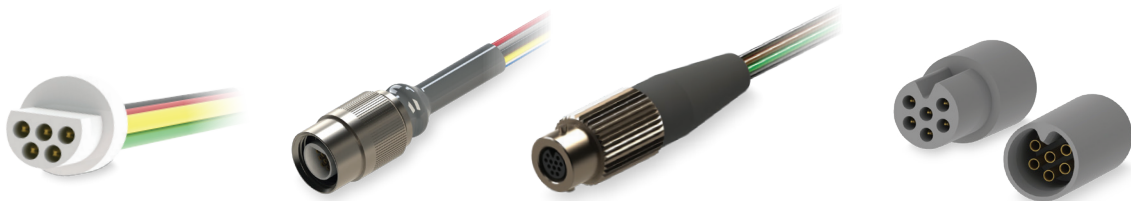


## MICRO 360<sup>®</sup> & NANO 360<sup>®</sup>

### INTERCONNECT SYSTEMS CATALOG



**Omnetics Connector Corporation** is a privately held connector design and manufacturing company with over 30 years of experience. Omnetics manufactures and designs compact ultra lightweight Micro-miniature, Nano-miniature, high temperature, and Hybrid connectors, wire harnesses, and cable assembly solutions for the toughest, smallest, and highest speed applications. These rugged miniature and ultra-miniature Mil-Spec based Circular and Hybrid Circular connector solutions are available in a variety of sizes and layouts featuring ratcheting, threaded, twist-lock, and breakaway coupling configurations. Omnetics' rugged Nano-miniature and Micro-miniature circular connectors are available with EMI shielding and IP68 sealing, and aid in the interconnect and SWaP design requirements of your battlefield communications, computing, and other high performance devices. Omnetics connectors are optimized for high speed compact circuitry in mission critical harsh environment applications.

With a rich history of designing and manufacturing high quality Micro and Nano connectors, our interconnect solutions are used in a variety of challenging application environments including Military, Aerospace, Medical, Petroleum, Test and Measurement, Robotics, and Research.

In addition to maintaining a large off-the-shelf (COTs) inventory,

Omnetics offers a wide range of standard designs and specializes in application-specific high reliability miniature and ultra-miniature interconnect solutions. The Omnetics product portfolio includes:

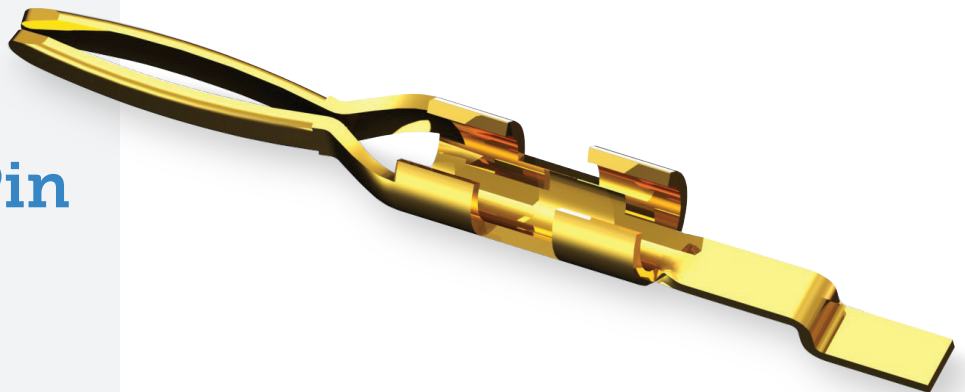
- Micro and Nano Circular connectors
- Micro and Nano Strip connectors
- Polarized Nano (PZN) connectors
- MIL-DTL-83513 Micro-D connectors
- Commercial Micro-D connectors
- Latching Micro-D connectors
- MIL-DTL-32139 Nano-D connectors
- Commercial Nano-D / Bi-Lobe connectors
- Latching Nano-D / Bi-Lobe connectors
- Hybrid connector configurations
- Cable Assemblies

Omnetics products are designed and assembled in Minneapolis, MN, U.S. The facility includes in-house automatic machining and over-molding equipment. Omnetics has a worldwide distribution and sales team that are experienced in supporting both standard and customized designs for connector miniaturization to form, fit, and function.

## Omnetics Connector Corporation

### Omnetics' Flex Pin

Designed for  
High Shock and  
Vibration.



Omnetics' Flex Pin contact is ideal for withstanding high shock and vibration situations. It meets and exceeds standards for MIL-DTL-83513 for Micro (0.050 in. pitch) connectors and the MIL-DTL-32139 for Nano (0.025 in. pitch) connectors. This simple, one-piece design is stamped from ASTM B194 Beryllium Copper.



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# Specification Sheets

## Space Level Screening

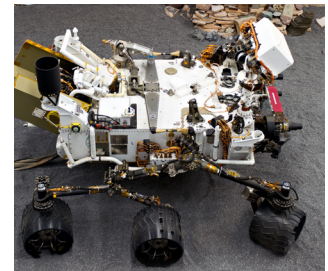
Per EEE-INST-002



### Ordering Steps

- Step 1 - Choose a suitable Micro or Nano connector
- Step 2 - Choose a level of Space Screening
  - Level 1 - Mission Critical (Highest Reliability)
  - Level 2 - High Reliability
  - Level 3 - Standard Reliability
- Step 3 - Select any added outgassing processing needed.
- Step 4 - Specify chosen ORDERING CODES from table below. These codes should be used as separate line items on all quote Requests and Purchase Orders as required.

Ordering Codes (quoted as separate line items)		
Screening Level	Special Screening Only	Processing for Outgassing
Level 1 - Mission Critical	SPT1	All standard materials exhibit less than 1.0% TML without additional processing. Contact service for special requirements.
Level 2 - High Reliability	SPT2	
Level 3 - Standard Reliability	Standard	



### Micro (.050" center)

### Nano (.025" center)

Inspection/Test	Micro (.050" center)		Nano (.025" center)	
	Level 1 Com'l/SCD	Level 2 Com'l/SCD	Level 1 Com'l/SCD	Level 2 Com'l/SCD
Visual	100%	100%	100%	100% 100%
Mechanical	2 (0)	2 (0)	2 (0)	2 (0)
Voltage Rating (DWV)	100%	2 (0)	100%	2 (0)
Insulation Resistance	2 (0)	2 (0)	2 (0)	2 (0)
Temperature Cycling	2 (0)	2 (0)	2 (0)	-
Low Level Contact Resistance	2 (0)	2 (0)	2 (0)	2 (0)
Mating/Unmating Force	2 (0)	-	2 (0)	-
Solderability/Resistance to heat (SMT & Thru-Hole only)	2 (0)	-	2 (0)	-


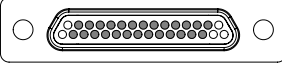
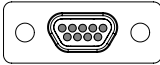
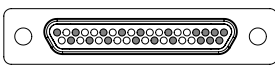
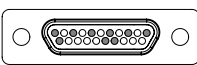



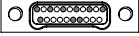
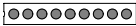











# Specification Sheets

The Omnetics High-Speed Protocol Guide, based on extensive internal research, provides connector options for various high-speed signaling protocols. The high-speed signaling specifications for each protocol were scrutinized extensively to provide an optimal pinout and ensure that the connectors meet or exceed the performance requirements.

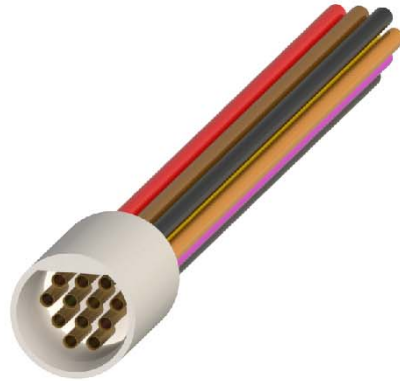
When necessary, measurements were taken on the Omnetics connectors and directly compared to commercially available connectors. In these cases, Omnetics connectors outperformed the commercial connectors, yielding lower loss values across the critical frequencies.

The pinouts for each available configuration are provided in the table below.

	Camera Link	Ethernet	HDMI	USB 3.0
Micro-D				
Nano-D				
Micro Strip				
Nano Strip				
Plastic Micro Circular				
Metal Micro Circular				
Plastic Nano Circular				
Metal Nano Circular				

# MICRO 360<sup>®</sup> Plastic

## Micro Circular Discrete Wire/Cable (Type WD/WC)



### Electrical-Mechanical Specifications

---

- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C w/ High Temp Epoxy)
- Dielectric Withstand Voltage: \_\_\_\_\_ 600 VAC RMS @sea level
- Contact Resistance: \_\_\_\_\_ 26 milliohms(65 mV) Max @2.5 Amps
- Current Rating: \_\_\_\_\_ 3 Amps per contact
- Durability: \_\_\_\_\_ >2000 Mating Cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact

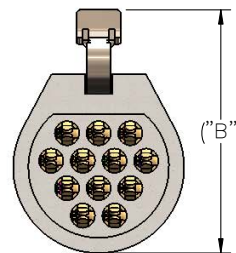
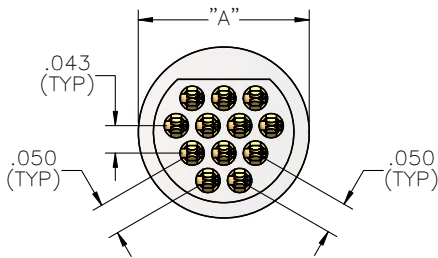
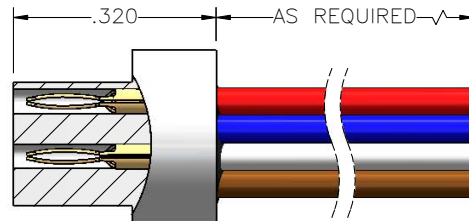
### Material Specifications

---

- Contact: \_\_\_\_\_ Copper Alloy per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Wire: \_\_\_\_\_ 26 AWG (7-34) PTFE, color coded



# Plastic - Pin - Wired MCP-WD

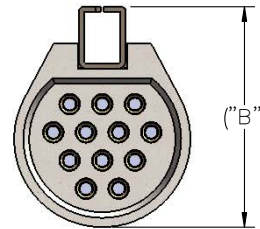
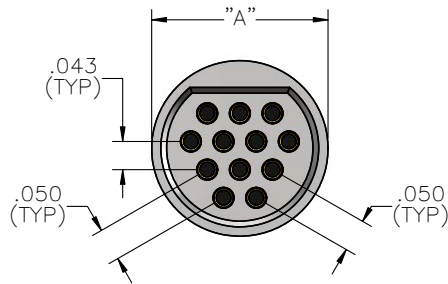
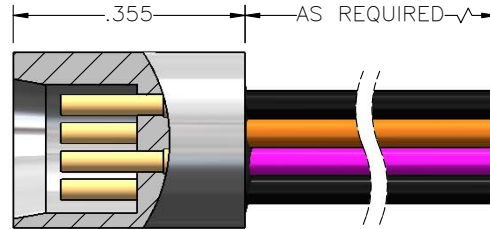


Part #	Contacts	English	Metric
		(IN)	(MM)
A22002-001	5	A	A
A22006-001	12	0.220	5.59
A22034-001	16	0.270	6.86
A22008-001	27	0.325	8.26
A22008-001	27	0.395	10.03
A22388-001	39	0.445	11.56

LATCHING OPTION

Part #	Contacts	English	Metric
		(IN)	(MM)
A22021-001	5	B	B
A22064-001	7	0.310	7.87
A22023-001	12	0.340	8.64
A22040-001	16	0.380	9.65
A22040-001	16	0.410	10.41
A22025-001	27	0.480	12.19

# Plastic - Socket - Wired MCS-WD



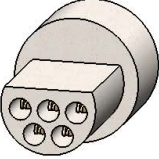
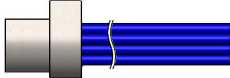
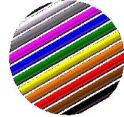
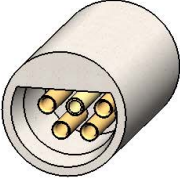





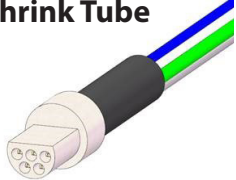
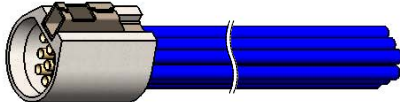
Part #	Contacts	English	Metric
		(IN)	(MM)
		A	A
A22003-001	5	0.220	5.59
A22007-001	12	0.270	6.86
A22035-001	16	0.325	8.26
A22009-001	27	0.395	10.03
A22396-001	39	0.445	11.56

LATCHING OPTION

Part #	Contacts	English	Metric
		(IN)	(MM)
		B	B
A22020-001	5	0.260	6.60
A22065-001	7	0.300	7.62
A22022-001	12	0.340	8.64
A22041-001	16	0.370	9.40
A22024-001	27	0.440	11.18



# MICRO CIRCULAR DISCRETE WIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Options
<b>MC</b>  Male (P - Pin)  	5	<b>WD: Discrete Wire</b>  	<b>C</b> Color Coded  
	7		
Female (S - Socket)  	12	<b>WC: Cable</b>  	<b>LT</b> Latch  
	16		
	27		
	39		
			<b>OM</b> Overmold (Contact Omnetics for Overmold Information & Availability)  
			<b>RH</b> RoHS COMPLIANT  
			<b>CLIP</b> Locking Clip  
			<b>ST: Inline w/                      Shrink Tube</b>  
			

**EXAMPLE:**  
MCS-12-WD-10.0-LT

# MICRO 360<sup>®</sup> Plastic

## Micro Circular Solder Cup (Type SS)



### Electrical-Mechanical Specifications

---

- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C w/ High Temp Epoxy)
- Dielectric Withstand Voltage: \_\_\_\_\_ 600 VAC RMS @sea level
- Contact Resistance: \_\_\_\_\_ 26 milliohms(65 mV) Max @2.5 Amps
- Current Rating: \_\_\_\_\_ 3 Amps per contact
- Durability: \_\_\_\_\_ >2000 Mating Cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact

### Material Specifications

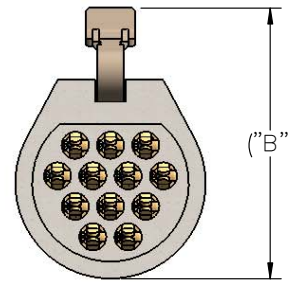
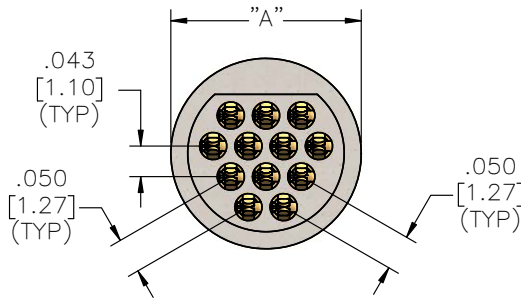
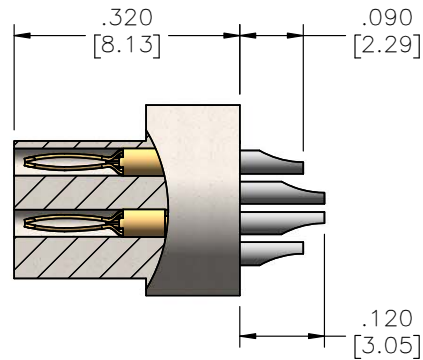
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- Contact: \_\_\_\_\_ Copper Alloy per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519



# Plastic - Pin - Solder Cup

## MCP-SS



**English (IN)**    **Metric (MM)**

Part #	Contacts	A	A
A22000-001	5	0.220	5.59
A22004-001	12	0.270	6.86
A22032-001	16	0.325	8.26
A22012-001	27	0.395	10.03
A22394-001	39	0.445	11.30

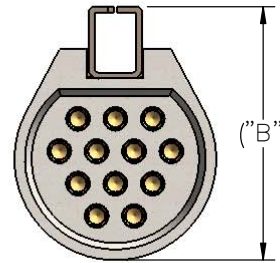
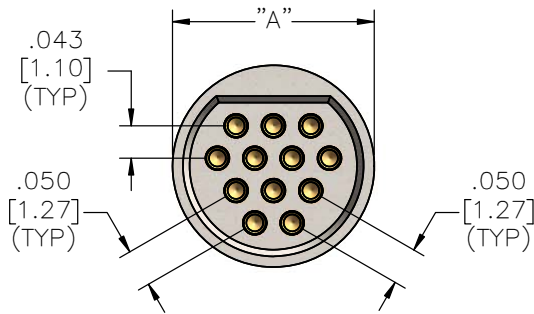
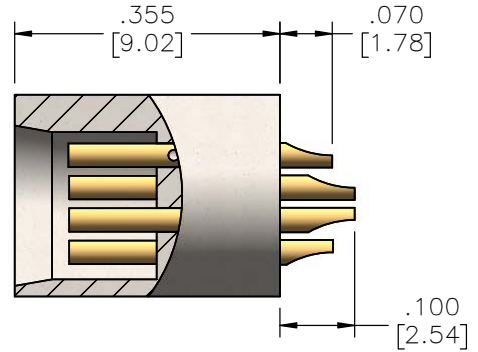
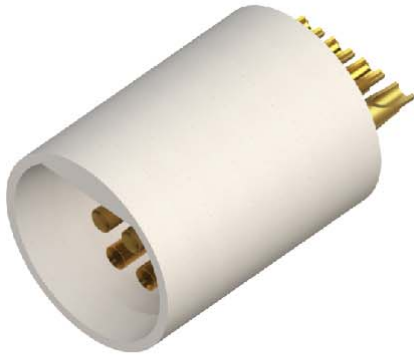
LATCHING OPTION

**English (IN)**    **Metric (MM)**

Part #	Contacts	B	B
A22027-001	5	0.310	7.87
A22066-001	7	0.340	8.64
A22029-001	12	0.380	9.65
A22038-001	16	0.410	10.41
A22031-001	27	0.480	12.19

# Plastic - Socket - Solder Cup

## MCS-SS



**English (IN)    Metric (MM)**

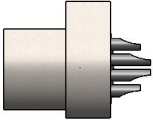
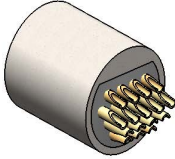



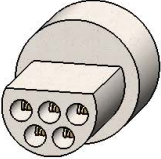
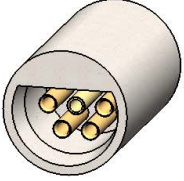
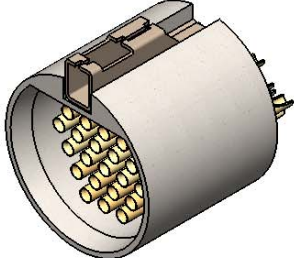
Part #	Contacts	A	A
A22001-001	5	0.220	5.59
A22005-001	12	0.270	6.86
A22033-001	16	0.325	8.26
A22013-001	27	0.395	10.03
A22402-001	39	0.445	11.30

LATCHING OPTION

**English (IN)    Metric (MM)**

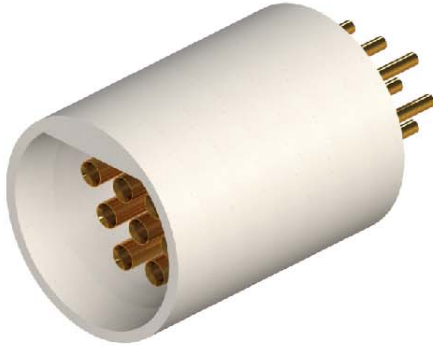
Part #	Contacts	B	B
A22026-001	5	0.260	6.60
A22067-001	7	0.300	7.62
A22028-001	12	0.340	8.64
A22039-001	16	0.370	9.40
A22031-001	27	0.440	11.18

# MICRO CIRCULAR SOLDER CUP (TYPE SS)

Series	# of Contacts	Termination Type	Options	
<b>MC</b>	<b>5</b>	<b>SS: Solder Cup</b>  	<b>LT</b> Latch 	
	<b>7</b>			
Male (P - Pin)	<b>12</b>			<b>CLIP</b> Locking Clip 
	<b>16</b>			
	<b>27</b>			
	<b>39</b>		<b>RH</b> RoHS COMPLIANT 	
 Female (S - Socket)				
				
				
	<b>EXAMPLE:</b> MCS-27-SS-LT			

# MICRO 360<sup>®</sup> Plastic

## Micro Circular Straight Thru-Hole Tail (Type DD)



### Electrical-Mechanical Specifications

---

- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C w/ High Temp Epoxy)
- Dielectric Withstand Voltage: \_\_\_\_\_ 600 VAC RMS @sea level
- Contact Resistance: \_\_\_\_\_ 26 milliohms(65 mV) Max @2.5 Amps
- Current Rating: \_\_\_\_\_ 3 Amps per contact
- Durability: \_\_\_\_\_ >2000 Mating Cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact

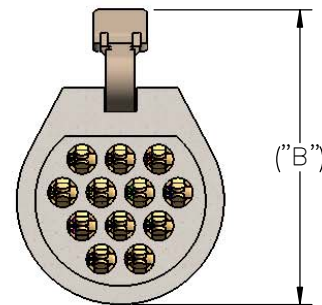
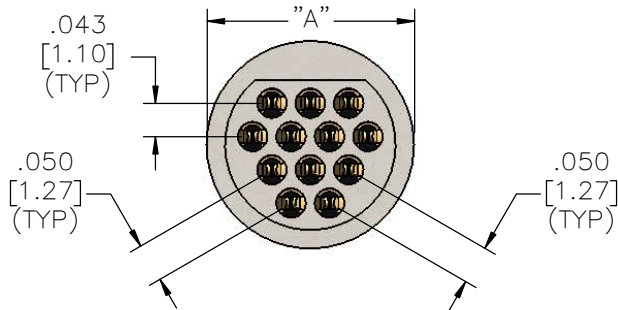
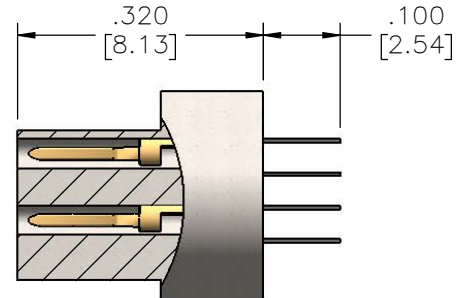
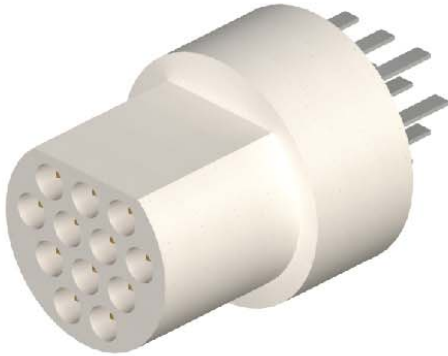
### Material Specifications

---

- Contact: \_\_\_\_\_ Copper Alloy per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519

# Plastic - Pin - Straight Tail

## MCP-DD



**English (IN)    Metric (MM)**

Part #	Contacts	A	A
A22015-001	5	0.220	5.59
A22017-001	12	0.270	6.86
A22036-001	16	0.325	8.26
A22019-001	27	0.395	10.03
A22392-001	39	0.445	11.30

LATCHING OPTION

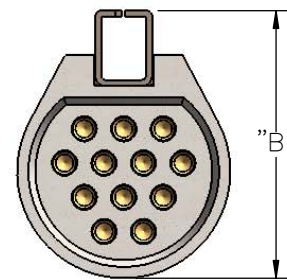
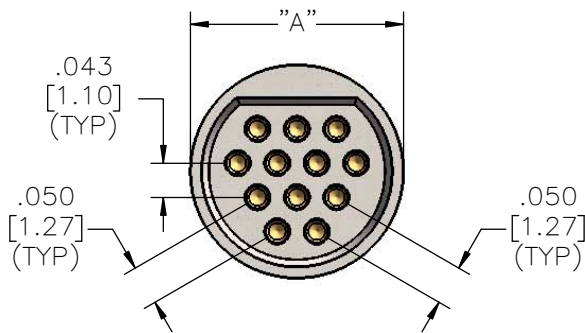
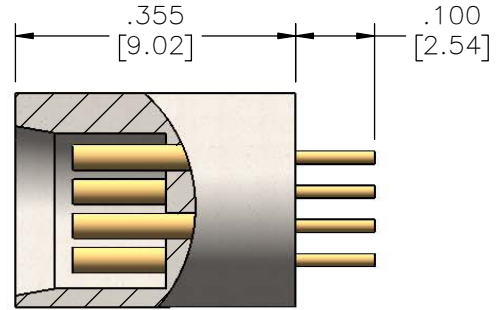
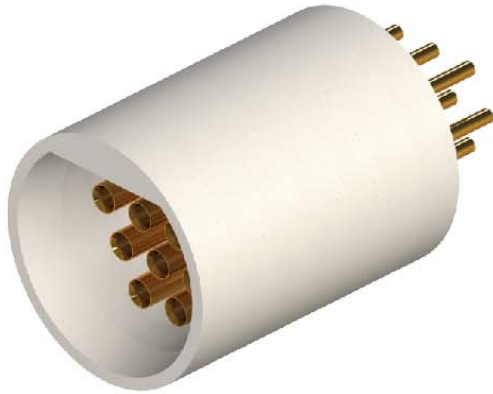
**English (IN)    Metric (MM)**

Part #	Contacts	B	B
A22044-001	5	0.310	7.87
A22068-001	7	0.340	8.64
A22046-001	12	0.380	9.65
A22050-001	16	0.410	10.41
A22048-001	27	0.480	12.19



# Plastic - Socket - Straight Tail

MCS-DD



**English (IN)    Metric (MM)**

Part #	Contacts	A	A
A22014-001	5	0.220	5.59
A22016-001	12	0.270	6.86
A22037-001	16	0.325	8.26
A22018-001	27	0.395	10.03
A22400-001	39	0.445	11.30

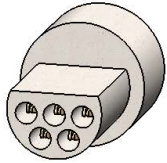
LATCHING OPTION

**English (IN)    Metric (MM)**

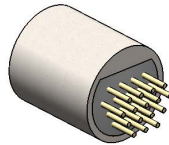
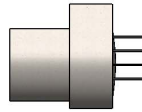
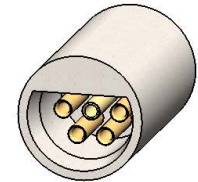
Part #	Contacts	B	B
A22045-001	5	0.310	7.87
A22069-001	7	0.340	8.64
A22047-001	12	0.380	9.65
A22051-001	16	0.410	10.41
A22049-001	27	0.480	12.19

# MICRO CIRCULAR STRAIGHT THRU-HOLE TAIL (TYPE DD)

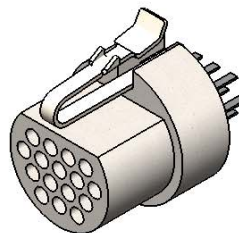
Series	# of Contacts	Termination Type	Options
<b>MC</b>	<b>5</b>	<b>DD: Straight Thru-Hole</b>	<b>LT</b> Latch
	<b>7</b>		
Male (P - Pin)	<b>12</b>		
	<b>16</b>		
	<b>27</b>		
	<b>39</b>		
Female (S - Socket)			<b>RH</b> RoHS COMPLIANT



Female  
(S - Socket)

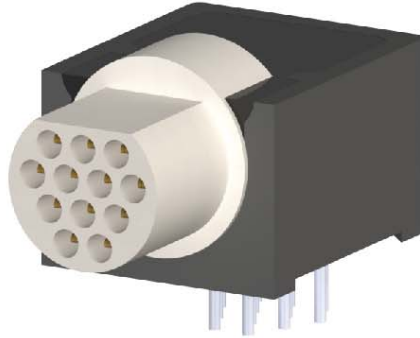


**EXAMPLE:**  
MCP-16-DD-LT



# MICRO 360<sup>®</sup> Plastic

## Micro Circular Right Angle Thru-Hole (Type RA)



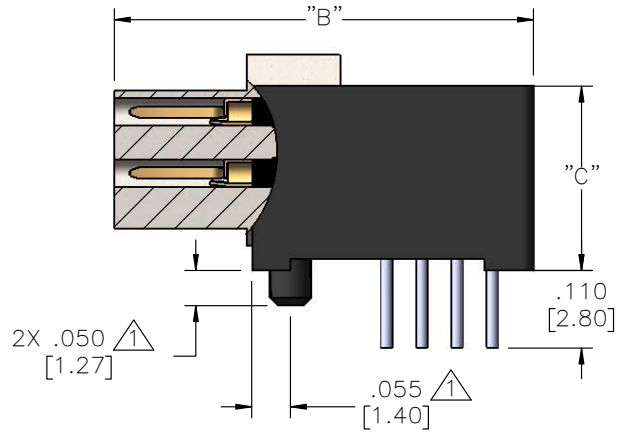
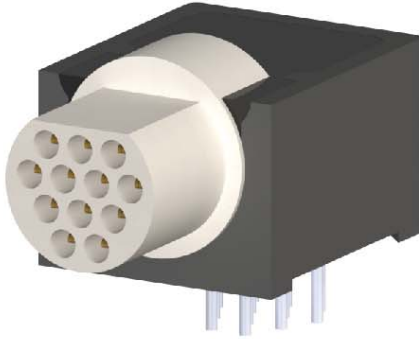
### Electrical-Mechanical Specifications

- Operating Temperature: \_\_\_\_\_ -55°C to 125°C
- Dielectric Withstand Voltage: \_\_\_\_\_ 600 VAC RMS @sea level
- Contact Resistance: \_\_\_\_\_ 26 milliohms(65 mV) Max @2.5 Amps
- Current Rating: \_\_\_\_\_ 3 Amps per contact
- Durability: \_\_\_\_\_ >2000 Mating Cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact

### Material Specifications

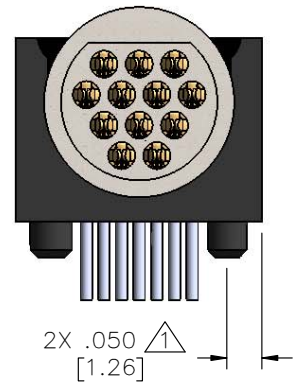
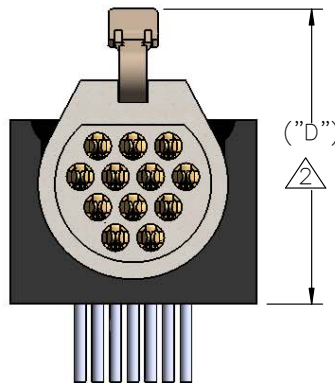
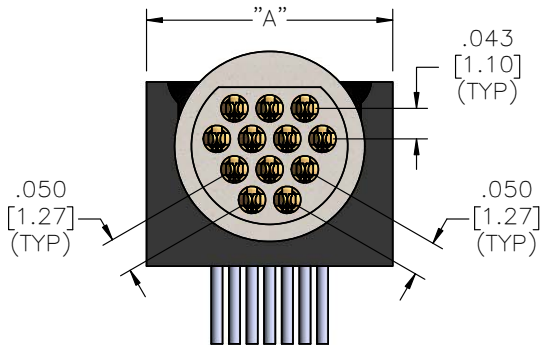
- Contact: \_\_\_\_\_ Copper Alloy per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519

# Plastic - Pin - Right Angle Thru-Hole MCP-RA



① OPTIONAL MOUNTING POSTS

② OPTIONAL LATCH

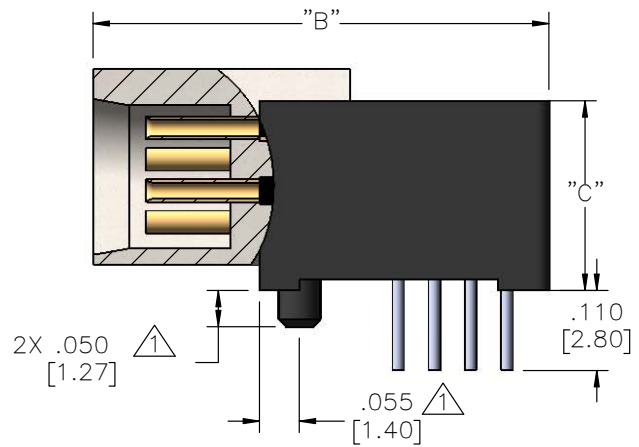
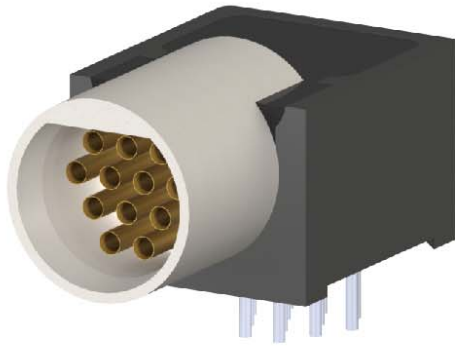


Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22052-001	5	0.300	0.495	0.232	7.62	12.57	5.89
A22053-001	12	0.350	0.595	0.262	8.89	15.11	6.65
A22054-001	16	0.411		0.294	10.44		7.47

## LATCHING OPTION

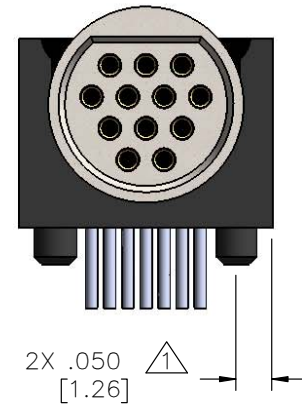
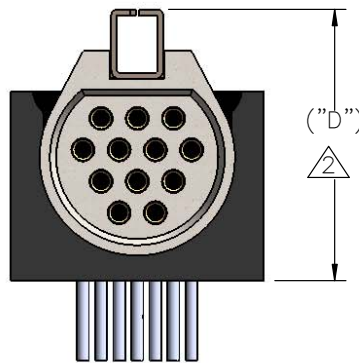
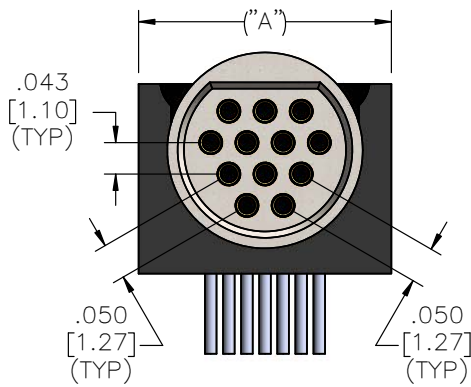
Part #	Contacts	English (IN)	Metric (MM)
		D	D
A22056-001	5	0.340	8.64
A22058-001	12	0.420	10.67
A22353-001	16	0.450	11.43

# Plastic - Socket - Right Angle Thru-Hole MCS-RA



① OPTIONAL MOUNTING POSTS

② OPTIONAL LATCH BOX



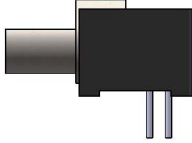


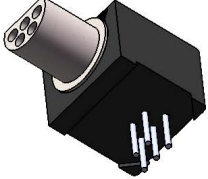
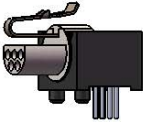

Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22060-001	5	0.300	0.530	0.232	7.62	13.46	5.89
A22061-001	12	0.350	0.630	0.262	8.89	16.00	6.65
A22354-001	16	0.411		0.294	10.44		7.47

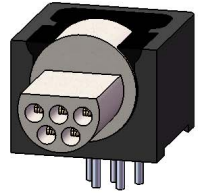
LATCHING OPTION

Part #	Contacts	English (IN)	Metric (MM)
		D	D
A22062-001	5	0.300	7.62
A22063-001	12	0.370	9.40
A22355-001	16	0.400	10.16

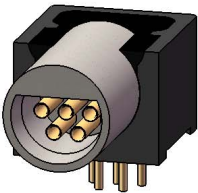


# MICRO CIRCULAR RIGHT ANGLE THRU-HOLE (TYPE RA)

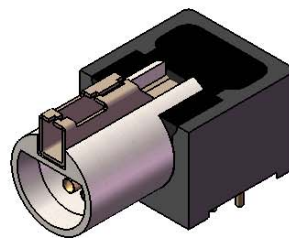
Series	# of Contacts	Termination Type	Options
MC	5 12 16	RA: Right Angle Thru-Hole	LT Latch
Male (P - Pin)			 
Female (S - Socket)			MP Mounting Posts 
			RH RoHS COMPLIANT 



Female  
(S - Socket)



**EXAMPLE:**  
MCS-05-RA-LT



# MICRO 360<sup>®</sup> Metal

## Micro Circular Ratcheting

Optional IP68 rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-83513
- Contact Resistance: \_\_\_\_\_ 26 Milliohm Max (65mV Drop Max) @ 2.5 Amps per MIL-DTL-83513
- Current Rating: \_\_\_\_\_ 3 Amps per MIL-DTL-83513
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ NASA SP-R-0022

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 26 AWG, (7-34) Tinned Copper, PFA Color Coded, Black Polyurethane Jacket

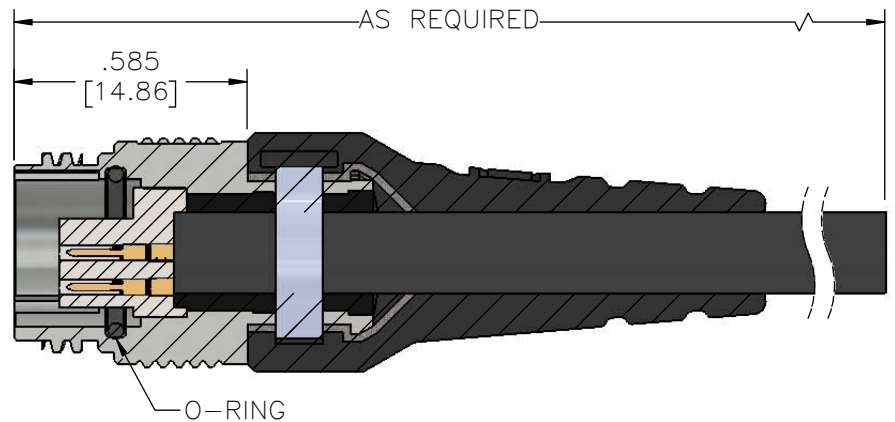
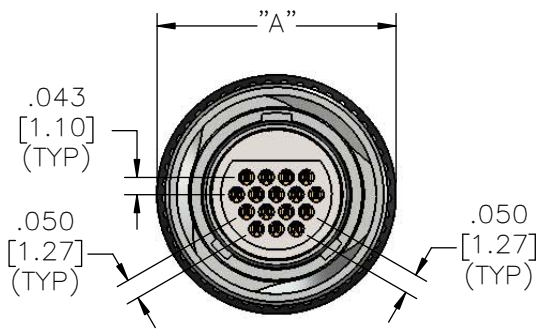
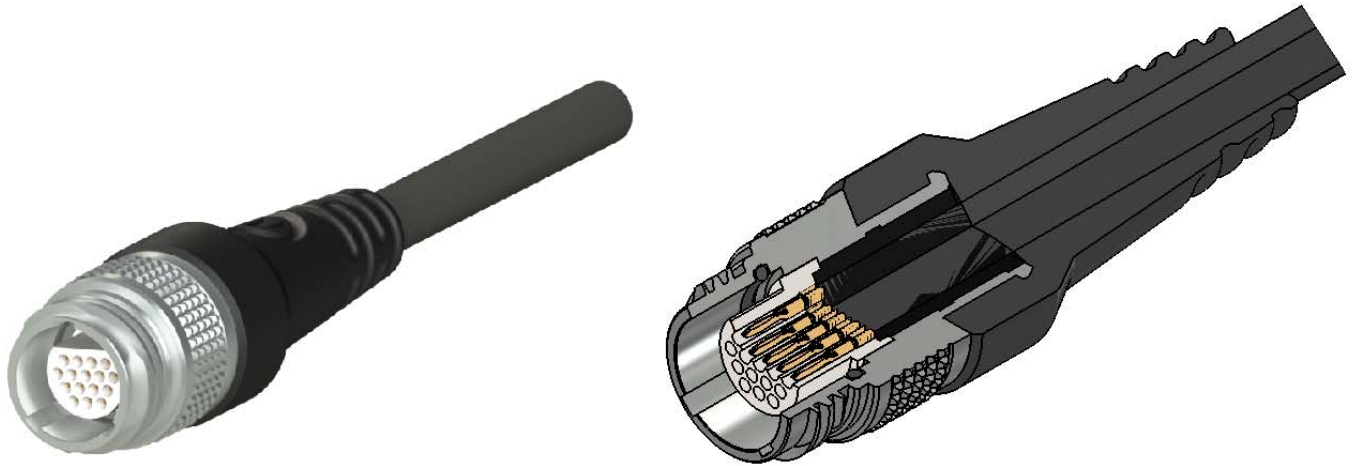
### Shell Options

- Aluminum 6061: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Ratcheting - Cabled - Inline - IP68

RMCP-WC-OM-IS-IP68

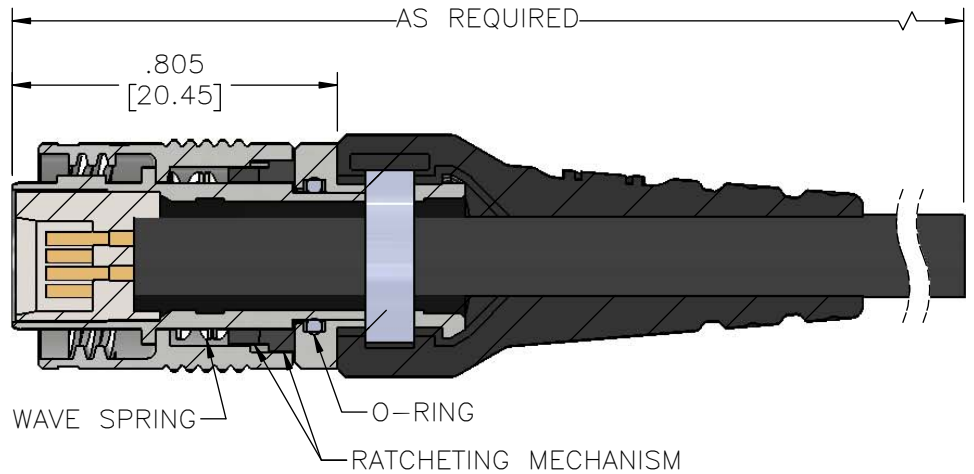
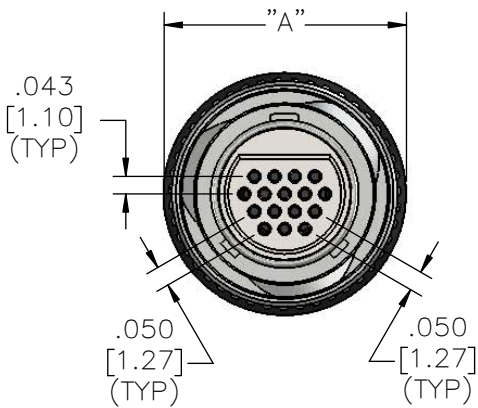
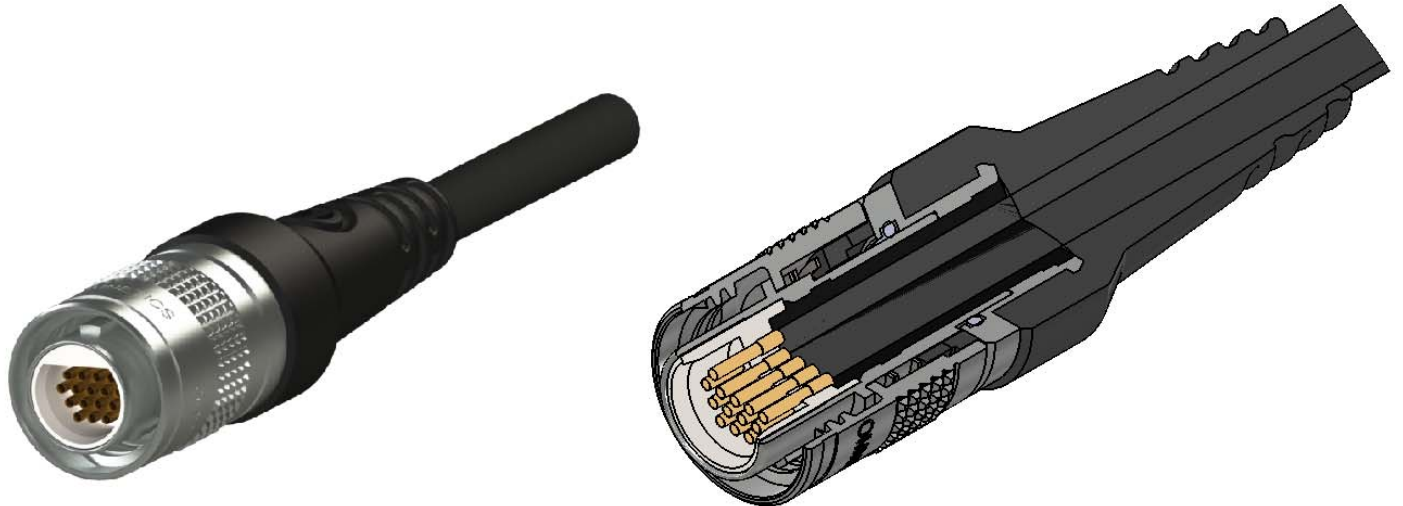


English (IN)    Metric (MM)

Part #	Contacts	A	A
A22493-001	5	0.510	12.95
A22500-001	12	0.550	13.97
A22507-001	16	0.600	15.24
A22514-001	27	0.670	17.02
A22557-001	39	0.780	19.81

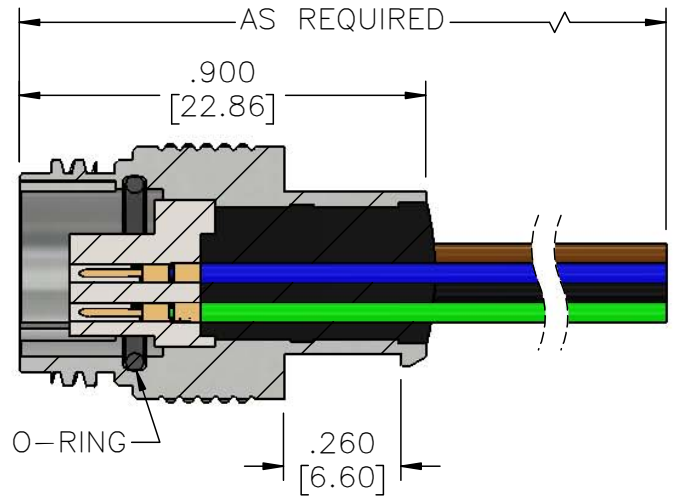
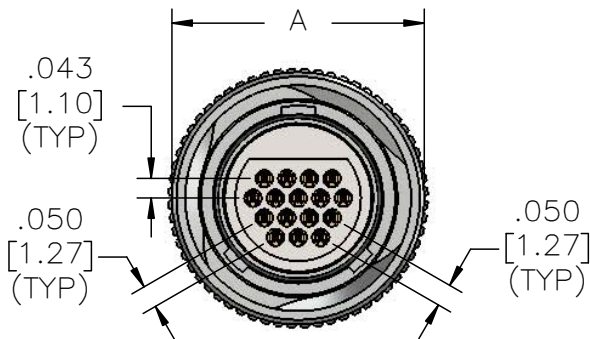
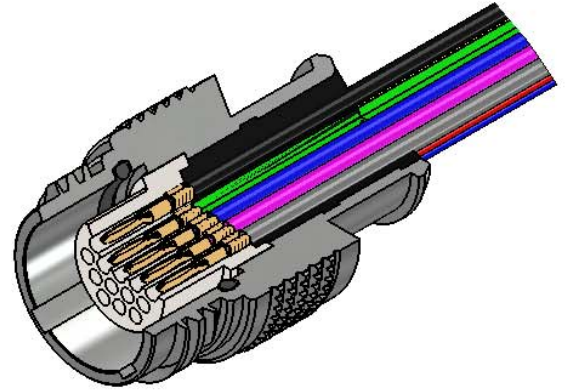
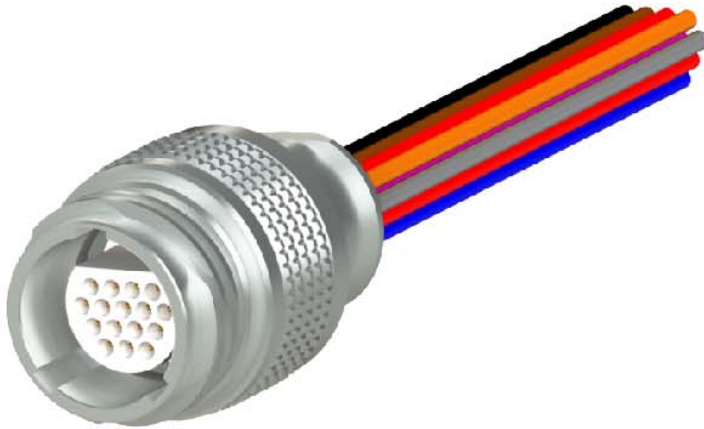
# Metal - Socket - Ratcheting - Cabled - Inline - IP68

RMCS-WC-OM-IS-IP68



Part #	Contacts	English	Metric
		(IN)	(MM)
A22492-001	5	A	A
A22499-001	12	0.510	12.95
A22506-001	16	0.550	13.97
A22513-001	27	0.600	15.24
A22559-001	39	0.670	17.02
		0.780	19.81

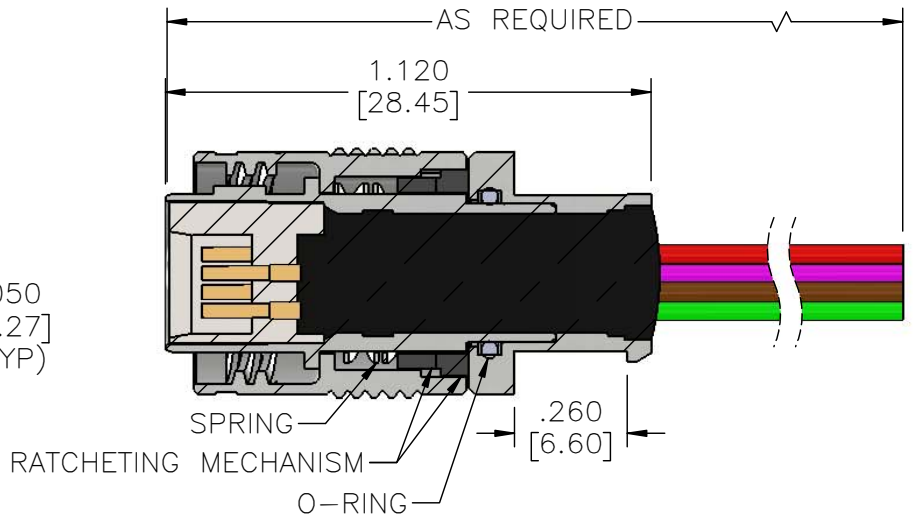
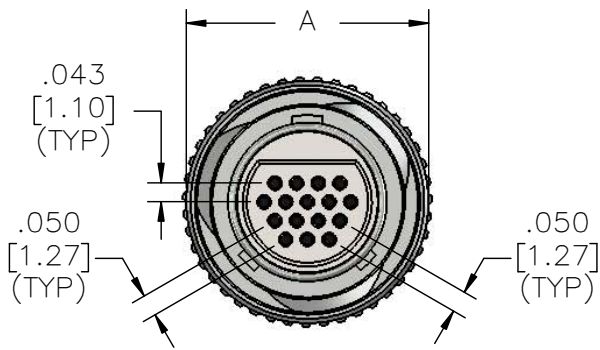
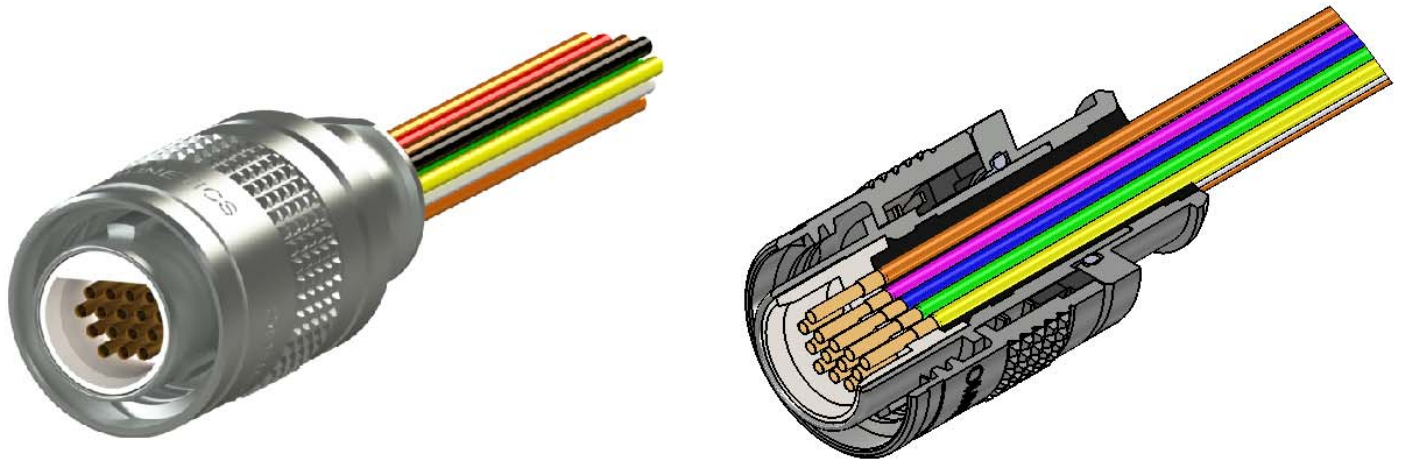
# Metal - Pin - Ratcheting - Wired RMCP-WD



Part #	Contacts	English	Metric
		(IN)	(MM)
A22491-001	5	A	A
A22498-001	12	0.470	11.94
A22505-001	16	0.520	13.21
A22512-001	27	0.570	14.48
A22556-001	39	0.640	16.26
		0.710	18.03



# Metal - Socket - Ratcheting - Wired RMCS-WD



Part #	Contacts	English	Metric
		(IN)	(MM)
A22490-001	5	A	A
A22497-001	12	0.470	11.94
A22504-001	16	0.520	13.21
A22511-001	27	0.570	14.48
A22558-001	39	0.640	16.26
		0.710	18.03

# MICRO CIRCULAR RATCHETING

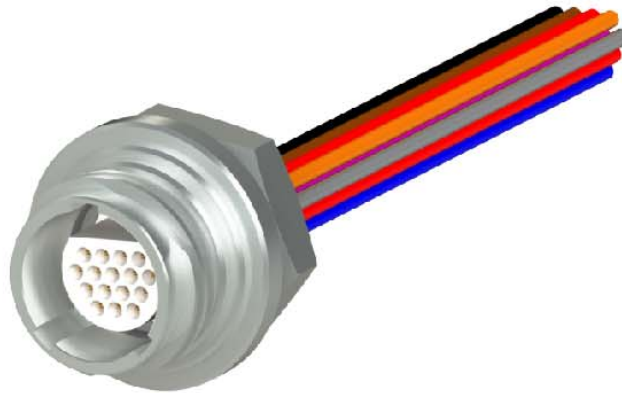
Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options, cont.
RMC Male (P - Pin)	5	WD: Discrete Lead Wire	<b>Standard</b> N: Nickel Plated Aluminum	SR: Inline Shell w/ Strain Relief	C Color Coded
	12				
Female (S - Socket)	16	WC: Cable	<b>Non-Standard Options</b> BN: Black Nickel Plated Aluminum	ST: Inline Shell w/ Shrink Tube	OM Inline Shell w/ Overmold
	27				
	39	Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max	P: Passivated Stainless Steel	IS: Inline Shell (Shell only)	OR O-Ring
			OX: Black Oxide Finished Steel		IP68
					RH RoHS COMPLIANT

**EXAMPLE:**  
RMCS-16-WC-18.0-C-IS-N-OM-IP68



# MICRO 360<sup>®</sup> Metal

## Micro Circular Ratcheting Panel Mount *Optional IP68 Rating*



### Electrical-Mechanical Specifications

---

■ Operating Temperature:	-55°C to 125°C
■ Dielectric Withstand Voltage:	600 VAC RMS @sea level
■ Contact Resistance:	26 milliohms(65 mV) Max @2.5 Amps
■ Current Rating:	3 Amps per contact
■ Durability:	500 Mating Cycles min
■ Insulation Resistance:	5000 megohms @ 500 VDC
■ Shock:	50 g's with no discontinuities > 1 microsecond
■ Vibration:	20 g's with no discontinuities > 1 microsecond
■ Thermal Vacuum Outgassing (Space Class):	1.0% max TML, 0.03% max CVCM
■ Mating/Unmating Force:	3 oz (85 g) per contact

### Material Specifications

---

■ Contact:	Copper Alloy per MIL-DTL-83513
■ Contact Finish:	Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
■ Insulator:	Thermoplastic per MIL-M-24519
■ Wire:	26 AWG (7-34) PTFE, color coded

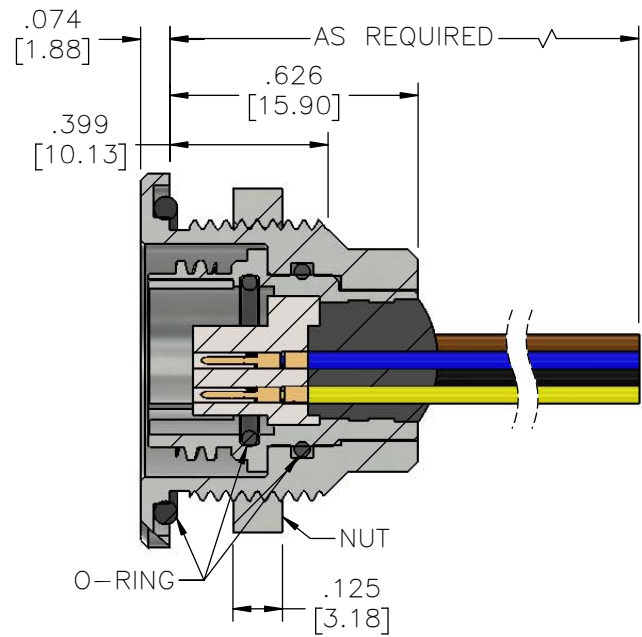
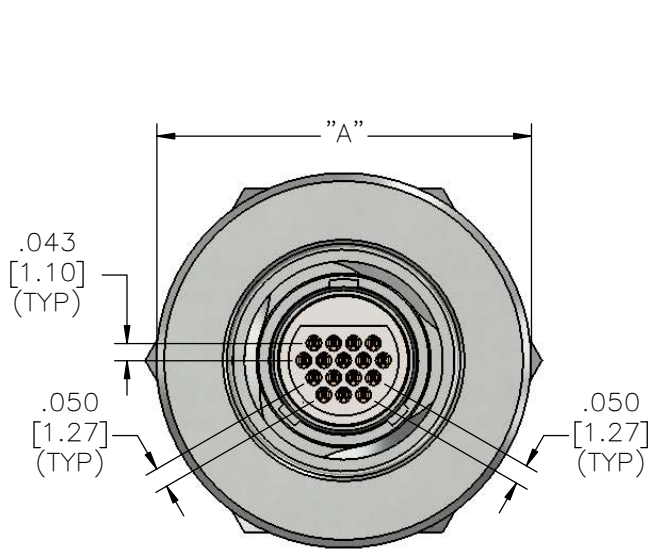
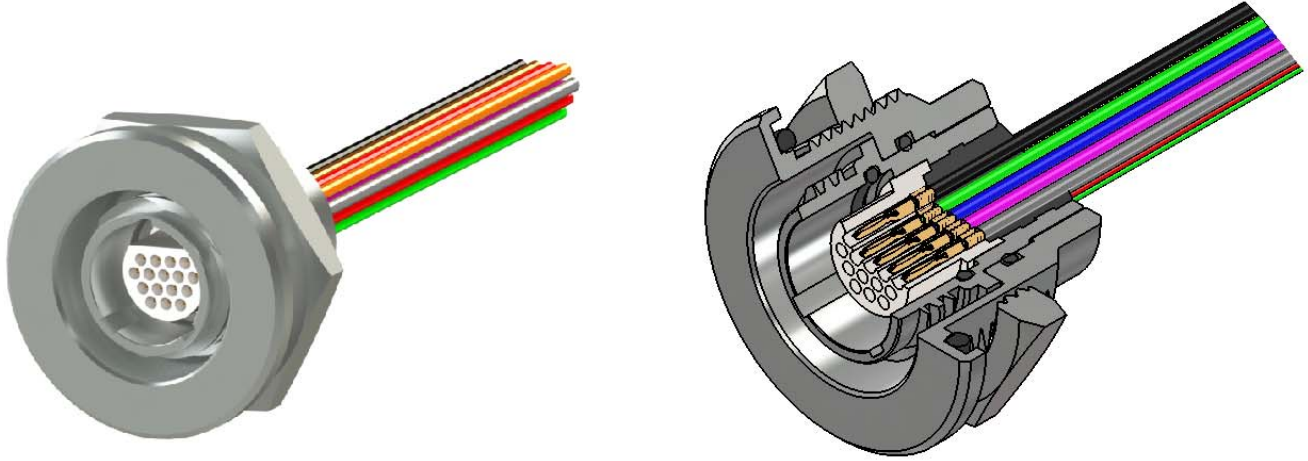
### Shell Options

---

■ Brass Alloy 360 1/2 Hard:	Electroless Nickel per SAE-AMS-2404 Black Nickel per MIL-P-18317
■ Stainless Steel, 300 Series:	Passivated per SAE-AMS-2700 Black Oxide Finish per MIL-DTL-13924, Class 4*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

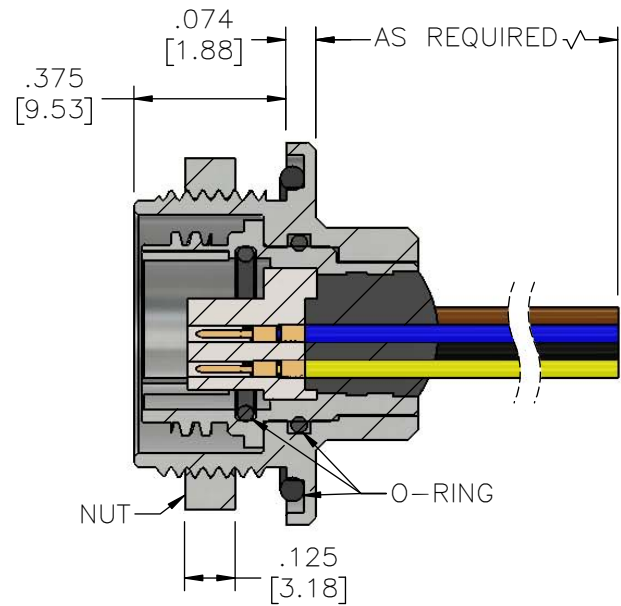
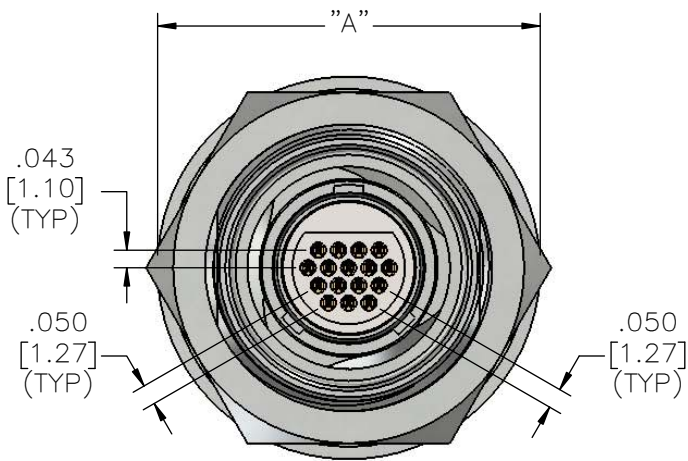
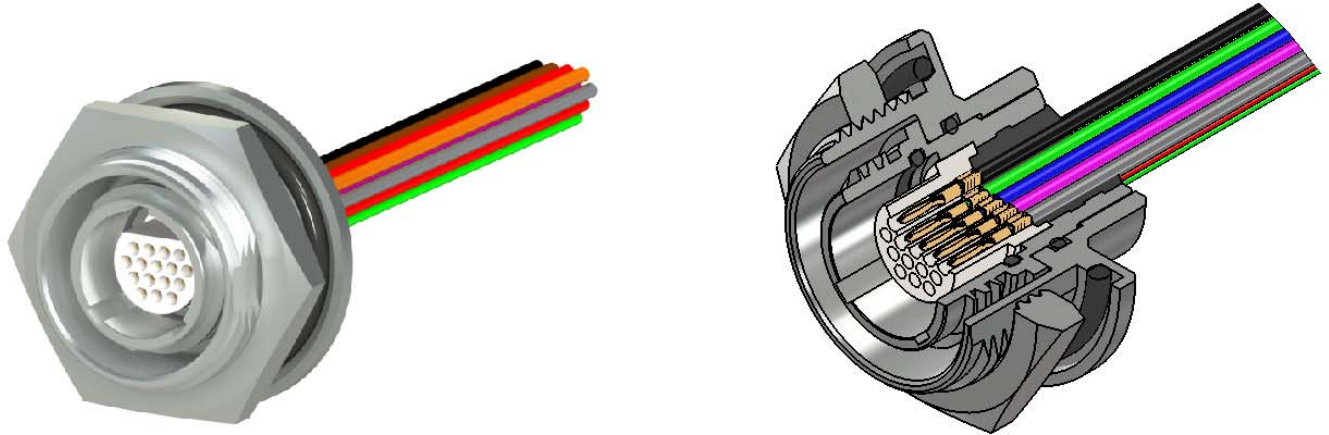
# Metal - Pin - Ratcheting - Front Panel RMCP-FP



Part #	Contacts	English	Metric
		(IN)	(MM)
A22495-001	5	A	A
A22502-001	12	0.820	20.83
A22509-001	16	0.950	24.13
A22516-001	27	1.020	25.91
A22553-001	39	1.130	28.70

# Metal - Pin - Ratcheting - Rear Panel

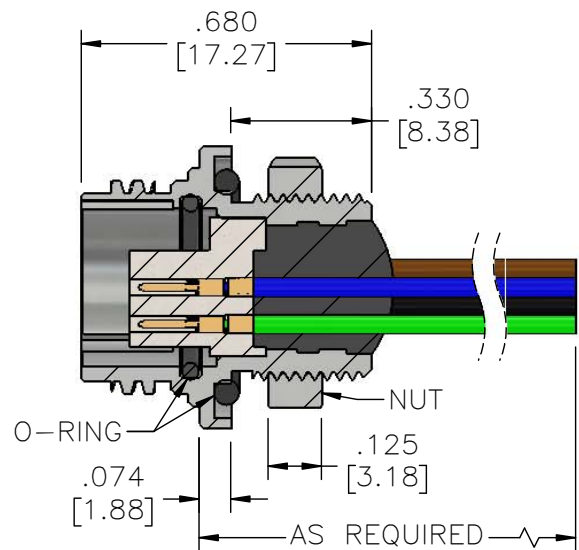
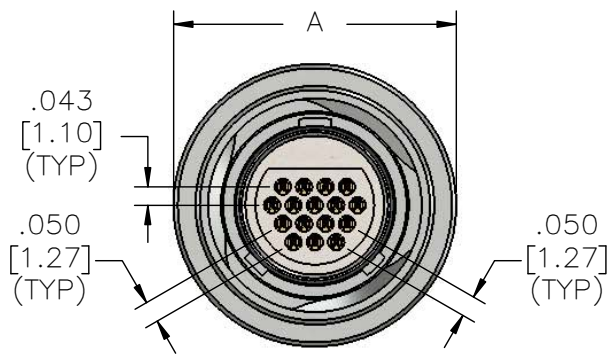
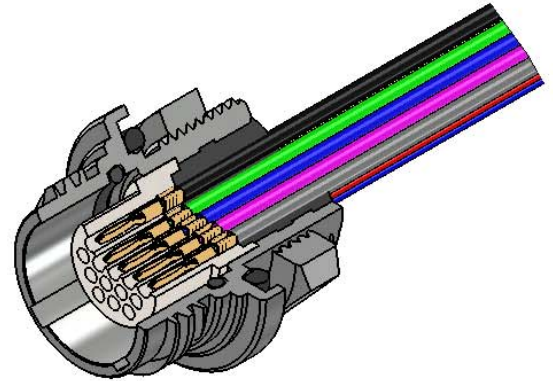
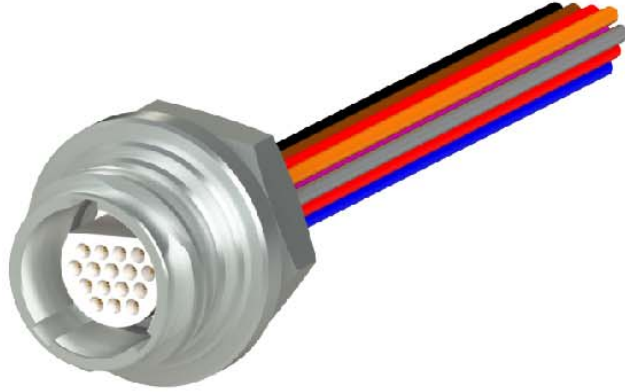
## RMCP-RP



		English (IN)	Metric (MM)
Part #	Contacts	A	A
A22496-001	5	0.820	20.83
A22503-001	12	0.900	22.86
A22510-001	16	0.950	24.13
A22517-001	27	1.020	25.91
A22554-001	39	1.130	28.70



# Metal - Pin - Ratcheting - Protruding Panel RMCP-PP

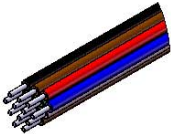















**English (IN)**    **Metric (MM)**

Part #	Contacts	A	A
A22494-001	5	0.528	13.41
A22501-001	12	0.578	14.68
A22508-001	16	0.662	16.81
A22515-001	27	0.732	18.59
A22555-001	39	0.810	20.57



# RATCHETING MICRO CIRCULAR PANEL MOUNT

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
<b>RMC</b>	<b>5</b>	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Aluminum</b> 	<b>FP: Front Panel Mount</b> (Male Only) 	<b>C</b> Color Coded 
	<b>12</b>				
Male (P - Pin)	<b>16</b>	<b>WC: Cable</b> 	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Aluminum</b> 	<b>RP: Rear Panel Mount</b> (Male Only) 	<b>OR</b> O-Ring 
	<b>27</b>				
	<b>39</b>				
Female (S - Socket)		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>PP: Protruding Panel Mount</b> (Male Only) 	<b>IP68</b> 
			<b>OX: Black Oxide Finished Steel</b> 		<b>RH</b> RoHS COMPLIANT 
					

**EXAMPLE:**  
RMCP-16-WD-10.0-C-FP-N-OR

# MICRO 360<sup>®</sup> Metal

## Micro Circular Threaded

Optional IP68 Rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-83513
- Contact Resistance: \_\_\_\_\_ 26 Milliohm Max (65mV Drop Max) @ 2.5 Amps per MIL-DTL-83513
- Current Rating: \_\_\_\_\_ 3 Amps per MIL-DTL-83513
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ NASA SP-R-0022

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 26 AWG, (7-34) Tinned Copper, PFA color coded, Black  
Polyurethane Jacket
- Wire: \_\_\_\_\_ 26 AWG (7-34) PTFE, color coded

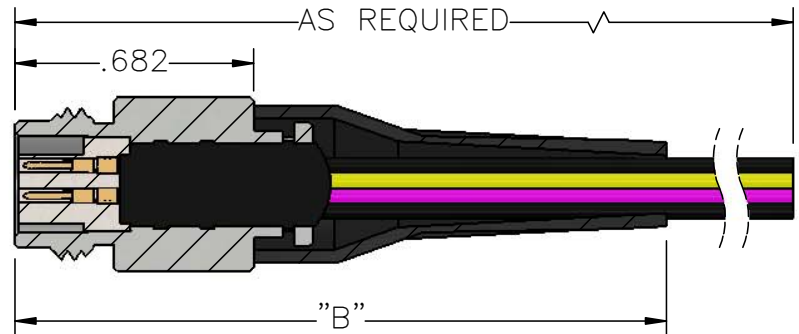
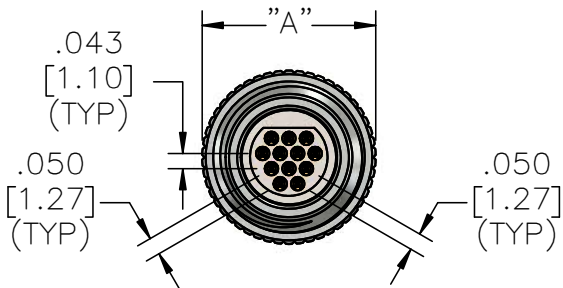
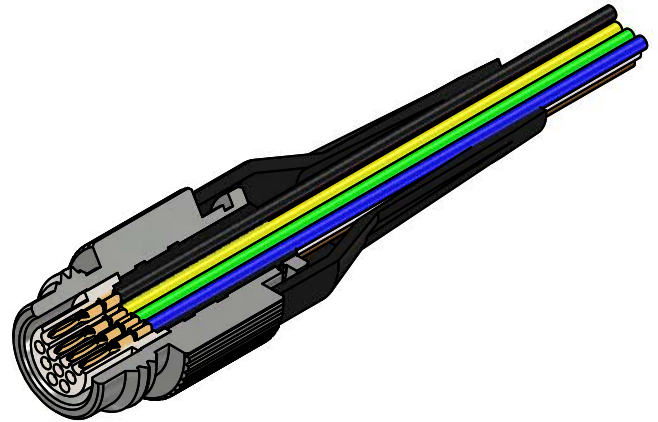
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Threaded - Wired - Inline - Strain Relief

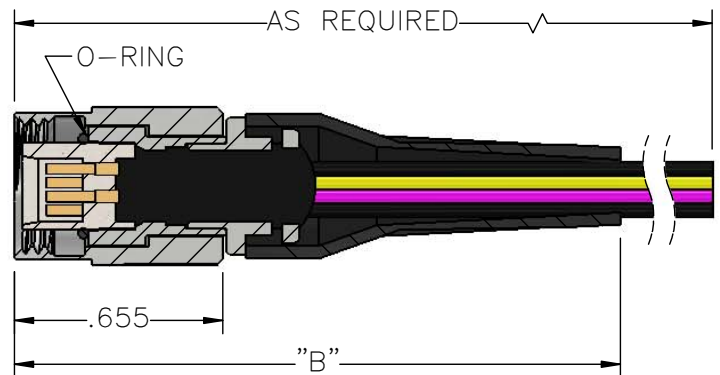
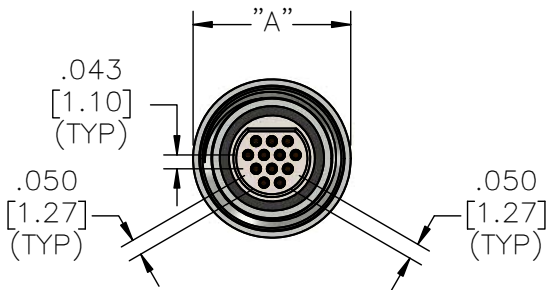
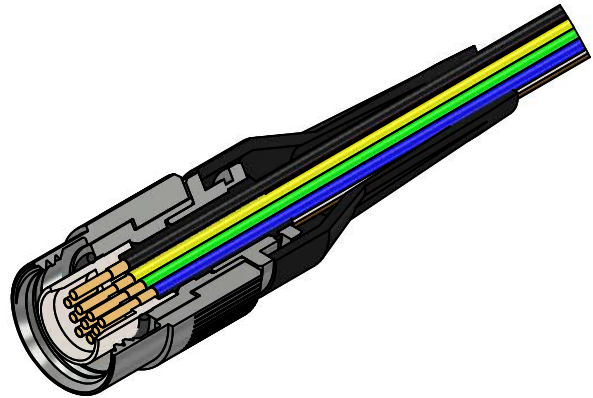
MMCP-WD-IS-SR



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A22368-001	5	0.420	1.900	10.67	48.26
A22373-001	12	0.500		12.70	
A22378-001	16	0.560		14.22	
A22383-001	27	0.610	2.100	15.49	53.34
A22486-001	39	0.650	2.300	16.51	58.42

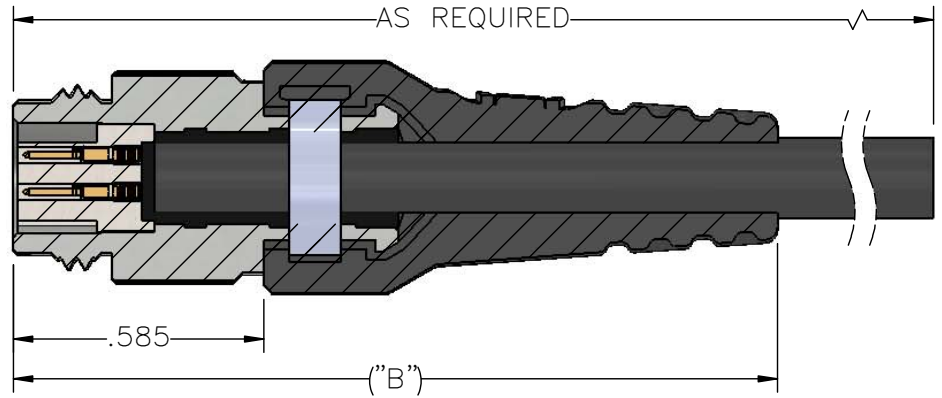
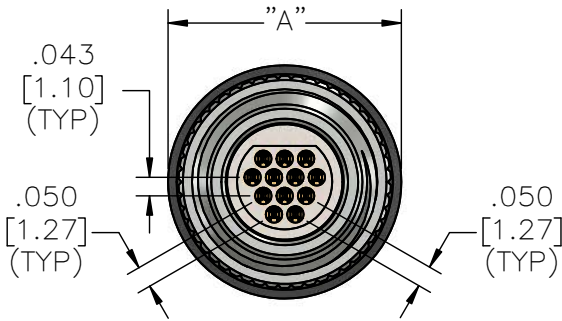
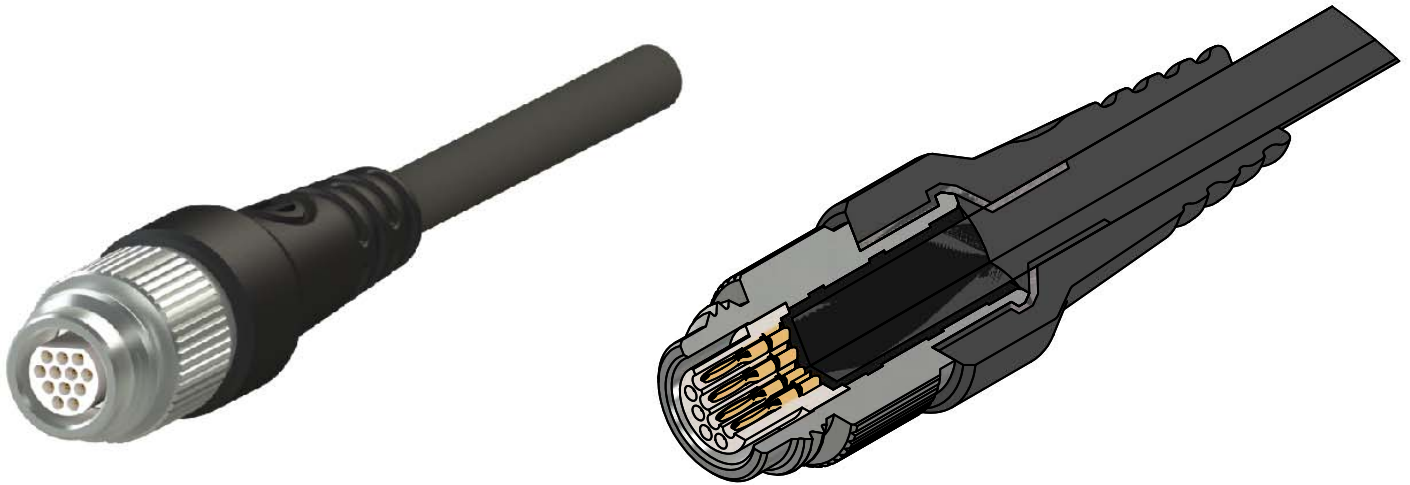
# Metal - Socket - Threaded - Wired - Inline - Strain Relief

MMCS-WD-IS-SR



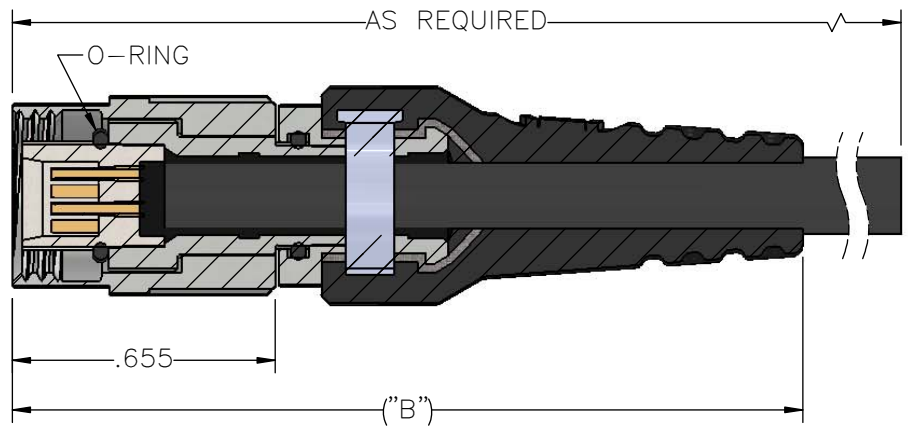
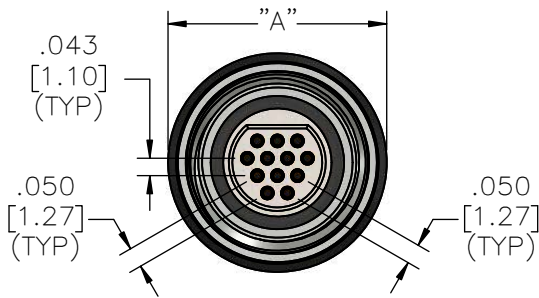
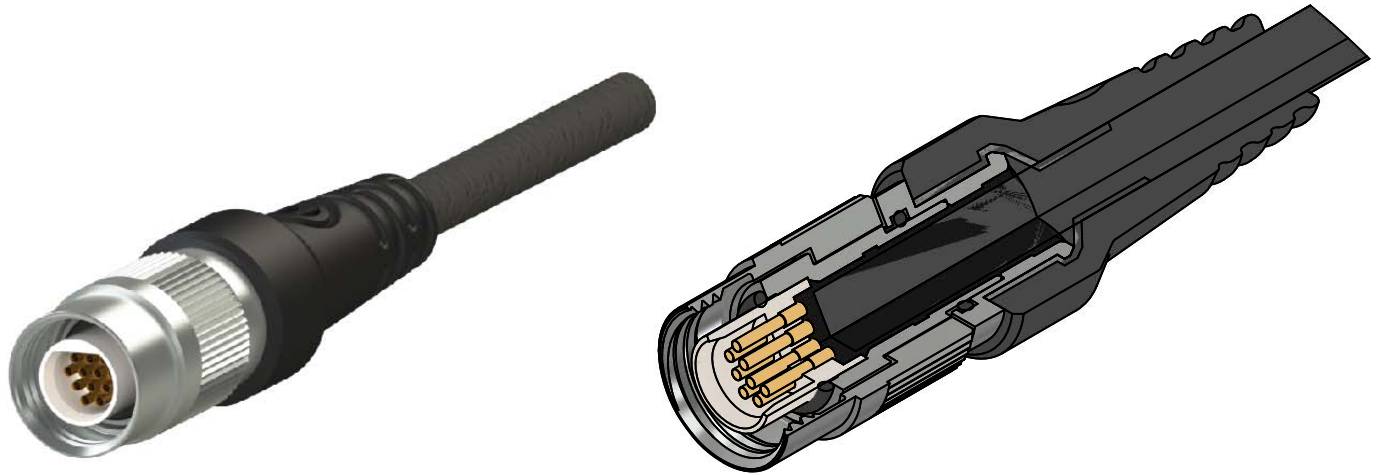
Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A22372-001	5	0.420	1.900	10.67	48.26
A22377-001	12	0.500		12.70	
A22382-001	16	0.560		14.22	
A22387-001	27	0.610	2.100	15.49	53.34
A22488-001	39	0.680	2.400	17.27	60.96

**Metal - Pin - Threaded -  
Cabled - Overmold - Inline  
MMCP-WC-OM-IS**



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A22336-001	5	0.510	1.740	12.95	44.20
A22334-001	12	0.550	1.790	13.97	45.47
A22332-001	16	0.600	1.890	15.24	48.01
A22330-001	27	0.670	2.080	17.02	52.83
A22487-001	39	0.720		18.29	

**Metal - Socket - Threaded -  
Cabled - Overmold - Inline**  
MMCS-WC-OM-IS



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A22335-001	5	0.510	1.920	12.95	48.77
A22333-001	12	0.550	1.970	13.97	50.04
A22331-001	16	0.600	2.070	15.24	52.58
A22329-001	27	0.670	2.160	17.02	54.86
A22489-001	39	0.720		18.29	



# METAL MICRO CIRCULAR THREADED DISCRETE LEADWIRE/CABLE ( TYPE WD/WC )

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options, cont.
MMC	5	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>IS: Inline Shell (shell only)</b> 	<b>C</b> Color Coded 
	12				
Male (P - Pin)	16	<b>WC: Cable</b> 	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b> 	<b>Options</b> <b>SR: Inline Shell w/ Strain Relief</b> 	<b>OR</b> O-Ring 
	27				
	27				
	39				
Female (S - Socket)		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>ST: Inline Shell w/ Shrink Tube</b> 	<b>IP68</b> 
			<b>OX: Black Oxide Finished Steel</b> 		<b>RH</b> RoHS COMPLIANT 
					<b>OM</b> Overmold (Contact Omnetics for Overmold Information & Availability) 

**EXAMPLE:**  
MMCS-12-WD-10.0-C-IS-N-SR-OR



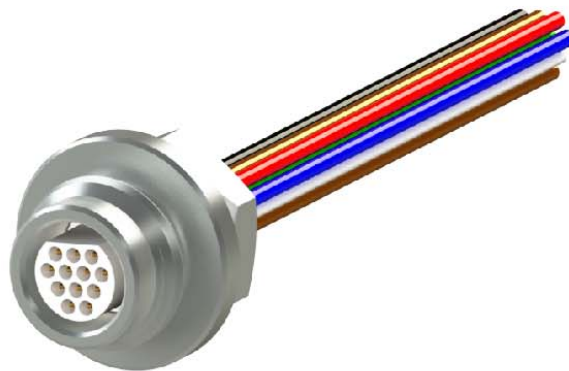
# METAL MICRO CIRCULAR KITS

BODY SIZES	CONTACT TYPE	KIT CONTENTS
<u>BODY SIZES</u> 05, 12, 16 OR 27	<u>GENDER</u> MALE OR FEMALE	<u>CONTENTS</u> WITH OR WITHOUT SOLDER CUP CONNECTOR
05 	MALE 	WITH CONNECTOR: A22110-001 W/O CONNECTOR: A22100-001
	FEMALE 	WITH CONNECTOR: A22111-001 W/O CONNECTOR: A22101-001
	MALE 	WITH CONNECTOR: A22112-001 W/O CONNECTOR: A22104-001
	FEMALE 	WITH CONNECTOR: A22113-001 W/O CONNECTOR: A22105-001
12 	MALE 	WITH CONNECTOR: A22114-001 W/O CONNECTOR: A22108-001
	FEMALE 	WITH CONNECTOR: A22115-001 W/O CONNECTOR: A22109-001
	MALE 	WITH CONNECTOR: A22116-001 W/O CONNECTOR: A22106-001
	FEMALE 	WITH CONNECTOR: A22117-001 W/O CONNECTOR: A22107-001
<b>MMCP KIT W/O CONNECTOR CONTAINS:</b> (1) METAL SHELL (1) STRAIN RELIEF (1) ASSEMBLY INSTRUCTION SHEET		
<b>MMCP KIT W/ CONNECTOR CONTAINS:</b> (1) CONNECTOR W/ SOLDER CUPS (1) METAL SHELL (1) STRAIN RELIEF (1) ASSEMBLY INSTRUCTION SHEET		
<b>MMCS KIT W/O CONNECTOR CONTAINS:</b> (1) O-RING (1) METAL SHELL ASSEMBLY (1) STRAIN RELIEF (1) ASSEMBLY INSTRUCTION SHEET		
<b>MMCS KIT W/ CONNECTOR CONTAINS:</b> (1) CONNECTOR W/ SOLDER CUPS (1) O-RING (1) METAL SHELL ASSEMBLY (1) STRAIN RELIEF (1) ASSEMBLY INSTRUCTION SHEET		

# MICRO 360<sup>®</sup> Metal

## Micro Circular Threaded Panel Mount

Optional IP68 rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-83513
- Contact Resistance: \_\_\_\_\_ 26 Milliohm Max (65mV Drop Max) @ 2.5 Amps per MIL-DTL-83513
- Current Rating: \_\_\_\_\_ 3 Amps per MIL-DTL-83513
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ NASA SP-R-0022

### Material Specifications

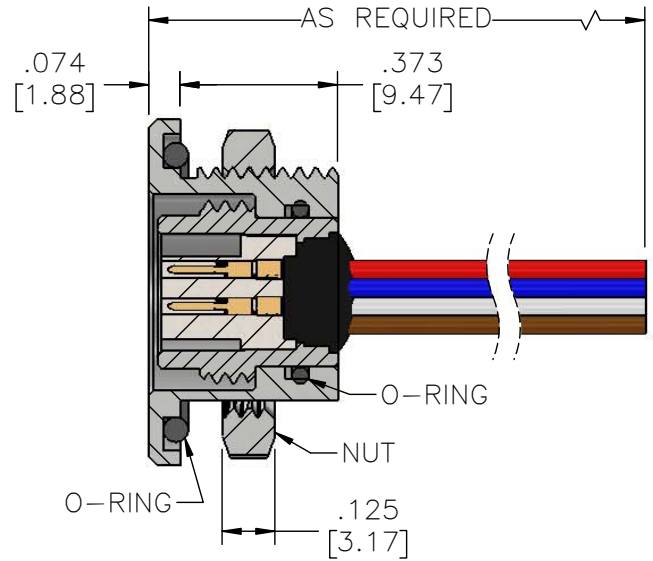
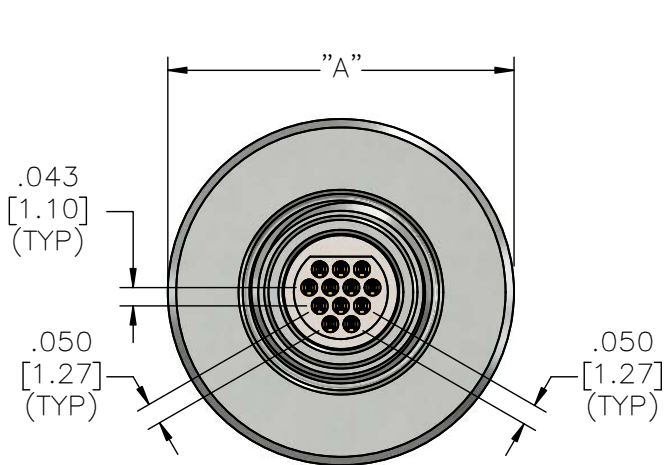
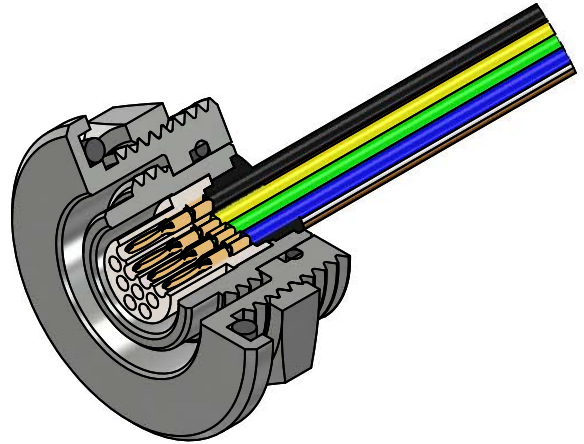
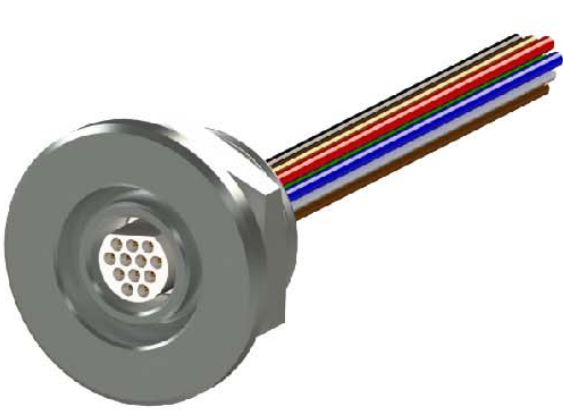
- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 26 AWG, (7-34) Tinned Copper, PFA color coded, Black  
Polyurethane Jacket
- Wire: \_\_\_\_\_ 26 AWG (7-34) PTFE, color coded

### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated  
per SAE-AMS-2700

\* less resistance to salt spray test.

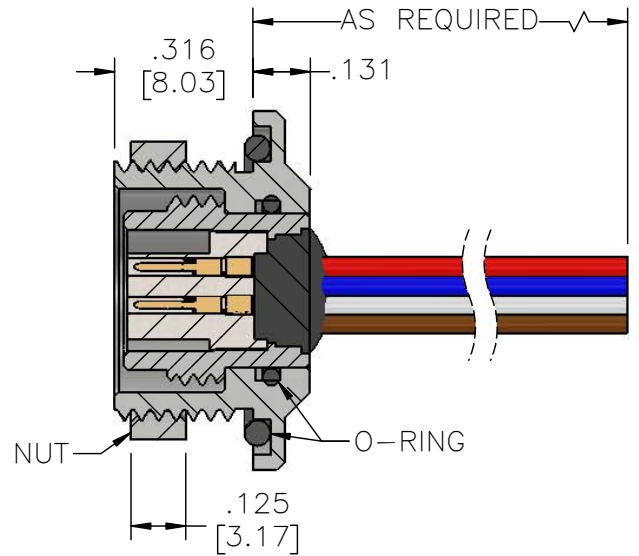
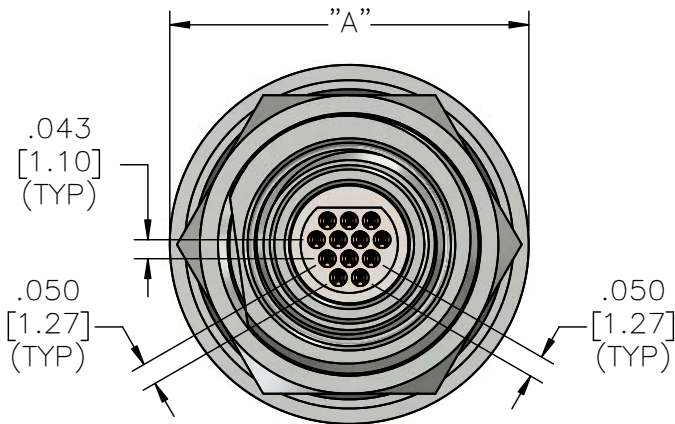
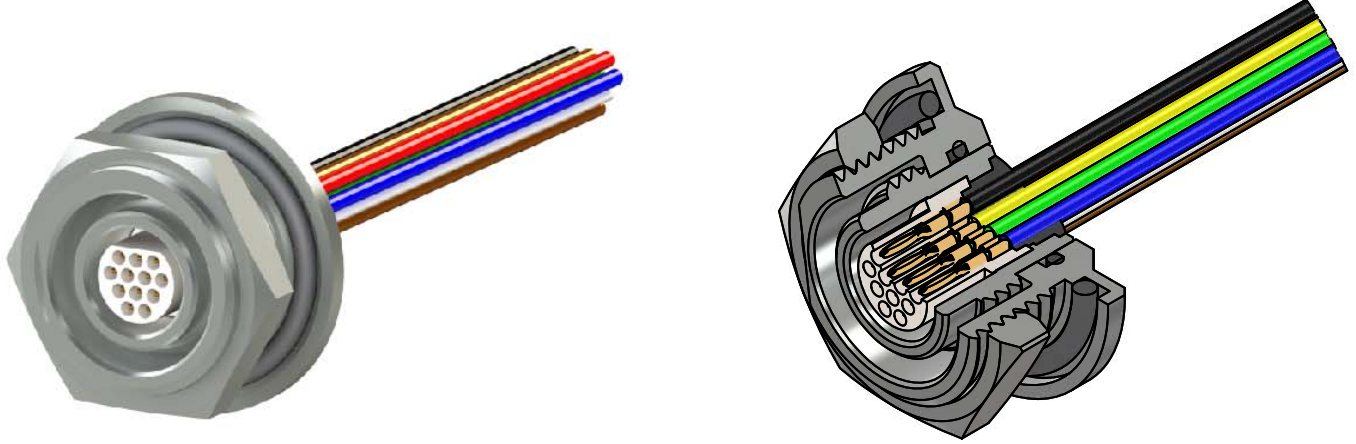
# Metal - Pin - Threaded - Wired - Front Panel MMCP-WD-FP



**English (IN)**    **Metric (MM)**

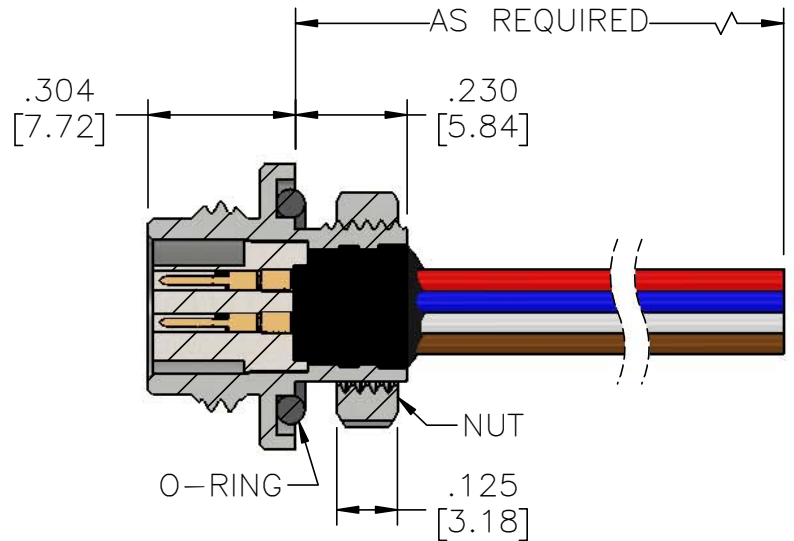
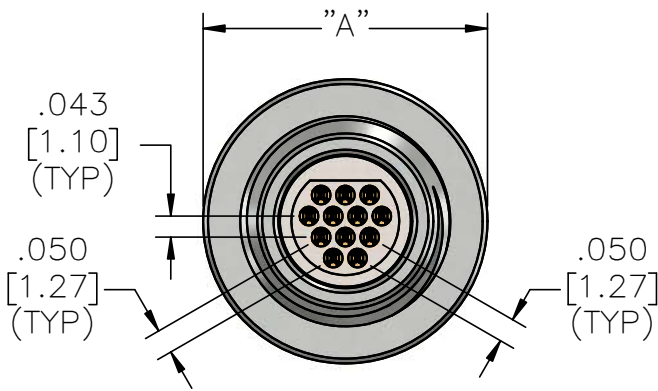
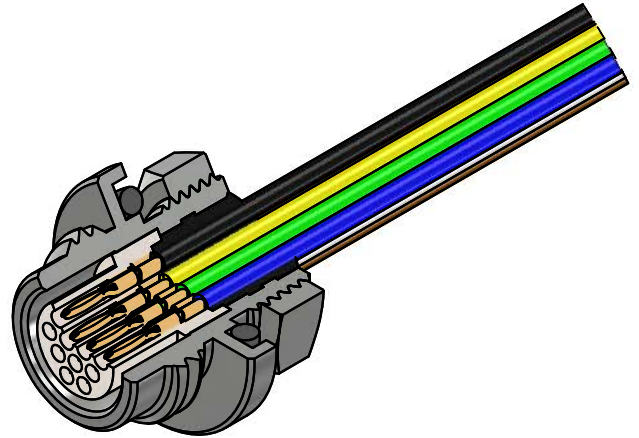
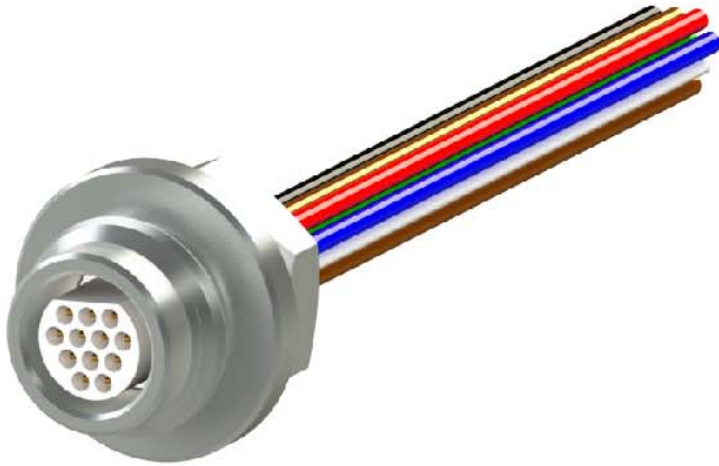
Part #	Contacts	A	A
A22128-001	5	0.750	19.05
A22129-001	12	0.820	20.83
A22130-001	16	0.875	22.23
A22131-001	27	0.990	25.15
A22483-001	39	1.100	27.94

# Metal - Pin - Threaded - Wired/Cable - Rear Panel MMCP-WC/WD-RP



Part #	Contacts	English	Metric
		(IN)	(MM)
A22132-001	5	A	A
A22133-001	12	0.750	19.05
A22134-001	16	0.820	20.83
A22135-001	27	0.875	22.23
A22484-001	39	0.990	25.15
		1.100	27.94

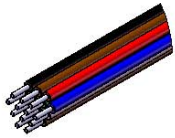














# Metal - Pin - Threaded - Wired - Protruding Panel MMCP-WD-PP



Part #	Contacts	English	Metric
		(IN)	(MM)
A22371-001	5	A	A
A22376-001	12	0.541	13.74
A22381-001	16	0.586	14.88
A22386-001	27	0.662	16.81
A22386-001	27	0.742	18.85
A22485-001	39	0.821	20.85



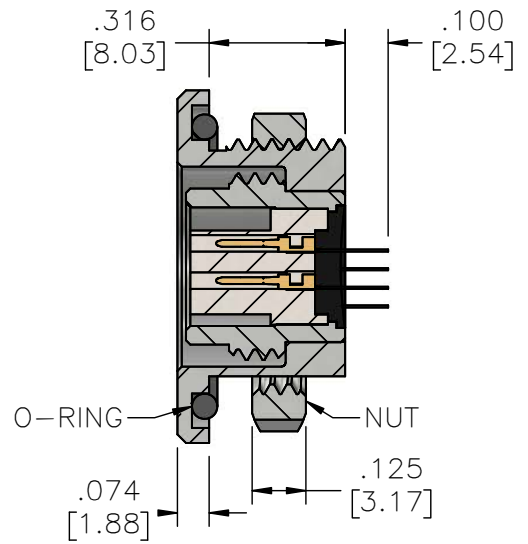
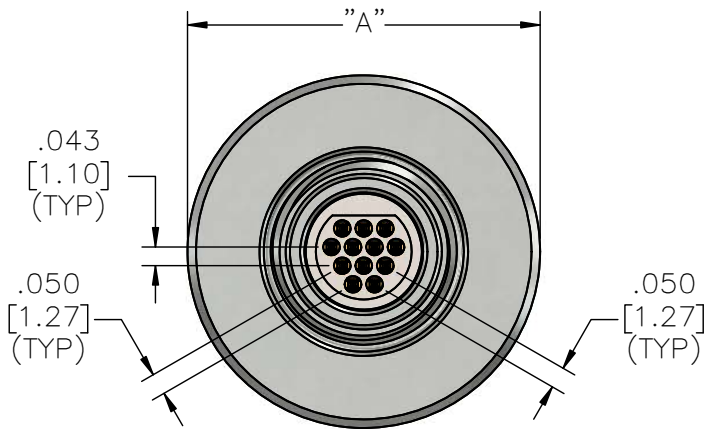
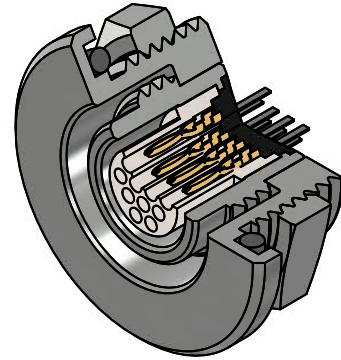
# METAL MICRO CIRCULAR THREADED DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
MMC Male (P - Pin)	5	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b>	<b>FP: Front Panel Mount</b> (Male Only) 	<b>C</b> Color Coded 
	12 16 27 39		<b>N: Nickel Plated Brass</b> 	<b>RP: Rear Panel Mount</b> (Male Only) 	
		<b>WC: Cable</b> 	<b>Non-Standard Options</b>	<b>PP: Protruding Panel Mount</b> (Male Only) 	<b>OR</b> O-Ring 
		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max	<b>P: Passivated Stainless Steel</b> 		<b>IP68</b> 
			<b>OX: Black Oxide Finished Steel</b> 		<b>RH</b> RoHS COMPLIANT 
					
					
					

**EXAMPLE:**  
MMCP-16-WD-10.0-C-PP-N-OR

# Metal - Pin - Straight Tail - Front Panel

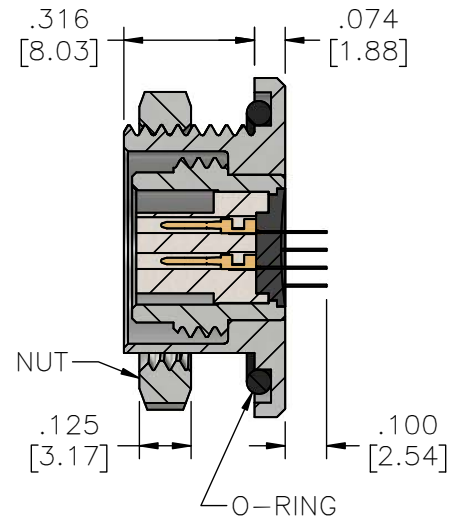
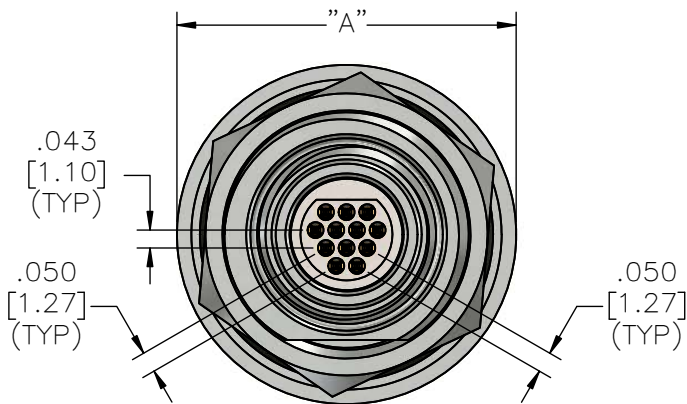
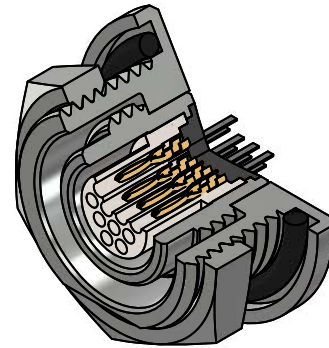
## MMCP-DD-FP



	English (IN)	Metric (MM)
Contacts	A	A
5	0.750	19.05
12	0.820	20.83
16	0.875	22.23
27	0.990	25.15
39	1.100	27.94



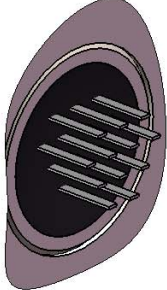

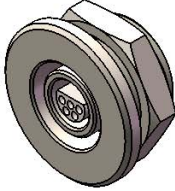









**Metal - Pin - Threaded - Straight Tail - Rear Panel**  
**MMCP-DD-RP**



	<b>English (IN)</b>	<b>Metric (MM)</b>
Contacts	A	A
5	0.750	19.05
12	0.820	20.83
16	0.875	22.23
27	0.990	25.15
39	1.100	27.94

# METAL MICRO CIRCULAR STRAIGHT THRU-HOLE TAIL (TYPE DD)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
<b>MMC</b>  Male (P - Pin)  	5	<b>DD: Straight Thru-Hole</b>    	<b>Standard</b> <b>N: Nickel Plated Brass</b>  	<b>FP: Front Panel Mount</b>  	<b>OR</b> O-Ring  
	12		<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b>  	<b>RP: Rear Panel Mount</b>  	<b>IP68</b>  <div style="border: 1px solid black; padding: 2px; display: inline-block;"><b>IP68</b></div>
	16		<b>P: Passivated Stainless Steel</b>  		<b>RH</b> RoHS COMPLIANT  
	27		<b>OX: Black Oxide Finished Steel</b>  		
					

**EXAMPLE:**  
MMCP-05-DD-RP-N-OR

# MICRO 360<sup>®</sup> Metal

## Micro Circular Twistlock *Optional IP68 Rating*



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-83513
- Contact Resistance: \_\_\_\_\_ 26 Milliohm Max (65mV Drop Max) @ 2.5 Amps per MIL-DTL-83513
- Current Rating: \_\_\_\_\_ 3 Amps per MIL-DTL-83513
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ NASA SP-R-0022

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 26 AWG, (7-34) Tinned Copper, PFA color coded, Black  
Polyurethane Jacket
- Wire: \_\_\_\_\_ 26 AWG (7-34) PTFE, color coded

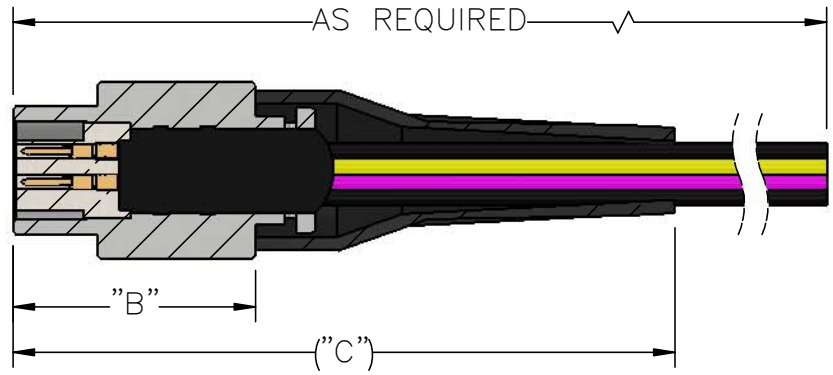
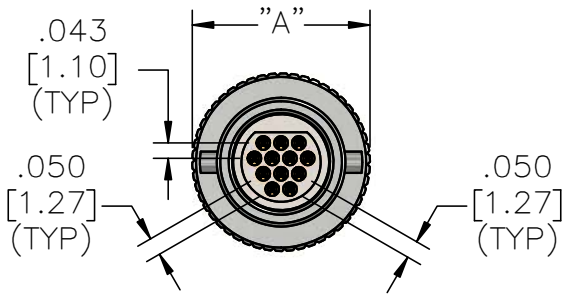
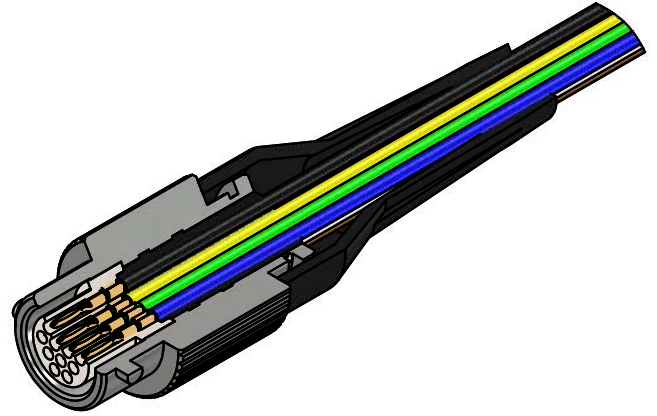
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated  
per SAE-AMS-2700

\* less resistance to salt spray test.

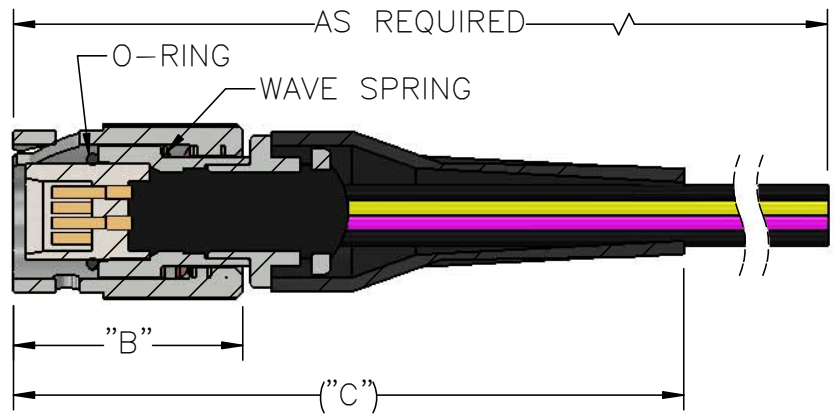
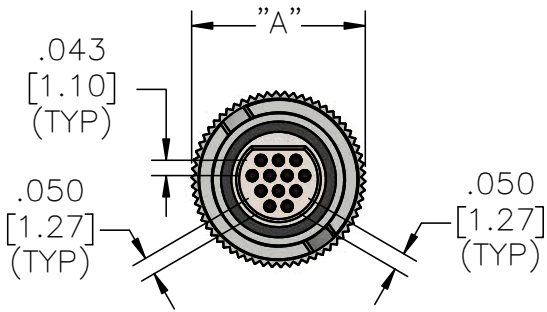
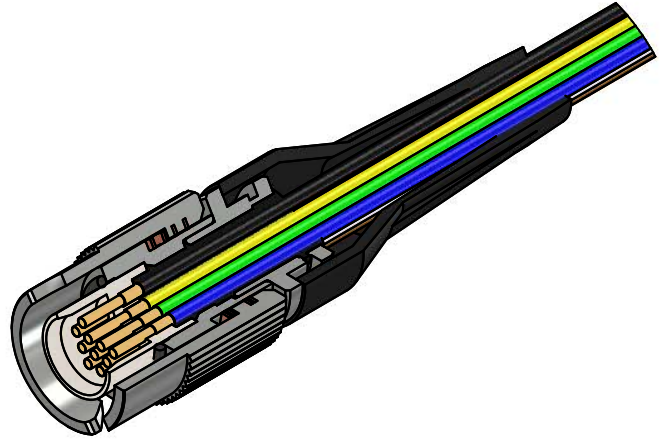
# Metal - Pin - Twist-Lock - Wired - Inline - Strain Relief

TMCP-WD-IS-SR



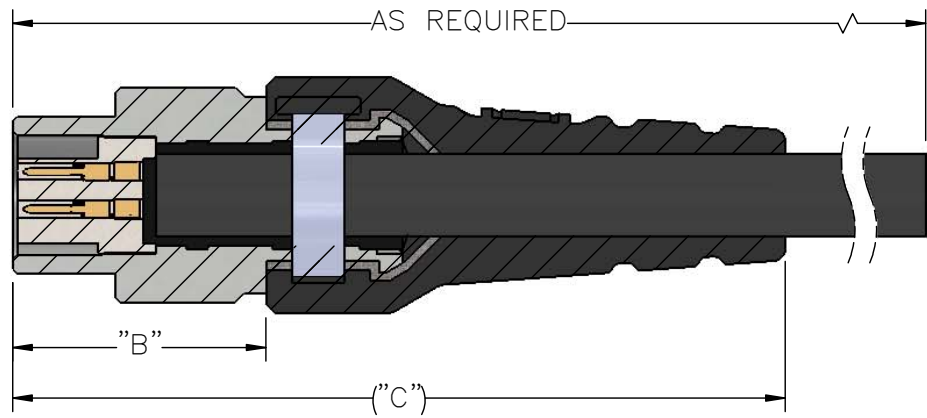
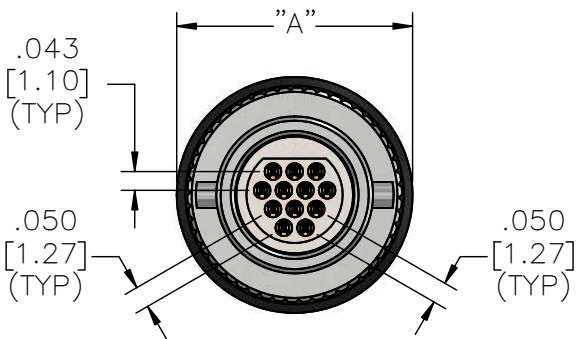
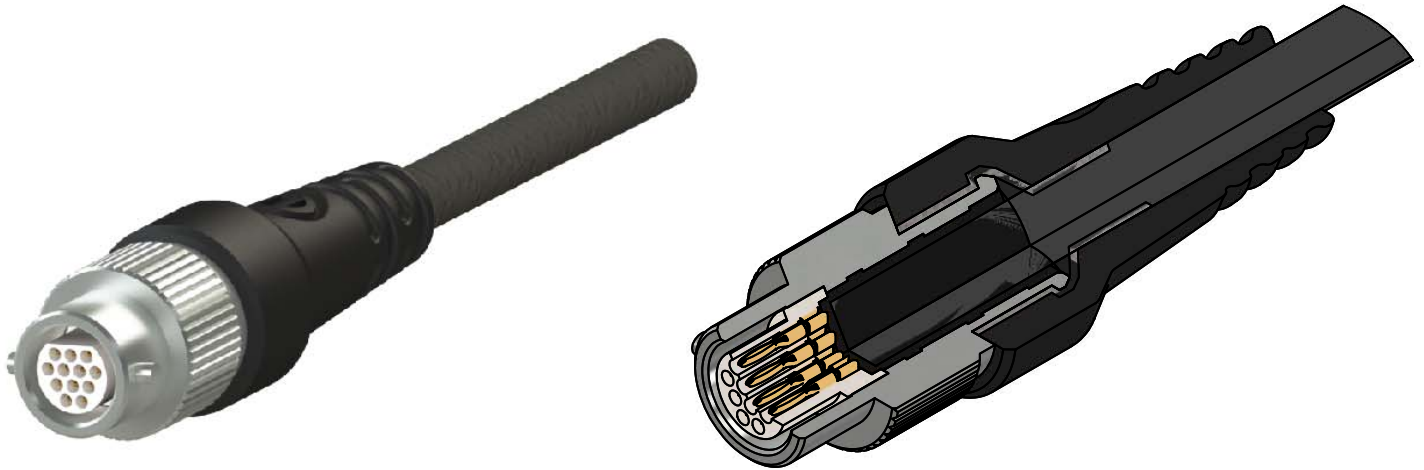
Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22228-001	5	0.450	0.680	1.900	11.43	17.27	48.26
A22230-001	12	0.500			12.70		
A22232-001	16	0.560			14.22		
A22234-001	27	0.610			15.49		
A22523-001	39	0.650	0.585	2.200	16.51	14.86	55.88

**Metal - Socket - Twist-Lock -  
Wired - Inline - Strain Relief**  
TMCS-WD-IS-SR



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22229-001	5	0.450	0.660	1.900	11.43	16.76	48.26
A22231-001	12	0.500			12.70		
A22233-001	16	0.560			14.22		
A22235-001	27	0.620	0.630	2.100	15.75	16.00	53.34
A22533-001	39	0.670			17.02		

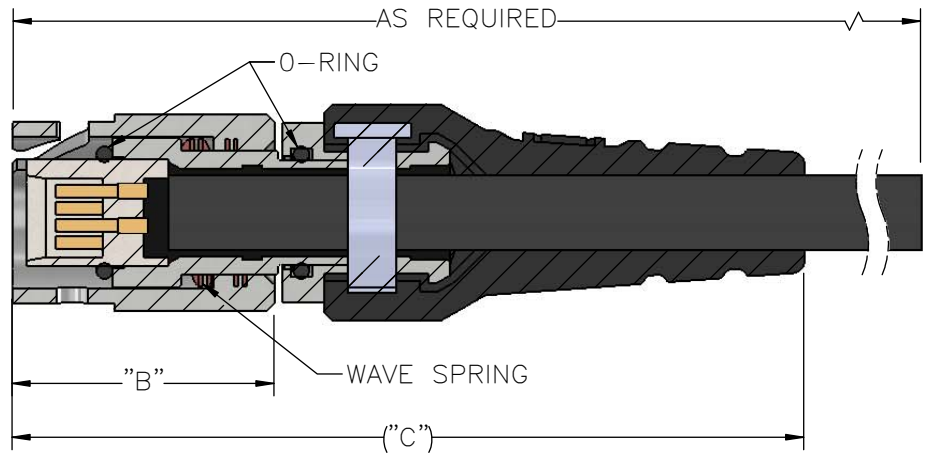
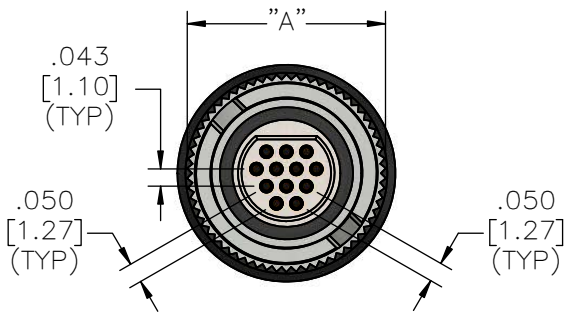
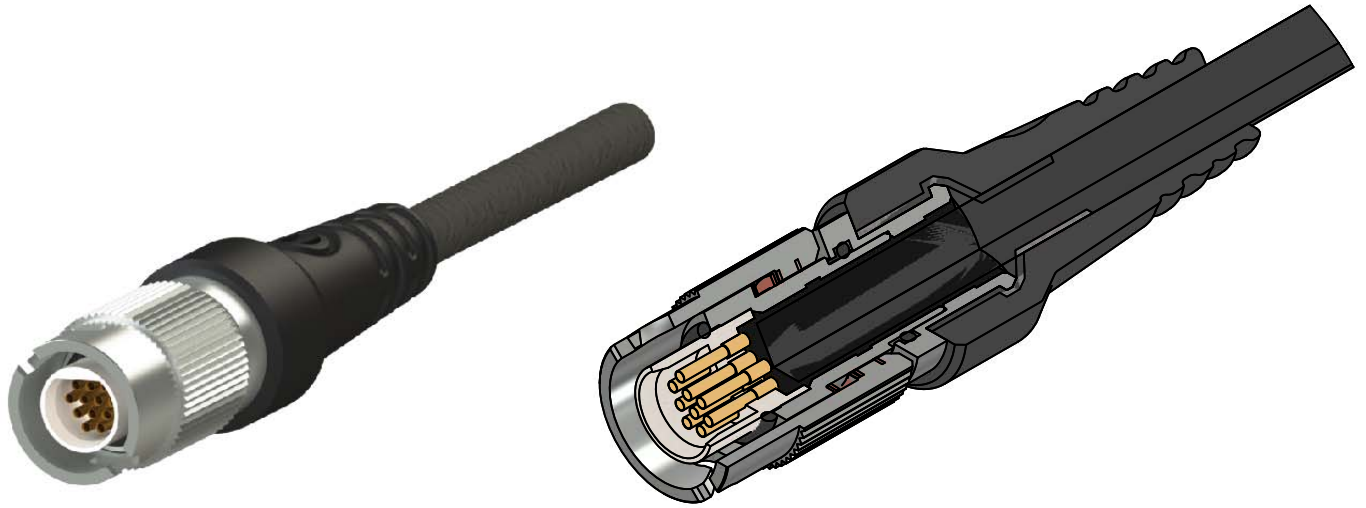
**Metal - Pin - Twist-Lock - Cabled -  
Overmold - Inline  
TMCP-WC-OM-IS**



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22352-001	5	0.510	0.590	1.740	12.95	14.99	44.20
A22350-001	12	0.550		1.790	13.97		45.47
A22348-001	16	0.600		1.890	15.24		48.01
A22346-001	27	0.670	0.580	1.980	17.02	14.73	50.29
-	39	Contact Omnetics for dimensions					

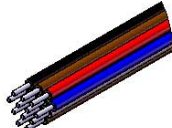













**Metal - Socket - Twist-Lock - Cable -  
Overmold - Inline**  
TMCS-WC-OM-IS



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22351-001	5	0.510	0.660	1.930	12.95	16.76	49.02
A22349-001	12	0.550		1.980	13.97		50.29
A22347-001	16	0.600		2.060	15.24		52.32
A22345-001	27	0.670	0.630	2.150	17.02	16.00	54.61
-	39	Contact Omnetics for dimensions					

# TWIST LOCK MICRO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options, cont.
TMC	5	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>IS: Inline Shell (Shell Only)</b> 	<b>C</b> Color Coded 
	12				
Male (P - Pin)	16	<b>WC: Cable</b> 	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b> 	<b>Options</b> <b>SR: Inline Shell w/ Strain Relief</b> 	<b>OR</b> O-Ring 
	27				
	39				
Female (S - Socket)		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>ST: Inline Shell w/ Shrink Tube</b> 	<b>IP68</b> 
			<b>OX: Black Oxide Finished Steel</b> 		<b>RH</b> RoHS COMPLIANT 
					<i>Non-Standard Option</i> <b>OM</b> Overmold (Contact Omnetics for Overmold Information & Availability) 

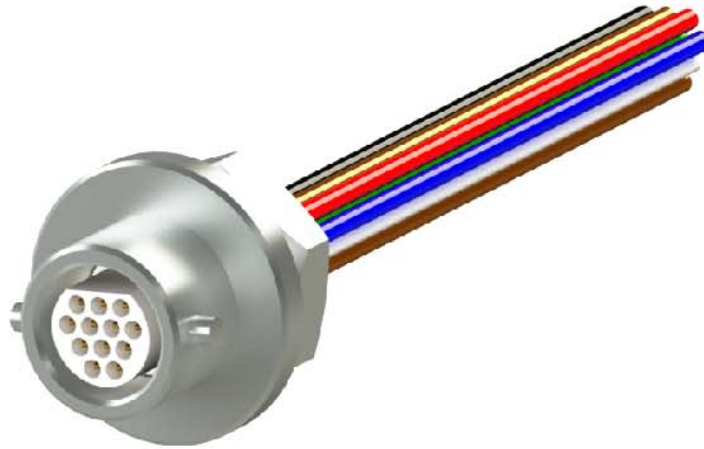
**EXAMPLE:**  
TMCS-12-WD-10.0-C-IS-N-ST-OR



# MICRO 360<sup>®</sup> Metal

## Micro Circular Twist-Lock Panel Mount

Optional IP68 Rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-83513
- Contact Resistance: \_\_\_\_\_ 26 Milliohm Max (65mV Drop Max) @ 2.5 Amps per MIL-DTL-83513
- Current Rating: \_\_\_\_\_ 3 Amps per MIL-DTL-83513
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ NASA SP-R-0022

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 26 AWG, (7-34) Tinned Copper, PFA color coded, Black  
Polyurethane Jacket
- Wire: \_\_\_\_\_ 26 AWG (7-34) PTFE, color coded

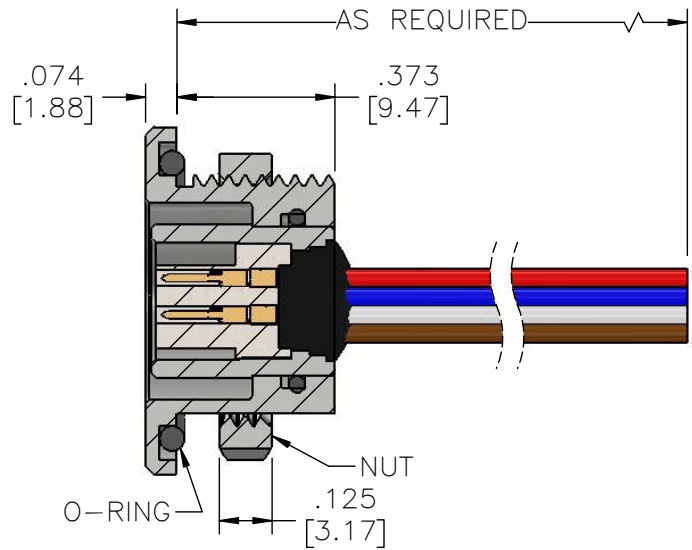
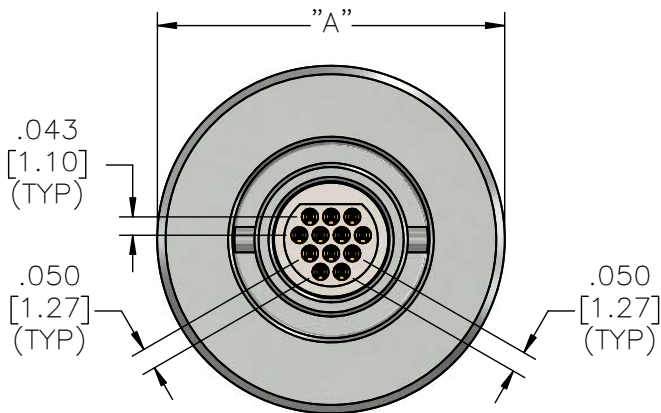
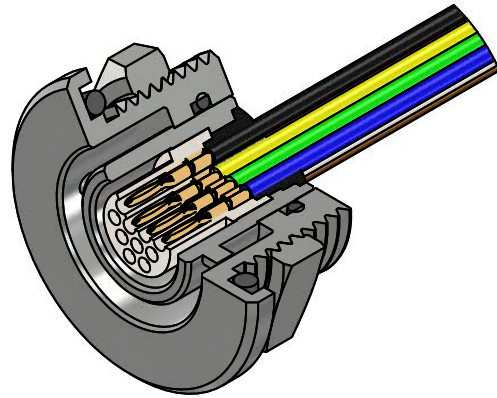
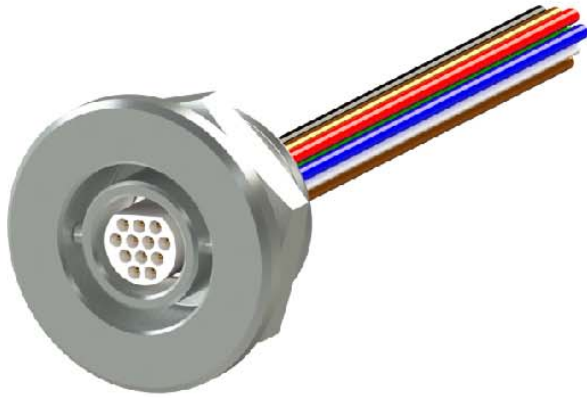
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated  
per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Twist-Lock - Wired - Front Panel - IP68

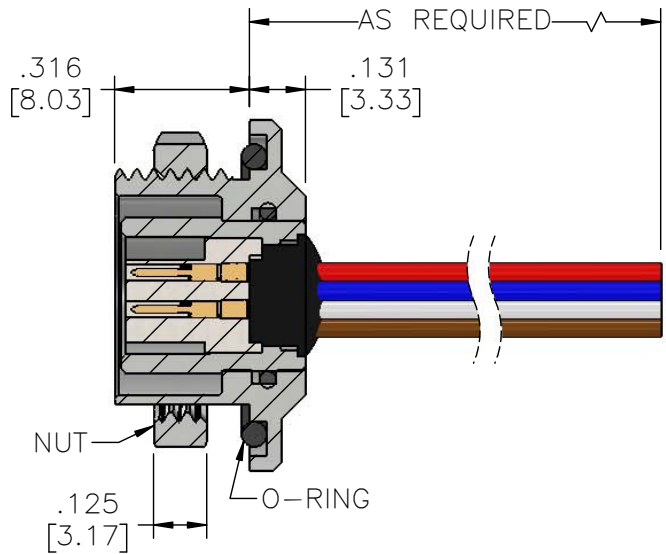
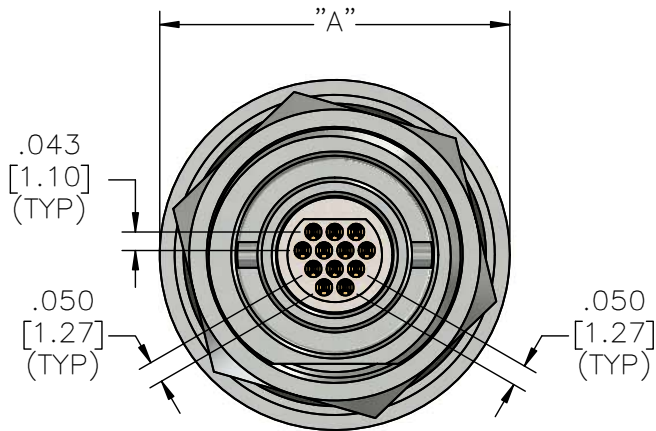
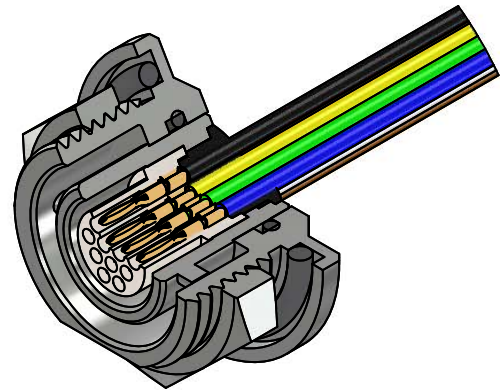
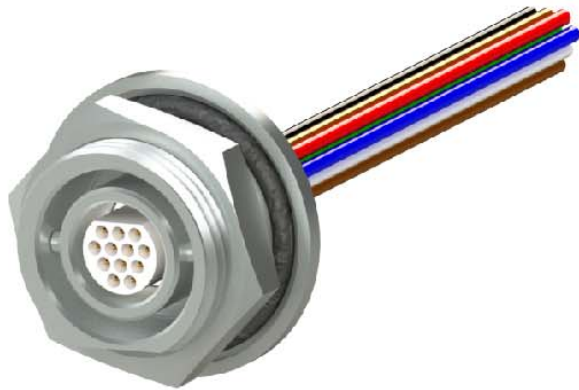
TMCP-WD-FP-IP68



Part #	Contacts	English	Metric
		(IN)	(MM)
A22359-001	5	A	A
A22358-001	12	0.750	19.05
A22357-001	16	0.820	20.83
A22356-001	27	0.875	22.23
A22356-001	27	0.990	25.15
A22520-001	39	1.100	27.94

# Metal - Pin - Twist-Lock - Cable - Rear Panel - IP68

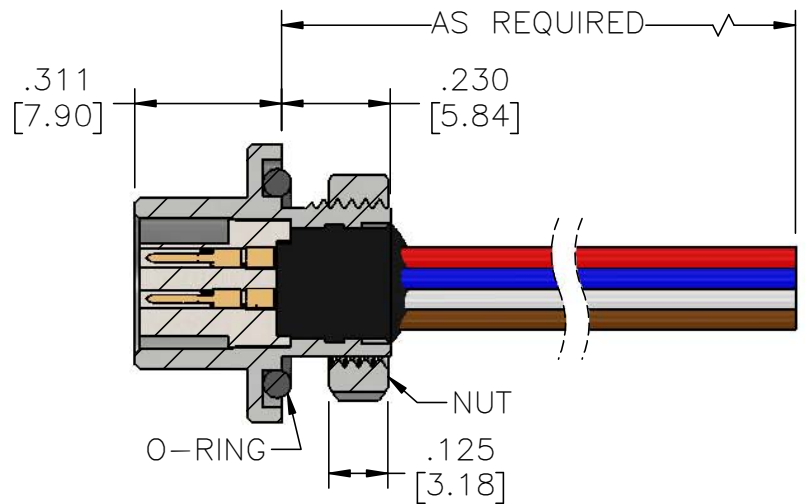
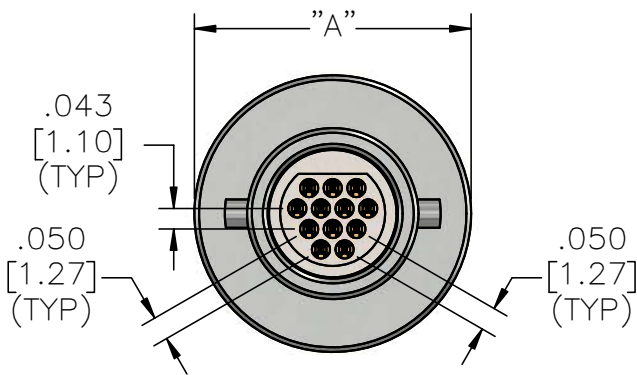
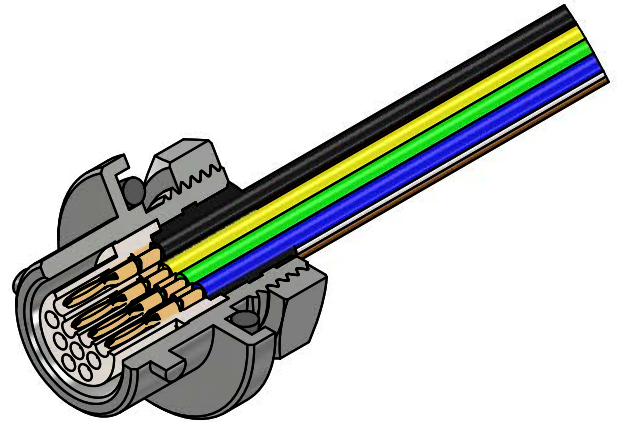
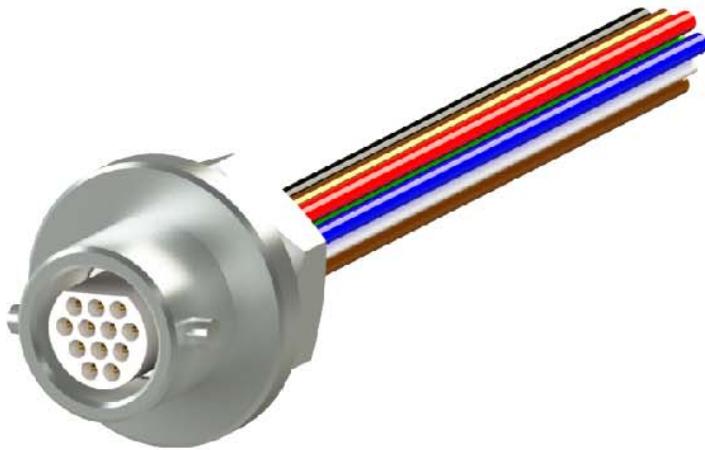
TMCP-WD-RP-IP68



Part #	Contacts	English	Metric
		(IN)	(MM)
A22363-001	5	A	A
A22362-001	12	0.750	19.05
A22361-001	16	0.820	20.83
A22360-001	27	0.875	22.23
A22360-001	27	0.990	25.15
A22521-001	39	1.100	27.94

# Metal - Pin - Twist-Lock - Wired - Protruding Panel - IP68







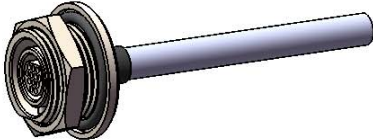
TMCP-WD-PP-IP68



Part #	Contacts	English	Metric
		(IN)	(MM)
A22367-001	5	A	A
A22366-001	12	0.541	13.74
A22365-001	16	0.586	14.88
A22364-001	27	0.662	16.81
-	39	Contact Omnetics for dimensions	

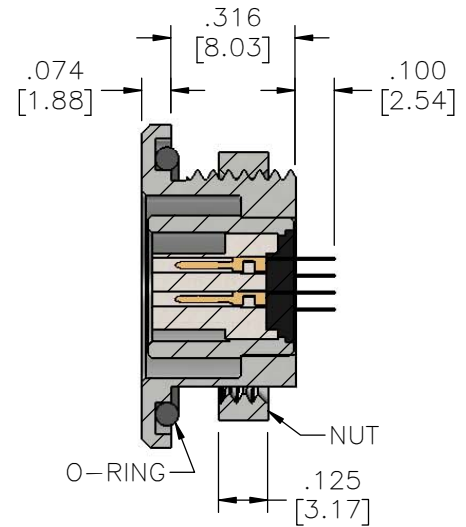
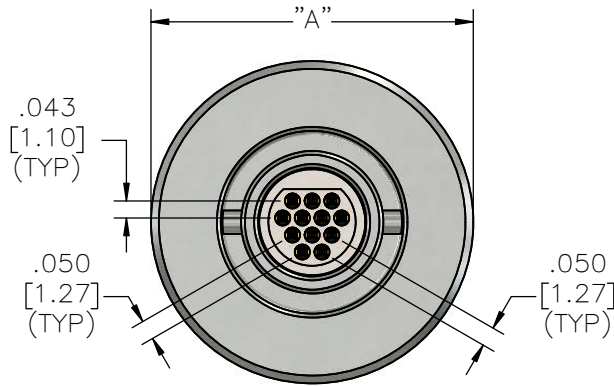
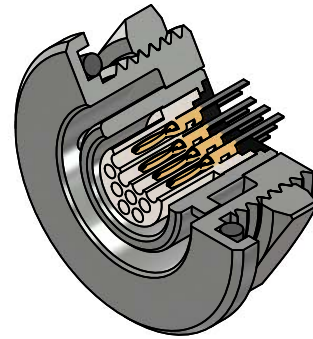


# TWIST-LOCK MICRO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
TMC  Male (P - Pin)	5	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>FP: Front Panel Mount</b> (Male Only) 	<b>C</b> Color Coded 
	12				
	16	<b>WC: Cable</b> 	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b> 	<b>RP: Rear Panel Mount</b> (Male Only) 	<b>OR</b> O-Ring 
	27				
	39				
	Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max				
	<b>OX: Black Oxide Finished Steel</b> 		<b>RH</b> RoHS COMPLIANT 		
<b>EXAMPLE:</b> TMCP-12-WC-10.0-N-RP-C-OR-ROHS					

# Metal - Pin - Twist-Lock - Straight Tail - Front Panel

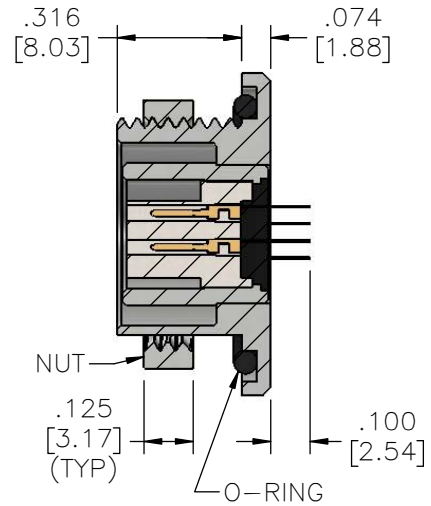
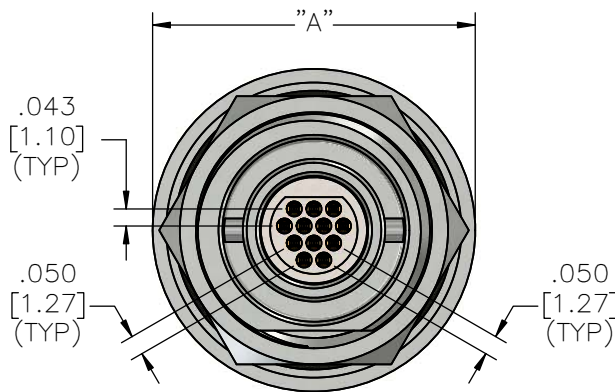
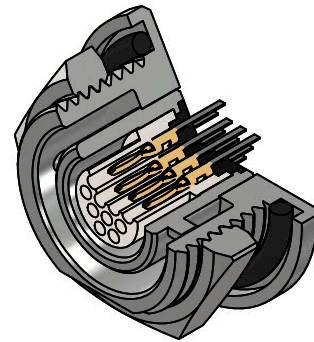
TMCP-DD-FP



	English (IN)	Metric (MM)
Contacts	A	A
5	0.750	19.05
12	0.820	20.83
16	0.875	22.23
27	0.990	25.15
39	Contact Omnetics for dimensions	



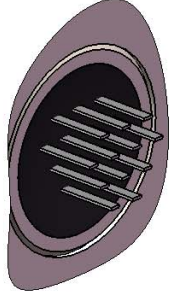







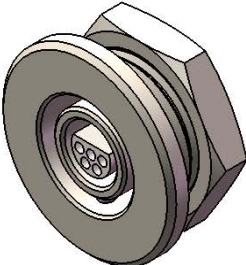
# Metal - Pin - Twist-Lock - Straight Tail - Rear Panel

TMCP-DD-RP



	English (IN)	Metric (MM)
Contacts	A	A
5	0.750	19.05
12	0.820	20.83
16	0.875	22.23
27	0.990	25.15
39	Contact Omnetics for dimensions	

# TWIST-LOCK MICRO CIRCULAR STRAIGHT THRU-HOLE (TYPE DD)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
TMC  Male (P - Pin)  	5	<b>DD: Straight Thru-Hole</b>    	<b>Standard</b>	<b>FP: Front Panel Mount</b>  	<b>OR</b> O-Ring  
	12		<b>N: Nickel Plated Brass</b>  		
	16		<b>Non-Standard Options</b>	<b>RP: Rear Panel Mount</b>  	<b>IP68</b>  <b>IP68</b>
	27		<b>BN: Black Nickel Plated Brass</b>  		
39	<b>P: Passivated Stainless Steel</b>  				
			<b>OX: Black Oxide Finished Steel</b>  		
<b>EXAMPLE:</b> TMCP-05-DD-FP-N-OR					

# MICRO 360<sup>®</sup> Metal

## Micro Circular Break Away *Optional IP68 Rating*



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-83513
- Contact Resistance: \_\_\_\_\_ 26 Milliohm Max (65mV Drop Max) @ 2.5 Amps per MIL-DTL-83513
- Current Rating: \_\_\_\_\_ 3 Amps per MIL-DTL-83513
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ 500 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1microsecond
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (85 g) typical per contact
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ NASA SP-R-0022

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 26 AWG, (7-34) Tinned Copper, PFA color coded, Black  
Polyurethane Jacket
- Wire: \_\_\_\_\_ 26 AWG (7-34) PTFE, color coded

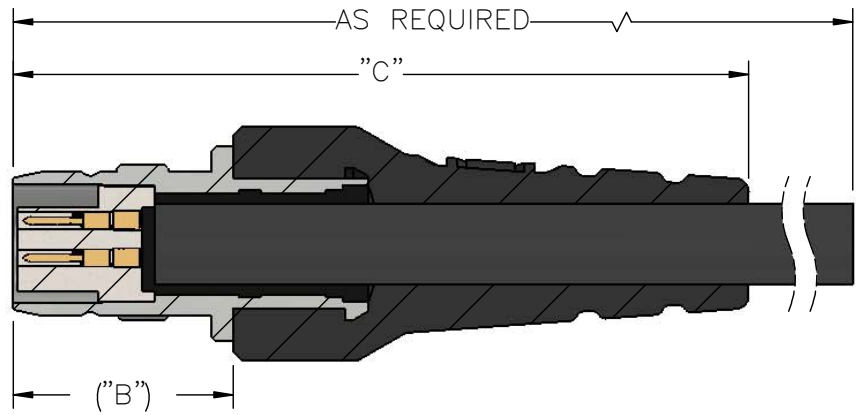
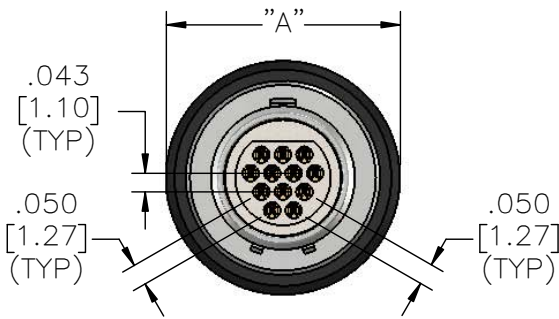
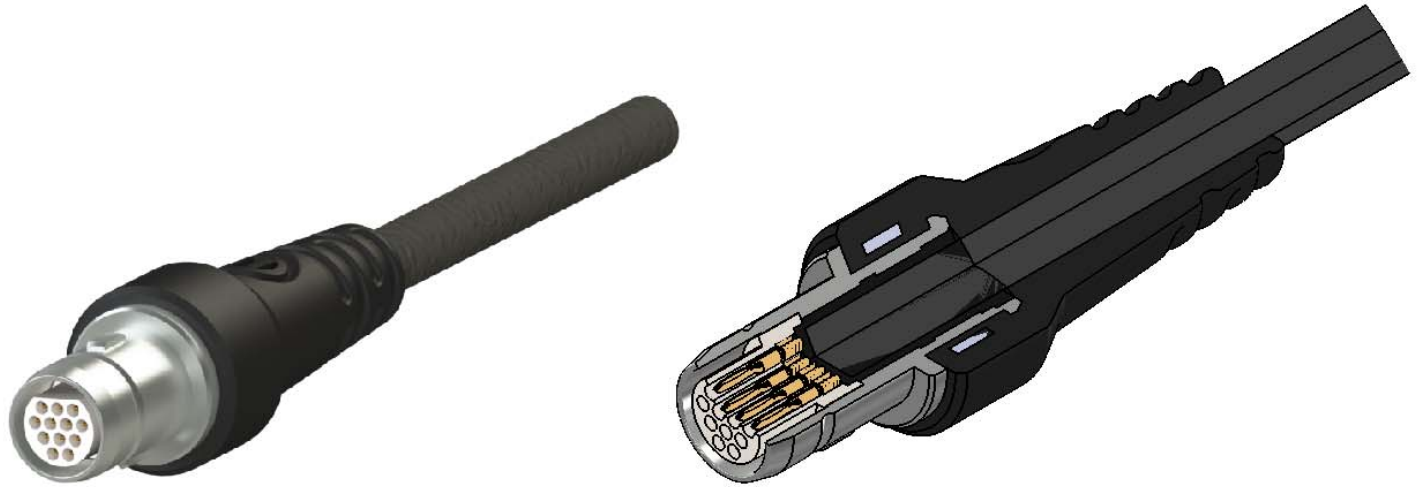
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated  
per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Keyed Break Away - Cabled - Overmold - Inline

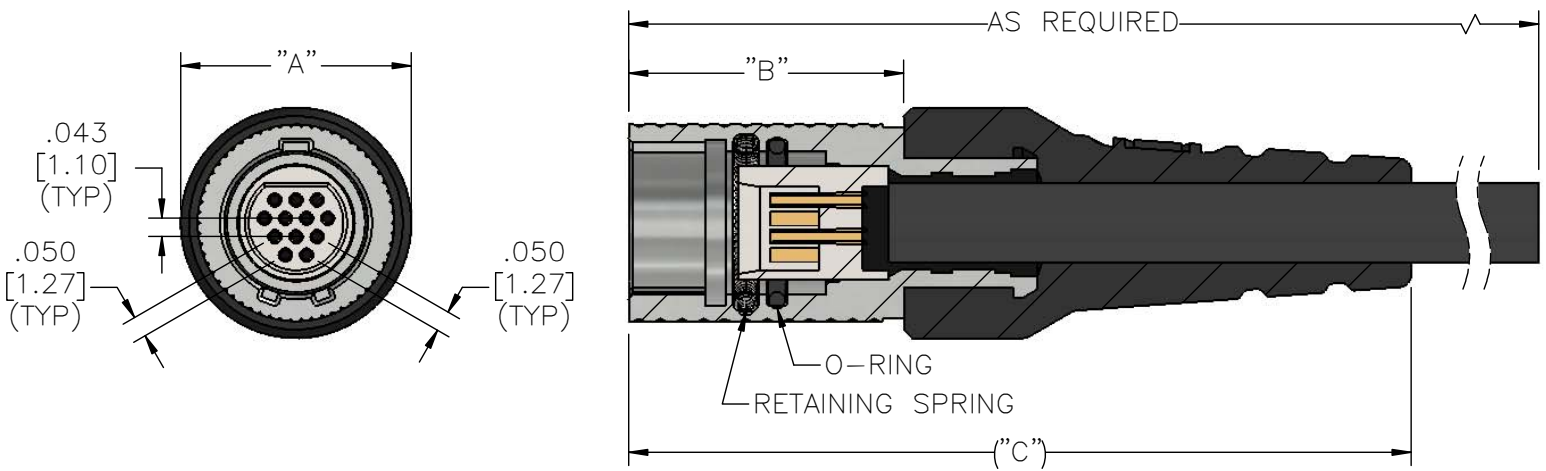
KBMP-WC-OM-IS



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22458-001	5	0.510	0.510	1.660	12.95	12.95	42.16
A22465-001	12	0.550		1.710	13.97		43.43
A22472-001	16	0.600		1.810	15.24		45.97
A22479-001	27	0.670	0.500	1.900	17.02	12.70	48.26
A22548-001	39	0.720		18.29			



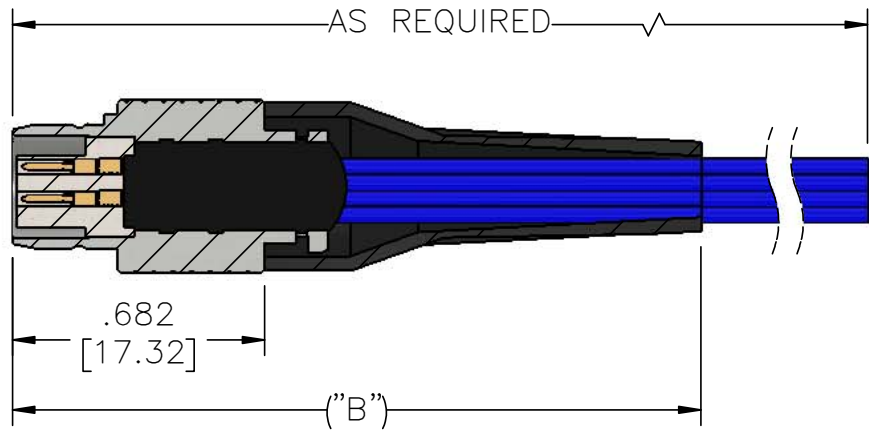
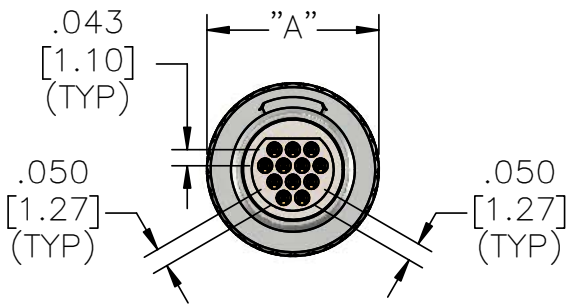
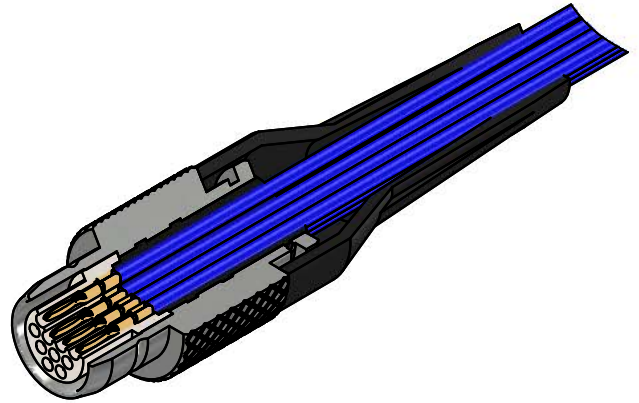
**Metal - Socket - Keyed Break Away -  
Cabled - Overmold - Inline**  
KBMS-WC-OM-IS



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A22455-001	5	0.510	0.650	1.800	12.95	16.51	45.72
A22462-001	12	0.550		1.850	13.97		46.99
A22469-001	16	0.600		1.950	15.24		49.53
A22476-001	27	0.670	0.640	2.040	17.02	16.26	51.82
A22552-001	39	0.720		18.29			

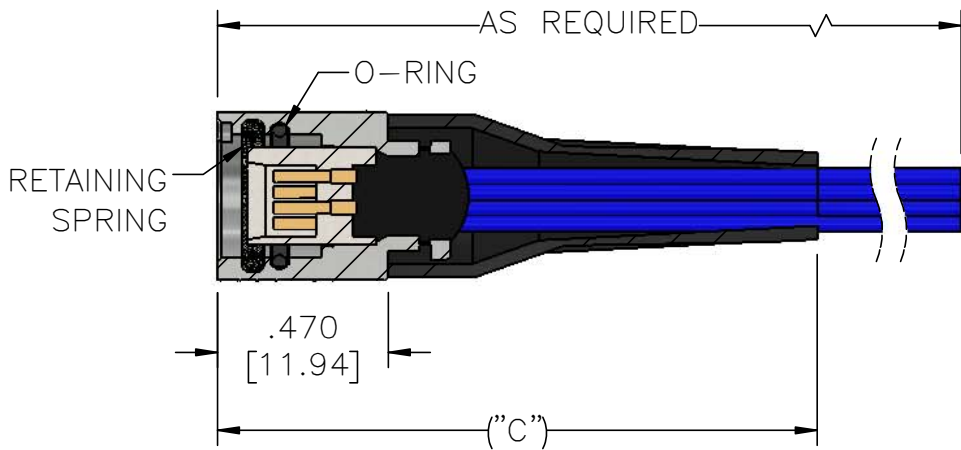
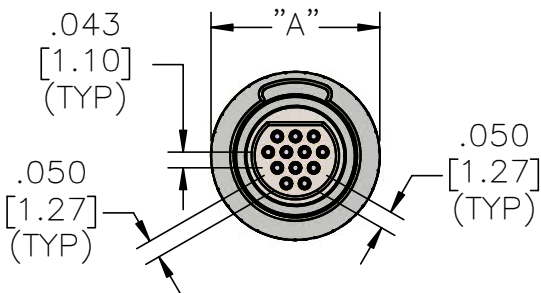
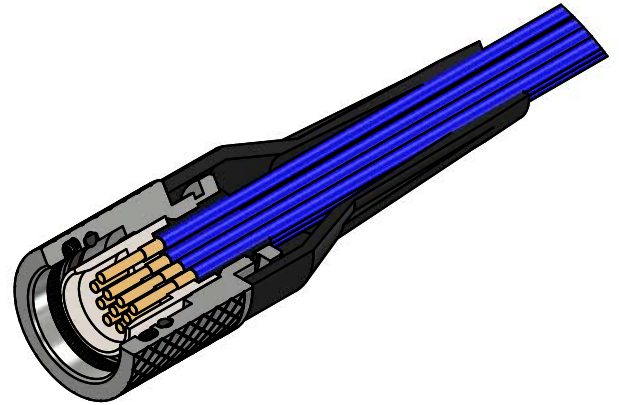
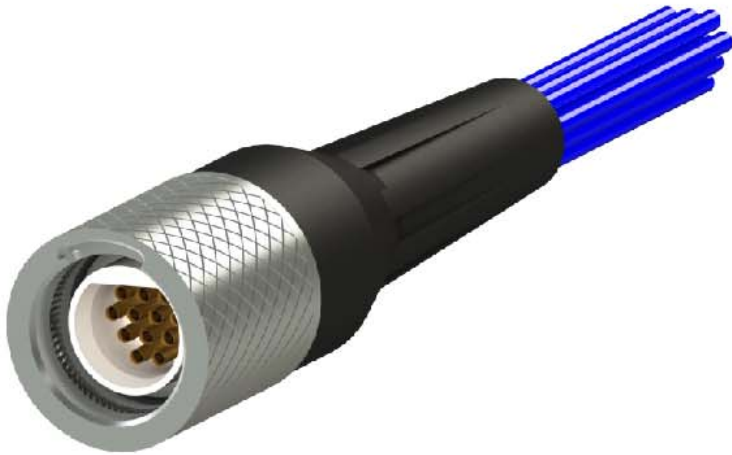
# Metal - Pin - Break Away - Wired - Inline - Strain Relief

BAMP-WD-IS-SR



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A22304-001	5	0.430	1.900	10.92	48.26
A22311-001	12	0.470		11.94	
A22318-001	16	0.530		13.46	
A22325-001	27	0.610	2.100	15.49	53.34
A22538-001	39	0.650	2.300	16.51	58.42

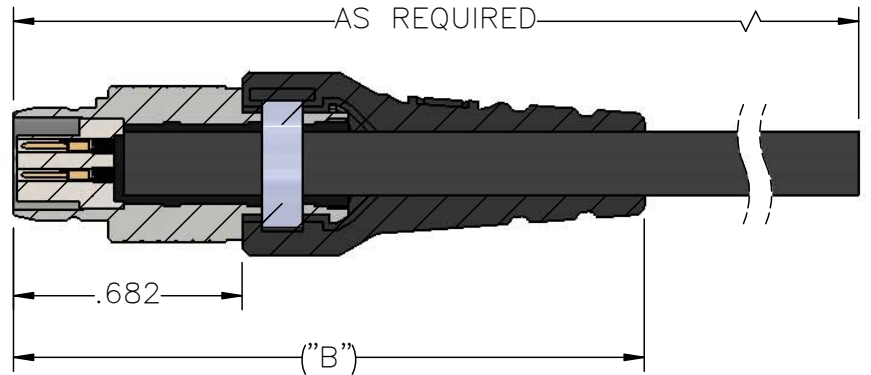
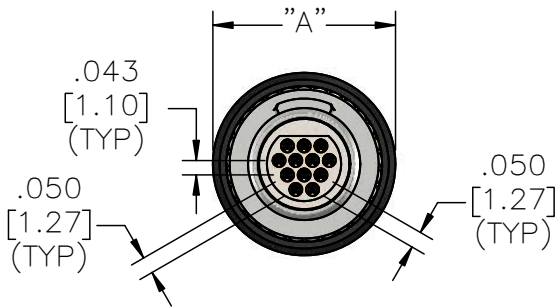
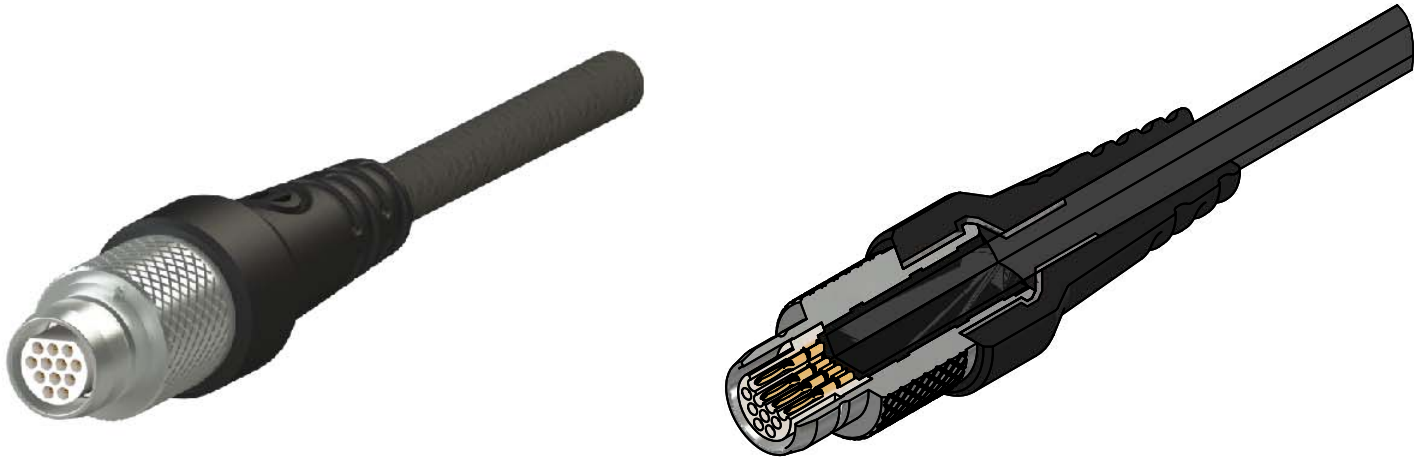
**Metal - Socket - Break Away -  
Wired - Inline - Strain Relief**  
BAMS-WD-IS-SR



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A22301-001	5	0.430	1.700	10.92	43.18
A22308-001	12	0.460	0.470	11.68	11.94
A22315-001	16	0.530	1.700	13.46	43.18
A22322-001	27	0.610	1.900	15.49	48.26
A22542-001	39	0.650	2.100	16.51	53.34

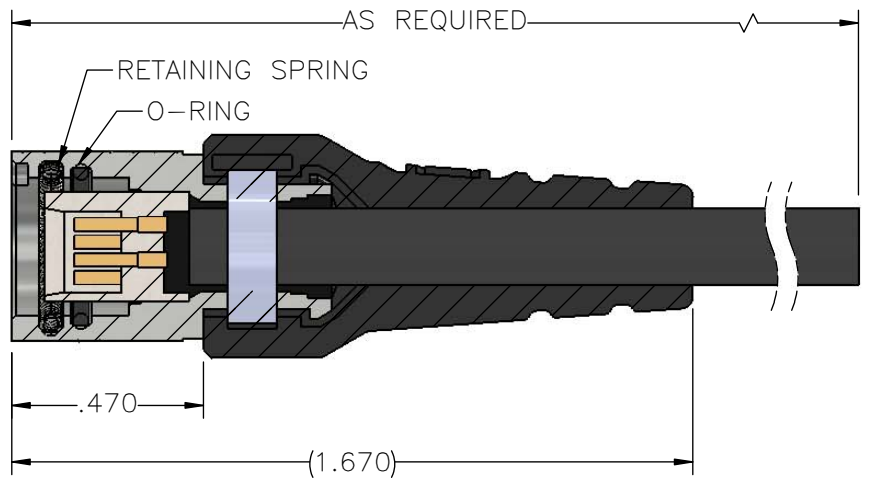
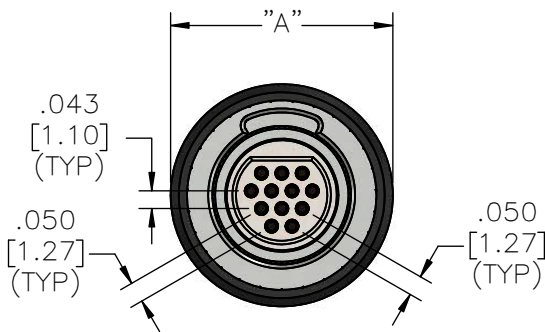
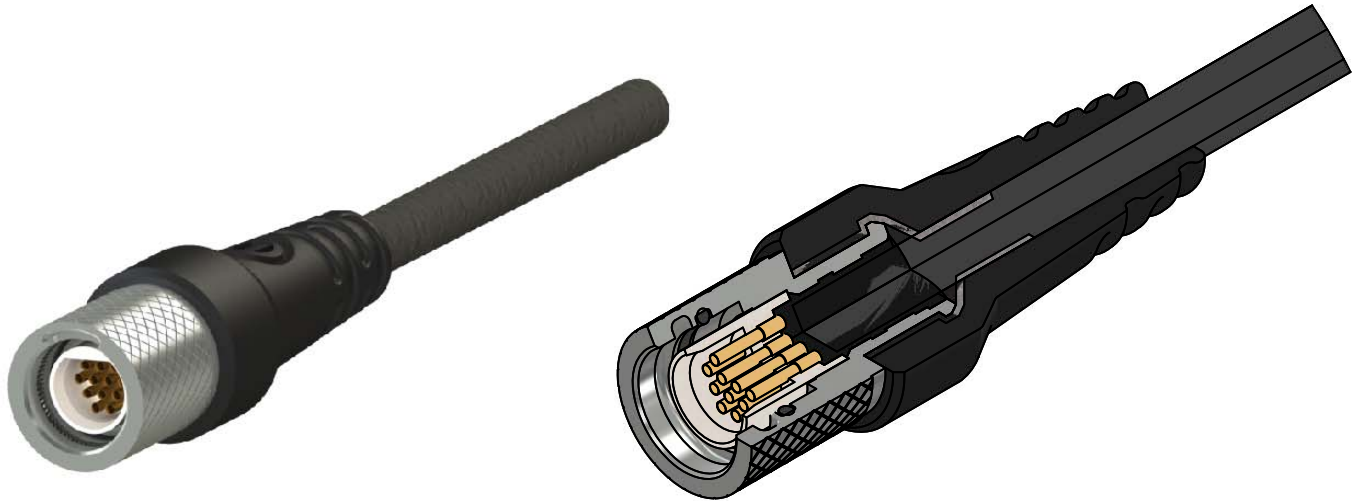
# Metal - Pin - Break Away - Cable - Overmold - Inline - IP68

BAMP-WC-OM-IS-IP68



		English (IN)	Metric (MM)
Part #	Contacts	A	A
A22344-001	5	0.510	12.95
A22342-001	12	0.550	13.97
A22340-001	16	0.600	15.24
A22338-001	27	0.670	17.02
-	39	Contact Omnetics for dimensions	








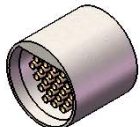

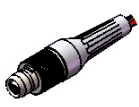



**Metal - Socket - Break Away -  
Cable - Overmold - Inline - IP68**  
BAMS-WC-OM-IS-IP68



**English (IN)    Metric (MM)**

Part #	Contacts	A	A
A22343-001	5	0.510	12.95
A22341-001	12	0.550	13.97
A22339-001	16	0.600	15.24
A22337-001	27	0.670	17.02
-	39	0.720	18.29

# QUICK DISCONNECT BREAK AWAY MICRO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
<b>KBM</b> (Keyed Break Away)	<b>5</b> <b>12</b>	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>IS: Inline Shell (Shell Only)</b> Male 	<b>C</b> Color Coded 
<b>BAM</b> (Standard Break Away)	<b>16</b> <b>27</b> <b>39</b>				
Male (P - Pin) 		<b>WC: Cable</b> 	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b> 	Female 	<b>OM</b> Overmold (Contact Omnetics for Overmold Information & Availability) 
Female (S - Socket) 		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>SR: Inline Shell w/ Strain Relief</b> 	
			<b>OX: Black Oxide Finished Steel</b> 	<b>ST: Inline Shell w/ Shrink Tube</b> 	<b>RH</b> RoHS COMPLIANT 

**EXAMPLE:**  
KBMS-16-WC-10.0-C-N-IS-OM-IP68

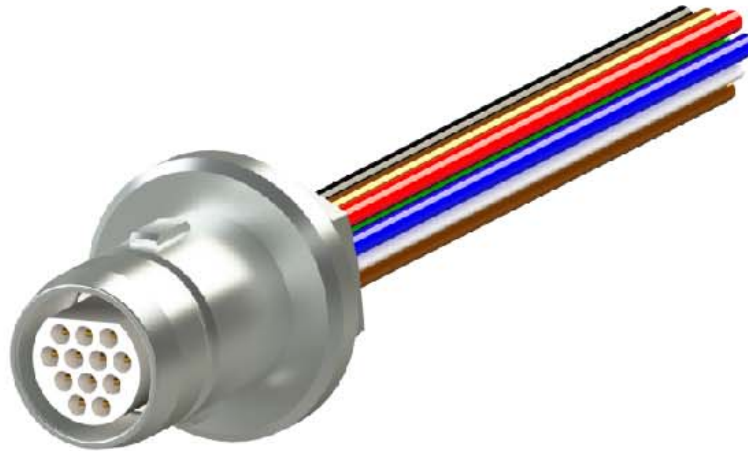




# MICRO 360<sup>®</sup> Metal

## Micro Circular Break Away Panel Mount

Optional IP68 Rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-83513
- Contact Resistance: \_\_\_\_\_ 26 Milliohm Max (65mV Drop Max) @ 2.5 Amps per MIL-DTL-83513
- Current Rating: \_\_\_\_\_ 3 Amps per MIL-DTL-83513
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ 500 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 500 VDC
- Shock: \_\_\_\_\_ 50 g's with no discontinuities > 1 microsecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 microsecond
- Mating/Unmating Force: \_\_\_\_\_ 3 oz (0.085 kg ) max per contact
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ NASA SP-R-0022

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-83513
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 26 AWG, (7-34) Tinned Copper, PFA color coded, Black Polyurethane Jacket
- Wire: \_\_\_\_\_ 26 AWG (7-34) PTFE, color coded

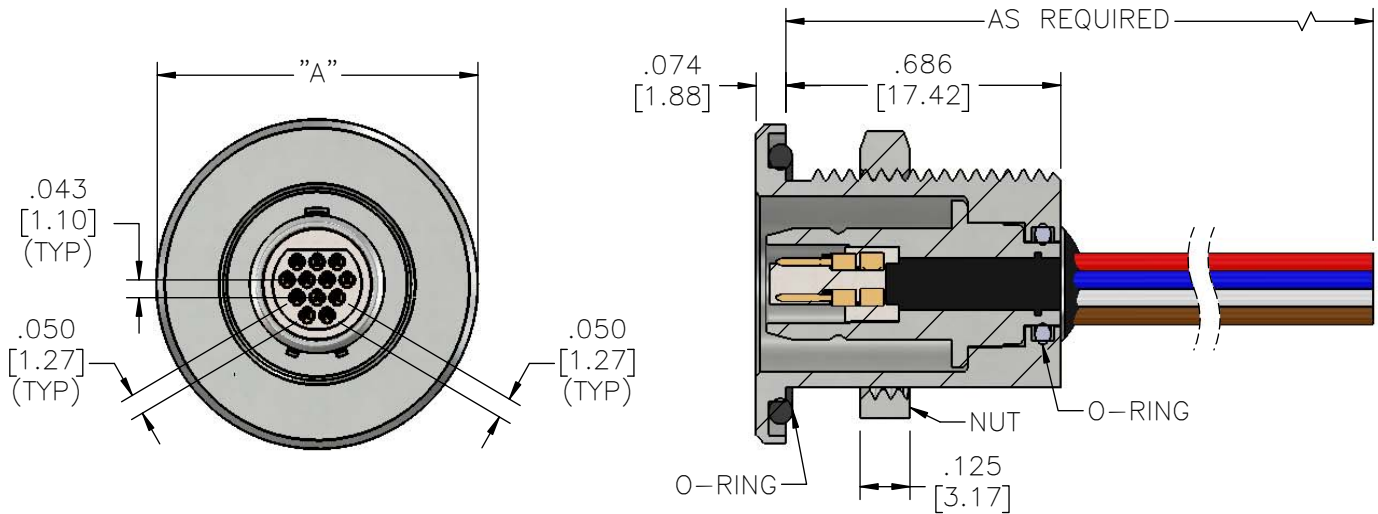
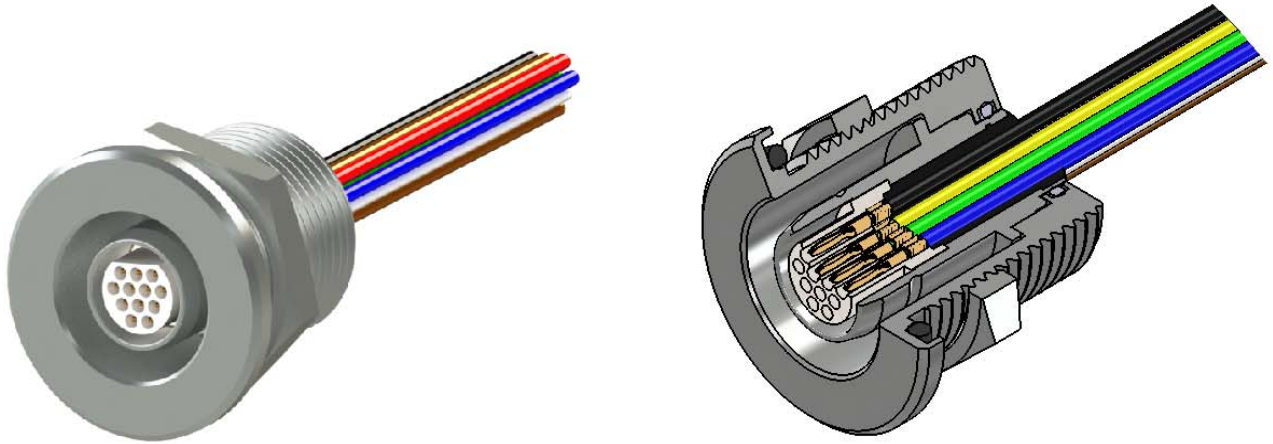
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Keyed Break Away - Wired - Front Panel

KBMP-WD-FP

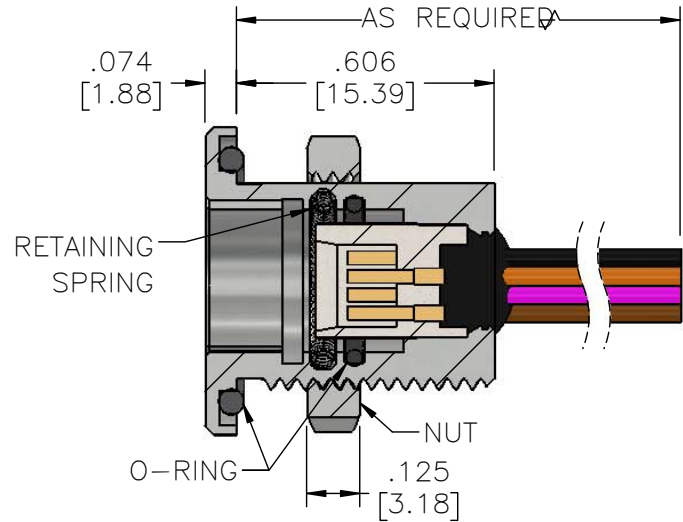
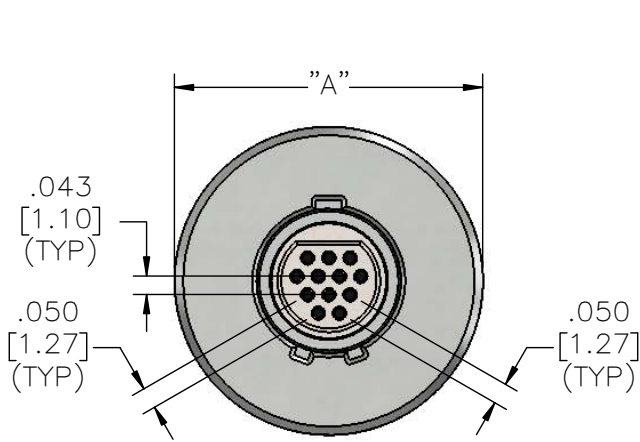
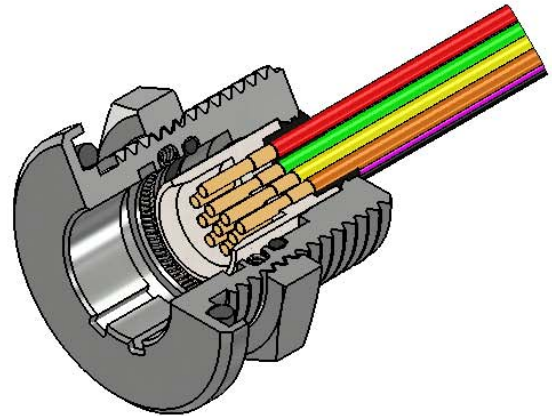


English (IN) Metric (MM)

Part #	Contacts	A	A
A22460-001	5	0.765	19.43
A22467-001	12	0.800	20.32
A22474-001	16	0.865	21.97
A22481-001	27	0.945	24.00
A22544-001	39	1.000	25.40

# Metal - Socket - Keyed Break Away - Wired- Front Panel

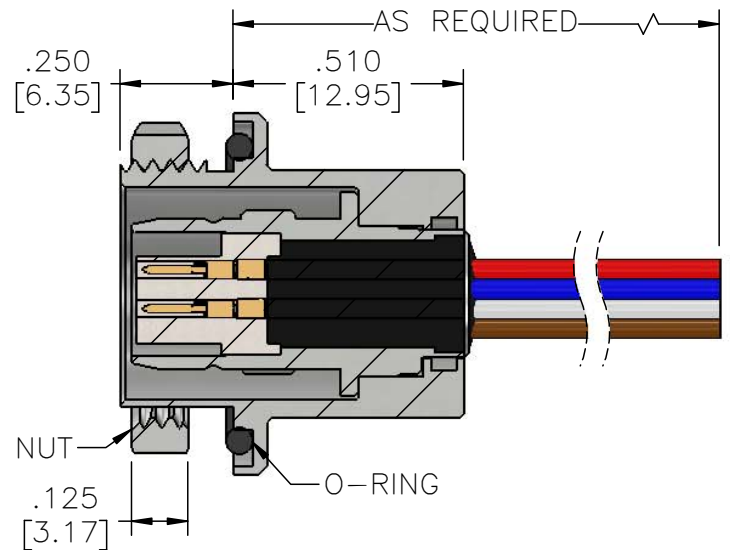
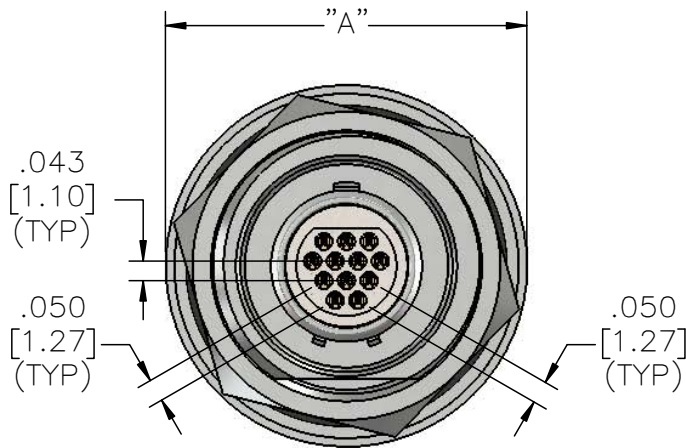
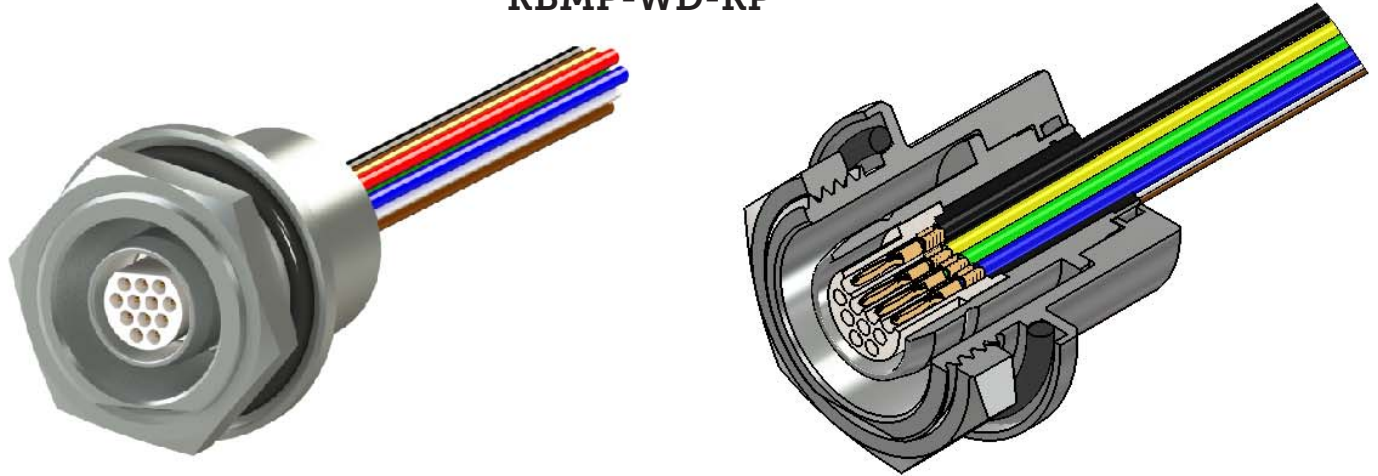
KBMS-WD-FP



Part #	Contacts	English (IN) Metric (MM)	
		A	A
A22456-001	5	0.680	17.27
A22463-001	12	0.725	18.42
A22470-001	16	0.765	19.43
A22477-001	27	0.865	21.97
A22549-001	39	0.950	24.13

# Metal - Pin - Keyed Break Away - Wired - Rear Panel

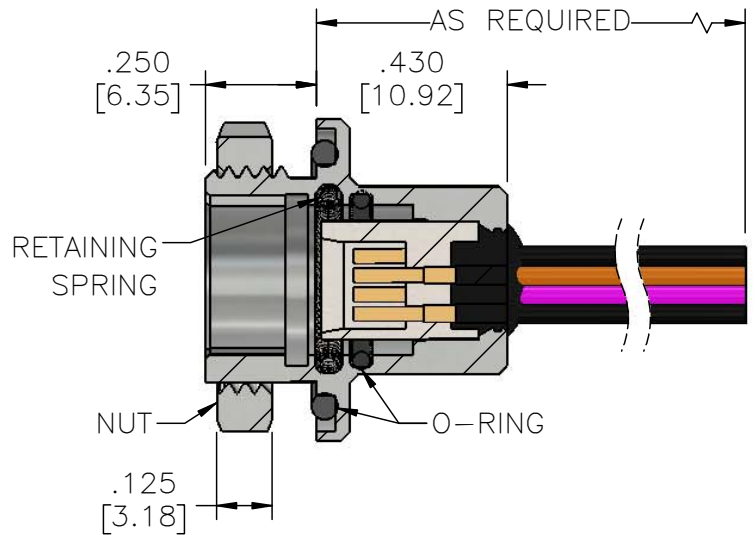
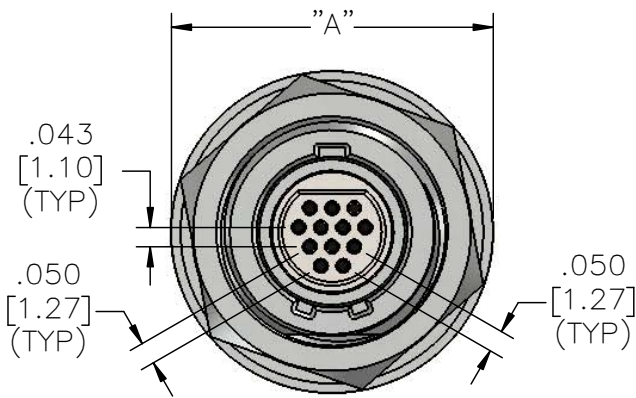
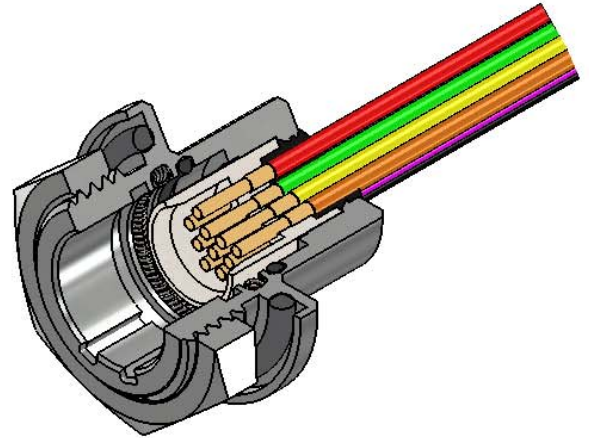
KBMP-WD-RP



Part #	Contacts	English (IN)	Metric (MM)
		A	A
A22461-001	5	0.765	19.43
A22468-001	12	0.800	20.32
A22475-001	16	0.865	21.97
A22482-001	27	0.945	24.00
A22545-001	39	1.000	25.40

# Metal - Socket - Keyed Break Away - Wired - Rear Panel

**KBMS-WD-RP**



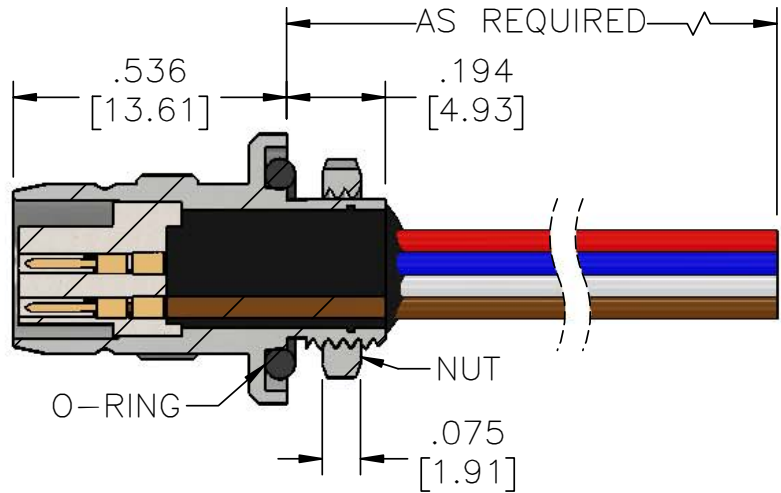
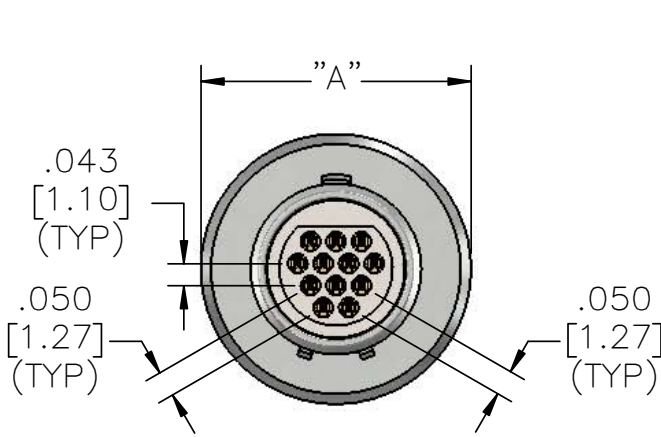
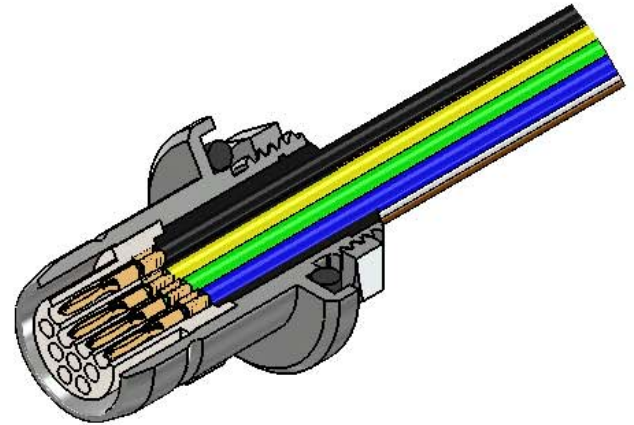
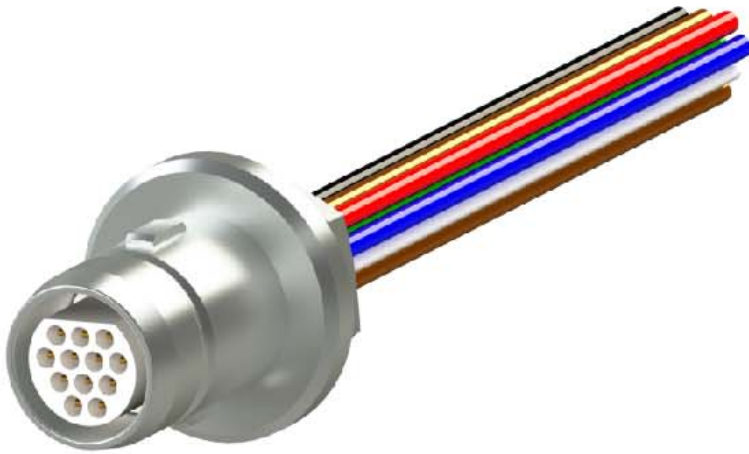
**English (IN) Metric (MM)**

Part #	Contacts	A	A
A22457-001	5	0.680	17.27
A22464-001	12	0.725	18.42
A22471-001	16	0.765	19.43
A22478-001	27	0.865	21.97
A22550-001	39	0.950	24.13



# Metal - Pin - Keyed Break Away - Wired - Protruding Panel

KBMP-WD-PP

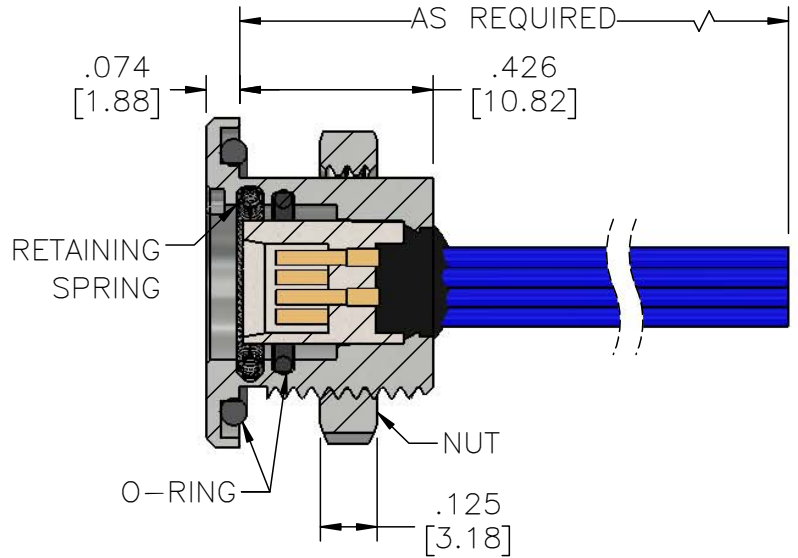
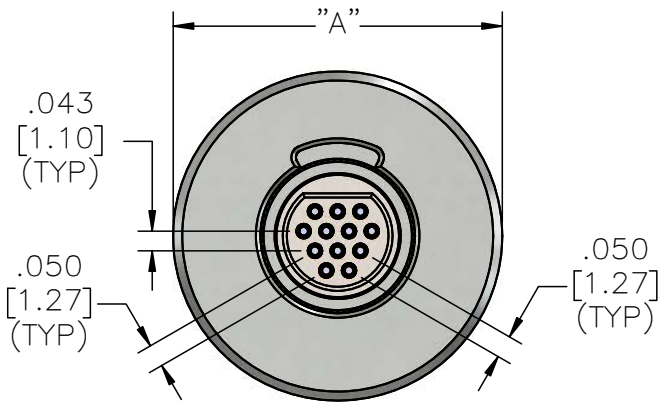
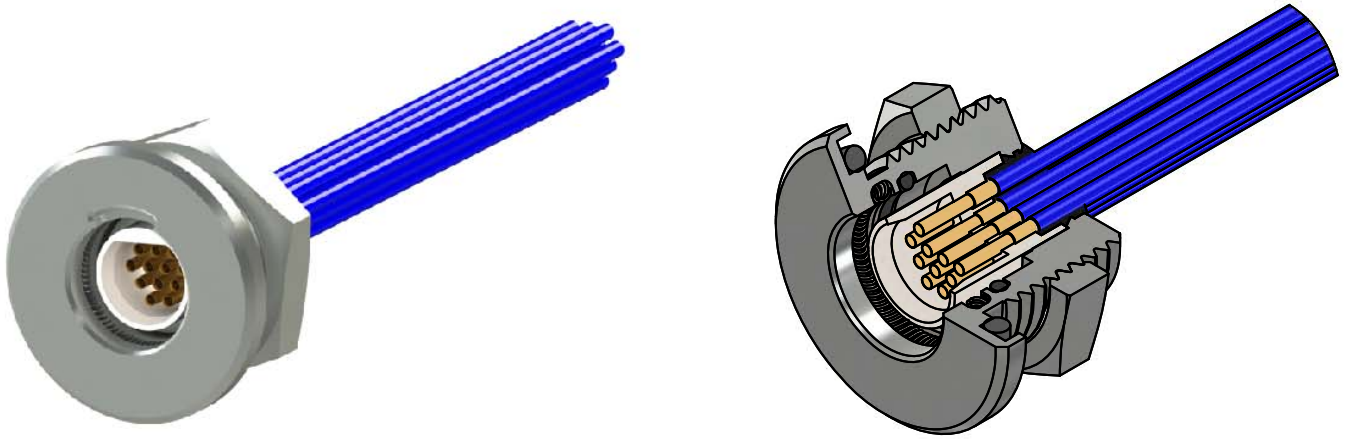


Part #	Contacts	English (IN) Metric (MM)	
		A	A
A22459-001	5	0.490	12.45
A22466-001	12	0.530	13.46
A22473-001	16	0.620	15.75
A22480-001	27	0.655	16.64
A22546-001	39	0.735	18.67



# Metal - Socket - Break Away - Wired - Front Panel

BAMS-WD-FP

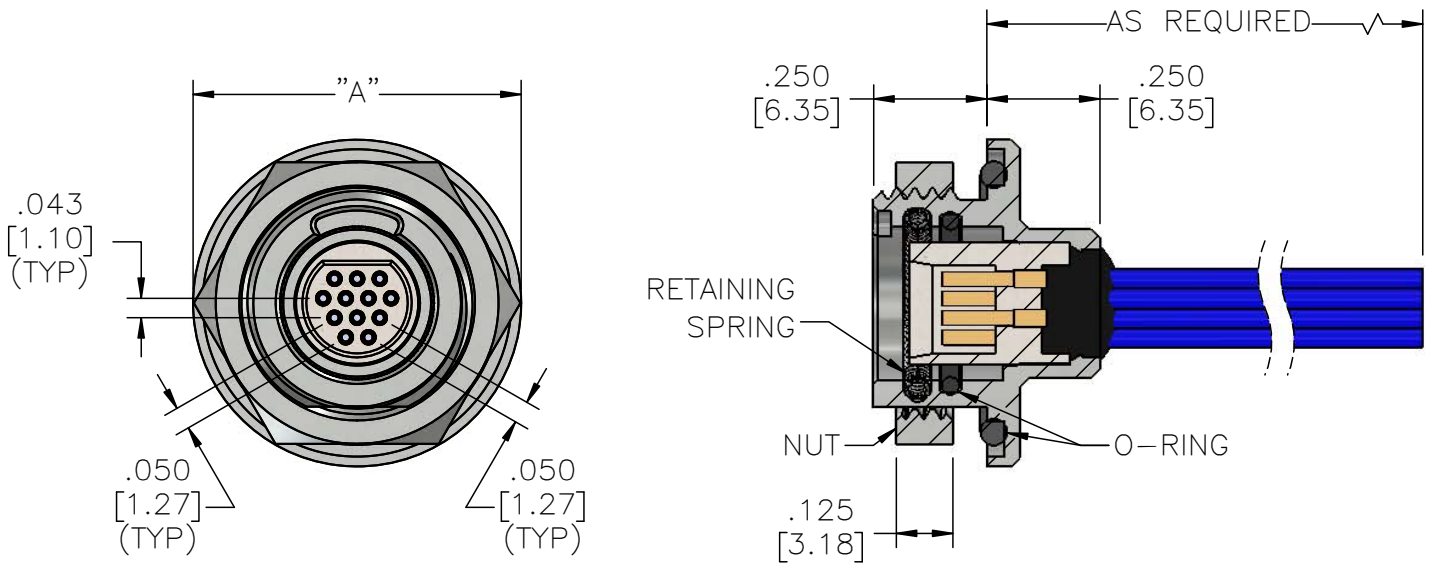
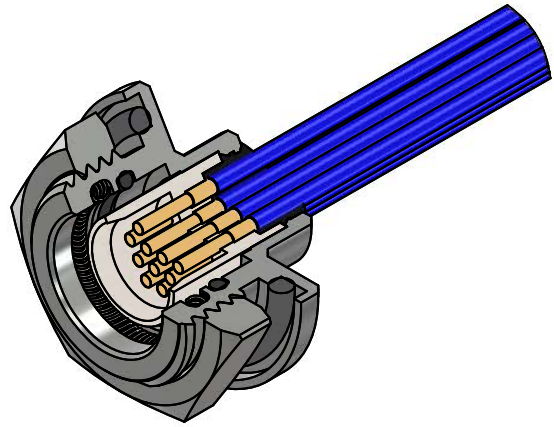
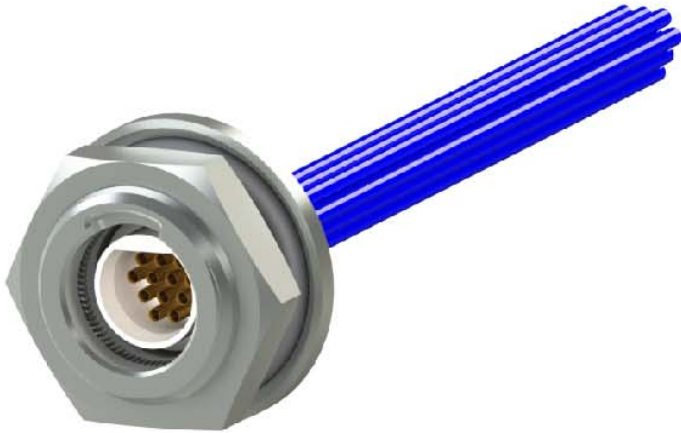


English (IN)    Metric (MM)

Part #	Contacts	A	A
A22431-001	5	0.680	17.27
A22436-001	12	0.725	18.42
A22441-001	16	0.765	19.43
A22446-001	27	0.865	21.97
A22540-001	39	0.945	24.00

# Metal - Socket - Break Away - Wired - Rear Panel

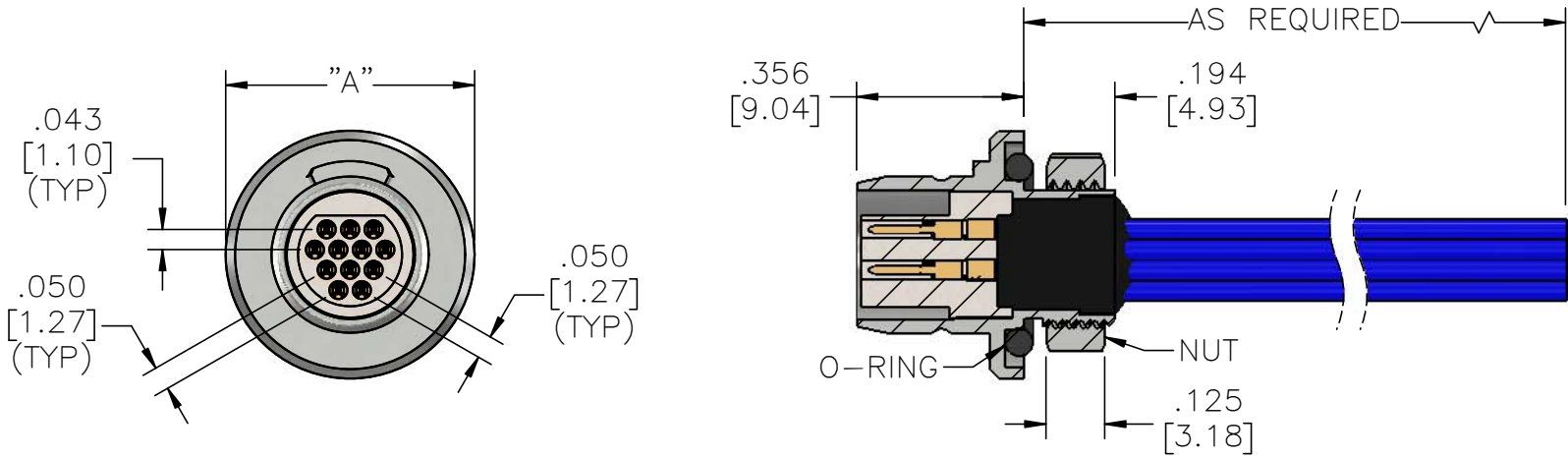
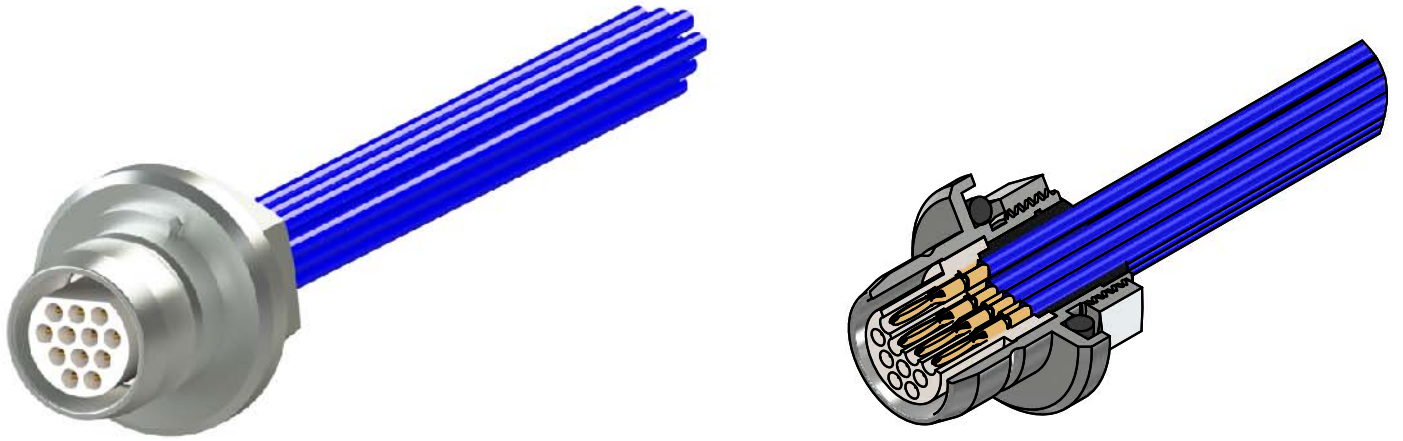
BAMS-WD-RP



English (IN) Metric (MM)

Part #	Contacts	A	A
A22432-001	5	0.680	17.27
A22437-001	12	0.725	18.42
A22442-001	16	0.765	19.43
A22447-001	27	0.865	21.97
A22541-001	39	0.915	23.24

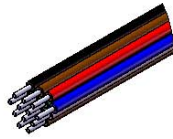








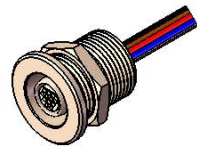
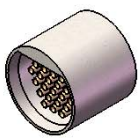






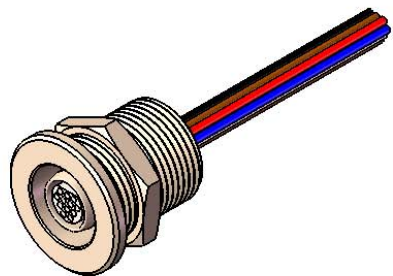
**Metal - Pin - Break Away -  
Wired - Protruding Panel**  
BAMP-WD-PP



**English (IN) Metric (MM)**

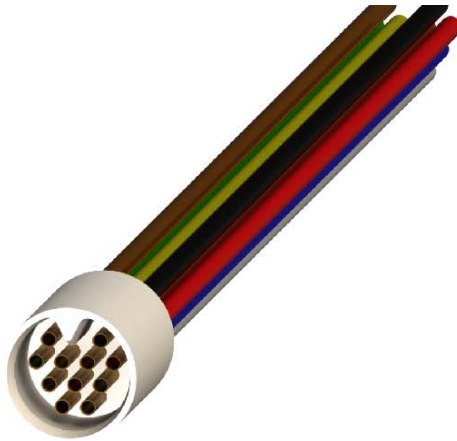
Part #	Contacts	A	A
A22435-001	5	0.490	12.45
A22440-001	12	0.530	13.46
A22445-001	16	0.620	15.75
A22450-001	27	0.655	16.64
A22537-001	39	0.745	18.92

# BREAK AWAY MICRO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
<b>KBM</b> (Keyed Break Away)	<b>5</b> <b>12</b> <b>16</b>	<b>WD: Discrete Lead Wire</b>	<b>Standard</b> <b>N: Nickel Plated Brass</b>	<b>RP: Rear Panel Mount</b>	<b>C</b> Color Coded
<b>BAM</b> (Standard Break Away)	<b>27</b> <b>39</b>				
Male (P - Pin)		<b>WC: Cable</b>	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b>		<b>OR</b> O-Ring
				<b>FP: Front Panel Mount</b>	
Female (S - Socket)		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 26 AWG Max	<b>P: Passivated Stainless Steel</b>		<b>RH</b> RoHS COMPLIANT
					
			<b>OX: Black Oxide Finished Steel</b>	<b>PP: Protruding Panel Mount (male only)</b>	<b>IP68</b>
					
					
		<b>EXAMPLE:</b> KBMP-12-WD-10.0-C-FP-N-OR			

# NANO 360<sup>®</sup> Plastic

## Nano Circular Discrete Leadwire/ Cable (Type WD/WC)



### Electrical-Mechanical Specifications

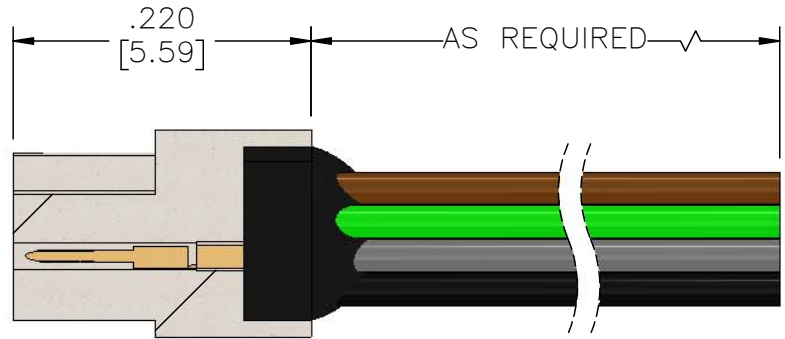
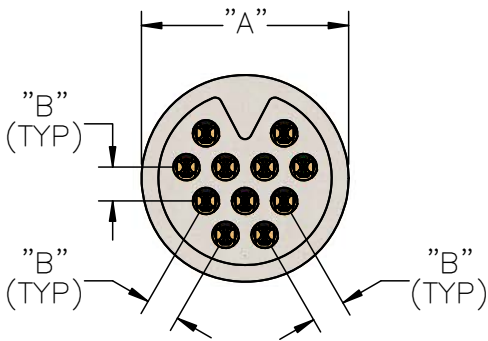
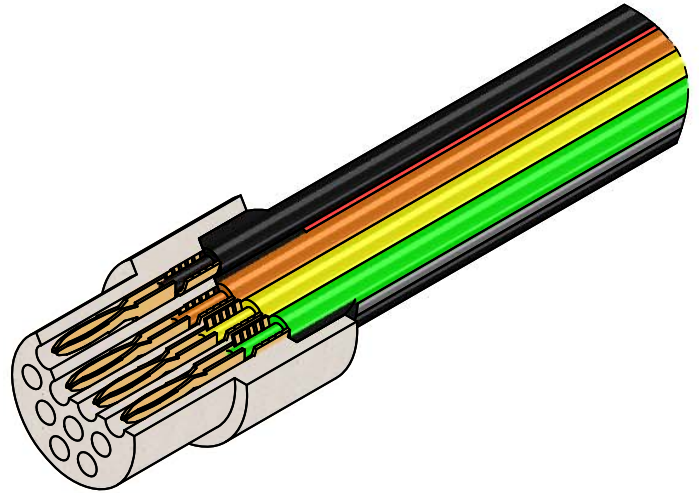
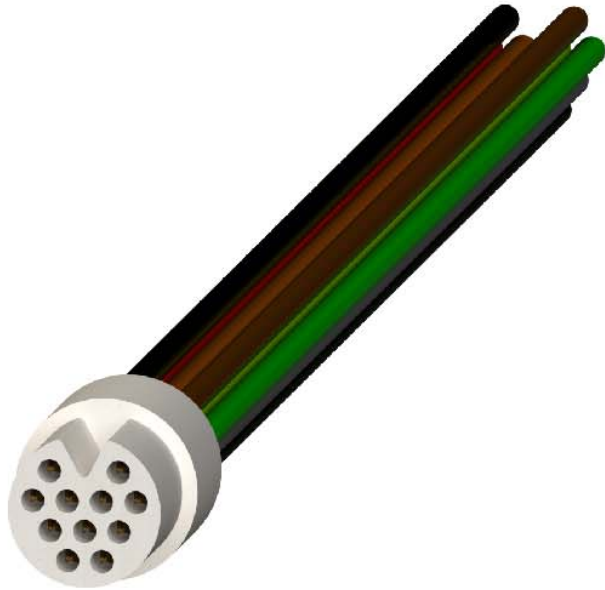
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C
- Dielectric Withstand Voltage: \_\_\_\_\_ 250 VAC RMS @sea level
- Contact Resistance: \_\_\_\_\_ 71 milliohms(71 mV) Max @1 Amps
- Current Rating: \_\_\_\_\_ 1 Amps per contact
- Durability: \_\_\_\_\_ >2000 Mating Cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71 g) typical per contact

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Wire: \_\_\_\_\_ 32 AWG (7-40) PTFE, color coded

# Plastic - Pin - Wired

## NCP-WD

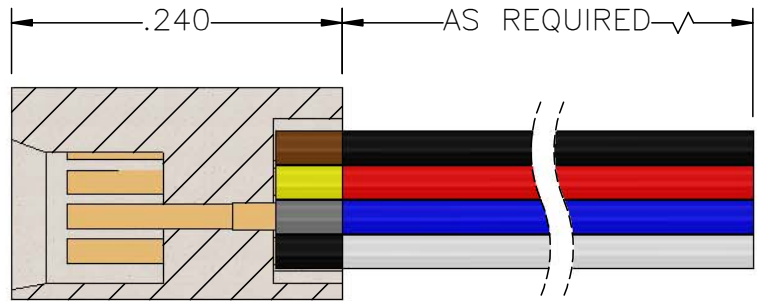
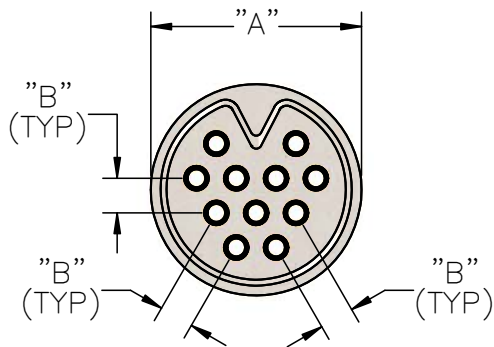
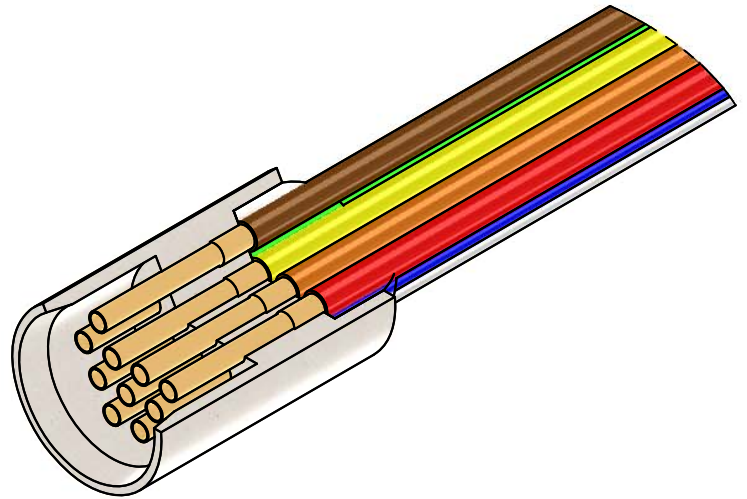


Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79100-001	6	0.122	0.025	3.10	0.64
A79102-001	11	0.153		3.89	
A79104-001	16	0.181		4.60	
A79106-001	28	0.217		5.51	
A79120-001	39	0.305	0.035	7.75	0.89



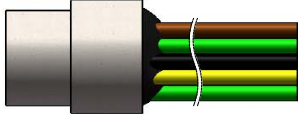



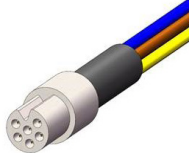
# Plastic - Socket - Wired

## NCS-WD



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79101-001	6	0.122	0.025	3.10	0.64
A79103-001	11	0.153		3.89	
A79105-001	16	0.181		4.60	
A79107-001	28	0.217		5.51	
A79121-001	39	0.305	0.035	7.75	0.89

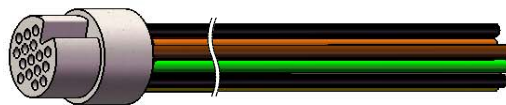
# NANO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Options
NC	6	<b>WD: Discrete Lead Wire</b>	<b>C</b> Color Coded
	11		
Male (P - Pin)	16		
	28		
	39		
Female (S - Socket)		<b>WC: Cable</b>	<b>CLIP</b> Locking Clip
Female (S - Socket)		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 32 AWG Max	<b>RH</b> RoHS COMPLIANT
			<b>ST: Inline Shell w/ Shrink Tube</b>
			

*Non-Standard Option*  
**OM**  
Overmold (Contact Omnetics for Overmold Information & Availability)

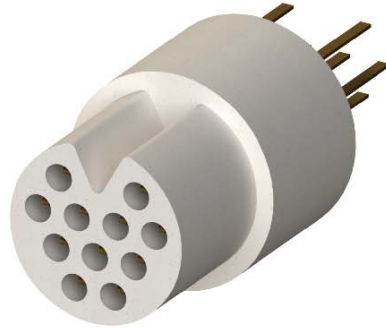


**EXAMPLE:**  
NCP-16-WD-12.0-C



# NANO 360<sup>®</sup> Plastic

## Nano Circular Straight Thru-Hole Tail



### Electrical-Mechanical Specifications

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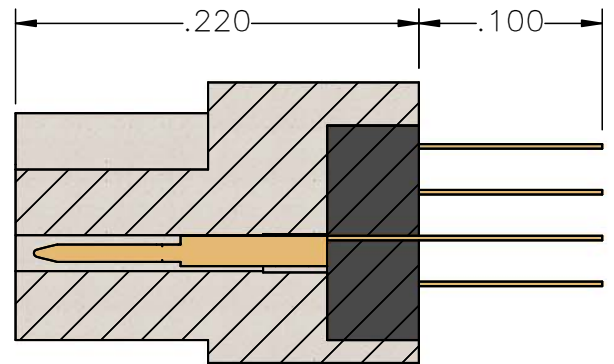
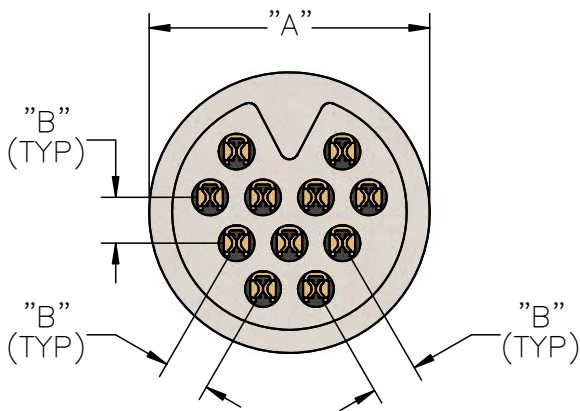
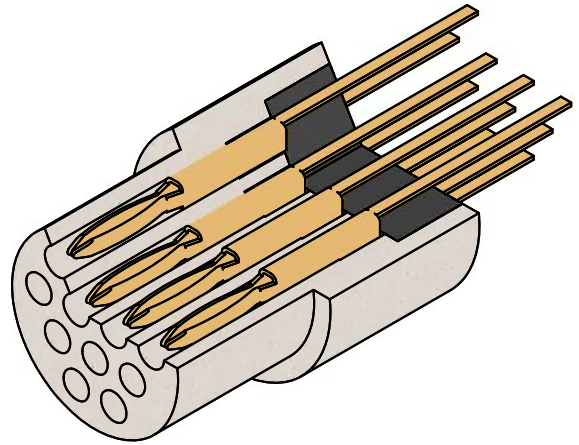
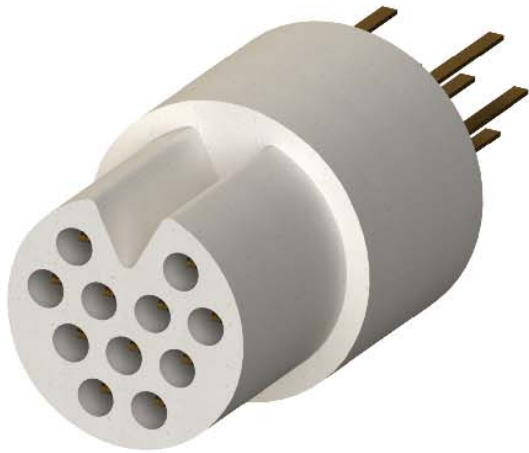
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C
- Dielectric Withstand Voltage: \_\_\_\_\_ 250 VAC RMS @sea level
- Contact Resistance: \_\_\_\_\_ 71 milliohms(71 mV) Max @1 Amps
- Current Rating: \_\_\_\_\_ 1 Amps per contact
- Durability: \_\_\_\_\_ >2000 Mating Cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71 g) typical per contact

### Material Specifications

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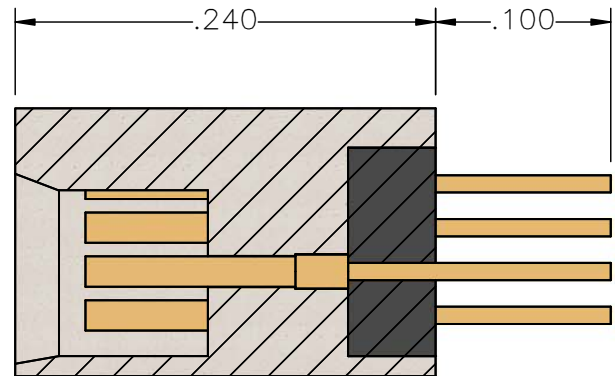
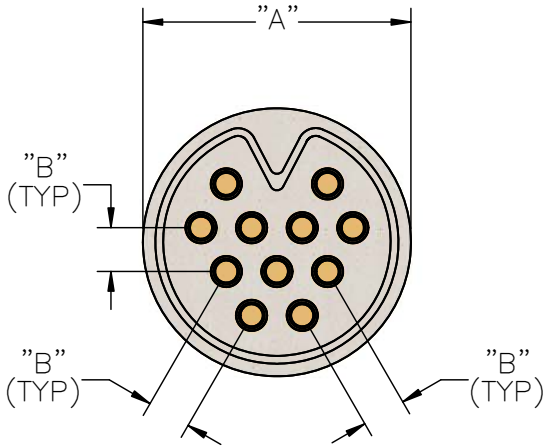
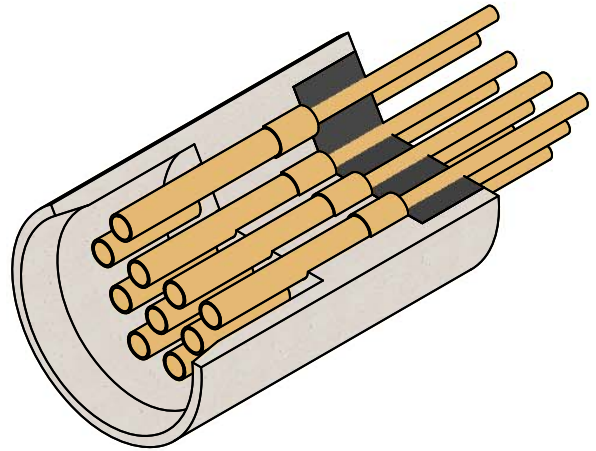
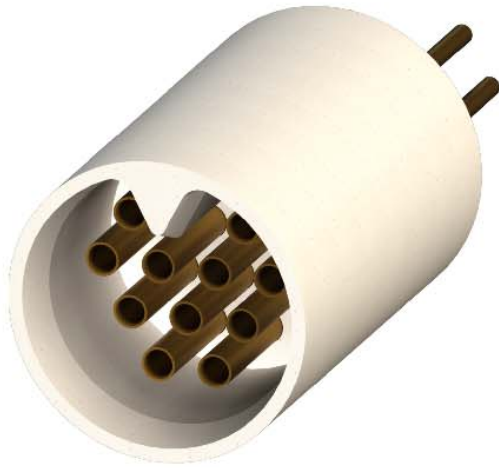
- Contact: \_\_\_\_\_ Copper Alloy per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C  
Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519

# Plastic - Pin - Straight Tail NCP-DD



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79108-001	6	0.122	0.025	3.10	0.64
A79110-001	11	0.153		3.89	
A79112-001	16	0.181		4.60	
A79114-001	28	0.217		5.51	
A79122-001	39	0.305	0.035	7.75	0.89

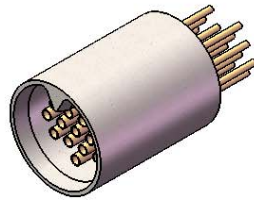
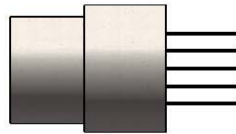
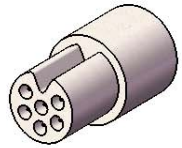
# Plastic - Socket - Straight Tail NCS-DD



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79109-001	6	0.122	0.025	3.10	0.64
A79111-001	11	0.153		3.89	
A79113-001	16	0.181		4.60	
A79115-001	28	0.217		5.51	
A79123-001	39	0.305	0.035	7.75	0.89

# NANO CIRCULAR STRAIGHT THRU-HOLE TAIL (TYPE DD)

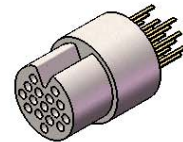
Series	# of Contacts	Termination Type	Options
NC	6	DD: Straight Thru-Hole	RH RoHS COMPLIANT
Male (P - Pin)	11		
	16		
	28		
Female (S - Socket)	39		



Female  
(S - Socket)



**EXAMPLE:**  
NCP-16-DD-RoHS





# NANO 360<sup>®</sup> Metal

## Nano Circular Threaded

Optional IP68 rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139
- Contact Resistance: \_\_\_\_\_ 71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139
- Current Rating: \_\_\_\_\_ 1 Amp per MIL-DTL-32139
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71 g) typical per contact

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 32 AWG, (7-40) tinned copper, PFA color coded, Black polyurethane jacket
- Wire: \_\_\_\_\_ 32 AWG (7-40) PTFE, color coded

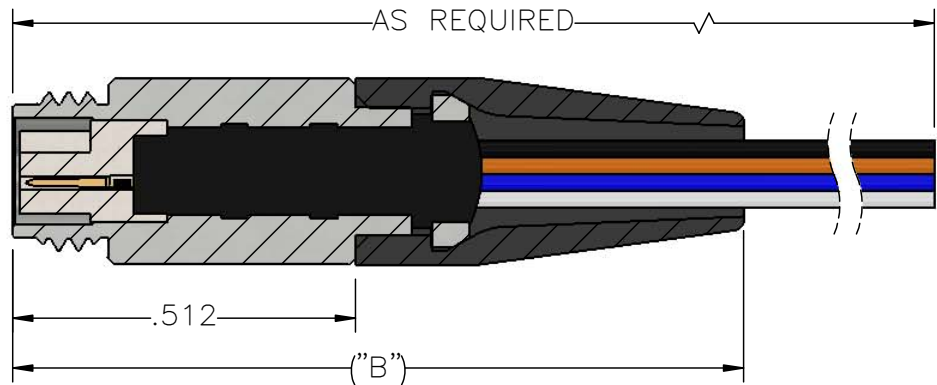
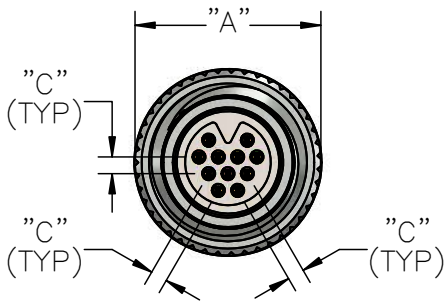
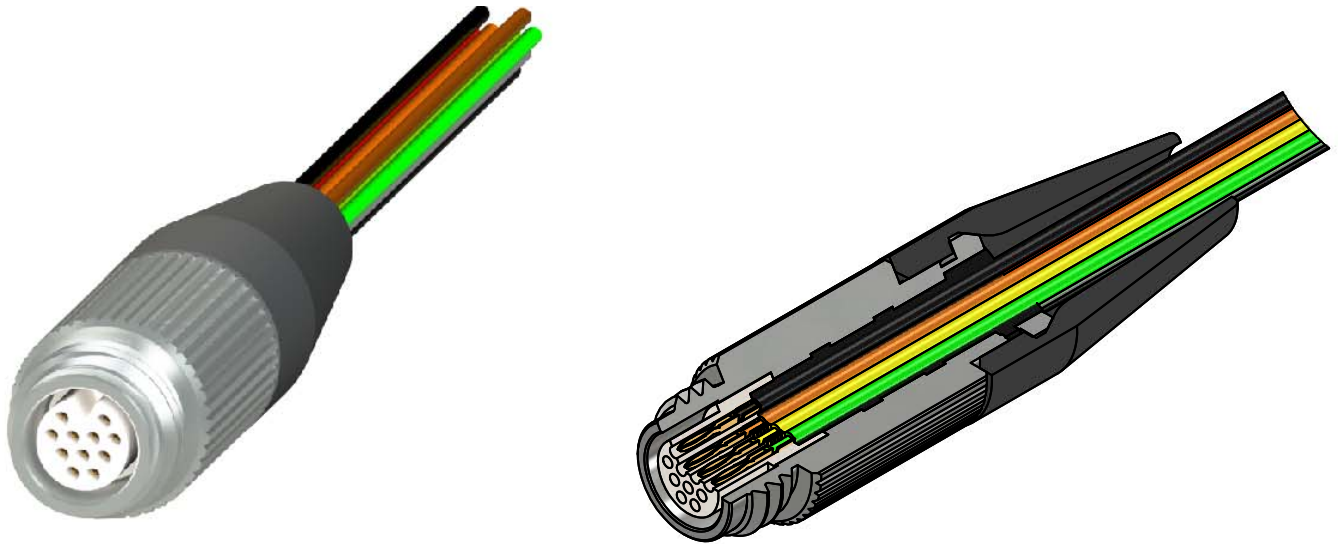
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Threaded - Wired - Inline - Strain Relief

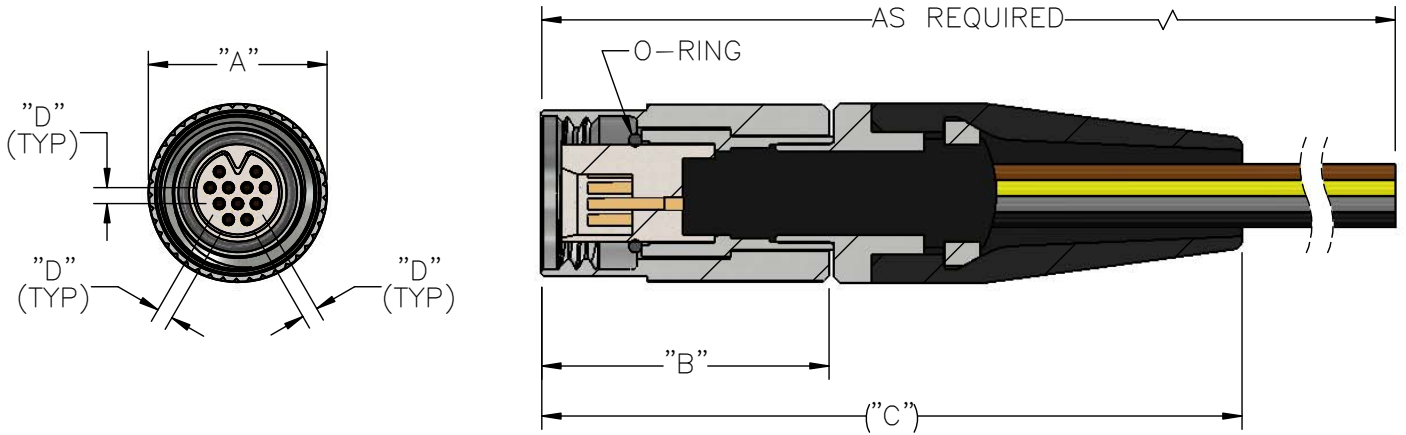
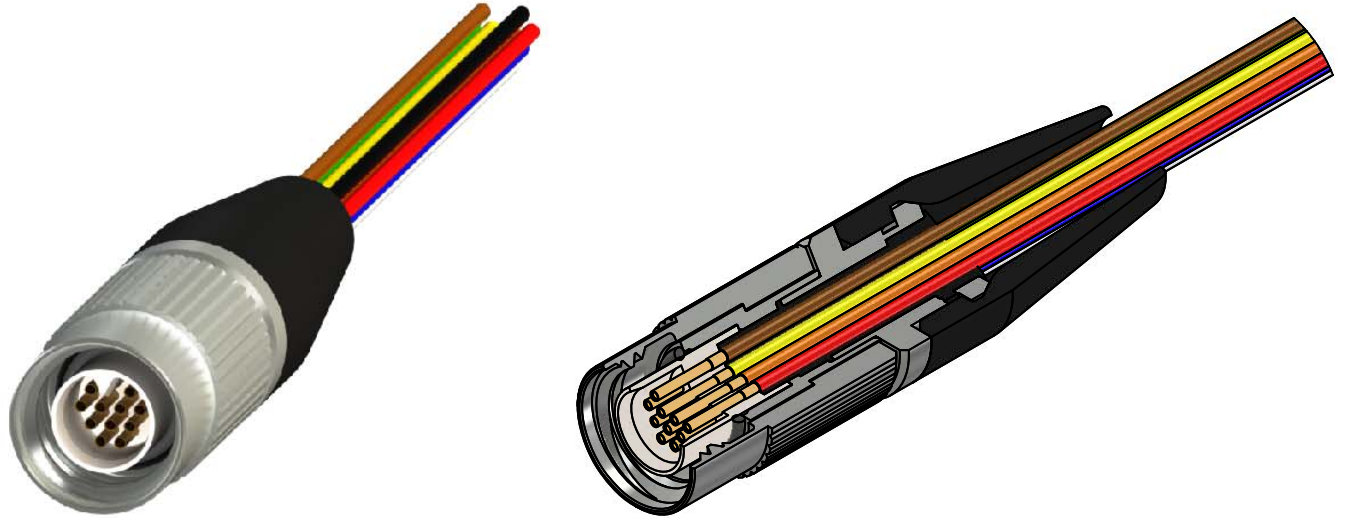
MNCP-WD-IS-SR



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79150-001	6	0.25	1.1	0.025	6.35	27.94	0.64
A79152-001	11	0.28			7.11		
A779154-001	16	0.32	1.3		8.13	33.02	
A79156-001	28	0.37	1.6		9.40	40.64	
A79465-001	39	0.47	1.7	0.030	11.81	43.18	0.76

# Metal - Socket - Threaded - Wired - Inline - Strain Relief

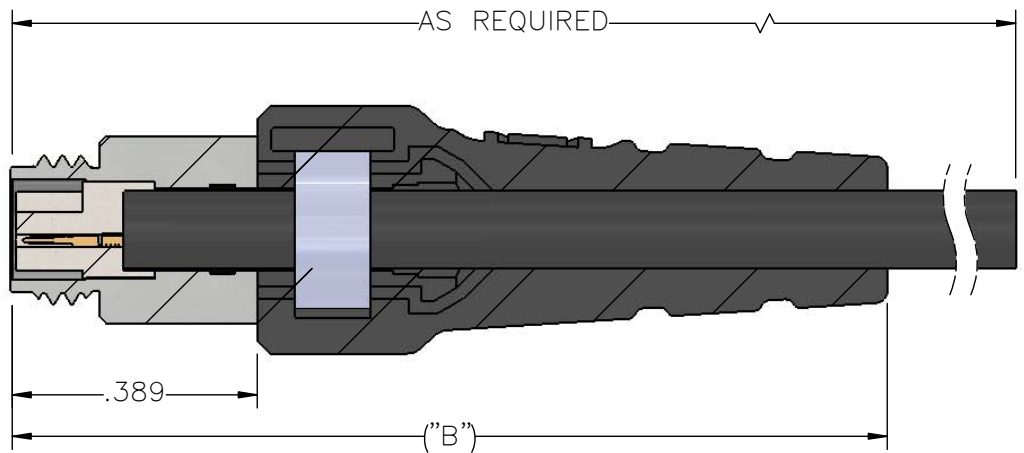
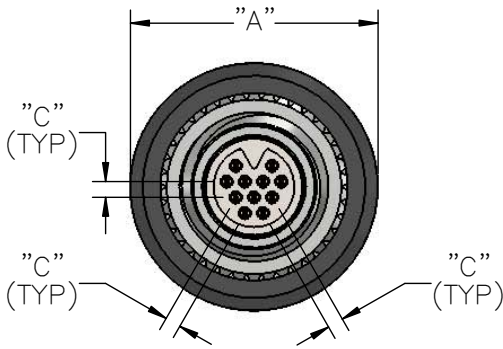
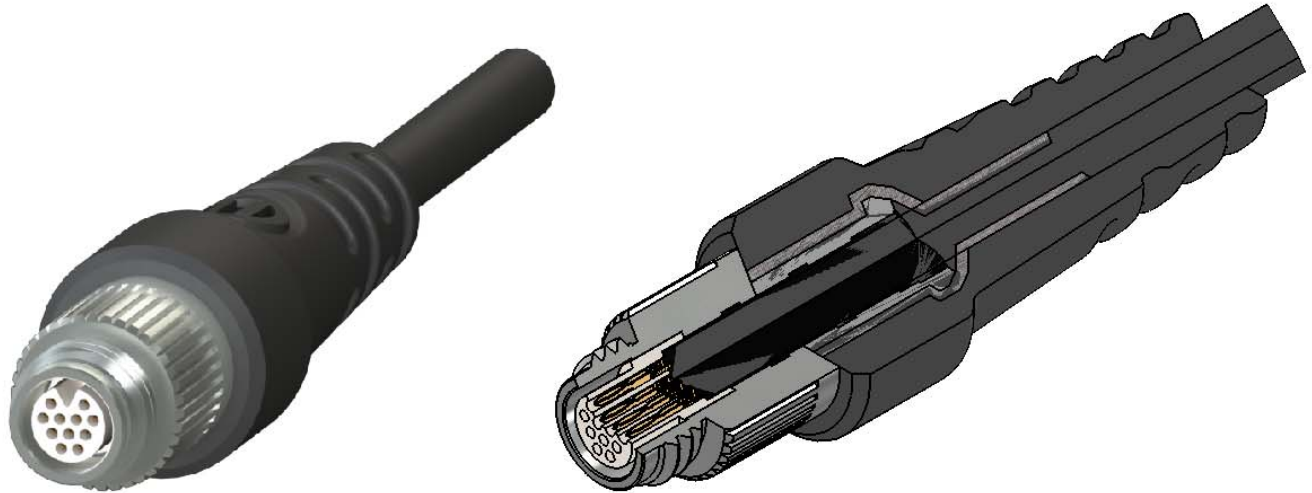
MNCS-WD-IS-SR



Part #	Contacts	English (IN)				Metric (MM)			
		A	B	C	D	A	B	C	D
A79151-001	6	0.25	0.45	1.1	0.025	6.35	7.11	27.94	0.64
A79153-001	11	0.28		1.3		7.11	7.11		
A79155-001	16	0.33		1.6		8.38	7.11		
A79157-001	28	0.37	0.51	1.6	0.030	9.40	9.45	40.64	0.76
A79156-001	39	0.37				9.40	11.4		

# Metal - Pin - Threaded - Cabled - Overmold - Inline - IP68

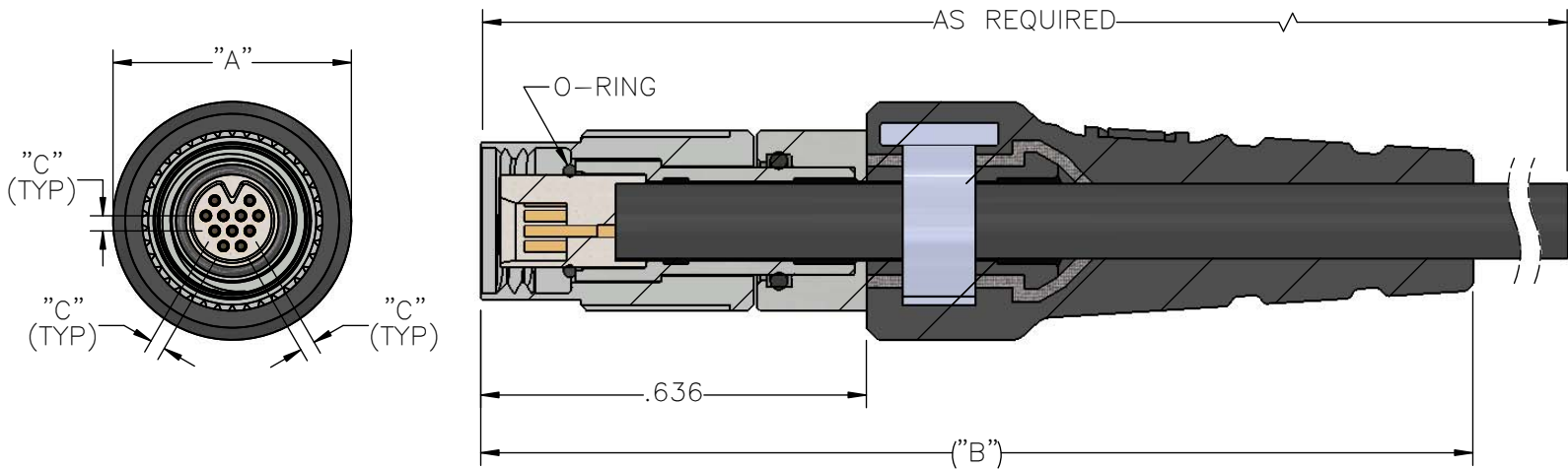
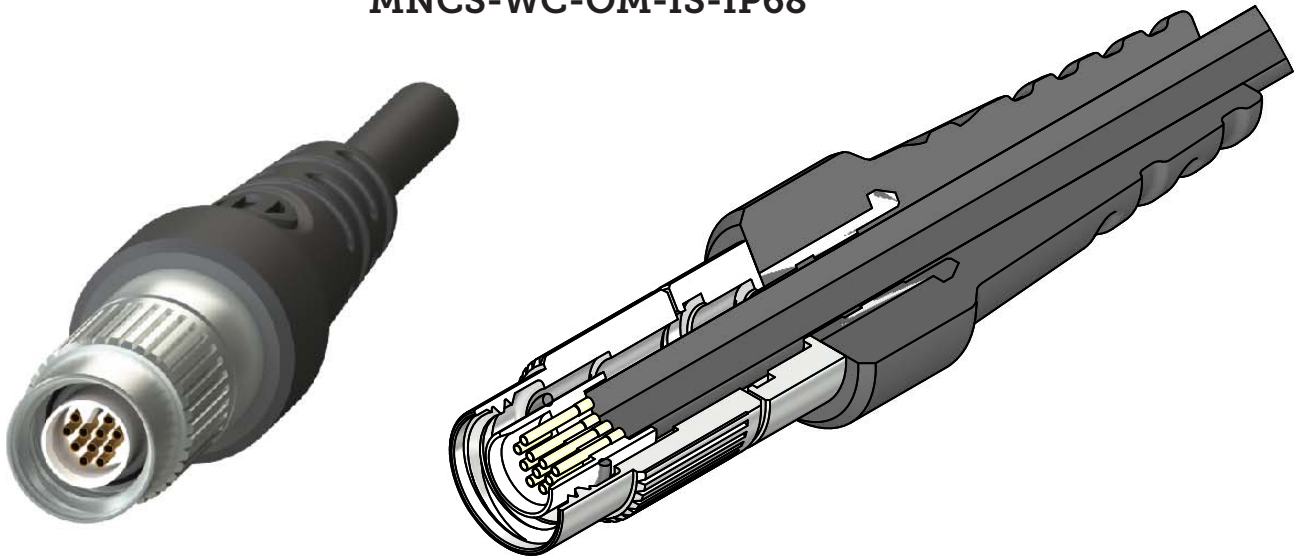
MNCP-WC-OM-IS-IP68



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79333-001	6	0.36	1.39	0.025	9.14	35.31	0.64
A79329-001	11	0.39			9.91		
A79325-001	16	0.42	1.47		10.67	37.34	
A79321-001	28	0.46	1.57	0.030	11.68	39.88	0.76
A79482-001	39	0.55			13.97		





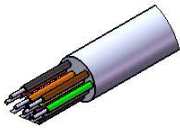









# Metal - Socket - Threaded - Cabled - Overmold - Inline - IP68

MNCS-WC-OM-IS-IP68



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79332-001	6	0.36	1.640	0.025	9.14	41.66	0.64
A79328-001	11	0.39			9.91		
A79324-001	16	0.42	1.710		10.67	43.43	
A79320-001	28	0.46	1.820	0.030	11.68	46.23	0.76
A79483-001	39	0.55			13.97		

# METAL NANO CIRCULAR THREADED DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

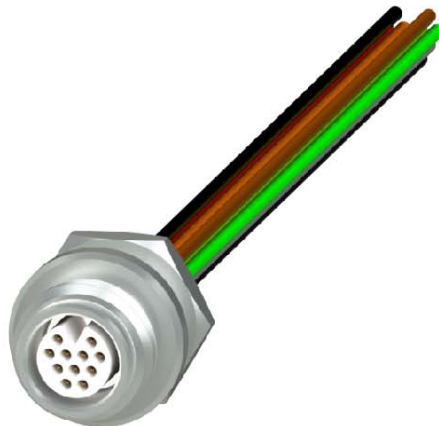
Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
MNC	6	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>IS: Inline Shell</b> 	<b>C</b> Color Coded 
	11				
Male (P - Pin)	16	<b>WC: Cable</b> 	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b> 	<b>SR: Inline Shell w/ Strain Relief</b> 	<b>OR</b> O-Ring 
	28				
	39				
Female (S - Socket)		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 32 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>ST: Inline Shell w/ Shrink Tube</b> 	<b>IP68</b> 
	<b>OX: Black Oxide Finished Steel</b> 	<b>RH</b> RoHS COMPLIANT 			
					<b>OM</b> Overmold (Contact Omnetics for Overmold Information & Availability) 

**EXAMPLE:**  
MNCS-11-WD-10.0-C-IS-N-SR-OR



## Nano Threaded Panel Mount

Optional IP68 Rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139
- Contact Resistance: \_\_\_\_\_ 71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139
- Current Rating: \_\_\_\_\_ 1 Amp per MIL-DTL-32139
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71 g) typical per contact

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 32 AWG, (7-40) tinned copper, PFA color coded, Black polyurethane jacket
- Wire: \_\_\_\_\_ 32 AWG (7-40) PTFE, color coded

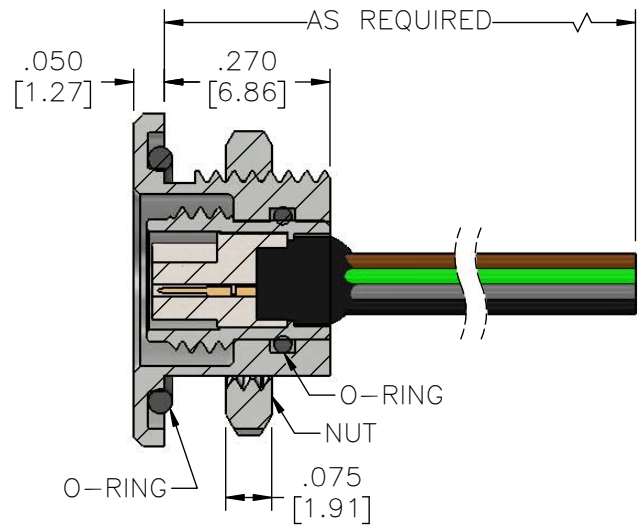
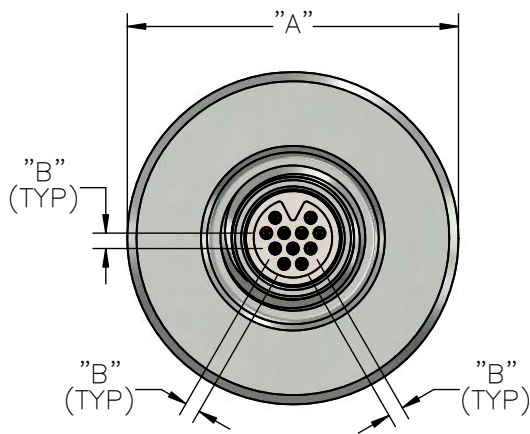
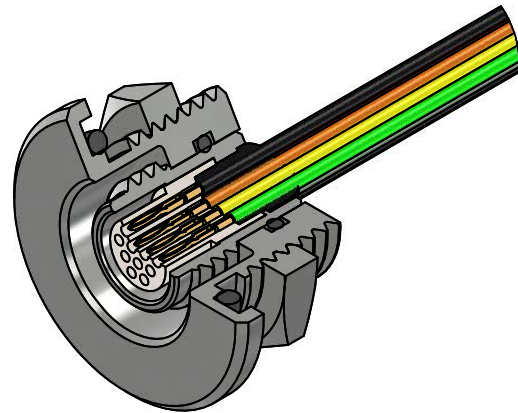
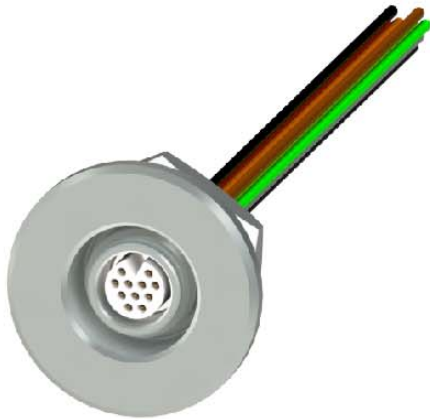
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Threaded - Wired - Front Panel - IP68

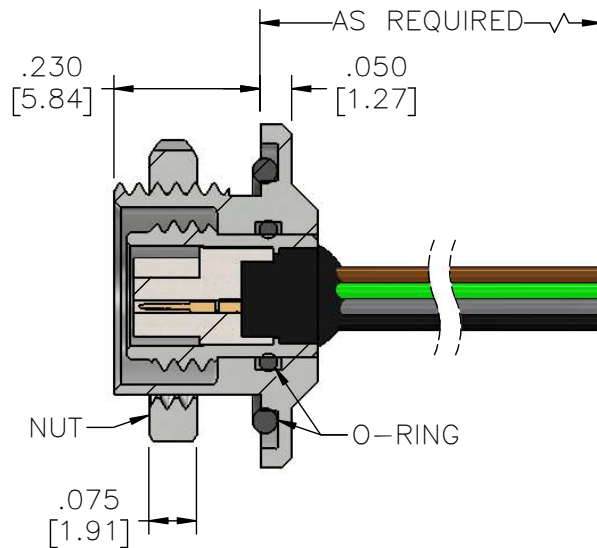
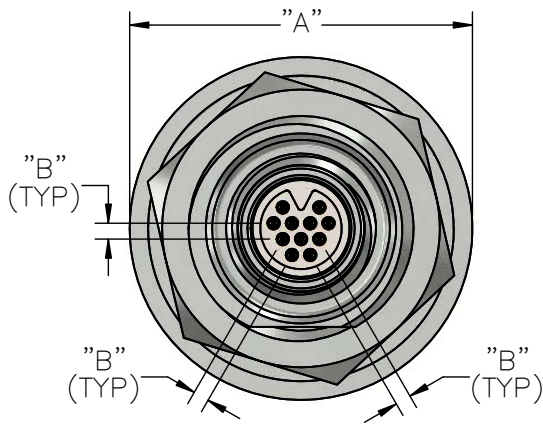
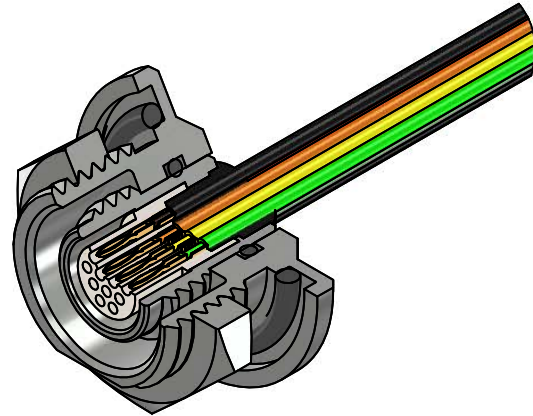
MNCP-WD-FP-IP68



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79280-001	6	0.495	0.025	12.57	0.64
A79281-001	11	0.540		13.72	
A79282-001	16	0.580		14.73	
A79283-001	28	0.615		15.62	
A79484-001	39	0.735	0.030	18.67	0.76

# Metal - Pin - Threaded - Wired - Rear Panel - IP68

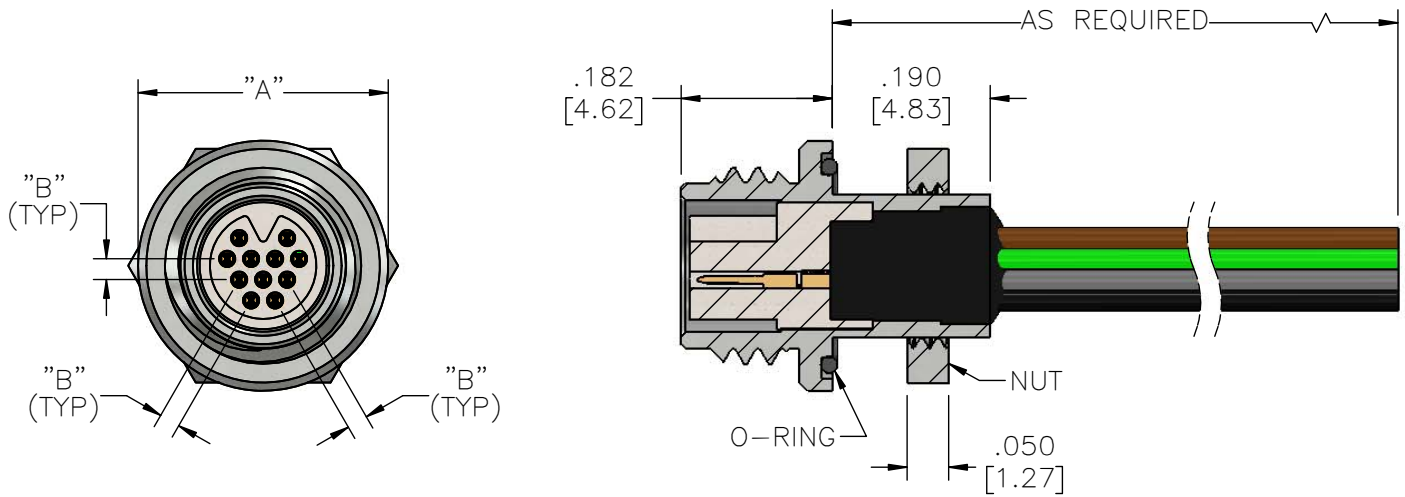
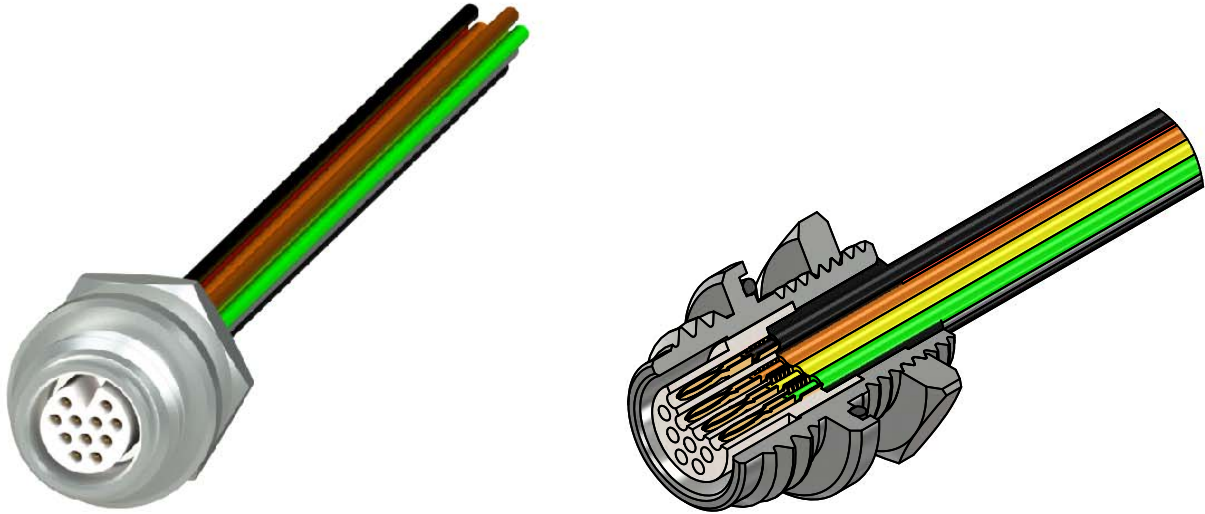
MNCP-WD-RP-IP68



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79284-001	6	0.495	0.025	12.57	0.64
A79285-001	11	0.540		13.72	
A79286-001	16	0.580		14.73	
A79287-001	28	0.615		15.62	
A79485-001	39	0.735	0.030	18.67	0.76














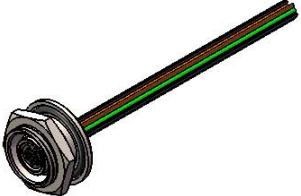
# Metal - Pin - Threaded - Wired - Protruding Panel - IP68

MNCP-WD-PP-IP68



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79288-001	6	0.330	0.025	8.38	0.64
A79289-001	11	0.400		10.16	
A79290-001	16	0.415		10.54	
A79291-001	28	0.460		11.68	
A79486-001	39	0.575		14.61	

## METAL NANO CIRCULAR THREADED DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
MNC Male (P - Pin)	6	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>FP: Front Panel Mount</b> (male only) 	<b>C</b> Color Coded 
	11				
	16	<b>WC: Cable</b> 	<b>Non-Standard Options</b> <b>BN: Black Nickel Plated Brass</b> 	<b>RP: Rear Panel Mount</b> (male only) 	<b>OR</b> O-Ring 
	28				
	39	Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 32 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>PP: Protruding Panel Mount</b> (male only) 	<b>IP68</b> 
			<b>OX: Black Oxide Finished Steel</b> 		<b>RH</b> RoHS COMPLIANT 
					

**EXAMPLE:**  
MNC-P-16-WD-10.0-N-RP-C-OR

## Nano Circular Twist-Lock

Optional IP68 Rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139
- Contact Resistance: \_\_\_\_\_ 71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139
- Current Rating: \_\_\_\_\_ 1 Amp per MIL-DTL-32139
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71 g) typical per contact

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 32 AWG, (7-40) tinned copper, PFA color coded, Black polyurethane jacket
- Wire: \_\_\_\_\_ 32 AWG (7-40) PTFE, color coded

### Shell Options

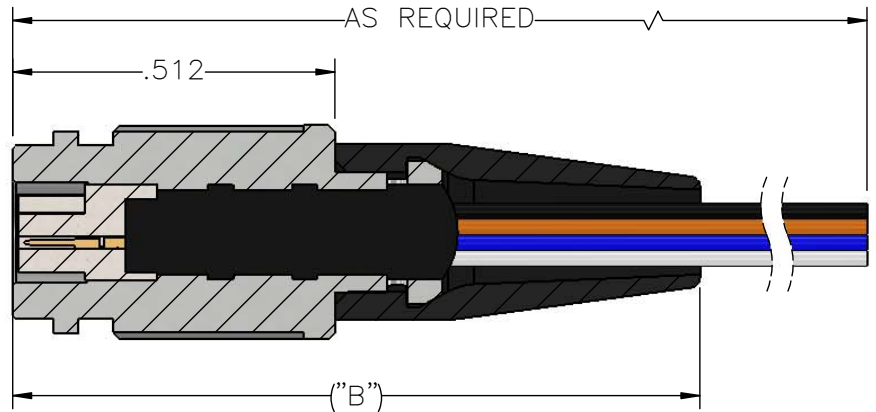
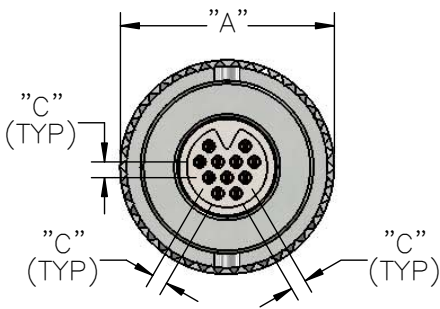
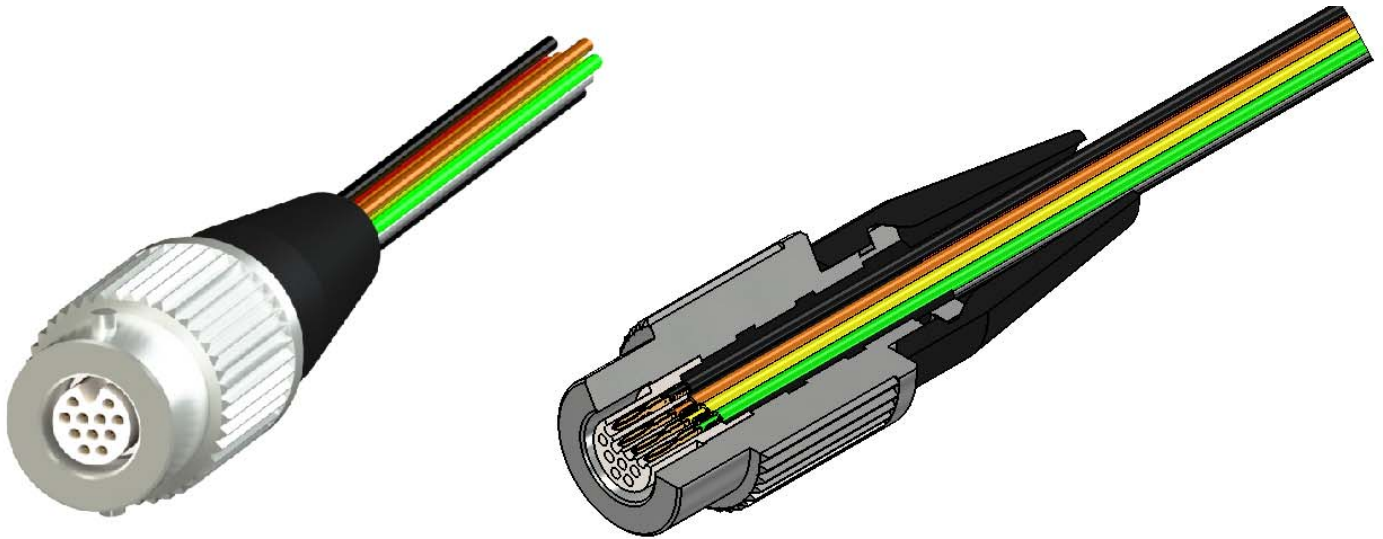
- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.



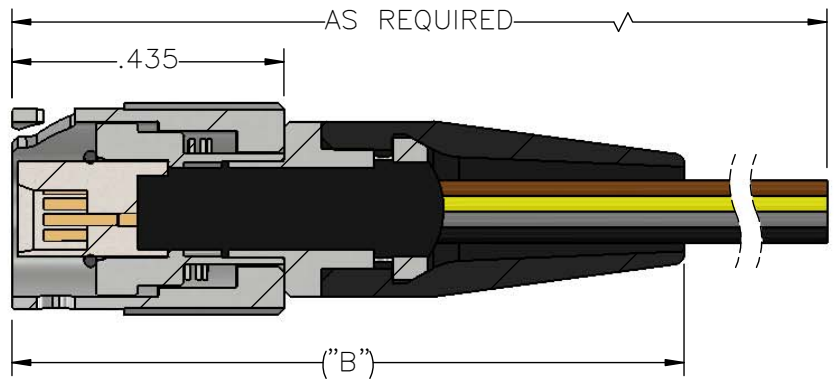
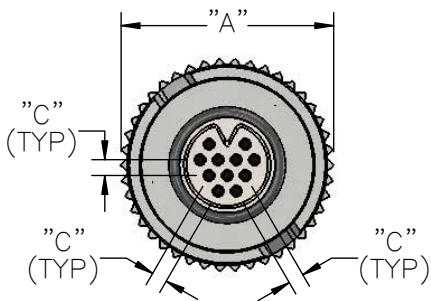
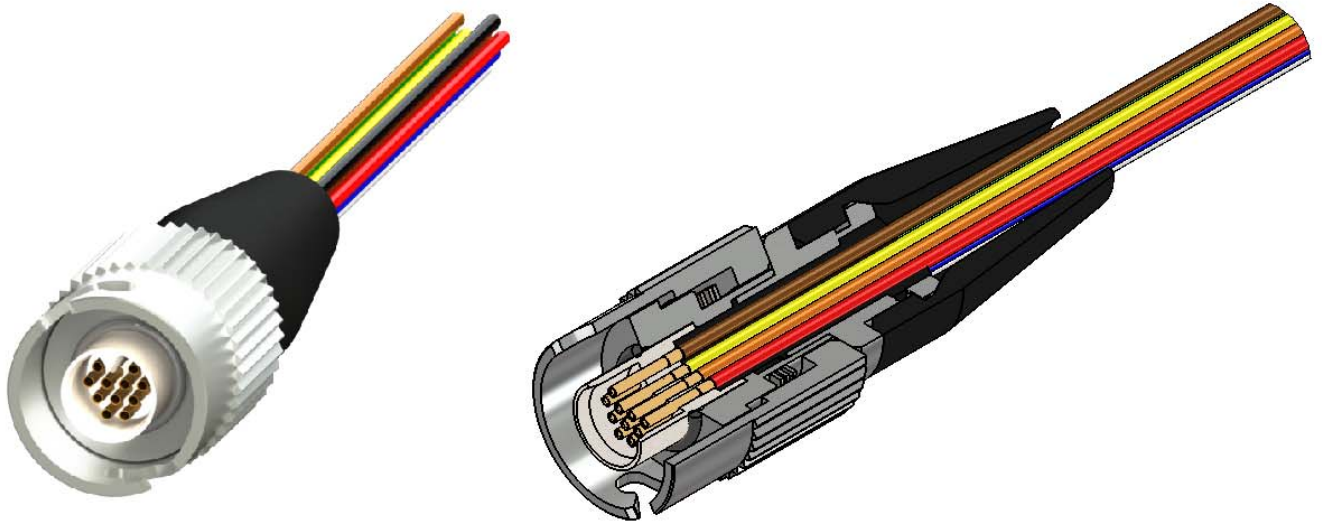
# Metal - Pin - Twist-Lock - Wired - Inline - Strain Relief

TNCP-WD-IS-SR



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79237-001	6	0.320	1.100	0.025	8.13	27.94	0.64
A79242-001	11	0.340			8.64		
A79247-001	16	0.370	1.300		9.40	33.02	
A79252-001	28	0.400	1.600	10.16	40.64		
A79477-001	39	0.496	1.700	0.030	12.60	43.18	0.76

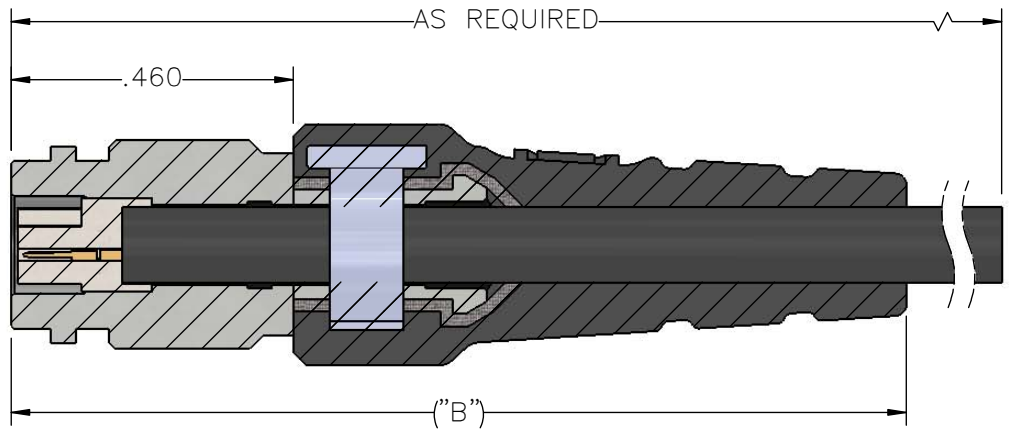
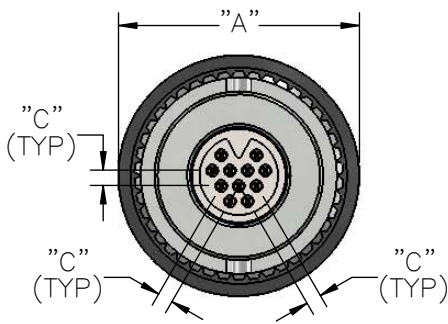
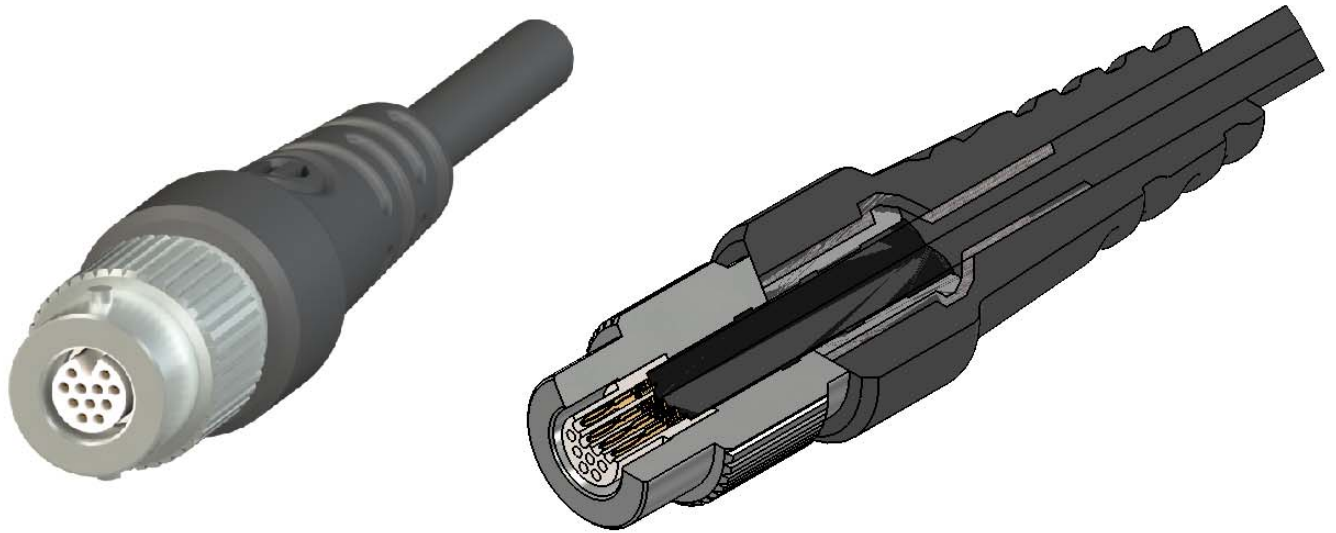
**Metal - Socket - Twist-Lock -  
Wired - Inline - Strain Relief**  
TNCS-WD-IS-SR



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79236-001	6	0.320	1.100	0.025	8.13	27.94	0.64
A79241-001	11	0.340			8.64		
A79246-001	16	0.370	1.300		9.40	33.02	
A79251-001	28	0.400	1.600		10.16	40.64	
A79478-001	39	0.500	1.700	0.030	12.70	43.18	0.76

# Metal - Pin - Twist-Lock - Cabled - Overmold - Inline - IP68

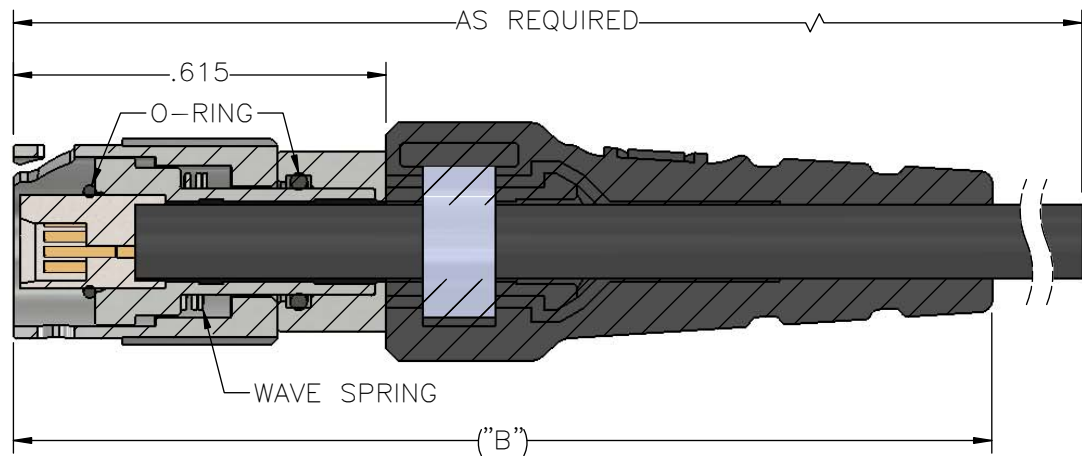
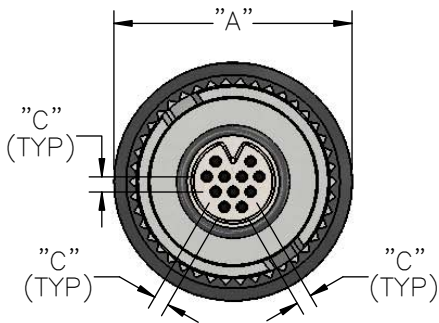
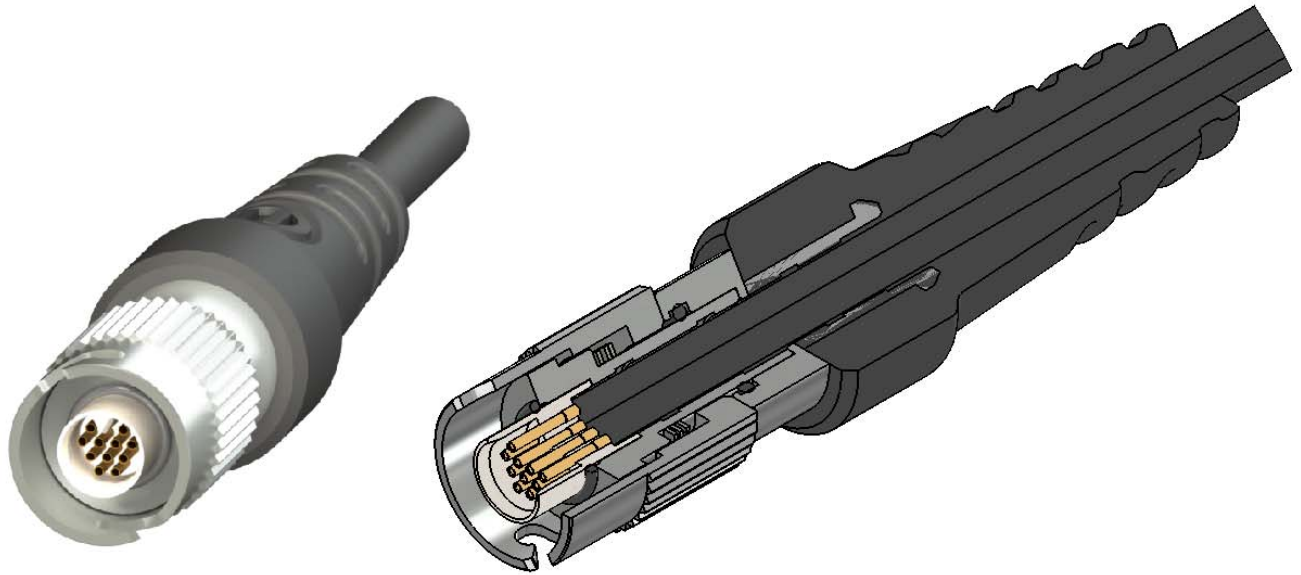
TNCP-WC-OM-IS-IP68



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79343-001	6	0.36	1.46	0.025	9.14	37.08	0.64
A79341-001	11	0.39			9.91		
A79339-001	16	0.42	1.54		10.67	39.12	
A79337-001	28	0.46	1.60		11.68	40.64	
A79494-001	39	0.55	1.64	0.030	13.97	41.66	0.76





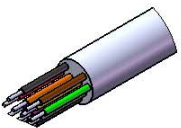







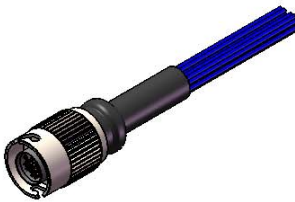

# Metal - Socket - Twist-Lock - Cabled - Overmold - Inline - IP68

TNCS-WC-OM-IS-IP68



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79342-001	6	0.36	1.600	0.025	9.14	40.64	0.64
A79340-001	11	0.39			9.91		
A79338-001	16	0.42	1.700		10.67	43.18	
A79336-001	28	0.46	1.800	0.030	11.68	45.72	0.76
A79495-001	39	0.55			13.97		

## TWIST LOCK NANO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
TNC	6	<b>WD: Discrete Lead Wire</b>	<b>Standard</b> <b>N: Nickel Plated Brass</b>	<b>IS: Inline Shell</b>	<b>C</b> Color Coded
	11				
Male (P - Pin)	16				
	28				
	39				
Female (S - Socket)		<b>WC: Cable</b>	<b>Non-Standard Options</b>	<b>SR: Inline Shell w/ Strain Relief</b>	<b>OR</b> O-Ring
			<b>BN: Black Nickel Plated Brass</b>		
		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 32 AWG Max	<b>P: Passivated Stainless Steel</b>	<b>ST: Inline Shell w/ Shrink Tube</b>	<b>IP68</b>
					<b>IP68</b>
			<b>OX: Black Oxide Finished Steel</b>		<b>RH</b> RoHS COMPLIANT
					
					<b>OM</b> Overmold (Contact Omnetics for Overmold Information & Availability)
					

**EXAMPLE:**  
TNCS-28-WD-18.0-N-IS-ST-C-OR-ROHS

## Nano Circular Twist-Lock Panel Mount

Optional IP68 Rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139
- Contact Resistance: \_\_\_\_\_ 71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139
- Current Rating: \_\_\_\_\_ 1 Amp per MIL-DTL-32139
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ >2000 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71 g) typical per contact

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 32 AWG, (7-40) tinned copper, PFA color coded, Black polyurethane jacket
- Wire: \_\_\_\_\_ 32 AWG (7-40) PTFE, color coded

### Shell Options

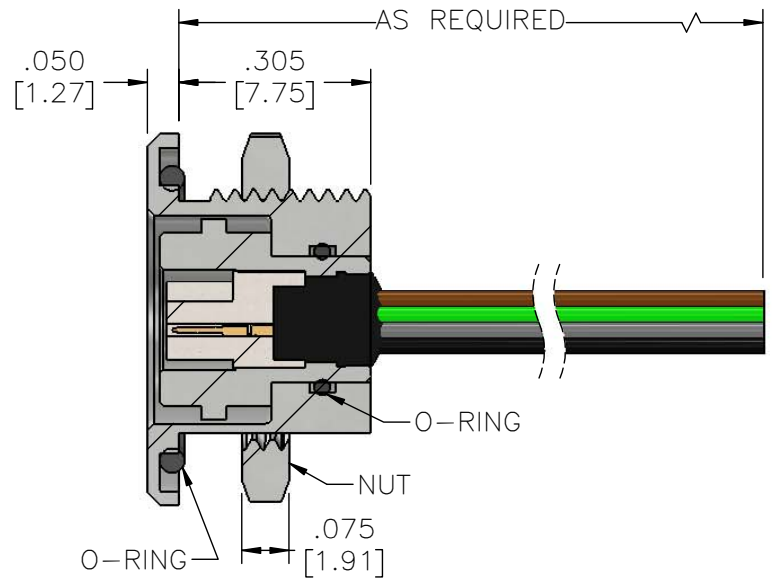
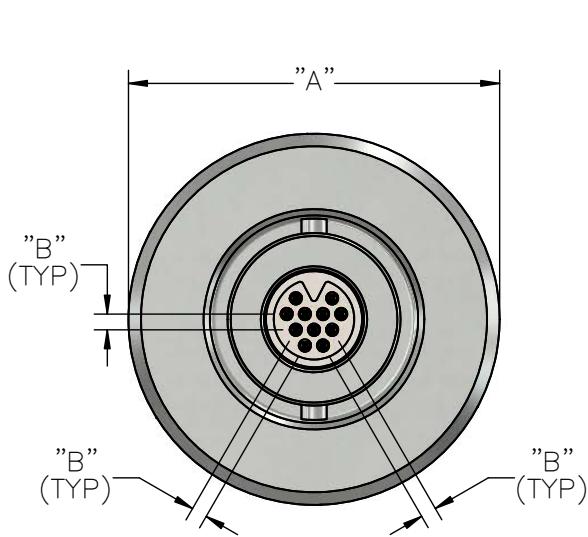
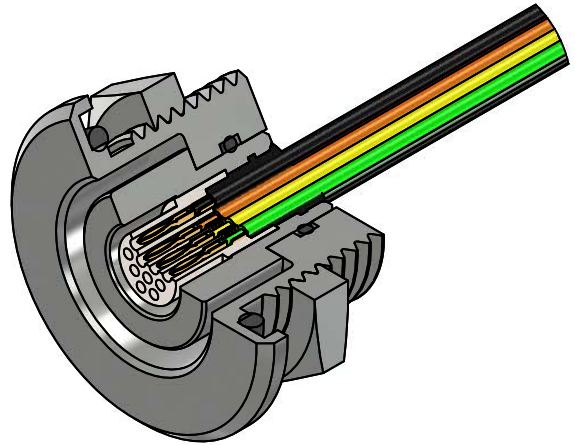
- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.



# Metal - Pin - Twist-Lock - Wired - Front Panel - IP68

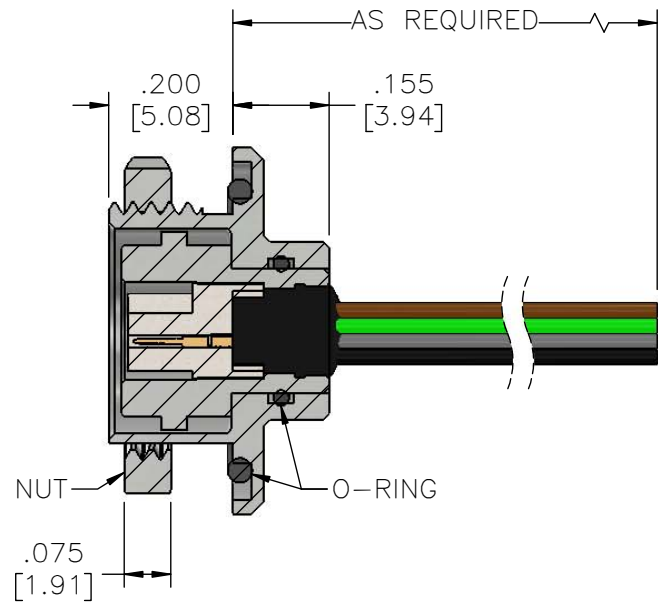
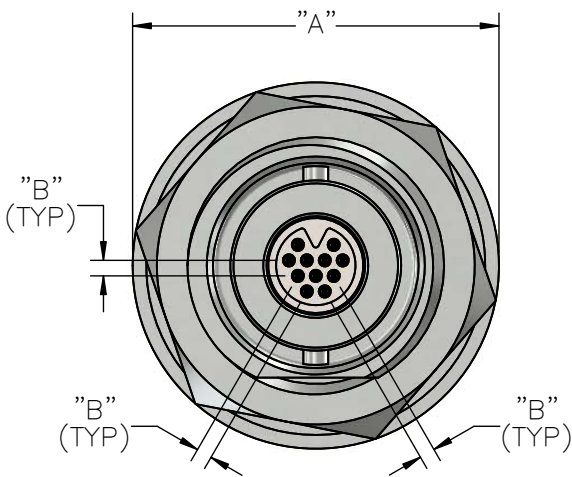
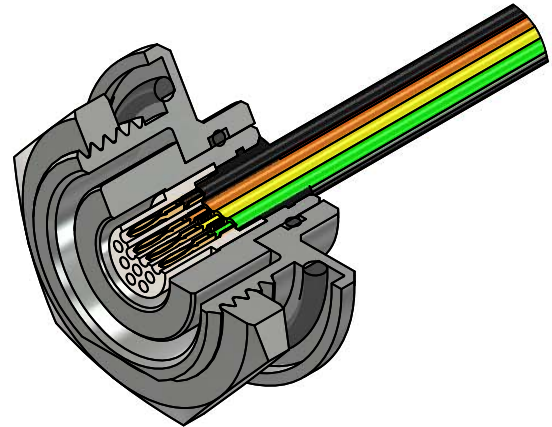
TNCP-WD-FP-IP68



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79408-001	6	0.580	0.025	14.73	0.64
A79409-001	11	0.590		14.99	
A79410-001	16	0.625		15.88	
A79411-001	28	0.650		16.51	
A79496-001	39	0.775	0.030	19.69	0.76

# Metal - Pin - Twist-Lock - Wired - Rear Panel - IP68

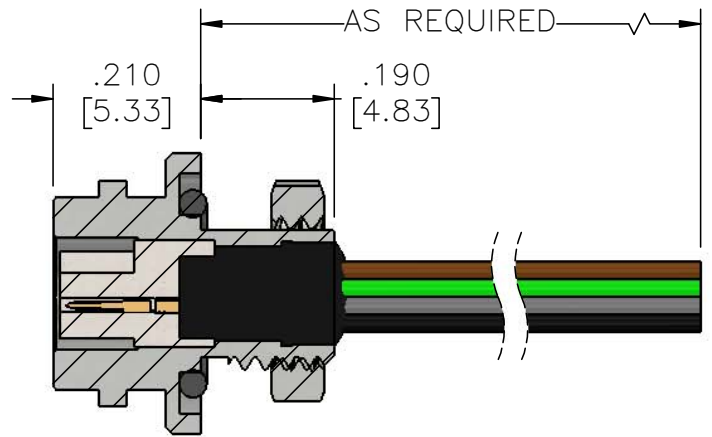
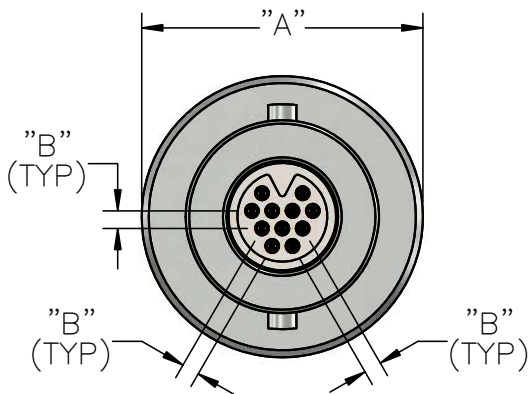
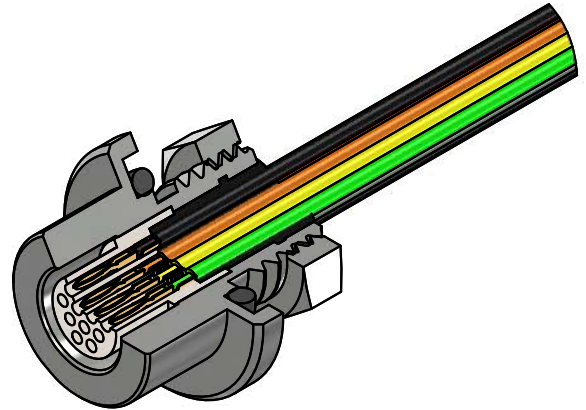
TNCP-WD-RP-IP68



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79412-001	6	0.590	0.025	14.99	0.64
A79413-001	11			15.88	
A79414-001	16	0.625		16.51	
A79415-001	28	0.650			
A79497-001	39	0.775	0.030	19.69	0.76

# Metal - Pin - Twist-Lock - Wired - Protruding Panel - IP68

TNCP-WD-PP-IP68



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79240-001	6	0.330	0.025	8.38	0.64
A79245-001	11	0.400		10.16	
A79250-001	16	0.415		10.54	
A79255-001	28	0.460		11.68	
A79481-001	39	0.575	0.030	14.61	0.76



# NANO 360<sup>®</sup> Metal

## Nano Circular Break Away

Optional IP68 rating



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139
- Contact Resistance: \_\_\_\_\_ 71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139
- Current Rating: \_\_\_\_\_ 1 Amp per MIL-DTL-32139
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ 500 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71g) typical per contact

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 32 AWG, (7-40) tinned copper, PFA color coded, Black polyurethane jacket
- Wire: \_\_\_\_\_ 32 AWG (7-40) PTFE, color coded

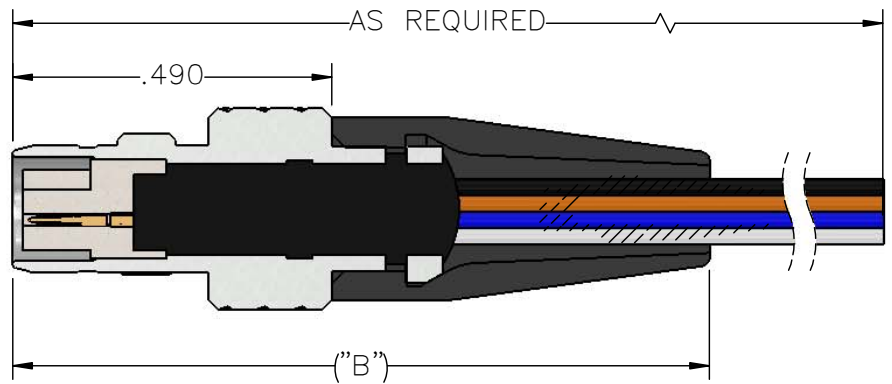
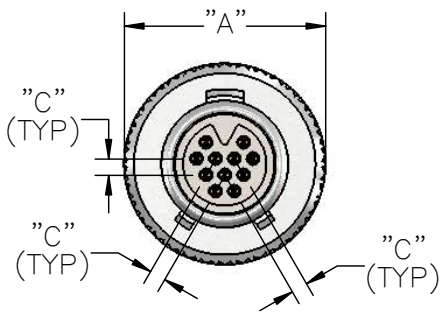
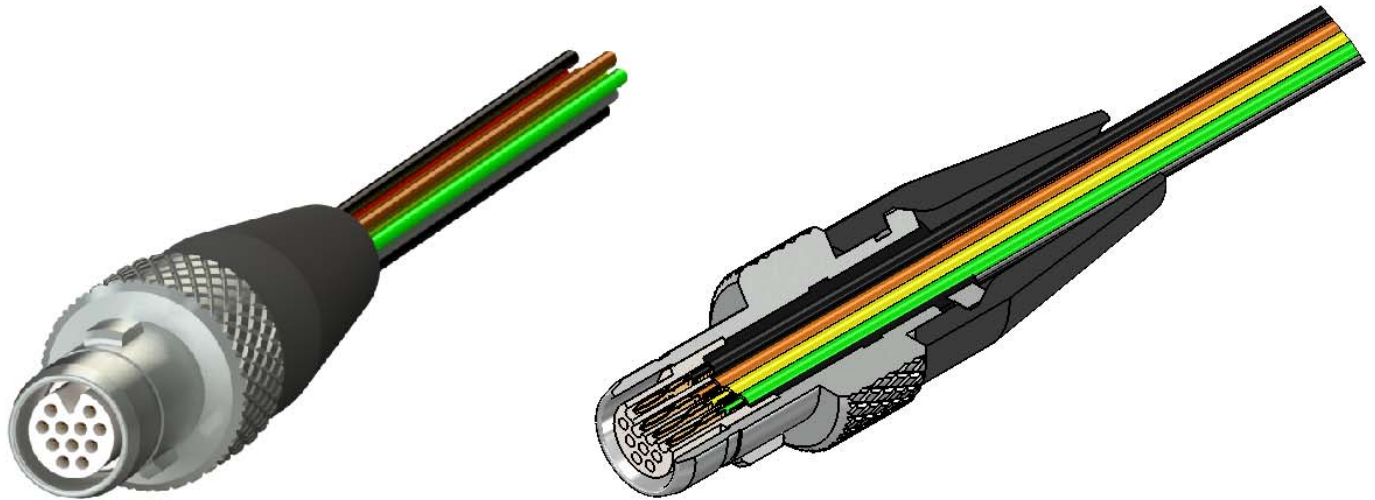
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Keyed Break Away - Wired - Inline - Strain Relief

KBNP-WD-IS-SR

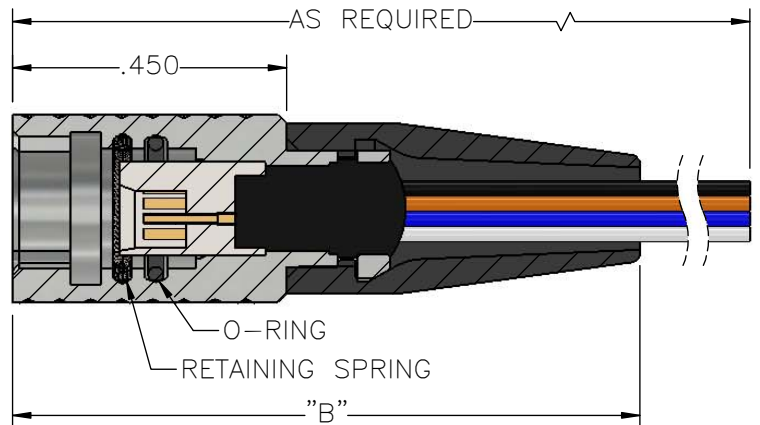
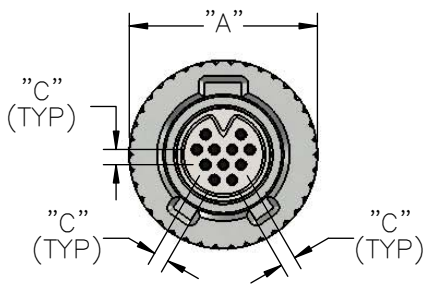
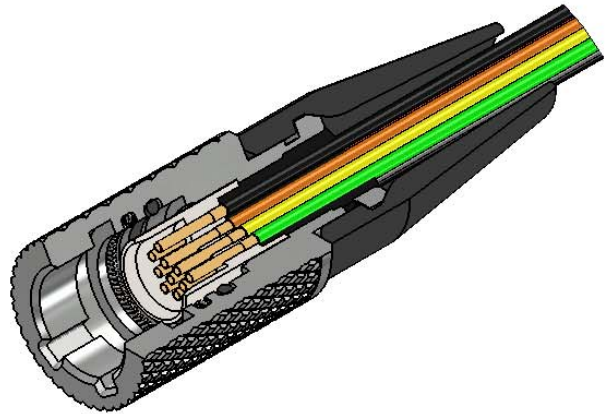


Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79424-001	6	0.28	1.000	0.025	7.11	25.40	0.64
A79433-001	11	0.31	1.100		7.87	27.94	
A79442-001	16	0.34	1.300		8.64	33.02	
A79451-001	28	0.39	1.500		9.91	38.10	
A79460-001	39	0.46	1.700	0.03	11.68	43.18	0.76



# Metal - Socket - Keyed Break Away - Wired - Inline - Strain Relief

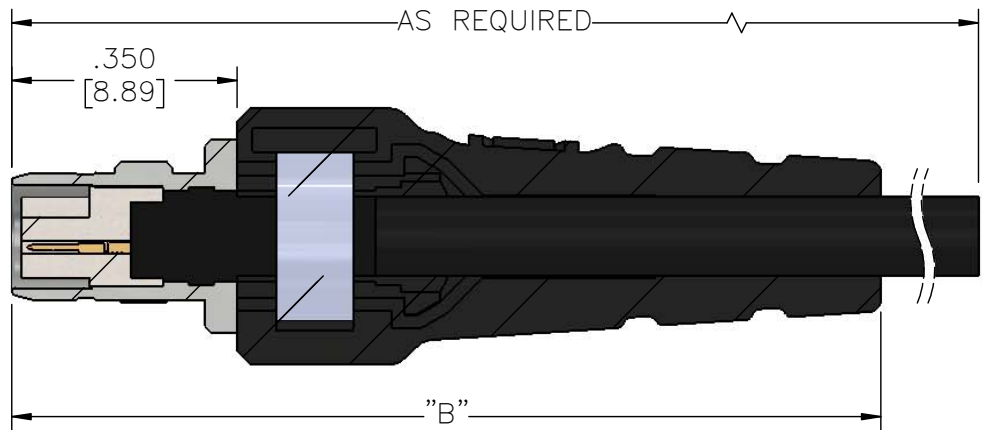
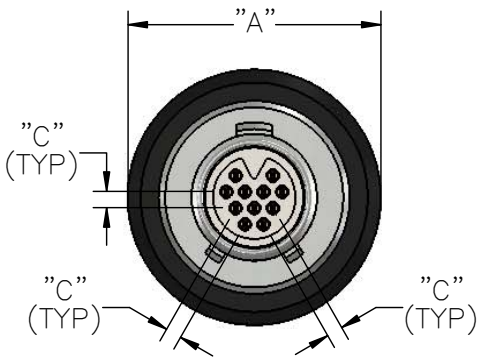
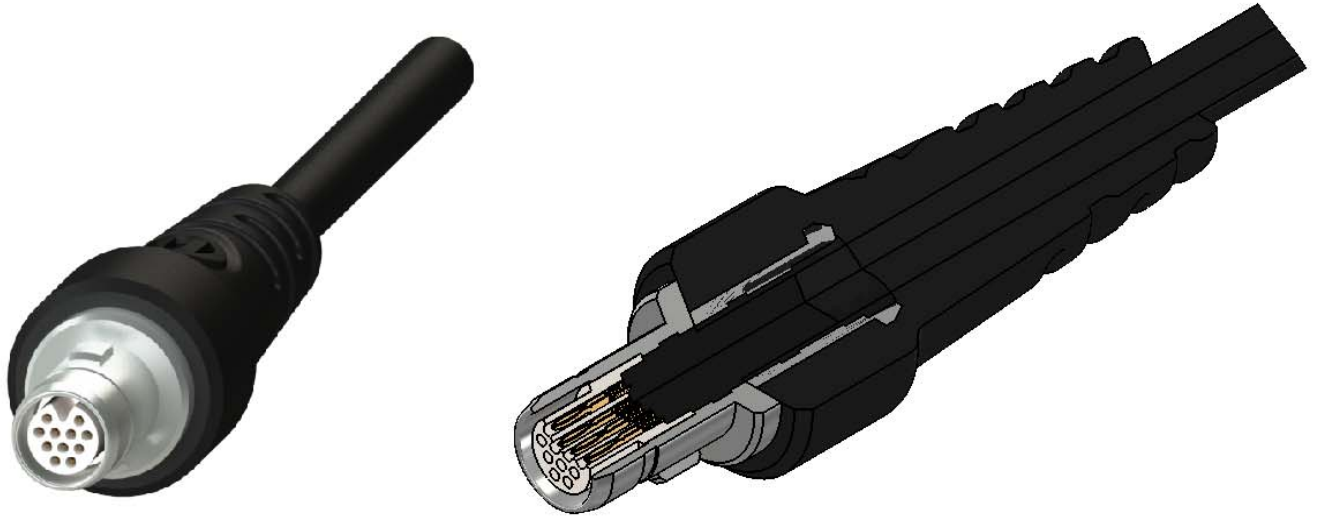
KBNS-WD-IS-SR



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79420-001	6	0.28	1.000	0.025	7.11	25.40	0.64
A79429-001	11	0.31	1.030		7.87	26.16	
A79438-001	16	0.34	1.210		8.64	30.73	
A79447-001	28	0.39	1.500		9.91	38.10	
A79456-001	39	0.47	1.630	0.03	11.94	41.40	0.76

# Metal - Pin - Keyed Break Away - Cabled - Overmold - Inline

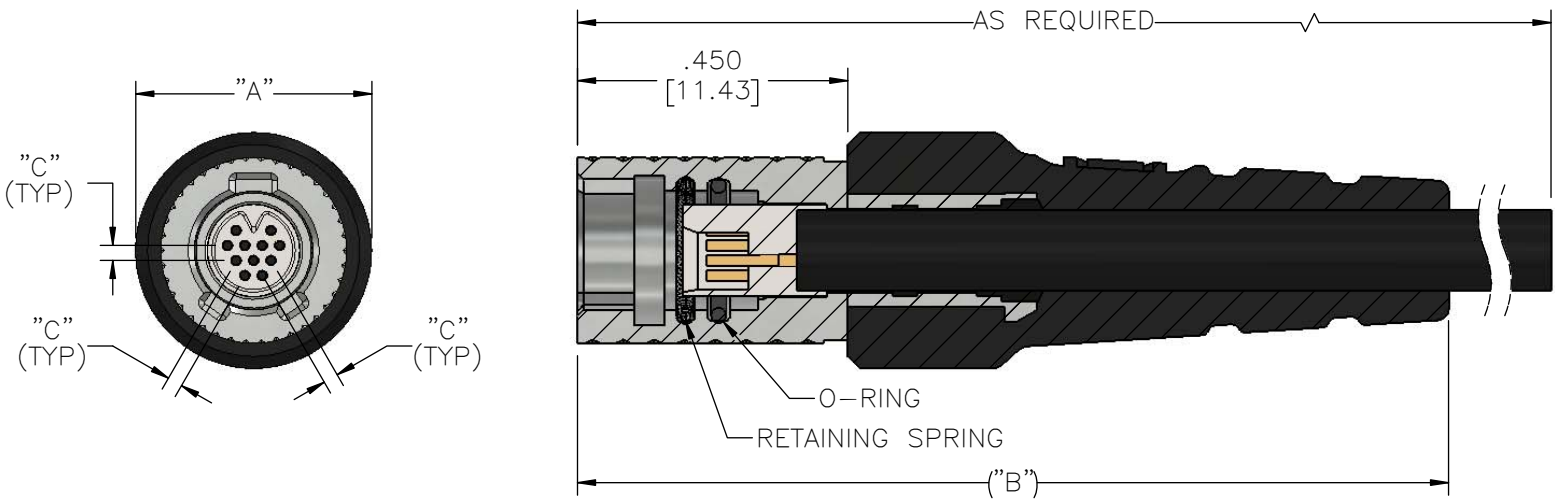
KBNP-WC-OM-IS



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79421-001	6	0.360	1.450	0.025	9.14	36.83	0.64
A79430-001	11	0.393			9.98		
A79439-001	16	0.420	1.530		10.67	38.86	
A79448-001	28	0.460	1.630		11.68	41.40	
A79457-001	39	0.550		0.030	13.97		0.76

# Metal - Socket - Keyed Break Away - Cable - Overmold - Inline

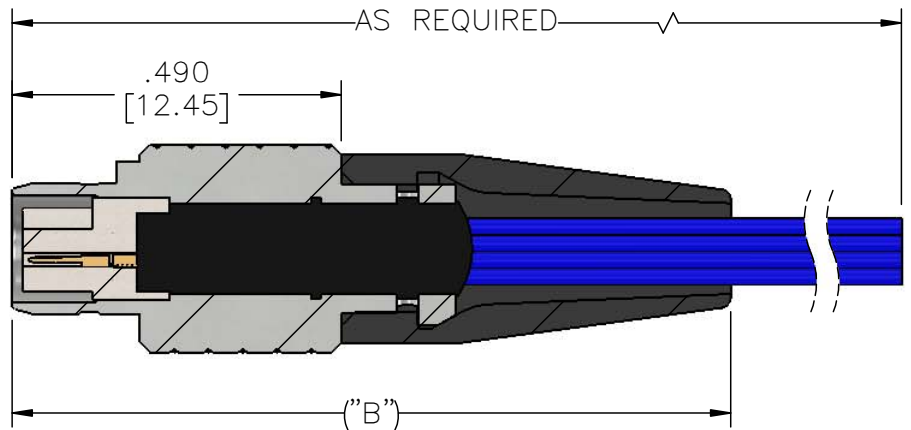
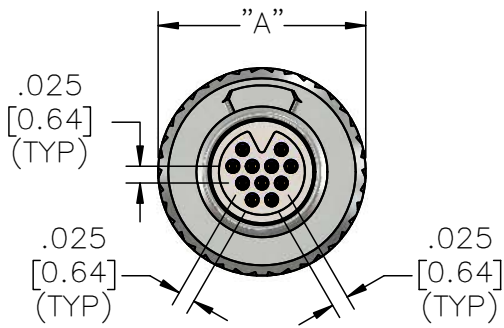
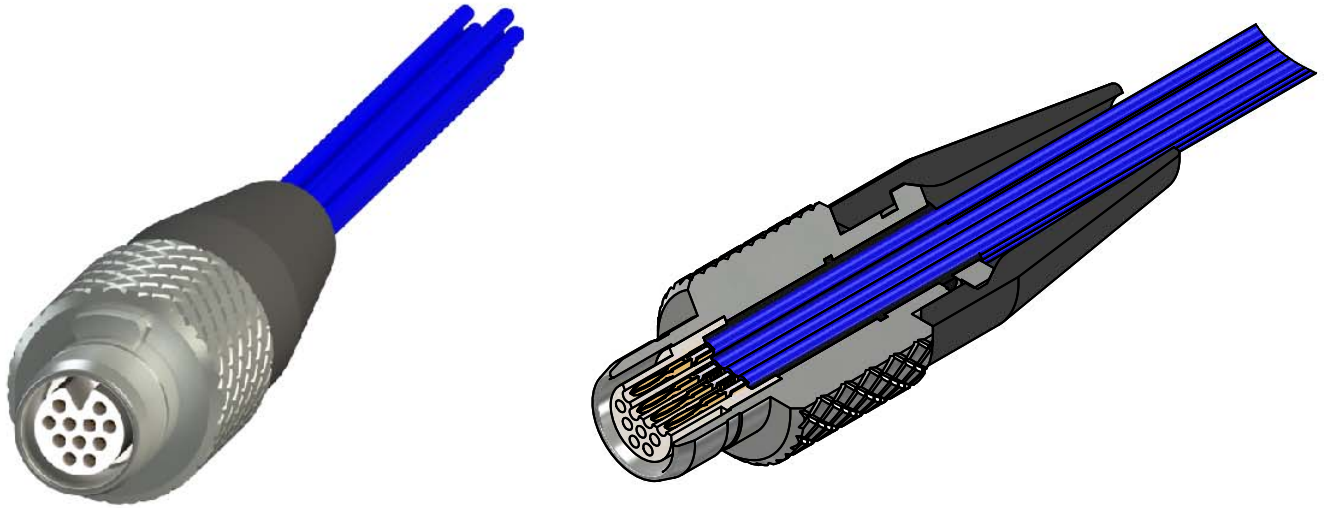
KBNS-WC-OM-IS



Part #	Contacts	English (IN)			Metric (MM)		
		A	B	C	A	B	C
A79425-001	6	0.360	1.350	0.025	9.14	34.29	0.64
A79434-001	11	0.390			9.91		
A79443-001	16	0.420	1.430		10.67	36.32	
A79452-001	28	0.460	1.530	11.68	38.86		
A79461-001	39	0.550		0.03		13.97	

# Metal - Pin - Break Away - Wired - Inline - Strain Relief

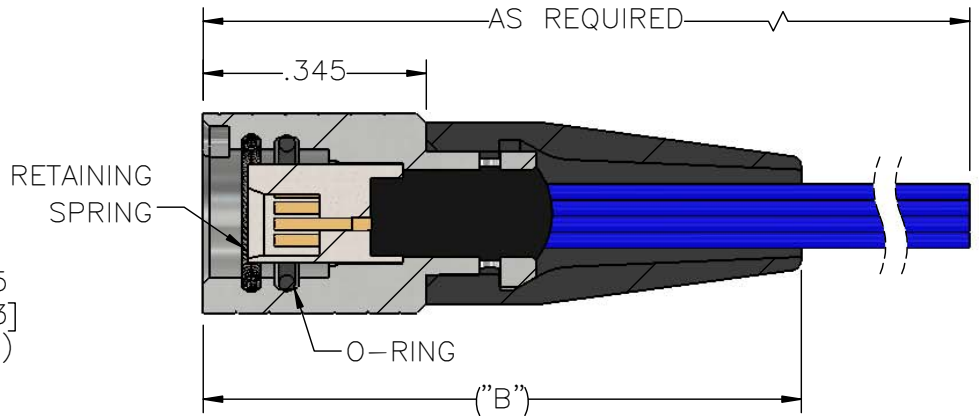
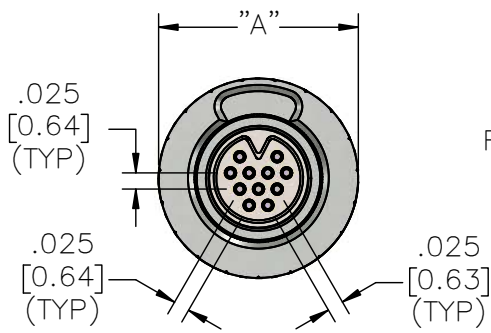
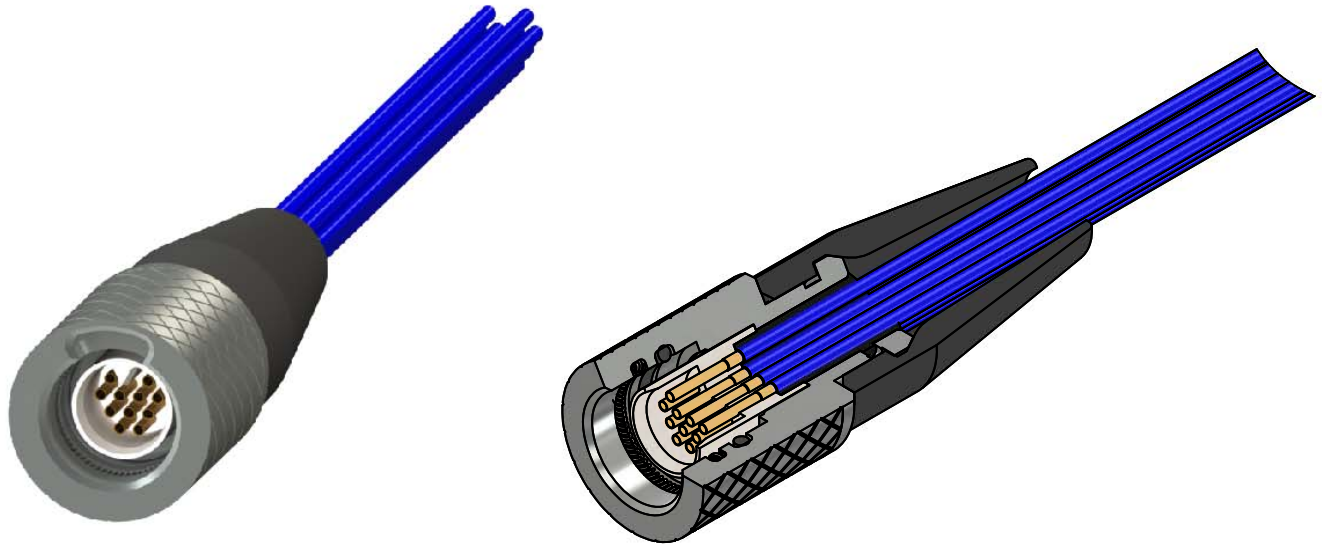
BANP-WD-IS-SR



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79211-001	6	0.28	1.000	7.11	25.40
A79218-001	11	0.31	1.100	7.87	27.94
A79225-001	16	0.34	1.300	8.64	33.02
A79232-001	28	0.39	1.500	9.91	38.10

# Metal - Socket - Break Away - Wired - Inline - Strain Relief

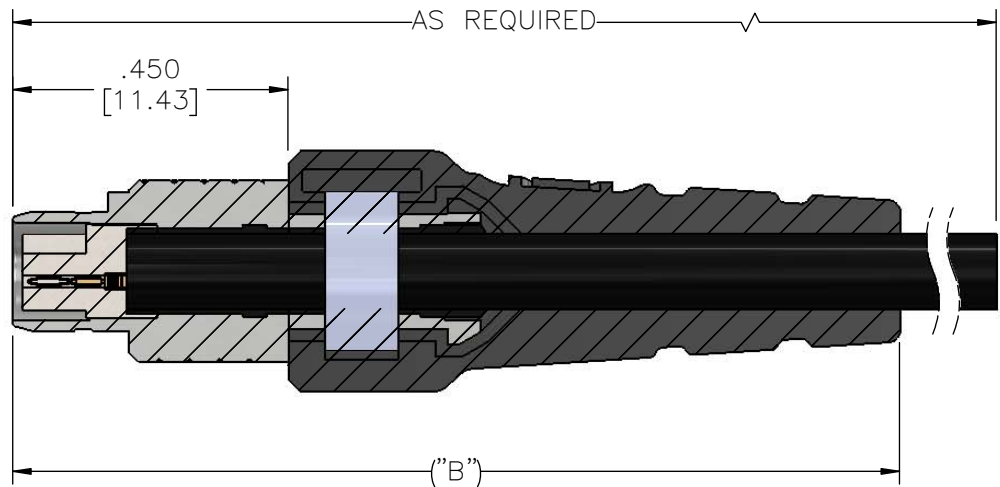
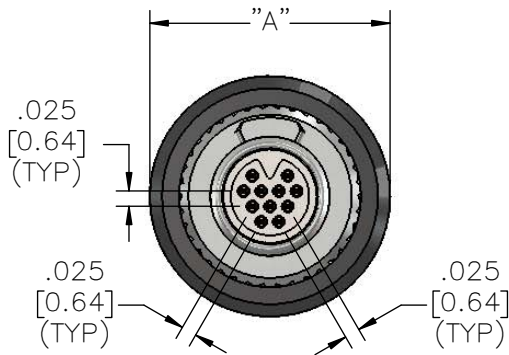
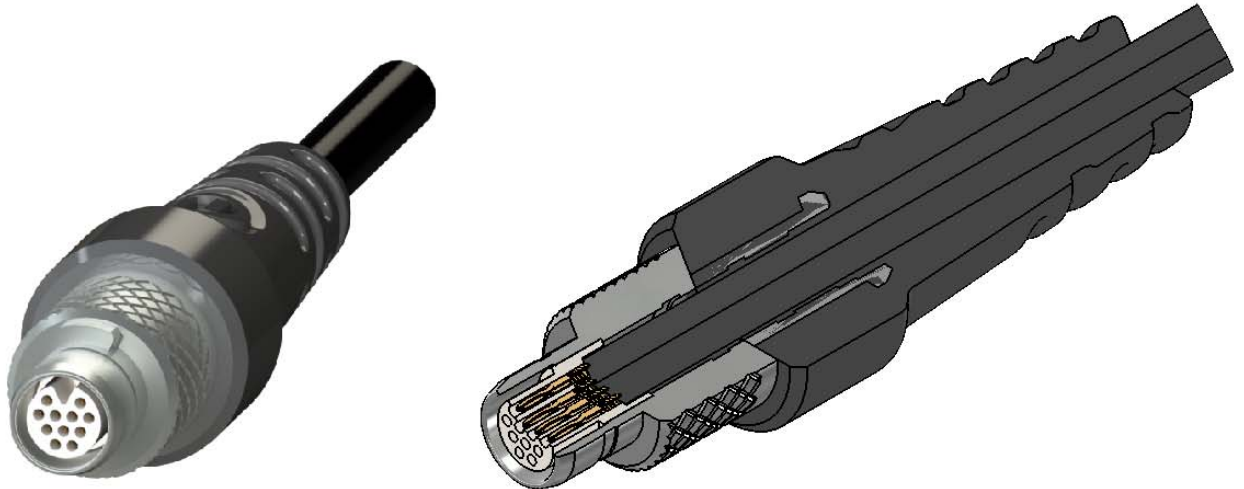
BANS-WD-IS-SR



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79208-001	6	0.28	0.900	7.11	22.86
A79215-001	11	0.31		7.87	
A79222-001	16	0.34	1.100	8.64	27.94
A79229-001	28	0.39	1.400	9.91	35.56

# Metal - Pin - Break Away - Cabled - Overmold - Inline

BANP-WC-OM-IS

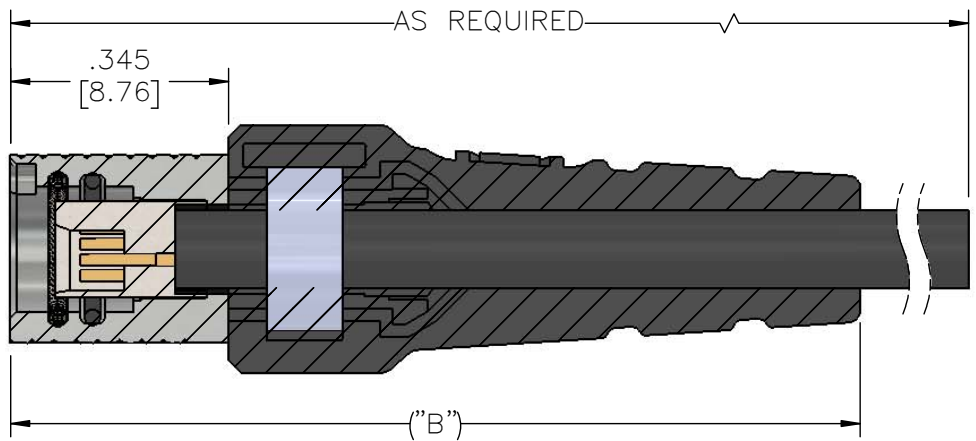
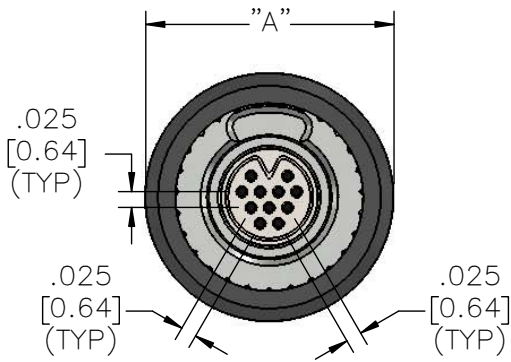
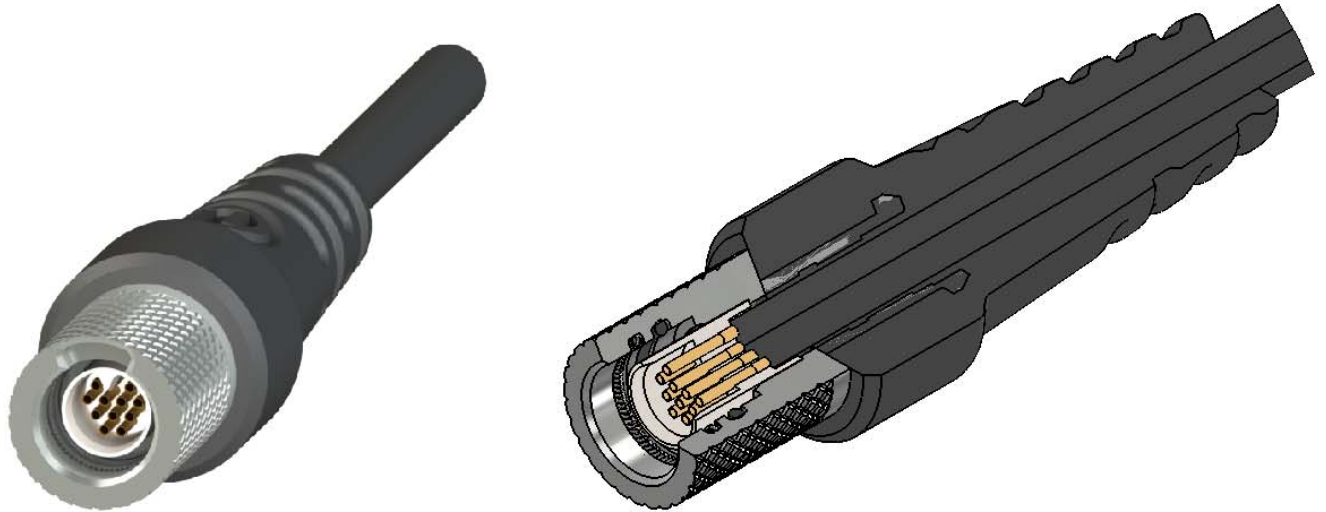


Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79335-001	6	0.36	1.450	9.14	36.83
A79331-001	11	0.39		9.91	
A79327-001	16	0.42	1.530	10.67	38.86
A79323-001	28	0.46	1.630	11.68	41.40









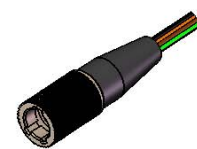










# Metal - Socket - Break Away - Cabled - Overmold - Inline

BANS-WC-OM-IS



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79334-001	6	0.36	1.350	9.14	34.29
A79330-001	11	0.39		9.91	
A79326-001	16	0.42	1.420	10.67	36.07
A79322-001	28	0.46	1.530	11.68	38.86

# QUICK DISCONNECT BREAK AWAY NANO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
<b>KBN</b> (Keyed Break Away)	<b>6</b> <b>11</b> <b>16</b>	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>IS: Inline Shell</b> Female 	<b>C</b> Color Coded 
<b>BAN</b> (Standard Break Away)	<b>28</b> <b>39</b>				
Male (P - Pin) 		<b>WC: Cable</b> 	<b>Non-Standard Options</b>	Male 	<b>OM</b> Overmold (Contact Omnetics for Overmold Information & Availability) 
Female (S - Socket) 		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 32 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>SR: Inline Shell w/ Strain Relief</b> 	
			<b>OX: Black Oxide Finished Steel</b> 	<b>ST: Inline Shell w/ Shrink Tube</b> 	<b>OR</b> O-Ring 
					<b>IP68</b> 
					<b>RH</b> RoHS COMPLIANT 
<b>EXAMPLE:</b> KBNP-11-WC-12.0-N-IS-OM-IP68					

# NANO 360<sup>®</sup> Metal

## Nano Break Away Panel Mount



### Electrical-Mechanical Specifications

- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139
- Contact Resistance: \_\_\_\_\_ 71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139
- Current Rating: \_\_\_\_\_ 1 Amp per MIL-DTL-32139
- Operating Temperature: \_\_\_\_\_ -55°C to 125°C (200°C with High Temp Epoxy)  
IP68 overmold -55°C to 85°C
- Durability: \_\_\_\_\_ 500 mating cycles min
- Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
- Shock: \_\_\_\_\_ 100 g's with no discontinuities > 10 nanosecond
- Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 10 nanosecond
- Thermal Vacuum Outgassing (Space Class): \_\_\_\_\_ 1.0% max TML, 0.03% max CVCM
- Mating/Unmating Force: \_\_\_\_\_ 2.5 oz (71 g) typical per contact

### Material Specifications

- Contact: \_\_\_\_\_ Copper Alloy Per MIL-DTL-32139
- Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
- Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
- Overmold: \_\_\_\_\_ Black Thermoplastic Polyurethane
- O-Ring: \_\_\_\_\_ BUNA-N
- Cable (Shielded): \_\_\_\_\_ 32 AWG, (7-40) tinned copper, PFA color coded, Black polyurethane jacket
- Wire: \_\_\_\_\_ 32 AWG (7-40) PTFE, color coded

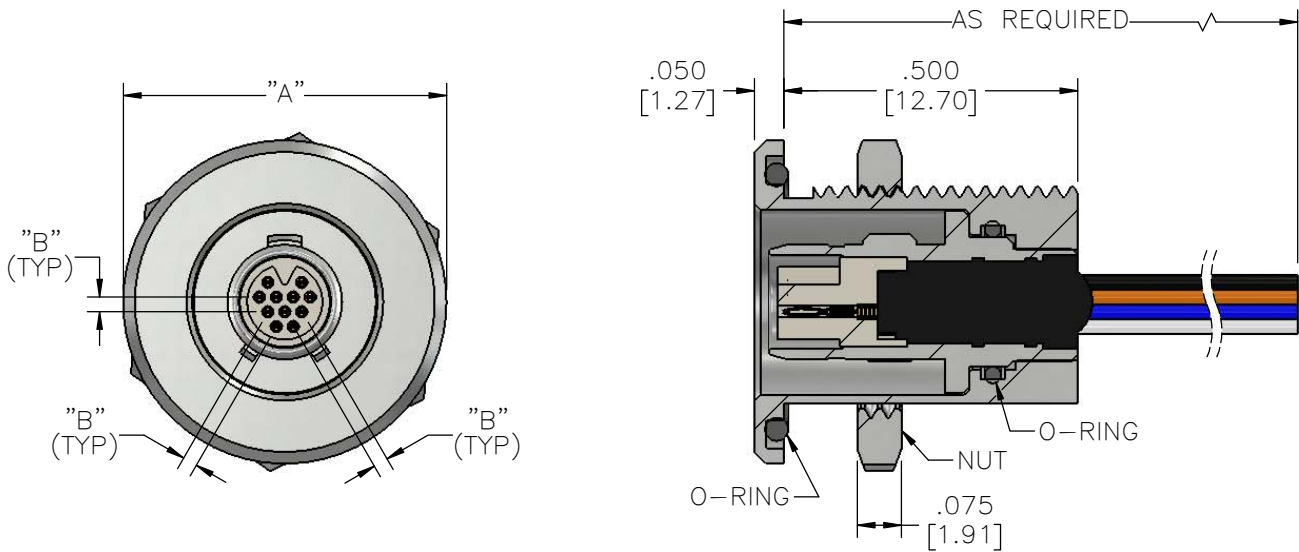
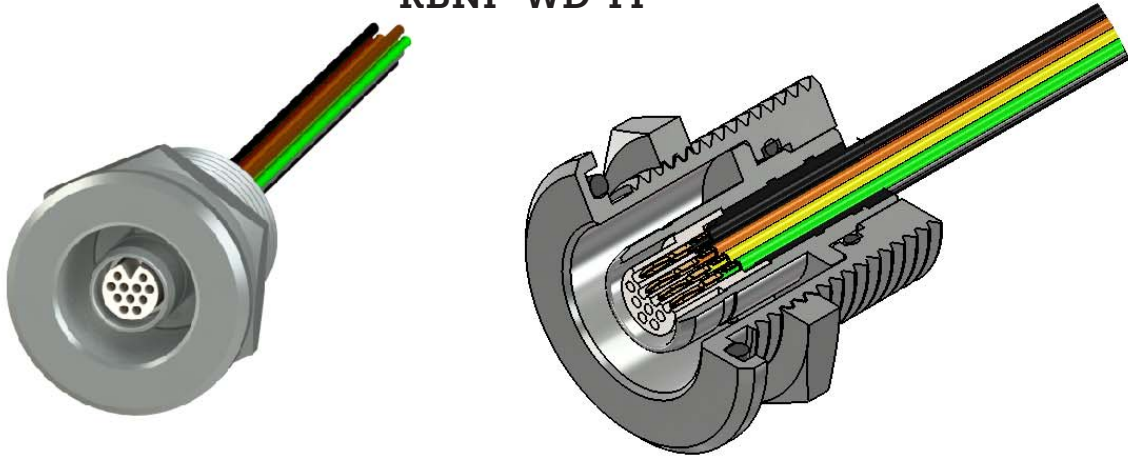
### Shell Options

- Brass Alloy 360 1/2 Hard: \_\_\_\_\_ Electroless Nickel per SAE-AMS-2404  
Black Nickel per MIL-P-18317
- Stainless Steel, 300 Series: \_\_\_\_\_ Passivated per SAE-AMS-2700  
Black Oxide Finish per MIL-DTL-13924, Class 4\*, Passivated per SAE-AMS-2700

\* less resistance to salt spray test.

# Metal - Pin - Keyed Break Away - Wired - Front Panel

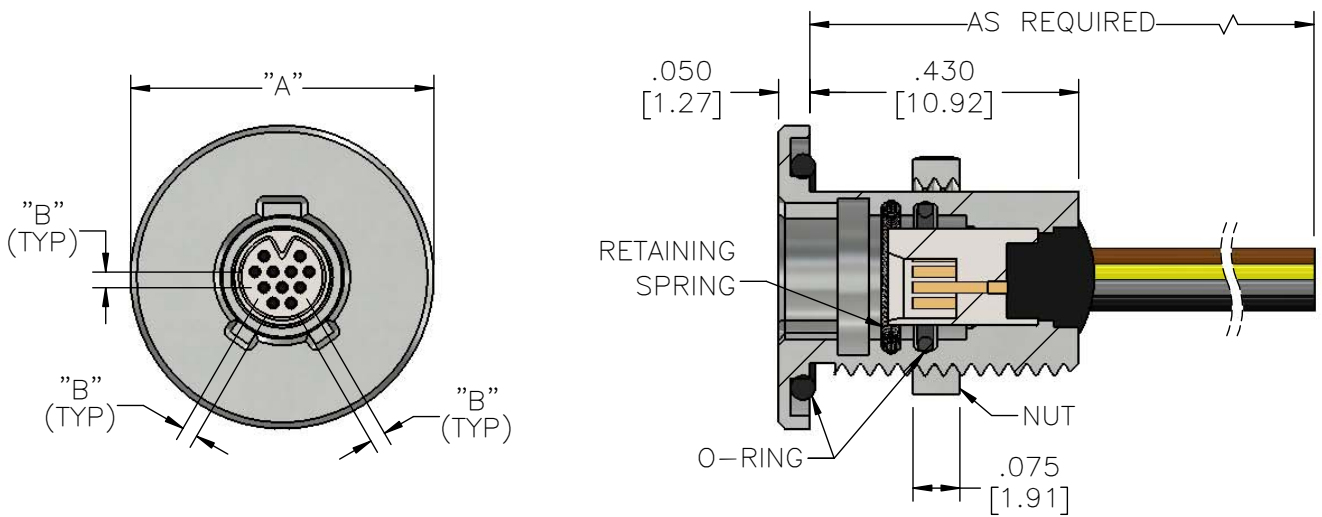
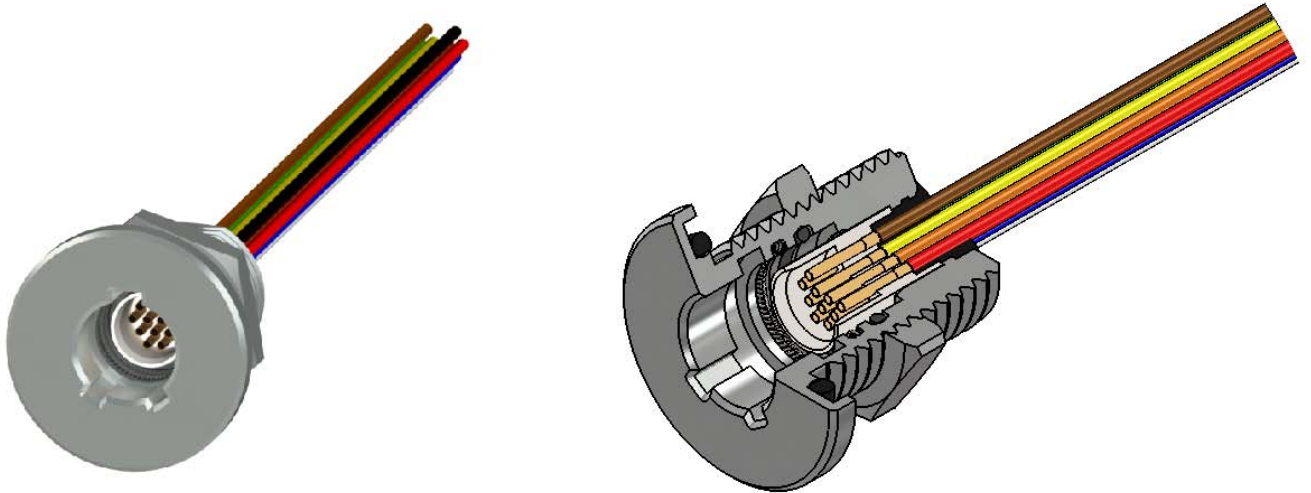
KBNP-WD-FP



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79426-001	6	0.510	0.025	12.95	0.64
A79435-001	11	0.550		13.97	
A79444-001	16	0.590		14.99	
A79453-001	28	0.635		16.13	
A79462-001	39	0.765	0.030	19.43	0.76

# Metal - Socket - Keyed Break Away - Wired/Cable - Front Panel

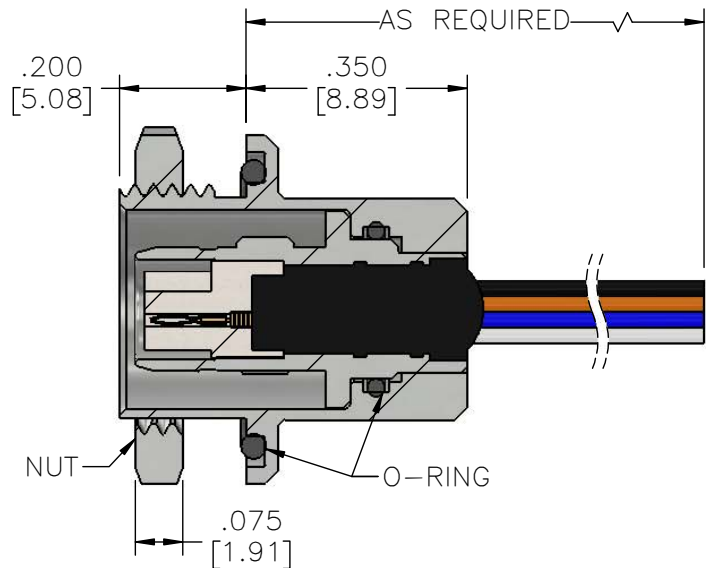
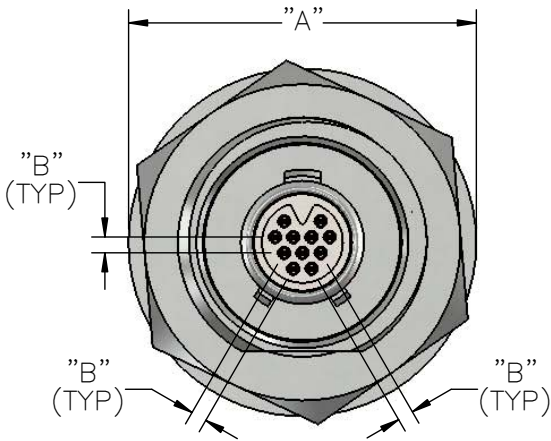
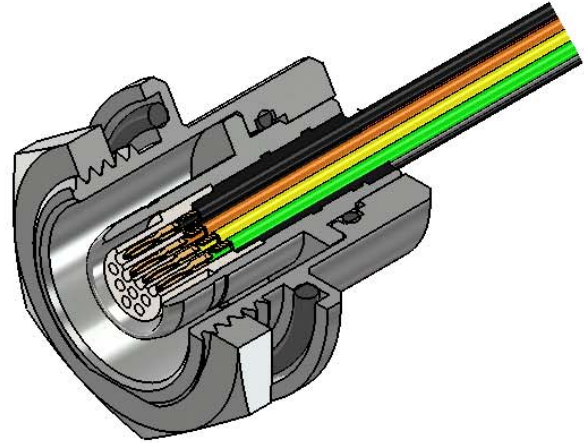
KBNS-WC/WD-FP



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79422-001	6	0.465	0.025	11.81	0.64
A79431-001	11	0.485		12.32	
A79440-001	16	0.515		13.08	
A79449-001	28	0.550		13.97	
A79458-001	39	0.690		17.53	

# Metal - Pin - Keyed Break Away - Wired - Rear Panel - IP68

KBNP-WD-RP-IP68

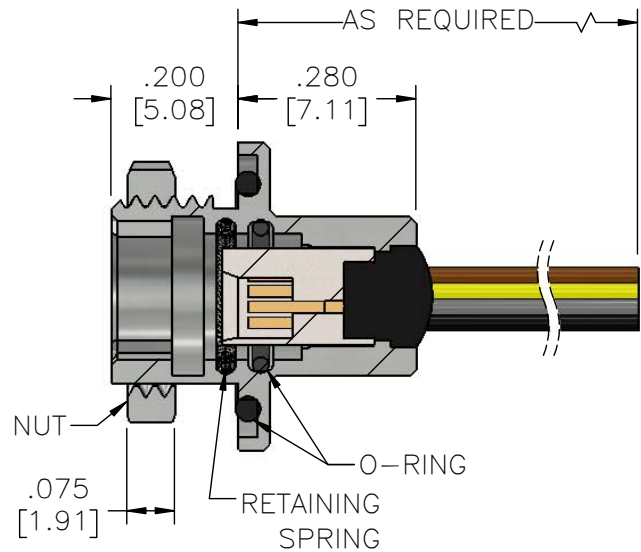
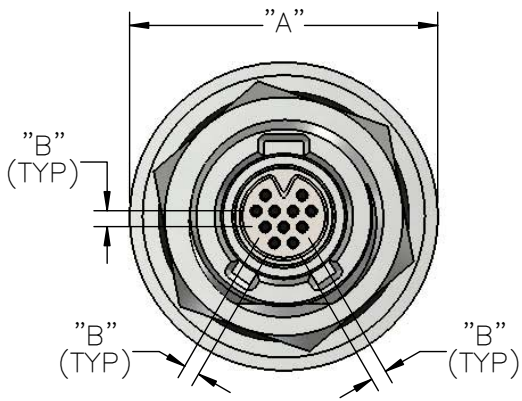
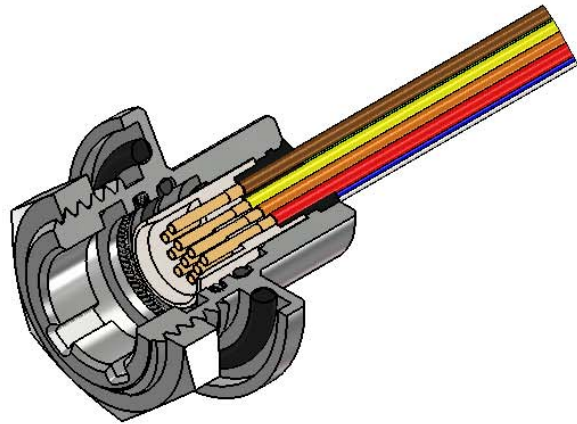


Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79427-001	6	0.510	0.025	12.95	0.64
A79436-001	11	0.550		13.97	
A79445-001	16	0.590		14.99	
A79454-001	28	0.635		16.13	
A79463-001	39	0.765	0.030	19.43	0.76



# Metal - Socket - Keyed Break Away - Wired/Cable - Rear Panel

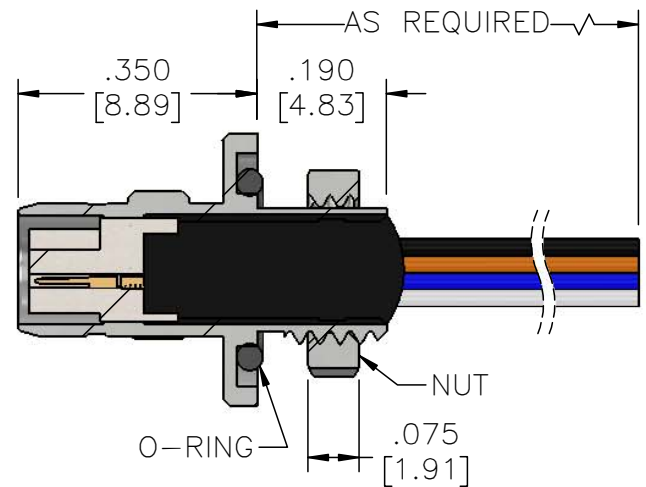
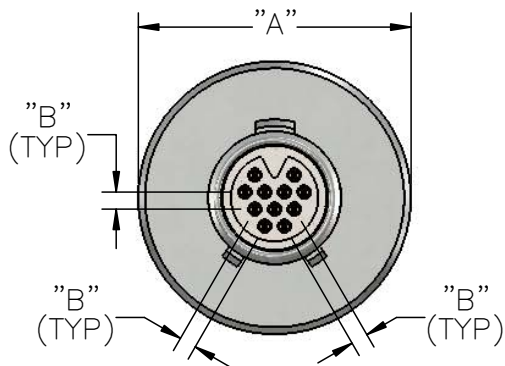
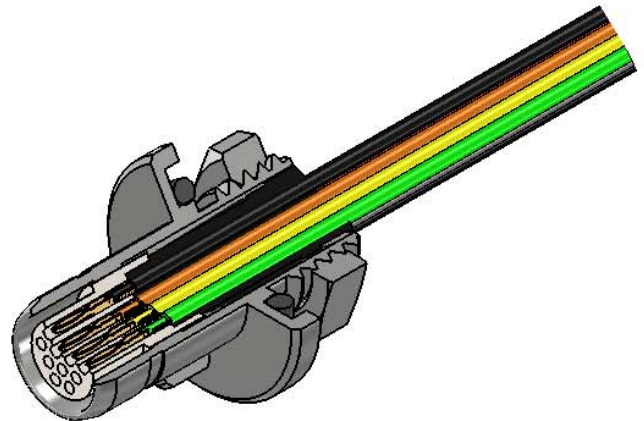
KBNS-WC/WD-RP



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79423-001	6	0.465	0.025	11.81	0.64
A79432-001	11	0.485		12.32	
A79441-001	16	0.515		13.08	
A79450-001	28	0.590		14.99	
A79459-001	39	0.650	0.030	16.51	0.76

# Metal - Pin - Keyed Break Away - Wired - Protruding Panel - IP68

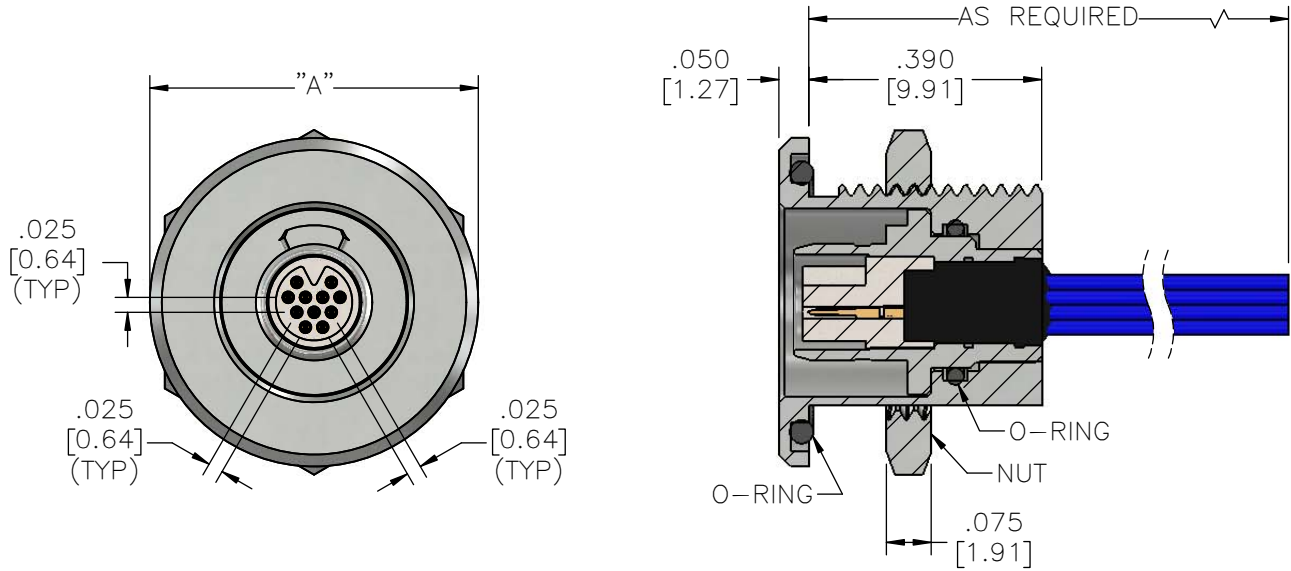
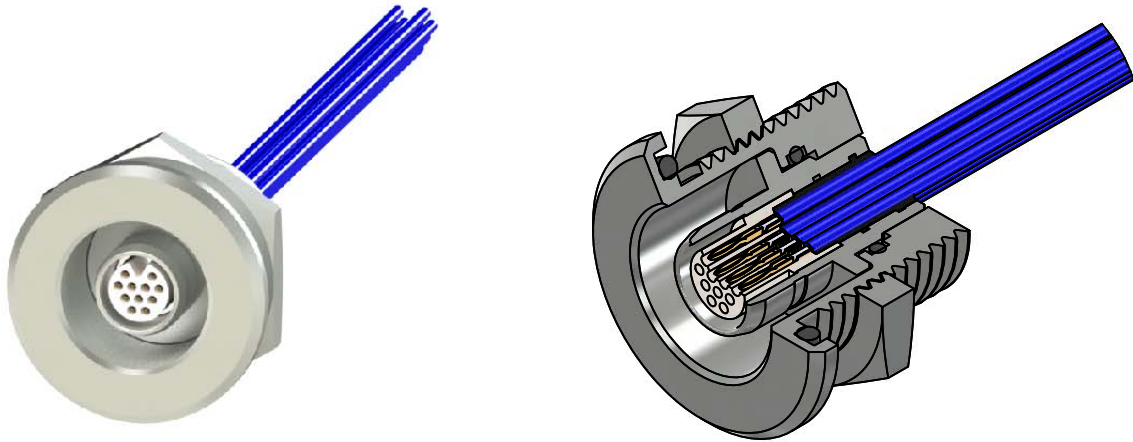
KBNP-WD-PP-IP68



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79428-001	6	0.330	0.025	8.38	0.64
A79437-001	11	0.400		10.16	
A79446-001	16	0.415		10.54	
A79455-001	28	0.460		11.68	
A79464-001	39	0.575	0.030	14.61	0.76

# Metal - Pin - Break Away - Wired - Front Panel

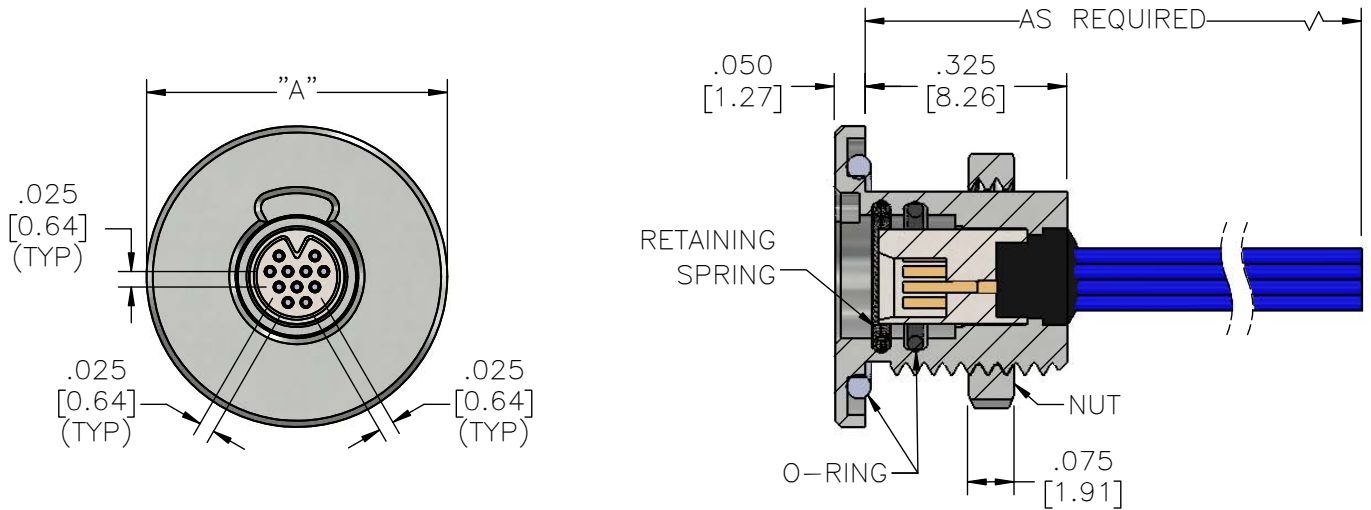
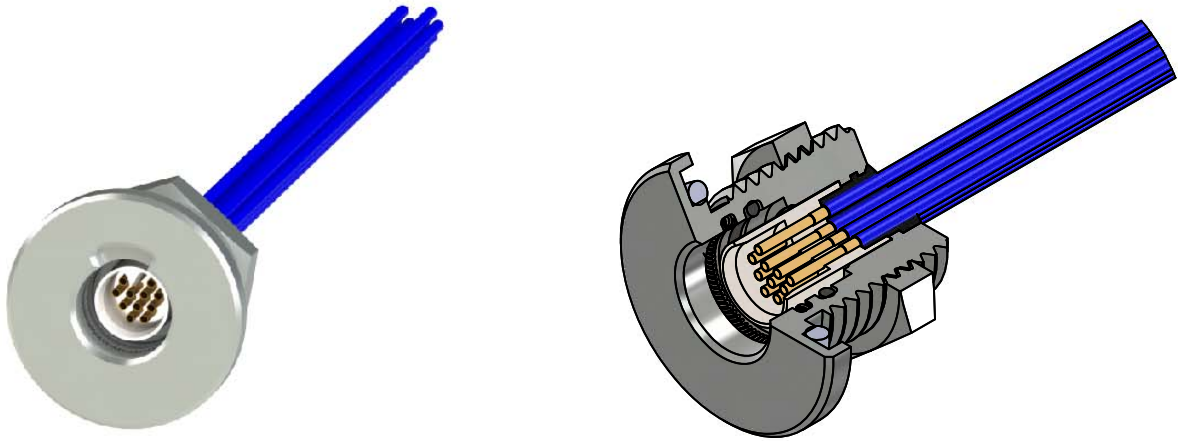
BANP-WD-FP



Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79212-001	6	0.510		12.95	
A79219-001	11	0.550	0.305	13.97	7.75
A79226-001	16	0.590		14.99	
A79233-001	28	0.515	0.325	13.08	8.26

# Metal - Socket - Break Away - Wired - Front Panel

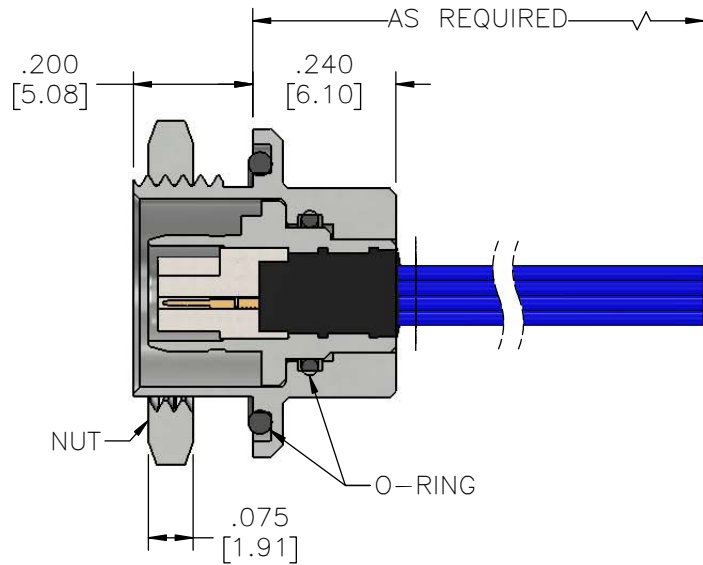
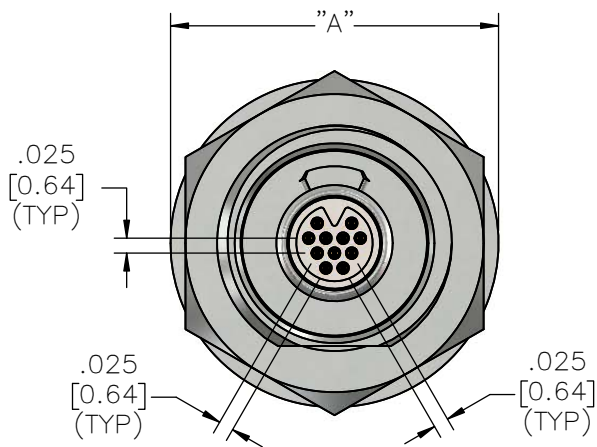
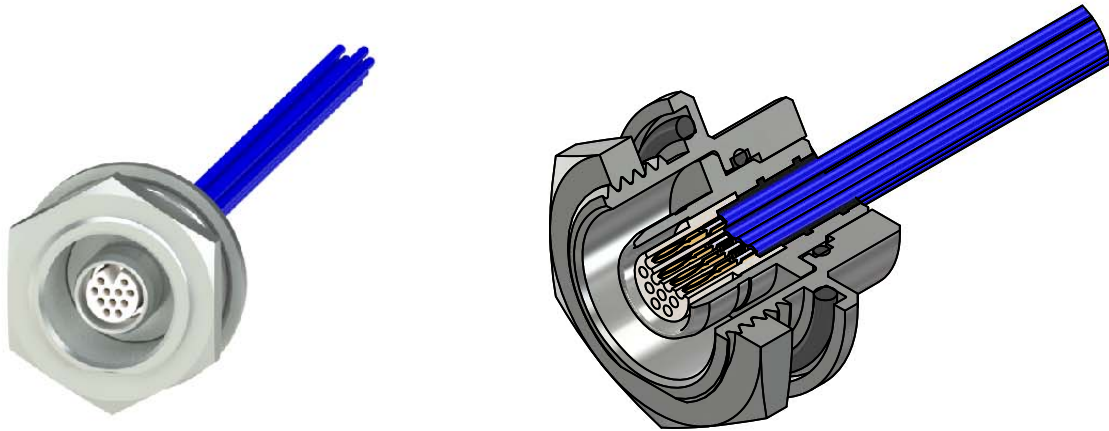
BANS-WD-FP



Part #	Contacts	English (IN)    Metric (MM)	
		A	A
A79209-001	6	0.465	11.81
A79216-001	11	0.485	12.32
A79223-001	16	0.515	13.08
A79230-001	28	0.550	13.97

# Metal - Pin - Break Away - Wired - Rear Panel

BANP-WD-RP

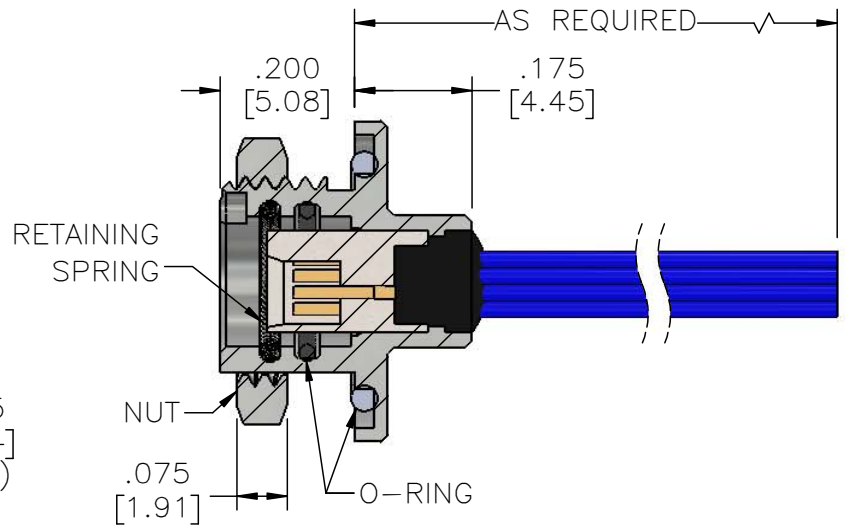
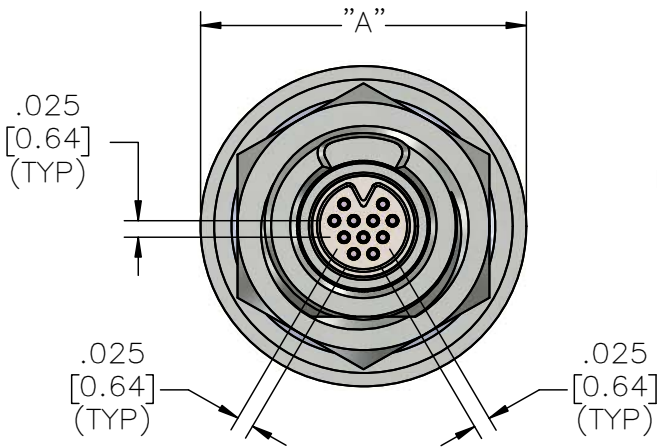
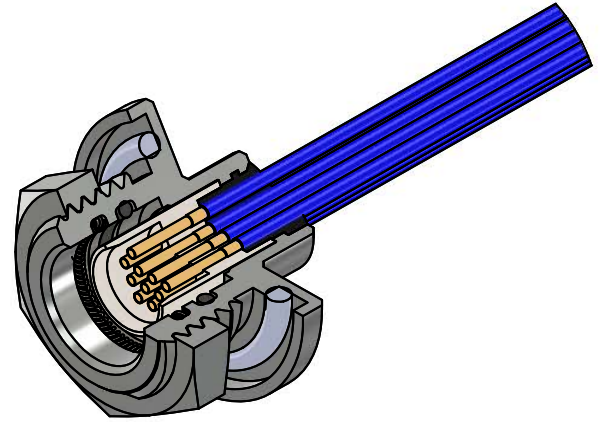


English (IN) Metric (MM)

Part #	Contacts	A	A
A79213-001	6	0.510	12.95
A79220-001	11	0.550	13.97
A79227-001	16	0.590	14.99
A79234-001	28	0.635	16.13

# Metal - Socket - Break Away - Wired - Rear Panel

BANS-WD-RP



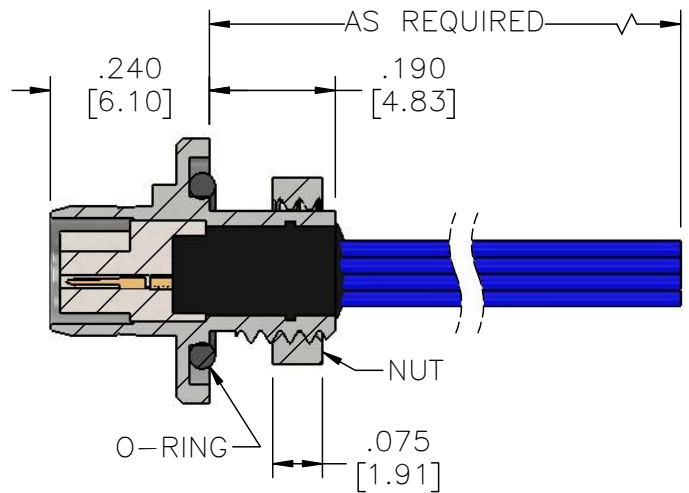
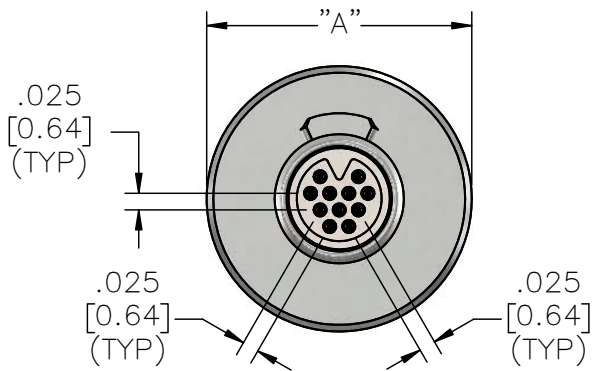
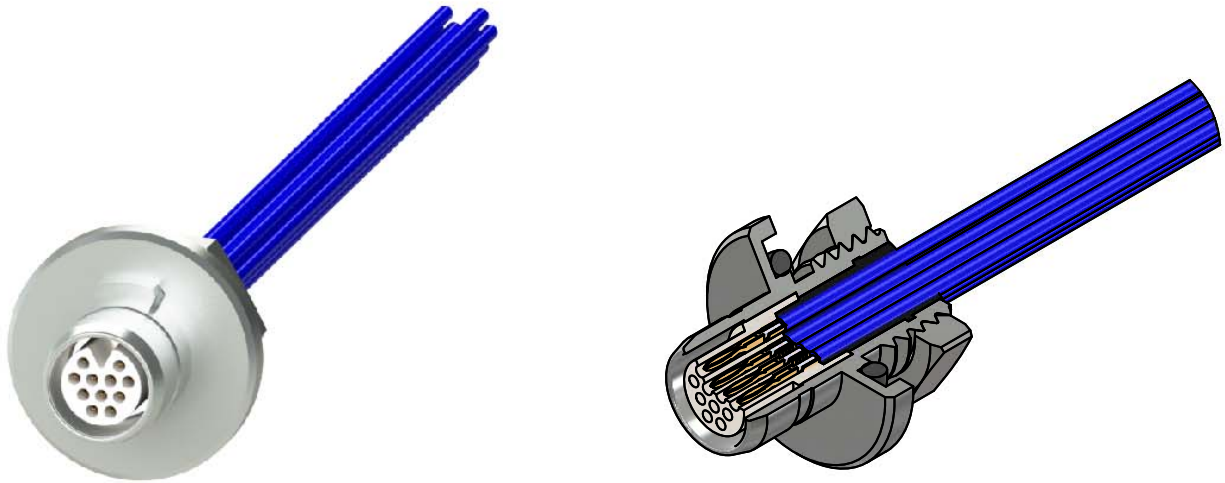
English (IN) Metric (MM)

Part #	Contacts	A	A
A79210-001	6	0.465	11.81
A79217-001	11	0.485	12.32
A79224-001	16	0.515	13.08
A79231-001	28	0.550	13.97



# Metal - Pin - Break Away - Wired - Protruding Panel



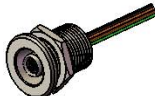














BANP-WD-PP



English (IN) Metric (MM)

Part #	Contacts	A	A
A79214-001	6	0.330	8.38
A79221-001	11	0.400	10.16
A79228-001	16	0.415	10.54
A79235-001	28	0.460	11.68

# BREAK AWAY NANO CIRCULAR DISCRETE LEADWIRE/CABLE (TYPE WD/WC)

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
<b>KBN</b> (Keyed Break Away)	<b>6</b> <b>11</b> <b>16</b>	<b>WD: Discrete Lead Wire</b> 	<b>Standard</b> <b>N: Nickel Plated Brass</b> 	<b>FP: Front Panel Mount</b> 	<b>C</b> Color Coded 
<b>BAN</b> (Standard Break Away)	<b>28</b> <b>39</b>				
Male (P - Pin) 		<b>WC: Cable</b> 	<b>Non-Standard Options</b>	<b>RP: Rear Panel Mount</b> 	<b>OR</b> O-Ring 
Female (S - Socket) 		Wire/Cable Length: 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4" 32 AWG Max	<b>P: Passivated Stainless Steel</b> 	<b>IP68</b> 	
			<b>OX: Black Oxide Finished Steel</b> 	<b>PP: Protruding Panel Mount (Male Only)</b> 	<b>RH</b> RoHS COMPLIANT 
					
		<b>EXAMPLE:</b> KBNS-11-WD-18.0-C-N-RP-IP68			

# NANO 360<sup>®</sup> Plastic

## SureCon 360° IP68



### Electrical-Mechanical Specifications

- 
- Performance: \_\_\_\_\_ Product family tested to and passed or exceeded the performance specifications of Table VIII of MIL-DTL-32139A
  - Contact Resistance: \_\_\_\_\_ 71 Milliohm Max (71mV Drop Max) @ 1.0 Amps per MIL-DTL-32139A
  - Current Rating: \_\_\_\_\_ 1 Amps per MIL-DTL-32139A
  - Operating Temperature: \_\_\_\_\_ -55°C to 85°C
  - Durability: \_\_\_\_\_ >2000 mating cycles min
  - Insulation Resistance: \_\_\_\_\_ 5000 megohms @ 100 VDC
  - Shock: \_\_\_\_\_ 100 g's with no discontinuities > 1 nanosecond
  - Vibration: \_\_\_\_\_ 20 g's with no discontinuities > 1 nanosecond
  - Mating/Unmating Force: \_\_\_\_\_ 3 oz (0.085 kg) max per contact

### Material Specifications

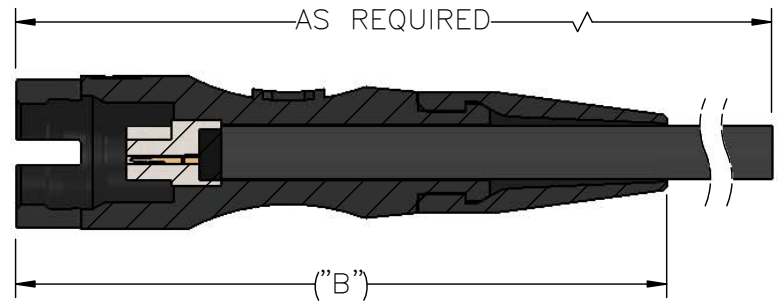
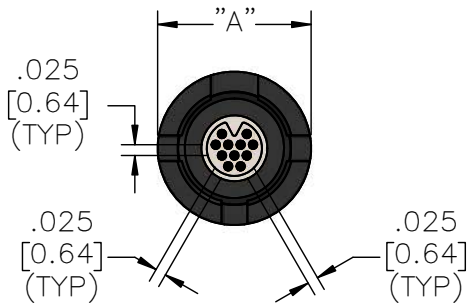
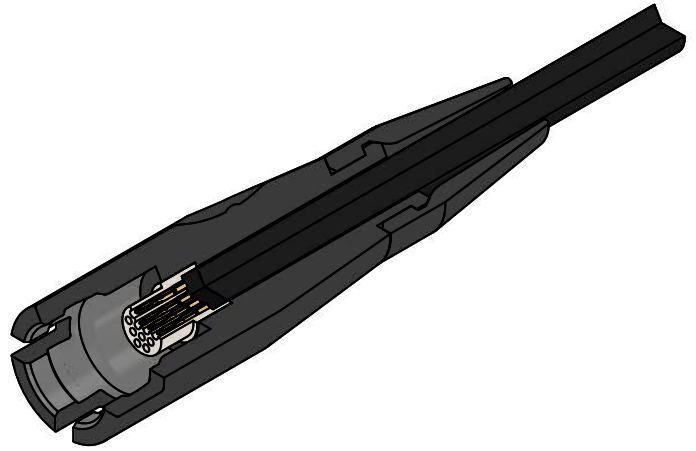
- 
- Contact: \_\_\_\_\_ Copper Alloy per MIL-DTL-32139
  - Contact Finish: \_\_\_\_\_ Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
  - Insulator: \_\_\_\_\_ Thermoplastic per MIL-M-24519
  - O-Ring: \_\_\_\_\_ BUNA-N
  - Cable (Shielded): \_\_\_\_\_ 32 AWG, (7-40) tinned copper, PFA color coded Black polyurethane jacket

### Shell Specifications

- 
- Shell (Overmold): \_\_\_\_\_ Polyester
  - Shell Relief: \_\_\_\_\_ Thermoplastic Polyurethane

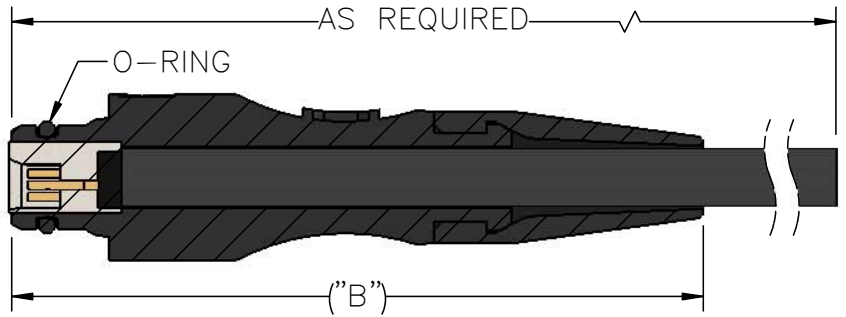
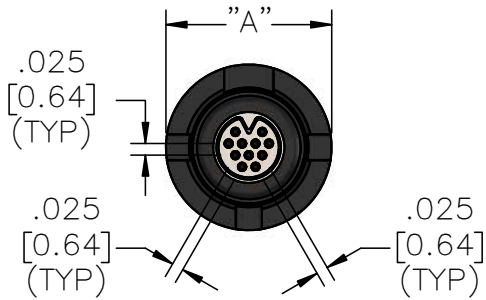
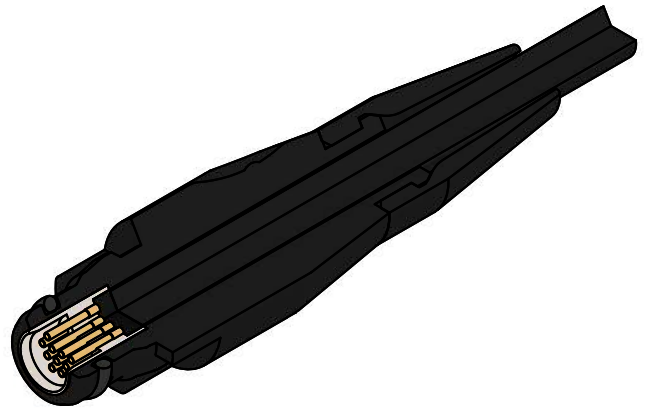
\* less resistance to salt spray test.

**Plastic - Pin - SureCon 360° -  
Cabled - Overmold - Inline**  
ONCP-WC-OM-IS



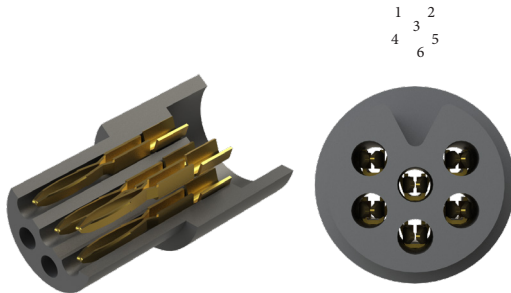
Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79300-001	6	0.325	1.250	8.26	31.75
A79303-001	11	0.356	1.510	9.04	38.35
A79306-001	16	0.384	1.890	9.75	48.01

**Plastic - Socket - SureCon 360° -  
Cabled - Overmold - Inline**  
ONCS-WC-OM-IS

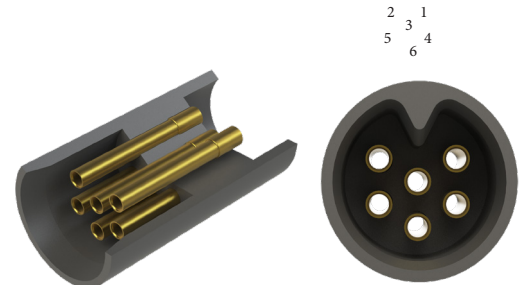


Part #	Contacts	English (IN)		Metric (MM)	
		A	B	A	B
A79301-001	6	0.330	1.460	8.38	37.08
A79304-001	11	0.360	1.490	9.14	37.85
A79307-001	16	0.380	1.670	9.65	42.42

# SureCon 360° IP68

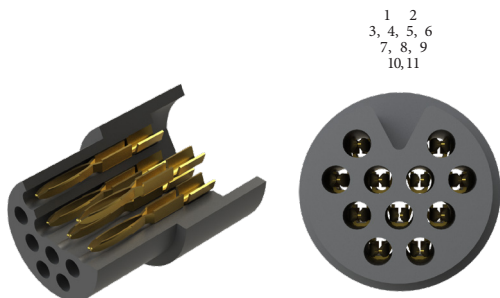


**6 Pin Connector**

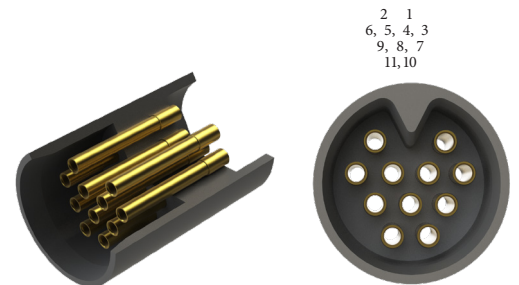


**6 Socket Connector**

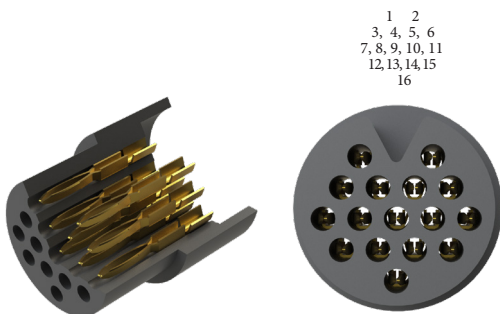
28-Contact PFA Color Code	
Socket #	Color
1	Black
2	Brown
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Violet
9	Gray
10	White
11	White/Black
12	White/Brown
13	White/Red
14	White/Orange
15	White/Yellow
16	White/Green



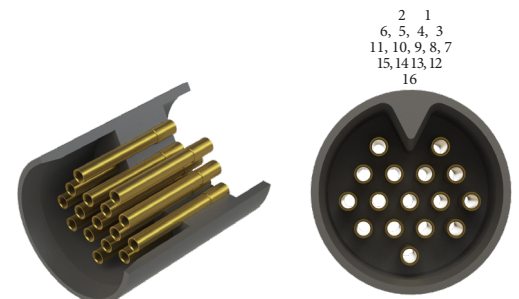
**11 Pin Connector**



**11 Socket Connector**



**16 Pin Connector**



**16 Socket Connector**



# SureCon 360° IP68

Series	# of Contacts	Termination Type	Shell Material and Finish	Shell Type	Options
<b>ONC</b>	6 11 16	<b>WC</b> Cable	<b>IS</b> Inline Shell (Male)	<b>Standard:</b> <b>Plastic Overmold</b>	<b>OM</b> Overmolded Strain Relief
Male (P - Pin)					
Female (S - Socket)		<b>Wire/Cable Length:</b> 18.0=18.0" Standard Option "XX.X" = Custom Length i.e. 23.4"	<b>IS</b> Inline Shell (Female)		<b>RH</b> RoHS COMPLIANT
		32 AWG Max			

Example:  
ONCS-11-WC-18.0-C-COM



# Didn't find what you were looking for?

Omnetics provides a wide range of capabilities to design and create connectors that fit your individual needs!



CUSTOM OVERMOLDS

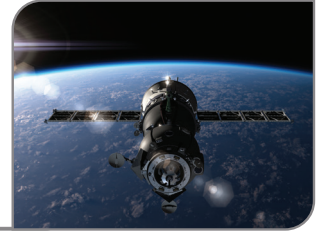
## INDUSTRIAL

New connector designs and materials are focused on small size and rugged superiority to meet the extreme reliability demands placed on petroleum electronics, including high temperatures, shock, and vibration.



## SPACE

Omnetics Connector Corporation has a rich history of supporting orbital and deep space projects. We offer multiple levels of space screening to complement our highly rugged, durable, and light-weight connectors.



## MEDICAL

Medical companies and researchers have relied on Omnetics' high quality Micro and Nano connectors for a variety of challenging applications. Omnetics is capable of building samples and prototypes for initial test, biocompatibility, and FDA approval, in addition to operating a 10,000 clean room system as an added value service.



## AVIATION

Reliable and durable connectors are needed to keep planes, helicopters, and unmanned aerial systems running smoothly and safely. Omnetics helps aviation applications deliver information and power in small and light-weight form factors.



## DEFENSE

Military applications rely on Omnetics connectors to deliver information safely and reliably in the most demanding and ruggedized environments. Omnetics connectors can help reduce size and weight while meeting and exceeding military standards.



## ROBOTICS

As the robotics industry matures and evolves, Omnetics' reliable, durable, and light-weight connectors are becoming more important for delivering data and electrical signals to robotic systems.





# KENSINGTON

ELECTRONICS inc.

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ALASKA & HAWAII

Please contact one  
of the ISRs.

**Courtney Darrah**

*Inside Sales Representative*  
cdarrah@keiconn.com  
512-339-3324

**Erin Gagne**

*Inside Sales Representative*  
egagne@keiconn.com  
512-339-3331

**Kevin Kientopf**

*Inside Sales Representative*  
kkientopf@keiconn.com  
512-339-3315

**Gabby Bozeman**

*Inside Sales Representative*  
gbozeman@keiconn.com  
512-339-3325

**John Davis**

*Inside Sales Representative*  
jdavis@keiconn.com  
512-339-3311

## North American Sales Support Coverage



**Kevin Kientopf**

*Inside Sales Representative*  
kkientopf@keiconn.com  
512-339-3315

**Courtney Darrah**

*Inside Sales Representative*  
cdarrah@keiconn.com  
512-339-3324

**John Davis**

*Inside Sales Representative*  
jdavis@keiconn.com  
512-339-3311

**Scott Kirchmeier**

*Regional Sales Manager*  
sales@keiconn.com  
512-339-3312

**Erin Gagne**

*Inside Sales Representative*  
egagne@keiconn.com  
512-339-3331

**Gabby Bozeman**

*Inside Sales Representative*  
gbozeman@keiconn.com  
512-339-3325