



RHINO⁶⁶⁶⁸⁹ **GUARD**

High Power Connector Series
with Interlock Contacts

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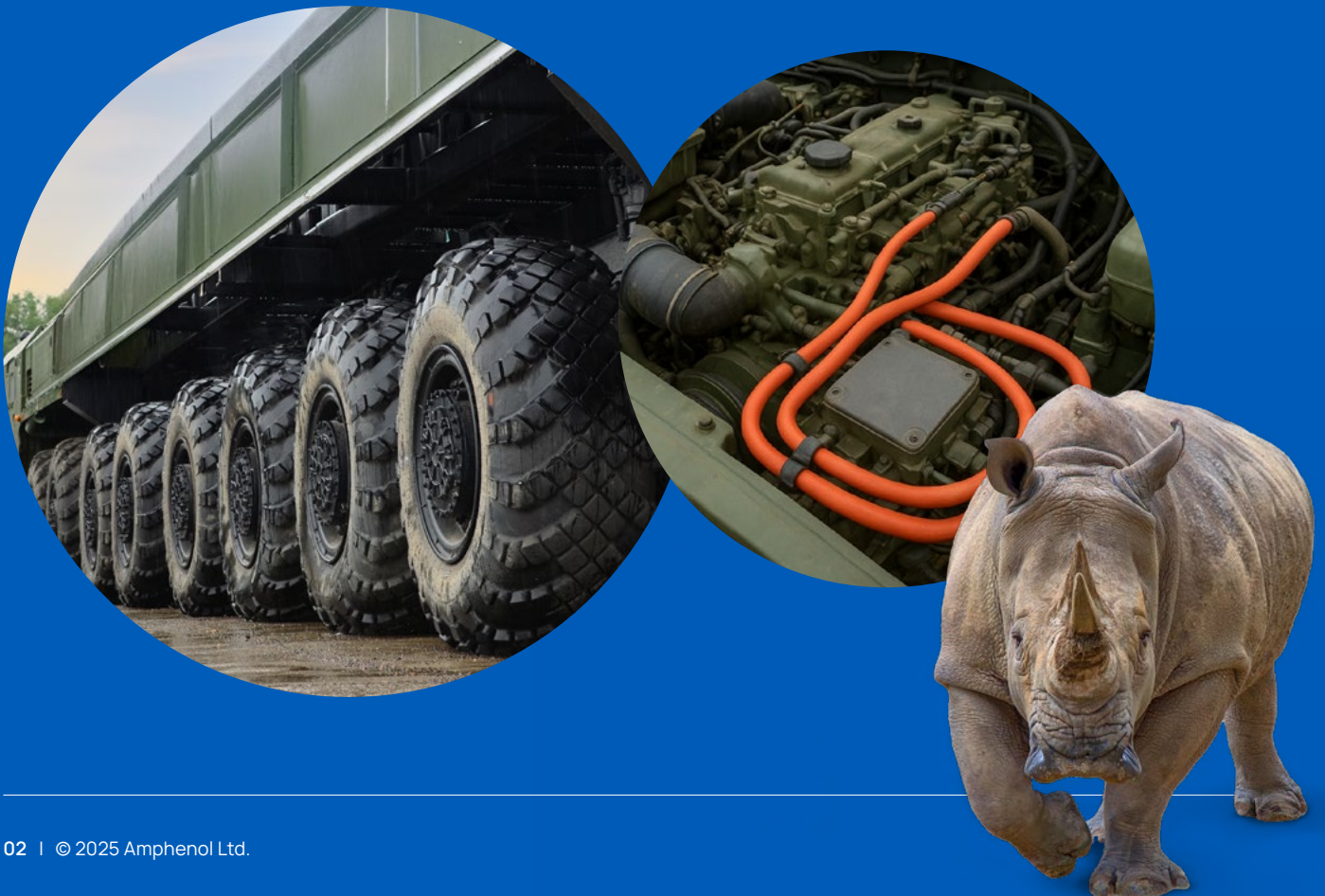
High Power Connector Series with Interlock Contacts

RHINO Guard is our newest addition to the RHINO 38999 product family, incorporating safety HVIL contacts.

Introducing the RHINO Guard, a product designed to excel in high-power distribution within military vehicles. This inherently durable connector showcases single-pole TALON contacts which deliver a higher current capacity and perform at a higher temperature limit compared to the original RHINO38999.

Designed to meet increasingly stringent safety requirements, the RHINO Guard features all the same performance spec of the RHINO38999 connector plus an additional pair of High-Voltage Interlock Loop (HVIL) sprung contacts. This advance ensures increased safety for its users by implementing a secure lock-out system which inhibits operation when electrical connections are not properly established. Receptacle connectors feature two sprung pin contacts and plugs, a landing pad to complete the interlock loop.

Tailored specifically for the rigorous demands of the military vehicle market, the RHINO Guard prioritizes both user safety and superior power performance. Blending these key aspects gives it a definitive edge over alternative products.

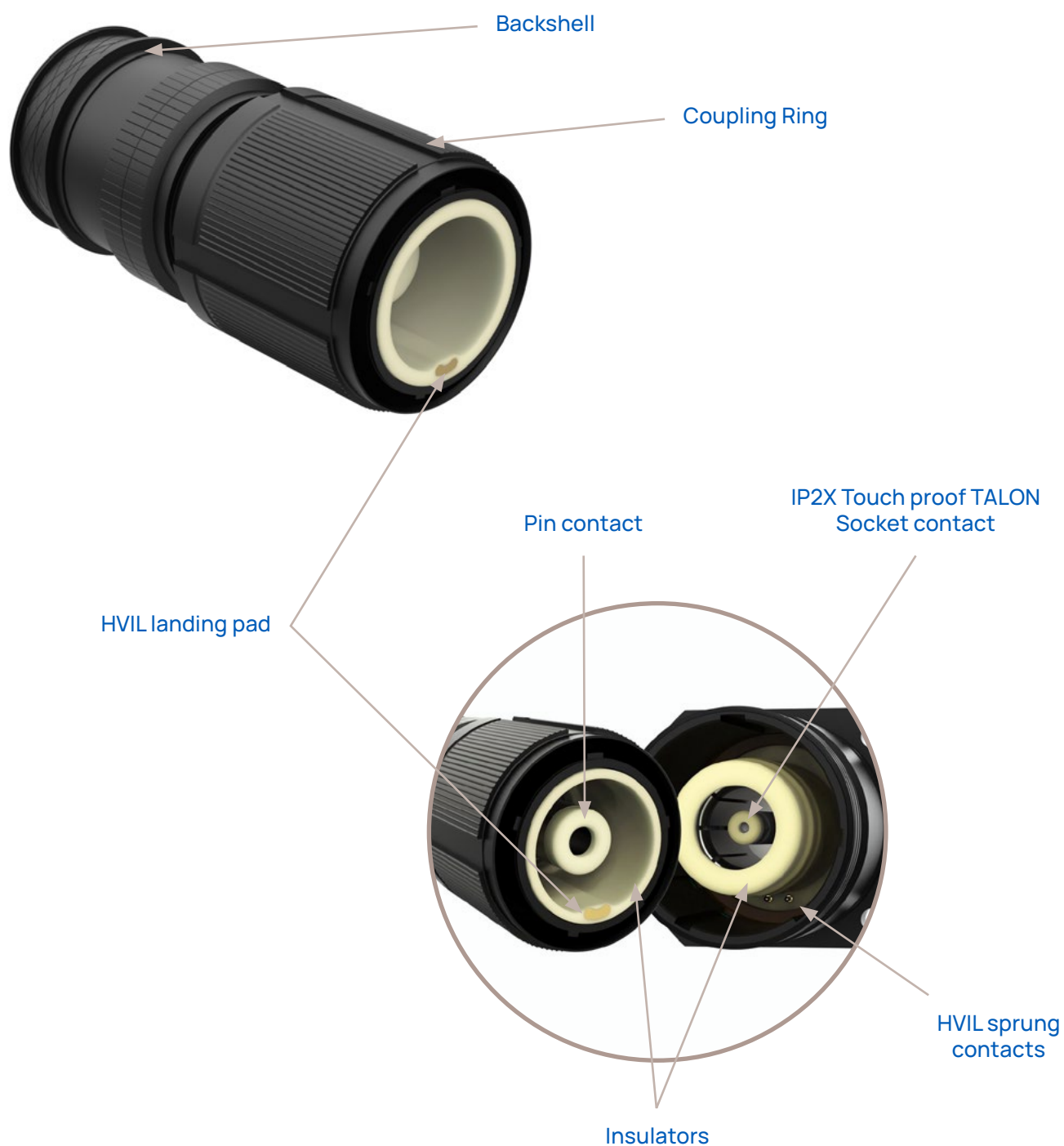


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Terminology



Backshell options

Locking ring only



Straight backshell



Mating options

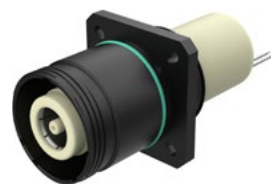


Plug
In-Line

WPTV-ED-06XXXX-XXX

Receptacle
Wall Mount

WPTV-ED-00XXXX-XXX



Receptacle
In-Line

WPTV-ED-01XXXX-XXX



Receptacle
Jam Nut

WPTV-ED-07XXXX-XXX



Part numbering

Example: WPTV-ED-06ZN25-1000-6PNB

In-Line Plug, Aluminium body, Black Zinc Nickel finish, Shell size 29 (not 25), 1000 Amperage Rating, Reduced Crimp, Pin Contact, Keyway N, Straight Backshell.

Nominal Current ratings in the RHINO Guard part numbers are for guidance only, please consult the de-rating curve for amperage performance for the expected ambient temperature in your application, in many cases the connector can outperform the nominal value in the part number so this should not be considered a limiting value.

Series	Shell Style	Finish	Shell Size	Amperage Rating	Contact Termination	Contact Gender	Keyway	Accessory
WPTV-ED-	06	ZN	XX-	XXX-	X	P	X	X
WPTV-ED	06 - In-Line Plug	ZN - Aluminium, Black Zinc Nickel	15	85	1 - Crimp	P - Pin	N	A - Locking ring only
			17	120	2 - Threaded Post		A	B - Straight backshell
			21	185	3 - Flat Tail		B	
			23	340	5 - Tapped Hole		C	
			25	500	6,7,8 - Reduced Crimp		D	
			29	1000			E	
WPTV-ED-	XX	ZN	XX-	XXX-	X	S	X	X
WPTV-ED	00 - Wall Mount Receptacle	ZN - Aluminium, Black Zinc Nickel	15	85	1 - Crimp	S - Socket	N	A - Locking ring only
	01 - In-Line Receptacle		17	120	2 - Threaded Post		A	B - Straight backshell
			21	185	3 - Flat tail		B	
			23	340	5 - Tapped hole		C	
	07 - Jam Nut Receptacle		25	500	6,7,8 - Reduced Crimp		D	
			29	1000			E	

Contact performance

RHINO Guard Shell Size and crimp bucket	Pin Contact Size (mm)	Contact Resistance (Milliohms)	Max Current Rating (A) at 20°C	Contact Mating Force (N)
15-85-1	3.6	TBC	TBC	TBC
17-120-1	6	0.02	275	45
21-185-1	8	0.018	500	75
23-340-1	10	0.015	625	60
25-500-1	14	0.013	925	75
29-1000-6	18	0.007	1200	93

Performance data

Electrical	
Current Rating	Up to 1200A, see page 8 for de-rating information
Shell to Shell Continuity	Less than 2.50mΩ initially, in accordance with EIA-364-83
Shell to Backshell Continuity	Less than 5.00mΩ initially, in accordance with EIA-364-83
Contact Resistance	See page 6
Insulation Resistance	5000MΩ
Maximum Working Voltage (Sea Level)	1000 V AC RMS / 1400 V DC
Maximum Dielectric Withstand Voltage	3000 V AC RMS
EMI	360° screening facilitated with straight EMC backshell

Technical	
Mating Durability	500 cycles minimum
Non-Magnetic	Yes
Termination Style	Crimp, Lug, Bus-bar
Coupling Method	Anti-vibration Tri-start thread
Mating Force	As Per MIL-DTL-38999L Table IV
Backshell Options	Straight or Locking Ring only
Panel Cutouts	As per MIL-DTL-38999L for rear mounting receptacles only

Environmental	
Operating Temperature	-55°C to +175°C*
Sealing (Mated and Unmated)	IP68
Salt Spray	Plating dependant, eg 500hrs for Black Zinc Nickel
Shock and Vibration	In accordance with DEF-STAN 00-35 Iss 4 Ch2 01 test M1 Appendix A Figs A22 – High Level and A23 Low Level**
Impact	In accordance with EIA-364-42 Light Service Class
Fluid Resistance	As per Mil-DTL-38999L
Safety	IP2X Finger Protection in accordance with BS EN 60529 mechanical finger
RoHS Compliant	Yes

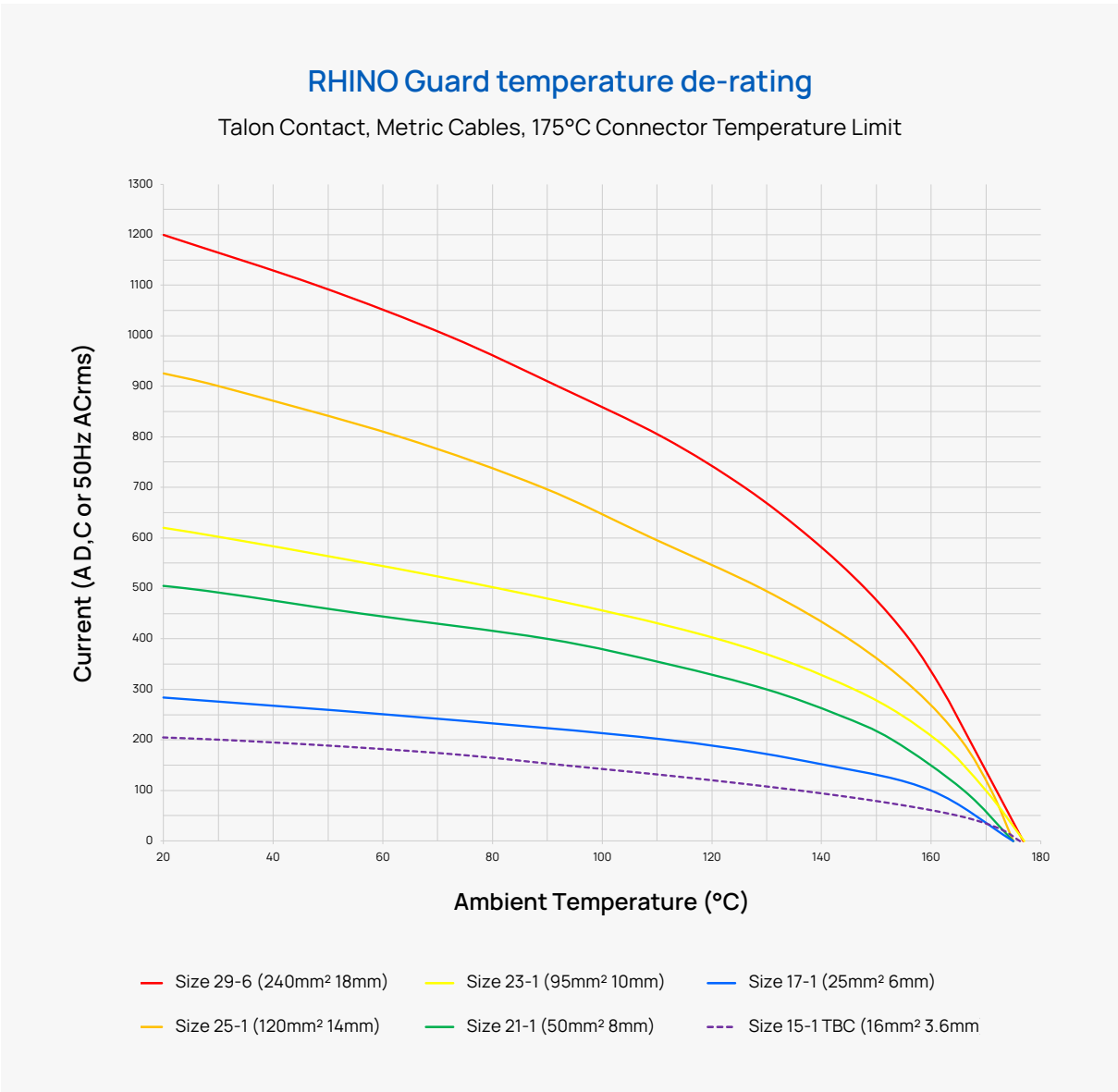
* Including environmental and contact self-heating, see de-rating curve.

** Cables should be supported to provide strain relief as close to the rear of the connector as practical. Bus bars should be kept to a minimum length practical, suitable CSA and appropriately supported for best performance.

Performance data

De-rating chart

The chart below is intended as a guide only, when used with the stated cable sizes on the plug and receptacle. It is the designer's responsibility to consider all physical and environmental factors which may affect de-rating and specify with some margin within these guideline limits. However Amphenol Ltd welcomes the opportunity to work alongside the designer in selecting appropriate connector solutions.



Cable Limit may be lower than 175°C, please factor in when selecting connector.
High Frequency AC must be additionally de-rated.
Multiple adjacent cables or cables in a conduit must be additionally de-rated.

Performance data

Crimp contact chart

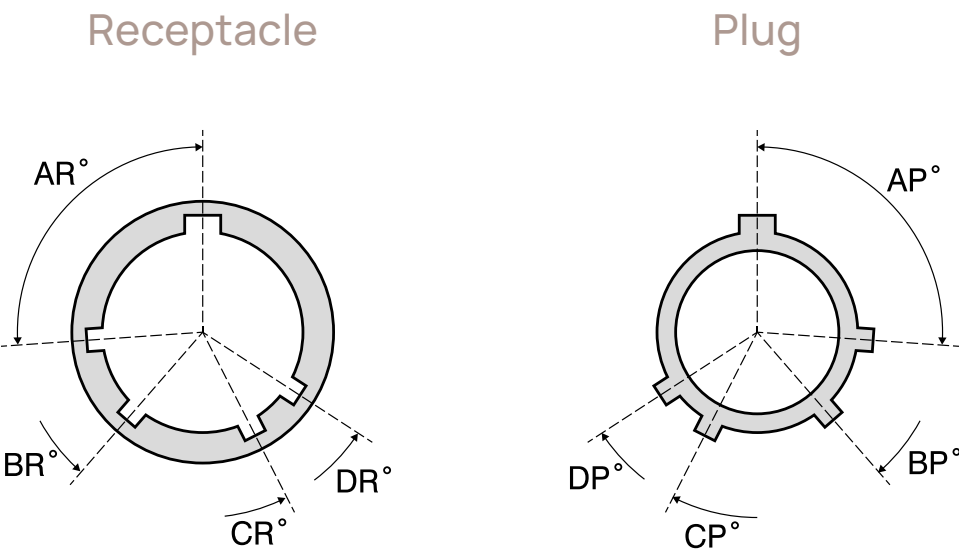
Rhino Guard connectors may be terminated to many cable brands including Axon, Habia, Huber+Suhner, Prysmian and others. Different methods of cable construction can lead to variations in stranding, compactness, tolerances and dimensions beyond our control. Therefore, whilst Amphenol cannot recommend the use of any particular cable type or brand, our Application Engineers are available to offer advice on crimp termination methods depending upon what tooling the Designer has available. The table below is intended as a guide only and it is recommended that crimp and pull-off tests be conducted to verify the contact termination method and tooling ultimately selected by the Designer.

For details of proven crimp tooling and die sets please refer to document 123GB-0846 on our website.

Shell Size	Contact Crimp Barrel Size	Crimp barrel bore ID Inch (mm)	Min acceptable cable core OD Inch (mm)	Recommended Cable Gauge (mm²)	Approx cable current (A) rating @ 30°C
15	-1	0.230 (05.84)	0.205 (05.20)	16	185A
	-6	0.191 (04.85)	0.157 (04.00)	10	140A
	-7	0.154 (03.91)	0.116 (02.95)	6	100A
17	-1	0.317 (08.05)	0.260 (06.60)	25	250A
	-6	0.230 (05.84)	0.205 (05.20)	16	185A
21	-1	0.423 (10.74)	0.362 (09.20)	50	395A
	-6	0.364 (09.25)	0.297 (07.55)	35	310A
23	-1	0.585 (14.86)	0.492 (12.50)	95	600A
	-6	0.498 (12.65)	0.439 (11.15)	70	500A
	-7	0.423 (10.74)	0.362 (09.20)	50	395A
25	-1	0.673 (17.09)	0.565 (14.35)	120	715A
	-6	0.585 (14.86)	0.492 (12.50)	95	600A
	-7	0.498 (12.65)	0.439 (11.15)	70	500A
	-8	0.423 (10.74)	0.362 (09.20)	50	395A
29	-1	1.004 (25.50)	0.933 (23.70)	300	1296A
	-6	0.947 (24.05)	0.866 (22.00)	240	1115A
	-7	0.829 (21.06)	0.748 (19.00)	185	920A
	-8	0.752 (19.10)	0.669 (17.00)	150	810A
	-9	0.673 (17.09)	0.565 (14.35)	120	715A

Keyway orientations

A plug with a given orientation letter will mate with a receptacle with the same orientation letter. The angles for a given connector are the same whether it contains a pin or socket contact. Views shown are from front face of the connector.



Keyway Orientations								
Keyway	Size 15				Size 17-25			
	AR/AP	BR/BP	CR/CP	DR/DP	AR/AP	BR/BP	CR/CP	DR/DP
N	95	141	208	236	80	142	196	293
A	113	156	182	292	135	170	200	310
B	90	145	195	252	49	169	200	244
C	53	156	2220	255	66	140	200	257
D	119	146	176	298	62	145	180	280
E	51	141	184	242	79	153	197	272

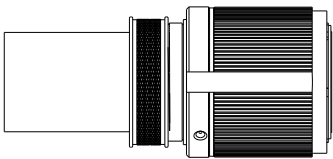
Plugs

Table of styles

WPTV-ED-06

A Style

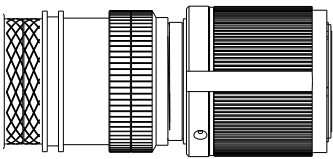
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WPTV-ED-06

B Style

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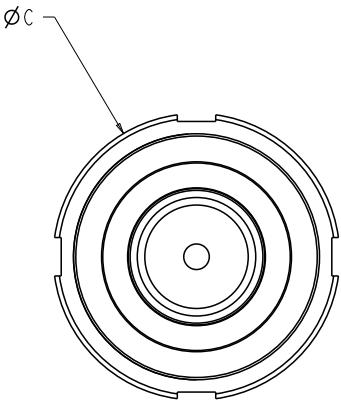
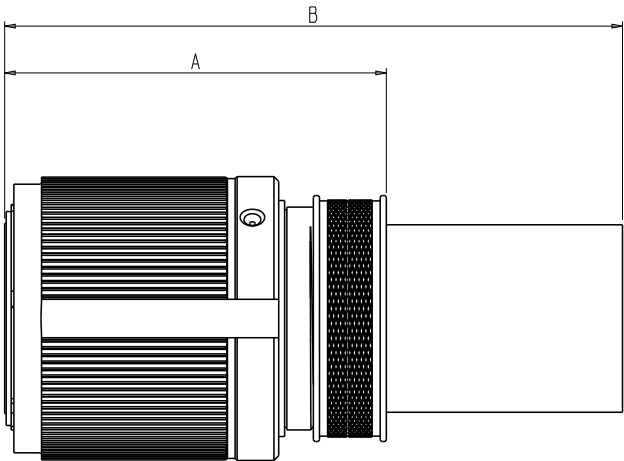


Plugs

06 In-Line Plug
A Style

WPTV-ED-06XXXX-XXXX-1PXA

- Locking Ring Only
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



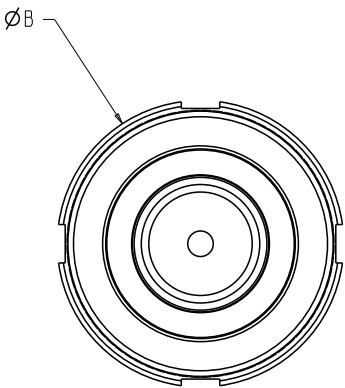
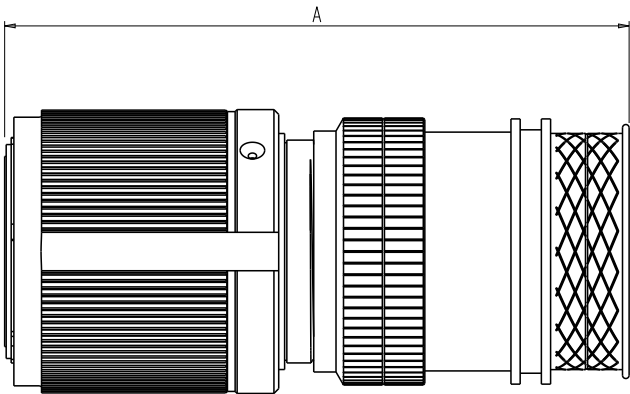
Reference Dimensions, Inch (mm)			
Size	A	B	ØC
15	1.754 (44.55)	2.114 (53.70)	1.249 (31.72)
17	1.868 (47.45)	2.378 (60.40)	1.386 (35.20)
21	2.023 (51.38)	2.587 (65.71)	1.620 (41.15)
23	2.228 (56.59)	3.249 (82.52)	1.737 (44.12)
25	2.475 (62.87)	4.072 (103.43)	1.864 (47.35)
29	2.740 (69.60)	4.327 (109.91)	2.105 (53.47)

Plugs

06 In-Line Plug
B Style

WPTV-ED-06XXXX-XXXX-1PXB

- Straight Backshell
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



Reference Dimensions, Inch (mm)		
Size	A	ØB
15	2.781 (70.64)	1.249 (31.72)
17	2.895 (73.53)	1.386 (35.20)
21	3.050 (77.47)	1.620 (41.15)
23	3.255 (82.68)	1.737 (44.12)
25	4.055 (103.00)	1.864 (47.35)
29	4.806 (122.07)	2.105 (53.47)

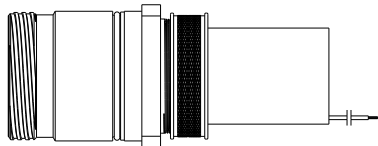
Receptacles

Table of styles

WPTV-ED-00

A Style

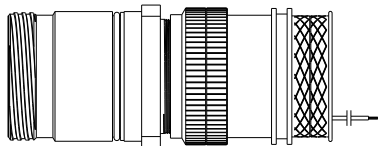
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WPTV-ED-00

B Style

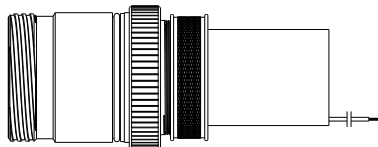
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WPTV-ED-01

A Style

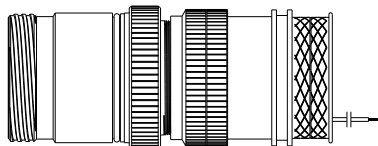
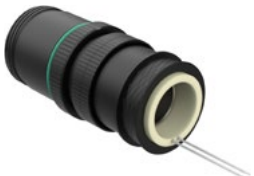
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WPTV-ED-01

B Style

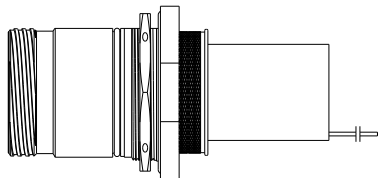
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WPTV-ED-07

A Style

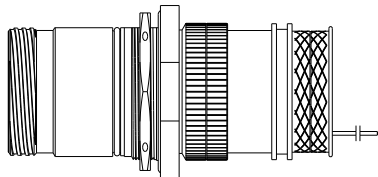
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WPTV-ED-07

B Style

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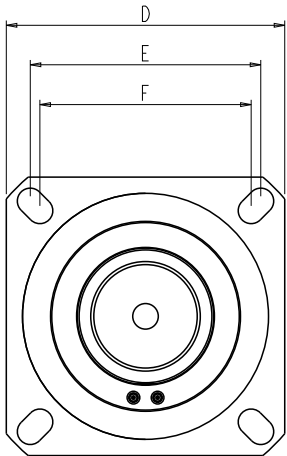
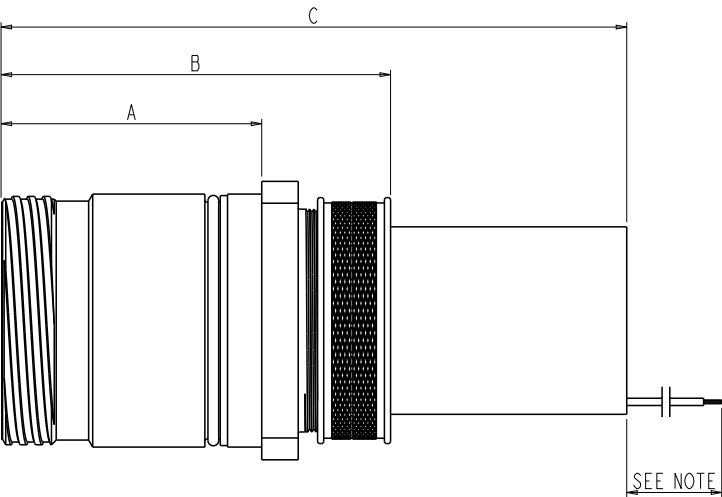
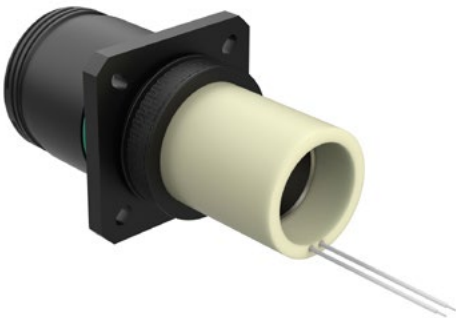


Receptacles

00 Wall Mount Receptacle
A Style

WPTV-ED-00XXXX-XXXX-1SXA

- Locking Ring Only
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



Reference Dimensions, Inch (mm)						
Size	A	B	C	D	E	F
15	1.096 (27.84)	1.754 (44.55)	2.114 (53.70)	1.219 (30.96)	0.969 (24.61)	0.906 (23.01)
17	1.210 (30.73)	1.921 (48.79)	2.787 (70.79)	1.438 (36.53)	1.156 (29.36)	1.062 (26.98)
21	1.365 (34.67)	2.048 (52.02)	2.914 (74.02)	1.562 (39.67)	1.250 (31.75)	1.156 (29.36)
23	1.450 (36.83)	2.328 (59.13)	3.249 (82.52)	1.689 (42.90)	1.375 (34.93)	1.250 (31.75)
25	1.697 (43.10)	2.535 (64.39)	4.072 (103.43)	1.812 (46.02)	1.500 (38.11)	1.375 (34.93)
29	1.944 (49.38)	2.732 (69.40)	4.420 (112.27)	2.312 (58.73)	1.725 (43.82)	1.600 (40.64)

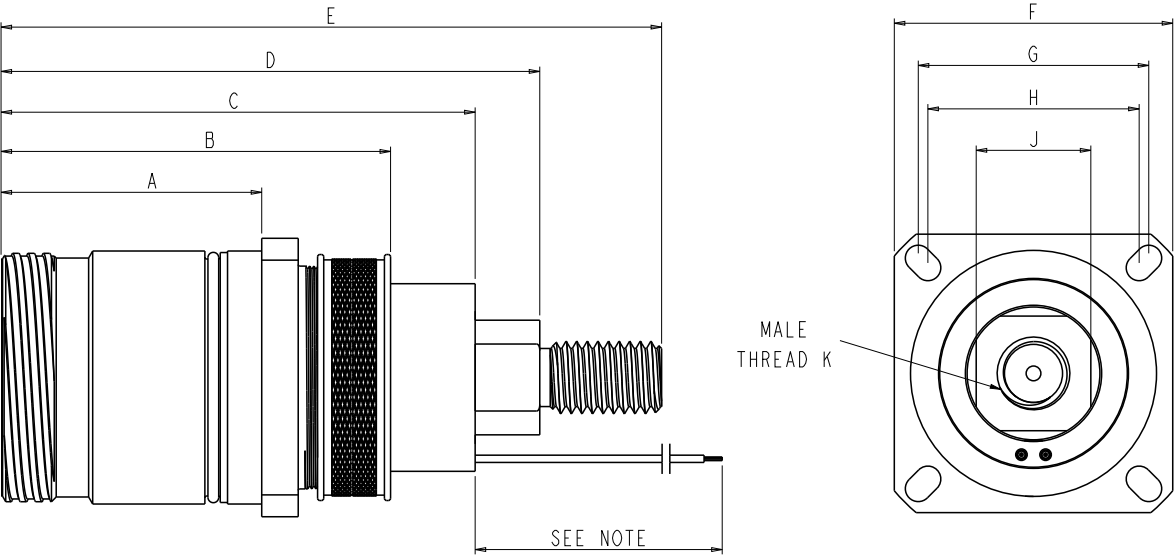
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

00 Wall Mount Receptacle
A Style

WPTV-ED-00XXXX-XXXX-2SXA

- Locking Ring Only
- Threaded Post Termination



Reference Dimensions, Inch (mm)										
Size	A	B	C	D	E	F	G	H	J	K
15	1.096 (27.84)	1.754 (44.55)	2.093 (53.16)	2.294 (58.27)	2.772 (70.41)	1.219 (30.96)	0.969 (24.61)	0.906 (23.01)	0.274 (6.96)	M4
17	1.210 (30.73)	1.921 (48.79)	2.259 (57.37)	2.459 (62.46)	2.937 (74.60)	1.438 (36.53)	1.156 (29.36)	1.062 (26.98)	0.392 (9.96)	M6
21	1.365 (34.67)	2.048 (52.02)	2.387 (60.63)	2.650 (67.31)	3.247 (82.47)	1.562 (39.67)	1.250 (31.75)	1.156 (29.36)	0.510 (12.95)	M8
23	1.450 (36.83)	2.328 (59.13)	2.788 (70.82)	3.114 (79.10)	3.829 (97.26)	1.689 (42.90)	1.375 (34.93)	1.250 (31.75)	0.667 (16.94)	M10
25	1.697 (43.10)	2.535 (64.39)	3.086 (78.38)	3.506 (89.05)	4.299 (109.20)	1.812 (46.02)	1.500 (38.11)	1.375 (34.93)	0.746 (18.92)	M12
29	1.944 (49.38)	2.732 (69.40)	3.458 (87.83)	3.878 (98.50)	4.671 (118.64)	2.312 (58.73)	1.725 (43.82)	1.600 (40.64)	0.746 (18.92)	M12

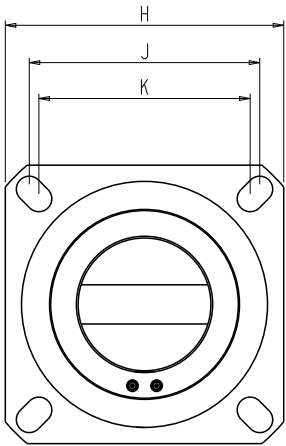
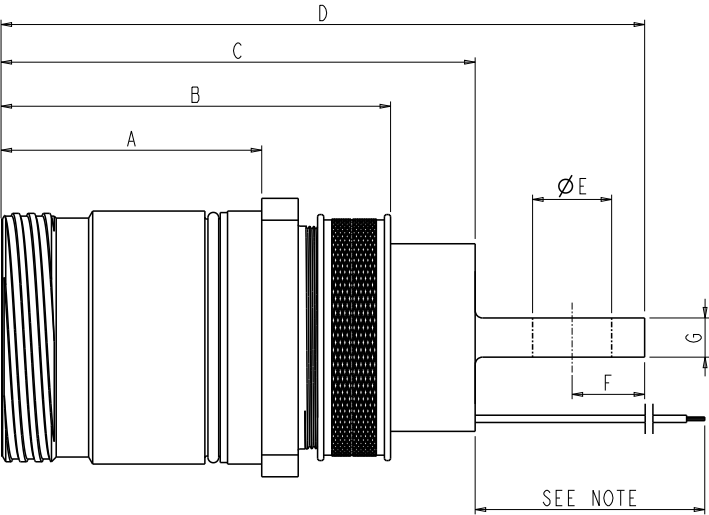
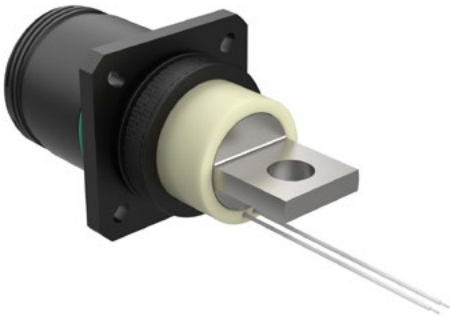
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

00 Wall Mount Receptacle
A Style

WPTV-ED-00XXXX-XXXX-3SXA

- Locking Ring Only
- Flat Tail Termination



Reference Dimensions, Inch (mm)										
Size	A	B	C	D	ØE	F	G	H	J	K
15	1.096 (27.84)	1.754 (44.55)	2.093 (53.16)	3.037 (77.14)	0.200 (5.08)	0.433 (10.99)	0.145 (3.68)	1.219 (30.96)	0.969 (24.61)	0.906 (23.01)
17	1.210 (30.73)	1.921 (48.79)	2.259 (57.37)	3.207 (81.46)	0.279 (7.09)	0.433 (10.99)	0.145 (3.68)	1.438 (36.53)	1.156 (29.36)	1.062 (26.98)
21	1.365 (34.67)	2.048 (52.02)	2.387 (60.63)	3.335 (84.71)	0.358 (9.09)	0.433 (10.99)	0.205 (5.21)	1.562 (39.67)	1.250 (31.75)	1.156 (29.36)
23	1.450 (36.83)	2.328 (59.13)	2.788 (70.82)	3.740 (95.00)	0.436 (11.07)	0.472 (11.99)	0.205 (5.21)	1.689 (42.90)	1.375 (34.93)	1.250 (31.75)
25	1.697 (43.10)	2.535 (64.39)	3.086 (78.38)	4.189 (106.40)	0.515 (13.08)	0.472 (11.99)	0.255 (6.48)	1.812 (46.02)	1.500 (38.11)	1.375 (34.93)
29	1.944 (49.38)	2.732 (69.40)	3.458 (87.83)	4.561 (115.85)	0.515 (13.08)	0.472 (11.99)	0.255 (6.48)	2.312 (58.73)	1.725 (43.82)	1.600 (40.64)

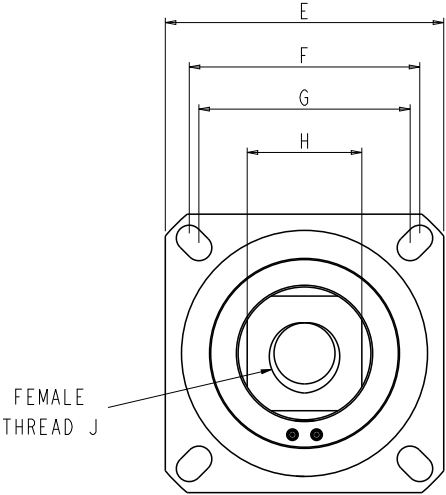
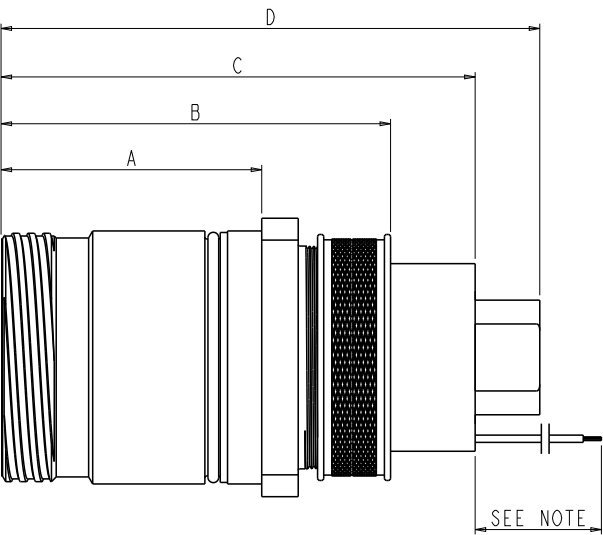
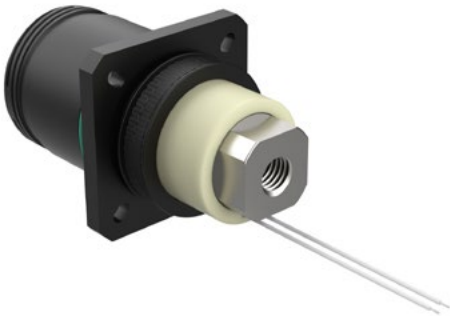
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

00 Wall Mount Receptacle
A Style

WPTV-ED-00XXXX-XXXX-5SXA

- Locking Ring Only
- Tapped Hole Termination



Reference Dimensions, Inch (mm)									
Size	A	B	C	D	E	F	G	H	J
15	1.096 (27.84)	1.754 (44.55)	2.093 (53.16)	2.294 (58.27)	1.219 (30.96)	0.969 (24.61)	0.906 (23.01)	0.274 (6.96)	M4 x 12mm DEEP
17	1.210 (30.73)	1.921 (48.79)	2.259 (57.37)	2.459 (62.46)	1.438 (36.53)	1.156 (29.36)	1.062 (26.98)	0.392 (9.96)	M6 x 12mm DEEP
21	1.365 (34.67)	2.048 (52.02)	2.387 (60.63)	2.650 (67.31)	1.562 (39.67)	1.250 (31.75)	1.156 (29.36)	0.510 (12.95)	M8 x 15mm DEEP
23	1.450 (36.83)	2.328 (59.13)	2.788 (70.82)	3.114 (79.10)	1.689 (42.90)	1.375 (34.93)	1.250 (31.75)	0.667 (16.94)	M10 x 18mm DEEP
25	1.697 (43.10)	2.535 (64.39)	3.086 (78.38)	3.506 (89.05)	1.812 (46.02)	1.500 (38.11)	1.375 (34.93)	0.746 (18.92)	M12 x 18mm DEEP
29	1.944 (49.38)	2.732 (69.40)	3.458 (87.83)	3.878 (98.50)	2.312 (58.73)	1.725 (43.82)	1.600 (40.64)	0.746 (18.92)	M12 x 18mm DEEP

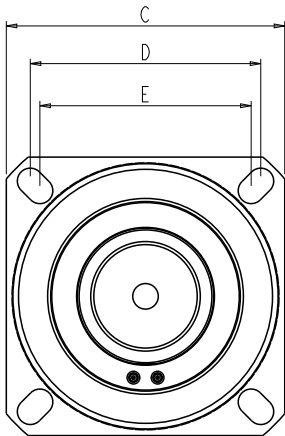
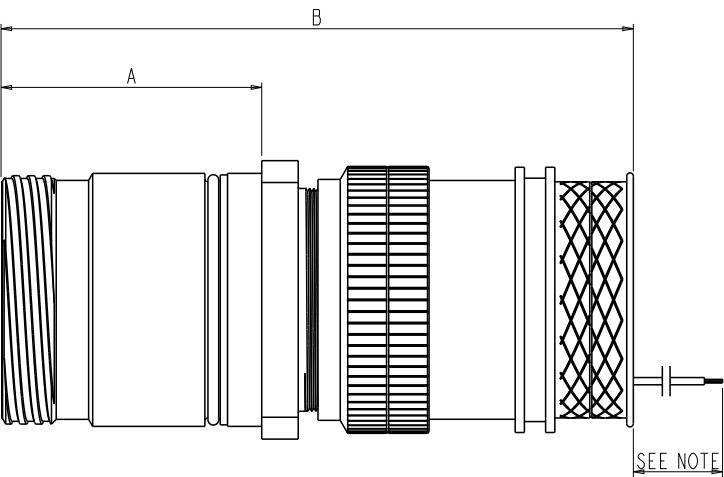
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

00 Wall Mount Receptacle
B Style

WPTV-ED-00XXXX-XXXX-1SXB

- Straight Backshell
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



Reference Dimensions, Inch (mm)					
Size	A	B	C	D	E
15	1.096 (27.84)	2.833 (71.96)	1.219 (30.96)	0.969 (24.61)	0.906 (23.01)
17	1.210 (30.73)	2.948 (74.88)	1.438 (36.53)	1.156 (29.36)	1.062 (26.98)
21	1.365 (34.67)	3.075 (78.11)	1.562 (39.67)	1.250 (31.75)	1.156 (29.36)
23	1.450 (36.83)	3.255 (82.68)	1.689 (42.90)	1.375 (34.93)	1.250 (31.75)
25	1.697 (43.10)	4.115 (104.52)	1.812 (46.02)	1.500 (38.11)	1.375 (34.93)
29	1.944 (49.38)	4.420 (112.27)	2.312 (58.73)	1.725 (43.82)	1.600 (40.64)

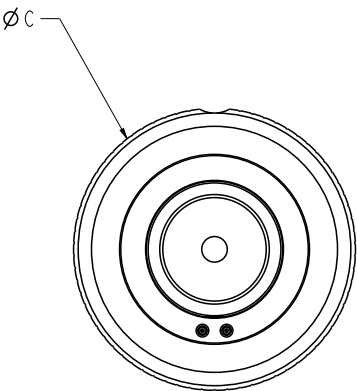
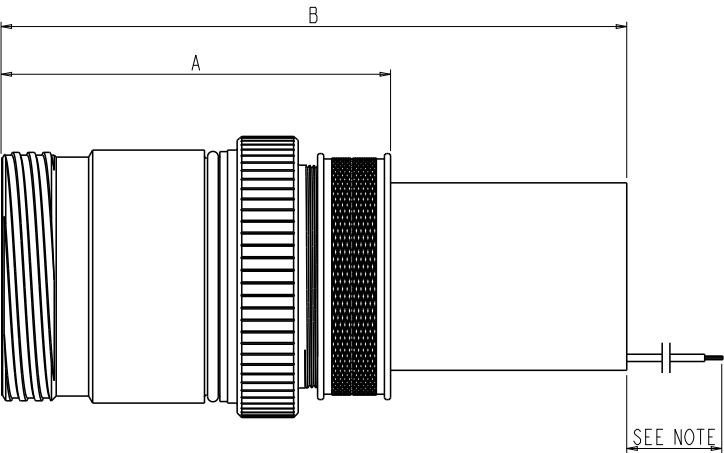
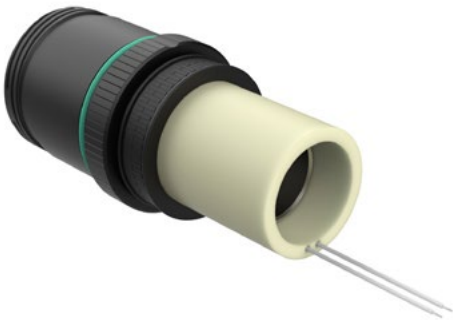
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

01 In-Line Receptacle A Style

WPTV-ED-01XXXX-XXXX-1SXA

- Locking Ring Only
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



Reference Dimensions, Inch (mm)			
Size	A	B	ØC
15	1.754 (44.55)	2.114 (53.70)	1.220 (30.99)
17	1.921 (48.79)	2.787 (70.79)	1.357 (34.47)
21	2.048 (52.02)	2.914 (74.02)	1.591 (40.41)
23	2.328 (59.13)	3.249 (82.52)	1.708 (43.38)
25	2.535 (64.39)	4.072 (103.43)	1.835 (46.61)
29	2.732 (69.40)	4.420 (112.27)	2.084 (52.93)

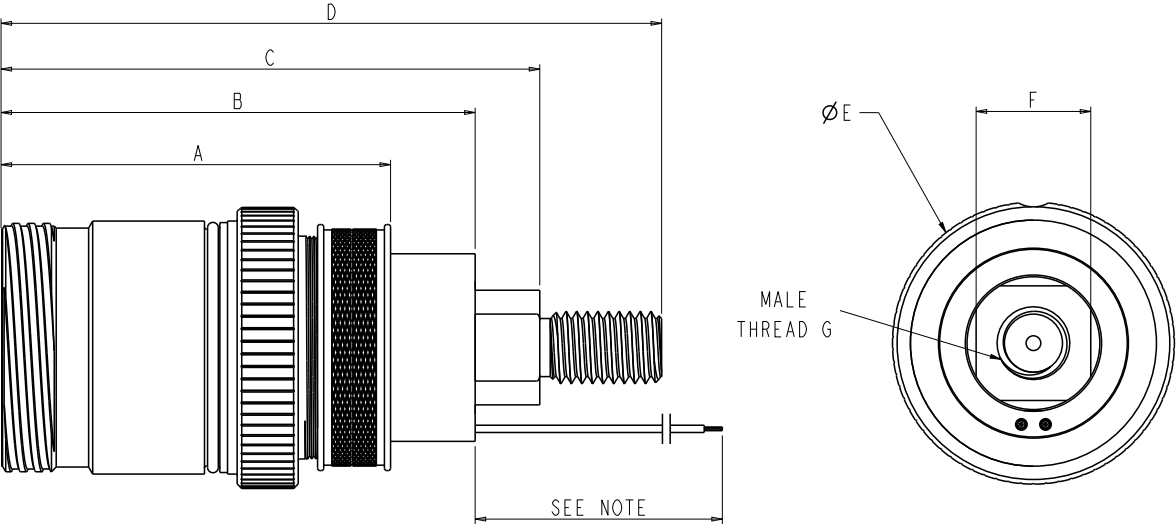
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

01 In-Line Receptacle A Style

WPTV-ED-01XXXX-XXXX-2SXA

- Locking Ring Only
- Threaded Post Termination



Reference Dimensions, Inch (mm)							
Size	A	B	ØC	D	E	F	G
15	1.754 (44.55)	2.093 (53.16)	2.294 (58.27)	2.772 (70.41)	1.220 (30.99)	0.274 (6.96)	M4
17	1.921 (48.79)	2.259 (57.37)	2.459 (62.46)	2.937 (74.60)	1.357 (34.47)	0.392 (9.96)	M6
21	2.048 (52.02)	2.387 (60.63)	2.650 (67.31)	3.247 (82.47)	1.591 (40.41)	0.510 (12.95)	M8
23	2.328 (59.13)	2.788 (70.82)	3.114 (79.10)	3.829 (97.26)	1.708 (43.38)	0.667 (16.94)	M10
25	2.535 (64.39)	3.086 (78.38)	3.506 (89.05)	4.299 (109.20)	1.835 (46.61)	0.746 (18.92)	M12
29	2.732 (69.40)	3.458 (87.83)	3.878 (98.50)	4.671 (118.64)	2.084 (52.93)	0.746 (18.92)	M12

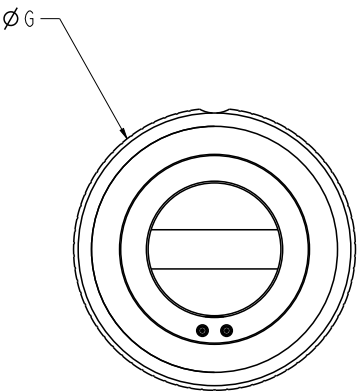
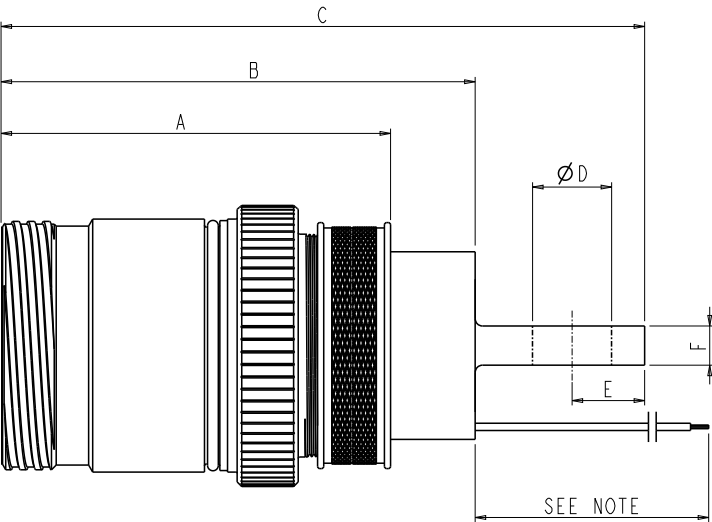
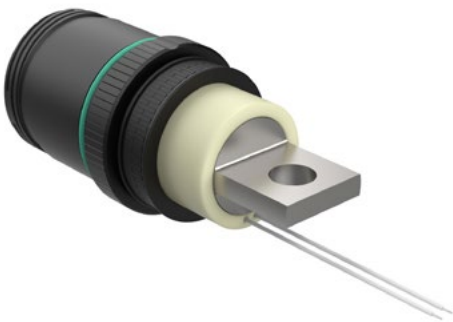
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

01 In-Line Receptacle A Style

WPTV-ED-01XXXX-XXXX-3SXA

- Locking Ring Only
- Flat Tail Termination



Reference Dimensions, Inch (mm)							
Size	A	B	C	ØD	E	F	ØG
15	1.754 (44.55)	2.093 (53.16)	3.037 (77.14)	0.200 (5.08)	0.433 (10.99)	0.145 (3.68)	1.220 (30.99)
17	1.921 (48.79)	2.259 (57.37)	3.207 (81.46)	0.279 (7.09)	0.433 (10.99)	0.145 (3.68)	1.357 (34.47)
21	2.048 (52.02)	2.387 (60.63)	3.335 (84.71)	0.358 (9.09)	0.433 (10.99)	0.205 (5.21)	1.591 (40.41)
23	2.328 (59.13)	2.788 (70.82)	3.740 (95.00)	0.436 (11.07)	0.472 (11.99)	0.205 (5.21)	1.708 (43.38)
25	2.535 (64.39)	3.086 (78.38)	4.189 (106.40)	0.515 (13.08)	0.472 (11.99)	0.255 (6.48)	1.835 (46.61)
29	2.732 (69.40)	3.458 (87.83)	4.561 (115.85)	0.515 (13.08)	0.472 (11.99)	0.255 (6.48)	2.084 (52.93)

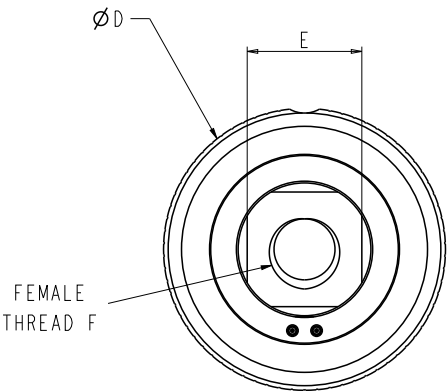
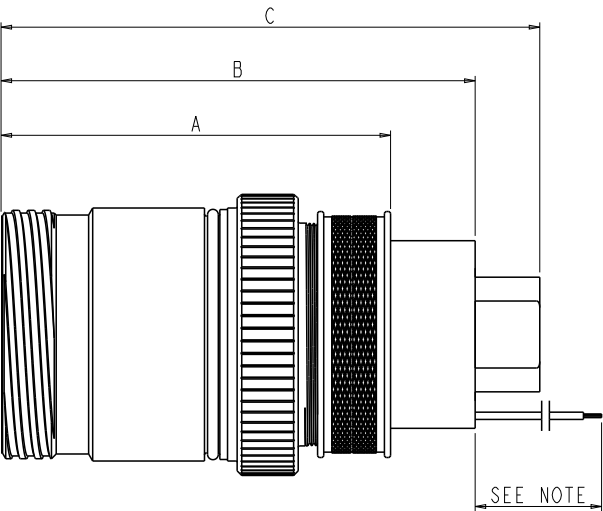
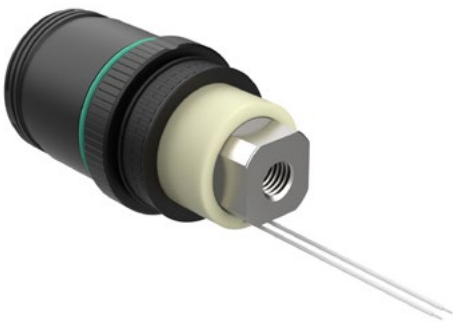
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

01 In-Line Receptacle
A Style

WPTV-ED-01XXXX-XXXX-5SXA

- Locking Ring Only
- Tapped Hole Termination



Reference Dimensions, Inch (mm)						
Size	A	B	C	ØD	E	F
15	1.754 (44.55)	2.093 (53.16)	2.294 (58.27)	1.220 (30.99)	0.274 (6.96)	M4 x 12mm DEEP
17	1.921 (48.79)	2.259 (57.37)	2.459 (62.46)	1.357 (34.47)	0.392 (9.96)	M6 x 12mm DEEP
21	2.048 (52.02)	2.387 (60.63)	2.650 (67.31)	1.591 (40.41)	0.510 (12.95)	M8 x 15mm DEEP
23	2.328 (59.13)	2.788 (70.82)	3.114 (79.10)	1.708 (43.38)	0.667 (16.94)	M10 x 18mm DEEP
25	2.535 (64.39)	3.086 (78.38)	3.506 (89.05)	1.835 (46.61)	0.746 (18.92)	M12 x 18mm DEEP
29	2.732 (69.40)	3.458 (87.83)	3.878 (98.50)	2.084 (52.93)	0.746 (18.92)	M12 x 18mm DEEP

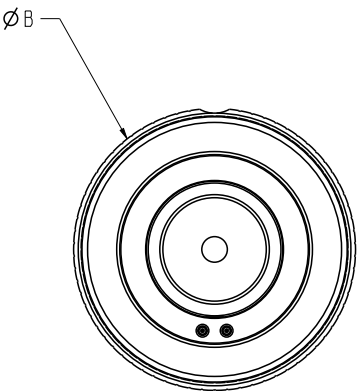
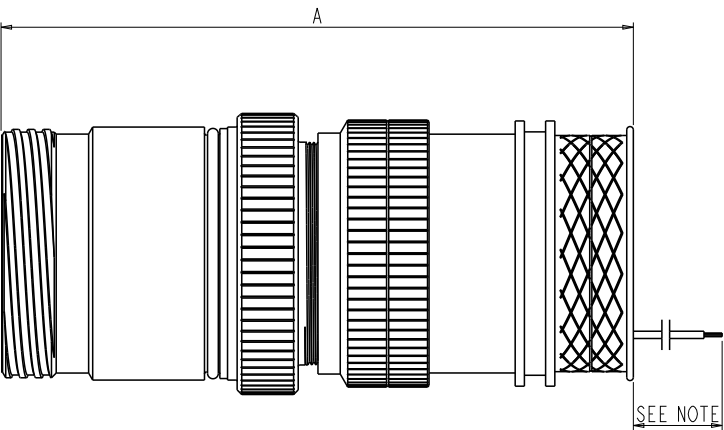
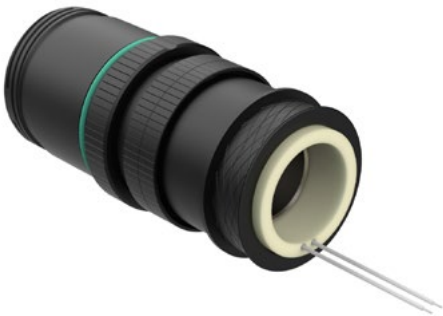
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

01 In-Line Receptacle B Style

WPTV-ED-01XXXX-XXXX-1SXB

- Straight Backshell
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



Reference Dimensions, Inch (mm)		
Size	A	ØB
15	2.833 (71.96)	1.220 (30.99)
17	2.948 (74.88)	1.357 (34.47)
21	3.075 (78.11)	1.591 (40.41)
23	3.255 (82.68)	1.708 (43.38)
25	4.115 (104.52)	1.835 (46.61)
29	4.420 (112.27)	2.084 (52.93)

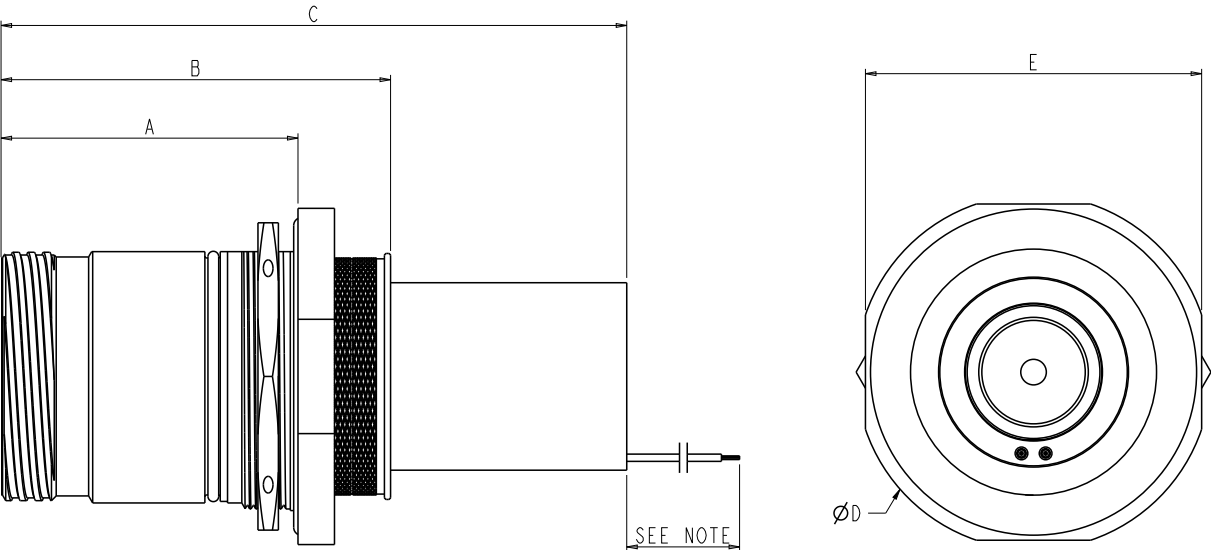
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

07 Jam Nut Receptacle
A Style

WPTV-ED-07XXXX-XXXX-1SXA

- Locking Ring Only
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



Reference Dimensions, Inch (mm)					
Size	A	B	C	ØD	E
15	1.212 (30.79)	1.754 (44.55)	2.114 (53.70)	1.625 (41.28)	1.500 (38.11)
17	1.326 (33.68)	1.921 (48.79)	2.787 (70.79)	1.750 (44.45)	1.625 (41.28)
21	1.480 (37.59)	2.048 (52.02)	2.914 (74.02)	2.062 (52.37)	1.938 (49.23)
23	1.683 (42.75)	2.328 (59.13)	3.249 (82.52)	2.188 (55.58)	2.062 (52.37)
25	1.930 (49.02)	2.535 (64.39)	4.072 (103.43)	2.311 (58.70)	2.188 (55.58)
29	2.180 (55.37)	2.732 (69.40)	4.420 (112.27)	2.560 (65.03)	2.437 (61.90)

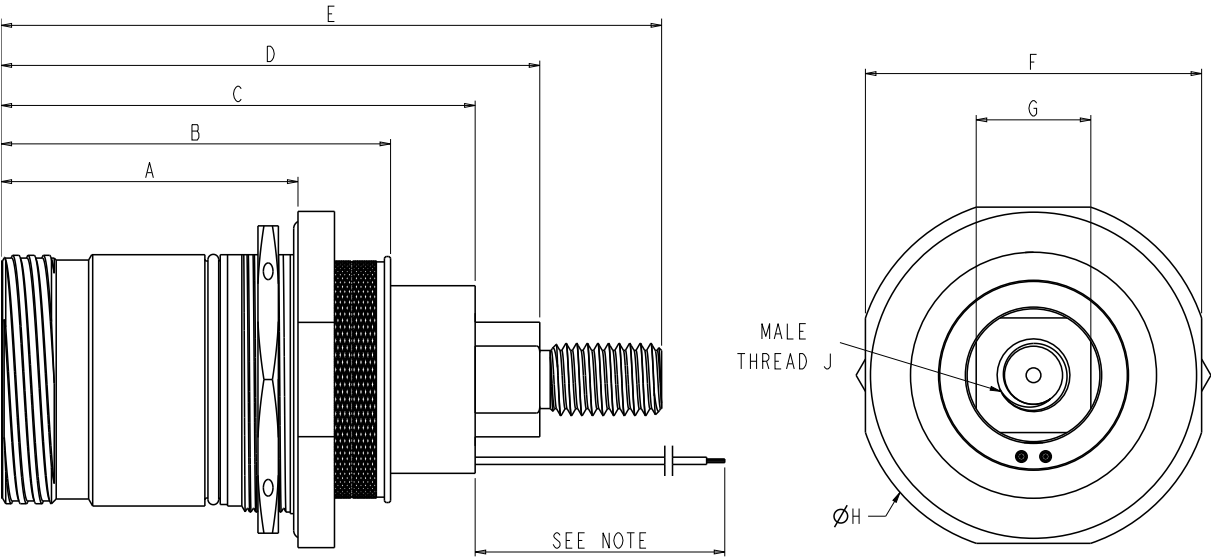
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

07 Jam Nut Receptacle
A Style

WPTV-ED-07XXXX-XXXX-2SXA

- Locking Ring Only
- Threaded Post Termination



Reference Dimensions, Inch (mm)									
Size	A	B	C	D	E	F	G	ØH	J
15	1.212 (30.79)	1.754 (44.55)	2.093 (53.16)	2.294 (58.27)	2.772 (70.41)	1.500 (38.11)	0.274 (6.96)	1.625 (41.28)	M4
17	1.326 (33.68)	1.921 (48.79)	2.259 (57.37)	2.459 (62.46)	2.937 (74.60)	1.625 (41.28)	0.392 (9.96)	1.750 (44.45)	M6
21	1.480 (37.59)	2.048 (52.02)	2.387 (60.63)	2.650 (67.31)	3.247 (82.47)	1.938 (49.23)	0.510 (12.95)	2.062 (52.37)	M8
23	1.683 (42.75)	2.328 (59.13)	2.788 (70.82)	3.114 (79.10)	3.829 (97.26)	2.062 (52.37)	0.667 (16.94)	2.188 (55.58)	M10
25	1.930 (49.02)	2.535 (64.39)	3.086 (78.38)	3.506 (89.05)	4.299 (109.20)	2.188 (55.58)	0.746 (18.92)	2.311 (58.70)	M12
29	2.180 (55.37)	2.732 (69.40)	3.458 (87.83)	3.878 (98.50)	4.671 (118.64)	2.437 (61.90)	0.746 (18.92)	2.560 (65.03)	M12

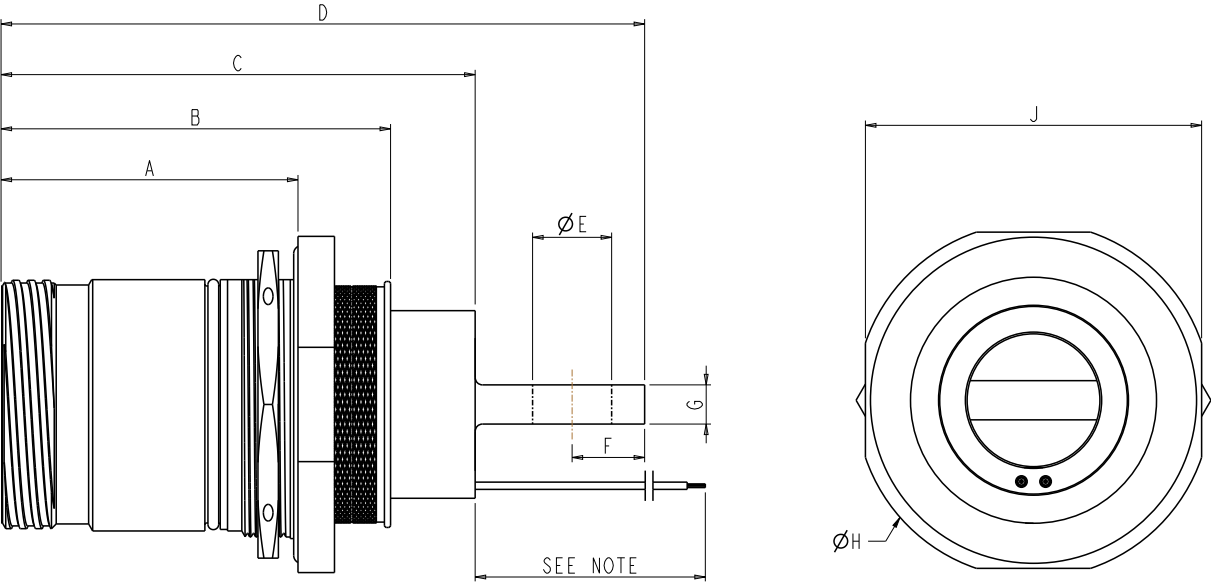
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

07 Jam Nut Receptacle
A Style

WPTV-ED-07XXXX-XXXX-3SXA

- Locking Ring Only
- Flat Tail Termination



Reference Dimensions, Inch (mm)									
Size	A	B	C	D	ØE	F	G	ØH	J
15	1.212 (30.79)	1.754 (44.55)	2.093 (53.16)	3.037 (77.14)	0.200 (5.08)	0.433 (10.99)	0.145 (3.68)	1.625 (41.28)	1.500 (38.11)
17	1.326 (33.68)	1.921 (48.79)	2.259 (57.37)	3.207 (81.46)	0.279 (7.09)	0.433 (10.99)	0.145 (3.68)	1.750 (44.45)	1.625 (41.28)
21	1.480 (37.59)	2.048 (52.02)	2.387 (60.63)	3.335 (84.71)	0.358 (9.09)	0.433 (10.99)	0.205 (5.21)	2.062 (52.37)	1.938 (49.23)
23	1.683 (42.75)	2.328 (59.13)	2.788 (70.82)	3.740 (95.00)	0.436 (11.07)	0.472 (11.99)	0.205 (5.21)	2.188 (55.58)	2.062 (52.37)
25	1.930 (49.02)	2.535 (64.39)	3.086 (78.38)	4.189 (106.40)	0.515 (13.08)	0.472 (11.99)	0.255 (6.48)	2.311 (58.70)	2.188 (55.58)
29	2.180 (55.37)	2.732 (69.40)	3.458 (87.83)	4.561 (115.85)	0.515 (13.08)	0.472 (11.99)	0.255 (6.48)	2.560 (65.03)	2.437 (61.90)

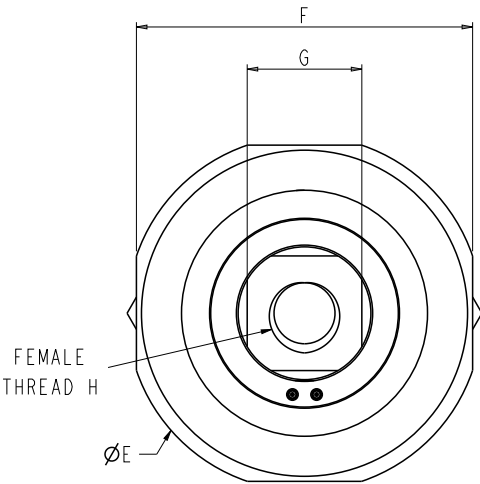
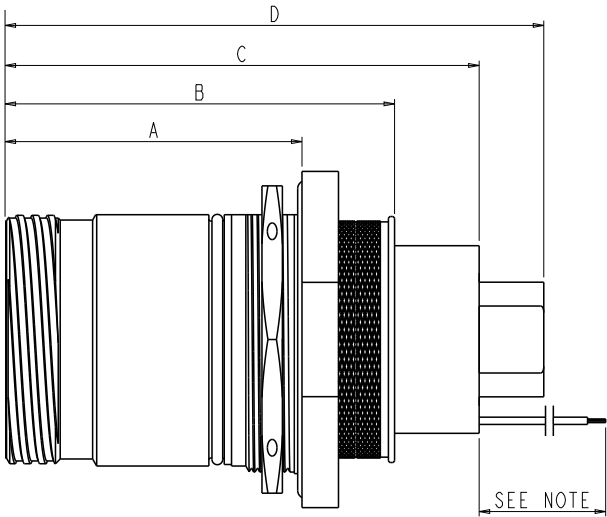
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

07 Jam Nut Receptacle
A Style

WPTV-ED-07XXXX-XXXX-5SXA

- Locking Ring Only
- Tapped Hole Termination



Reference Dimensions, Inch (mm)								
Size	A	B	C	D	ØE	F	G	H
15	1.212 (30.79)	1.754 (44.55)	2.093 (53.16)	2.294 (58.27)	1.625 (41.28)	1.500 (38.11)	0.274 (6.96)	M4 x 12mm DEEP
17	1.326 (33.68)	1.921 (48.79)	2.259 (57.37)	2.459 (62.46)	1.750 (44.45)	1.625 (41.28)	0.392 (9.96)	M6 x 12mm DEEP
21	1.480 (37.59)	2.048 (52.02)	2.387 (60.63)	2.650 (67.31)	2.062 (52.37)	1.938 (49.23)	0.510 (12.95)	M8 x 15mm DEEP
23	1.683 (42.75)	2.328 (59.13)	2.788 (70.82)	3.114 (79.10)	2.188 (55.58)	2.062 (52.37)	0.667 (16.94)	M10 x 18mm DEEP
25	1.930 (49.02)	2.535 (64.39)	3.086 (78.38)	3.506 (89.05)	2.311 (58.70)	2.188 (55.58)	0.746 (18.92)	M12 x 18mm DEEP
29	2.180 (55.37)	2.732 (69.40)	3.458 (87.83)	3.878 (98.50)	2.560 (65.03)	2.437 (61.90)	0.746 (18.92)	M12 x 18mm DEEP

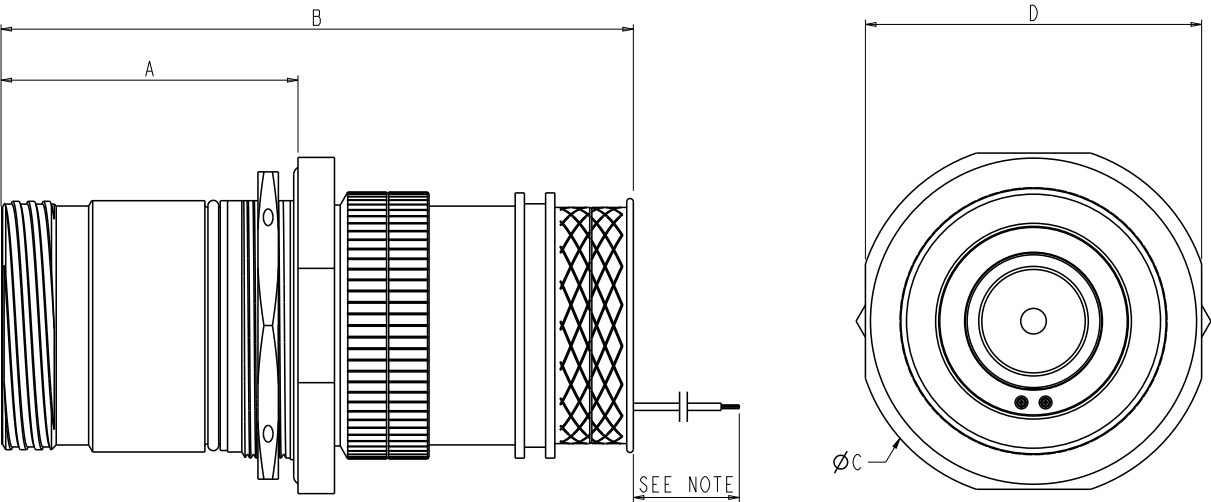
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Receptacles

07 Jam Nut Receptacle B Style

WPTV-ED-07XXXX-XXXX-1SXB

- Straight Backshell
- Crimp Termination
- Also -6, -7, and -8 reduced crimp options



Reference Dimensions, Inch (mm)				
Size	A	B	ØC	D
15	1.212 (30.79)	2.833 (71.96)	1.625 (41.28)	1.500 (38.11)
17	1.326 (33.68)	2.948 (74.88)	1.750 (44.45)	1.625 (41.28)
21	1.480 (37.59)	3.075 (78.11)	2.062 (52.37)	1.938 (49.23)
23	1.683 (42.75)	3.255 (82.68)	2.188 (55.58)	2.062 (52.37)
25	1.930 (49.02)	4.115 (104.52)	2.311 (58.70)	2.188 (55.58)
29	2.180 (55.37)	4.420 (112.27)	2.560 (65.03)	2.437 (61.90)

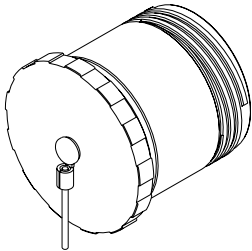
Note: Pilot contact wires on receptacles: 2 x 24AWG PTFE equipment wire 0.1m cut length - customer to strip as required

Caps

Table of Styles

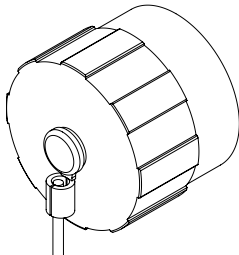
WPTV-PC-XX-XX

Page 31



WPTV-RC-XX-XX

Page 32



Rhino Guard caps are all supplied with a 450mm +/- 6mm black Terylene cord lanyard, basic crimp ferrule and crimp eyelet for the user to terminate to their own specification.

Part numbering

Example: WPTV-PC-ZN-23

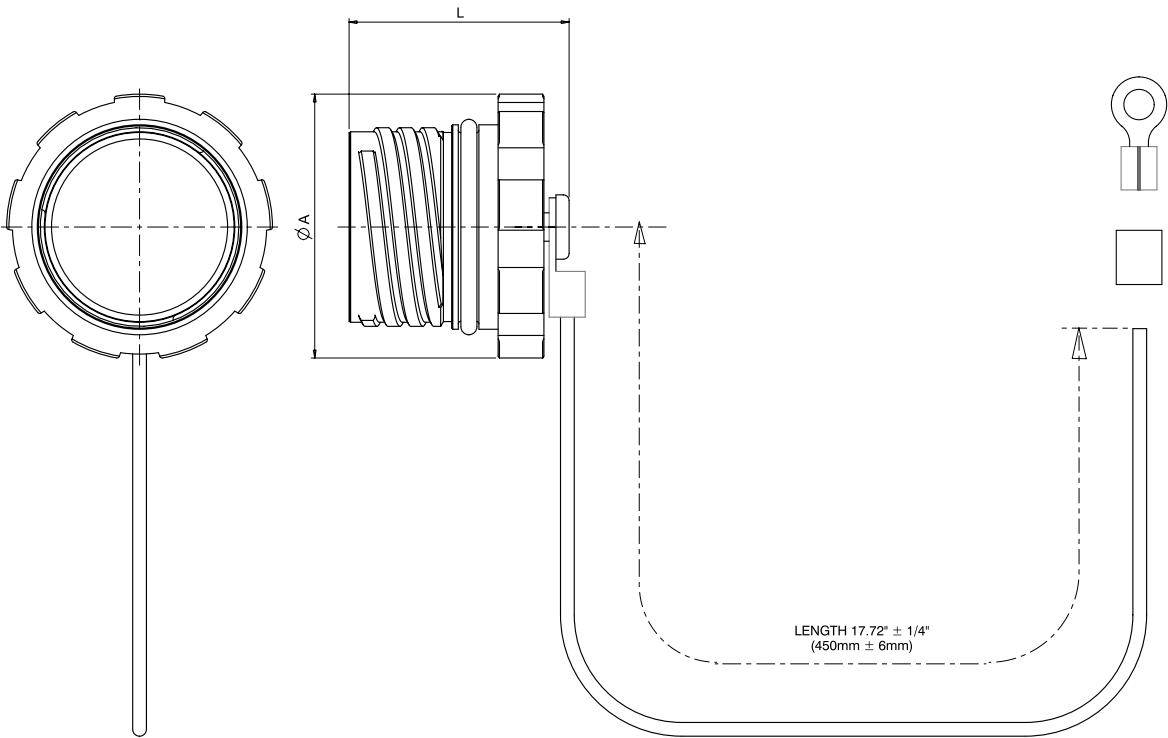
Plug Cap, Aluminium body, Black Zinc Nickel finish, Shell size 23

Series	Style	Finish	Shell Size
WPTV-	XX-	ZN-	XX
WPTV-	PC - Plug Cap RC - Receptacle Cap	ZN - Aluminium, Black Zinc Nickel	15 17 21 23 25 29

Caps

Metal cap assembly for Plugs

WPTV-PC-ZN-XX

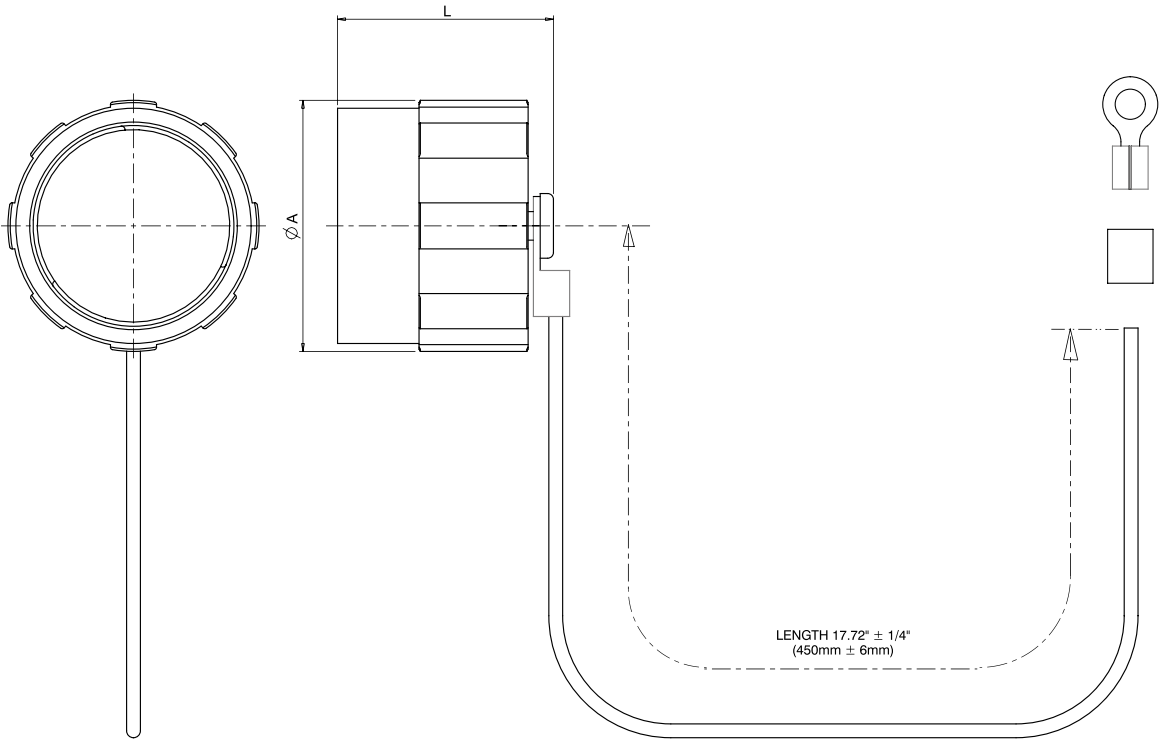


Reference Dimensions, Inch (mm)		
Size	ØA	L
15	1.240 (31.50)	1.186 (30.12)
17	1.375 (34.93)	1.294 (32.87)
21	1.610 (40.89)	1.329 (33.76)
23	1.730 (43.94)	1.534 (38.96)
25	1.855 (47.12)	1.782 (45.26)
29	2.104 (53.44)	2.029 (51.54)

Caps

Metal cap assembly for Receptacles

WPTV-RC-ZN-XX



Reference Dimensions, Inch (mm)		
Size	$\varnothing A$	L
15	1.217 (30.91)	1.128 (28.65)
17	1.418 (36.02)	1.242 (31.55)
21	1.573 (39.95)	1.297 (32.94)
23	1.699 (43.15)	1.520 (38.61)
25	1.825 (46.36)	1.742 (44.25)
29	2.074 (52.68)	2.050 (52.07)

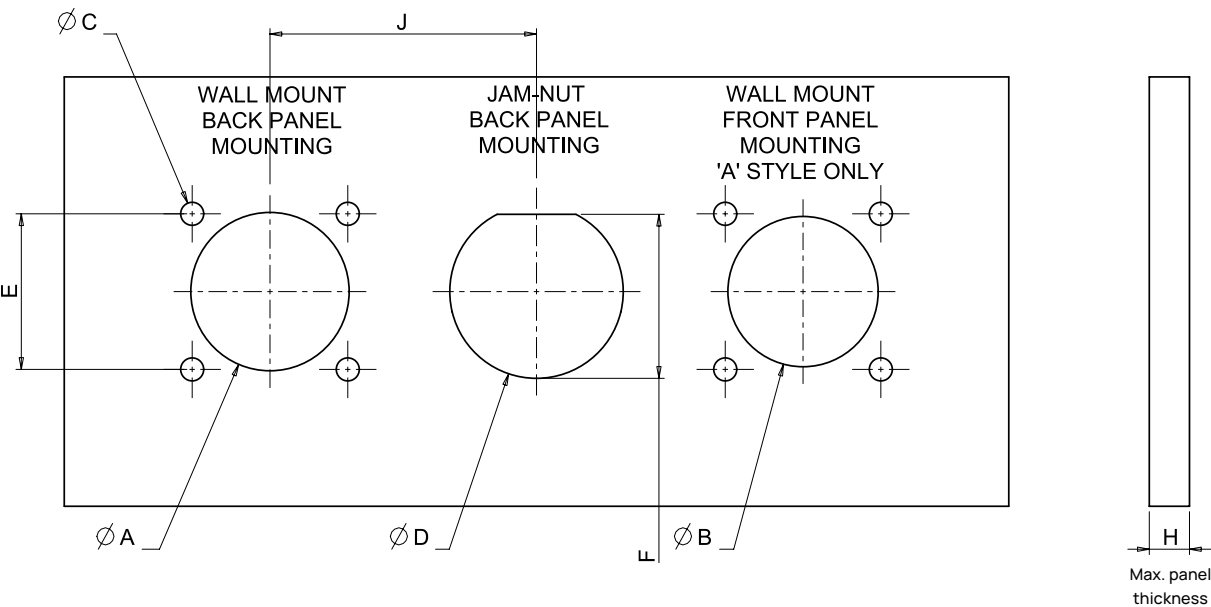
Installation

Guide to installation documents available on request

The following documents are available on request or from our website to provide additional information regarding the termination and installation of Rhino Guard connectors.

Document title	Description
123GB-0826	Panel cutout dimensions for all sizes and styles
123GB-0839	Assembly instructions for wall mount receptacles with part numbers beginning WPTV-ED-00...
123GB-0840	Assembly instructions for inline receptacles with part numbers beginning WPTV-ED-01...
123GB-0841	Assembly instructions for plugs with part numbers beginning WPTV-ED-06...
123GB-0842	Assembly instructions for jam nut receptacles with part numbers beginning WPTV-ED-07...
123GB-0845	Specified torque settings for contact and backshell assembly
123GB-0846	Contains information regarding crimp tools and settings for carrying out crimp termination

Panel cut-out



Reference Dimensions, Inch (mm)									
Size	ØA	ØB	ØC Imperial	ØC Metric	ØD	E	F	H Wall Mt	J
15	1.047 (26.59)	1.080 (25.91)	0.128 (3.25)	0.134 (3.40)	1.135 (28.83)	0.969 (24.61)	1.085 (27.56)	0.234 (05.94)	1.674 (42.52)
17	1.219 (30.96)	1.160 (29.46)	0.128 (3.25)	0.134 (3.40)	1.260 (32.00)	1.062 (26.97)	1.210 (30.73)	0.234 (05.94)	1.800 (45.72)
21	1.422 (36.12)	1.350 (34.25)	0.128 (3.25)	0.134 (3.40)	1.510 (38.35)	1.250 (31.75)	1.460 (37.08)	0.204 (05.18)	2.036 (51.71)
23	1.547 (39.29)	1.513 (38.43)	0.150 (3.81)	0.177 (4.50)	1.635 (41.53)	1.375 (34.93)	1.585 (40.26)	0.204 (05.18)	2.162 (54.91)
25	1.672 (42.47)	1.631 (41.43)	0.150 (3.81)	0.177 (4.50)	1.760 (44.70)	1.500 (38.10)	1.710 (43.43)	0.204 (05.18)	2.284 (58.01)
29	1.921 (48.80)	1.874 (47.60)	0.150 (3.81)	0.177 (4.50)	2.009 (51.03)	1.725 (43.82)	1.959 (49.76)	0.204 (05.18)	2.660 (67.56)

Note:

Rhino Guard is designed to fit within existing MIL-DTL-38999L panel cutouts when fitting from the rear of the panel in all cases.

When installing wall mount receptacles choose dimensions from either the C Imperial or C Metric columns dependant on the fixings selected.

Jam nut mounting receptacles and wall mount straight "B" style backshell connectors are designed for rear mounting applications only.

Jam nut max panel thickness is 0.125 (03.18), minimum 0.062 (01.57).

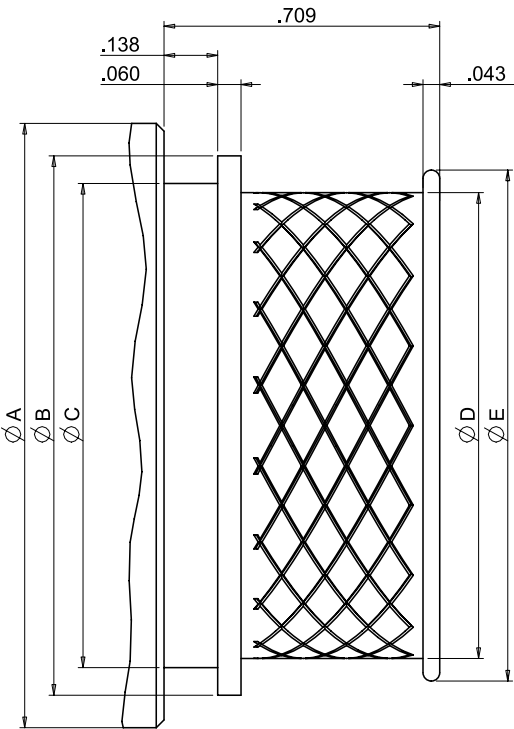
Use (W638) deviation code to specify panel sealing gasket to be supplied with Wall mount connector.

Please note spacing of connectors and cable may affect heat generation and/or cross-talk, and thus should be taken into account when calculating de-rating.

Backshell dimensions

The dimensions given below are intended to aid with the selection of heatshrink tubes, adaptors and termination accessories. Rhino Guard connectors are already supplied complete with backshell components thus eliminating the need to separately procure a suitable strain relief clamp or adaptor.

Rhino Guard backshells are designed to suit termination by either traditional heatshrink or overmoulding and feature a knurled area for braid retention providing both strain relief and 360 degree screening for when shielded cable is selected.



Reference Dimensions, Inch (mm)					
Size	ØA	ØB	ØC	ØD	ØE
15	0.992 (25.20)	0.940 (23.88)	0.848 (21.54)	0.751 (19.08)	0.867 (22.02)
17	1.117 (28.37)	1.033 (26.24)	0.941 (23.90)	0.841 (21.36)	0.957 (24.31)
21	1.429 (36.30)	1.263 (32.08)	1.121 (28.47)	1.073 (27.25)	1.189 (30.20)
23	1.554 (39.47)	1.387 (35.23)	1.245 (31.62)	1.198 (30.43)	1.314 (33.38)
25	1.554 (39.47)	1.726 (43.84)	1.584 (40.23)	1.537 (39.04)	1.653 (41.99)
29	1.796 (45.62)	1.968 (49.99)	1.826 (46.38)	1.779 (45.19)	1.895 (48.13)

Torque fixtures

The below torque fixtures are available to order as an assembly aid for the termination of backshells and locking rings to the correct torque values. Whilst by no means essential, they are a useful aid in reducing termination and assembly time.

For instructions and recommended torque values view the latest issue of document reference 123GB-0845 on our website.

Series	Style	Size	Key	Reference view
Torque fixture to assist with assembly of plug connectors				
294GB-	5069-	XX-	XX	
294GB	5069	15	N	
		17	A	
		21	B	
		23	C	
		25	D	
		29	E	
Torque fixture to assist with assembly of receptacle connectors				
294GB-	5070-	XX-	XX	
294GB	5070	15	N	
		17	A	
		21	B	
		23	C	
		25	D	
		29	E	

RHINO GUARD

Amphenol LTD
DEFENCE & AEROSPACE

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