

smiths connectors

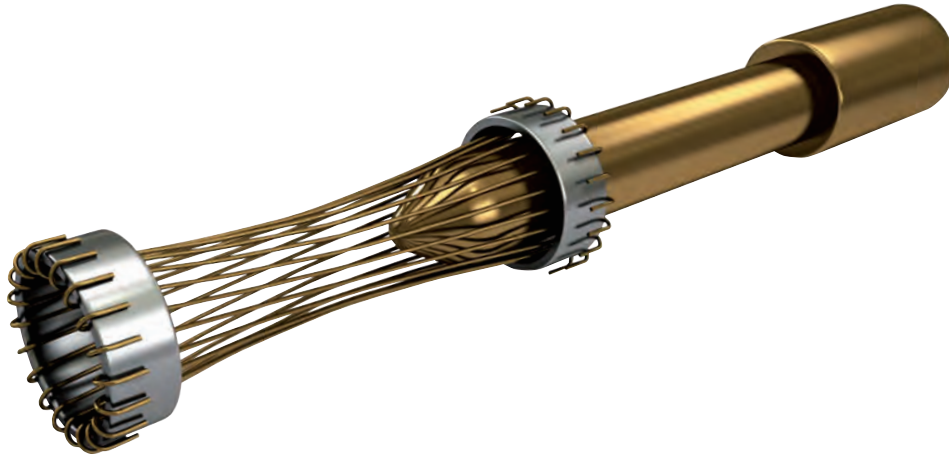
# HBB CONNECTOR SERIES

*High Power, Quick Release Connectors*



# HYPERBOLOID TECHNOLOGY

Smiths Connectors offers an extensive range of superior contact technologies suitable for standard and custom solutions. Hypertac® (HYPERboloid conTACT) is the original superior performing hyperboloid contact technology designed for use in all applications and in harsh and demanding environments where high reliability and safety are critical. The inherent electrical and mechanical characteristics of the Hypertac hyperboloid contact ensures unrivalled performance in terms of reliability, number of mating cycles, low contact force and minimal contact resistance. The shape of the contact sleeve is formed by hyperbolically arranged contact wires, which align themselves elastically as contact lines around the pin, providing a number of linear contact paths.



## FEATURE

### LOW INSERTION/EXTRACTION FORCES

The angle of the socket wires allows tight control of the pin insertion and extraction forces. The spring wires are smoothly deflected to make line contact with the pin.

### LONG CONTACT LIFE

The smooth and light wiping action minimizes wear on the contact surfaces. Contacts perform up to 100,000 insertion/extraction cycles with little degradation in performance.

### LOWER CONTACT RESISTANCE

The design provides a far greater contact area and the wiping action of the wires insures a clean and polished contact surface. Our contact technology has half the resistance of conventional contact designs.

### HIGHER CURRENT RATINGS

The design parameters of the contact (e.g., the number, diameter and angle of the wires) may be modified for any requirement. The number of wires can be increased so the contact area is distributed over a larger surface. Thus, the high current carried by each wire because of its intimate line contact, can be multiplied many times.

### IMMUNITY TO SHOCK & VIBRATION

The low mass and resultant low inertia of the wires enable them to follow the most abrupt or extreme excursions of the pin without loss of contact. The contact area extends 360 degrees around the pin and is uniform over its entire length. The 3 dimensional symmetry of the Hypertac contact design guarantees electrical continuity in all circumstances.

## BENEFIT

### HIGH DENSITY INTERCONNECT SYSTEMS

Significant reductions in size and weight of sub-system designs. No additional hardware is required to overcome mating and unmating forces.

### LOW COST OF OWNERSHIP

The Hypertac contact technology will surpass most product requirements, thus eliminating the burden and cost of having to replace the connector or the entire subsystem.

### LOW POWER CONSUMPTION

The lower contact resistance of our technology results in a lower voltage drop across the connector reducing the power consumption and heat generation within the system.

### MAXIMUM CONTACT PERFORMANCE

The lower contact resistance of the Hypertac contact reduces heat build-up; therefore Hypertac contacts are able to handle far greater current in smaller contact assemblies without the detrimental effects of high temperature.

### RELIABILITY UNDER HARSH ENVIRONMENTS

Harsh environmental conditions require connectors that will sustain their electrical integrity even under the most demanding conditions such as shock and vibration. The Hypertac contact provides unmatched stability in demanding environments when failure is not an option.

## PRODUCT FEATURES

- ▶ Contact technology guarantees high reliability
- ▶ Push lock to mate connector
- ▶ Quick release latch to unmate
- ▶ Ruggedised metal shell
- ▶ Cable and panel mount variants
- ▶ Compact ergonomic design
- ▶ Low component count
- ▶ Gender reversible
- ▶ Polarised
- ▶ 360 degree EMI/RFI shielding option
- ▶ 5000+ mating cycles without EMI/RFI band
- ▶ Sealed IPx7 and IP6K9K when mated
- ▶ Finger protected contacts
- ▶ Current rating 300A and 500A
- ▶ Temperature rating -55 to +150 deg C



# HOW TO ORDER



1 2 3 4 5 6 7 8 9 10

1 ▶ CONNECTOR FAMILY

2 ▶ NOMINAL CURRENT RATING **030** 300 AMP **050** 500 AMP

3 ▶ SHELL GENDER **P** PLUG **R** RECEPTACLE

4 ▶ SHELL POLARISING  
**A** POLARISED CODE A, CONTACT CAP BLACK      **B** POLARISED CODE B, CONTACT CAP ORANGE  
**C** POLARISED CODE C, CONTACT CAP BLUE      **D** POLARISED CODE D, CONTACT CAP GREY  
**E** POLARISED CODE E, CONTACT CAP GREEN      **F** POLARISED CODE F, CONTACT CAP RED

5 ▶ SHELL MATERIAL  
**A** HIGH STRENGTH ALUMINIUM ALLOY BODY, ZINC-COBALT PLATED  
**B** HIGH STRENGTH ALUMINIUM ALLOY BODY, ELECTROLESS NICKEL PLATED  
**E** HIGH STRENGTH ALUMINIUM ALLOY BODY, BLACK ZINC-NICKEL

6 ▶ CONTACT GENDER  
**X** PIN, GOLD PLATED (1.27 µm gold on mating surface)      **Y** SOCKET, GOLD PLATED (1.27 µm gold on mating surface)

7 ▶ CONTACT TERMINATION OPTIONS  
**\*** CONTACT TO ACCEPT CABLE CRIMPED DIRECTLY ON CONTACT AXIS. (See table *Straight exit crimp contacts* on following page)  
**L** CONTACT TO ACCEPT BOLTED TERMINATION E.G. LUGGED CABLE (lug ordered separately; see *Accessories - Crimp lug codes* below) OR BUSBAR. ALSO ORDER THIS OPTION FOR A PLUG WITH RIGHT ANGLE BACKSHELL

8 ▶ BACKSHELL OPTIONS  
**0** NO BACKSHELL      **A** RIGHT-ANGLE BACKSHELL (PLUG ONLY)  
**B** STRAIGHT BACKSHELL, AVAILABLE ON PLUGS AND RECEPTACLES WITH CRIMP CONTACT ONLY

9 ▶ BACKSHELL EXIT CODE      **0** EXIT CODE 0 APPLIES TO ALL STANDARD CONNECTORS

10 ▶ STANDARD VARIATIONS  
**000** NO VARIANT: DENOTES A PLUG WITHOUT EMI BAND OR REAR MOUNT RECEPTACLE WITH NON-CONDUCTIVE O-RING AND STANDARD LENGTH CONTACT  
**00E** EMI BAND FITTED (PLUGS ONLY)  
**0C0** REAR MOUNT RECEPTACLE WITH CONDUCTIVE PANEL O-RING  
**0M0** FRONT MOUNT RECEPTACLE WITH CONDUCTIVE PANEL O-RING (not available with backshell option B)  
**0MS** FRONT MOUNT RECEPTACLE WITH SHORT LUG/BUSBAR CONTACT AND CONDUCTIVE PANEL O-RING (not available with backshell option B)  
**0N0** FRONT MOUNT RECEPTACLE WITH NON-CONDUCTIVE PANEL O-RING (not available with backshell option B)  
**0NS** FRONT MOUNT RECEPTACLE WITH SHORT LUG/BUSBAR CONTACT AND NON-CONDUCTIVE PANEL O-RING (not available with backshell option B)  
**012** PLUGS ONLY - EMI BAND AND RIGHT-ANGLE BACKSHELL WITH KNURLED CABLE PORT  
**013** PLUG – EMI BAND AND STRAIGHT BACKSHELL WITH KNURLED CABLE PORT  
 RECEPTACLE – STRAIGHT BACKSHELL WITH KNURLED CABLE PORT

## ▶ HOW TO ORDER

## STRAIGHT EXIT CRIMP CONTACTS

Crimp contact size codes				
Code	300 amp connector		500 amp connector	
	Conductor size (mm <sup>2</sup> )	Crimp barrel bore (mm)	Conductor size (mm <sup>2</sup> )	Crimp barrel bore (mm)
<b>D</b>	25	7.9	50	11.0
<b>H</b>	–	–	70	13.0
<b>K</b>	35	9.2	–	–
<b>Q</b>	–	–	95	14.5
<b>S</b>	50	11.0	–	–
<b>V</b>	–	–	120	15.0

Dimensions are for reference only and subject to change

## NOTES

Please contact your local sales representative to inquire about a composite shell option.

Please contact your local sales representative to inquire about a circular multi-pole option.

Please contact your local sales representative to inquire about our harness solutions and other power products.

# TECHNICAL CHARACTERISTICS

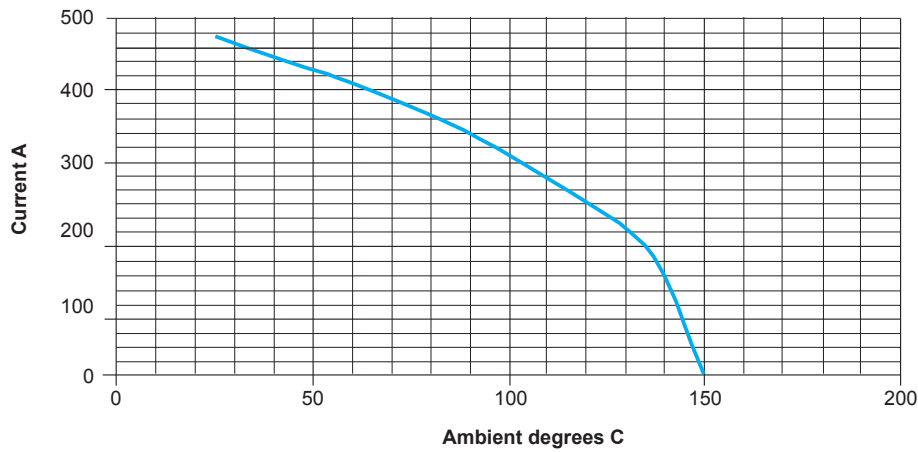
Materials	
Item	Material detail
Shells and backshells	Aluminium alloy
Latch ring	Aluminium alloy
Insulators	Insulators - glass reinforced PPS Finger proof components - glass reinforced Nylon 66
Contacts	Copper alloy
Socket wires	Copper beryllium alloy
Crimp lugs	Copper alloy
EMI band	Copper beryllium alloy
Latch pins and springs	Stainless steel
Fasteners	Stainless steel
O rings & seals	Fluorosilicone elastomer
Transit caps	Vinyl

Protective finishes	
Item	Finish
Contacts, mating surfaces	1,27µm min gold per ASTM-B-488, type II, grade C over 1.27µm – 2.40µm nickel per SAE-AMS-QQ-N-290, class 2 over copper flash
Contacts, crimp barrels	0.5µm min gold per ASTM-B-488, type II, grade C over 1.27µm – 2.40µm nickel per SAE-AMS-QQ-N-290, class 2 over copper flash
Contacts, other surfaces	0.127µm min gold per ASTM-B-488, type II, grade C over 1.27µm – 2.40µm nickel per SAE-AMS-QQ-N-290, class 2 over copper flash
Stainless steel parts	Passivated, SAE-AMS-QQ-P-35
Shells	Zinc/cobalt, ASTM-B-840 Grade 6 Type C, over AMS-C-26074 class 4 grade B or Electroless nickel, AMS-C-26074 class 4 grade B or Zinc nickel trivalent black, ASTM-B-841 Class 1, Grade 10, over AMS-C-26074 class 4 grade B
Latch ring	Sulphuric acid anodised and dyed black. Defence standard 03-25/3
Crimp lugs	5 – 10µm tin, MIL-T-10727C over 0.25µm copper MIL-C-14550
EMI band	7.62 – 10µm tin per MIL-T-10727C over 3 – 5µm nickel per AMS-QQ-N-290

► TECHNICAL CHARACTERISTICS

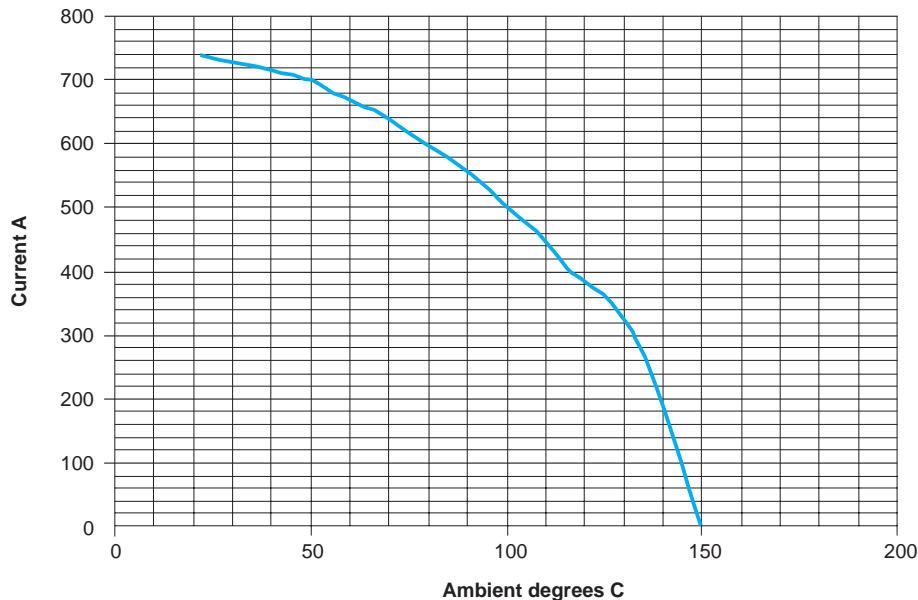
Electrical performance and current derating		
Parameter	Level	
	300 Amp connector	500 Amp connector
Voltage rating @ sea level, volts dc	750	
Current rating, continuous, amps	300	500
Surge current	6 kA for 1 second	10 kA for 1 second
Contact resistance (EIA-364-06C), mΩ max	0.1	0.05
Insulation resistance, GΩ minimum	5	
Shell to shell continuity, mΩ max	15	

**HBB 300 A DERATING**



Data from test using connectors each cabled with 1.2 metre length of 70 sq mm cable. Further derating may be necessary depending on the application. Derating curves generated according to EIA-364-70B Method 2

**HBB 500 A DERATING**



Data from test using connectors each cabled with 1.2 metre length of 120 sq mm cable. Further derating may be necessary depending on the application. Derating curves generated according to EIA-364-70B Method 2

► TECHNICAL CHARACTERISTICS

Mechanical performance		
Parameter	Level	
	300 Amp connector	500 Amp connector
Connector mating / unmating force (N max)	350	350
Endurance (mating & unmating cycles, min)	Connector with EMI band - 1000 All others - 5000	

Environmental performance	
Parameter	Level
Temperature range (operational & storage)	-55 to +150 deg C
Humidity (days @ 90/95 % RH at 40°C)	56
Salt spray (hours)	ZnCo plated – 300 ZnNi plated – 300 Electroless nickel plated – 48
Temperature life (hrs @ °C)	1000 at 125°C
Sealing, mated	BS EN 60529 IPx7
Sealing, mated	ISO 20653:2006 IP6K9K
Panel sealing level	BS EN 60529 IPx7
Random vibration (EIA-364-28E)	Test Condition V, Test Condition Letter E (0.2 g <sup>2</sup> /Hz), duration 1.5 hours
Mechanical shock (EIA-364-27B)	25g, 11ms, half sine wave

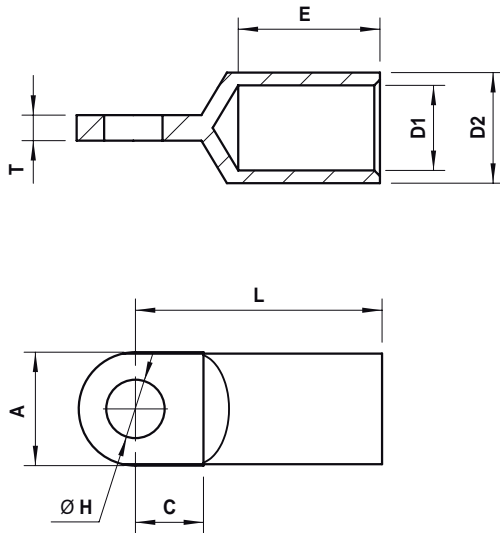


## ▶ ACCESSORIES

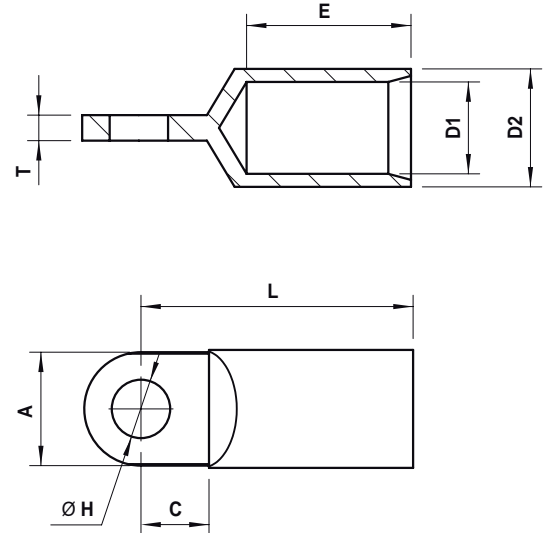
If required, the following accessories must be ordered separately; they are not supplied with connectors.

### CRIMP LUG CODES AND DIMENSIONS

Lug for standard cable (suffix –A-68)



Lug for fine stranded cable (suffix –B-68)



#### Important

These are special pattern lugs which must be used on all connectors with right-angle backshells. They are also recommended for use on plug connectors with bolted contact terminations and no backshells.

Receptacle connectors where no boot is fitted can accept any other suitable lug.

Crimp lugs are tin plated (suffix -68).

Lugs require crimp tooling; see page 9 Spares and special tools section.

▶ ACCESSORIES

LUG CODES AND DIMENSIONS FOR 300A RANGE

Cable area, sq mm	Part number	Dimensions							
		A (max)	C (nom)	D1 (nom)	D2 (nom)	E (nom)	H (nom)	L (nom)	T (ref)
25	HBB-950-8-25-A-68	18.1	10.0	7.0	10.0	25.0	8.3	38.1	4.0
25	HBB-950-8-25-B-68	18.1	10.0	7.9	11.0	27.0	8.3	40.4	4.0
35	HBB-950-8-35-A-68	18.1	10.0	8.5	12.0	25.0	8.3	39.0	4.0
35	HBB-950-8-35-B-68	18.1	10.0	9.2	12.5	27.0	8.3	41.0	4.0
50	HBB-950-8-50-A-68	18.1	10.0	10.0	14.0	25.0	8.3	39.6	4.0
50	HBB-950-8-50-B-68	18.1	10.0	11.0	15.0	27.0	8.3	41.9	4.0
70	HBB-950-8-70-A-68	18.1	10.0	12.0	16.5	25.0	8.3	40.5	4.0
70	HBB-950-8-70-B-68	18.1	10.0	13.0	17.0	27.0	8.3	42.5	4.0

LUG CODES AND DIMENSIONS FOR 500A RANGE

Cable area, sq mm	Part number	Dimensions							
		A (max)	C (nom)	D1 (nom)	D2 (nom)	E (nom)	H (nom)	L (nom)	T (ref)
50	HBB-950-10-50-A-68	20.1	12.0	10.0	14.0	25.0	10.3	41.5	4.5
50	HBB-950-10-50-B-68	20.1	12.0	11.0	15.0	27.0	10.3	43.8	4.5
70	HBB-950-10-70-A-68	20.1	12.0	12.0	16.0	25.0	10.3	42.1	4.5
70	HBB-950-10-70-B-68	20.1	12.0	13.0	17.0	27.0	10.3	44.4	4.5
95	HBB-950-10-95-A-68	20.1	12.0	13.5	18.0	25.0	10.3	42.8	4.5
95	HBB-950-10-95-B-68	20.1	12.0	14.5	19.0	27.0	10.3	45.1	4.5
120	HBB-950-10-120-A-68	20.1	12.0	15.0	19.5	25.0	10.3	43.4	4.5
120	HBB-950-10-120-B-68	20.1	12.0	16.2	21.0	27.0	10.3	45.8	4.5

HEAT SHRINK BOOTS

Connectors are designed to accept the following moulded lipped heat shrink boots which conform to specification number VG95343:

	Straight boot for bare connector	90° boot	Boot for right angle backshell	Boot for straight backshell
300 A plug	HBO-0008-B005A (note A)	HBO-0009-E004A (note B)	HBO-0008-B005A (note A)	HBO-0008-B005A (note A)
300 A receptacle	N/A	N/A	N/A	HMO-0008-B005A (note A)
500 A plug	HBO-0008-C001A (note F)	HBO-0009-E005A (note E)	HBO-0008-C001A (note F)	HBO-0008-C001A (note F)
500 A receptacle	N/A	N/A	N/A	HBO-0008-C001A (note F)

Notes

A: VG spec = VG 95343 T18 B005A  
D: VG spec = VG 95343 T18 E003A

B: VG spec = VG 95343 T18 E004A  
E: VG spec = VG 95343 T18 E005A

C: VG spec = VG 95343 T18 B004A  
F: VG spec = VG 95343 T18 C001A

It is the user's responsibility to ensure that boot material and adhesive / epoxy meet the requirements of their application. For further application details see Workshop Manual – single-pole HBB range available from website or Smiths Connectors technical services.

## ▶ ACCESSORIES

### HEAT SHRINK TUBES

On the following connector types or connector-boot combinations, an insulating sleeve must be fitted to the crimp lugs or crimp barrels. Thick-walled adhesive-lined heat shrink tube meeting VG95343 is the recommended material for this application. Sleeves must be fitted prior to fitting one of the above heat shrink boots. Tubing must cover the entire crimp barrel and seal to the cable outer jacket.

	Smiths Connectors pt. no.
300A plug, all options	HBO-0007-D006A-0050
300A receptacle, straight backshell	HBO-0007-D006A-0050
500A plug, all options with 50 sq mm cable all options with cable >50 sq mm	HBO-0007-D006A-0070 HBO-0007-D007A-0070
500A receptacle, straight backshell all options with 50 sq mm cable all options with cable >50 sq mm	HBO-0007-D006A-0070 HBO-0007-D007A-0070

Tubing ordered according to this table is made from a self-extinguishing elastomer, internally coated with high-performance epoxy. The material/adhesive combination is rated to 150 degrees C. It is the user's responsibility to ensure that tube material and adhesive/epoxy meet the requirements of their application.

For further application details see *Workshop Manual – single-pole HBB range* available from website or Smiths Connectors technical services.

### BAND-IT®, STAINLESS STEEL, PASSIVATED

Band-It clamp suitable for	Smiths Connectors pt. no.
300 A connector with straight or right angle backshell	HBO-0005
500 A connector with straight or right angle backshell	HBO-0005

Band-It clamps require an installation tool; see Spares and special tools section for tool order codes.

### CONSTANT FORCE SPRING CLAMP, STAINLESS STEEL, PRE-STRESSED AND HEAT TREATED

Constant force clamp suitable for	Smiths Connectors pt. no.
300 A connector with straight or right angle backshell	HBB-971
500 A connector with straight or right angle backshell	HBB-971

No tooling is required for constant force clamps. These clamps are removable and re-useable.

▶ SPARES AND SPECIAL TOOLS

RECEPTACLE INTERFACE O-RINGS

	Smiths Connectors pt. no.
Fluorosilicone o-ring for 300 A receptacle	HR-01717-0178-F-70
Fluorosilicone o-ring for 500 A receptacle	HR-02352-0178-F-70

PANEL O-RINGS

	Smiths Connectors pt. no.
Fluorosilicone o-ring for 300 A receptacle	HR-02987-0178-F-70
Fluorosilicone o-ring for 500 A receptacle	HR-03782-0178-F-70
Conductive o-ring for 300 A receptacle	HR-02987-0178-D-70
Conductive o-ring for 500 A receptacle	HR-03782-0178-D-70

BACKSHELL CAP O-RINGS

	Smiths Connectors pt. no.
Fluorosilicone o-ring for 300 A right angle backshell	HR-02195-0178-F-70
Fluorosilicone o-ring for 500 A right angle backshell	HR-02670-0178-F-70

BAND-IT® TOOLING

	Smiths Connectors pt. no.
Hand tool for Band-It screen braid clamps	HBO-0006

CRIMP TOOLING

Klauke crimp tooling is recommended for terminating cables to connector crimp barrels and terminal lugs. Battery powered tool (mini electro-hydraulic) = EK354. Crimp tools and dies listed in the following tables are available from Smiths Connectors.

## ▶ SPARES AND SPECIAL TOOLS

### CRIMP DIES BY CODE/LUG AND CABLE SIZE – 300 A RANGE

Termination code or lug ref	Cable CSA (mm <sup>2</sup> )	Crimp barrel ID (mm)	Crimp style	No. of crimps	Die for use with EK354 tool
<b>D</b>	25	7.9	Hex	2	HR425
<b>K</b>	35	9.2	Hex	2	HR435
<b>S</b>	50	11.0	Hex	2	HR450
<b>HBB-950-8-25-A-68</b>	25	7.0	Hex	2	HR425
<b>HBB-950-8-25-B-68</b>	25	7.9	Hex	2	HR425
<b>HBB-950-8-35-A-68</b>	35	8.5	Hex	2	HR435
<b>HBB-950-8-35-B-68</b>	35	9.2	Hex	2	HR435
<b>HBB-950-8-50-A-68</b>	50	10.0	Hex	2	HR450
<b>HBB-950-8-50-B-68</b>	50	11.0	Hex	2	HR450
<b>HBB-950-8-70-A-68</b>	70	12.0	Hex	2	HR470
<b>HBB-950-8-70-B-68</b>	70	13.0	Hex	2	HR470

### CRIMP DIES BY CODE/LUG AND CABLE SIZE – 500 A RANGE

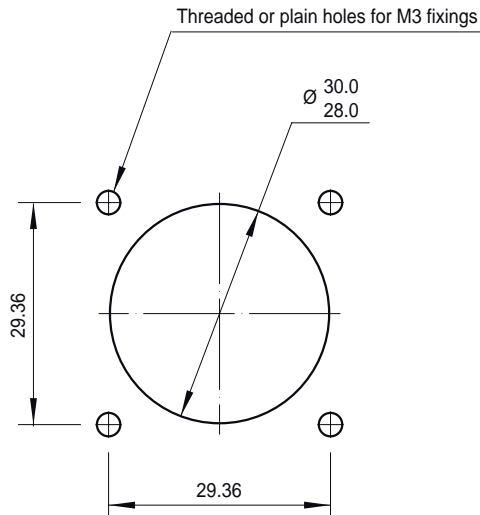
Termination code or lug ref	Cable CSA (mm <sup>2</sup> )	Crimp barrel ID (mm)	Crimp style	No. of crimps	Die for use with EK354 tool
<b>D</b>	50	11.0	Hex	2	HR450
<b>H</b>	70	13.0	Hex	2	HR470
<b>Q</b>	95	14.5	Hex	2	HR495
<b>V</b>	120	15.0	Hex	2	HR4120
<b>HBB-950-10-50-A-68</b>	50	10.0	Hex	2	HR450
<b>HBB-950-10-50-B-68</b>	50	11.0	Hex	2	HR450
<b>HBB-950-10-70-A-68</b>	70	12.0	Hex	2	HR470
<b>HBB-950-10-70-B-68</b>	70	13.0	Hex	2	HR470
<b>HBB-950-10-95-A-68</b>	95	13.5	Hex	2	HR495
<b>HBB-950-10-95-B-68</b>	95	14.5	Hex	2	HR495
<b>HBB-950-10-120-A-68</b>	120	15.0	Hex	2	HR4120
<b>HBB-950-10-120-B-68</b>	120	16.2	Hex	2	HD4120

For further details refer to the HBB Workshop Manual.

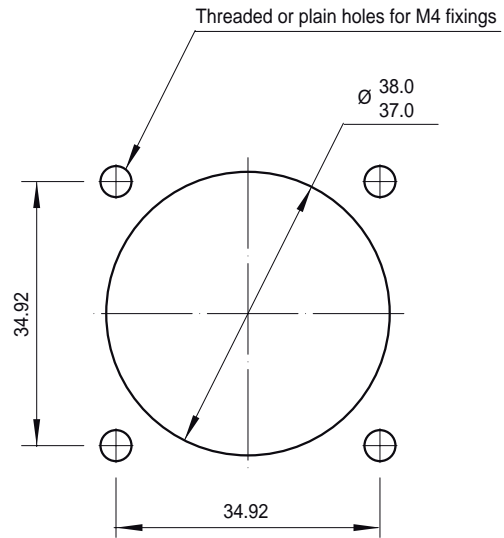
▶ **PANEL PREPARATION FOR RECEPTACLES**

**STANDARD REAR MOUNT  
(CONNECTOR MOUNTED BEHIND PANEL / INSIDE BOX)**

**300 AMP**



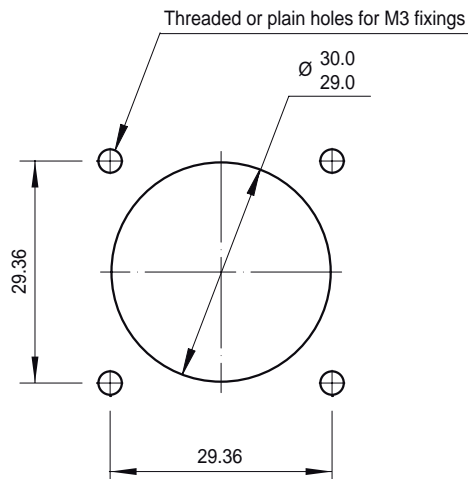
**500 AMP**



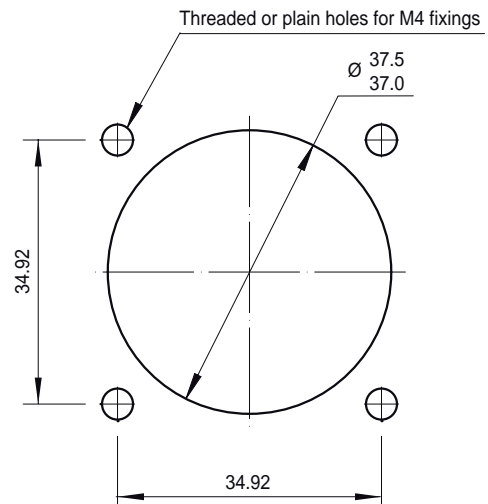
Recommended maximum panel thickness = 5.0 mm. If panel is more than 3.0 mm thick then fixing screws may need to be recessed to give clearance for mating connector.

**FRONT MOUNT  
(CONNECTOR MOUNTED IN FRONT OF PANEL / OUTSIDE BOX)**

**300 AMP**



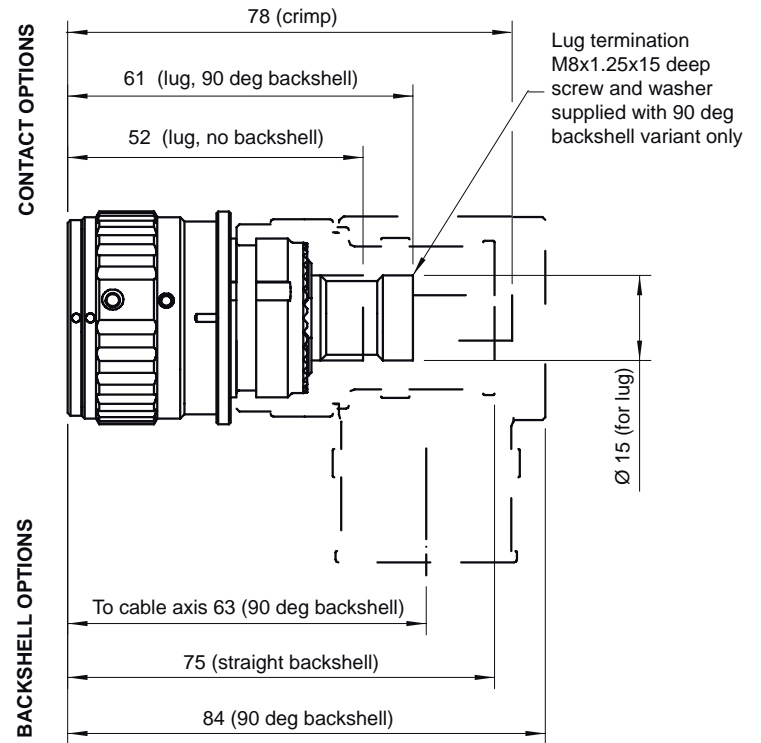
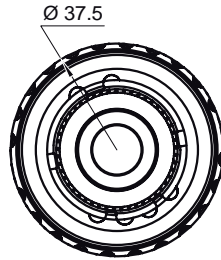
**500 AMP**



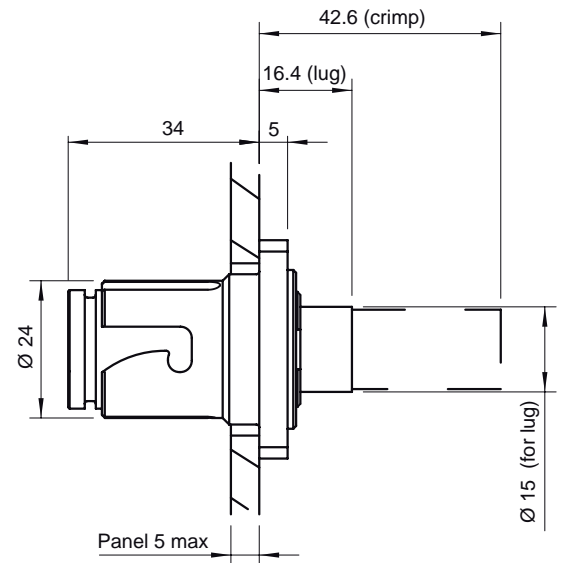
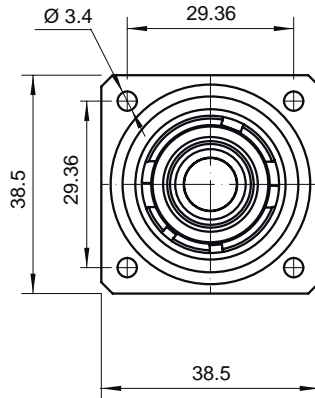
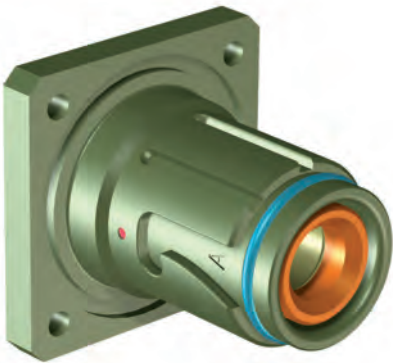
Dimensions in mm - Drawings not to scale - Transit caps not shown

CONNECTOR OUTLINE DRAWINGS

300 AMP PLUG



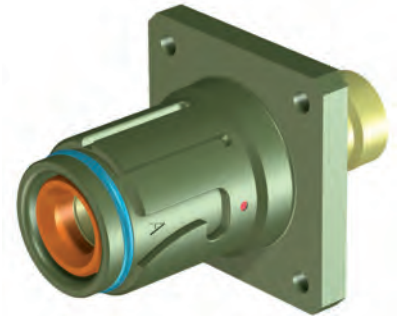
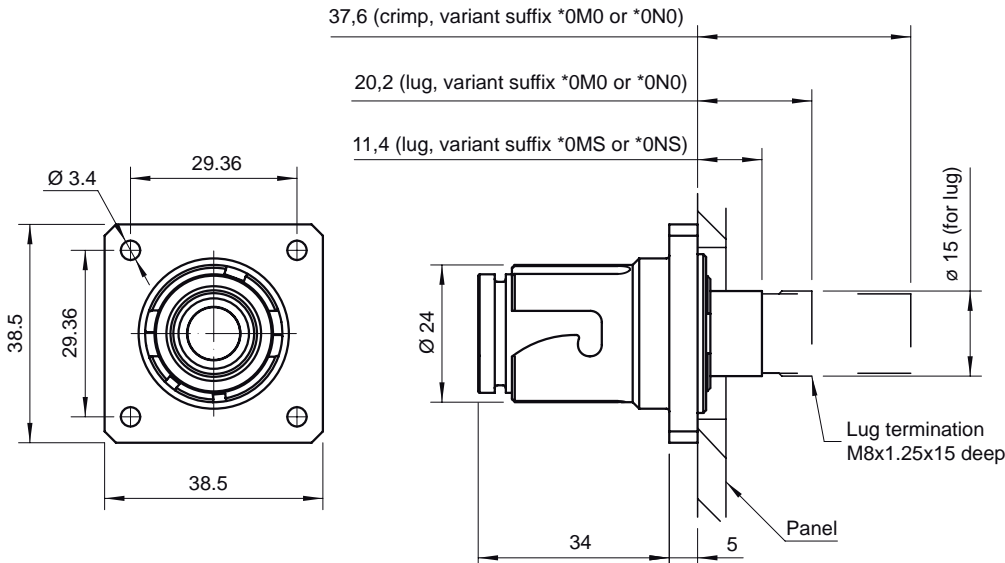
300 AMP RECEPTACLE, REAR MOUNTING



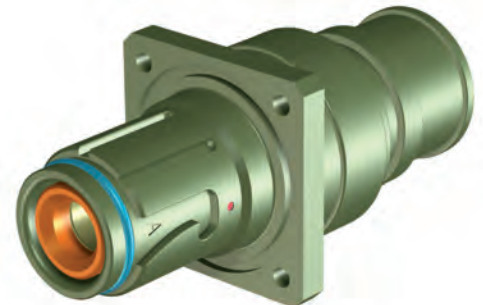
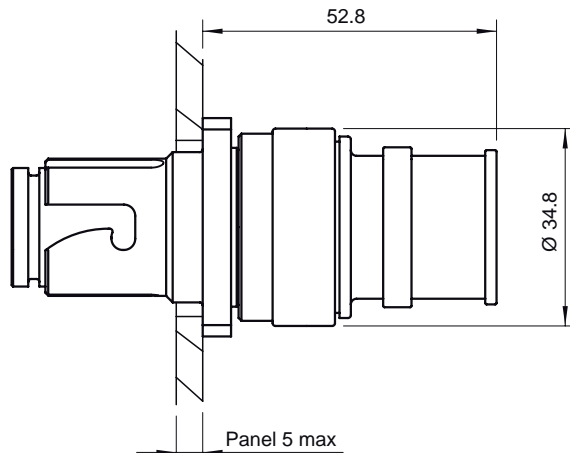
Dimensions in mm - Drawings not to scale - Transit caps not shown

► CONNECTOR OUTLINE DRAWINGS

300 AMP RECEPTACLE, FRONT MOUNTING



300 AMP RECEPTACLE WITH BACKSHELL, REAR MOUNTING

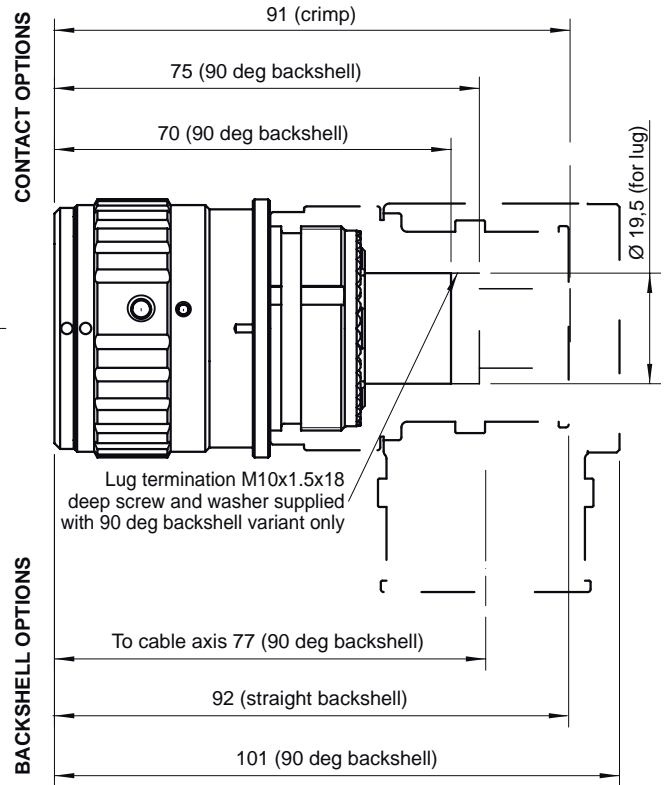
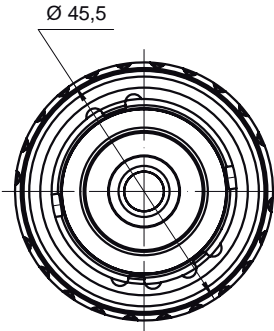


This version is intended for rear mounting and is only available with a crimp contact. The contact crimp barrel must be specified when ordering: see page 2 section Straight exit crimp contacts above.

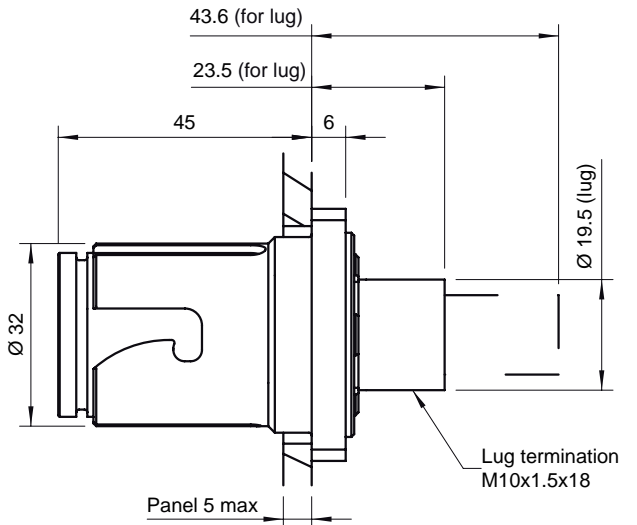
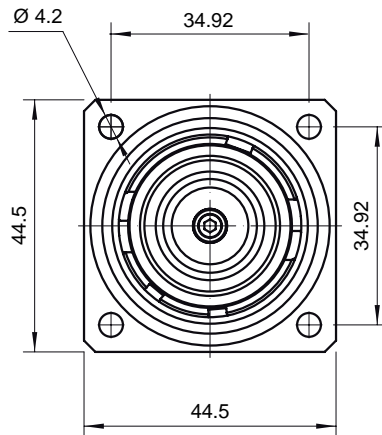
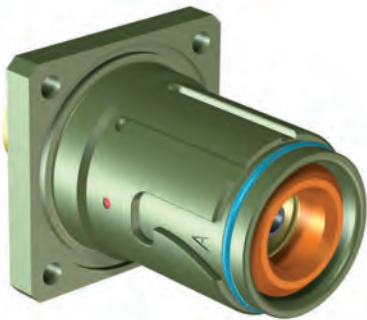


CONNECTOR OUTLINE DRAWINGS

500 AMP PLUG

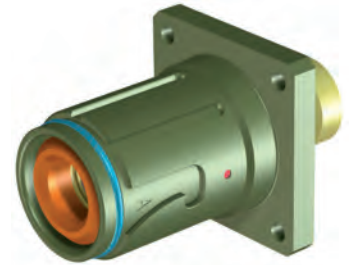
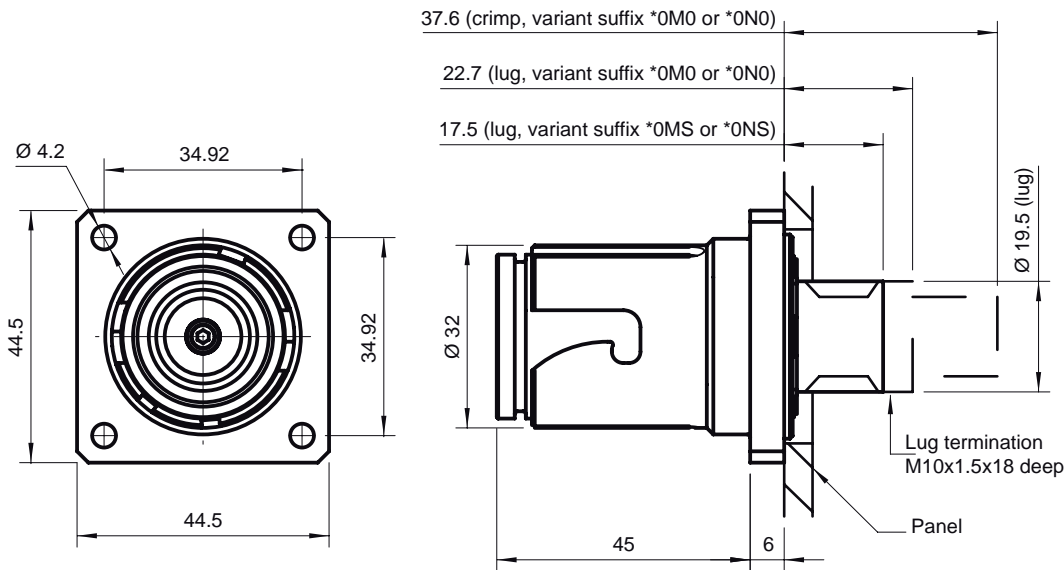


500 AMP RECEPTACLE, REAR MOUNTING

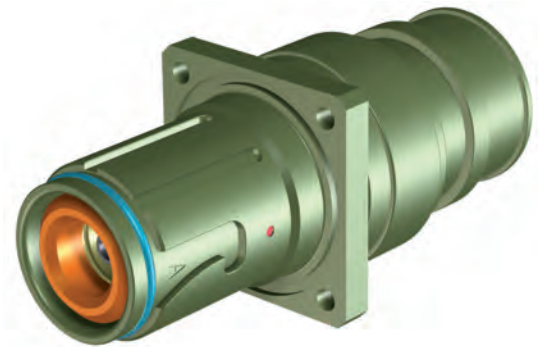
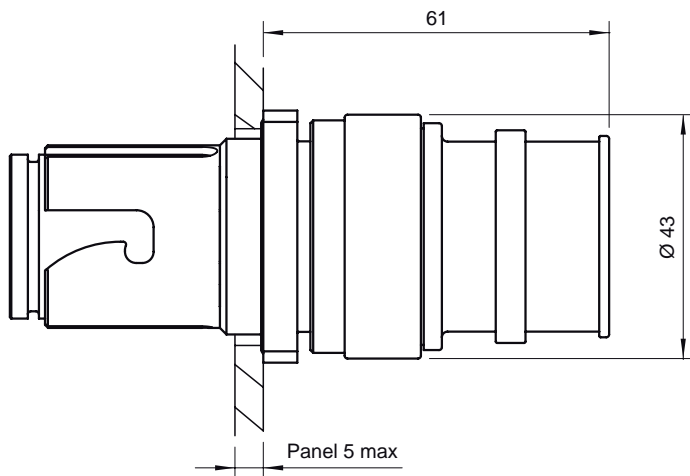


► CONNECTOR OUTLINE DRAWINGS

500 AMP RECEPTACLE, FRONT MOUNTING



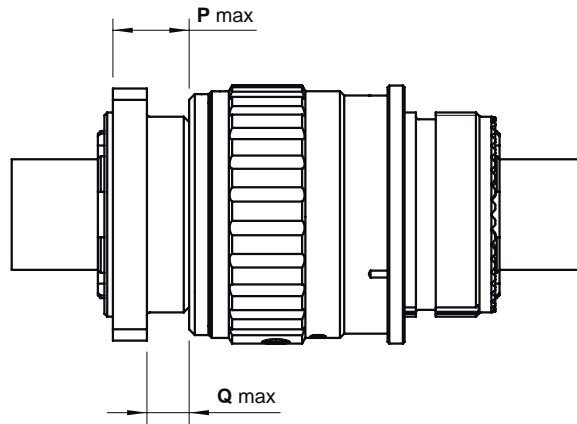
500 AMP RECEPTACLE WITH BACKSHELL, REAR MOUNTING



This version is intended for rear mounting and is only available with a crimp contact. The contact crimp barrel must be specified when ordering: see page 2 section Straight exit crimp contacts above.

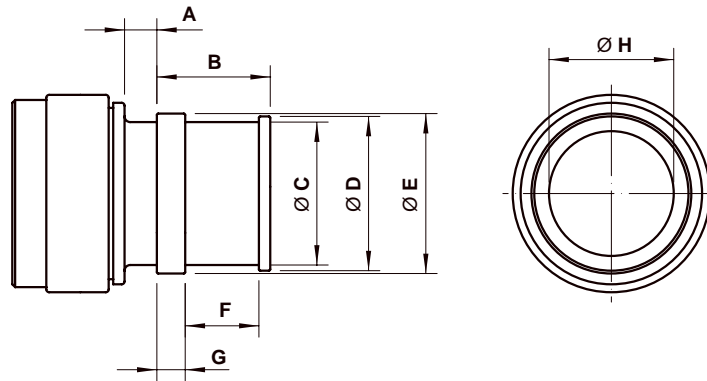
► CONNECTOR OUTLINE DRAWINGS

MATED DIMENSIONS



Dimension when fully mated (mm)	P (max)	Q (max)
300A	12.0	7.0
500A	13.5	7.5

STRAIGHT OPTION

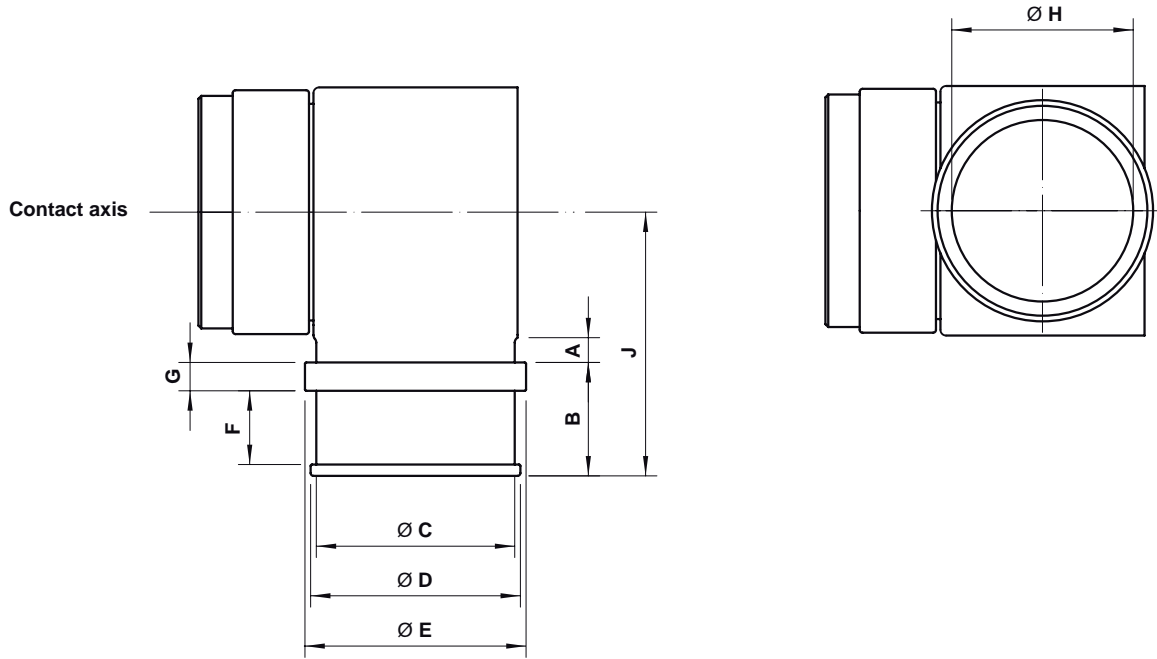


Dimensions (mm)	A	B	Ø C	Ø D	Ø E	F	G	Ø H
300 A straight	6	20	25	27	28	13	5	22
500 A straight	9.5	20	34	36	38	13	5	30

On connectors with variant suffix -013, diameters Ø C and Ø E are knurled (DIN 82 RGV).

► CONNECTOR OUTLINE DRAWINGS

RIGHT-ANGLE OPTION



Dimensions (mm)	A	B	Ø C	Ø D	Ø E	F	G	Ø H	J
300 A right angle	5	20	30	32	33	13	5	27	43
500 A right angle	4	20	35	37	39	13	5	32	47

Internal features in the backshell allow it to be locked in position in 9 degree (500 amp) or 11.25 degree (300 amp) steps around the axis of the plug contact. On plugs with variant suffix -012, diameters Ø C and Ø E are knurled (DIN 82 RGV).

## ▶ GENERAL RANGE INFORMATION

### TRANSIT PACKAGING

Connectors are supplied with non-sealing vinyl caps to protect plated finishes.

### SEALED PROTECTIVE CAPS

Protective caps meeting recognised sealing specifications are available; consult your local sales representative.

### FEEDTHROUGH VERSIONS

Pin to pin feedthrough versions are available; consult your local sales representative.

### HARNESS SOLUTIONS

Please contact your local sales representative to inquire about our harness solutions.

#### **Disclaimer 2014**

All of the information included in this catalogue is believed to be accurate at the time of printing. It is recommended, however, that users should independently evaluate the suitability of each product for their intended application and be sure that each product is properly installed, used and maintained to achieve desired results.

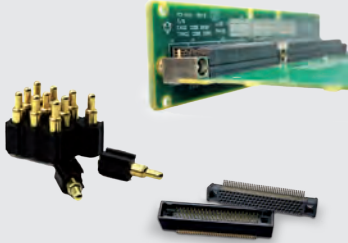
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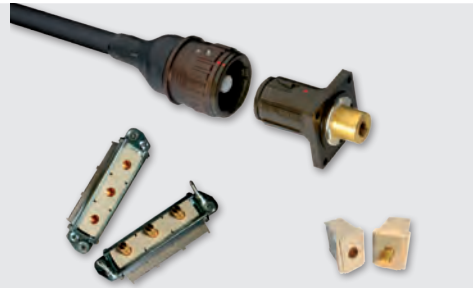
# SMITHS CONNECTORS PRODUCT LINES

## PCB



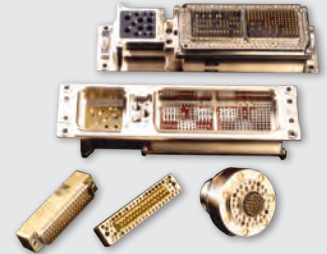
- ▶ Low, medium and high density board-to-board, cable to board and stacking
- ▶ Rugged standard
- ▶ Low profile
- ▶ Signal, power, coaxial & high speed configurations
- ▶ Self configurable board-to-board
- ▶ Spring probe connectors
- ▶ Mixed signal, power and coaxial contact connectors
- ▶ Different termination styles: solder cup, crimp, SMT and SMT flex, press fit, solder dip.

## POWER



- ▶ Circular
- ▶ Configurable rectangular
- ▶ Ruggedized
- ▶ Single and Multi-Way Connectors
- ▶ Power contact up to 1,200 Amps
- ▶ Excellent performance in harsh environment conditions
- ▶ Cable assembling

## EMI/EMP FILTER



- ▶ EMI/RFI filtering and transient protection
- ▶ RoHS compliant solderless filter connectors available
- ▶ Circular, ARINC, D-Subminiature Micro-D
- ▶ Filtered adapters for "bolt on" EMI /EMP solutions
- ▶ Filter hybrid capability

## MODULAR/RECTANGULAR



- ▶ Configurable with modules for signal, power, coax, fiber optics and/or pneumatics
- ▶ Easy configuration in a single frame
- ▶ For rack & panel, and cable applications
- ▶ Guided hardware for blind
- ▶ D-sub connectors
- ▶ Micro-D style
- ▶ Signal connectors for hand held and docking stations

## CIRCULAR



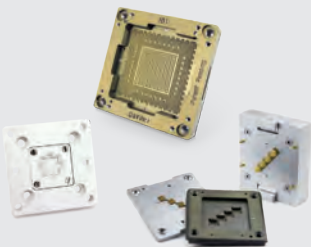
- ▶ Metal and Plastic
- ▶ Industrial M12, M23, M40, M58
- ▶ Crimp and solder terminations
- ▶ Various types of cable clamps
- ▶ Push Pull/ latch mechanism
- ▶ Color coding

## HEAVY DUTY



- ▶ Ultra reliable hyperboloid contact
- ▶ Modular solution: signal, power, data contacts, and fiber optics
- ▶ High resistance in harsh environment
- ▶ EMC shielding
- ▶ Easy cable mounting
- ▶ High pressure up to 35K PSI, 250° C
- ▶ High temperature up to 440° C

## SPRING PROBES



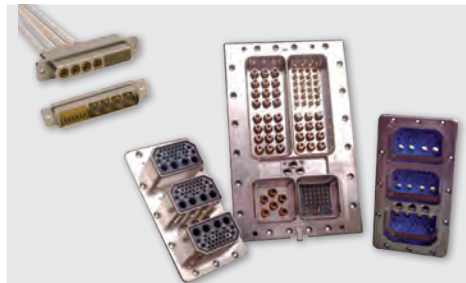
- ▶ Z-axis compliant
- ▶ Blind mate engagement
- ▶ Long cycle life
- ▶ High density
- ▶ Extreme miniaturization
- ▶ Printed circuit board test
- ▶ Bare board test
- ▶ Coaxial contacts

## MIL/AERO STANDARD



- ▶ Standard military interface
- ▶ ARINC interface
- ▶ ARINC 801
- ▶ Custom inserts

## HIGH SPEED COPPER/FIBER



- ▶ Quadrax and Twinax Connectors
- ▶ Rugged D-Sub Connectors
- ▶ ARINC and MIL-STD Contacts
- ▶ Micro Twinax/Quadax
- ▶ Butt-Joint and Expanded Beam Contacts
- ▶ ARINC 801 Termini
- ▶ Floating Fiber Termini

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