

Autosport



5th Edition

Interconnection Solutions

AS Series

Developed by Deutsch from the MIL-C-38999 Series 1.5 (Eurofighter connector), the Deutsch AS Series is a range of medium and high density circular connectors designed to meet the stringent requirements of the aerospace industry. Foremost of these requirements are enhanced performance with both weight and space savings. Available in a huge range with a wide variety of options, the AS Series features high density arrangements up to 128 ways with four shell styles, and five keyway orientations.

FEATURES

- High density arrangements up to 128 ways
- Contact sizes 16 (20 Amp) 20 (7.5 Amp) and 22 (5Amp)
- Positive locking coupling mechanism
- Conductive black zinc finish
- Interfacial and wire sealing
- 100% scoop-proof interface with RFI grounding fingers
- Integral screen termination/boot location
- In-line and two hole mounting styles
- Environmentally sealed to IP67
- Filter, Hermetic and Fibre Optic options available
- PCB options as standard
- Standard Gold-plated crimp contacts
- 5 keyway orientations, indicated by different colour bands
- Universal orientation for test equipment

BENEFITS

- Standardised product range
- Weight, space and cost savings compared to existing aerospace type connectors
- No need for backshells for boot termination
- Screening braid and strain relief boot can both be fitted
- Scoop-proof interconnection where space envelope would previously have dictated the use of non scoop proof connectors
- High quality plating enhances durability and appearance of connector
- Intermateable with existing LN29729 (Mil-C-38999 Series 1 1/2) and Pan 6433-2 style connectors
- Uses standard Aerospace crimp tooling
- Visual indication of keyway orientation of connector
- Purpose designed coupling/decoupling tools



GENERAL SPECIFICATION

Standard Connector

Supplied complete with crimp contacts and insertion/extraction tool

Materials

Shell/Coupling ring: Aluminium alloy. Black Zinc finish

Contacts: Copper alloy
Gold plated

Insulators: Thermoplastic

Interface/Wire seals: Fluorinated silicone

Wire Sealing

Connector rear sealing grommets are designed to seal on wires having an overall insulation diameter within the following range:

Contact Size	22	20	16
Min (mm)	0.76	1.02	1.65
Max (mm)	1.37	2.11	2.77

Dielectric Withstand Voltage

This is dependent on the spacing of the contacts within the insert layout. See contact/insert arrangements page 15 & 16

Contact Size	22	20	16
Current Rating	5 Amps	7.5 Amps	20 Amps
Conductor Diameter	0.790mm max	0.970mm max	1.530mm max

Contact Rating and Wire Acceptance

Temperature Rating -55°C to $+175^{\circ}\text{C}^*$

*The upper limit is the maximum internal hot-spot temperature resulting from the combination of ambient temperature and heating due to current.

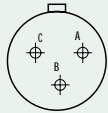
VIBRATION

Tested to exceed: Dynamic test - random on random 60g RMS in 3 axis.

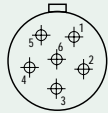
Endurance test - random 57g RMS in 2 axis for 8 hours each axis.

Sinusoidal resonance to over 75g.

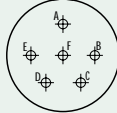
AS CONTACT/ INSERT ARRANGEMENTS



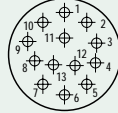
08-98 (I)
Size 8
3#20



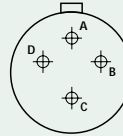
08-35 (M)
Size 8
6#22



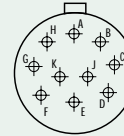
10-98 (I)
Size 10
6#20



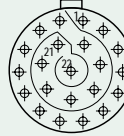
10-35 (M)
Size 10
13#22



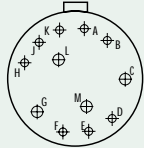
12-04 (I)
Size 12
4#16



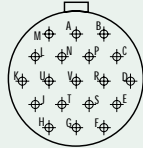
12-98 (I)
Size 12
10#20



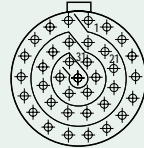
12-35 (M)
Size 12
22#22



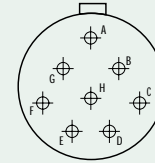
14-97 (I)
Size 14
8#20 4#16



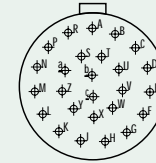
14-19 (I)
Size 14
19#20



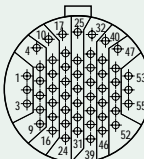
14-35 (M)
Size 14
37#22



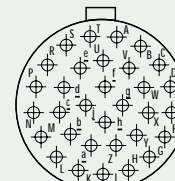
16-08 (I)
Size 16
8#16



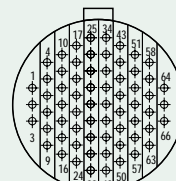
16-26 (I)
Size 16
26#20



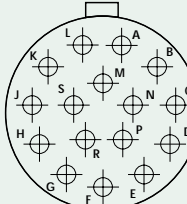
16-35 (M)
Size 16
55#22



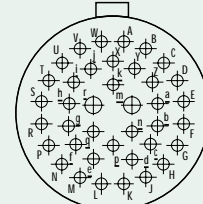
18-32 (I)
Size 18
32#20



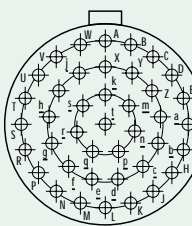
18-35 (M)
Size 18
66#22



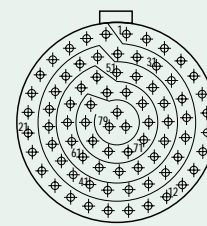
20-16 (I)
Size 20
16#16



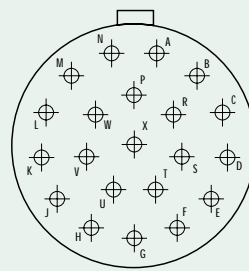
20-39 (I)
Size 20
37#20 2#16



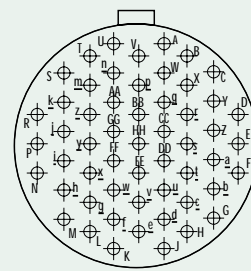
20-41 (I)
Size 20
41#20



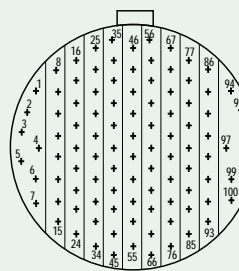
20-35 (M)
Size 20
79#22



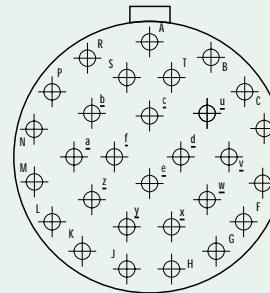
22-21 (I)
Size 22
21#16



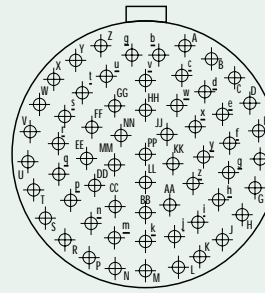
22-55 (I)
Size 22
55#20



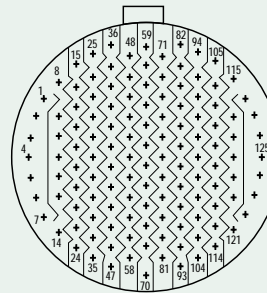
22-35 (M)
Size 22
100#22



24-29 (I)
Size 24
29#16



24-61 (I)
Size 24
61#20



24-35 (M)
Size 24
128#22

AS Series...Cont.

SHELL SIZE	CONTACT ARRANGEMENT	NUMBER OF CONTACTS			RATING
		SIZE 22 D	SIZE 20	SIZE 16	
8	-98		3		I
8	-35	6			M
10	-98		6		I
10	-35	13			M
12	-04			4	I
12	-98		10		I
12	-35	22			M
14	-97		8	4	I
14	-19		19		I
14	-35	37			M
16	-08			8	I
16	-26		26		I
16	-35	55			M

Note 1: Ratings M & I define Dielectric withstand voltage ratings as follows:

I = 1800 volts AC rms

M = 1300 volts AC rms.

SHELL SIZE	CONTACT ARRANGEMENT	NUMBER OF CONTACTS			RATING
		SIZE 22 D	SIZE 20	SIZE 16	
18	-32		32		I
18	-35	66			M
20	-16			16	I
20	-39		37	2	I
20	-41		41		I
20	-35	79			M
22	-21			21	I
22	-55		55		I
22	-35	100			M
24	-29			29	I
24	-61		61		I
24	-35	128			M

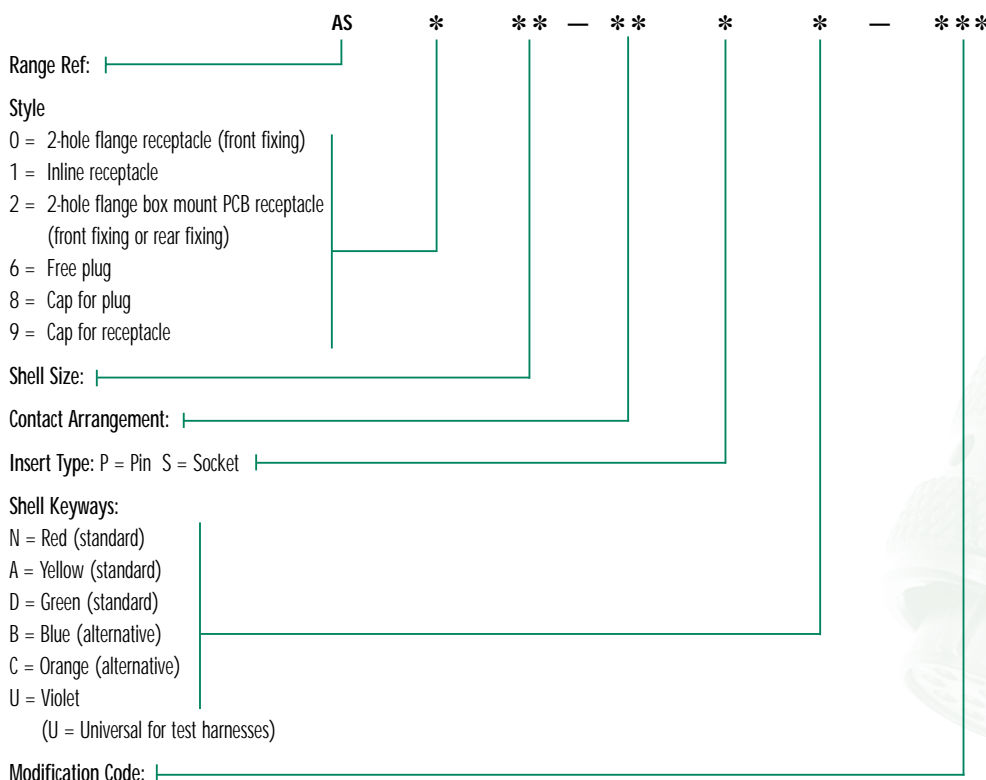
Note 2: The contact/insert arrangements shown above are standard

layouts. Other combinations of shell size and insert arrangements may be available. For details consult the sales office.

AS SERIES: CONTACTS, TOOLING AND FILLER PLUGS

CONTACT SIZE	PART NUMBERS						
	SOCKET	PIN	FILLER PLUG	INS/EXT TOOL	CRIMP TOOL	PIN POSITIONER	SKT POSITIONER
22	38943-22	38941-22	600300-22	M81969/14-01	M22520/2-01	M22520/2-09	M22520/2-07
20	38943-20	38941-20	600300-20	M81969/14-10	M22520/2-01	M22520/2-10	M22520/2-10
16	38943-16	38941-16	600300-16	M81969/14-03	M22520/1-01	M22520/1-04	M22520/1-04

ORDERING INFORMATION

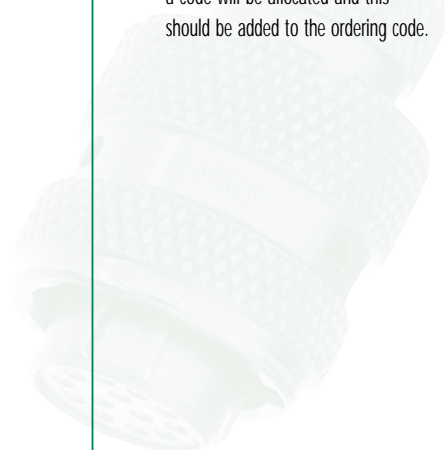


How to order:

Quote the AS reference, followed by the style, shell size, contact arrangement, insert style and shell keyway option, e.g. AS008-98PN.

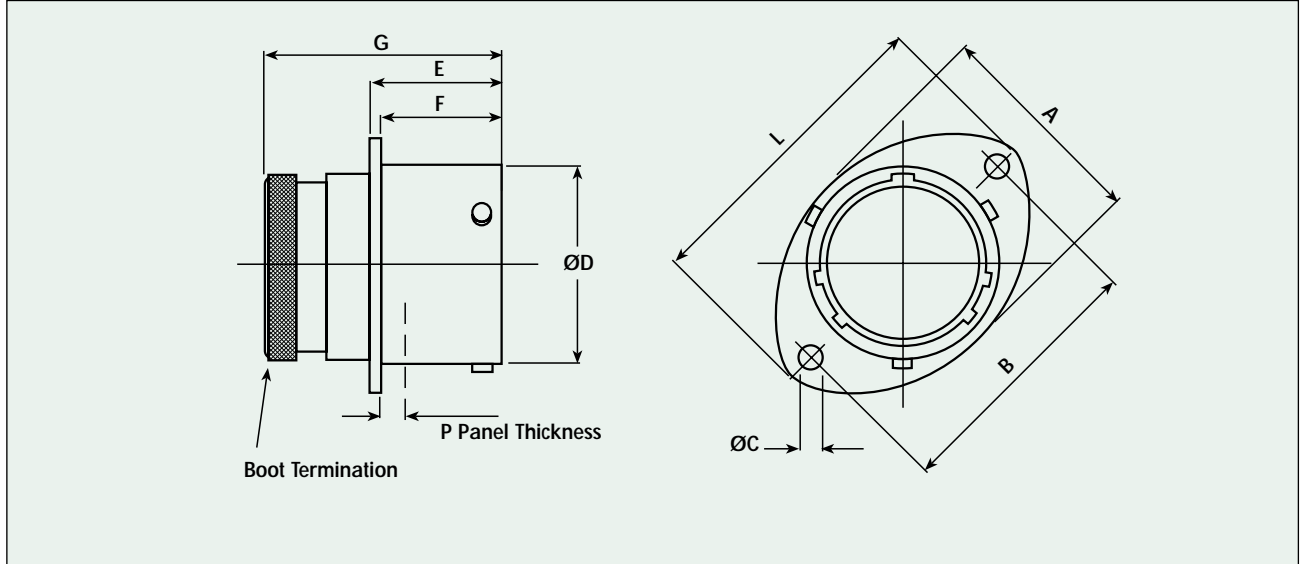
For protective caps quote the AS style reference and shell size, e.g. AS808.

If you require a special modification, a code will be allocated and this should be added to the ordering code.



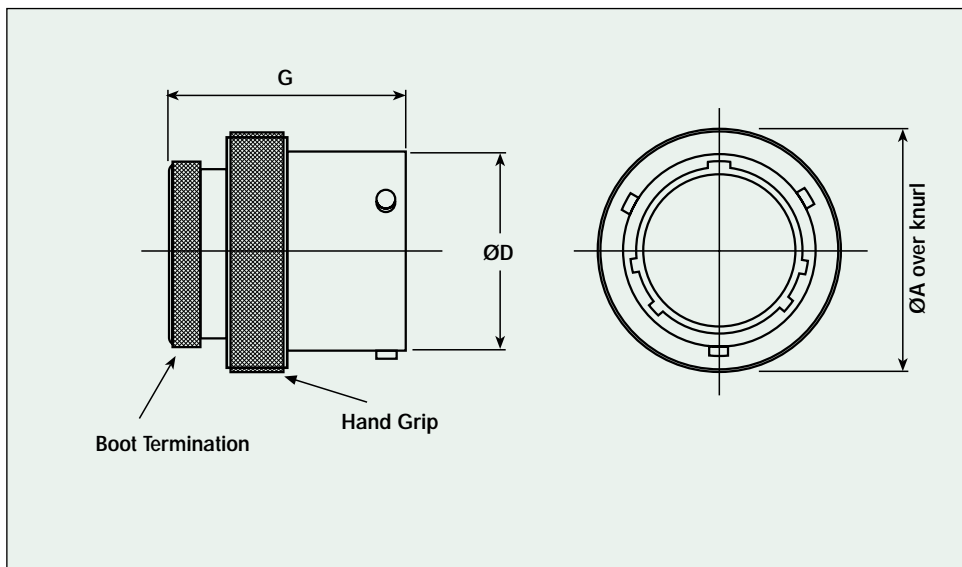
AS SHELL STYLES

RECEPTACLE – TYPE 0



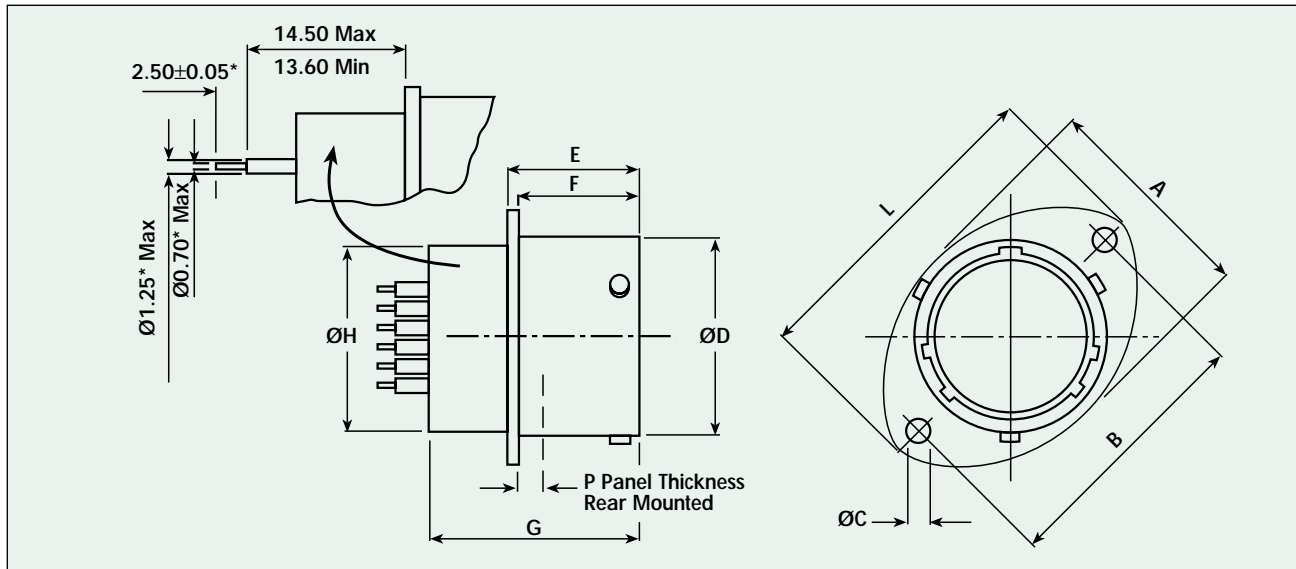
SHELL SIZE	A Ref	B ± 0.2	C + 0.1 - 0	D + 0 - 0.13	E + 0.15 - 0	F + 0 - 0.13	G MAX	L MAX	P MAX
08	16.50	21.35	3.20	12.00	17.21	16.05	33.50	27.20	3.00
10	19.50	25.90		15.00				32.00	
12	24.00	29.10		19.05				35.20	
14	27.00	32.50		22.22				38.40	
16	30.30	34.80		25.40				41.00	
18	33.70	38.20		28.57				44.70	
20	37.00	41.60		31.75				47.90	
22	40.00	44.95	34.92	51.10	15.29				
24	43.30	49.35	3.70	38.10		55.80	2.26		

INLINE RECEPTACLE – TYPE 1



SHELL SIZE	A MAX	D + 0 - 0.13	G MAX
08	17.70	12.00	33.50
10	20.80	15.00	
12	25.20	19.05	
14	28.40	22.22	
16	31.50	25.40	
18	34.80	28.57	
20	38.20	31.75	
22	41.30	34.92	
24	44.60	38.10	

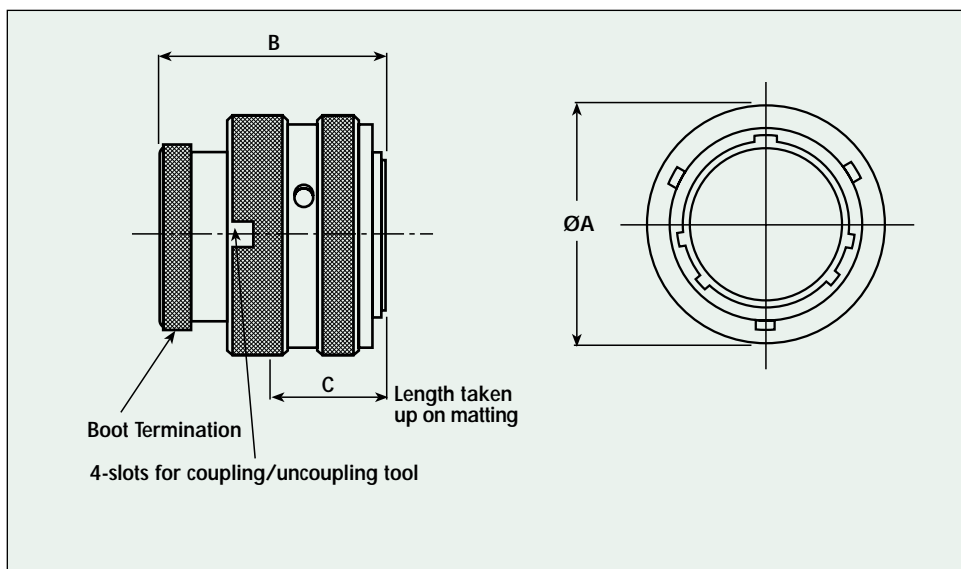
PCB BOX MOUNTING RECEPTACLE – TYPE 2



*Dimensions for 20 and 22 contacts shown are for standard parts. Other PCB contacts are available.

SHELL SIZE	A Ref	B ± 0.2	C + 0.1 - 0	D + 0 - 0.13	E + 0.15 - 0	F + 0 - 0.13	G MAX	H MAX	L MAX	P MAX
08	16.50	21.40	3.2	12.00	17.21	16.05	27.65	11.10	27.20	3.00
10	19.50	25.90		15.00				14.27	32.00	
12	24.00	29.10		19.05				17.44	35.20	
14	27.00	32.50		22.22				20.60	38.40	
16	30.30	34.80		25.40				23.77	41.00	
18	33.70	38.20		28.57				26.94	44.70	
20	37.00	41.60		31.75				30.11	47.90	
22	40.00	44.95		34.92				33.29	51.10	
24	43.30	49.35	3.7	38.10	15.29	36.46	55.80	2.26		

PLUG – TYPE 6



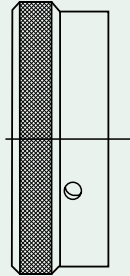
SHELL SIZE	A MAX	B MAX	C MAX
08	17.70	33.50	15.00
10	20.80		
12	25.20		
14	28.40		
16	31.50		
18	34.80		
20	38.20		
22	41.30		
24	44.60		

All dimensions are in mm unless stated otherwise

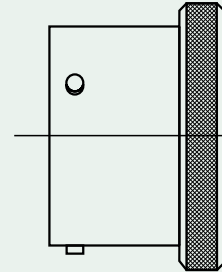
AS PROTECTIVE CAPS

RECOMMENDED FOR EQUIPMENT STORAGE/TRANSIT

RECEPTACLE CAP – TYPE 9

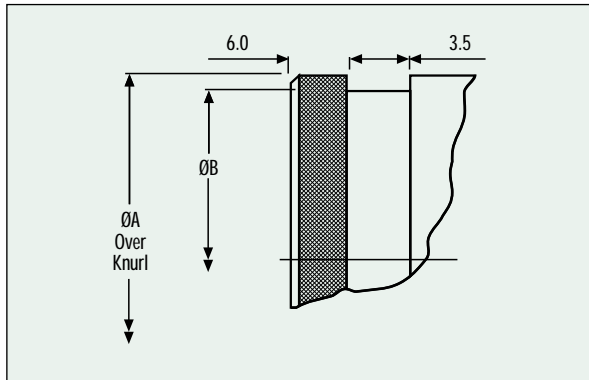


PLUG CAP – TYPE 8



All protective caps incorporate a silicon seal

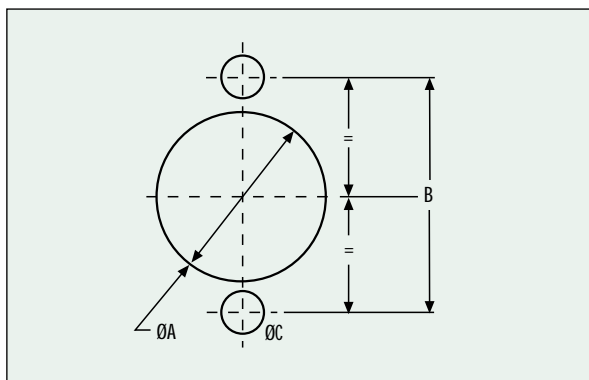
BOOT TERMINATION DETAIL



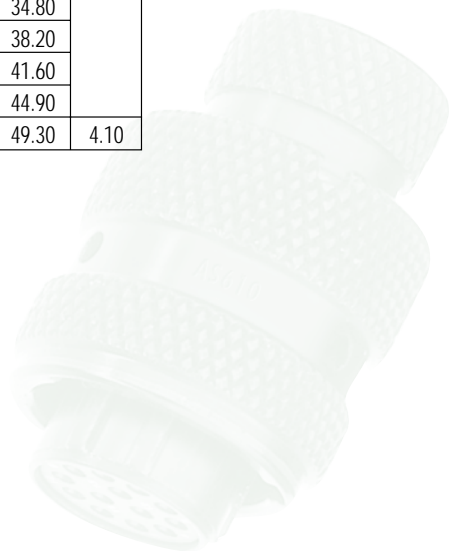
SHELL SIZE	A ± 0.10	B ± 0.05
08	11.20	10.00
10	14.22	12.95
12	17.39	16.15
14	20.55	19.15
16	23.72	23.35
18	26.89	25.35
20	30.06	28.50
22	33.24	31.70
24	36.41	34.85

Note:
For details on applicable Strain Relief Boots and the Braid Termination System see page 29

PANEL CUT-OUT DETAIL



SHELL SIZE	A ± 0.10	B ± 0.20	C ± 0.20
08	14.50	21.40	3.6
10	17.40	25.90	
12	21.90	29.10	
14	25.00	32.50	
16	28.20	34.80	
18	31.40	38.20	
20	34.60	41.60	
22	37.80	44.90	
24	41.00	49.30	4.10



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interconnection solutions for harsh environments

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Deutsch Autosport connectors are built to withstand the harshest conditions found in the motorsport arena. Its products are supported by dedicated technicians and engineers with the total backup expected from a company like Deutsch.

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Castleham Industrial Estate 2 Stanier Road St Leonards on Sea East Sussex TN38 9RP England
Telephone +44 (0)1424 852722 Fax +44 (0)1424 855979 Email industrial@deutsch.co.uk

DEUTSCH AUTOSPORT DISTRIBUTION NETWORK

Contact your local distribution outlet for sales and further information:



FRANCE
Cie Deutsch
10 rue Lionel Terray
F-92500
Rueil Malmaison
Tel +33 147084047
Fax +33 147083538
Email cds@compagnie-deutsch.com



GERMANY
Compagnie Deutsch GmbH
Fraunhoferstrasse 11b
D-82152
Munchen
Tel +49 89 8991570
Fax +49 89 8574684
Email info@compagnie-deutsch.de



ITALY
Connex
Piazzale Lugano 9
20158 Milano
Italy
Tel +39 02 39321147
Fax +39 02 6464195
Email connex_italiana@iol.it



JAPAN
Global Active Technology
4-11-11, Higashitokorozawa
Tokorozawa-shi
Saitama, 359-0021
Japan
Tel +81-42-945-1515
Fax +81-42-945-1555
Email sales@gat.ne.jp



UNITED KINGDOM
Servo & Electronic Sales Ltd
24 High Street
Lydd
Kent
England
Tel +44(0) 1797 322500
Fax +44(0) 1797 321569
Email servo@plugs.demon.co.uk



USA
PI Research (USA) Inc
8250 Haverstick
Suite 2725
Indianapolis
IN 46240
Tel +1 317 2598900
Fax +1 317 2590137
Email deutschsales@piusa.com



DEUTSCH
AUTOSPORT LTD

Castleham Industrial Estate
2 Stanier Road, St Leonards on Sea
East Sussex TN38 9RP England
Telephone +44(0) 1424 852722
Fax +44(0) 1424 855979
Email autosport@deutsch.co.uk