Amphenol
Pyle National

FIREWALL CONNECTORS

- ESC10
- ESC11
- ESC15
- ESC16
- EN2997
- BACC63
- D38999
- JN1024
- M83723
- FPK
- BTK

PRODUCT RANGE

PYLE-NATIONAL PRODUCTS FROM AMPHENOL

The Pyle-National division of Amphenol Ltd situated in Nottingham, England, has supplied high-performance stainless-steel firewall connectors to the UK aero-engine market since 1968.

These products have an enviable reputation for reliability and performance through the use of proven technology and attention to design detail.

Plugs incorporate a threaded coupling mechanism with an anti-decoupling device that has greater resistance to de-coupling than to coupling. This eliminates the need for wire locking and tends to tighten under vibration offering the user added assurance and a margin of safety. Most ranges offer an option of EMI grounding fingers to ensure RFI performance.

In addition to standard products to existing specifications, our in-house design capabilities, based on long experience in providing connectors for use in harsh and difficult environments, allows us to produce custom products for special applications that are unobtainable elsewhere.

WHAT ARE FIREWALL CONNECTORS?

Firewall connectors are designed to allow electrical connections to pass through the aircraft firewall bulkhead without compromising the fire protection. In the event of a fire they are required to maintain full electrical performance for a period of five minutes and must not allow flame to propagate on the other side of the bulkhead for a further twenty minutes.

All firewall types have removable crimped contacts. These are of the rear release type (removal tool is inserted from rear of connector) apart from Mil-C-256500 based connectors which have front release contacts (removal tool is inserted from mating end).

PRODUCT CATALOGUES

Catalogues with dimensional details etc. are available on the Amphenol Aerospace web-site at www.amphenol-aerospace.com

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QUALIFICATIONS

Pyle-National products are qualified to the following specifications:

- Mil-C-26500 QPL

- Mil-C-38999 Series 3 QPL

- Mil-C-83723 Series 3 QPL

- BS-EN2997 Classes K, KE, S and SE—Certificate No: PQ 080

- SBAC specifications ESC10 and ESC30

- Rolls-Royce specifications ESCO01 and ESCO06

- Roll-Royce specification ESC11

- Roll-Royce specification ESC15*

- Roll-Royce specification ESC16*

- Boeing BACC63BT, BR, CM, CN

- ASN-E019x & -E44x

- General Electric M50TF3564

Note: * = Qualification pending

AMPHENOL LTD
PYLE-NATIONAL DIVISION

EN2997

Stainless steel firewall connectors to European specification BS-EN2997. Derivative of Mil-DTL-83723 series 3 with 360° accessory teeth. Available with or without EMI grounding fingers and with or without contacts. Contact specification is EN3155.

Temperature Ranges:
-65°C to 200°C Class K and S
-65°C to 260°C Class KE and SE

Available Layouts:
08-03, 08-98
10-05, 10-06
12-03, 12-12
14-04, 14-07, 14-12, 14-15
16-10, 16-24
18-08, 18-14, 18-31
20-16, 20-25, 20-39, 20-41
22-19, 22-55
24-30, 24-61
28-42

EN2997SE01624F6

BS-EN2997
Class
Shell Style
Shell Size

Alternate keying
Contact Style (see note 1)
Insert Arrangement

Class   K — 200°C Firewall
         S — 200°C Firewall with EMI band
         KE — 260°C Firewall
         SE — 260°C Firewall with EMI band

Shell Style 0 —Square Flange receptacle
             6 — Plug with anti-decoupling device
             7— Jam-Nut Receptacle

Shell Size   08, 10, 12, 14, 16, 18, 20, 22, 24, 28

Insert Arrangement see above

Contact Style
A — Pin insert less contacts
B — Socket insert less contacts
C — #20 pin with #18 crimp well
D — # 20 socket with #18 crimp well
F — Standard socket
M — Standard pin

Keying
N — Normal, 6, 7, 8, 9, Y

Notes
1. Contact styles other than M or F are only used for ordering purposes only and must not be included in connector marking. Connectors are always marked with M or F.
2. Proprietary identification: BTK series
3. Parts are identical to those supplied under ESC10 qualification.

ESC10

Stainless steel firewall connectors to SBAC specification ESC10. Derivative of Mil-DTL-83723 series 3 Class K having 360° accessory teeth and high temperature insert. Specification dictates that parts may only be supplied without contacts. Plugs are available with or without EMI grounding fingers . The 10-06 layout is not included in the specification and cannot be supplied under ESC10 part number. Contact specification ESC30.

Temperature Ranges: -65°C to 260°C Class KE and SE

Available Layouts: 08-03, 08-98
         10-05
         12-03, 12-12
         14-04, 14-07, 14-12, 14-15
         16-10, 16-24
         18-08, 18-14, 18-31
         20-16, 20-25, 20-39, 20-41
         22-19, 22-55
         24-30, 24-61
         28-42

ESC10KE01624S6O

ESC10
Class
Shell Style
Shell Size

Variation
Alternate keying
Contact Style
Insert Arrangement

Class   KE — 260°C Firewall
       S E — 260°C Firewall plug with EMI band
       YE— Hermetic receptacle

Shell Style 0 —Square Flange receptacle
           1 — Hermetic weld/solder mount receptacle
           2 — Hermetic square flange receptacle
           3 — Hermetic jam-nut receptacle
           6 — Plug with anti-decoupling device

Shell Size 08, 10, 12, 14, 16, 18, 20, 22, 24, 28

Parts are identical to those supplied under EN2997

Proprietary identification: BTK series

Insert Arrangement see above

Contact Style
P — pin insert less contacts
S — Socket insert less contacts

Keying
N — Normal, 6, 7, 8, 9

Variations
A — Wire lock holes
B — Hermetic with eyelet contacts
O — No variation
X — Hermetic with t/c contacts

ESC11

Introduced to allow #20 contacts to be used on Boeing applications, these stainless steel scoop-proof firewall connectors to Rolls-Royce ESC11 specification may only be supplied without contacts with or without EMI grounding fingers . Only those layouts with #20 contacts (not 10-06) are included in the specification but as smaller ESC10 shells are naturally scoop-proofed parts are only available in shell sizes 14 and above. Keying is mirror image of that used for ESC10 parts to prevent cross-connection. Contacts are same as used in ESC10 and are to specification ESC30

Temperature Ranges:	-65°C to 260°C Class KE and SE
Available Layouts:	14-15
	16-24
	18-31
	20-39, 20-41
	22-55
	24-61

ESC11KE01624S6O

Specification	Variation
Class	Alternate keying
Shell Style	Contact Style
Shell Size	Insert Arrangement

Class   KE — 260°C Firewall
S E — 260°C Firewall plug with EMI band
YE— Hermetic receptacle

Shell Style 0 —Square Flange receptacle
1 — Hermetic weld/solder mount receptacle
2 — Hermetic square flange receptacle
3 — Hermetic jam-nut receptacle
6 — Plug with anti-decoupling device

Shell Size   14, 16, 18, 20, 22, 24

Insert Arrangement see above

Contact Style
P — pin insert less contacts
S — Socket insert less contacts

Keying
N — Normal, 6, 7, 8, 9

Variations
A — Wire lock holes
B — Hermetic with eyelet contacts
O — No variation
X — Hermetic with t/c contacts

Proprietary identification: HTK series

ESC15

These Stainless steel firewall connectors to Rolls-Royce specification ESC15, are a development of the ESC10 connector having a rear shell designed to accept banded coupling for screens and/or heatshrink boot. Receptacles are available fitted with clinch nuts to allow easier mounting Parts are only supplied without contacts and plugs are available with or without EMI grounding fingers. Contact used are to specification ESC30. 10-06 layout is included in ESC15 specification.

Temperature Ranges:	-65°C to 260°C Class KE and SE

Available Layouts:	08-03, 08-98
	10-05, 10-06
	12-03, 12-12
	14-07, 14-15
	16-10, 16-24
	18-14, 18-31
	20-39, 20-41
	22-19, 22-55
	24-30, 24-61
	28-42

ESC15KE41624S6O
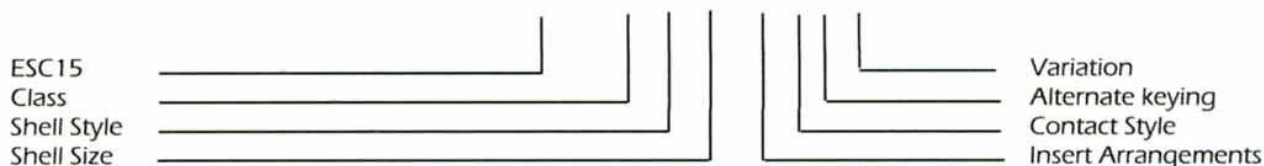
ESC15		Variation
Class		Alternate keying
Shell Style		Contact Style
Shell Size		Insert Arrangements

Class	KE — 260°C Firewall
	S E — 260°C Firewall plug with EMI band

Shell Style	2 —Square Flange receptacle screen & boot
	3— Square Flange receptacle screen only
	4 — Square flange receptacle screen & boot with clinch nuts
	7 — Plug screen and boot
	9 — Plug screen only

Shell Size 08, 10, 12, 14, 16, 18, 20, 22, 24, 28

Insert Arrangements see above

Contact Style
P — pin insert less contacts
S — Socket insert less contacts

Keying
N — Normal, 6, 7, 8, 9

Variations
A — Wire lock holes
0 — No variation

ESC16

These stainless steel scoop-proof firewall connectors to Rolls-Royce ESC16 specification, are a development of the ESC11 types having a rear shell designed to accept banded coupling for screens and/or heatshrink boot. Specification dictates that parts are only supplied without contacts. Plugs are available with or without EMI grounding fingers and receptacles may be ordered with clinch nuts. Contact specification ESC30

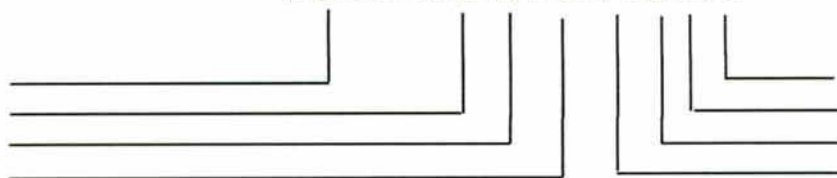Temperature Ranges: -65°C to 260°C Class KE and SE

Available Arrangements:
14-15
16-24
18-31
20-39, 20-41
22-55
24-61

Although specification contains all layouts with # 20 contacts, the scoop-proof feature is only available on layouts with #20 contacts in shell size 14 and above.

ESC16KE01624S6O

ESC16
Class
Shell Style
Shell Size

Variation
Alternate keying
Contact Style
Insert Arrangements

Class   KE — 260°C Firewall
S E — 260°C Firewall plug with EMI band

Shell Style 2 —Square Flange receptacle screen & boot
3— Square Flange receptacle screen only
4 — Square flange receptacle screen & boot
with clinch nuts
7 — Plug screen and boot
9 — Plug screen only

Shell Size   14, 16, 18, 20, 22, 24

Insert Arrangement see above

Contact Style
P — pin insert less contacts
S — Socket insert less contacts

Keying
N — Normal, 6, 7, 8, 9

Variations
A — Wire lock holes
0 — No variation

JN1024

Stainless steel firewall connectors to Eurofighter specification JN1024. Plugs are only available with EMI grounding fingers . Can be supplied with or without contacts.
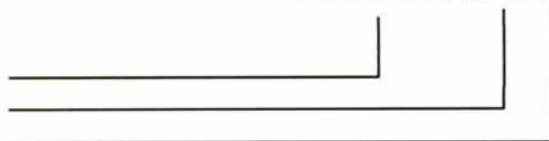
Temperature Ranges: -65°C to 260°C

Available Layouts: 10-06
12-03, 12-12
14-04, 14-07, 14-15
16-10
18-08, 18-14, 18-31
20-41
22-55
24-30, 24-46, 24-61
28-42

JN1024A24-46S6L

JN1024
Shell Style
Shell Size

Variation
Alternate keying
Contact Style
Insert Arrangement

Shell Style	A —Square Flange receptacle
	B — Jam-nut receptacle
	C — Free Plug

Shell Size   08, 10, 12, 14, 16, 18, 20, 22, 24, 28

Insert Arrangement see above

Contact Style
P — Pin contacts
S — Socket contacts

Keying
N — Normal, 6, 7, 8, 9, Y

Variations
L — Less contacts

Proprietary BTK series

BTK

Proprietary range of stainless steel firewall connectors. Plugs are available with or without EMI grounding fingers and parts can be supplied with or without contacts.

Temperature Ranges:	-65°C to 260°C (-Y144)
	-65°C to 200°C
Available Layouts:	08-03, 08-98
	10-05, 10-06, 10-20
	12-03, 12-12
	14-04, 14-07, 14-12, 14-15
	16-10, 16-24
	18-08, 18-14, 18-31
	20-16, 20-25, 20-39, 20-41
	22-19, 22-55
	24-19, 24-30, 24-46, 24-57, 24-61
	28-42

BTK-17E16-24SE06-Y144

Threaded Coupling
83723 Type
Class
Shell Style
Shell Mod
Shell Size

Variation
Alternate keying
Contact Finish
Contact Style
Insert Arrangements

Class	K — Stainless Steel Firewall	Insert Arrangement
	Y — Hermetic	see above
		Contact Style
		P — Pin contacts
Shell Style	12 — Plug with anti-decoupling device	S — Socket contacts
	14 — Hermetic weld/solder mount	Contact Finish
	17 — Square Flange receptacle	D — Gold plated
	19 — Jam-nut receptacle	E — Without contacts
		Keying
Shell Mod	No digit — 3 accessory teeth (M83723)	Blank — Normal, 06, 07,08, 09, 10
	E — 360 deg accessory teeth	Variations
	F — 360 deg acc teeth and EMI band (plugs only)	- Y144 — 260 deg C

Shell Size   08, 10, 12, 14, 16, 18, 20, 22, 24, 28

BACC63BR/BT

Stainless steel firewall connectors approved to Boeing BACC63BR and BACC63BT specifications
Plug is available with or without EMI grounding fingers .

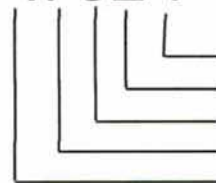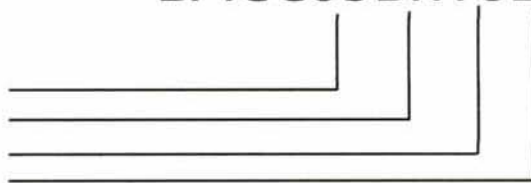| Temperature Ranges:	-65°C to 200°C
Available Layouts:	12-3
	14-7
	16-10
	18-14
	22-19
	24-30
	28-42

BACC63BR18B14P6LA

Specification
Shell Style
Shell Size
Shell Modification

Option
No tactile Indicator
Alternate keying
Contact Style
Insert Arrangement

Shell Style	BR—Non-decoupling plug, firewall
	BT—Square flange receptacle, firewall

Insert Arrangement see above

Contact Style
P — Pin contacts
S — Socket contacts

Shell Size   12, 14, 16, 18, 20, 22, 24, 28

Keying
N — Normal, 6, 7, 8, 9,10

Shell Modification
B=360 deg accessory teeth per MS3155
D=360 deg accessory teeth per MS3155
with Grounding spring on plug
- = 3 Accessory teeth per M83723 III

Option
A = Without contacts and seal plugs
(letter is not marked on connector)

Proprietary BSK series

BACC63CM/CN

Stainless steel firewall connectors approved to Boeing BACC63CM and BACC63CN specifications. Plug is only available with EMI grounding fingers . All parts have 360° accessory teeth.
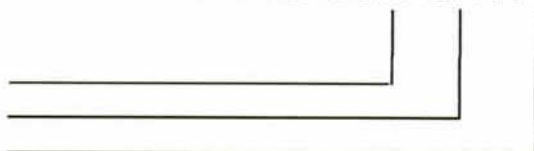
Temperature Ranges: -65°C to 260°C

Available Layouts:
08-3, 08-98
10-5, 10-6, 10-20
12-3, 12-12
14-7, 14-12, 14-15
16-10, 16-24
18-8, 18-14, 18-31
20-16, 20-25, 20-39, 20-41
22-19, 22-55
24-30, 24-61
28-42

BACC63CM1814P6A

Specification
Shell Style
Shell Size

Contact option
Alternate keying
Contact Style
Insert Arrangement

Shell Style
CM—Non-decoupling plug, firewall
CN —Square flange receptacle, firewall
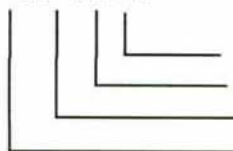
Insert Arrangement
see above

Contact Style
P — Pin contacts
S — Socket contacts

Shell Size 08, 10, 12, 14, 16, 18, 20, 22, 24, 28

Keying
N — Normal, 6, 7, 8, 9, 10

Contact Option
A = With contacts and seal plugs
(letter is not marked on connector)
No code = No contacts or seal plugs

Same as ESC10 and EN2997 product. Proprietary BTK series

ASN-E

Stainless steel firewall connectors to Airbus Aerospatiale specifications. Available with or without EMI grounding fingers. These specifications are superseded by EN2997.

Temperature Ranges:	-65°C to 200°C Class K and S
	-65°C to 260°C Class KE and SE

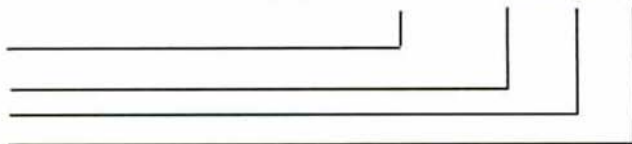|	
Available Layouts:	08-98, 08-03
	10-05, 10-06
	12-03, 12-12
	14-07, 14-15
	16-10, 16-24
	18-08, 18-14, 18-31
	20-16, 20-39, 20-41
	22-19, 22-55
	24-19, 24-30, 24-61
	28-42

ASN-EO442SE16-24S6A

Series	
Shell Style	
Class	
Shell Size	
	Contact Option
	Alternate keying
	Contact Style
	Insert Arrangements

Class   K and KE — Firewall
S and SE — Firewall plug with EMI band

Shell Style
195 — Plug with anti-decoupling device
197 — Square flange receptacle 3 teeth
441 — Plug with anti-decoupling device 360° teeth
442 — Plug with anti-decoupling device 360° teeth
with EMI band
443 — Square flange receptacle 3 teeth
444 — Square flange receptacle 360° teeth

Shell Size   08, 10, 12, 14, 16, 18, 20, 22, 24, 28

Insert Arrangement see above

Contact Style
P — Pin contacts
S — Socket contacts

Keying
N — Normal, 6, 7, 8, 9, Y

Contact Option
No code — With contacts
A — Less contacts

Proprietary BTK series

MIL-DTL-38999
Series III

Stainless steel firewall rear-release connectors approved to MIL-DTL-38999 specification. Connection is by tri-start buttress thread with only 360° rotation to fully coupled position. Full coupling is indicated by coupling nut covering red indicator band Plug is only available with EMI grounding fingers . All parts have 360° accessory teeth.

Temperature Ranges:	-65°C to 200°C
Available Layouts:	A35, A98
	B35, B98
	C08, C35, C98
	D05, D15, D18, D19, D35, D97
	E06, E08, E26, E35
	F11, F32, F35
	G16, G35, G39, G41, G75
	H21, H35, H53
	J04, J11, J19, J20, J24, J29, J35, J46, J61

D38999/20KA35PN

Specification
Shell Style
Class

Alternate keying
Contact Style
Insert Arrangement
Shell Size
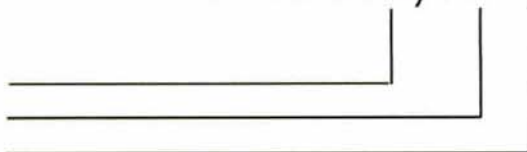
Shell Style	20— Square flange receptacle	Insert Arrangement
	24 —Jam Nut receptacle	see above
	26 — Plug	

Contact Style
P — Pin contacts

Class	K— Stainless steel firewall	S — Socket contacts
	S—Electroless nickel plated s/s firewall	A — Less special pin contacts
		B — Less special socket contacts

Shell Size	A, B, C, D, E, F, G, H, J

Keying
N — Normal, A, B, C, D, E

MIL-DTL-83723
Series III

Stainless steel firewall rear-release connectors approved to MIL-DTL-83723 specification. Firewall class use only threaded coupling. Full coupling is indicated by coupling nut covering red indicator band. Plug is available with EMI grounding fingers . Versions are available with 3 or 360° accessory teeth.

Temperature Ranges:	-65°C to 200°C
Available Layouts:	0803, 0898
	1005, 1006, 1020
	1203, 1212,
	1404, 1407,1412, 1415
	1610, 1624,
	1808, 1814, 1831
	2016, 2025, 2039, 2041
	2219, 2255
	2419, 2457, 2461

M83723/82K16246

Specification
Style
Class

Alternate keying
Insert Arrangement
Shell Size

Style
82— Square Flange Receptacle, Socket contacts
83 —Square Flange Receptacle, Pin contacts
84 — Jam Nut Receptacle, Socket contacts
85 — Jam Nut Receptacle, Pin contacts
86 — Straight Plug, Socket contacts
87 — Straight Plug, Pin contacts
95 — Self Locking Plug, Socket contacts
96 — Self Locking Plug, Pin contacts
97 — Self Locking Plug, Socket contacts, 360°teeth
98 — Self Locking Plug, Pin contacts, 360°teeth

Insert Arrangement
see above

Keying
N — Normal, 6, 7, 8, 9, Y

Class
K— Stainless steel firewall
S —Stainless steel firewall with EMI band

Shell Size
08, 10, 12, 14, 16, 18, 20, 22, 24

FP Series

Stainless steel firewall connectors to Mil-C-26500, Lockheed, Boeing and GE specifications. Available with or without anti-decoupling mechanism in coupling nut.

Temperature Ranges:	-55°C to 200°C

Available Layouts:
12-03
14-04, 14-15
16-10, 16-24
18-08, 18-14, 18-31
22-14, 22-19, 22-55
24-30
28-40, 28-42

FPK-1128-42ST06-D-WXX

Series
Shell Style
Shell Size
Insert Arrangement

Variations
Cable Support
Alternate keying
Contact Type
Contact Style

Series	FPK — Qualified to MS and Boeing specifications
	FPL — Qualified to Lockheed specifications
	FP5K— Scoop-proof version for GE

Shell Style	11 — Straight Plug
	12 — Ratchet Lock Plug
	17 — Square Flange Receptacle
	19 — Jam Nut Receptacle

Shell Size   12, 14, 16, 18, 22, 24, 28

Insert Arrangement see above

Contact Style
P — Pin contacts
S — Socket contacts

Contact Type
E— No contacts
T—Rhodium plated
D—Gold plated

Keying
Blank — Normal, 6, 7, 8, 9, Y

Cable Support
No code — No support
D — Long
P — Short
J — Right Angle

Variations
W— Insert variation
Y — Hardware variation

Contacts

Power contacts are machined from half-hard leaded copper material and are finished with gold over nickel plating to specified thickness.

Contacts fitted to hermetic receptacles are machined from nickel-iron material and are finished as specified, normally gold over nickel plate

Power Socket Contacts for 83723 based connectors 200 °C - Mil-Spec Marking

Size	PN Part No	Mil-Spec Part No	Colour Code
20	BA-4120-36LD	M39029/5-115	Brown, Brown, Green
16	BA-4116-36LD	M39029/5-116	Brown, Brown, Blue
12	BA-4112-36LD	M39029/5-118	Brown, Brown, Grey

Power Pin Contacts for 83723 based connectors 200 °C - Mil-Spec Marking

Size	PN Part No	Mil-Spec Part No	Colour Code
20	BA-4020-36LD	M39029/4-110	Brown, Brown, Black
16	BA-4016-36LD	M39029/4-111	Brown, Brown, Brown
12	BA-4112-36LD	M39029/4-113	Brown, Brown, Orange

Power Socket Contacts for 83723 based connectors 200 °C - EN Marking

Size	PN Part No	Mil-Spec Part No	Colour Code
20	BA-4120-36LD-Y165	EN3155-003F2020	Red, Red
20/18	BA-412018-36LD-Y165	EN3155-003F2018	Red Violet
16	BA-4116-36LD-Y165	EN3155-003F1616	Blue, Blue
12	BA-4112-36LD-Y165	EN3155-003F1212	Yellow, Yellow

Power Pin Contacts for 83723 based connectors 200 °C - EN Marking

Size	PN Part No	Mil-Spec Part No	Colour Code
20	BA-4020-36LD-Y165	EN3155-008M2020	Red, Red
20/18	BA-402018-36LD-Y165	EN3155-008M2018	Red Violet
16	BA-4016-36LD-Y165	EN3155-008M1616	Blue, Blue
12	BA-4012-36LD-Y165	EN3155-008M1212	Yellow, Yellow

Contact Rating

Contact Size	Test Current Crimp Contacts	Test Current Hermetic Contacts
22	5 amps	3 amps
20	7.5 amps	5 amps
16	13 amps	10 amps
12	23 amps	17 amps
10	33 amps	NA
8	60 amps	36 amps

Seal Plugs 200 °C

Contact Size	PN Part No	Mil-Spec Pt No
22	T3-4022-59L	MS27488-22
20	BA-4020-59L	MS27488-20
16	BA-4016-59L	MS27488-16
12	BA-4012-59L	MS27488-12

AMPHENOL LTD
PYLE-NATIONAL DIVISION

Contacts

In addition to standard power contacts, we manufacture co-axial, twinax and thermocouple contacts for use in our 38999 connectors.

We also manufacture twinax contacts to JN113 specification for use in the JN1024 qualified 24-46 layout.

Shielded Contacts for 38999 connectors

Size	Type	PN Part No Pin	Mil Spec Part No Pin	Amphenol Part No Pin	PN Part No Socket	Mil Spec Part No Socket	Amphenol Part No Socket
12	Shielded	T3-4612-211-LD	M39029/28-211	21-33122-546	T3-4712-416-LD	M39029/75-416	21-33123-546
12	Shielded	T3-4612-409-LD	M39029/28-409		T3-4712-417-LD	M39029/75-417	
12	Double Shielded	T3-4612-414-LD	M39029/28-414		T3-4712-422-LD	M39029/75-422	
12	Matched 50Ω	T3-46P12-558-LD			T3-47P12-559-LD		
8	Twinax	T3-46T08-LD	M39029/90-529	21-33190-529	T3-47T08-LD	M39029/91-530	21-33191-530
8	Double Shielded Twinax	T3-46TB08-LD			T3-47TB08-LD		
8	Twinax Low Pro-file	T3-46TD08-LD			T3-47TD08-LD		

Shielded Contacts for 83723 based connectors

| Size	Type	PN Part No Pin	JN Part No Pin	PN Part No Socket	JN Part No Socket	Cable Accommodation
8	Twinax	BA-46T08-LD		BA-47T08-LD		M17/176-00002
8	Twinax	BA-46TA08-LD	JN1103P	BA-47TA08-LD	JN1103S	PAN 6421 JN1060ZB002

Thermocouple Contacts for 38999 connectors

Size	Material	PN Part No Pin	Mil Spec Part No Pin	PN Part No Socket	Mil Spec Part No Socket
22D	Chromel	T3-4022-10P	M39029/87-472	T3-4122-10P	M39029/88-484
22D	Alumel	T3-4022-10R	M39029/87-471	T3-4122-10R	M39029/88-483
20	Chromel	T3-4020-10P	M39029/87-476	T3-4120-10P	M39029/88-488
20	Alumel	T3-4020-10R	M39029/87-475	T3-4120-10R	M39029/88-487
16	Chromel	T3-4016-10P	M39029/87-480	T3-4116-10P	M39029/88-492
16	Alumel	T3-4016-10R	M39029/87-479	T3-4116-10P	M39029/88-491

Contact Marking

Mil-Spec 39029 contacts are marked with three colour bands on the crimp barrel. These bands use the standard resistor colour code to designate the bin-code of the contact. The bin code is the three digit number after the dash. In the following example bands would be Brown, Brown, Orange

M39029/4-113

Bin Code


```
COLOR BANDS    1st
               2nd
Socket         3rd
```
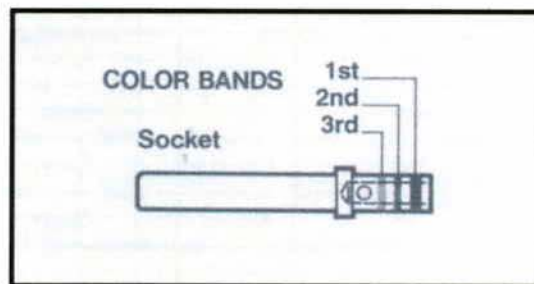
Colour Codes

0	-	Black		5	-	Green
1	-	Brown		6	-	Blue
2	-	Red		7	-	Violet
3	-	Orange		8	-	Grey
4	-	Yellow		9	-	White

ESC30 and EN3155 contacts have only two colour bands that denote size of mating end and size of crimp bucket. A white dot is added to denote 260°C performance.

Colour Codes are: Examples:

Size 20 — Red   ESC30-S20BC   Red, Red, White Dot
Size 18 — Violet
Size 16 — Blue   EN3155-003F2018 Red, Violet
Size 12 — Yellow

Intermateability

The following table shows intermateability of ranges. Those items shown in bold can be considered a direct replacement being identical products with only marking difference.

	ESC10	ESC11	ESC15	ESC16	M83723	BACC63	EN2997	BTK
ESC10		NO	YES	NO	YES	YES	**YES**	**YES**
ESC11	NO		NO	YES	NO	NO	NO	NO
ESC15	YES	NO		NO	YES	YES	YES	YES
ESC16	NO	YES	NO		NO	NO	NO	NO
M83723	YES	NO	YES	NO		YES	YES	YES
BACC63	YES	NO	YES	NO	YES		YES	YES
EN2997	**YES**	NO	YES	NO	YES	YES		**YES**
BTK	**YES**	NO	YES	NO	YES	YES	**YES**	

Custom Designs

In addition to our standard firewall products we design and manufacture custom connectors to meet special requirements. These range from minor modifications to special connector types.

Some examples are shown below

Custom Shells

We offer machined shells to non-standard dimensions and designs to fit awkward or difficult areas. These are available for both environmental and hermetic parts. The use of special shells offers savings in costs of equipment housings, castings and assembly time.

Fuel Immersed Tankwall Connectors

Designed to provide connections from fuel tank internal wiring to external wiring, these connectors give a full hermetic seal with the advantages of crimped connections by use of 'poke-home' socket contacts. Rear of connector operates fully immersed in the aircraft fuel and the special materials used to allow full immersion have been tested for resistance to standard aircraft fluids.

Tested to Boeing and Airbus specifications for fuel immersed connectors.

Operating temperature range: –55° C to + 200°C

Filtered Connectors

Designed to provide RFI protection to individual wires by use of C, LC or Pi Section filters. Ground plane is connected to shell.

Capacitive elements can be discrete or planar array.

Receptacle with captive nuts

Mounting flange has four self-locking nuts fitted to simplify mounting. Nuts are infinitely re-usable without loss of locking torque and can have cadmium or silver plating.

Operating temperature range: As standard parts

PCB contacts

Connector is fitted with contacts for soldering directly into printed circuit board or flexible circuit. Dimensions of spill can be tailored to board requirements. Rear of connector can be potted to counter contact movement and increase sealing performance.

Operating temperature range: As standard parts