BIRNS Aquamate LLC

ELECTRICAL CONNECTORS FOR HARSH ENVIRONMENTS AND SPECIAL APPLICATIONS

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SPECIFICATIONS

Series	Contact Number And Gauge Range						
	AWG 22	AWG 20	AWG 18	AWG 16	AWG 14	AWG 12	AWG 4
MH		2					
Nano		2,4					
TC Tiny Connector	7	2,3,4,5					
MC Mini Connector		5,6,8,9,10,12,13,16,18,21	2,3,4				
SC Standard Circular		25	2,3,4,5,6,8,10,12,16				
LP Low Profile		12	2,3,4,6,7,9				
Metal Shell 1500		5,6,8	2,3,4				
Metal Shell 2000		10,12	2,3,4				
Metal Shell 2400			6,8,10				
FAWL, FAWM		5,8,10	2,3,4				
LPM		5,6,7,8	3,4				
Penetrator			2,3,4,5,6,7,8				
RM Size G			1,2,3,4,5,6				
RM Size K				2,3,4,5,6,8			
55 Size 1500			4,6,8	2,3			
55 Size 2000			13,21	3,4,6,8			
55 Size 2400			20	12,10			
HD Heavy Duty						2,3,4	
RFT							1

Insulation	>250 megaohm
Contacts	<0.01 ohm, Gold plated per MIL-G 45204 Type II, Grade C, Class 0
Matings	>750 Cycles
Pin	Phosphor Bronze
Sockets	Beryllium Copper
Location Pin	316 Stainless
In-line cable	60cm
BH leads	30cm

Temperature	-5C - +65C
Molding	Low Carbon Neoprene
Bulkhead	316 Stainless, Titanium Grade 5, Nickel Aluminum Bronze. Also available: PEEK, Aluminum
Pressure Rating Mated	>600 bar
Wet Mated Connectors:	Nano, TC, MC, SC, LP, Metal Shell, FAWL/M, HD
Depth Open Face*	Diving Depth

*Wet mated connectors have been tested open face to depths far exceeding diving depth. High open face pressures may damage the connector.

Wire Current Rating Per AWG And Number Of Conductors													
	Number Of Conductors												
	#2	#3	#4	#5	#6	#7	#8	#9	#10	#12	#13	#16	#20
20 AWG	6	5	5	4	4	4	4	3	3	3	3	3	3
18 AWG	8	7	6	6	6	5	5	5	5	4	4	4	4
16 AWG	12	10	9	8	8	7	7	7	7	6	6	6	5
14 AWG	18	15	14	13	12	11	11	10	10	9	9	8	8
12 AWG	23	20	18	17	16	15	14	14	13	12	12	11	10
10 AWG	29	25	23	21	20	19	18	17	16	15	15	14	13
8 AWG	41	35	32	29	28	26	25	24	23	21	21	19	18
6 AWG	53	45	41	38	35	34	32	31	29	28	27	25	23
4 AWG	70	61	55	50	47	45	43	41	39	37	36	33	31
2 AWG	93	81	73	67	63	60	57	54	52	49	48	44	41

For example, an 18 AWG x 2 pin connector will have a 8 amp rating per wire.
The number of conductors refers to electrically loaded conductors.

Current Rating Modifier: Cable Length	
Cable length	Correction Factor
15.2 m (50 ft)	0.7

Current Rating Modifier: Ambient Temperature					
(°C)	(°F)	Correction Factor	(°C)	(°F)	Correction Factor
10 >	50 >	1.2	41–50	105–122	0.75
11–20	51–68	1.1	51–60	123–140	0.58
21–30	69–86	1	61–65	141–149	0.47
31–40	87–104	0.9	66–70	150–158	0.33

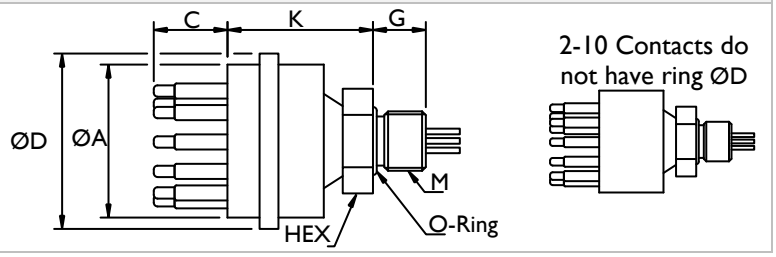
Standard Color Code					
Wire 1	Black	Wire 11	Black/White	Wire 21	White/Green
Wire 2	White	Wire 12	Black/Red	Wire 22	White/Orange
Wire 3	Red	Wire 13	Black/Green	Wire 23	White/Blue
Wire 4	Green	Wire 14	Black/Orange	Wire 24	White/Brown
Wire 5	Orange	Wire 15	Black/Blue		
Wire 6	Blue	Wire 16	Black/Brown		
Wire 7	Brown	Wire 17	Black/Yellow		
Wire 8	Yellow	Wire 18	Black/Gray		
Wire 9	Gray	Wire 19	Black/Violet		
Wire 10	Violet	Wire 20	White/Red		

These color codes may vary and are for reference only. Customers must always check pin / wire alignment before terminating. For Ethernet color coding see the Ethernet section.

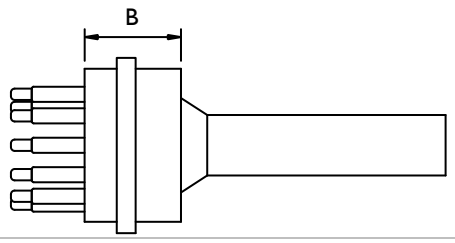
	Manufacturer Compatibility Table							
	SC	MC	LP	LPM	FAWL FAWM	METAL SHELL	5500	RM
SUBCONN	YG	YG*	YG	NA	NA	YG	NA	NA
SEACON	Y	Y	Y	N	YG	NA	L	YG
IMPULSE	Y	Y	Y	YG	N	NA	NA	L
BURTON	NA	NA	NA	NA	NA	NA	YG	NA
Legend	YG YES GUARANTEED Y YES L LIKELY N NO NA NOT APPLICABLE							
*	For MC 9-16 add suffix "-SU" or "-BIRNS"							

STANDARD CIRCULAR (SC)

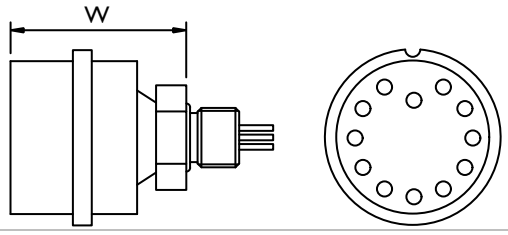
SCBH12MSS



SCIL12M



SCBH12FSS



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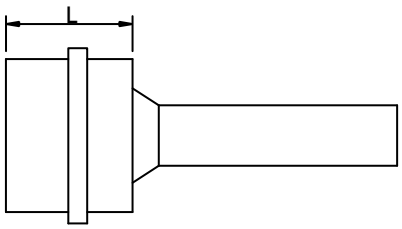
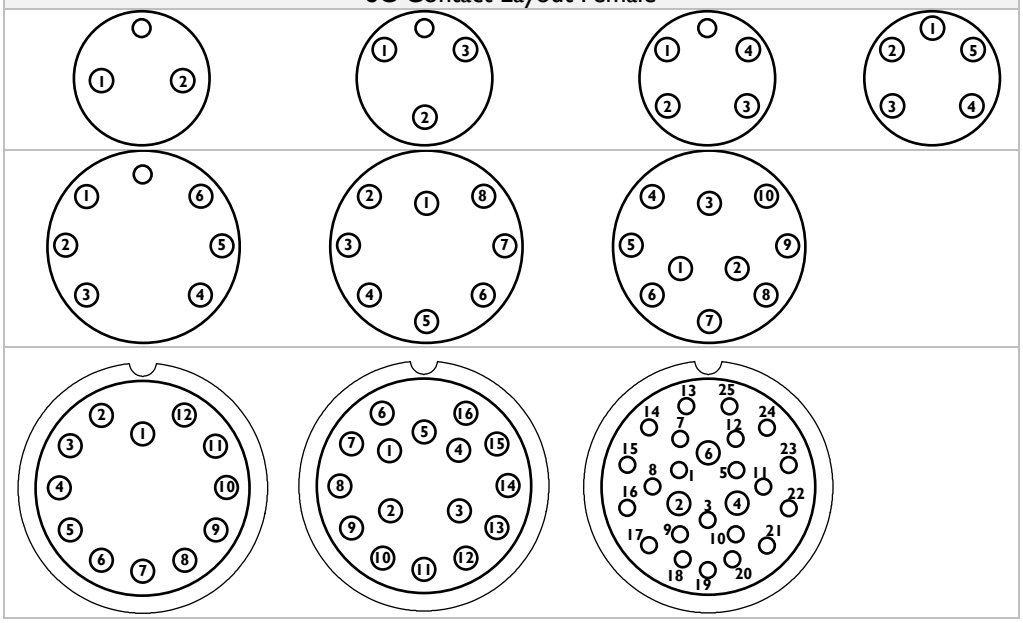


#Contacts	ØA[mm]	B[mm]	C[mm]	ØD[mm]	K[mm]	G[mm]	L[mm]	W[mm]	M[Thread]	HEX[mm]	O-Ring	Locking Sleeve
2,3,4,5	25	19	19.5	NA	36	14 or 19	28.5	45	7/16-20 UNF	19	2-014	FLS-A, MLS-A
6,8,10	32	19	19.5	NA	41	14 or 19	28.5	50	5/8-18 UNF	24	2-017	FLS-B, MLS-B
12,16,25	40.5	25.5	19.5	46	38.5	14 or 19	28.5	45	5/8-18 UNF	24	2-017	FLS-C, MLS-C

SC Contact Layout Female



# Contacts	Cable OD [mm]	AWG
2	7.5	18
3	8.1	
4	9	
5	12.2	
6	12.3	
8	13.5	
10	15	
12	16	
16	18	
25	20	20

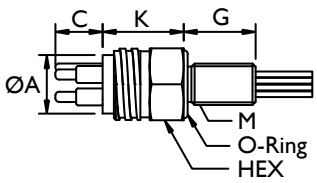
SC Part Number Format

SC	BH	4	M	SS
Series SC	Type*: BH, IL, DC, OM	Contact Num.	Gender F - Female M - Male	Options SS - Stainless Steel TT - Titanium

* BH – Bulkhead, IL – Inline, DC – Dummy, OM - Over Mold

HEAVY DUTY (HD)

HDBH4MSS



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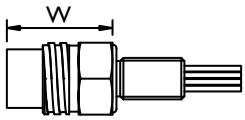
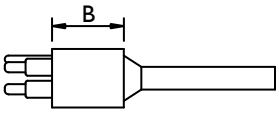


HDIL4M



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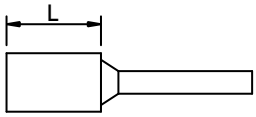
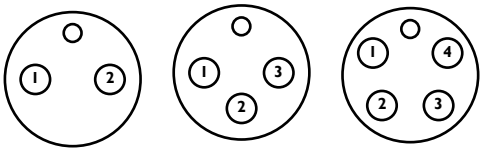


# Contacts	A [mm]	B [mm]	C [mm]	K [mm]	G [mm]	L [mm]	W mm]	M [Thread]	HEX [mm]	O-Ring [Nitrile]	Locking Sleeve
2,3,4	25	19	14	30	14 or 19	28	39	5/8-18 UNF	24	2-017	FLS-MCA MLS-MCA

HD Contact Layout Female

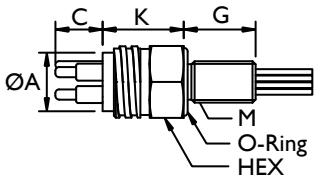


# Contacts	Cable OD [mm]	AWG
2	15.2	12
3	16.1	
4	17	

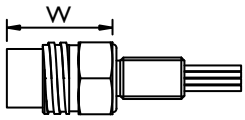
HD Part Number Format				
HD	BH	4	M	SS
Series HD	Type BH - bulkhead IL - inline DC - dummy OM - over mold	Contact Num.	Gender F - female M - male	Options SS - stainless steel TT - titanium

MINI CONNECTOR (MC)

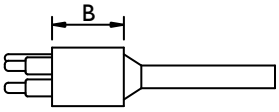
MCBH4MSS



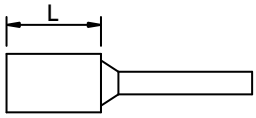
MCBH4FSS



MCIL4M



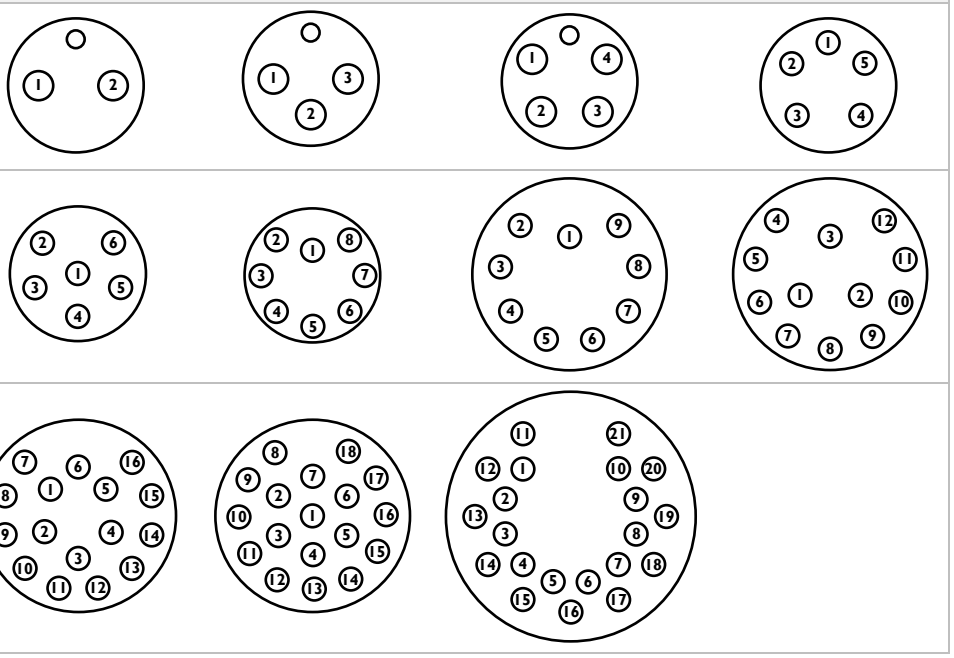
MCIL4F



# Contacts	A [mm]	B [mm]	C [mm]	K [mm]	G [mm]	L [mm]	W [mm]	M[Thread]	HEX[mm]	O-Ring	Locking Sleeve
2,3,4,5,6,8	16	19	12.5	21.5	19	25	28	7/16-20 UNF	19	2-014	FLS-MC MLS-MC
*9,10,12,16,18	25	19	14	30	14 or 19	28.5	39	5/8-18 UNF	24	2-017	FLS-MCA MLS-MCA
21	32	19	14	41	14 or 19	28.5	50	5/8-18 UNF	24	2-017	FLS-B MLS-B

*9,10,12,16 BIRNS configuration. See "SU" for Subconn configuration.

MC Contact Layout Female



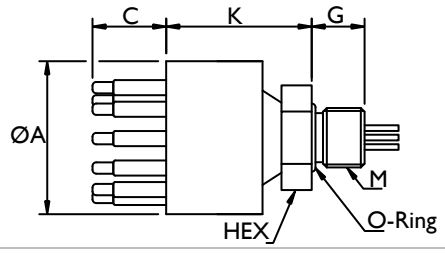
# Contacts	Cable OD [mm]	AWG
2	8	18
3	9.4	
4	10	
5	8	20
6	8	
8	10	
9	10	
10	10.5	
12	9	
16	10.5	
18	10.5	
21	-	

MC Part Number Format

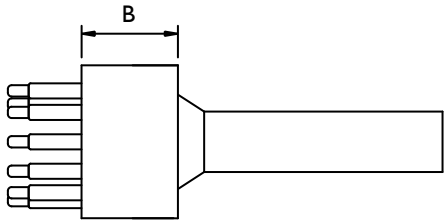
MC	BH	8	M	SS	-RA
Series MC	Type BH - bulkhead IL - inline DC - dummy OM - over mold	Contact Num.	Gender F - female M - male	Options SS - stainless steel TT - titanium	Option RA - right angle

MINI CONNECTOR SUBCONN CONFIGURATION (MC-SU)

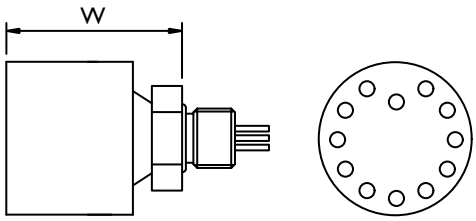
MCBH12MSS-SU



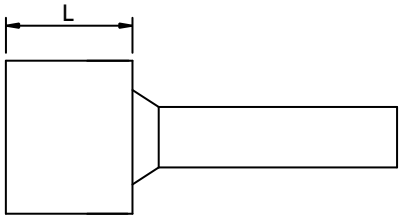
MCIL12M-SU



MCBH12FSS-SU

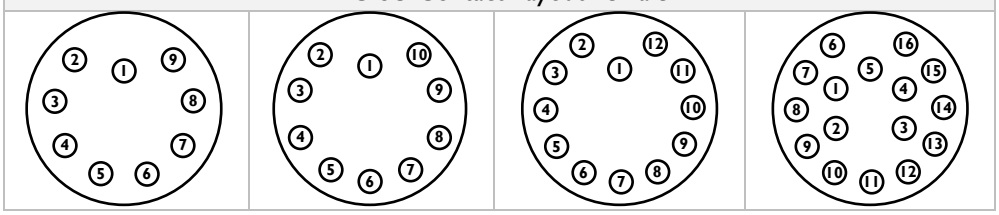


MCIL12F-SU



#Contacts	ØA[mm]	B[mm]	C[mm]	K[mm]	G[mm]	L[mm]	W[mm]	M[Thread]	HEX[mm]	O-Ring	Locking Sleeve
9,10,12,16	25	19	19.5	36	14 or 19	28	45	1/2-20 UNF	24	2-017	FLS-A, MLS-A

MC-SU Contact Layout Female



# Contacts	Cable OD [mm]	AWG
9	10	20
10	10.5	
12	11	
16	12	

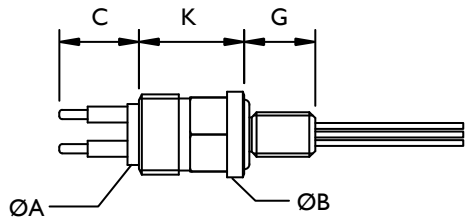
Order with the 'SU' suffix. For example MCIL9F-SU

MC-SU Part Number Format

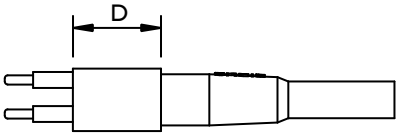
MC	BH	9	M	SS	-SU
Series MC	Type BH - Bulkhead IL - Inline DC - Dummy OM - Over mold	Contact Num.	Gender F - Female M - Male	Options SS - Stainless Steel TT - Titanium	Configuration SU – Subconn BIRNS - Birns

TINY CONNECTOR (TC)

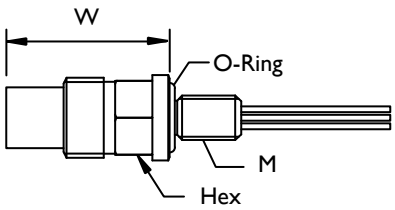
TCBH3MSS



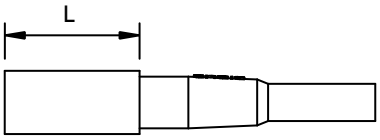
TCIL3M



TCBH3FSS

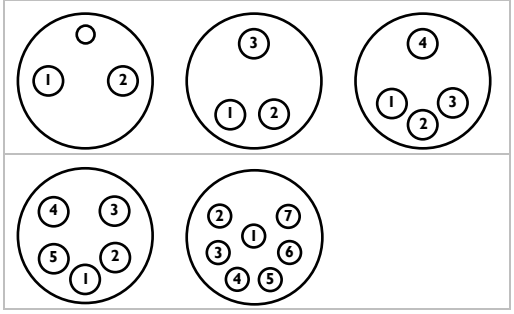


TCIL3F



# Contacts	ØA [mm]	ØB [mm]	D [mm]	C [mm]	K [mm]	G [mm]	L [mm]	W [mm]	M [Thread]	HEX [mm]	O-Ring [Nitrile]	Locking Sleeve
2,3,4,5,7	11	15	15.5	12	20.5	12.5	23.5	28.5	5/16-24 2A UNF	13	2-012	FLS-TC MLS-TC

TC Contact Layout Female

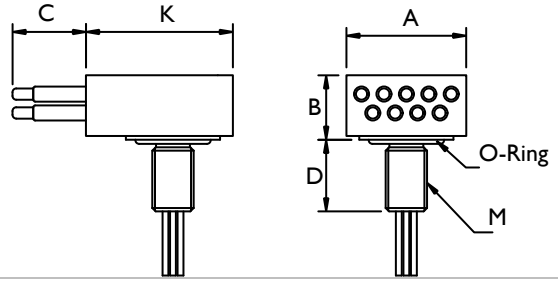


# Contacts	Cable OD [mm]	AWG
2	5.6	20
3	6.5	
4	5.5	
5	5.8	
7	6.0	22

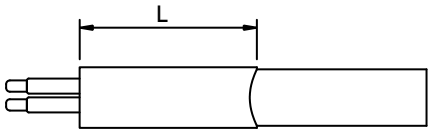
TC Part Number Format				
TC	BH	3	M	SS
Series TC	Type BH - bulkhead IL - inline DC - dummy OM - over mold	Contact Num.	Gender F - female M - male	Options SS - stainless steel TT - titanium

LOW PROFILE (LP) AND MINI LOWPROFILE (MCLP)

MCLPBH9MSS And LPBH9MSS

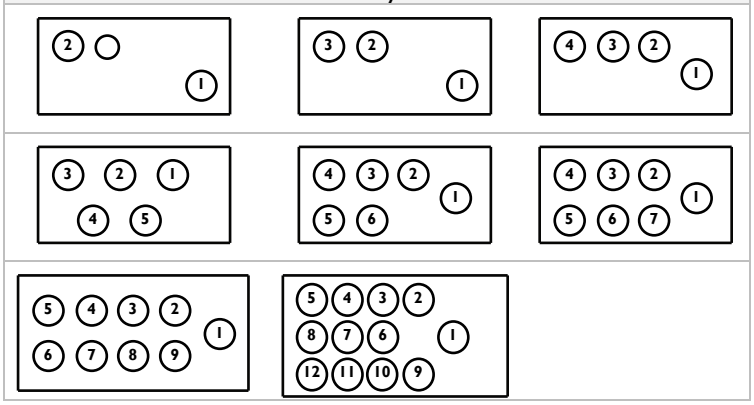


MCLPIL9M And LPIL9M

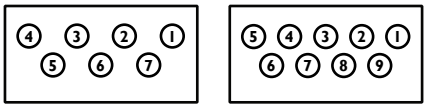


# Contacts	A [mm]	B [mm]	C [mm]	L [mm]	K [mm]	W [mm]	M [Thread]	O-Ring	Locking Strap
LP 2	22	14	19.5	42	32	19 Or 25	7/16-20 UNF	2-014	LPBH-RS
LP 3,4,5	25	14	19.5	42	32				LPBH-RS
LP 6,7	25	19	19.5	45	44				LPBH-RS
LP 9,12	31.5	21	19.5	45	45				LPBH-RS
MCLP 7,9	25	14	12.5	42	32				MCLP-RS

LP Contact Layout Female



MCLP Contact Layout Female



	LP		MCLP	
# Contacts	Cable OD[mm]	AWG	Cable OD[mm]	AWG
2	6	18	NA	NA
3	6.7			
4	7			
5	7.5			
6	7.5			
7	8	18	8.5	20
9	9.5		10	
12	10	20	NA	

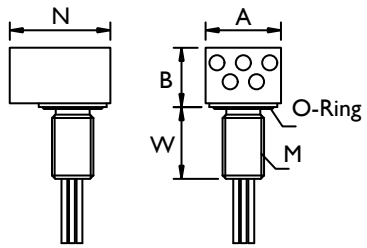
LP And MCLP Part Number Format

MCLP	BH	7	M	SS	_19MM
Series	Type*	Contact Num.	Gender	Options	BH Thread Length
LP	BH		F - Female	SS - Stainless Steel	19MM
MCLP	IL		M - Male	TT - Titanium	25MM
	DC			Leave Empty For Brass	
	OM				

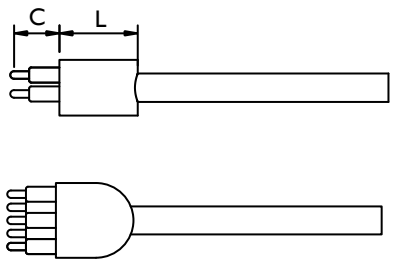
* BH – Bulkhead, IL – Inline, DC – Dummy, OM - Over Mold

FAWL FAWM

FAWL-BH5FSS

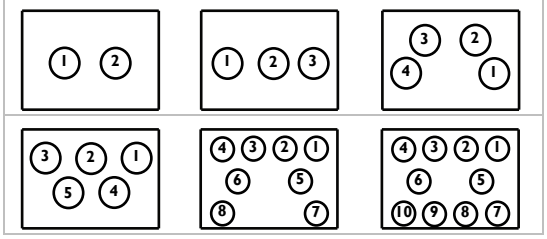


FAWL-IL5M



# Contacts	A[mm]	B[mm]	C[mm]	L[mm] Male	N [mm] Female	W[mm]	M[Thread]	O-Ring	Locking Strap
2,3,4,5 FAWL	20.5	14.7	14	21	31	19, 25	7/16-20 UNF	2-014	FAWM-RS
8,10 FAWM	21	18	14	25.5	35.5	19, 25	7/16-20 UNF	2-014	FAWM-RS

FAWL FAWM Contact Layout Female



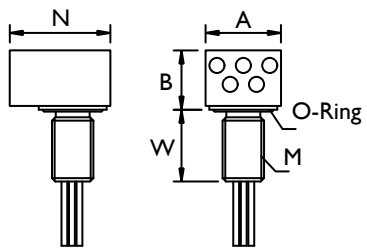
# Contacts	Cable OD [mm]	AWG
2	6	18
3	6.7	
4	7	
5	7.5	20
8	9.5	
10	10	

FAWL FAWM Part Number Format

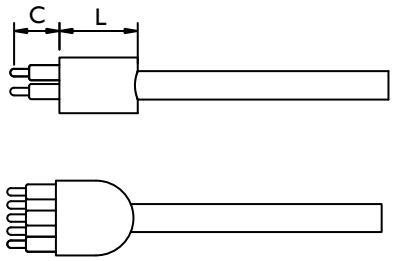
FAWL	-BH	2	M	SS	_19MM
Series FAWL FAWM	Type BH - bulkhead IL - inline DC - dummy OM - over mold	Contact Num.	Gender F - female M - male	Options SS - stainless steel	Thread Length 19MM 25MM Only for BH

LPM

LPMBH5FSS

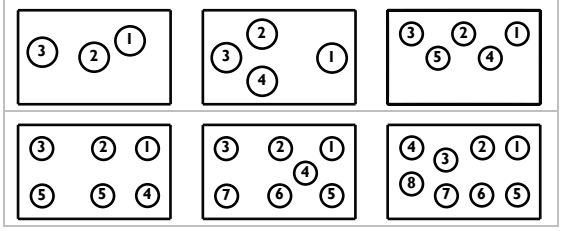


LPMIL5M



# Contacts	A [mm]	B [mm]	C [mm]	L [mm] Male	N [mm] Female	W [mm]	M[Thread]	O-Ring	Locking Strap
3,4,5,6,7,8	20.5	16.7	19	21	32.5	19, 25	7/16-20 UNF	2-014	FAWM-RS

LPM Contact Layout Female



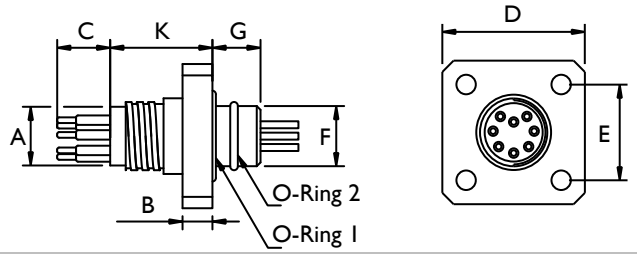
# Contacts	Cable OD [mm]	AWG
3	9.4	18
4	10	
5	8	20
6	8	
7	9	
8	10	

LPM Part Number Format

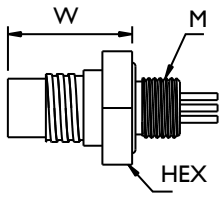
LPM	-BH	3	M	SS	_19MM
Series	Type BH - bulkhead IL - inline DC - dummy OM - over mold	Contact Num.	Gender F - female M - male	Options SS - stainless steel	Thread Length 19MM 25MM Only for BH

METAL SHELL (MS)

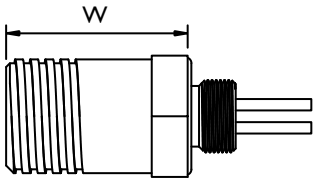
1500 FCR



1500 BCR

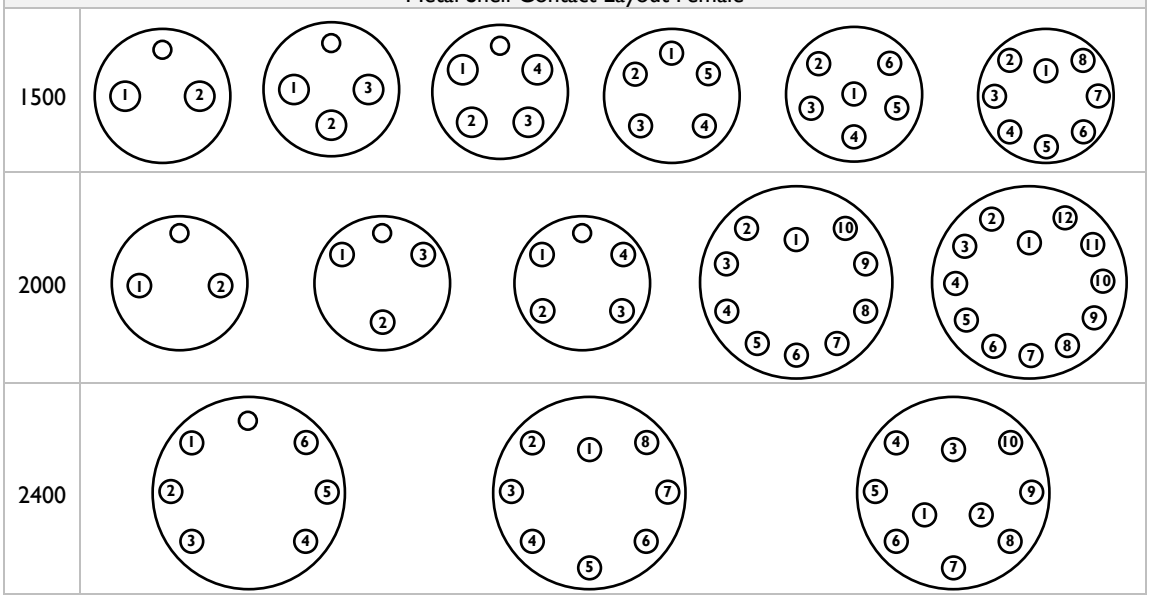


2000 BCR



Shell Size	O-Ring 1	O-Ring 2	HEX [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	W [mm]	M [mm] [Thread]
1500	2-017	2-014	30	Ø 15.5	7.9	12.5	38.1	25.4 4 Holes x Ø 5.2	Ø 15.884 Ø 15.866	12.7	33	5/8-18 UNF 2A
2000	2-018	2-016	32	Ø 31.6	9.5	NA	44.4	31.75 4 Holes x Ø 6.7	Ø18.780 Ø18.759		48	¾-16 UNF 2A
2400	2-122	2-020	41	Ø 38.8	9.5	NA	50.8	38.1 4 Holes x Ø 6.7	Ø25.130 Ø25.110		48	1-14 UNS 2A

Metal Shell Contact Layout Female



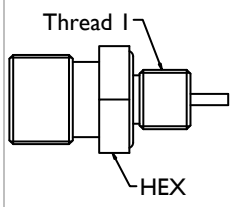
Series	Contact Num. VS. AWG	
	AWG 20	AWG 18
1500	5,6,8	2,3,4
2000	10,12	2,3,4
2400		6,8,10

Metal Shel Part Number Format

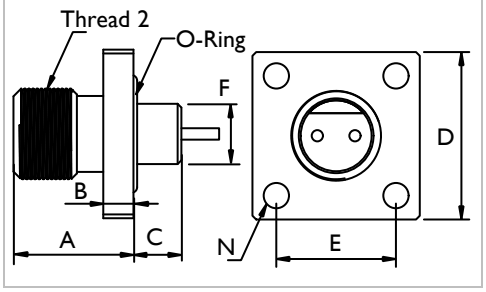
FCR	15	02	M	SS
Type FCR - flange BCR - hex	Size 15, 20, 24	Contact Num.	Gender F - female M - male	Options SS - stainless steel only

5500 SERIES

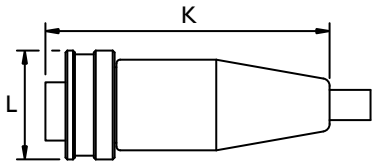
BCR 5507



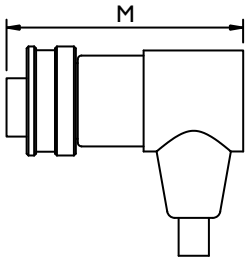
FCR 5506



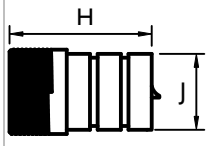
CCP 5501



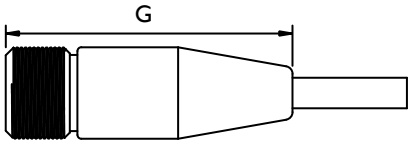
CCP RA 55R1



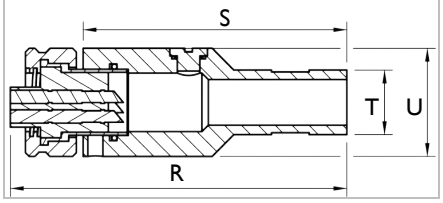
CCR AT 55A2



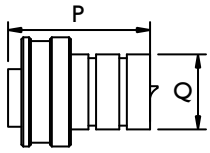
CCR 5502



PBOF 55P1



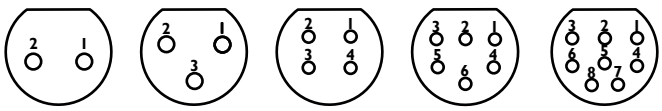
CCP AT 55A1



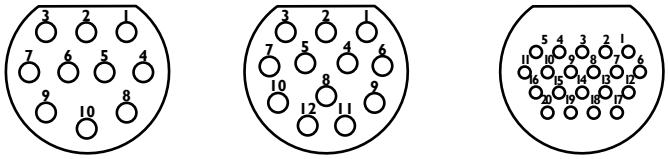
Shell Size	O-Ring	Thread 1	Thread 2	HEX [mm]	A[mm]	B[mm]	C[mm]	D[mm]	E[mm]	F[mm]	G[mm]	H[mm]	J[mm]
15	2-116	5/8-18 UNF	15/16-20	28.4 (1.12 IN.)	31.8	8	12.7	38	25.4	17.2	75	37.3	19.8
20	2-118	3/4-16 UNF	1-1/4-9	31.8 (1.25 IN.)	38	9.5	12.7	44.5	31.8	18.9	128	40.4	27
24	2-122	1-14 UNF	1-1/2-9	38.1(1.5 IN.)	38.1	9.5	12.7	50.8	38.1	25.15	128	42.7	33.5

Shell Size	K [mm]	L [mm]	M [mm]	N [mm]	P [mm]	Q [mm]	R [mm]	S [mm]	T [mm]	U [mm]
15	75	27.7	70	5.2	39.4	17.3	96.52	69.85	17.07	28.45
20	128	38	85	7	42	27.7	102.62	74.68	17.07	38.1
24	128	44.5	100	7.4	42.2	33.6	106.43	81.79	17.07	44.45

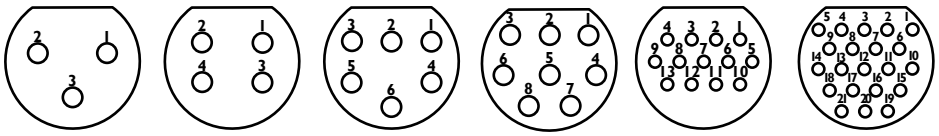
55 Series Contact Layout Female Shell 1500



55 Series Contact Layout Female Shell 2400



55 Series Contact Layout Female Shell 2000



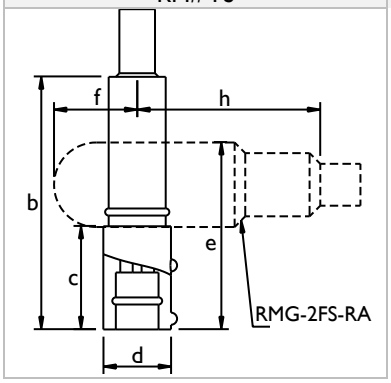
Series	Contact Num. VS. AWG	
	AWG18	AWG16
55 Size 1500	4,6,8	2,3
55 Size 2000	13,21	3,4,6,8
55 Size 2400	20	12,10

5500 SERIES Ordering Table

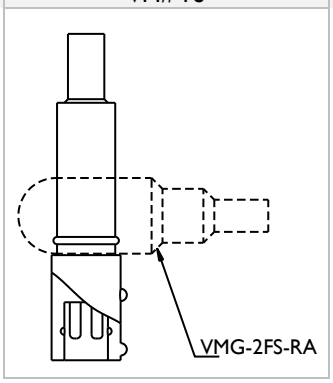
55	0	1	-20	03	-0003
Series	A - Attachable C - Cap (dust cap) P - Pressure Balanced (oil filled) R - Right Angle 0 - 600V Standard	Type: 1 - CCP 2 - CCR 6 - FCR BCR	Size 15 20 24	Contact count	Length In Feet

RUBBER MOLDED (RM)

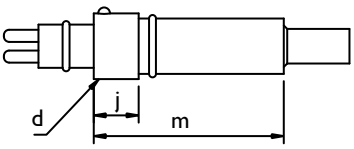
RM#-FS



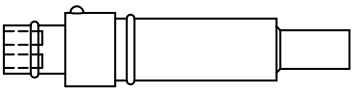
VM#-FS



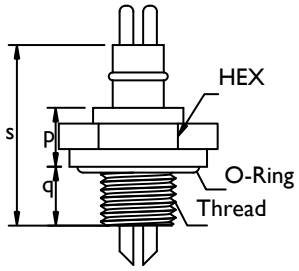
RM#-MP



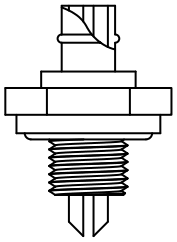
VM#-MP



XS#-BCL

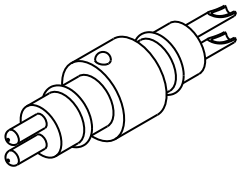


VS#-BCL

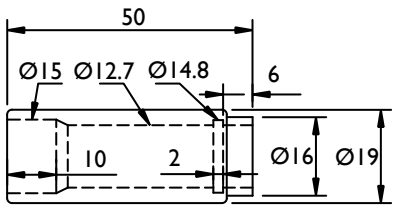


RMG-#MP-AT

RMG-2MP-AT



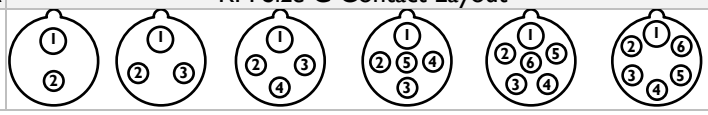
RMG-AT-BOOT



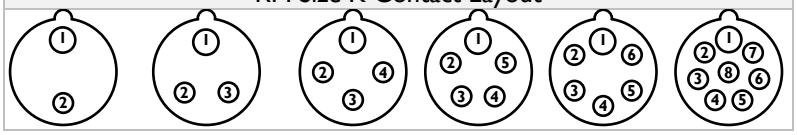
Size	b[mm]	c[mm]	Ød[mm]	e[mm]	f[mm]	h[mm]	j[mm]	m[mm]	p[mm]	q[mm]	s[mm]	HEX [mm]	O-Ring	Thread	Locking Sleeve
A	65	36	8	N/A	8.9	28	16	49.5	4.6	15.7	30.2	11.2	2-012	5/16-24 UNF-2	FLS-A-RM MLS-A-RM
G	73.5	28.5	19	54	19	47	13	58.5	16	16	48	35	2-213	3/4-16 UNF-2	FLS-G MLS-G
K	68	41	27	68	19	47	19	46	16	25.4	54	41	2-217	1-14 NS-2A	FLS-K MLS-K

Size A

RM Size G Contact Layout



RM Size K Contact Layout



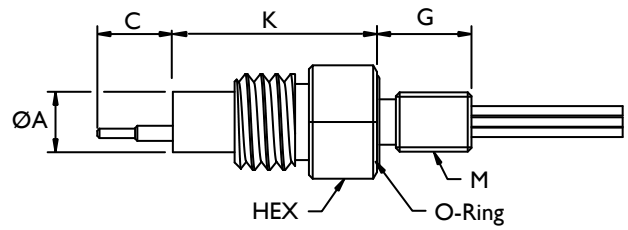
Mating Options	
Connector	Mates To
RM#-FS	RM#-MP
	XS#-BCL
VM#-FS	VM#-MP
	VS#-BCL
# size: A, G or K	

RM Part Number Format					
RM	G	-6	FS	-AT	-BCL
Type RM VM XS VS	Size A G K	Contact Num.	Gender FS - female Socket MP - male plug FSD - FS dummy MPD - MP dummy	Options AT – attachable RA – right angle RADIAL - #6 pin only see layout	Add -BCL For XS and VS Bulkheads

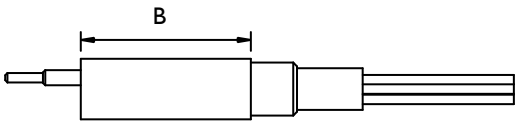
Series	Contact Num. VS. AWG	
	AWG18	AWG16
RM Size G	1,2,3,4,5,6	
RM Size K		2,3,4,5,6,8

HERMAPHRODITIC

NABH4

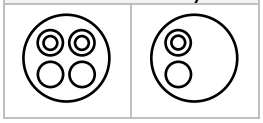


NAIL4



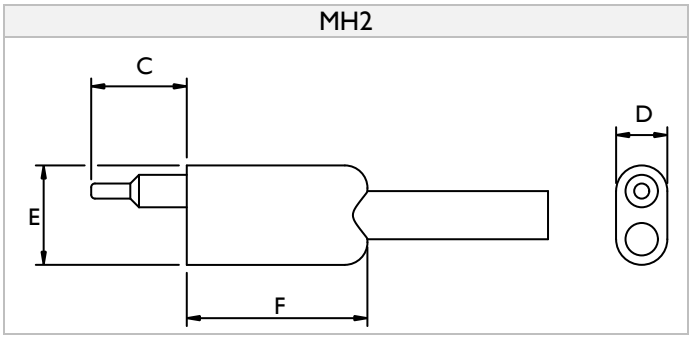
# Contacts	A [mm]	B [mm]	C [mm]	K [mm]	G [mm]	M[Thread]	HEX[mm]	O-Ring	Locking Sleeve
2,4	10	22.5	11	25	12.5	5/16-24 2A UNF	15	2-012	FLS-NA, MLS-NA

Nano Contact Layout



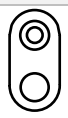
NANO Data Table		
Number of contacts	2	4
PN cable connector	NAIL2	NAIL4
PN bulkhead	NABH2	NABH4
AWG	20	

MH2



# Contacts	C [mm]	D [mm]	E [mm]	F [mm]
2	12.7	6.8	13.2	24

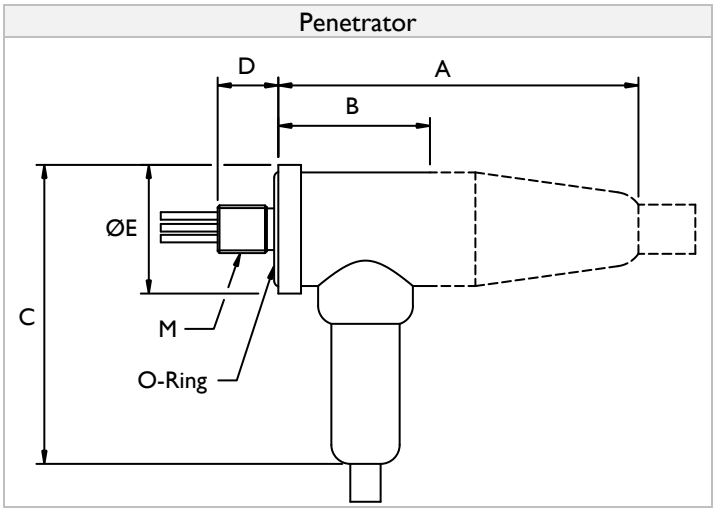
MH Contact Layout



MH Data Table	
Number of contacts	2
Cable dim [mm]	6.4
Ordering number single cable lead	MH2
Ordering number dual cable lead	MH2-DW
AWG	20

PENETRATOR (PN)

Penetrator

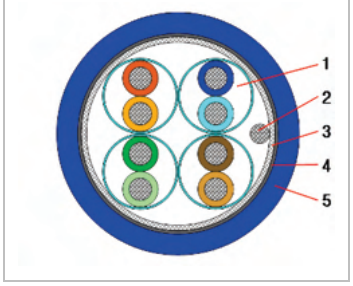
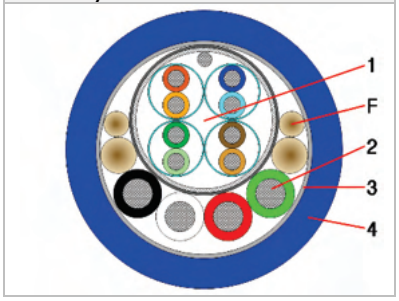


	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	O-Ring [Nitrile]	M Thread
Size B	63.5	28.2	60.5	16	25.4	2-017	1/2-20 UNF-2A
Size C	106	36	67	25	38	2-213	3/4-16 UNF-2A

# Contacts	Cable OD [mm]	AWG
2	7.5	18
3	8.1	
4	9	
5	12	
6	12.3	
7	13	
8	13.5	

Penetrator Part Number Format			
PN	-B	-6	-RA
Series	Size B C	Contact Num. Size B - 1,2, 3, 4, 6, 8,9 Size C - 1,2, 3, 4, 6, 8,9,10	Options RA - right angle

ETHERNET

Ethernet: Cat 6	Hybrid: Cat 6 + Power
	

Ethernet Part Number Format		
Ethernet add "-ETH" Ethernet + Power add "-ETH13"		
Series	Bulkheads	Cable
MC	MCBH8FSS-ETH MCBH13MSS-ETH13	MCIL8M-ETH MCIL13M-ETH13
SC	SCBH8FSS-ETH SCBH16MSS-ETH13	SCIL8M-ETH SCIL16F-ETH13
MCLP	MCLPBH9FSS-ETH	MCLPIL9M-ETH
FCR/BCR	FCR1508MSS-ETH	MCIL8F-ETH
LP	LPBH9FSS-ETH	LPIL9M-ETH
FAWM	FAWM-BH8MSS-ETH FAWM-BH10MSS-ETH13	FAWM-IL8F-ETH FAWM-IL10F-ETH13
5500	5506-2008-ETH 5506-2013-ETH13	5501-2008-ETH 5501-2013-ETH13

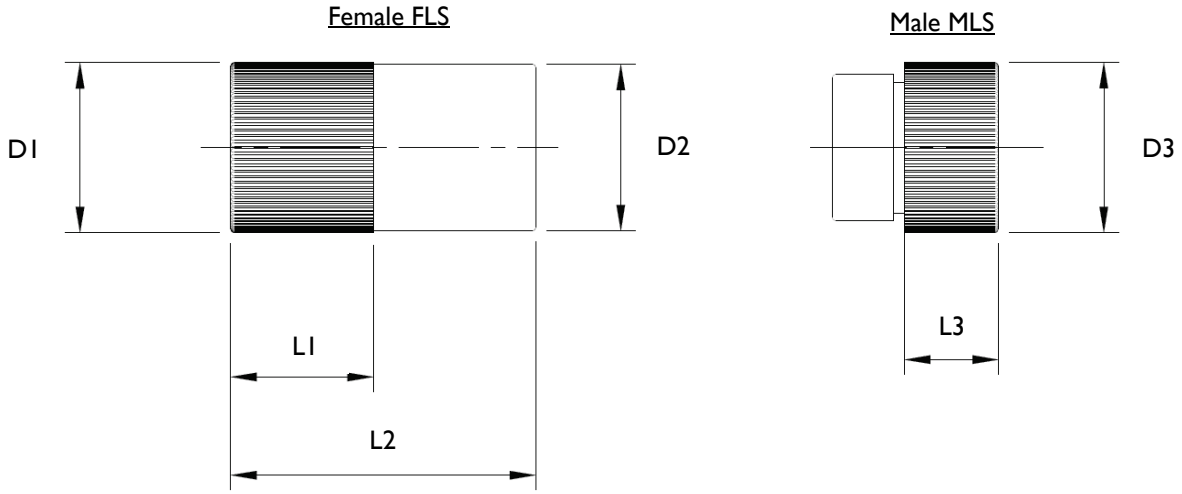
Cable Build		
	Ethernet: Cat 6	Hybrid: Cat 6 + Power
1	shielded 100% twisted pairs	Cat6 Cable
2	Drain AWG26	4 x AWG18
3	Outer braid 80% coverage	
4	Non-woven tape	12mm OD.
5	8mm OD.	NA
F	NA	Filler

Ethernet Cross Reference			
Birns Aq.	MCXX8-ETH	MCLPXX9-ETH	MCXX13-ETH13
Subconn	DXX8X	DXX9X	DXX13X
Birns Aq.	550X-1508-ETH	550X-2013-ETH13	
Eaton Burton	550X-1508-EXXX	550X-2013-EXXX	

Ethernet Specification		
	Ethernet: Cat 6	Hybrid: Cat 6 + Power
Power	NA	AWG18x4
Ethernet	Cat6 Patch AWG24 x 8	
Data Rate	1Gbs up to 30 m.	
Cable OD	8mm	12mm
Bend Rad.	6 x OD =~48mm	6 x OD =~72mm
Standard Cable Length	Bulkhead / Cable Connector = 1M Over Mold connector = 0.1M	
RJ45 Jack	Simply45: S45-1755P, hookup: T568B Supplied without RJ45 jack. To order RJ45 jack: -Unterminated RJ45 use P/N: S45-1755P -Terminated* RJ45 use P/N: RJ45-TRM	
*Do not pre-terminate RJ45 on bulkhead smaller then 5/8" thread.		

Wire Color Code - Ethernet			
# Wire	Number Of Contacts On Connector		
	8 Wires	9 Wires	10+ Wires
1	Brown*	Brown*	Black
2	Light Brown*	Light Brown*	Screen
3	Blue*	Blue*	White
4	Light Blue*	Light Blue*	Brown*
5	Orange*	Orange*	Light Brown*
6	Light Orange*	Light Orange*	Blue*
7	Green*	Green*	Light Blue*
8	Light Green*	Light Green*	Orange*
9		Screen	Light Orange*
10			Green*
11			Light Green*
12			Red
13			Green
14+	Standard color code		
*	Twisted pairs		

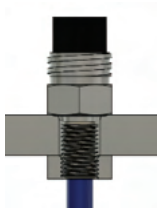
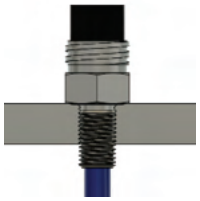
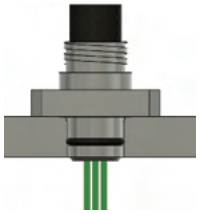
LOCKING SLEEVES

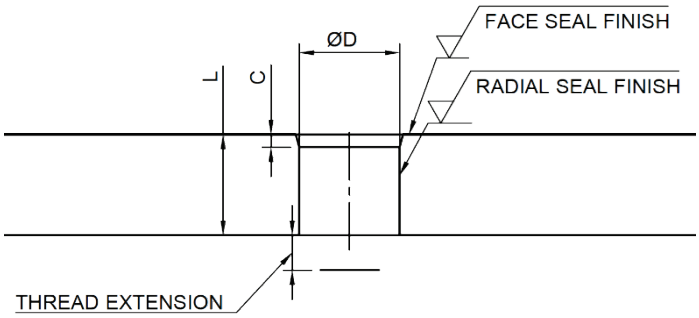


PN	Reference PN	Application	D1 [mm]	D2 [mm]	D3 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
FLS-A MLS-A	DLSA-F DLSA-M	SC 2-5 MC-SU 9-16	34	33	34	16	32	23
FLS-B MLS-B	DLSB-F DLSB-M	SC 6-10	40	39	39	16.5	32.5	23
FLS-C MLS-C	DLSC-F DLSC-M	SC 12, 16, 25	59	59	59	30	30	19.5
FLS-MC MLS-MC	MCDLS-F MCDLS-M	MC 2-8 METAL SHELL 1500	23	22.5	23	19.3	41.3	12.7
FLS-MCA MLS-MCA		MC 9-21 Birns HD 2-4	34	33	34	26.7	52.7	23
FLS-TC MLS-TC		TC	17.3	16.5	16.5	20	36	10
FLS-NA MLS-NA		NANO	17.3	16.5	16.5	20	40.5	15.5
LS2000		METAL SHELL 2000	34	33	NA	16	32	NA
LS2400		METAL SHELL 2400	40	39	NA	16.5	32.5	NA
FLS-A-RM MLS-A-RM	A-FLS-D A-MLS-D	RM size A	17	12.7	17	13.6	45.6	13.5
FLS-G MLS-G	G-FLS-D G-MLS-D	RM size G	28.5	27.5	28.5	22	34.7	11
FLS-K MLS-K	K-FLS-D K-MLS-D	RM size K	36	36	38.1	48	48	17.8

Note:
Material: Delrin Black
Available Stainless Steel: FLS-A-SS; FLS-MC-SS; MLS-MC-SS; LS2000-SS;

APPLICATION GUIDELINES

Connector Mounting Configurations			
Straight Hole + Nut	Threaded Hole	Threaded Hole + Nut	Flange
			
Standard application, Enables orientation adjustment	Used in limited space / access application. Or if wall thickness prevents nut	Used to prevent accidental release.	Enables radial seal as well as face seal. Better connector orientation, accuracy and fastening access. More expensive.



Mounting Hole Dimensions				
Connector	D		C [mm]	L [mm]
	Straight Hole [mm]	Threaded Hole		
5/16"-24 UNF	8.12±0.1	5/16-24 UNF	0.2 MAX x 45°	NA
7/16"-20 UNF	11.29±0.1	7/16-20 UNF		
5/8"-18 UNF	16.05±0.1	5/8-18 UNF		
3/4"-16 UNF	19.23±0.1	3/4-16 UNF		
1"-14 UNS	25.58±0.1	1-14 UNS		
FCR1500	15.9+0.027	NA	1.5 x 15°	13 min
FCR2000	18.8+0.033			
FCR2400	25.15+0.033			
FACE/ RADIAL SEAL FINISH N7 (Ra 1.6) or better on O-ring contact surfaces.				

Closing Torque		
Thread	Stainless Steel Or Titanium	
	lb-ft	Nm
5/16"-24 UNF	3	4
7/16"-20 UNF	9	13
5/8"-18 UNF	27	37
3/4"-16 UNF	42	57
1"-14 UNS	67	90
*Brass or Aluminum 70% of listed **PEEK 30% of listed		

Maintenance
Before mating use PTFE based lubricant such as Super Lube® by Synco (grease for O-rings and aerosol for connectors) For cleaning use contact cleaner (isopropyl alcohol) or soap and water. For longest life clean connectors after each job, dry, relubricate, and cover until ready for next job.

DISTRIBUTORS

Americas					
North America	USA	New England	**Electronic Sales Of New England**	33 Main St., Unit E Old Saybrook, CT 06475	sales@esalesne.com www.esalesne.com
		Mid-Atlantic	**Lindgren Associates, Inc.**	8711 Plantation Lane Manassas, VA. 20110	www.LindgrenAssociates.com
		Gulf Coast	**Cis Interconnect**	2580 Broadway ST. San Leon Texas 77539	www.cis-interconnect.com
	Canada		**Axsub Inc.**	112, Montée Industrielle Rimouski, Québec, G5M 1B1	sales@axsub.com www.axsub.com
South America	Brazil:		**Mako Services Ltd.**	Av. Beira Mar, no 262 Sl 704 – Castelo 20021-060 Rio de Jaaneiro	www.makoservices.com.br

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East Asia	China	**Shanghai Linkearth Electronics Co.,Ltd**	Room 403, NO. 1455 Pingcheng Road Jiading, Shanghai, China 201899	www.linkearthelec.com
		Shanghai Rock-Firm Interconnect Systems Co Ltd	Block B, 23th Floor, No.33 Fushan Road,Shanghai, China P.C. 200120	www.rock-firm.com
		Shanghai P-Nav Scientific	Instruments Co.,Ltd Rm3A08 Bld B North Block E-Link World 999 HuaXu Road, Shanghai,China 201702	Sales@P-Nav.com.cn www.P-Nav.cn
	Japan	**Cosmos Shoji Ltd**	Sanyo Yasuda Bld. 7F 2-11, Kanda Nihiki-Cho, Chiyo-Ku, Tokyo 101-0054 JAPAN	www.cosmos-shoji.co.jp
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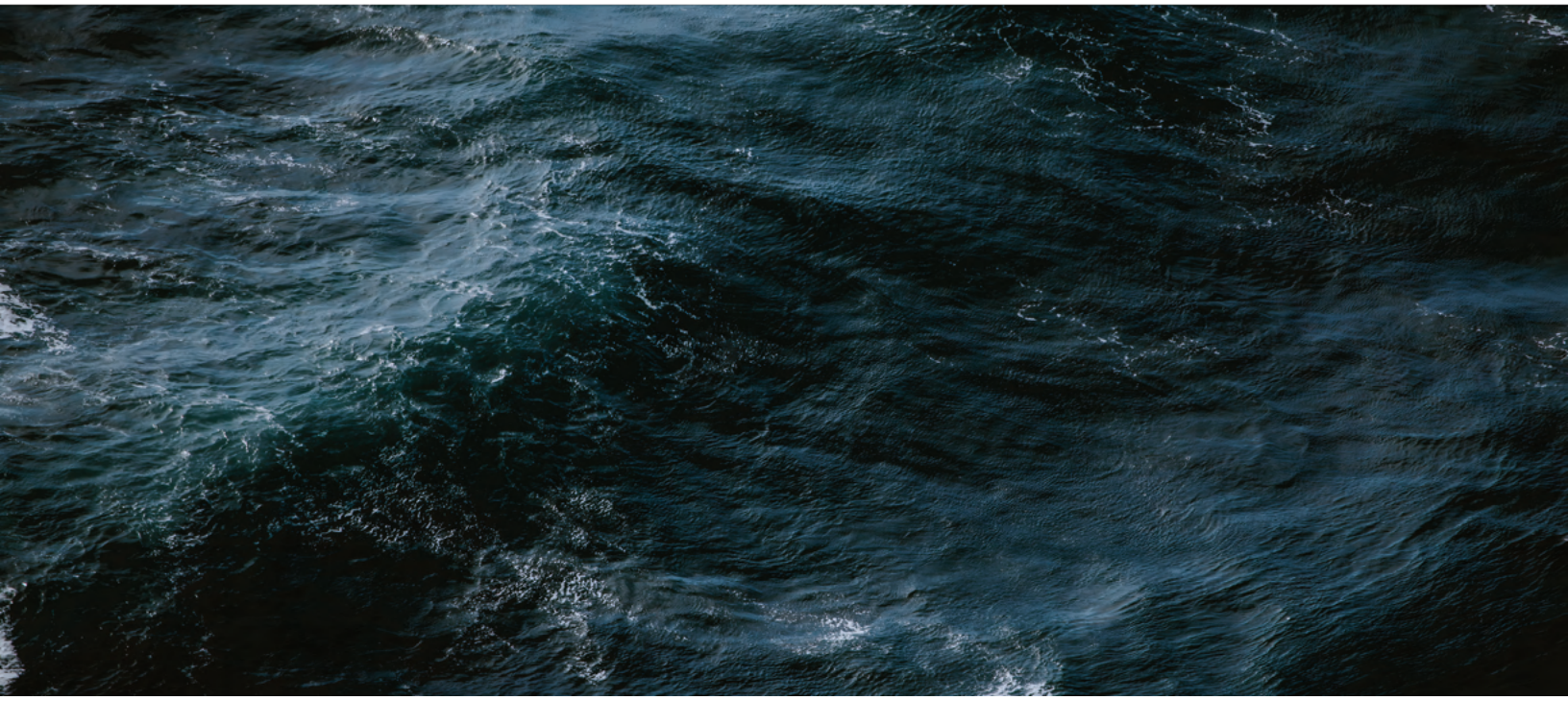
Marine Solutions	22 Carlisle Street Paarden Eiland Cape Town 7420	info@marinesolutions.co.za www.marinesolutions.co.za

Israel		
Zevulun Marine Systems Ltd.	Hatzofim 1 Kfar Adumim Israel 90618	sales@zevulun.biz www.zevulun.biz



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