SHD

ROADLINE SERIES MULTIPIN CONNECTORS

Bals

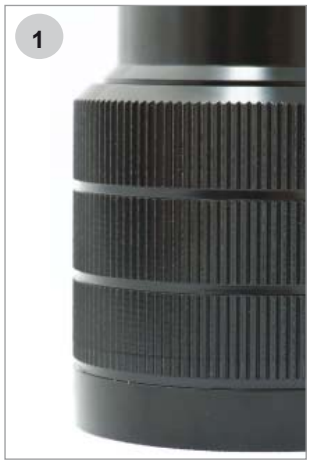
syntax

no compromise

SHD HEAVY DUTY ROADLINE

INLINE FEMALE

The new **SYNTAX®** **SHD ROADLINE** series has been designed and manufactured to offer a comprehensive solution in PA (touring) applications or OB (Outdoor Broadcast) environments. When mated it has an IP67 waterpfoof rating.
SHD ROADLINE series is compliant with military standard Mil C 5015 & VG 95234.
In addition to the standard features of SVK, SVS, SPK, SB and SV series, this version has been further enhanced to offer even greater robustness in the harshest of applications, so as to ensure long term reliability, an increased number of mating cycles and longer life.



Special aluminium alloy shell with high-resistance black finish.
Pic. **1** - Marked knurling on the whole circumference of locking-ring for optimal grip, thus allowing very easy coupling. An audible click indicates that locking is complete.
Pic. **2** - Thick wall construction locking-ring for greater resistance to all possible forms of abuse.
Pic. **3** - The aluminium housing for the neoprene insert is flush with the edge of locking-ring, so to avoid ovalization due to accidental blows
Pic. **4 -** Extra wide backshells for easier wiring.
Increased size of Coupling roller pins on locking-ring for more durability

Bals

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INLINE MALE

Extralong backshell for easier wiring. Once wiring is carried out, both circular knurling and machined housings for customized wrench jaws on the backshell's edge contribute to easier locking:
Pic. **5** - A housing that allows dust cap lacing has also been considered. Dust cap is laced through a special high-resistance cable made up of seven stainless strands, covered by an anti-abrasion Teflon black tube provided with standard dust cap.
Pic. **6 -** Machined housings for customized wrench (Part N. SVKT-KSW)
Pic. **7** - Marked knurl ridges allow usage of strap wrench tool (Part N. SVKT-KSTRAP)

SHD HEAVY DUTY ROADLINE

PANEL FEMALE

PANEL MALE

CONTACTS

CRIMP CONTACTS TYPES AND PART N.

Size	Connector	Plating	Part N.	Gender	Part N.	Gender
16	13/19/25/37/54/85 pin	Silver	SVKP16SFC	Female	SVKP16SMC	Male
		Gold	SVKP16GFC	Female	SVKP16GMC	Male
18	100/150 pin	Gold	SVKP18GFC	Female	SVKP18GMC	Male

SOLDER CONTACTS TYPES AND PART N.

Size	Connector	Plating	Part N.	Gender	Part N.	Gender
16	13/19/25/37/54/85 pin	Gold	SVKP16GFS	Female	SVKP16GMS	Male

CONTACTS RATING

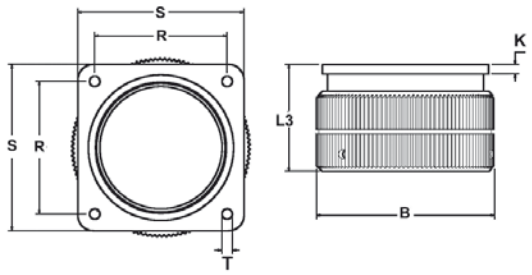
Size	Max Current	Rated Current	Max Voltage Drop	Wire section (mm²)	Wire section AWG
16	22 A	13 A	74 mv	1÷1,5	18÷16
18	10 A	7,5 A	83 mv	0,15÷0,6	26÷20

CONNECTORS RATING

Contacts number	Operating voltage	Operating voltage	Test voltage	Min. Flashover
	Vdc	Vac	Vac	Vac
13/19/25/150	250	200	1000	1400
37/54/85/100	700	500	2000	2800

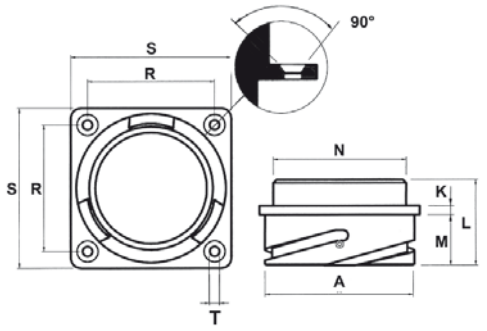
OVERALL SIZE

PANEL FEMALE



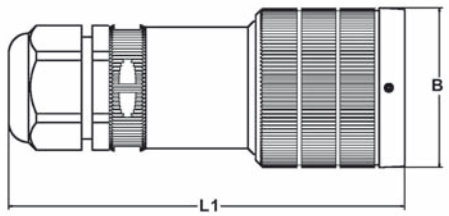
N° pin	shell size	BØ Max	L3	K	R	S	T
			Max	±0.2	±0.1	±0.3	H13
13 - 19	20	43.0	38.1	4	29.4	38.0	3.2
25	24	50.4	40.6	4	34.9	44.5	3.7
37	28	56.0	40.8	4	39.7	50.8	3.7
54	32	63.0	43.7	4	44.45	57.0	4.4
85-100-150	40	75.0	44.8	4	55.6	69.8	4.4

PANEL MALE



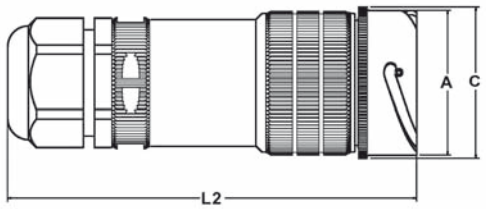
N° pin	shell size	AØ	K	L	M	ØN	R	S	T
		+0/-0.15	±0.2	±0.3	±0.4/-0	Max	±0.1	±0.3	H13
13 - 19	20	34.2	4	34.5	19	31.75	29.4	38.1	3.2
25	24	40.9	4	35.7	20.6	35.3	34.9	44.5	3.7
37	28	46.7	4	35.7	20.6	41.4	39.7	50.8	3.7
54	32	53.4	4	37.3	22.2	47.8	44.5	57	4.3
85-100-150	40	65.5	4	37.3	22.2	59	55.6	69.8	4.3

INLINE FEMALE



N° pin	shell size	BØ Max	L1 Max	Cable clamp Metric	Ø cable
					Min.-Max.
13 - 19	20	43.0	153	M 20	6 - 14
25	24	50.4	153	M 25	6 - 18
37	28	56.0	158	M 32	7 - 25
54	32	63.0	163	M 32	7 - 25
85 - 100 -150	40	75.0	186	M 40	15 - 32

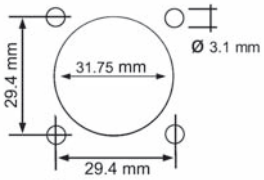
INLINE MALE



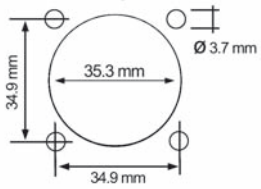
N° pin	shell size	AØ Max	ØC	L2 Max	Cable clamp Metric	Ø cable
		+0/-0.15	Max			Min.-Max.
13 - 19	20	40.0	43	142	M 20	6 - 14
25	24	40.9	44	154	M 25	6 - 18
37	28	46.7	50	158	M 32	7 - 25
54	32	53.4	56	164	M 32	7 - 25
85 - 100 -150	40	65.5	69	166	M 40	15 - 32

CUT-OUT DIMENSIONS

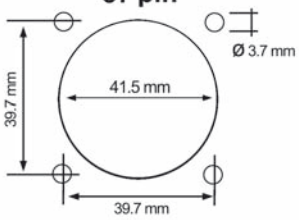
13/19 pin



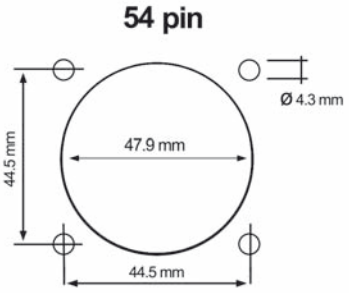
25 pin



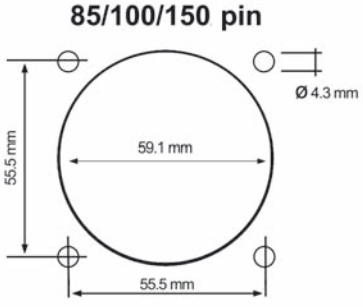
37 pin



54 pin

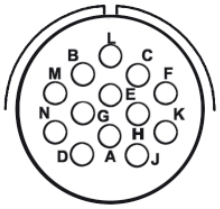


85/100/150 pin

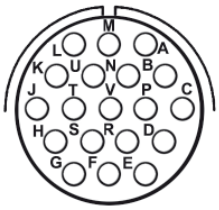


INSERT LAYOUTS AND WIRING LIST

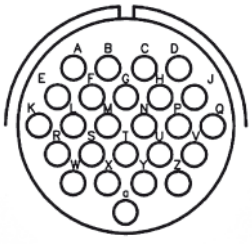
FRONT VIEW OF MALE INSERT



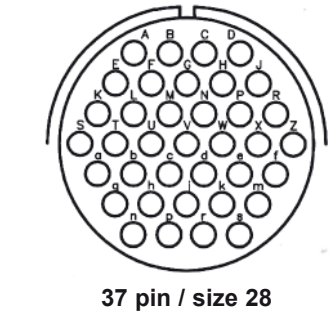
13 pin / size 20



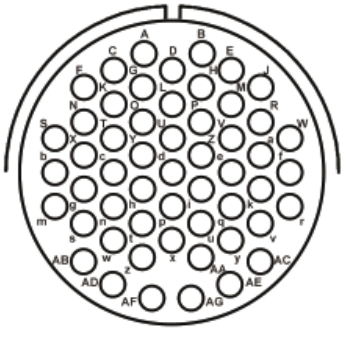
19 pin / size 20



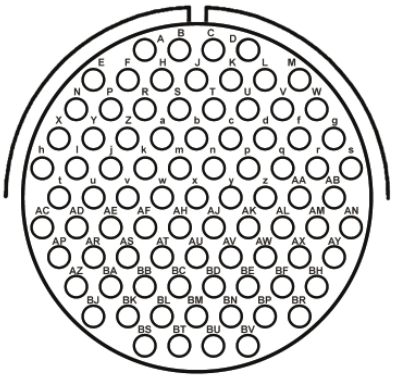
25 pin / size 24



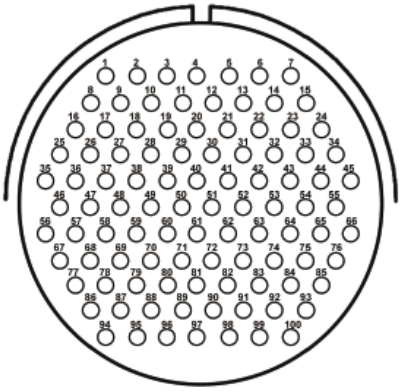
37 pin / size 28



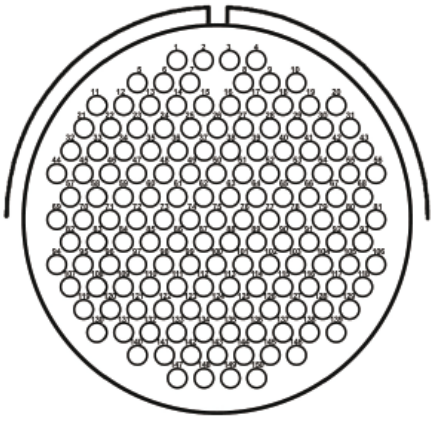
54 pin / size 32



85 pin / size 40



100 pin / size 40



150 pin / size 40

13 pin - 4 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	M	B	L
2	N	G	E
3	D	A	H
4	J	K	F

19 pin - 6 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	A	M	L
2	C	P	B
3	N	U	V
4	T	J	K
5	D	R	E
6	F	G	S

25 pin - 8 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	A	E	F
2	G	C	B
3	D	H	J
4	M	L	K
5	Q	P	N
6	W	S	R
7	T	X	Y
8	Z	V	U

37 pin - 12 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	E	F	A
2	B	C	G
3	H	J	D
4	S	T	K
5	L	M	U
6	V	W	N
7	P	R	X
8	a	b	g
9	c	d	j
10	e	f	m
11	n	p	h
12	r	s	k

54 pin - 16 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	W	f	r
2	J	R	a
3	k	v	AC
4	E	M	V
5	e	q	y
6	B	H	P
7	Z	j	u
8	D	L	U
9	d	p	x
10	A	G	O
11	Y	h	t
12	C	K	T
13	c	n	w
14	F	N	X
15	g	s	AB
16	S	b	m

85 pin - 28 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	A	B	C
2	E	F	H
3	J	K	L
4	N	P	R
5	S	T	U
6	X	Y	Z
7	a	b	c
8	d	f	g
9	h	l	j
10	k	m	n
11	p	q	r
12	t	u	v
13	w	x	y
14	z	AA	AB
15	AC	AD	AE
16	AF	AH	AJ
17	AK	AL	AM
18	AP	AR	AS
19	AT	AU	AV
20	AW	AX	AY
21	AZ	BA	BB
22	BC	BD	BE
23	BJ	BK	BL
24	BM	BN	BP
25	BS	BT	BU
26	BV	BR	BF
27	BH	AN	s
28	W	M	D

100 pin - 32 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	1	2	3
2	4	5	6
3	7	8	9
4	10	11	12
5	13	14	15
6	16	17	18
7	19	20	21
8	22	23	24
9	25	26	27
10	28	29	30
11	31	32	33
12	34	35	36
13	37	38	39
14	40	41	42
15	43	44	45
16	46	47	48
17	49	50	51
18	52	53	54
19	55	56	57
20	58	59	60
21	61	62	63
22	64	65	66
23	67	68	69
24	70	71	72
25	73	74	75
26	76	77	78
27	79	80	81
28	82	83	84
29	85	86	87
30	88	89	90
31	91	92	93
32	94	95	96
33	97	98	99

150 pin - 48 channels			
Ch	Hot	Cold	Gnd
No.	+	-	⏚
1	1	2	3
2	5	6	7
3	8	9	10
4	11	12	13
5	14	15	16
6	17	18	19
7	21	22	23
8	24	25	26
9	27	28	29
10	20	30	31
11	32	33	34
12	35	36	37
13	38	39	40
14	41	42	43
15	44	45	46
16	47	48	49
17	50	51	52
18	53	54	55
19	57	58	59
20	60	61	62
21	63	64	65
22	66	67	68
23	69	70	71
24	72	73	74
25	75	76	77
26	78	79	80
27	82	83	84
28	85	86	87
29	88	89	90
30	91	92	93
31	94	95	96
32	97	98	99
33	100	101	102
34	103	104	105
35	56	81	106
36	107	108	109
37	110	111	112
38	113	114	115
39	116	117	118
40	119	120	121
41	122	123	124
42	125	126	127
43	139	128	129
44	130	131	132
45	133	134	135
46	136	137	138
47	140	141	142
48	143	144	145

Bals

PART NUMBER EXPLANATION

Part N.											

EXAMPLE Part N.	SHD	150	F	V	R	G	S	MP	N		

CONNECTOR SERIES	
SHD = (13 - 19 - 25 - 37 - 54 - 85 - 100 - 150 pin) Back shell: standard. Locking ring: ergonomic and rubber coated	SHD

CONTACTS NUMBER	
013 - 019 - 025 - 037 - 054 - 085 - 100-- - 150	...

CONTACT TYPE	
M = male	M
F = female	F

CONNECTOR TYPE	
V = inline	V
P = panel	P

COUPLING TERMINATION	
- = with ramps	-
D = ergonomic oversized locking ring with stronger roller pins	D
R = rubber coated locking ring	R

CONTACT PLATING TYPE	
S = silver (13 - 19 - 25 - 37 - 54 - 85 pin)	S
G = gold (13 - 19 - 25 - 37 - 54 - 85 - 100 - 150 pin)	G
N = no contact	N

CONTACT TYPE AND TERMINATION	
C = spring loaded crimp (13 - 19 - 25 - 37 - 54 - 85 pin)	C
S = spring loaded solder (13 - 19 - 25 - 37 - 54 - 85 pin)	S
P = spring loaded pcb (13 - 19 - 25 - 37 - 54 - 85 pin)	P
N = no contact	N
K = armored crimp contact (13 - 19 - 25 - 37 - 54 - 72 - 85 - 100 - 101 - 150 pin)	K
Z = armored solder contact (13 - 19 - 25 - 37 - 54 - 72 - 85 - 100 - 101 - 150 pin)	Z

CABLE CLAMP RANGE - METRIC			
Thread Size	Clamping Range (mm)	Pins	
M 20 x 1.5	6 - 12	13 - 19	MH
M 20 x 1.5	10 - 14	13 - 19	MI
M 25 x 1.5	6 - 13	25	MJ
M 25 x 1.5	13 - 18	25	ML
M 32 x 1.5	7 - 15	37 - 54	MN
M 32 x 1.5	11 - 21	37 - 54	MM
M 32 x 1.5	18 - 25	37 - 54	MO
M 40 x 1.5	15 - 23	85 - 100 - 150	MQ
M 40 x 1.5	19 - 28	85 - 100 - 150	MP
M 40 x 1.5	22 - 32	85 - 100 - 150	MR

CABLE CLAMP TYPE	
N = normal	N
S = spiral flex	S
R = strain relief	R

SPECIAL VERSION (upon request)	
For example: T = inserted solder termination contacts	T
Not pre-installed	0

RUBBER COATED LOCKING RING COLOR	
0 = Black (standard)	0
1 = Green	1
2 = Red	2
3 = Yellow	3
4 = Blue	4

Bals

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Bals