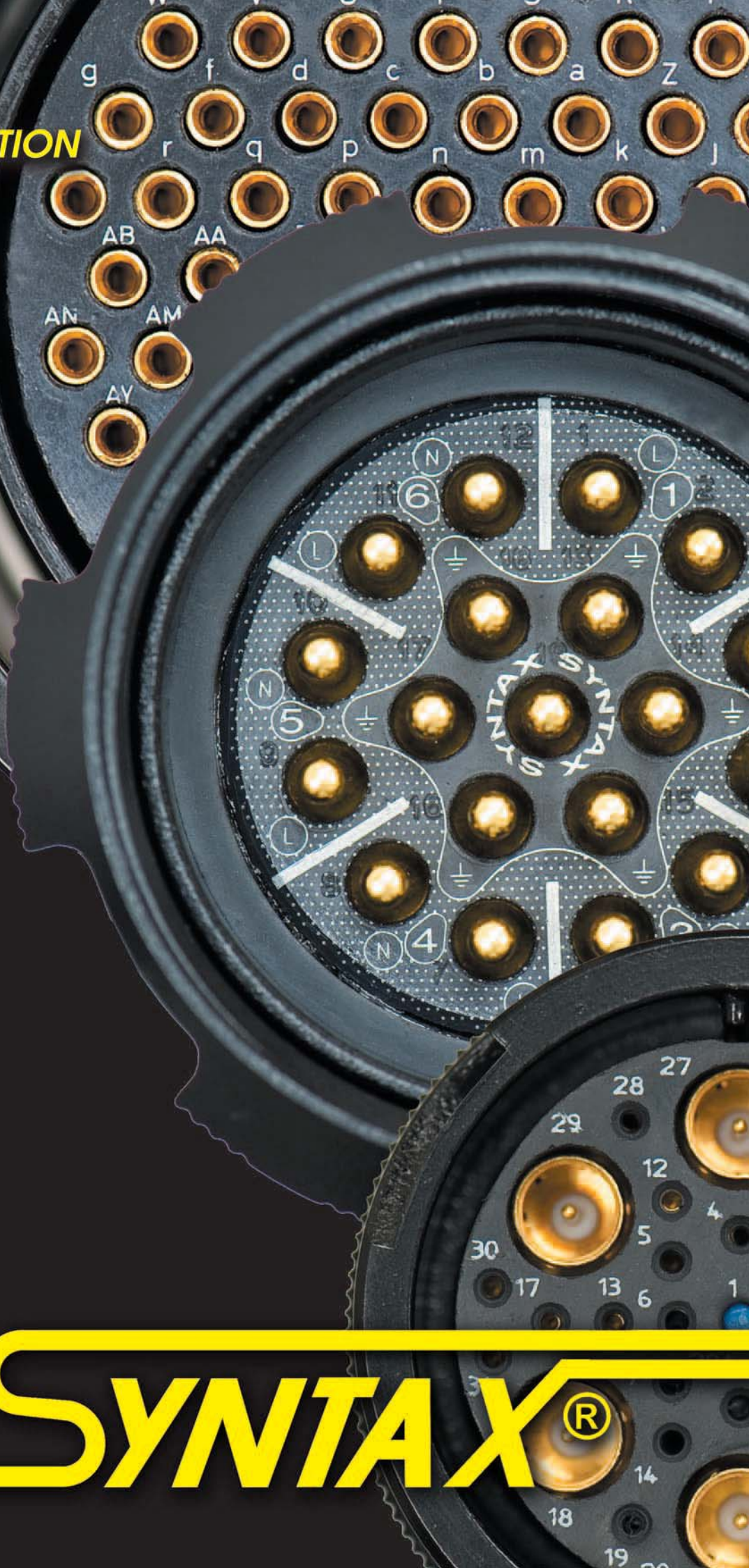


CONNECTORS
CABLES
POWER DISTRIBUTION



SYNTAX[®]

HEAVY DUTY ROADLINE



4



Part N. SVKT-KSTRAP



5



Part N. SVKT-KSW

Extralong back-shell 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. 4 Marked knurl ridges allow usage of strap wrench tool (Part N. SVKT-KSTRAP)

Pic. 5 Machined housings for customized wrench (Part N. SVKT-KSW)

Pic. 6 A housing that allows dust cap lacing has also been considered. Dust cap is laced through a special high-resistance cable made up of 7 stainless strands, covered by an anti-abrasion Teflon black tube. Teflon covering is provided with standard dust cap.

6



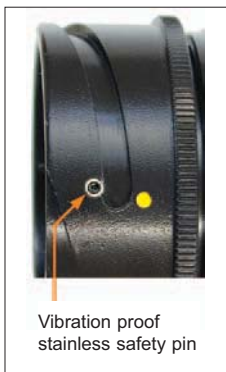
AUDIO STANDARD 13 - 150 PIN

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated



The **SYNTAX®** connectors have been designed and are manufactured to ensure continual and reliable operation in the harsh environment of the professional sound applications. Compliant military standard Mil C 5015 & VG 95234 specif.

Two shell versions for panel connectors (male and female) plus two for inline cable connectors (male and female) allow complete cable hook up system and extension leads through a daisy chain configuration. A wide range of insert arrangements allows connections from 13 poles (4 channels) to 150 poles (48 channels).



Vibration proof stainless safety pin

- Aluminium alloy shells with high resistance black finish.
- Audible, visual and tactile indication of locking. 2000 mating cycles minimum.
- Ergonomic arctic grip or rubber covered locking ring for ease of coupling even with gloved hands.
- Bayonet ramp protrusion protected by stainless steel ring.
- Gold or silver plated machined contacts for quality signal path and long term reliability
- Insert manufactured in a high insulating chloroprene rubber: allowing easy contact insertion and removal, during assembly or repair.
- Gland cable retention system (spiral-anti flex version available), ensures water tight sealing and good strain relief at the cable entry.
- IP 67 grade waterproof (when mated) for outdoor applications.
- Protection dust caps waterproof IP67 grade when mated with the connectors.

DUST CAP LACING

The special cable retention of the protection dust cap, was planned for army and railway applications. The formation of the cable is composed by 7 high resistance stainless strands, covered by an anti-abrasion teflon black tube.

The particular "necktie" connection on the inline connector, makes easy the handling of the dust cap allowing the spin of the cable without any knotting.

On the chassis connector the cable will be fixed by one of the four screws of the shell.



AUDIO STANDARD 13 PIN

Inline 13 pin male



Basic code: **SVK013MV...**
(see page 10)

Panel 13 pin male



Basic code: **SVK013MP...**
(see page 10)

Protection dust cap
for 13 pin male



SVK013TMSC



Inline 13 pin female



Basic code: **SVK013FV...**(see page 17)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 13 pin male



Basic code: **SVK013FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 13 pin female



SVK013TFSC

13 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 11 - 16 - 21 / M 20	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

AUDIO STANDARD 19 PIN

Inline 19 pin male



Basic code: **SVK019MV...**
(see page 10)

Panel 19 pin male



Basic code: **SVK019MP...**
(see page 10)

Protection dust cap
for 19 pin male



SVK019TMSC



Inline 19 pin female



Basic code: **SVK019FV...**(see page 10)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 19 pin male



Basic code: **SVK019FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 19 pin female



SVK019TFSC

19 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 16 - 11 - 21 / M 20	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10'	Reverse series available with locking ring fitted on male connector	

AUDIO STANDARD 25 PIN



<p>Inline 25 pin male</p>  <p>Basic code: SVK025MV... (see page 10)</p>	<p>Panel 25 pin male</p>  <p>Basic code: SVK025MP... (see page 10)</p>	<p>Protection dust cap for 25 pin male</p>  <p>SVK025TMSC</p>
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<p>Inline 25 pin female</p>  <p>Basic code: SVK025FV...(see page 10) With standard locking ring (as shown) Alternative locking rings (see page 9)</p>	<p>Panel 25 pin male</p>  <p>Basic code: SVK025FP... (see page 10) With standard locking ring (as shown) Alternative locking rings (see page 9)</p>	<p>Protection dust cap for 25 pin female</p>  <p>SVK025TFSC</p>
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25 PIN CONNECTORS INFO			
Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated			
Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 16 - 21 - 29 / M 25	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

AUDIO STANDARD 37 PIN



<p>Inline 37 pin male</p>  <p>Basic code: SVK037MV... (see page 10)</p>	<p>Panel 37 pin male</p>  <p>Basic code: SVK037MP... (see page 10)</p>	<p>Protection dust cap for 37 pin male</p>  <p>SVK037TMSC</p>
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<p>Inline 37 pin female</p>  <p>Basic code: SVK037FV...(see page 10) With standard locking ring (as shown) Alternative locking rings (see page 9)</p>	<p>Panel 37 pin male</p>  <p>Basic code: SVK037FP... (see page 10) With standard locking ring (as shown) Alternative locking rings (see page 9)</p>	<p>Protection dust cap for 37 pin female</p>  <p>SVK037TFSC</p>
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37 PIN CONNECTORS INFO			
Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated			
Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 21 - 29 / M 32	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

AUDIO STANDARD 54 PIN

Inline 54 pin male



Basic code: **SVK054MV...**
(see page 10)

Panel 54 pin male



Basic code: **SVK054MP...**
(see page 10)

Protection dust cap
for 54 pin male



SVK054TMSC



Inline 54 pin female



Basic code: **SVK054FV...**(see page 10)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 54 pin male



Basic code: **SVK054FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 54 pin female



SVK054TFSC

54 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 21 - 29 / M 32	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

AUDIO STANDARD 85 PIN

Inline 85 pin male



Basic code: **SVK085MV...**
(see page 10)

Panel 85 pin male



Basic code: **SVK085MP...**
(see page 10)

Protection dust cap
for 85 pin male



SVK085TMSC



Inline 85 pin female



Basic code: **SVK085FV...**(see page 10)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 85 pin male



Basic code: **SVK085FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 85 pin female



SVK085TFSC

85 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 29 - 36 / M 40	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

AUDIO STANDARD 100 PIN



Inline 100 pin male



Basic code: **SVK100MV...**
(see page 10)

Panel 100 pin male



Basic code: **SVK100MP...**
(see page 10)

Protection dust cap
for 100 pin male



SVK100TMSC

Inline 100 pin female



Basic code: **SVK100FV...**(see page 10)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 100 pin male



Basic code: **SVK100FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 100 pin female



SVK100TFSC

100 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 29 - 36 / M 40	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

AUDIO STANDARD 150 PIN



Inline 150 pin male



Basic code: **SVK150MV...**
(see page 10)

Panel 150 pin male



Basic code: **SVK150MP...**
(see page 10)

Protection dust cap
for 150 pin male



SVK150TMSC

Inline 150 pin female



Basic code: **SVK150FV...**(see page 10)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 150 pin male



Basic code: **SVK150FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 150 pin female



SVK150TFSC

150 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 36 - 29 / M 40	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

SLIM HIGH DENSITY 72 PIN

Inline 72 pin male



Basic code: **SVS072MV...**
(see page 10)

Panel 72 pin male



Basic code: **SVS072MP...**
(see page 10)

Protection dust cap
for 72 pin male



SVS072TMSC

Inline 72 pin female



Basic code: **SVS072FV...**(see page 10)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 72 pin male



Basic code: **SVS072FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 72 pin female



SVS072TFSC



72 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 29 - 21 / M 32	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

SLIM HIGH DENSITY 101 PIN

Inline 101 pin male



Basic code: **SVS101MV...**
(see page 10)

Panel 101 pin male



Basic code: **SVS101MP...**
(see page 10)

Protection dust cap
for 101 pin male



SVS101TMSC

Inline 101 pin female



Basic code: **SVS101FV...**(see page 10)
With standard locking ring (as shown)
Alternative locking rings (see page 9)

Panel 101 pin male



Basic code: **SVS101FP...**
(see page 10)
With standard locking ring
(as shown)
Alternative locking rings
(see page 9)

Protection dust cap
for 101 pin female



SVS101TFSC



101 PIN CONNECTORS INFO

Compliant military standard Mil C 5015 & VG 95234 specif. IP67 grade waterproof when mated

Back shell:	standard.	Contacts type:	pag. 29
Cable gland:	PG 29 - 21 / M 32	Insert layouts and wiring list:	pag. 11
Locking rings version:	pag. 9	Overall size & cut-out dimensions:	pag. 13
Part Number explanation:	pag. 10	Reverse series available with locking ring fitted on male connector	

BAYONET LOCKING RINGS

STANDARD = S

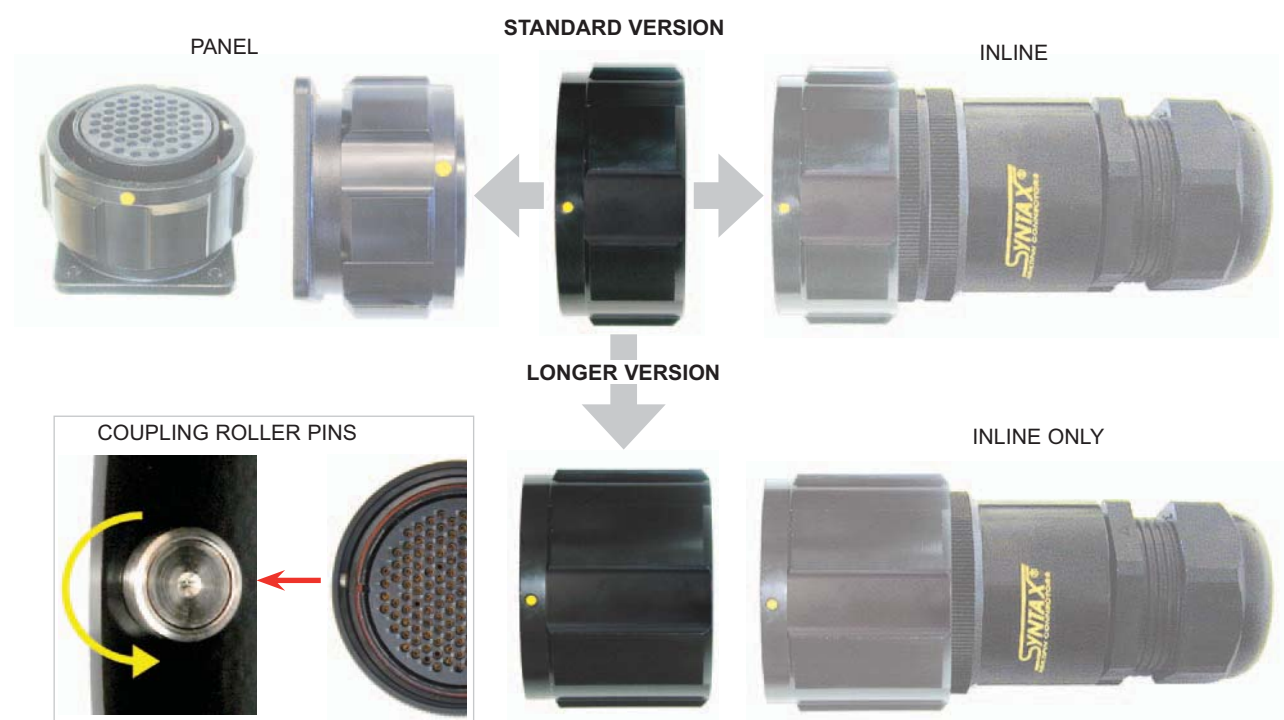


RUBBER COATED WITH ROLLER PINS = R



ERGONOMIC WITH ROLLER PINS = X (standard) or Y (longer)

Ergonomic aluminium locking ring. Designed to build a product even more suitable for the harshest applications. The studs of the plug connector coupling nut are roller-stud version. This means an easier coupling and a bigger number of operations due to a lower wear of the coupling ramps.



See page 10 to introduce S, R, X and Y in PART NUMBER explanation

PART NUMBER EXPLANATION



Part N.																				
EXAMPLE Part N.	SVK	150	F	V	R	G	S	P6	N											

CONNECTOR SERIES	
SVK = (13-19-25-37-54-85-100-150 PIN) back shell: standard locking ring: standard, ergonomic standard & longer version, rubber coated	SVK
SVS = (72-101 PIN) slim series, high density; back shell: standard locking ring: standard, ergonomic standard & longer version, rubber coated	SVS
SPK = (4-8 PIN) back shell: standard locking ring: standard and rubber coated	SPK

CONTACTS NUMBER	
004 - 008 - 013 - 019 - 025 - 037 - 054 - 072 - 085 - 100 - 101 - 150	...

CONTACT TYPE	
M = male	M
F = female	F

CONNECTOR TYPE	
V = inline	V
P = panel	P

COUPLING TERMINATION	
- = with ramps	-
S = standard locking ring	S
R = rubber coated locking ring	R
X = ergonomic standard with roller pins locking ring	X
Y = ergonomic longer with roller pins locking ring	Y

CONTACT PLATING TYPE	
S = silver (4-8-13-19-25-37-54-85 pin)	S
G = gold (4-8-13-19-25-37-54-72-85-100-101-150 pin)	G
N = no contact	N

CONTACT TERMINATION	
C = crimp	C
S = solder	S
P = pcb	P
N = no contact	N

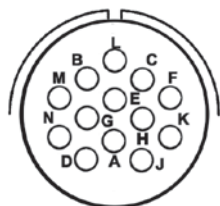
CABLE CLAMP RANGE	
PG: P1 = PG 11 cable Ø 4 to 10 mm	P1
P2 = PG 13.5 cable Ø 6 to 12 mm	P2
P3 = PG 16 cable Ø 9 to 14 mm	P3
P4 = PG 21 cable Ø 13 to 18 mm	P4
P5 = PG 29 cable Ø 14 to 25 mm	P5
P6 = PG 36 cable Ø 24 to 32 mm	P6
METRIC: M + ...(see table pag. 38)	M...

CABLE CLAMP TYPE	
N = normal	N
S = spiral flex for PG 16 and 21 only	S
R = strain relief (see table pag. 39)	R

SPECIAL VERSION (upon request)	
For example: T = inserted solder termination contacts	T

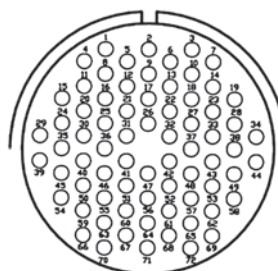
INSERT LAYOUTS & WIRING LIST

FRONT VIEW OF MALE INSERT



13 pin / size 20

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



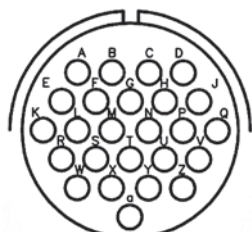
72 pin / size 28

72 pin - 24 channels				
Ch No.	Hot +	Cold -	Gnd	
1	3	2	1	
2	5	6	7	
3	9	8	4	
4	13	14	10	
5	15	11	12	
6	18	17	16	
7	22	23	19	
8	24	20	21	
9	27	26	25	
10	33	34	28	
11	30	31	32	
12	36	35	29	
13	44	38	37	
14	41	42	43	
15	45	39	40	
16	48	47	46	
17	52	53	49	
18	54	50	51	
19	57	56	55	
20	61	62	58	
21	63	59	60	
22	69	65	64	
23	66	67	68	
24	72	71	70	



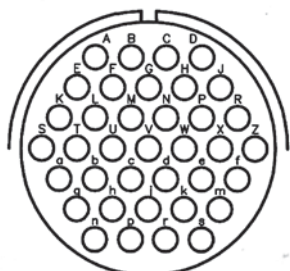
19 pin / size 20

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



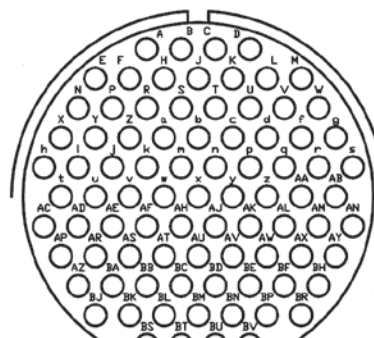
25 pin / size 24

25 pin - 8 channels				
Ch No.	Hot +	Cold -	Gnd	
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	



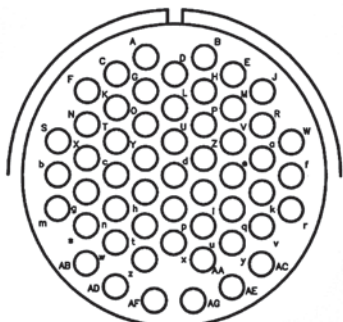
37 pin / size 28

37 pin - 12 channels				
Ch No.	Hot +	Cold -	Gnd	
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	



85 pin / size 40

85 pin - 28 channels				
Ch No.	Hot +	Cold -	Gnd	
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	i	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	

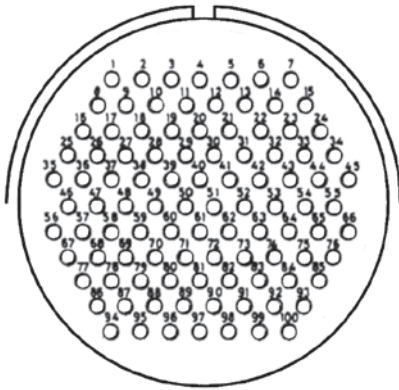


54 pin / size 32

54 pin - 16 channels				
Ch No.	Hot +	Cold -	Gnd	
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	

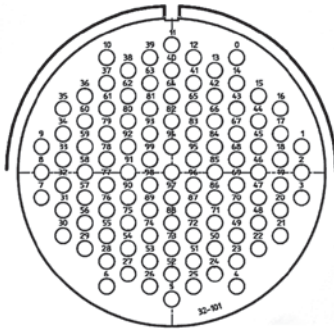
INSERT LAYOUTS & WIRING LIST

FRONT VIEW OF MALE INSERT



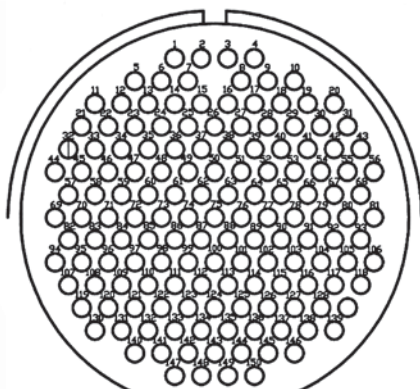
100 pin / size 40

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



101 pin / size 32

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



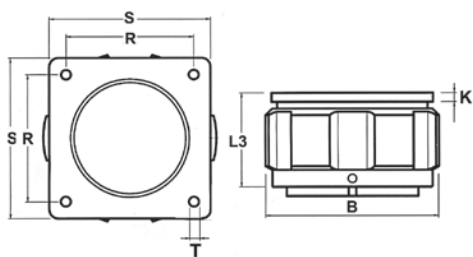
150 pin / size 40

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

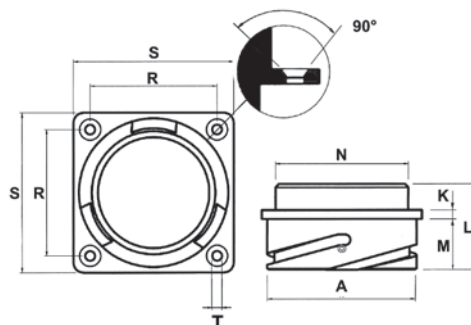
OVERALL SIZE & CUT-OUT DIMENSIONS

OVERALL SIZE

PANEL FEMALE



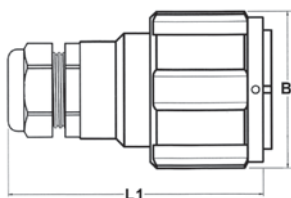
PANEL MALE



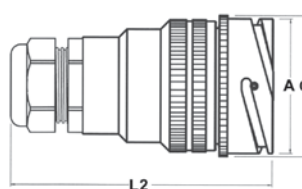
N° pin	shell size	BØ Max	L3 Max	K ±0.2	R ±0.1	S ±0.3	T H13
13 - 19	20	41	36.6	4	29.4	38.1	3.1
25	24	50	41	4	34.9	44.5	3.7
37-72	28	57	41	4	39.7	50.8	3.7
54-101	32	64	44.5	4	44.5	57	4.3
85-100-150	40	76	45.5	4	55.6	69.8	4.3

N° pin	shell size	AØ +0/-0.15	K ±0.2	L ±0.3	M ±0.4/-0	ØN Max	R ±0.1	S ±0.3	T 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
37-72	28	46.7	4	35.7	20.6	41.4	39.7	50.8	3.7
54-101	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



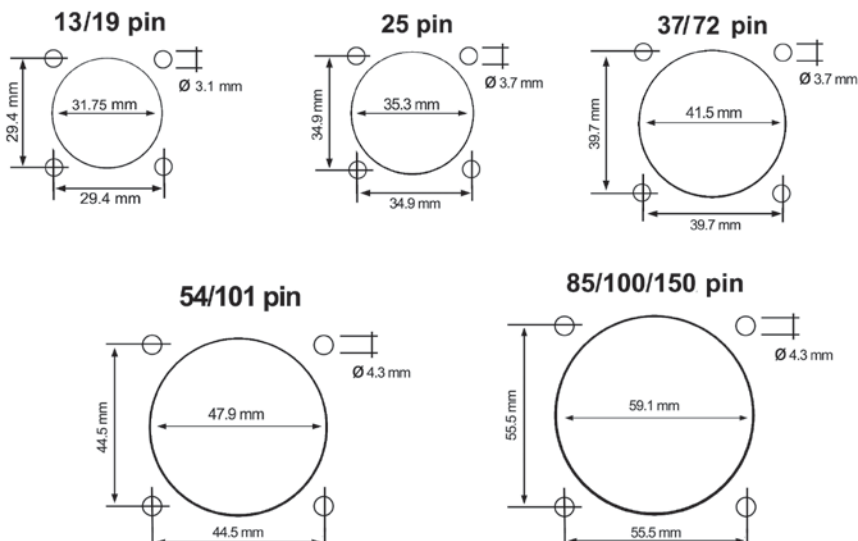
INLINE MALE

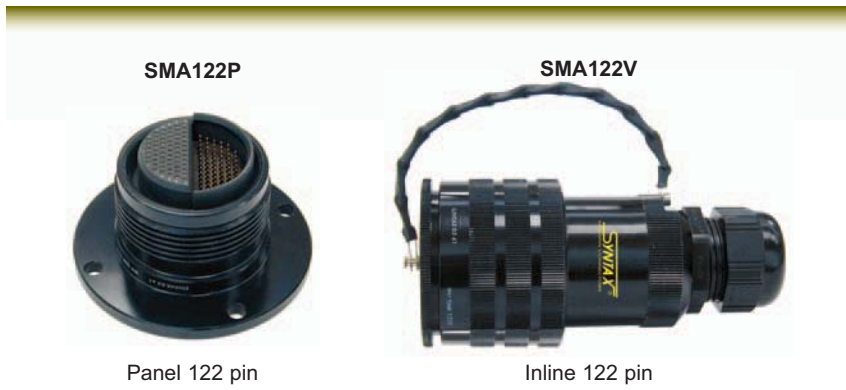


N° pin	shell size	BØ Max	L1 Max	PG	Ø cable Min.-Max.
13 - 19	20	41	102	11	4 - 10
25	24	48	102	16	9 - 14
37-72	28	53	114	21	13 - 18
54-101	32	60	117	21	13 - 18
85	40	72	127	29	14 - 25
100 -150	40	72	136	36	24 - 32

N° pin	shell size	AØ Max +0/-0.15	ØC Max	L2 Max	PG	Ø cable Min.-Max.
13 - 19	20	40.0	43	100	11	4 - 10
25	24	40.9	44	101	16	9 - 14
37-72	28	46.7	50	113	21	13 - 18
54-101	32	53.4	56	116	21	13 - 18
85	40	65.5	69	126	29	14 - 25
100 -150	40	65.5	69	135	36	24 - 32

CUT-OUT DIMENSIONS





The SYNTAX® SMA connectors are configured in the 122 pins for multicore cables until 40 pairs and 176 pins for multicore cables until 58 pairs and are fully compatible with the existing fixed pin solder type & crimp type MASS connectors, and use the same inline and panel mount housings. The metal shells are machined and hard black anodized to protect against damage through physical abuse. The hermaphroditic design minimizes the number of required parts as two connectors allow for complete daisy chain capability. All connectors include a heavy-duty dust cap. Inline connectors have water tight PG 36 cable gland or (optional) a cable strain relief utilising a basket weave design. The crimp type versions are designed for easy, positive insertion and removal of pins and sockets, using a standard crimp tool and locator insert.

- Hermaphroditic Design
- Crimp or Solder contacts
- All machined aluminium construction
- Water tight IP67 when mated
- Intermateable with Whirlwind Mass connectors
- Hard anodised black finish

CONNECTOR RATING				
N° pin	Rated voltage	Rated voltage	Dielectric Strength	Min. Flashover
	Vca	Vcc	Vca	Vca
122	180	210	1200	800
176	180	210	1200	800

CONTACTS RATING				
Max Current	Rated Current	Max Voltage Drop	Wire section (mm ²)	Wire section AWG
7,5 A	7,5 A	83 mv	0,15-0,6	26-20

CONNECTOR DIMENSIONS												
N° pin	PANEL								INLINE			
	A	B	C	D	G	H	L	M	E	F	N	P
122	63,0	65,6	7,1	101,5	66,0	57,3	45,7	48,5	70,0	145,0	159,0	150,0
176	67,0	69,76	7,0	107,5	69,0	60,0	57,0	55,0	76,2	150,0	163,0	155,0

AUDIO/VIDEO CONNECTORS



SV25/6FV-GCP5N



SV25/6FP-GC

SV25/6MVRGCP5N

SV25/6MPRGC

This Audio/Video SYNTAX® connector has been designed for professional broadcasting use to face up the work harsh environment in outdoor applications.

Two shell versions for panel connectors (male and female) plus two for inline connectors (male and female) allow complete cable hook up system and extension leads. The insert arrangements allows connections for 24 signal contacts and 6 video channels for RG59 coaxial cable.

The cable gland on the back shell is suitable to host our combined audio/video cable 7YA08V6SX, designed specifically for this application.



- Compliant military standard Mil C 5015 & VG 95234.
- Aluminium alloy shells with high resistance black finish.
- Audible, visual and tactile indication of locking. 2000 mating cycles minimum.
- Ergonomic rubber covered locking ring for ease of coupling.
- Bayonet ramp protrusion protected by stainless steel ring.
- Gold plated machined contacts for quality signal path and long term reliability
- Insert manufactured in a high insulating chloroprene rubber: allowing easy contact insertion and removal, during assembly or repair.
- Gland cable retention system, ensures water tight sealing and good strain relief at the cable entry.
- IP 67 grade waterproof (when mated) for outdoor applications.
- Protection dust caps waterproof IP67 grade when mated with the connectors (see pag. 8)

On the following page you can see an example of our application on a audio/video stage-box.

CONTACTS

Male - Part N. SVKP59CXGMC



Female - Part N. SVKP59CXGFC



Female - Part N. SVKP20GFC



Male - Part N. SVKP20GMC



AUDIO/VIDEO DISTRIBUTION

COMBINED MULTIPIN CONNECTOR INPUT, 8 AUDIO LINES XLR + 6 BNC VIDEO LINES



FRAME

Steel stage box with trapezoidal section and sides with a high mechanics resistance, painted with epoxy black anti-scratch paint. The position of the output connectors on the inclined sides, guarantees an easy identification of the channels during the connection step, also helped by the labels of the channel-numbers.

Under the base there are 4 nylon feet to guarantee a stable position and enough separation from the ground.

On the opposite side to the multipin connector, three holes have been provided for possible vertical hooking.

INPUT

Signal distribution through the exclusive Syntax multipin connector (male or female), dust cup provided, 24 gold pins for audio signals and 6 gold pins for video signals 75 Ohm.

DISTRIBUTION

audio connection through 8 XLR panel (female or male) 3pins connectors, arranged in two sections of 4 lines every side. Video connection through 6 BNC panel connectors with ground isolated from the frame, arranged in two sections of 3 lines every side.

INTERNAL CONNECTIONS

The audio interconnections between the multipin connector and XLR connectors is arranged through a shielded balanced cable, made of 2 signal conductors, 1 drain wire and aluminium foil screen.

The multipin connector cabling is realized by crimping, while the XLR connector cabling is realized by soldering.

The video interconnections between the multipin connector and BNC connectors is arranged through RG59 double shielded cable 75 Ohm, made of 1 signal conductor, a copper tinned braid shield and a aluminium foil screen.

The cabling of the video channels is realized through the crimping to guarantee a good mechanical resistance and a steady impedance avoiding signal losses



The SYNTAX® SSX series, designed for professional lighting applications, and perfectly compatible with standard 19 pin Socapex (419 series), is extremely robust being of a machined aluminium alloy, thick wall construction with a hard black anodized finish or black painted finish. The insert stack is neoprene rubber, thereby allowing removable contacts in crimp or solder version. The unit is completely watertight to IP67 when mated.

Electrical safety and compliance is guaranteed through shells which are internally insulated, to prevent electric shock and "first make last break" ground contacts. Grounding rings allow bussing of the ground contacts. Locking ring and backshell design for easy handling.

- Compliant cULus E 302043
- Ingress protection: IP67-IEC 529 norms
- Salt atmosphere resistance: 96 h IEC 68-21-11
- Operating temperature: -55°C to +125°C
- Shell material: aluminium alloy, machined
- Available: anodized finish or black painted finish
- Insert neoprene rubber
- Cable gland retention: PG 29 - PG 36

CONTACTS

The male and female are machined by high conductive copper alloy and are gold plated finish.

CRIMP

Voltage rating AC	Voltage rating DC	Max current	Rated current	Potential drop	Dielectric Strength	
					Test voltage	Min. Flashover
700 V	500 V	41 Amps	23 Amps	63 mV	2000 Vac RMS	2800 Vac RMS



MALE



FEMALE

SOLDER

Voltage rating AC	Voltage rating DC	Max current	Rated current	Potential drop	Dielectric Strength	
					Test voltage	Min. Flashover
700 V	500 V	41 Amps	23 Amps	63 mV	2000 Vac RMS	2800 Vac RMS



MALE



FEMALE

GROUND CONNECTION



Ground first connection

In compliance to electrical safety the 7 central pins are moved forward and allows "first make last break" ground contact.



Common ground (OPTIONAL) Part N.: SSXCMGR

Two disks are easily fitted to the central ring of six contacts, thereby creating a common ground ring.



**Shell grounding
SPECIAL VERSION** pon request
Body shell grounding contact guarantee full safety.

SSX 19 PIN STANDARD SERIES

Compliant
C  US

SYNTAX CONNECTORS

SSX19MV



Inline male

SSX19FV



Inline female

SSX19MP



Panel male

SSX19FP



Panel female

SSX SERIES COMPATIBLE WITH STANDARD 19 PIN SOCAPEX (419 series)



Safety insulating tube

ERGONOMIC COUPLING GRIP

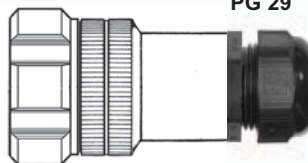


CABLE GLANDS FOR SSX SERIES

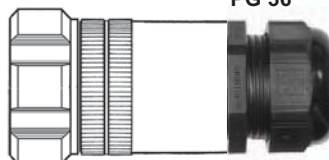
These glands provide positive strain relief and water tight sealing. Technical characteristics:

- Approvals: UL E146370 - CSA LR-50370 - VDE 57086 - SEV 100989
- Protection: Up to 70 PSI
- Material: Polyamide - flame retardant, self-extinguishing nylon with neoprene bushing
- Rated Temperature: -20°C to 80°C (UL), up to +100°C Max
- Seal IP 68 (International Protection - highest grade), comparable to NEMA 6 classification
 - First digit (0-6): Dust Protection
 - Second digit (0-8): Water Protection
- Resistant to Salt water, weak acids, weak alkalis, alcohol, ester, ketones, ether, benzene, gas, mineral oil, animal and vegetable oils, gasoline, oil, grease, and common solvents

PG 29



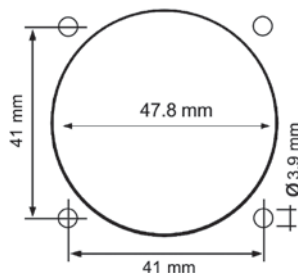
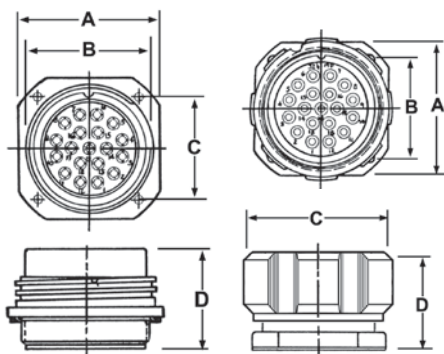
PG 36



OVERALL SIZE & CUT-OUT DIMENSIONS

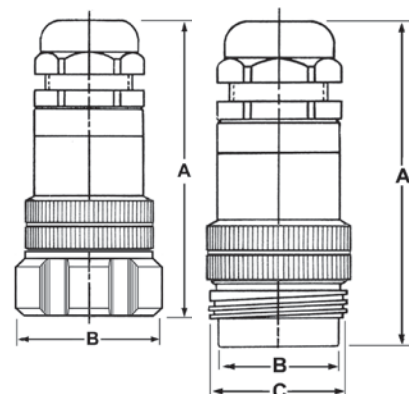
PANEL FEMALE			
A	ØB	C	D
57	47,8	41	37,5

PANEL MALE			
A	B	C	D
57	41	60	38



INLINE MALE	
A	ØB
120	64

INLINE FEMALE		
A	ØB	ØC
120	46	52



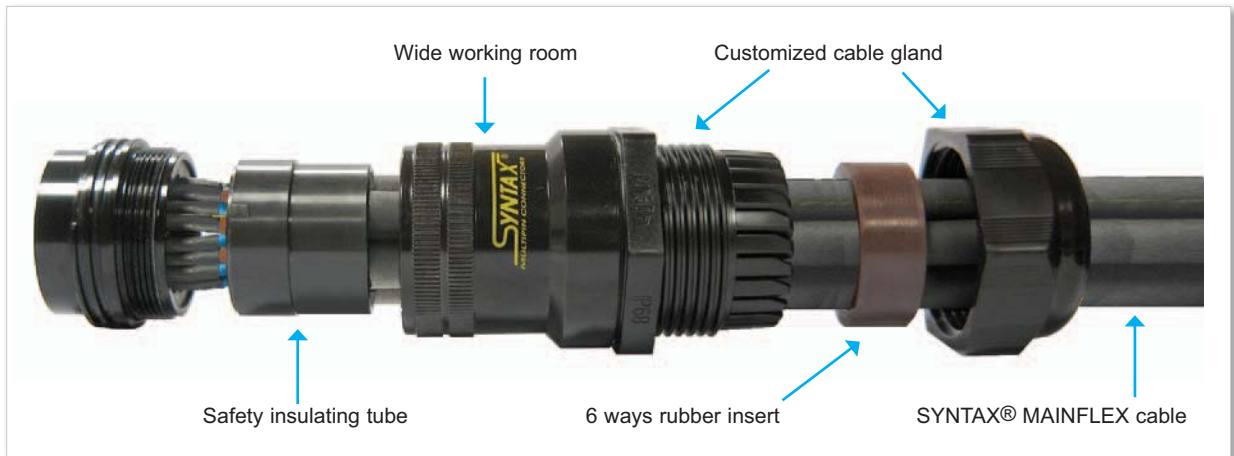
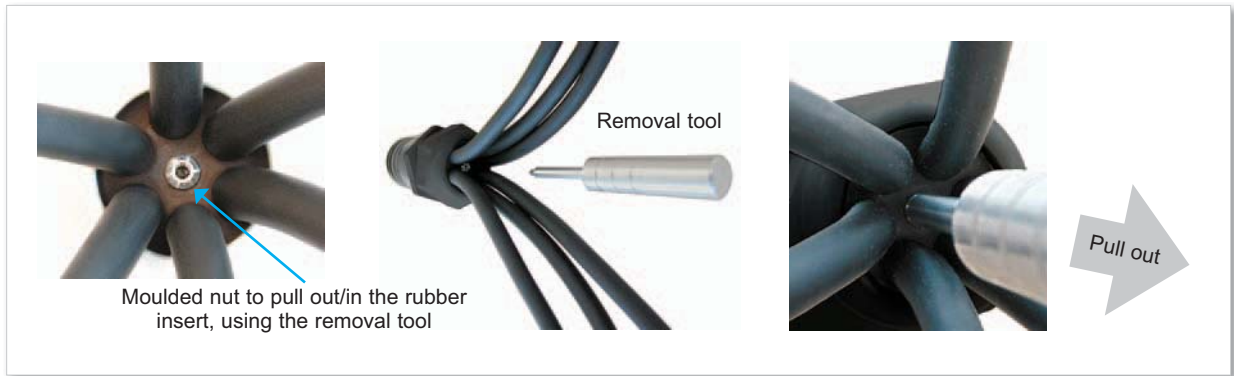
SSX 19 PIN - SPIDER



SYNTAX® SSX SPIDER 19 pin connector is an alternative version of the SSX 19 pin standard, studied to get simple managing of the break-ins and break-outs operations.

The special 6 ways rubber insert, fitted in the cable gland terminal, offers the opportunity to get an optimal cables retention and a perfect watertight seal IP67 necessary for the outdoor use.

Supplied with 6 leads SYNTAX® MAINFLEX cable, becomes the best solution to meet the right specifications about handling and IP67 waterproof.



SSX19MV-SPIDER



SSX19FV-SPIDER

SSX 19 PIN STANDARD CABLES

SP19M6FBL-010 (1 mt) - 015 (1,5 mt) - 020 (2 mt)



SPIDER SPLITTER

Assembled list:

- n.1 P/N : SSX19MVYGCMS - (Syntax SSX19 male)
- n.6 P/N : Y213-6X - (CEE17 16A 230V 3P female)
- mt P/N : 7ZF0325 - Syntax Cable 3 x 2.5 mm²

SP6M19FBL-010 (1 mt) - 015 (1,5 mt) - 020 (2 mt)



SPIDER SPLITTER

Assembled list:

- n.1 P/N : SSX19FV-GCMS - (Syntax SSX19 female)
- n.6 P/N : Y013-6X - (CEE17 16A 230V 3P male)
- mt P/N : 7ZF0325 - Syntax Cable 3 x 2.5 mm²

EC19P25-L...



Assembled list:

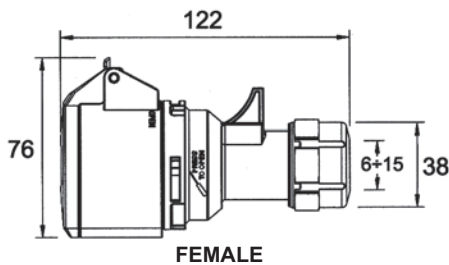
- 1 x P/N SSX19MVYGCP5N - (Syntax SSX19 male)
- 1 x P/N SSX19FV-GCMS - (Syntax SSX19 female)
- mt P/N 7ZF1925 - Syntax Cable 19x2.5 mm²

- EC19P25-L10 10 mt cable lenght
- EC19P25-L20 20 mt cable lenght
- EC19P25-L... cable lenght upon request

Y213-6X



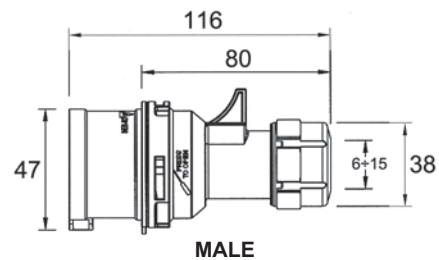
Inline female black color splashproof IP44. Easy assembling by quick lock. Water-proof cable gland no unscrewing system. 220V 16A 2p + T



Y013-6X



Inline male black color splashproof IP44. Easy assembling by quick lock. Water-proof cable gland no unscrewing system. 220V 16A 2p + T



SETTING UP BY NO TOOLS



DISASSEMBLING JUST A SCREWDRIVER




SSX 19 PIN - PART NUMBER EXPLANATION



Part N.

EXAMPLE Part N. **SSX 19 F V Y G S P6 N T 1**

CONNECTOR SERIES		
SSX = 19 pin standard series	SSX	↑
CONTACTS NUMBER		
19	19	↑
CONTACT TYPE		
M = male	M	↑
F = female	F	↑
CONNECTOR TYPE		
V = inline	V	↑
P = panel	P	↑
COUPLING TERMINATION		
- = with thread	-	↑
Y = ergonomic high grip locking ring	Y	↑
R = rubber coated locking ring	R	↑
CONTACT PLATING TYPE		
G = gold	G	↑
N = no contact	N	↑
CONTACT TERMINATION		
C = crimp	C	↑
S = solder	S	↑
N = no contact	N	↑
CABLE CLAMP RANGE		
PG: P5 = PG 29 cable Ø 14 to 25 mm	P5	↑
P6 = PG 36 cable Ø 24 to 32 mm	P6	↑
METRIC: M + ...(see table pag. 38)	M...	↑
SPIDER: MS = 6 cables Ø 9 to 11,7 mm	MS	↑
CABLE CLAMP TYPE		
N = normal	N	↑
R = strain relief	R	↑
SPECIAL VERSION (upon request)		
For example: T = inserted solder termination contacts	T	↑
U = shell grounding	U	↑
EXTERNAL FINISH		
_ = black painted	_	↑
1 = black anodized (compliant )	1	↑
Special versions upon request		↑



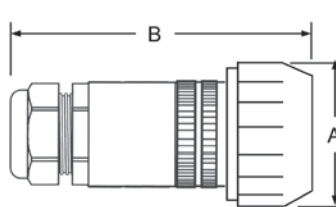
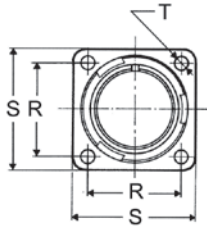
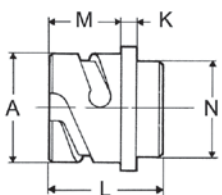
SPK SYNTAX® connectors are available in 4 and 8 pin configuration for speaker array connections and are fully intermateable with CA-COM connectors, commonly used by many speaker enclosure manufacturers. The design utilises the same key features of SVK Series and are supplied as standard with the rubber covered locking ring and with gold plated solder contacts. The SPK speaker series, ensures long term reliability through the robust construction and addresses the short comings of the more traditional Industrial and Military connectors when used in touring applications.

- Rubber Coated Coupling Locking Rings
- Machined Backshells
- "First Make Last Break" earthing contacts
- Thick Wall sections
- Roller Bearing Coupling Pins
- IP67 watertight construction when mated
- Compliant Integral Grounding System

CONNECTOR DIMENSIONS (mm) 4 pin (PG13,5) & 8 pin (PG 21)

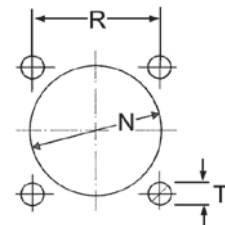
	PANEL							
	A	K	L	M	N	R	S	T
	+0	±0,2	±0,3	+0,4	-0	max. ±0,1	±0,3	H13
4 pin	30,8	4	34,3	19	25,6	27,0	35	3,2
8 pin	37,4	4	34,3	19	32,2	31,8	41	3,2

terminal	INLINE		
	A	B	Pin
standard locking ring	37	106	4
standard locking ring	43	109	8
rubber locking ring	49	110	4
rubber locking ring	56	112	8
ramps	34	108	4
ramps	40	110	8



CUT-OUT 4 & 8 pin

	R	N	T
	±0,2	+0,4 -0	±0,2
4 pin	27,0	25,8	3,2
8 pin	31,8	32,4	3,2



CONTACTS

The male and female are machined by high conductive copper alloy and could be supplied gold or silver plated.

Voltage rating AC	Voltage rating DC	Max current	Rated current	Potential drop	Dielectric Strength	
					Test voltage	Min. Flashover
1250 V	900 V	41 Amps	23 Amps	63 mV	2800 Vac RMS	3600 Vac RMS

	GOLD PLATED	
MALE		FEMALE
	SILVER PLATED	

Part Number explanation: see page 10

SPK SPEAKER

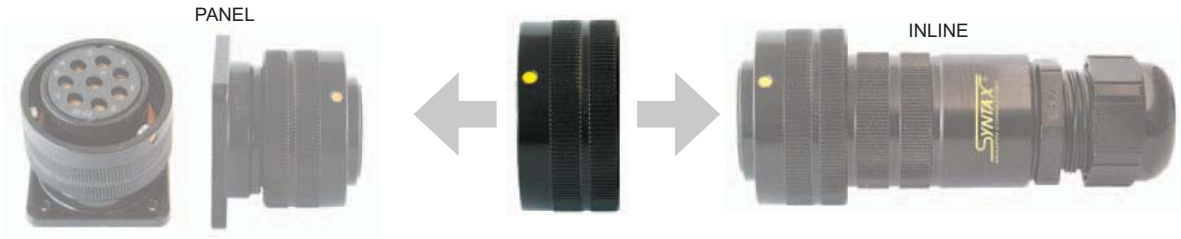


Part Number explanation: see page 10

LOCKING RING

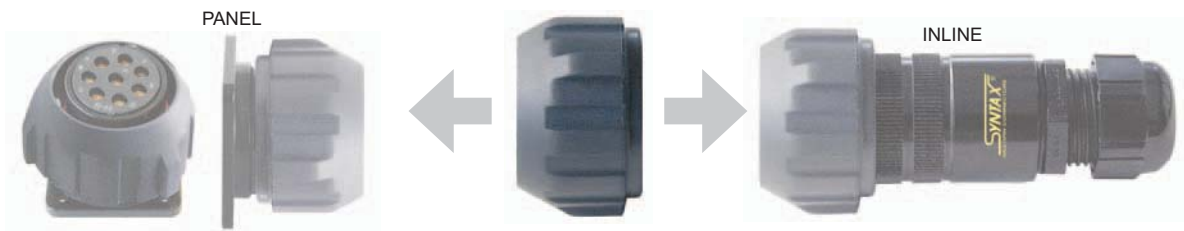
STANDARD

Standard aluminium arctic grip locking ring for SPK connectors series.



RUBBER COATED

Rubber coated locking ring for ease of coupling even with gloved hands. For SPK connectors series.



CABLE GLANDS



SB BALLAST



The SYNTAX® SB ballast connectors incorporate features which ensure high quality, extreme durability and safe connection between HMI ballasts and Lamps. The range includes connectors compatible with all major HMI lamp manufacturer specifications, covering 400W-20KW HMI ranges. The coupling mechanism, which is the area most prone to damage is of a machined thick wall construction and utilises roller bearings to allow for easy coupling.

- Machined Alloy Coupling Rings
- Thick Wall sections
- Extended Length Coupling Rings
- Roller Bearing Coupling Pins
- Machined Backshells
- IP67 watertight construction
- F.M.L.B Earthing contacts
- Compliant Integral Grounding System
- Crimp or Solder contacts
- Ergonomic arctic grip or rubber covered locking ring
- Standard insulating insert range -55° to 125° C (available -70° to 200°)

**Table B
PLATING SILVER SOLDER CONTACTS**

Size	Male	Part N.	Female	Part N.	For type arrangement
16S		SVKP16SMSs		SVKP16SFSs	16S-1
16		SVKP16SMS		SVKP16SFS	28A-9 28-22 32A-9 40A-10
12		SVKP12SMS		SVKP12SFS	16-10 20-15 24-11 24-2 28-10
8		SVKP08SMS		SVKP08SFS	22-1 22-2 24-11 28-3 28-10
4		SVKP04SMS		SVKP04SFS	28A-9 28-22 28-6 28-10 32A-9 40A-10
0		SVKP00SMS		SVKP00SFS	32-5

**Table C1
CONTACTS RATING**

Size	Max Current	Rated Current	Max Voltage Drop	Wire section (mm ²)	Wire section AWG
0	245 A	150 A	53 mV	50+60	0
4	135 A	80 A	58 mV	16+20	4
8	73 A	46 A	65 mV	6+8	8
12	41 A	23 A	63 mV	3	12
16	22 A	13 A	74 mV	1+1,5	16
16S	22 A	13 A	74 mV	1+1,5	16

Table A

CONTACTS TYPE & QUANTITY				SERVICE RATING
ARRANGEMENT	CONTACTS	SIZE	see Table C2	
	16S-1	7	16S	A
	16-10	3	12	A
	20-15	7	12	A
	22-1	2	8	D
	22-2	3	8	D
	22-22	4	8	A
	24-11	9	3 8	A
		6	12	
	24-2	7	12	D
	28A-9	9	4 4	A
		5	16	
	28-22	6	3 4	D
		3	16	
	28-3	3	8	E
	28-6	3	4	D
	28-10	7	2 4	G = D Ball = A
		2	8	
		3	12	
	32A-9	9	3 4	A
		6	16	
	32-5	2	0	D
	40A-10	8	4 4	D
		4	16	

Table C2

Service Rating	Insert Arrangement Service Rating		Dielectric Strength (Standard at see level conditions)	
	Operating Voltage DC (at see level)	Operating Voltage AC (at see level)	Minumum Flashover AC MS	Test Voltage AC RMS (Hi Pot)
I	250 V	200 V	1400 V	1000 V
A	700 V	500 V	2800 V	2000 V
D	1250 V	900 V	3600 V	2800 V
E	1750 V	1250 V	4500 V	3500 V
B	2450 V	1750 V	5700 V	4500 V
C	4200 V	3000 V	8500 V	7000 V

Table D

DEGREES FOR ALTERNATE INSERT POSITIONS

ROTATION DEGREES		INSERT TYPE															
		16S-1	16-10	20-15	22-1	22-2	22-22	24-2	24-11	28A-9	28-22	28-3	28-6	28-10	32A-9	32-5	40A-10
W	80	90	80	35	70	-	80	35	110	70	70	70	80	65	35	-	
X	-	180	-	110	145	110	-	110	250	145	145	145	110	135	110	-	
Y	-	270	-	250	215	250	-	250	260	215	215	215	250	225	250	-	
Z	280	-	280	325	290	-	280	325	280	290	290	290	280	275	325	-	



ROTATION EXAMPLE

FRONT VIEW MATING SIDE FEMALE INSERT SHELL ROTATION

FRONT VIEW MATING SIDE MALE INSERT SHELL ROTATION

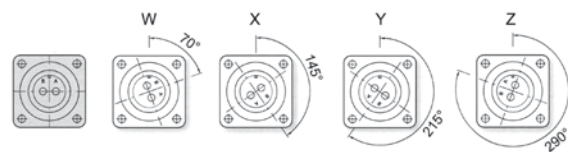
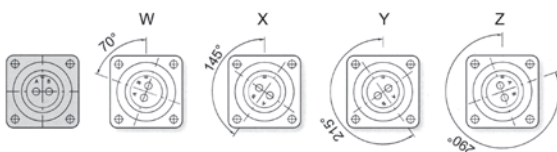


Table E
PLASTIC CABLE CLAMP

Size arrangement	PG	Code	Clamping range (mm)	
			Min	Max
16S-1, 16-10	16	P3	9	14
20-15	11	P1	4	10
	16	P3	9	14
	21	P4	13	18
22-1, 22-2, 22-22	21	P4	13	18
	29	P5	14	25
	16	P3	9	14
24-2, 24-11	21	P4	13	18
	29	P5	14	25
	16	P3	9	14
28A-9, 28-22, 28-3 28-6, 28-10	21	P4	13	18
	29	P5	14	25
	16	P3	9	14
32A-9, 32-5	21	P4	13	18
	29	P5	14	25
	16	P3	9	14
40A-10	29	P5	14	25
	36	P6	24	32



SB BALLAST

BACKSHELL AND METAL CABLE CLAMP..C

Besides guaranteeing an excellent mechanical strain relief keeping the cable in the centre of the connector, these cable-clamps are provided with an internal conical rubber bushing ensuring waterproof protection IP67. The screws in stainless steel have elastic anti-vibration washers.

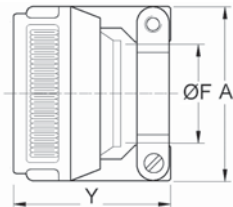


Table F

Standard version

Size arrangement	C	Code	Clamping range ØF		Y	A
			Min	Max		
16S-1, 16-10	8C	C3	8	13.58	32.3	28.1
20-15, 22-1, 22-2, 22-22	12C	C5	11.3	19	35.7	37.3
24-2, 24-11, 28A-9, 28-22, 28-3, 28-6, 28-10	16C	C6	15.5	23.8	39	43.2
32A-9, 32-5	20C	C7	23.4	31.8	44.8	54
40A-10	28C	C9	30	41.3	52.3	63.4



BUSHING

These are made of elastomeric rubber and used with the metal cable clamp to protect the cable. They allow using cables with diameter smaller than the nominal one.



Table G

Bushing Part N.	For metal cable clamp Code	ØS	ØK		L
			Open	Closed	
SBBC3	C3	13.6	11.1	5.6	50.8
SBBC5	C5	18.9	13.74	6.85	50.8
SBBC6	C6	23.7	19	10.9	50.8
SBBC7	C7	31.6	23.8	15.74	50.8
SBBC9	C9	41.1	31.75	20.7	50.8



SHELL GROUNDING



"First make last break" earth contacts and a shell grounding path compliant with electrical safety make the ballast connectors one of the safest on the market.



SB BALLAST PART NUMBER EXPLANATION

Part N.

Example Part N. **SB 32A-9 W M R C9 S S L**

CONNECTOR SERIES	Code
SB Ballast	SB

INSERT ARRANGEMENT	Code
16S-1, 16-10, 20-15, 22-1, 22-2, 22-22, 24-11, 24-2 28A-9, 28-22, 28-3, 28-6, 28-10, 32A-9, 32-5, 40A-10	

INSERT ROTATION	Code
W rotation degrees (see Table D pag. 26)	W
X rotation degrees (see Table D pag. 26)	X
Y rotation degrees (see Table D pag. 26)	Y
Z rotation degrees (see Table D pag. 26)	Z
— NO ROTATION	—

INSERT TYPE	Code
M = male	M
F = female	F

COUPLING TERMINATION	Code
— = with ramps	—
S = standard locking ring	S
R = rubber coated locking ring	R
X = ergonomic standard locking ring with roller pins locking ring	X
Y = ergonomic longer locking ring with roller pins locking ring	Y

SHELL - BACKSHELL & CABLE CLAMP (see Table E and F pag. 26-27)	Code
FP = panel front mounting	FP
RP = panel rear mounting	RP
C3 = backshell & metal cableclamp for size 16-16S campling range (8+13,5 mm)	C3
C5 = backshell & metal cableclamp for size 20-22 campling range (11,3+19 mm)	C5
C6 = backshell & metal cableclamp for size 24-28 campling range (15,5+23,8 mm)	C6
C7 = backshell & metal cableclamp for size 32 campling range (23,4+31,8 mm)	C7
C9 = backshell & metal cableclamp for size 40 campling range (30+41,3 mm)	C9
P1 = PG11: backshell & plastic cableclamp for size 20 campling range (4+10 mm)	P1
P2 = PG13,5: backshell & plastic cableclamp for size 16 campling range (6+12 mm)	P2
P3 = PG16: backshell & plastic cableclamp for size 22 - 24 campling range (9+14 mm)	P3
P4 = PG21: backshell & plastic cableclamp for size 20, 22, 24, 28, 32 campling range (13+18 mm)	P4
P5 = PG29: backshell & plastic cableclamp for size 20, 22, 24, 28, 32 campling range (14+25 mm)	P5
P6 = PG36: backshell & plastic cableclamp for size 40 campling range (24+32 mm)	P6

CONTACT PLATING TYPE	Code
S = silver (see Table B pag. 25)	S
G = gold (upon request)	G
N = no contacts	N

CONTACT TERMINATION	Code
S = solder (see Table B pag. 25)	S
C = crimp (upon request)	C
N = no contacts	N




SPECIAL VERSION (upon request)	Code
L = shell grounding	L

CONTACTS DETAILS

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
						
20	72/101 pin Audio & video SV 25/6	Gold	SVKP20GFC	Female	SVKP20GMC	Male
						
12	SSX 19 pin	Gold	SSXP12GFC	Female	SSXP12GMC	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
						
20	hermaphrodite 122/176 pin	Gold	SMAP20GFS	Female	SMAP20GMS	Male
						
12	SSX 19 pin	Gold	SSXP12GFS	Female	SSXP12GMS	Male
						
12	SPK 4/8 pin	Silver	SPKP12SFS	Female	SPKP12SMS	Male
						
		Gold	SPKP12GFS	Female	SPKP12GMS	Male
						

CONTACTS RATING

Size	Max Current	Rated Current	Max Voltage Drop	Wire section (mm ²)	Wire section AWG
12	41 A	23 A	63 mv	2+3	12+14
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
20	7,5 A	7,5 A	83 mv	0,15+0,3	26+22

CONNECTORS RATING

Contacts number	Operating voltage	Operating voltage	Test voltage	Min. Flashover
	Vdc	Vac	Vac	Vac
13/19/25/150 - 72/101	250	200	1000	1400
37/54/85/100	700	500	2000	2800
4/8	1250	900	2800	3800

SOLDER CONTACTS TYPES AND PART N.

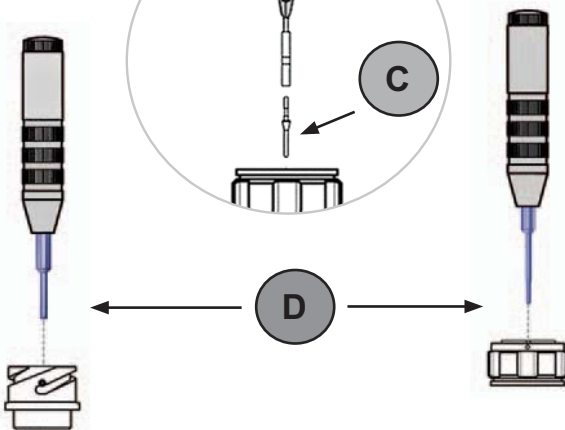
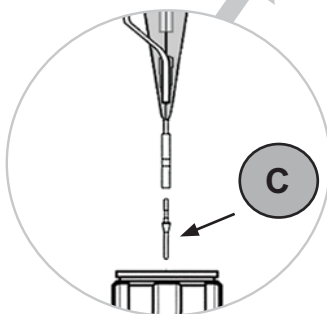
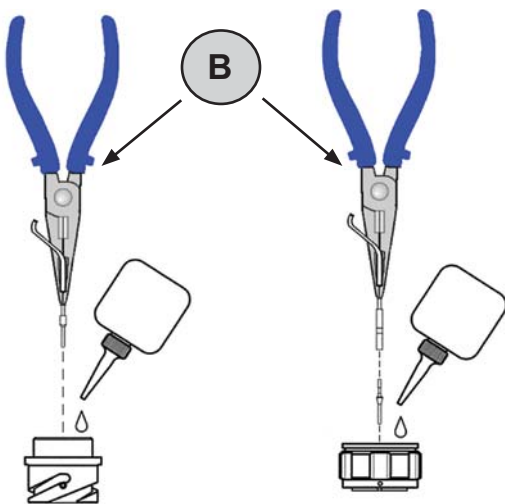
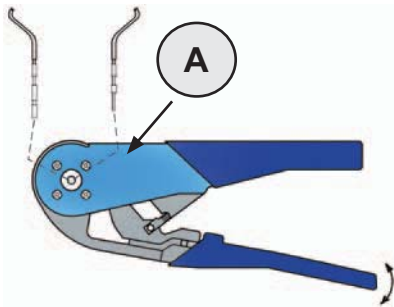
Size	Connector	Plating	Part N.	Gender	Part N.	Gender
RG59	SV25/6...	Gold	SVKP59CXGMC	Male	SVKP59CXGFC	Female
						

TOOLS & CRIMPING INSTRUCTIONS

For 12 - 16 - 18 - 20 contact size

1. Strip the wire.
2. Assemble the universal positioner on the crimp tool frame (see pic. A).
3. Raise and rotate the wire gauge selection knob on the tool frame, to select the correct crimping dimension.
4. Place the contact (mating end first) into the crimp tool.
5. Insert the stripped wire into the hollow end of the contact. Close the crimp tool arms completely and release.
6. For ease of insertion is it beneficial to lubricate insert cavities with the recommended lubricant, like isopropyl alcohol. **DO NOT USE ALTERNATIVE GREASES OR OILS** wich could damage the insert and slip out the pin.

7. Insert the wired contact from the rear of the connector as shown below, using the insertion tool (see pic. B).
8. When inserting socket contacts, it is recommended to use the guide pin (FEMALE CONTACTS ONLY see pic. C). Remove the guide pin from the inserted contact and use it for the next contact.
9. Apply a slow, even pressure until the contact snaps into position.
10. Only use the recommended removal tool (pic. D) to remove the contact or to adjust its position in the cavity. Use of other tools could damage the contact or insert.



UNIVERSAL POSITIONER



Part. N. SVKTOR-U

CRIMP TOOL



Part. N. SVKTCRIMP

INSERTING TOOL



Part. N. SVKTINS12 - SVKTINS16 - SVKTINS18/20

INSERTING GUIDE PIN FEMALE ONLY



Part. N. SVKT20GP-18GP-16GP-12GP- 59GP
For the correct insertion follow the guide line pag. 31

REMOVAL TOOL



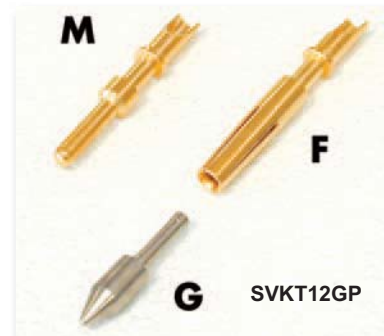
Part. N. SVKTESTR12/16-18-20

TOOLS & CRIMPING INSTRUCTIONS

EXAMPLE INSERTION SOLDER CONTACTS SSX 19 CONNECTORS

1. For ease of insertion is it beneficial to lubricate insert cavities with the recommended lubricant, like isopropyl alcohol. **DO NOT USE ALTERNATIVE GREASES OR OILS** wich could damage the insert and slip out the pin.
2. Insert the male contact (M) from the rear of the connector as shown below, using the clamp insertion tool (B). Apply a slow, even pressure until the contact snaps into position (see pic 1).
3. When inserting socket contacts (F), it is recommended that a guide pin (G) be used (FEMALE CONTACTS ONLY). Apply a slow, even pressure until the contact snaps into position, remove the guide pin from the inserted contact and use it for the next contact (see pic 2, 3, 4, 5)

INSERTING TOOL



1



2



3



4



5

STRAP WRENCH & CUSTOMIZED WRENCH TOOLS



PNEUMATIC CRIMP TOOLS For 12 - 16 - 18 - 20 contact size



BENCH MOUNT ADJUSTABLE



Part. N. **SVKTCRIMP-C**

Bench mounted, the optional foot valve allows hands-free operation. The bench mount will allow the tool to be secured at virtually any angle for individual comfort, thereby minimizing operator fatigue.

The foot valve, when installed in-line with an air supply, makes a portable system which is adaptable to any work bench. Air supply requirements are 5.5 to 8.0 atmospheres clean dry air. The system uses standard air fitting readily available in most shops.

The pneumatic tools are well known for their unequalled reputation for trouble-free, dependable service, cost saving and adaptability both in military and industrial programs. Whether upper, middle or lower range, the power tools fulfill the same precise crimp requirements as the hand models. They use the same indenter configuration, the same gaging dimensions and selector settings. No additional operator training is necessary. The compact size and lightweight of these tools allows them to be used easily as hand tools, as well as high production bench tools. The hand trigger is designed for equal ease of use by right or left handed operators.

PNEUMATIC CRIMP



Part. N. **SVKTCRIMP-A**

FOOT VALVE



Part. N. **SVKTCRIMP-B**

HYDRAULIC CRIMPING TOOL for 4 and 8 contacts size



Lightweight and compact, this tool is ideal for the compression of connectors on overhead lines and other general electric installation applications.

With the benefit of spring loaded handles, the dies can be advanced using only one hand; therefore leaving the other hand free to position the connector.

For ease of operation and comfort of the operator, the tool head can rotate through 180 degrees.

The built-in safety valve will by-pass the oil supply, when the maximum pressure is reached.

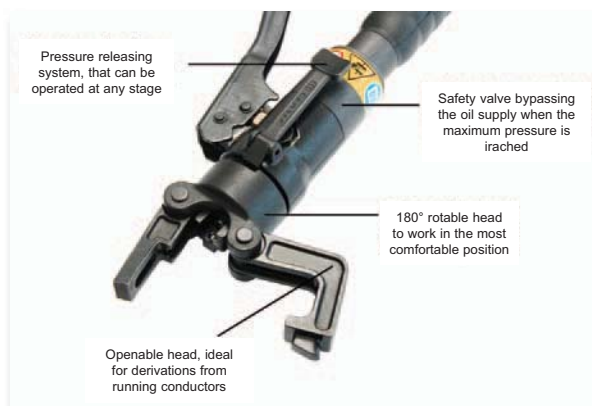
The pressure release system can easily be operated, at any stage of the compression.



ME1 ME2 ME3 ME5

CRIMPING ACCESSORIES

SBH	ME1	for cable 4 to 6 mm ²
	ME2	for cable 10 mm ²
	ME3	for cable 16 mm ²
	ME5	for cable 25 mm ²



J-LOCK CONNECTOR

250Amp



The SYNTAX® J-LOCK connector series is a miniature power cable hook up system offering high current capability while maintaining minimal physical dimensions.

J-LOCK offers a commercially viable option to historical hard wiring techniques. In addition, J-LOCK offers improved safety characteristics through utilization of insulated bodies, sealing mechanisms, locking mechanisms and protected current carrying elements.

The speed of connection and disconnection offers great savings in equipment down time, servicing and maintenance procedures. The security of the connection is maintained by a simple but very effective locking mechanism which can be utilized as a temporary or permanent lock.

The contact elements are based on our proven multi-lam band technology which ensures low contact resistance thus minimizing power loss, low physical insertion forces with a self wiping action, and high number of mating cycles.

The male contact elements are protected by a non-conductive tip which makes physical contact with the current carrying element impossible.

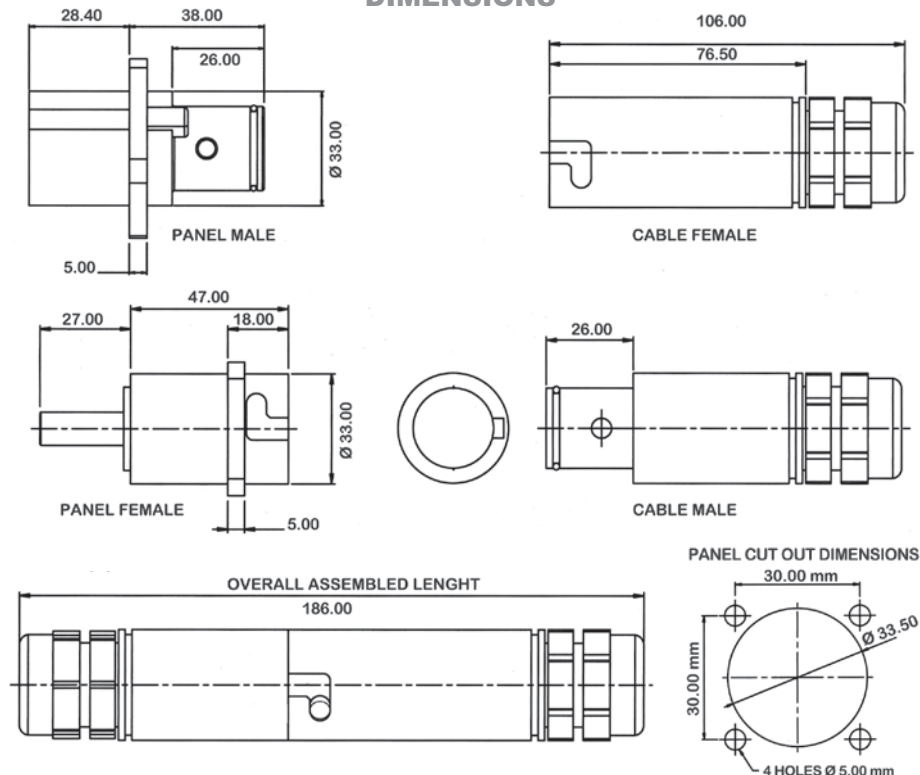
The contacts are held in the insulators via a clip retention system. This allows for fast, simple assembly and good retention of the contact sets, especially where vibration is an environmental concern. Contact termination to the cable conductor is by standard compression crimp or threaded M12 post (panel connectors).

Connectors for panel mounting and cable mounting are available. All connectors are IP67 sealed when mated through utilization of integral sealing rings and cable strain relief.

TECHNICAL DATA

Number of contacts	1	Operating temperature	-30 to 125 C°
Max. current rating	250 Amp	Environmental resistance	up to IP67
AWG	4 - 0/0	Sealing	when mated
Contact termination	25-70 mm²	Protection against electric shock	IP2X (male only)
Contact type	Crimp, threaded post M12	Mating cycle	500
Contact retention systems	Retention clip	Shell material finish	High temperature thermoplastic
Contact extraction system	Extraction tool	Flammability	UL94-VD
Mating method	Bayonet	Shell color	green, black, red, blue yellow, brown, grey, white
Operating voltage	415 Vac		
Signal / Power layouts	Power only		

DIMENSIONS



SPW POWER SYNTAX

400Amp



Typical application for SYNTAX® SPW include lighting distribution panels, stage power box, load banks, generators and three phase motors. PowerSyntax connectors serve a very diverse industry base which includes outdoor concerts, sporting events, television outdoor broadcasting, theatres, electricity supply companies and many heavy industrial environments such as mining and construction. Four standard formats: two Source connectors with a male contact (for panel mounting and for cable attachment) and two Drain connectors with a female contact (for panel mounting and for cable attachment) .

- Secondary locking
 - Dead front contacts
 - High impact insulators
 - Multipoint contact
 - Integral location Keys
 - Waterproof when mated
 - Colour coded
 - Cable gland retention
- on the line drain only to prevent accidental disconnection.
 insulated nylon tip on the live contact prevents accidental touching.
 glass filled thermoplastic insulators prevents damage due to mis handling and guarantee a high degree of insulation, with maximum resistance to oil, acids and water.
 23 spring loaded active elements (louvers) allow low insertion force and guarantee multiple points of contact, ensuring minimal power loss.
 each connector type is individually keyed to eliminate the possibility of accidental cross mating.
 sealing is guaranteed through IP rated interfacial and cable gland compression seals.
 insulators are supplied as standard in UK, Australian and European colour identification codes.
 PG 29

IDENTIFICATION COLOR CODES

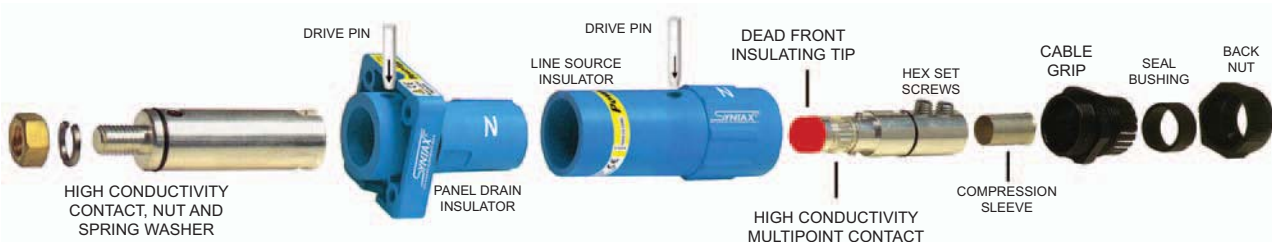
	EARTH	NEUTRAL	LINE 1	LINE 2	LINE 3
EUROPE	Green	Blue	Brown	Black	Grey
UK	Green	Black	Red	Yellow	Blue
AUSTRALIA	Green	Black	Red	White	Blue

Secondary locking release key Part. N. **SPWZKEY**



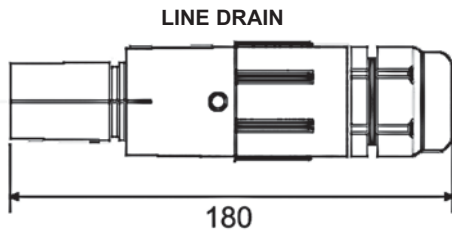
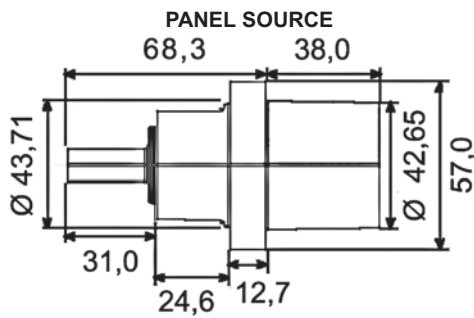
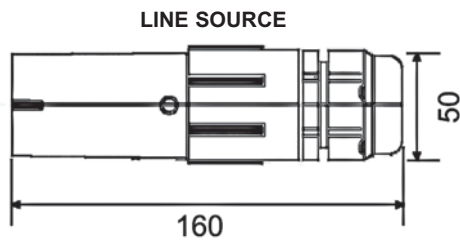
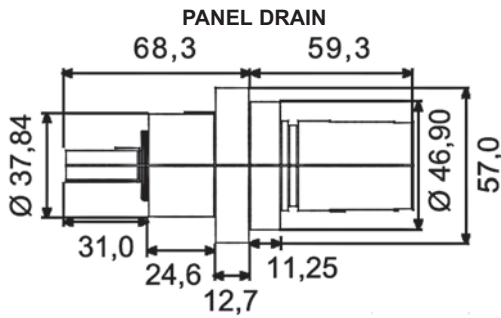
TECHNICAL DATA

Hex set screw	until 120 mm ²	Input protection (mated)	up to IP67
Max. current rating	400 Amp	Operating temperature rating	-30°C +125°C
Max. rated voltage to earth	2Kv ac / 3Kv dc	Protection against electric shock	IP2X
Min. flashover	9.5 Kv dc or ac peak	Insulation resistance	> 5 M ohms @ 500 Vdc
Flammability	flame retardant	Operating cycles	500 minimum

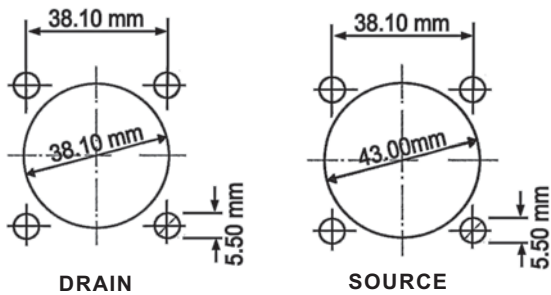


SPW POWER SYNTAX

DIMENSIONS



PANEL CUT OUT



FITS IN YOUR 19" RACK



RKQ400PSR

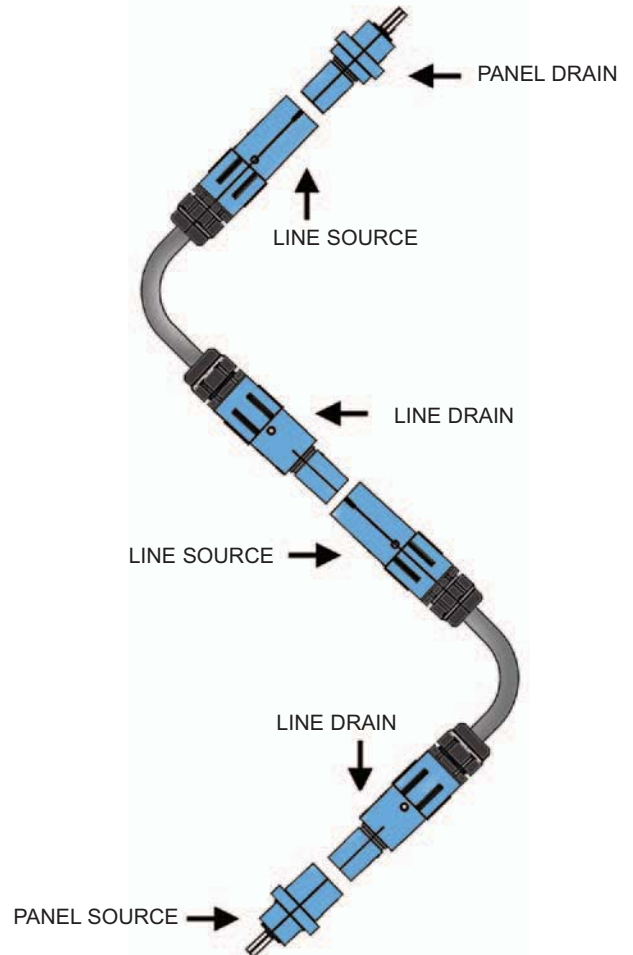
2 unit rack panel, steel 20/10 (482x88 mm) for single pole connectors SPW POWERSYNTAX panel source.



RKQ400PDR

2 unit rack panel, steel 20/10 (482x88 mm) for single pole connectors SPW POWERSYNTAX panel drain.

EXTENSION OF THE CABLE WITHOUT USING THE ADAPTER



SPW POWER SYNTAX

SYNTAX POWER CONNECTORS

LINE SOURCE

LINE DRAIN

PANEL SOURCE

PANEL DRAIN

LINE 1

SPW1LSM4P5



LINE 1 - Line Source

SPW1LDM4P5



LINE 1 - Line Drain

SPW1PSM4



LINE 1 - Panel Source

SPW1PDM4



LINE 1 - Panel Drain

LINE 2

SPW2LSN4P5



LINE 2 - Line Source

SPW2LDN4P5



LINE 2 - Line Drain

SPW2PSN4



LINE 2 - Panel Source

SPW2PDN4



LINE 2 - Panel Drain

LINE 3

SPW3LSG4P5



LINE 3 - Line Source

SPW3LDG4P5



LINE 3 - Line Drain

SPW3PSG4



LINE 3 - Panel Source

SPW3PDG4



LINE 3 - Panel Drain

NEUTRAL

SPWNLSB4P5



NEUTRAL - Line Source

SPWNLDB4P5



NEUTRAL - Line Drain

SPWNPSB4



NEUTRAL - Panel Source

SPWNPDB4



NEUTRAL - Panel Drain

GROUND

SPWGLSV4P5



GROUND - Line Source

SPWGLDV4P5



GROUND - Line Drain

SPWGPSV4



GROUND - Panel Source

SPWGPDV4



GROUND - Panel Drain

NOT AVAILABLE FOR U.S.A. MARKET

RETENTION & PROTECTION CABLE SYSTEM



CABLE GLAND

The standard strain relief supplied with all the SYNTAX® series is the PG thread. These glands provide positive strain relief and water tight sealing.

Technical characteristics:

- Approvals: UL E146370 - CSA LR-50370 - VDE 57086 - SEV 100989
- Protection: Up to 70 PSI
- Material: Polyamide - flame retardant, self-extinguishing nylon with neoprene bushing
- Rated Temperature: -20°C to 80°C (UL), up to +100°C Max
- Seal IP 68 (International Protection - highest grade), comparable to NEMA 6 classification
 - First digit (0-6): Dust Protection
 - Second digit (0-8): Water Protection
- Resistant to Salt water, weak acids, weak alcalis, alcohol, ester, ketones, ether, benzene, gas, mineral oil, animal and vegetable oils, gasoline, oil, grease, and common solvents.

SPIRAL FLEX VERSION

The SKINTOP® spiral versions are also available (PG 16 and 21 only).

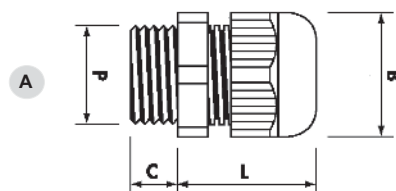
The spiral gland eliminates damage to cable cores through flexing of cable at the connector - cable interface, and therefore is commonly used with audio cable, where the small gauge of the signal wires can be easily damaged.

CABLE CLAMPS LOCATION

Pin connector	Type	Ø Cable	Standard	Flex	Lock nuts	Part N.
13	PG 11	4-10 mm	7ZST11	7ZST11M	PG 11	7ZST11D
19-25	PG 16	9-14 mm	7ZST16	7ZST16M	PG 16	7ZST16D
37-54	PG 21	13-18 mm	7ZST21	7ZST21M	PG 21	7ZST21D
72-85-101	PG 29	14-25 mm	7ZST29		PG 29	7ZST29D
100-150	PG 36	24-32 mm	7ZST36		PG 36	7ZST36D

OVERALL SIZE & CUT-OUT FIXING HOLES

Fig.	Part N.	PG	Cut-out Ø mm	B mm	C mm	L mm
A	7ZST11	11	19	22	8	30
	7ZST16	16	22.5	27	10	34
	7ZST21	21	29	33	11	38
	7ZST29	29	37	42	11	44
	7ZST36	36	47	53	8	56
B	7ZST11M	11	19	22	8	79
	7ZST16M	16	22.5	27	10	105
	7ZST21M	21	29	33	11	118



RETENTION & PROTECTION CABLE SYSTEM

METRIC

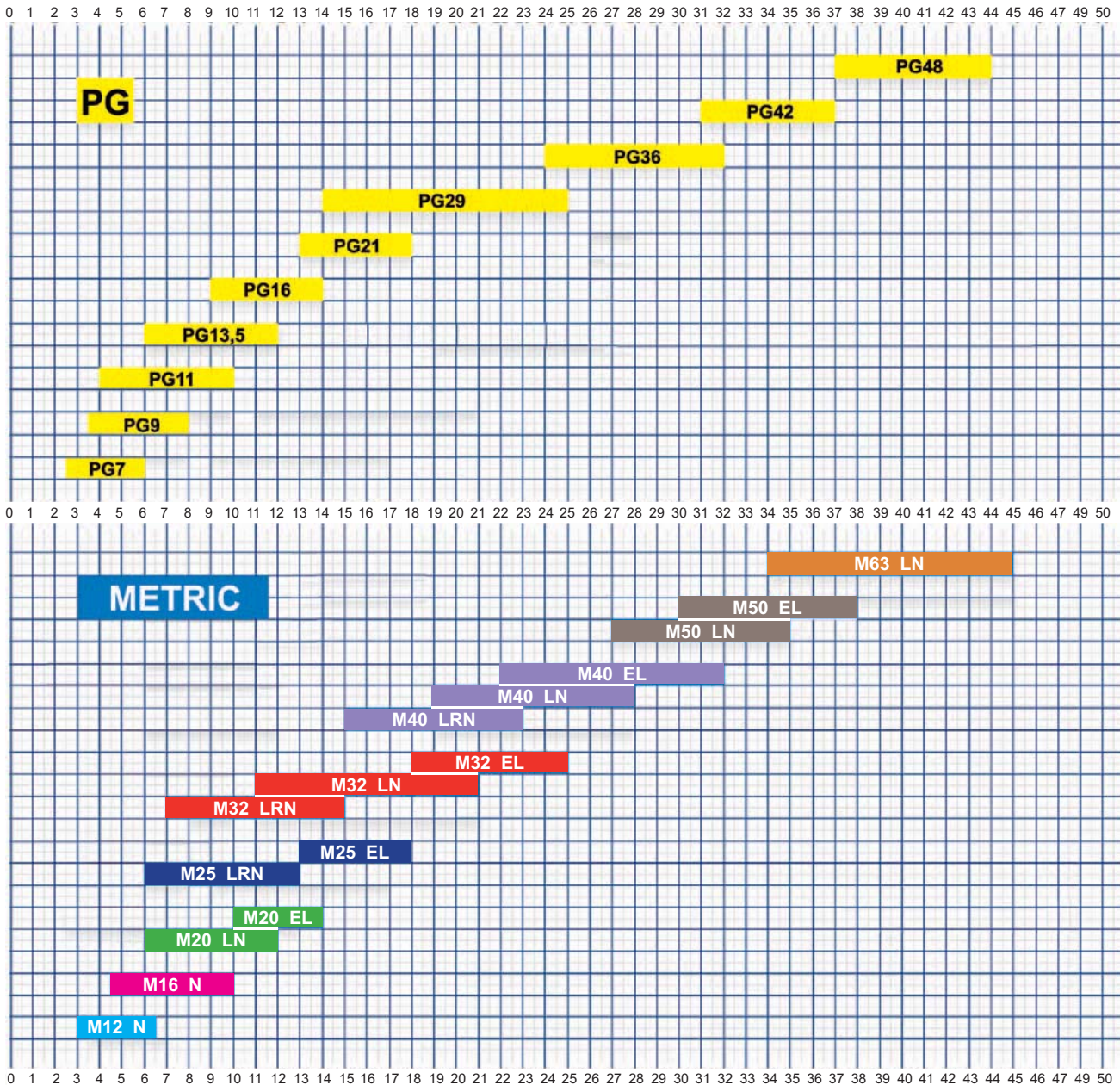


Sealing Nut designed for a perfect grip and effortless spanner tight seal. Neoprene Seal for a perfect, watertight seal IP68 - 5 bar. Blade System for optimal strain relief and cable protection combined with a generous clamping range. Multiple Threads for secure and rapid assembly. Built-in vibration protection system to eliminate loss of torque.

- Material Strong Nylon 6
- Colour Black

		Thread Size	Model type	Length of Thread	Clamping Range	Spanner Size	Part N.
Rif. Part N. Explanation of page 10	B	M 12 x 1.5	Normal	8.0	3.0 - 6.5	SW 15	7ZM12N
	E	M 16 x 1.5	Normal	8.0	4.5 - 10.0	SW 19	7ZM16N
	H	M 20 x 1.5	Normal	15.0	6.0 - 12.0	SW 24	7ZM20LN
	I	M 20 x 1.5	Oversize	15.0	10.0 - 14.0	SW 27	7ZM20EL
	J	M 25 x 1.5	Reduced	15.0	6.0 - 13.0	SW 30	7ZM25LRN
	L	M 25 x 1.5	Oversize	15.0	13.0 - 18.0	SW 33	7ZM25EL
	N	M 32 x 1.5	Reduced	15.0	7.0 - 15.0	SW 36	7ZM32LRN
	M	M 32 x 1.5	Normal	15.0	11.0 - 21.0	SW 36	7ZM32LN
	O	M 32 x 1.5	Oversize	15.0	18.0 - 25.0	SW 42	7ZM32EL
	Q	M 40 x 1.5	Reduced	18.0	15.0 - 23.0	SW 46	7ZM40LRN
	P	M 40 x 1.5	Normal	18.0	19.0 - 28.0	SW 46	7ZM40LN
	R	M 40 x 1.5	Oversize	18.0	22.0 - 32.0	SW 53	7ZM40EL
	T	M 50 x 1.5	Normal	18.0	27.0 - 35.0	SW 55	7ZM50LN
	U	M 50 x 1.5	Oversize	18.0	30.0 - 38.0	SW 60	7ZM50EL
W	M 63 x 1.5	Normal	18.0	34.0 - 45.0	SW 66	7ZM63LN	

CABLE DIMENSION TO BE USED WITH PG OR METRIC GLANDS (MM)



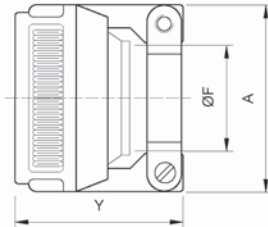
RETENTION & PROTECTION CABLE SYSTEM

METAL CABLE CLAMP



AVAILABLE ONLY WITH
SPECIAL BACK SHELL

Besides guaranteeing an excellent mechanical strain relief keeping the cable in the centre of the connector, these cable-clamps are provided with an internal conical rubber bushing ensuring waterproof protection IP67. The screws in stainless steel have elastic anti-vibration washers.



Cable clamp size	Clamping range ØF		Y	A
	Min	Max	Max	±0.2
16S - 16	8	13.58	32.3	28.1
18	9.6	15.9	35	31.7
20 - 22	11.3	19	35.7	37.3
24 - 28	15.5	23.8	39	43.2
32	23.4	31.8	44.8	54
36	25.4	35	52	57.8
40	30	41.3	52.3	63.4

BASKET WEAVE STRAIN RELIEF



Part N.	PG	Cable Range	SYNTAX® Cables fit
7ZK11A952B110	11	Ø 9.52 to 11.09 mm	7YPR04SX
7ZK16A111B127	16	Ø 11.13 to 12.70 mm	7YPR08SX
7ZK21A111B158	21	Ø 11.10 to 15.87 mm	7YPR12SX
7ZK21A143B174	21	Ø 14.28 to 17.45 mm	7YPR16SX
7ZK21A159B190	21	Ø 15.88 to 19.05 mm	7YPR16SX
7ZK29A175B222	29	Ø 17.47 to 22.22 mm	7YPR24SX
7ZK29A222B254	29	Ø 22.22 to 25.40 mm	7YPR32SX
			7YPR40SX
7ZK36A254B285	36	Ø 25.40 to 28.57 mm	7YPR48SX

These cable grips, sometimes referred to as "Basket Weave", consist of a woven steel wire mesh and watertight gland nut assembly. The key benefits of this system are:

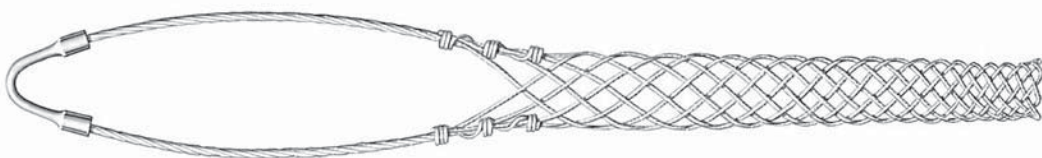
- The design of the weave is such that it is virtually impossible for a cable to be pulled out of the sock through lateral force; the more the cable is pulled the tighter the grip will become.
- The anti bend characteristics of the weave sock, eliminate damage to cable through flexing.

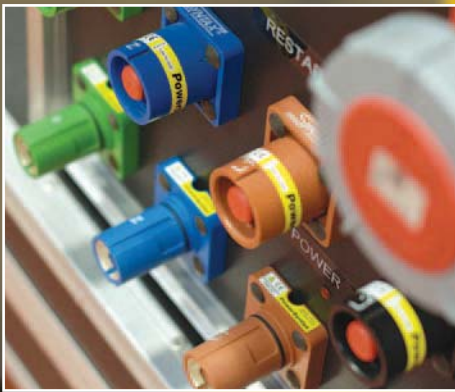
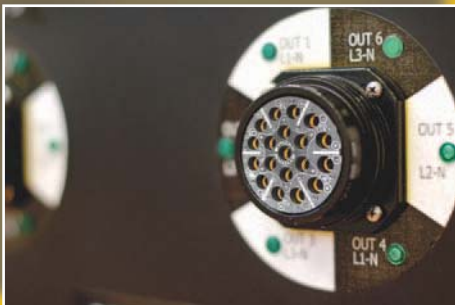
This design of grip is mainly used with large channel count systems, where the added protection of the valuable Multicore is a warranted feature. However versions are available for virtually any cable or connector configuration.

HANGER GRIP

These heavy duty wire mesh hanger are designed to ensure the right retention of the cable without any sliding and scraping of the external jacket.

Part N.	Cable O.D. Min.	Cable O.D. Max
7ZHG1	12 mm	16 mm
7ZHG2	16 mm	18 mm
7ZHG3	19 mm	21 mm





SYNTAX® CABLE

8 JACKETED PAIRS - OFC EXTRAFLEX MULTICORE - NOISELESS

SHIELD - SUBZERO USE MADE IN ITALY

EXTRAFLEX MULTICORE - NOISELESS 100% FOIL SHIELD



SHD
ROADLINE
SERIES
MULTIPIN
CONNECTORS

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 waterproof 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

SHD HEAVY DUTY ROADLINE

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 (mm ²)	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

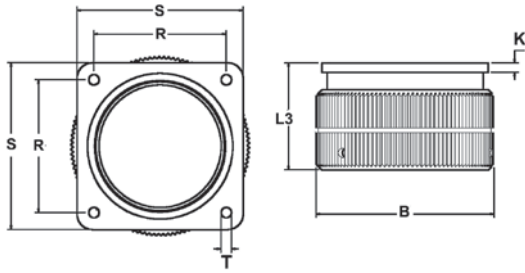
CONNECTORS RATING

Contacts number	Operating voltage		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

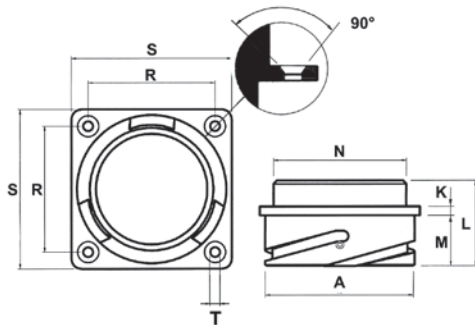
CUT-OUT DIMENSIONS

PANEL FEMALE



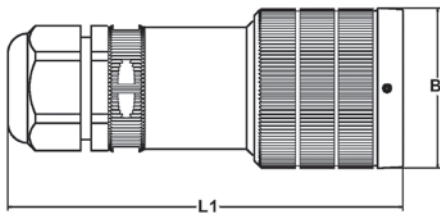
N° pin	shell size	BØ Max	L3	K	R	S	T
			Max	±0.2	±0.1	±0.3	H13
13 - 19	20	43.0	38.1	4	29.4	38.0	3.2
25	24	50.4	40.6	4	34.9	44.5	3.7
37	28	56.0	40.8	4	39.7	50.8	3.7
54	32	63.0	43.7	4	44.45	57.0	4.4
85-100-150	40	75.0	44.8	4	55.6	69.8	4.4

PANEL MALE



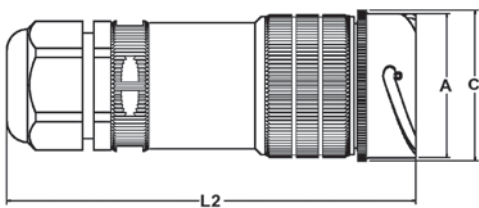
N° pin	shell size	AØ	K	L	M	ØN	R	S	T
		+0/-0.15	±0.2	±0.3	±0.4/-0	Max	±0.1	±0.3	H13
13 - 19	20	34.2	4	34.5	19	31.75	29.4	38.1	3.2
25	24	40.9	4	35.7	20.6	35.3	34.9	44.5	3.7
37	28	46.7	4	35.7	20.6	41.4	39.7	50.8	3.7
54	32	53.4	4	37.3	22.2	47.8	44.5	57	4.3
85-100-150	40	65.5	4	37.3	22.2	59	55.6	69.8	4.3

INLINE FEMALE



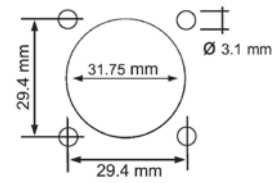
N° pin	shell size	BØ Max	L1 Max	Cable clamp Metric	Ø cable Min.-Max.
13 - 19	20	43.0	153	M 20	6 - 14
25	24	50.4	153	M 25	6 - 18
37	28	56.0	158	M 32	7 - 25
54	32	63.0	163	M 32	7 - 25
85 - 100 - 150	40	75.0	186	M 40	15 - 32

INLINE MALE

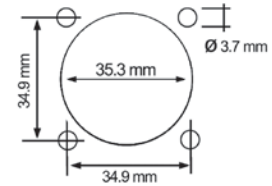


N° pin	shell size	AØ Max	ØC	L2 Max	Cable clamp Metric	Ø cable Min.-Max.
		+0/-0.15	Max			
13 - 19	20	40.0	43	142	M 20	6 - 14
25	24	40.9	44	154	M 25	6 - 18
37	28	46.7	50	158	M 32	7 - 25
54	32	53.4	56	164	M 32	7 - 25
85 - 100 - 150	40	65.5	69	166	M 40	15 - 32

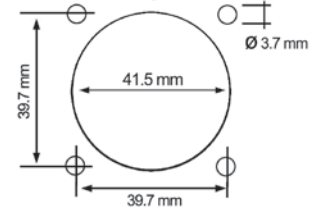
13/19 pin



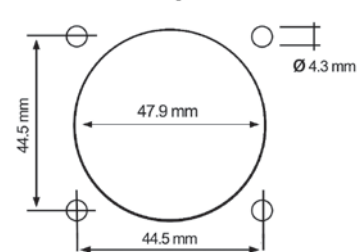
25 pin



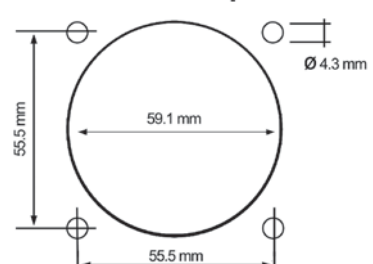
37 pin



54 pin



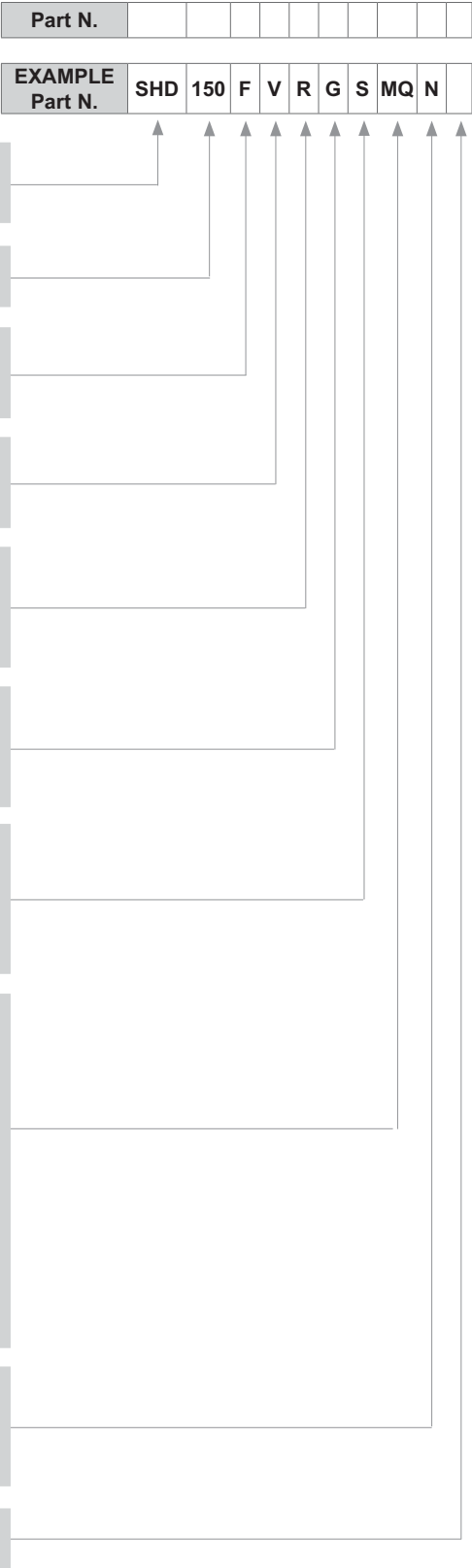
85/100/150 pin



PART NUMBER EXPLANATION

Part N.									
EXAMPLE Part N.	SHD	150	F	V	R	G	S	MQ	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 TERMINATION		
C = crimp		C
S = solder		S
P = pcb		P
N = no contact		N
CABLE CLAMP RANGE - METRIC		
Thread Size	Clamping Range (mm)	Pins
M 20 x 1.5	6 - 12	13 - 19
M 20 x 1.5	10 - 14	13 - 19
M 25 x 1.5	6 - 13	25
M 25 x 1.5	13 - 18	25
M 32 x 1.5	7 - 15	37 - 54
M 32 x 1.5	11 - 21	37 - 54
M 32 x 1.5	18 - 25	37 - 54
M 40 x 1.5	15 - 23	85 - 100 - 150
M 40 x 1.5	19 - 28	85 - 100 - 150
M 40 x 1.5	22 - 32	85 - 100 - 150
		MH
		MI
		MJ
		ML
		MN
		MM
		MO
		MQ
		MP
		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



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SYNTAX[®]
is a VALENTINI Trade Mark





SVK
& SVS
AUDIO
SERIES
MULTIPIN
CONNECTORS

syntax
no compromise

INLINE FEMALE



The new **SYNTAX® SVK** audio series has been conceived and manufactured to set a higher standard for studio applications. Its IP67 waterproof rating makes it perfectly suitable also for outdoor applications.

SVS Slim High-Density series is also available (72 and 101 pin configurations).

SVK audio and **SVS** Slim High Density series are compliant with military standard Mil C 5015 & VG 95234.

Compared to our previous standard audio series, the new SVK has been enhanced to achieve a higher level of robustness and durability.



Special aluminium alloy shell with high-resistance black finish.

Pic. 1 - Marked knurling on the whole circumference of locking-ring for optimal grip and 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 backshell for easier wiring.

Increased size of Coupling roller pins on locking-ring for more durability.

INLINE MALE



Many of its features have been borrowed from the bigger SHD Roadline series, such as a thicker locking ring with deeper knurling for maximum ease of coupling and a thicker backshell. The new aluminium locking ring also features coupling roller pins and, just like on the SHD series, the locking ring is designed in such a way to prevent possible ovalization of the insert due to accidental blows. Protective dust caps are available. They are provided with a special high-resistance cable lacing made up of seven stainless strands, covered by an anti-abrasion Teflon black tube.

SVK audio is available in 13, 19, 25, 37, 54, 85, 100 and 150 pin configurations.

SVS Slim High-Density series is available in 72 and 101 pin configurations.

DUST CAP FOR IP67 WHEN MATED

Version for
female
connector



Version for
male
connector













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
						
20	72/101 pin	Gold	SVKP20GFC	Female	SVKP20GMC	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

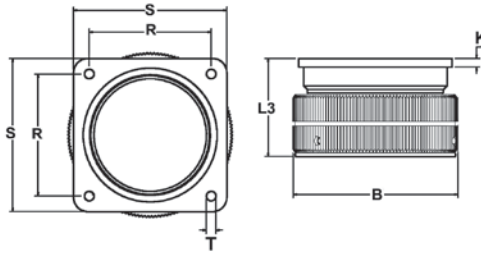
Size	Max Current	Rated Current	Max Voltage Drop	Wire section (mm ²)	Wire section AWG
16	22 A	13 A	74 mv	1+1,5	18+16
18	10 A	7,5 A	83 mv	0,15+0,6	26+20
20	7,5 A	7,5 A	83 mv	0,15+0,3	26+22

CONNECTORS RATING

Contacts number	Operating voltage		Test voltage	Min. Flashover
	Vdc	Vac	Vac	Vac
13/19/25/150 - 72/101	250	200	1000	1400
37/54/85/100	700	500	2000	2800

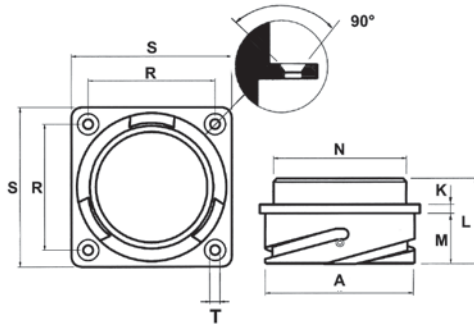
OVERALL SIZE

PANEL FEMALE



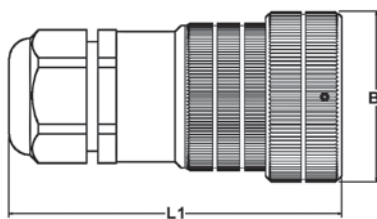
N° pin	shell size	BØ Max	L3	K	R	S	T
			Max	±0.2	±0.1	±0.3	H13
13 - 19	20	43.0	38.1	4	29.4	38.0	3.2
25	24	50.4	40.6	4	34.9	44.5	3.7
37-72	28	56.0	40.8	4	39.7	50.8	3.7
54-101	32	63.0	43.7	4	44.45	57.0	4.4
85-100-150	40	75.0	44.8	4	55.6	69.8	4.4

PANEL MALE



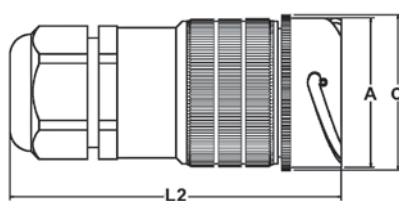
N° pin	shell size	AØ	K	L	M	ØN	R	S	T
		+0/-0.15	±0.2	±0.3	±0.4/-0	Max	±0.1	±0.3	H13
13 - 19	20	34.2	4	34.5	19	31.75	29.4	38.1	3.2
25	24	40.9	4	35.7	20.6	35.3	34.9	44.5	3.7
37-72	28	46.7	4	35.7	20.6	41.4	39.7	50.8	3.7
54-101	32	53.4	4	37.3	22.2	47.8	44.5	57	4.3
85-100-150	40	65.5	4	37.3	22.2	59	55.6	69.8	4.3

INLINE FEMALE



N° pin	shell size	BØ Max	L1 Max	Cable clamp Metric	Ø cable Min.-Max.
13 - 19	20	43.0	103	M 20	6 - 14
25	24	50.4	108	M 25	6 - 18
37-72	28	56.0	116	M 32	7 - 25
54-101	32	63.0	121	M 32	7 - 25
85 - 100 - 150	40	75.0	147	M 40	15 - 32

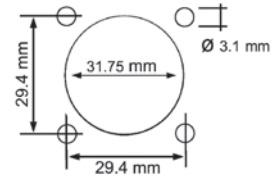
INLINE MALE



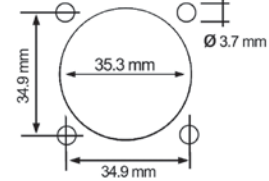
N° pin	shell size	AØ Max	ØC	L2 Max	Cable clamp Metric	Ø cable Min.-Max.
		+0/-0.15	Max			
13 - 19	20	40.0	43	102	M 20	6 - 14
25	24	40.9	44	109	M 25	6 - 18
37-72	28	46.7	50	116	M 32	7 - 25
54-101	32	53.4	56	122	M 32	7 - 25
85 - 100 - 150	40	65.5	69	147	M 40	15 - 32

CUT-OUT DIMENSIONS

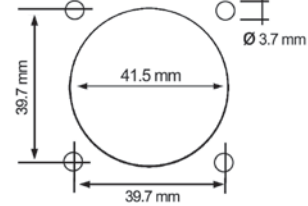
13/19 pin



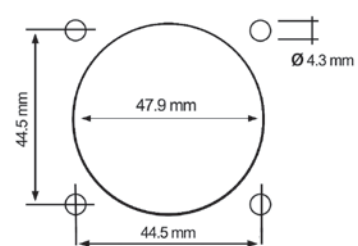
25 pin



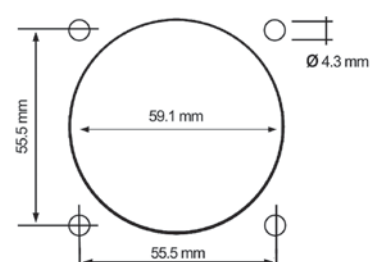
37/72 pin



54/101 pin

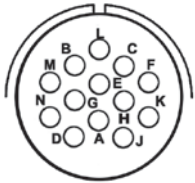


85/100/150 pin

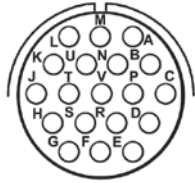


INSERT LAYOUTS AND WIRING LIST

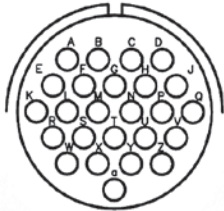
FRONT VIEW OF MALE INSERT



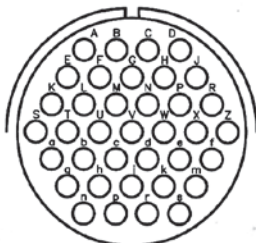
13 pin / size 20



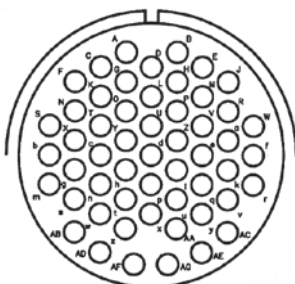
19 pin / size 20



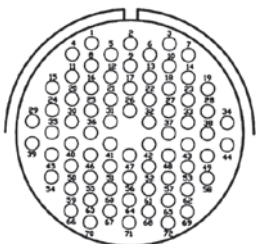
25 pin / size 24



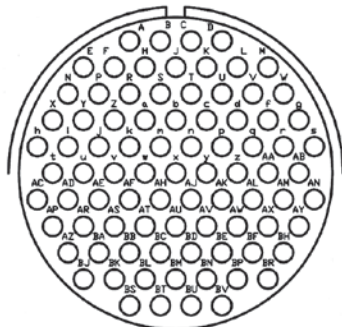
37 pin / size 28



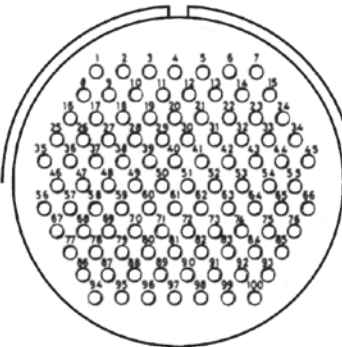
54 pin / size 32



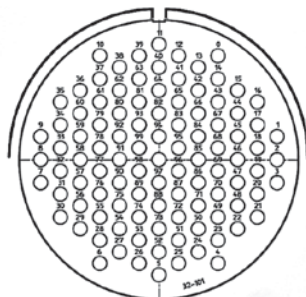
72 pin / size 28



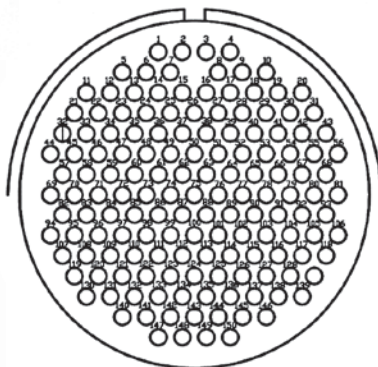
85 pin / size 40



100 pin / size 40



101 pin / size 32



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	i	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

72 pin - 24 channels							
Ch	Hot	Cold	Gnd	Ch	Hot	Cold	Gnd
No.	+	-	⏏	No.	+	-	⏏
1	3	2	1	13	44	38	37
2	5	6	7	14	41	42	43
3	9	8	4	15	45	39	40
4	13	14	10	16	48	47	46
5	15	11	12	17	52	53	49
6	18	17	16	18	54	50	51
7	22	23	19	19	57	56	55
8	24	20	21	20	61	62	58
9	27	26	25	21	63	59	60
10	33	34	28	22	69	65	64
11	30	31	32	23	66	67	68
12	36	35	29	24	72	71	70

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

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

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

PART NUMBER EXPLANATION

Part N.

EXAMPLE Part N. **SVK 150 F V R G S MP N**

CONNECTOR SERIES	
SVK = (13 - 19 - 25 - 37 - 54 - 85 - 100 - 150 pin) Back shell: standard. Locking ring: ergonomic and rubber coated	SVK
SVS = (72 - 101 PIN) slim series, high density. Back shell: standard. Locking ring: ergonomic and rubber coated	SVS

CONTACTS NUMBER	
013 - 019 - 025 - 037 - 054 - 072 - 085 - 100 - 101 - 150	...

CONTACT TYPE	
M = male	M
F = female	F

CONNECTOR TYPE	
V = inline	V
P = panel	P

COUPLING TERMINATION	
- = with ramps	-
H = ergonomic locking ring with improved thickness and stronger roller pins	H
R = rubber coated locking ring	R

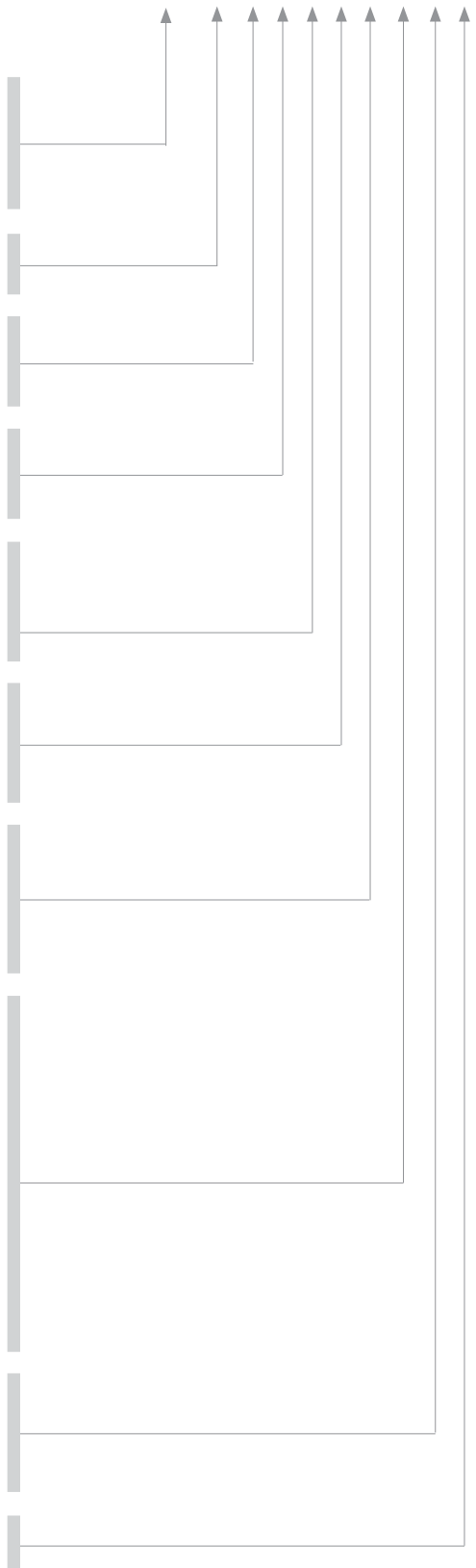
CONTACT PLATING TYPE	
S = silver (13 - 19 - 25 - 37 - 54 - 85 pin)	S
G = gold (13 - 19 - 25 - 37 - 54 - 72 - 85 - 100 - 101 - 150 pin)	G
N = no contact	N

CONTACT TERMINATION	
C = crimp	C
S = solder	S
P = pcb	P
N = no contact	N

CABLE CLAMP RANGE - METRIC				
Thread Size	Clamping Range (mm)	SVK (pins)	SVS (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	72 - 101	MN
M 32 x 1.5	11 - 21	37 - 54	72 - 101	MM
M 32 x 1.5	18 - 25	37 - 54	72 - 101	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

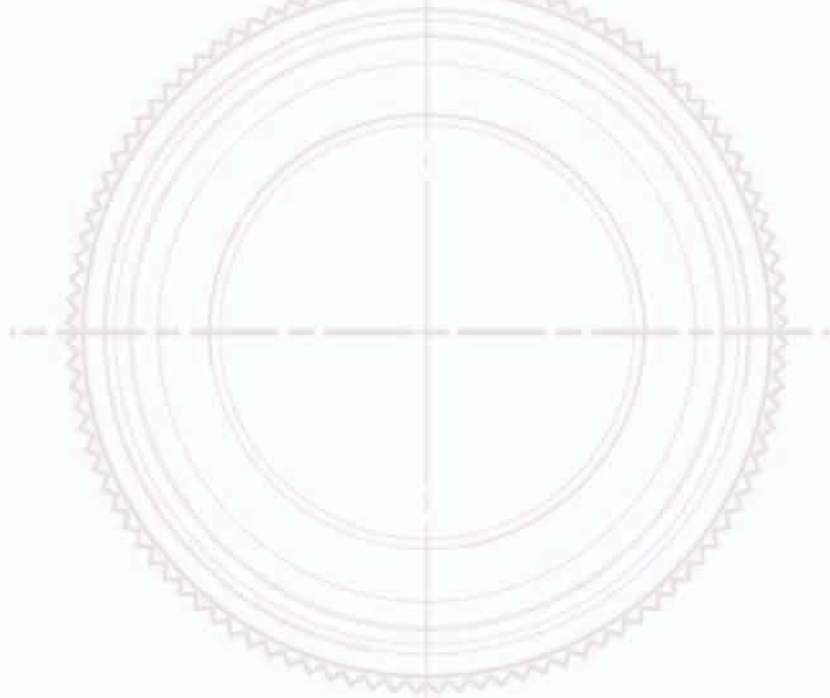
SPECIAL VERSION (upon request)	
For example: T = inserted solder termination contacts	T



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SSX
19 PIN
LIGHTING
CONNECTOR
NEW SERIES

syntax
no compromise

SSX 19 PIN LIGHTING SERIES



The **SYNTAX® SSX** series, designed for professional lighting applications and perfectly compatible with standard Socapex 419 series, is extremely robust being made of thick wall construction machined aluminium alloy, with a hard black anodized finish or black painted finish. The contacts insert is chloroprene rubber, which enables the use of removable contacts, either crimp or solder version. The unit is completely IP67 watertight when mated. Electrical safety and compliance is guaranteed by internal insulation of the shells, obtained through a safety insulating sleeve to prevent electric shock, as well as "first make last break" ground contacts. Grounding rings allow bussing of the ground contacts. Locking rings and backshells are designed for easy handling.

- Ingress protection: IP67-IEC 529 norms
- Salt atmosphere resistance: 96 h IEC 68-21-11
- Operating temperature: -55°C to +125°C
- Shell material: machined aluminium alloy
- Finish: anodized or black painted
- Chloroprene rubber insert
- Cable gland retention: Metric M 40
- Spider cable gland retention: Metric M 50

CONTACTS

The male and female are machined by high conductive copper alloy and are gold or silver plated finish.



CRIMP

Voltage rating AC	Voltage rating DC	Max current	Rated current	Potential drop	Dielectric Strength	
					Test voltage	Min. Flashover
700 V	500 V	41 Amps	23 Amps	63 mV	2000 Vac RMS	2800 Vac RMS



GOLD Male



SILVER Male



GOLD Female



SILVER Female

SOLDER

Voltage rating AC	Voltage rating DC	Max current	Rated current	Potential drop	Dielectric Strength	
					Test voltage	Min. Flashover
700 V	500 V	41 Amps	23 Amps	63 mV	2000 Vac RMS	2800 Vac RMS



GOLD Male



SILVER Male



GOLD Female



SILVER Female



"Ground first" connection

In compliance to electrical safety the 7 central pins are moved forward and allows "first make last break" ground contact.

GROUND CONNECTION



Common ground (OPTIONAL) Part N.: SSXCMGR

Two disks are easily fitted to the central ring of six contacts, thereby creating a common ground ring.



Shell grounding SPECIAL VERSION upon request
Body shell grounding contact guarantee full safety.

SSX 19 PIN LIGHTING SERIES



METRIC CABLE GLANDS FOR SSX SERIES

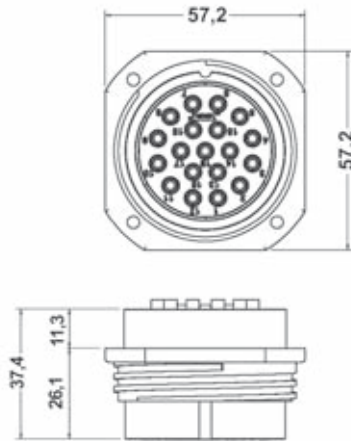
1 CONNECTOR AND 3 CABLE GLANDS OPTIONS ON THE SAME BACKSHELL

Cable Clamp - Metric (dimensions in mm)				
V (thread size)	Ø S (clamping range)	K	Z	L
M 40 x 1.5	15 - 23	46	10	52
M 40 x 1.5	19 - 28	46	10	52
M 40 x 1.5	22 - 32	46	10	52

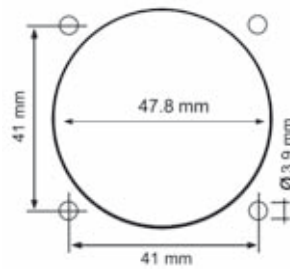
SSX 19 PIN LIGHTING SERIES



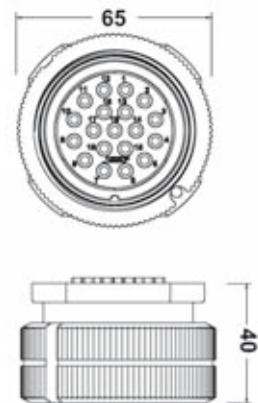
PANEL FEMALE



OVERALL SIZE

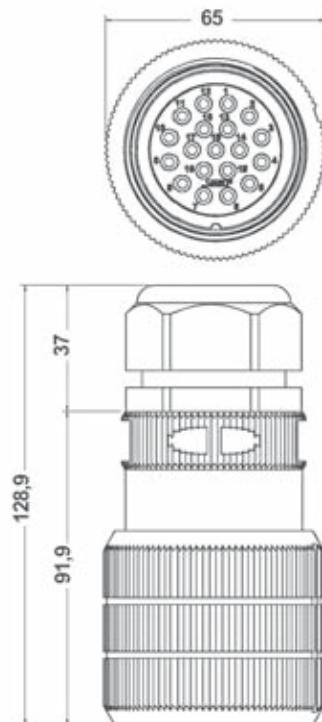


PANEL MALE

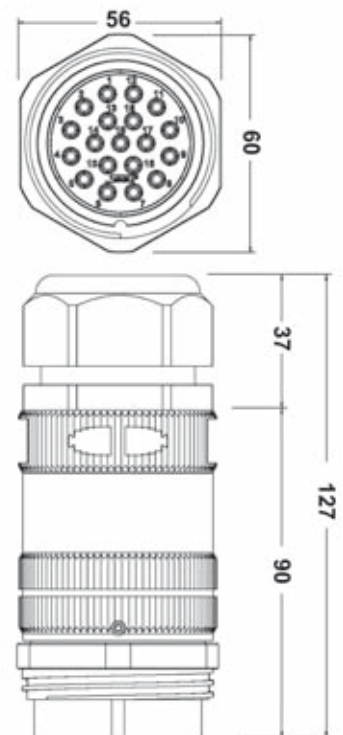


PANEL CUT-OUT DIMENSIONS

INLINE MALE



INLINE FEMALE



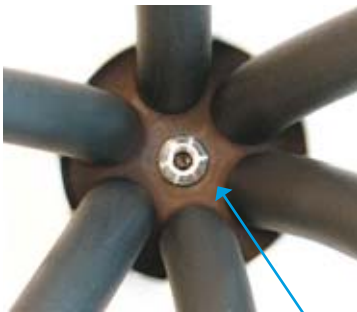
SSX 19 PIN - SPIDER



SYNTAX® SSX SPIDER 19 pin connector is an alternative version of the SSX 19 pin standard, studied to get simple managing of break-in and break-out operations.

The special 6-way rubber grommet, fitted in the cable gland terminal, guarantees optimal cable retention and a perfect watertight seal IP67 necessary for outdoor use.

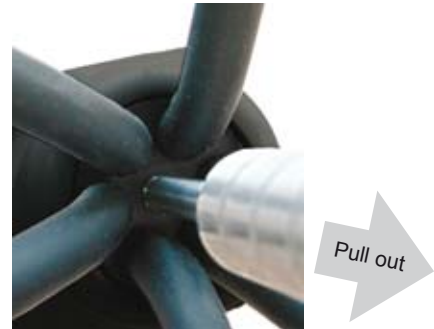
Supplied with 6 **SYNTAX® MAINFLEX** cable leads, it represents the best solution to meet the requirements as for handling and waterproof IP67 protection.



Moulded nut to insert/pull out the rubber grommet, using the removal tool



Removal tool



Pull out



SSX 19 PIN FEATURES for ASSEMBLING and USAGE

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. 1 - 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-scratch Teflon black tube provided with standard dust cap.
- Pic. 2 - Machined housings (2a) for customized wrench (Part N. SVKT-KSW) and marked knurl ridges (2b) for strap wrench (Part N. SVKT-KSTRAP)
- Pic. 3 - Anti-twisting grub screw to prevent accidental unscrewing of the corrector's backshell when mating female and male connectors.
- Pic. 4 - The inline female version now features an external hex to thighten the connector's shell and backshell once wiring operations have been carried out.



SSX 19 PIN Lighting Cables

SP19M6FBL- 010 (1 mt) - 015 (1,5 mt) - 020 (2 mt)



SPIDER SPLITTER

Assembled list:

- | | | |
|-----------|-------------|--------------------------------------|
| n.1 P/N : | SSX19MVGCM5 | Syntax SSX19 male |
| n.6 P/N : | Y213-6X | CEE17 16A 230V 3P female |
| mt P/N : | 7ZF0325 | Syntax Cable 3 x 2.5 mm ² |

SP6M19FBL- 010 (1 mt) - 015 (1,5 mt) - 020 (2 mt)



SPIDER SPLITTER

Assembled list:

- | | | |
|-----------|--------------|--------------------------------------|
| n.1 P/N : | SSX19FV-GCM5 | Syntax SSX19 female |
| n.6 P/N : | Y013-6X | CEE17 16A 230V 3P male |
| mt P/N : | 7ZF0325 | Syntax Cable 3 x 2.5 mm ² |

EC19P25-L...



EXTENSION CABLE

Assembled list:

- | | | |
|-----------|--------------|-------------------------------------|
| 1 x P/N : | SSX19MVGCP5N | Syntax SSX19 male |
| 1 x P/N : | SSX19FV-GCM5 | Syntax SSX19 female |
| mt P/N : | 7ZF1925 | Syntax Cable 19x2.5 mm ² |

- | | |
|--------------|---------------------------|
| EC19P25-L10 | 10 mt cable lenght |
| EC19P25-L20 | 20 mt cable lenght |
| EC19P25-L... | cable lenght upon request |

PART NUMBER EXPLANATION



Part N.

EXAMPLE Part N. **SSX 19 F V D G S MP N T 1**

CONNECTOR SERIES	
SSX = 19 pin standard series	SSX

CONTACTS NUMBER	
19	19

CONTACT TYPE	
M = male	M
F = female	F

CONNECTOR TYPE	
V = inline	V
P = panel	P

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

CONTACT PLATING TYPE	
G = gold	G
S = silver	S
N = no contact	N

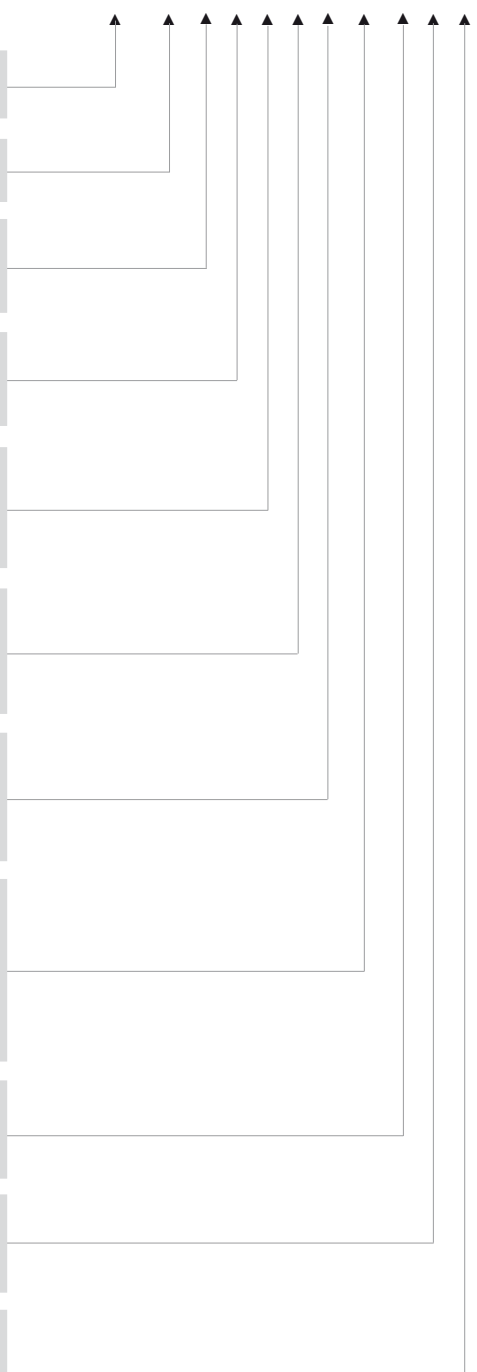
CONTACT TERMINATION	
C = crimp	C
S = solder	S
N = no contact	N

CABLE CLAMP RANGE - METRIC		
Thread Size	Clamping Range (mm)	
M 40 x 1.5	15 - 23	MQ
M 40 x 1.5	19 - 28	MP
M 40 x 1.5	22 - 32	MR
SPIDER: Grommet M 50 - 6 hole Ø 9 to 11,7 mm		MS

CABLE CLAMP TYPE	
N = normal	N
R = strain relief	R

SPECIAL VERSION (upon request)	
For example: T = inserted solder termination contacts	T
U = shell grounding	U

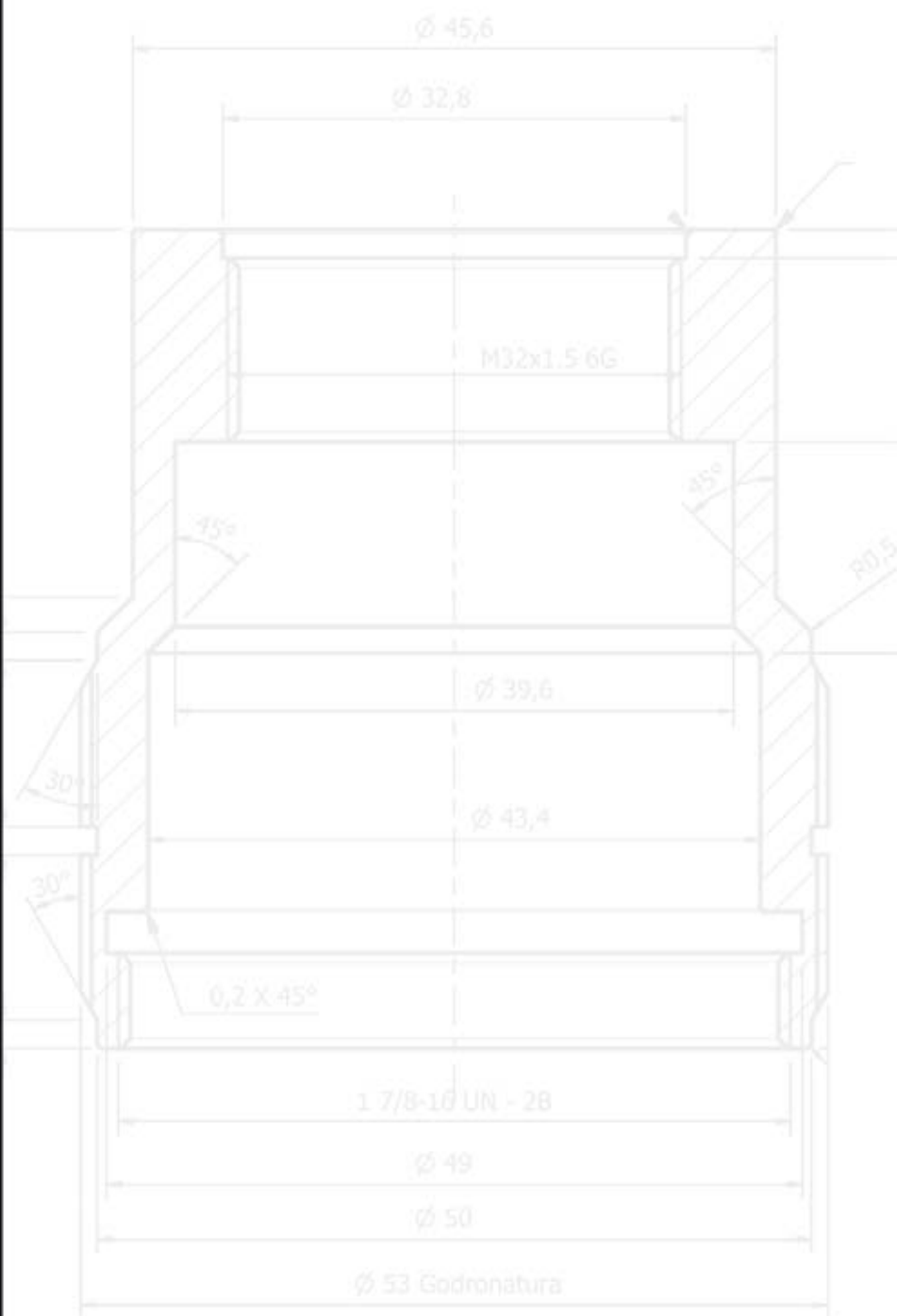
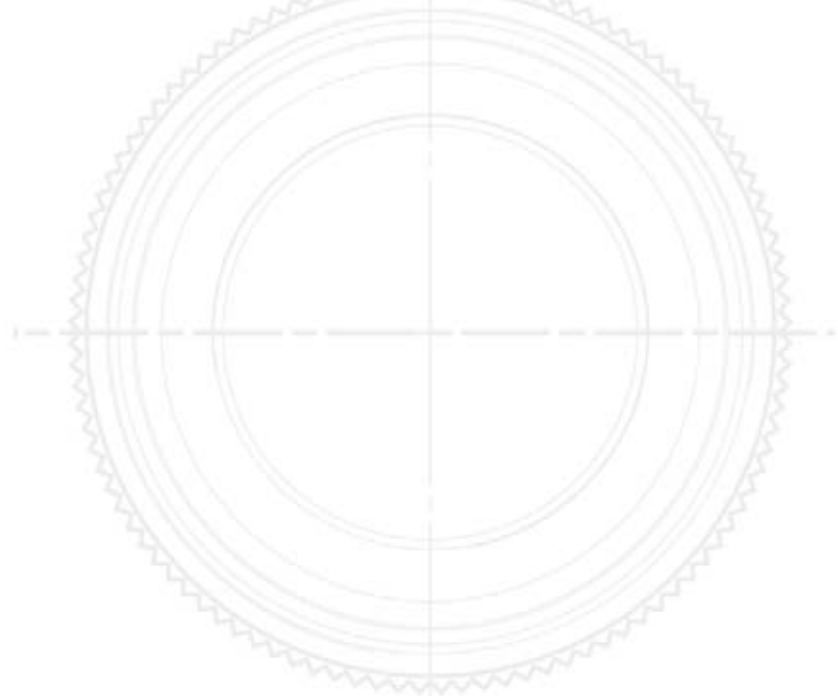
EXTERNAL FINISH	
_ = black painted	_
1 = black anodized	1
Special versions upon request	



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SPX & SPZ

POWERSYNTAX CONNECTOR SERIES

syntax
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SPX & SPZ PowerSyntax

SPX and SPZ are the new PowerSyntax series of single pole electrical connectors. PowerSyntax are specifically suited for the electrical supply management from 650A in continuous work up to 750A for brief periods (see technical data table at the bottom of this page). Although fully intermateable with the original (and all the previous Syntax versions), the new SPX PowerSyntax features a number of mechanical and technical enhancements which have been designed and incorporated to redefine the standards on this category of connectors as for safety, reliability, ease of handling and robustness in the harshest conditions.

TYPICAL APPLICATIONS

- Electrical power systems
- Power distribution
- Outdoor concerts and sporting events
- Outdoor broadcasting
- Theatres
- Mobile generators
- Industrial vehicles
- Railway installations
- Military installations
- Load banks
- Backup power systems
- Electrical power supply companies
- Heavy industry







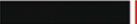


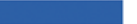










GENERAL FEATURES

- Intermateable with other versions
- CE compliant
- EN/ESI compliant
- Contact retained within the thermoplastic housing with a flame-retardant UL94-VO plastic pin. This method ensures quick assembling and disassembling. No special extracting tools are needed
- Heavy-duty ergonomic hand grip, with sides specifically designed for easy pushing/pulling when mating/unmating
- Metric thread M40 cable gland IP68 watertight compliant with EN/CE, adapters available for cables over 32 mm diameter
- Screw and Crimp terminals to facilitate cables from 25mm² to 300 mm²
- Mechanically keyed to prevent mating errors
- Permanent marking to identify phase/line and safety information embossed on connector's body
- Multipoint contact area
- Silver Plated Contacts
- High Impact bodies
- EN harmonized color coding (Europe). Also available in UK, Australia and USA color codes

TECHNICAL DATA

Number of contacts:	single pole
Maximum continuous current rating with 300 mm ² cable:	650A
Maximum current with 300 mm ² cable:	750A
Test Voltage:	4500 V AC
Short Circuit Rating:	35.5kA peak
Insulation Resistance:	>5000 MOhm @500V
IP rating when mated:	IP67
Protection against electric shock:	IP2X
Contact resistance:	<0.1 mOhm
Housing material:	high temperature thermoplastic
Flammability:	UL94 V0
Coupling method:	bayonet lock with secondary locking pin
Number of mating cycles:	>500
Operating temperature:	-30°C/+125°C

IDENTIFICATION COLOR CODES

	GROUND	NEUTRAL	LINE 1	LINE 2	LINE 3
EUROPE					
UK					
AUSTRALIA					
U.S.A.					

EUROPEAN SERIES EXAMPLE

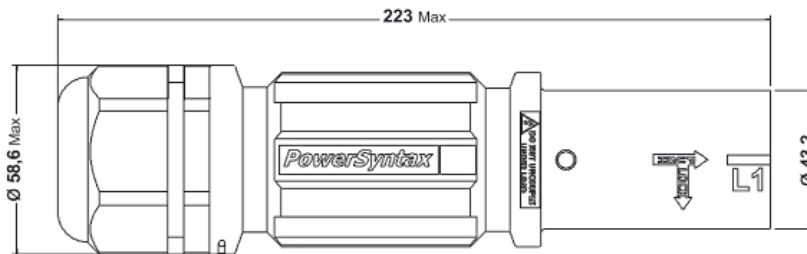
	LINE SOURCE	LINE DRAIN	PANEL SOURCE	PANEL DRAIN
LINE 1				
	LINE 1 - Line Source	LINE 1 - Line Drain	LINE 1 - Panel Source	LINE 1 - Panel Drain
LINE 2				
	LINE 2 - Line Source	LINE 2 - Line Drain	LINE 2 - Panel Source	LINE 2 - Panel Drain
LINE 3				
	LINE 3 - Line Source	LINE 3 - Line Drain	LINE 3 - Panel Source	LINE 3 - Panel Drain
NEUTRAL				
	NEUTRAL - Line Source	NEUTRAL - Line Drain	NEUTRAL - Panel Source	NEUTRAL - Panel Drain
GROUND				
	GROUND - Line Source	GROUND - Line Drain	GROUND - Panel Source	GROUND - Panel Drain

SPX PowerSyntax Standard size



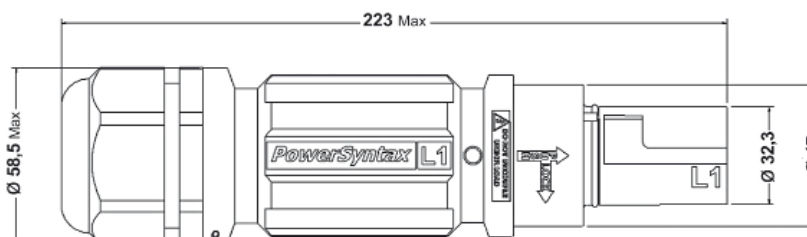
LINE SOURCE

Innovative ergonomic hand grip for easy handling.
Finger protection IP2X to prevent accidental touching of live contact parts.
Contact to housing retention through flame-retardant UL94-VO plastic cotter pin.
No special tools required for assembling.
Special ergonomic Release-key (supplied separately) for the releasing of the secondary locking pin.
Set Screw termination for cables 25 mm² -150 mm²
Crimp termination for cables up to 300 mm²
Watertight IP68 plastic cable gland M40 for cable strain relief retention range 15 - 32 mm.
Permanent markings to identify phase/line and safety information are embossed on connector's shell.
No additional information sticker is applied.
400A and 650A versions available.



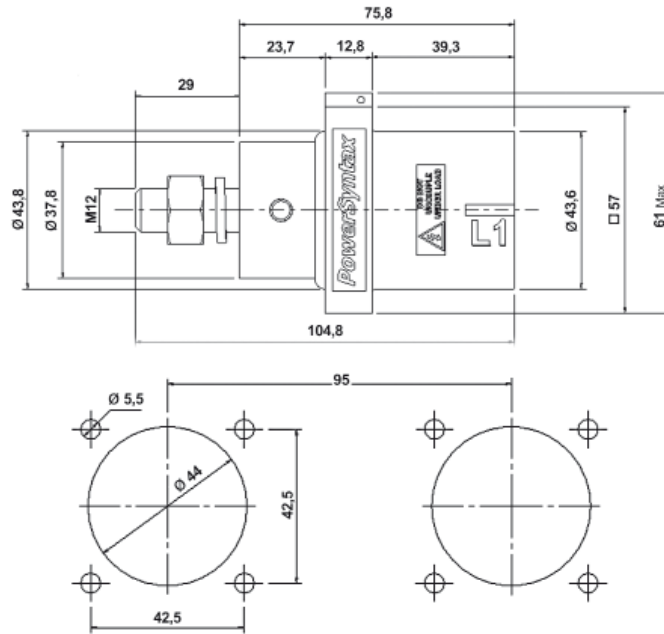
LINE DRAIN

Innovative ergonomic hand grip for easy handling.
Finger protection IP2X to prevent accidental touching of live contact parts.
Contact to housing retention through flame-retardant UL94-VO plastic cotter pin.
No special tools are required for assembling.
Bayonet lock with secondary locking pin.
Special ergonomic Release-key (supplied separately) for the releasing of the secondary locking pin.
Set Screw termination for cables 25mm² -150 mm²
Crimp termination for cables up to 300 mm²
Watertight IP68 plastic cable gland M40 for cable strain relief retention range 15 - 32 mm.
Permanent markings to identify phase/line and safety information are embossed on connector's shell.
No additional information sticker is applied.
400A and 650A versions available.



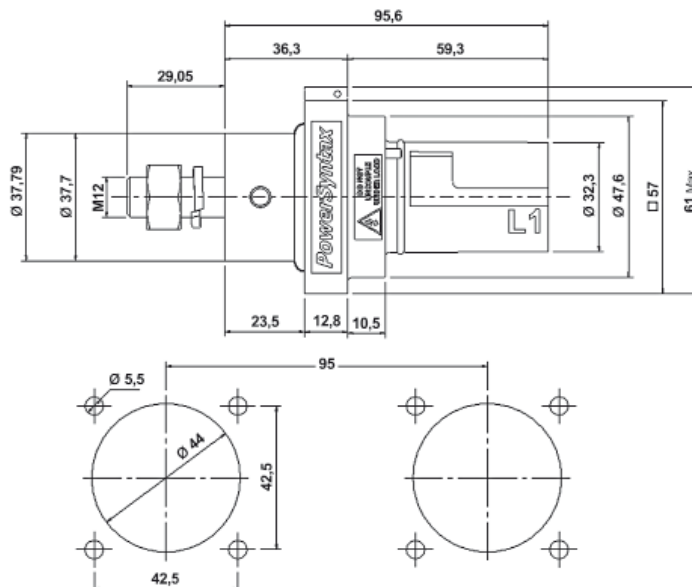
PANEL SOURCE

Specific housing for protection cap lacing moulded on the plastic body of the flange.
 Finger protection IP2X to prevent accidental touching of live contact parts.
 Contact to housing retention through flame-retardant UL94-VO plastic cotter pin. No special tools are required for assembling.
 Special ergonomic Release-key (supplied separately) for the releasing of the secondary locking pin.
 Front or rear panel mount. M12 Thread for cable attachment.
 Permanent markings to identify phase/line and safety information are embossed on connector's shell. No additional information sticker is applied.
 400A and 650A versions available.

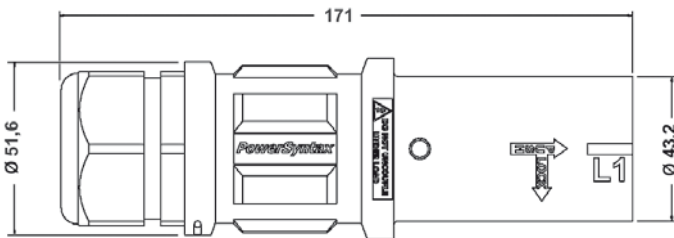


PANEL DRAIN

Specific housing for protection cap lacing moulded on the plastic body of the flange.
 Finger protection IP2X to prevent accidental touching of live contact parts.
 Contact to housing retention through flame-retardant UL94-VO plastic cotter pin. No special tools are required for assembling.
 Bayonet lock with secondary locking pin.
 Special ergonomic Release-key (supplied separately) for the releasing of the secondary locking pin.
 Front or rear panel mount. M12 Thread for cable attachment.
 Permanent markings to identify phase/line and safety information are embossed on connector's shell. No additional information sticker is applied.
 400A and 650A versions available.

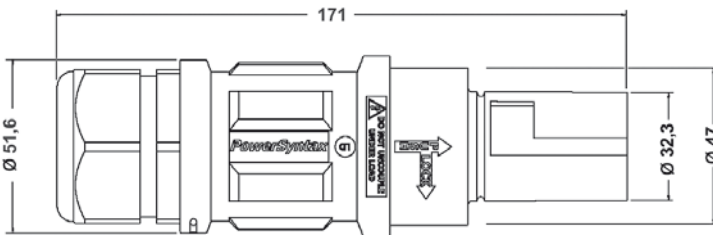


SPZ PowerSyntax Short size



LINE SOURCE

Innovative ergonomic hand grip for easy handling. Finger protection IP2X to prevent accidental touching of live contact parts. Contact to housing retention through flame-retardant UL94-VO plastic cotter pin. No special tools required for assembling. Special ergonomic Release-key (supplied separately) for the releasing of the secondary locking pin. Set Screw termination for cables 25 mm² - 95 mm². Watertight IP68 plastic cable gland M40 for cable strain relief retention range 15 - 28 mm. Permanent markings to identify phase/line and safety information are embossed on connector's shell. No additional information sticker is applied. 400A version available.



LINE DRAIN

Innovative ergonomic hand grip for easy handling. Finger protection IP2X to prevent accidental touching of live contact parts. Contact to housing retention through flame-retardant UL94-VO plastic cotter pin. No special tools are required for assembling. Bayonet lock with secondary locking pin. Special ergonomic Release-key (supplied separately) for the releasing of the secondary locking pin. Set Screw termination for cables 25mm² - 95 mm². Watertight IP68 plastic cable gland M40 for cable strain relief retention range 15 - 28 mm. Permanent markings to identify phase/line and safety information are embossed on connector's shell. No additional information sticker is applied. 400A version available.

Two sizes available



PASSIVE SAFETY



New important details, such as newly conceived protection caps with special lacing, have been introduced in the design. A specific housing for the cap's lacing has been moulded on the flange of the panel-mount versions and on the body of the inline versions. The protection caps are laced to the connector's body through a special high-resistance cable made up of seven stainless strands, and covered by anti-scratch teflon black tubing.

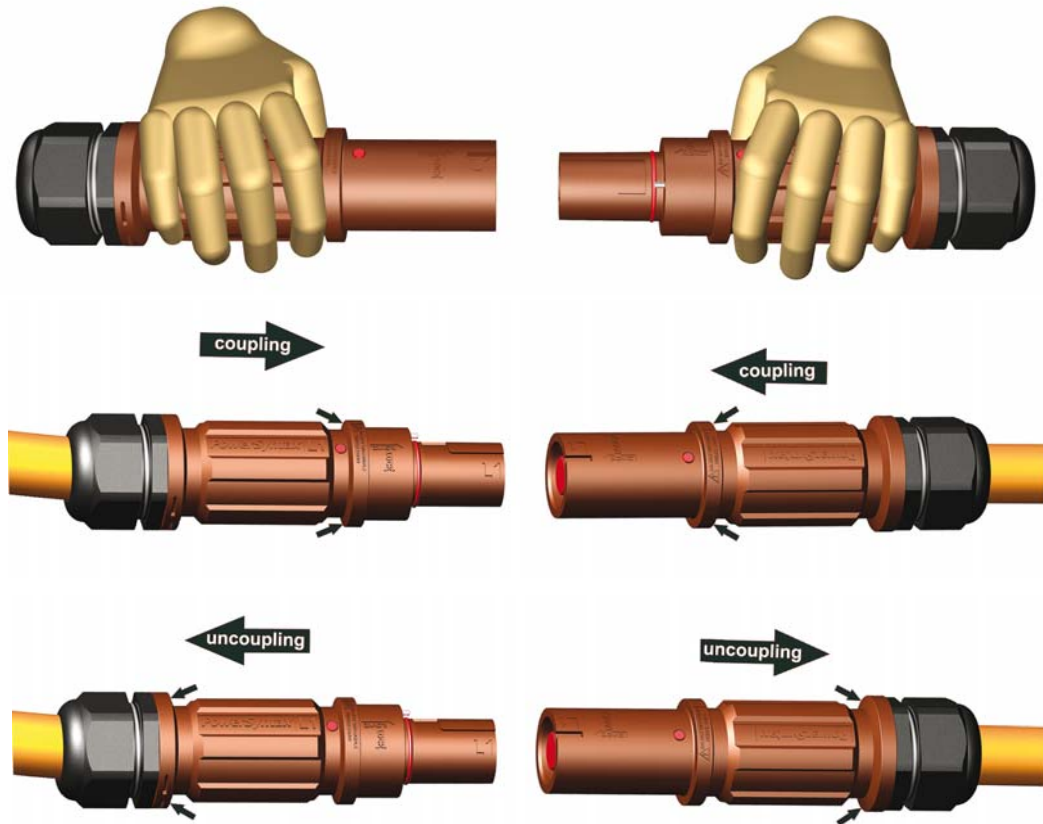
The use of protective caps results in:

- **Extended life span of the connectors** - the mating faces are protected against impact damage and abrasion.
- **Improved safety** - also when the connectors are uncoupled, the contact is protected against dust and water.

Specific housing for protection cap lacing moulded on cap (Pic. 1) for panel version (Pic. 2) and inline version (Pic. 3).

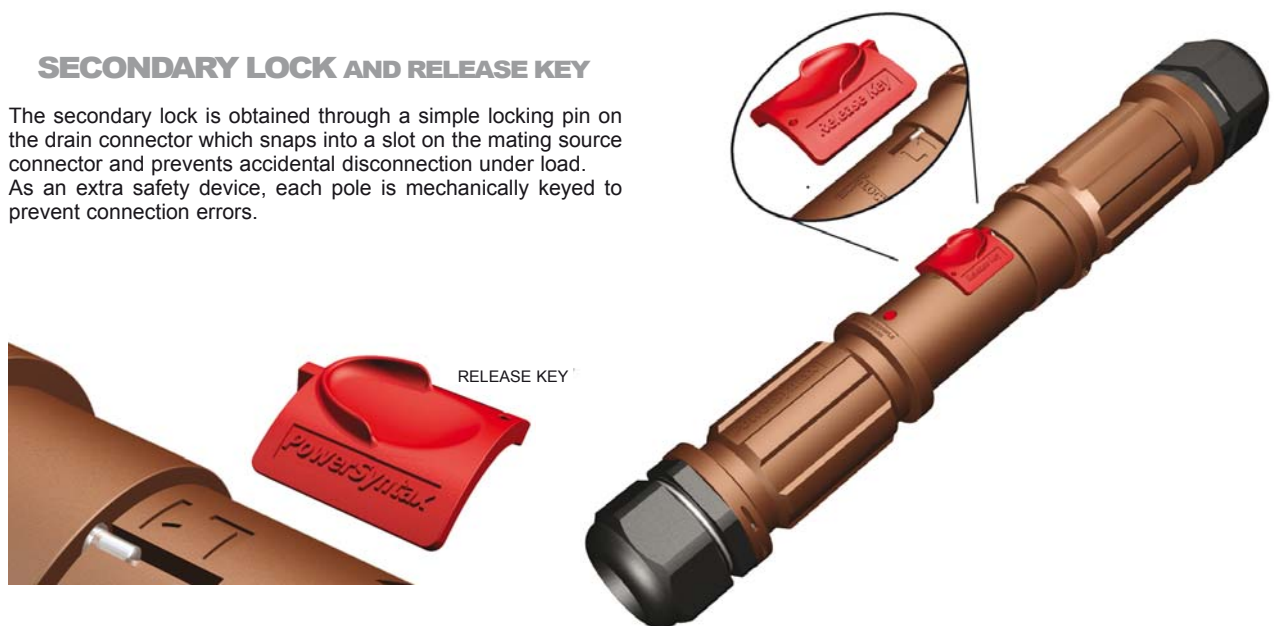
ERGONOMICS

The external shell has an ergonomic design which grants optimal hand grip also when operating with gloves. The shape of the shell ensures optimal handling. In particular, the sides of the hand grip are specifically designed for easy pushing/pulling of the connector when mating/unmating.



SECONDARY LOCK AND RELEASE KEY

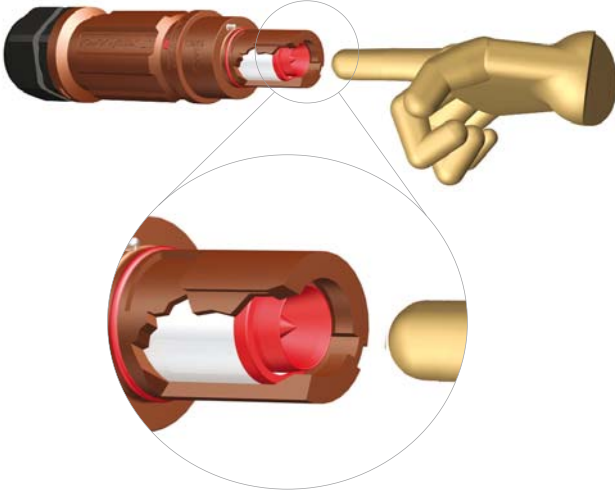
The secondary lock is obtained through a simple locking pin on the drain connector which snaps into a slot on the mating source connector and prevents accidental disconnection under load. As an extra safety device, each pole is mechanically keyed to prevent connection errors.



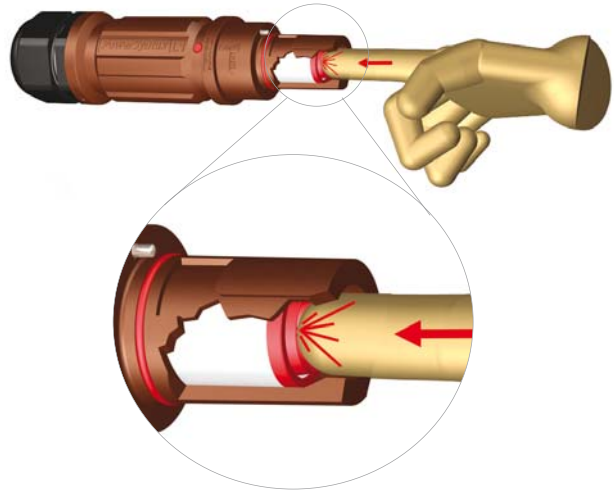
ELECTRICAL PROTECTION OF CONTACTS



Both gender contacts are compliant with electrical safety standard IP2X, which guarantees touch-proof protection of live parts.
On Drain connectors, the protective plastic elements feature a sharp-pointed insulated tip which prevents the possibility of pushing the contact inwards with fingers and are also designed so as to provide mechanical locking in case of improper pushing of the contact.



Released contact position

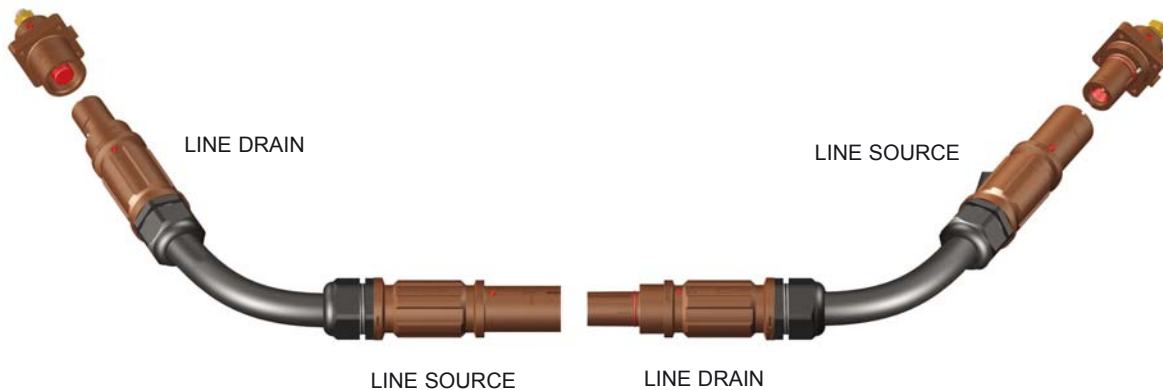


Furthest back position of the contact when pressed with fingers or improper tools

DAISY-CHAIN HOOK-UP PATTERN

PANEL SOURCE

PANEL DRAIN



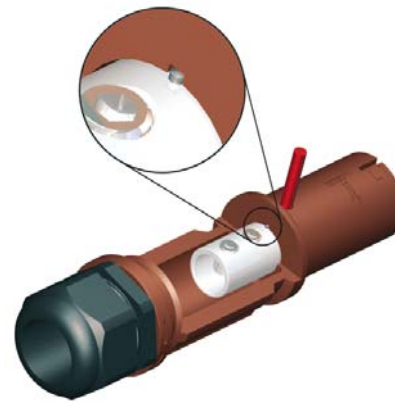
CABLE RETENTION SYSTEM

The Metric M40 cable gland nuts supplied with the connector are available with different clamping ranges for cables up to 32 mm diameter. In addition to the 25, 35, 50, 70, 95 and 120 mm² retention sleeves already available on the previous Power Syntax Series, the cable retention system on the new SPX now allows the use of reduction sleeves for cables up to 150 mm² diameter.

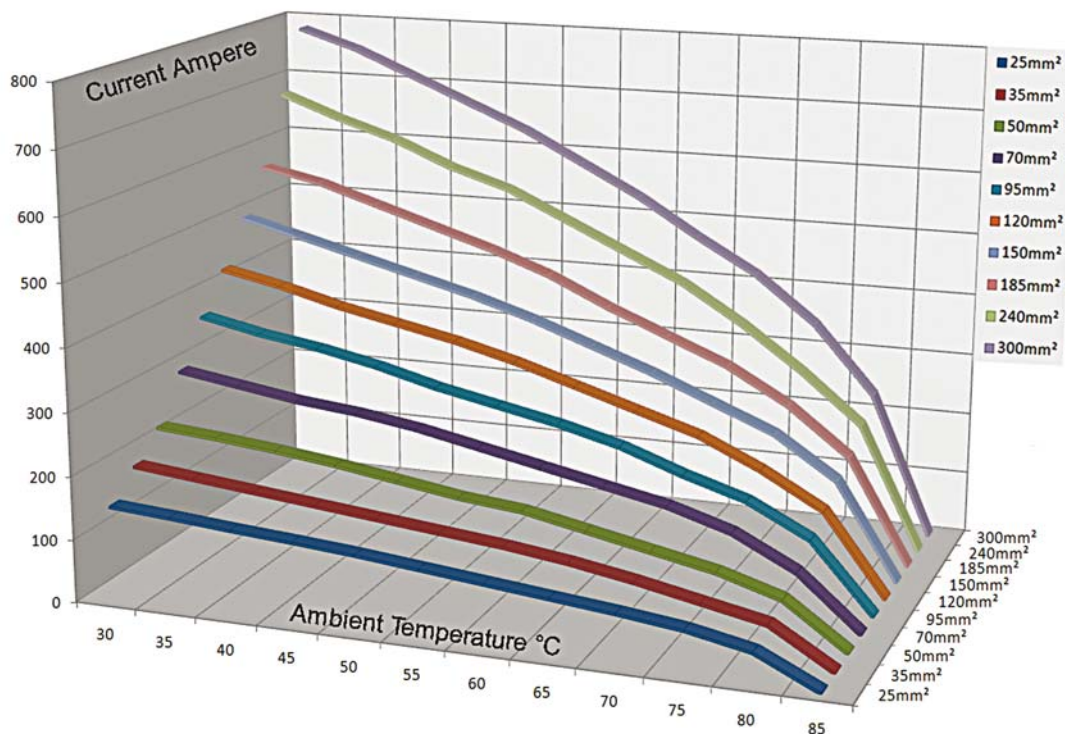


DRIVEN CONTACT RETENTION

The contact retention on the thermoplastic housing is obtained through the well-known cotter pin method. Now, this tried and tested system also features a drive pin for easier assembling. The plastic cotter pin is UL94-VO flame-retardant.



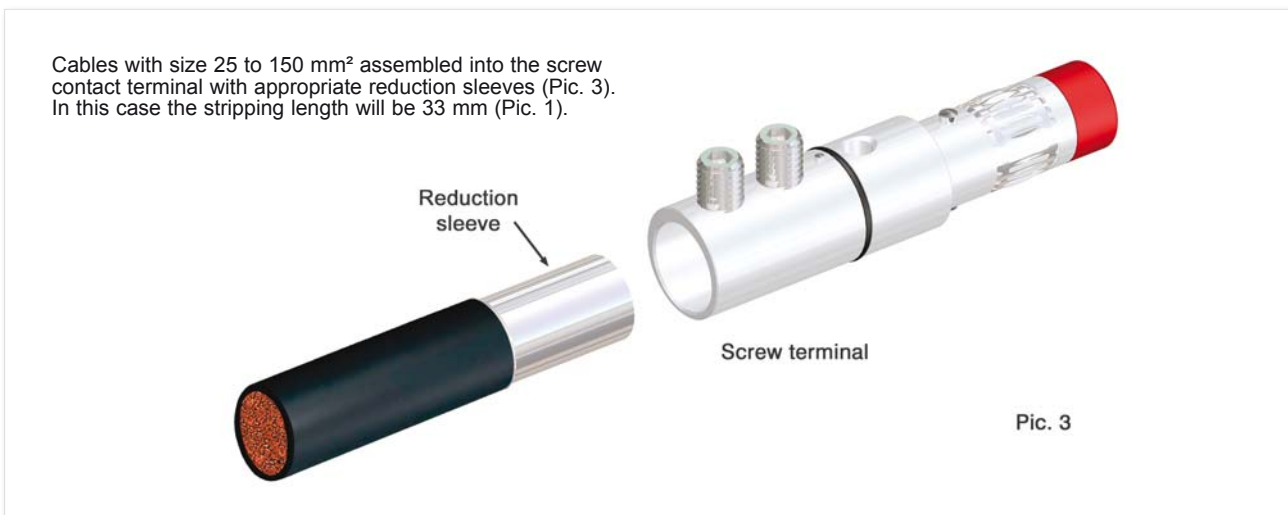
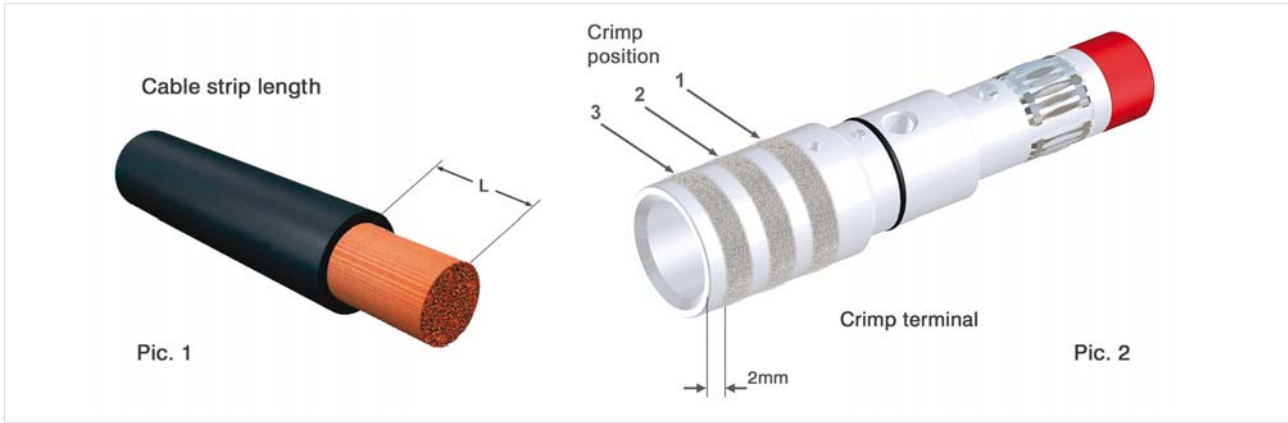
RATED CURRENT



DATA FOR 85° C CABLE RATINGS

ASSEMBLING DATA & TOOLS PowerSyntax

CRIMPING DATA	cable size 185 mm ²	cable size 240 mm ²	cable size 300 mm ²
Insulation strip length = L (Pic.1)	42 mm	42 mm	42 mm
Number of compressions (Pic.2)	2	3	3
Hand operated hydraulic crimp tool	HTC131-C	HTC131-C	HTC131-C
Cordless hydraulic crimp tool	B131-C	B131-C	B131-C
Crimp die set	ME 37-C	ME 48-C	ME 60-C



PART NUMBER EXPLANATION









Part N.							
EXAMPLE Part N.	SPX	4	LD	1	BR	120	MR

CONNECTOR SERIES	
Power Syntax Series	SPX

MAXIMUM CURRENT RATING	
Up to 400 Amp SCREW (25 to 150 mm ²)	4
Up to 750 Amp CRIMP (185 to 300 mm ²)	7

CONNECTOR STYLE	
Line Drain	LD
Line Source	LS
Panel Drain M 12 Thread	PD
Panel Source M 12 Thread	PS

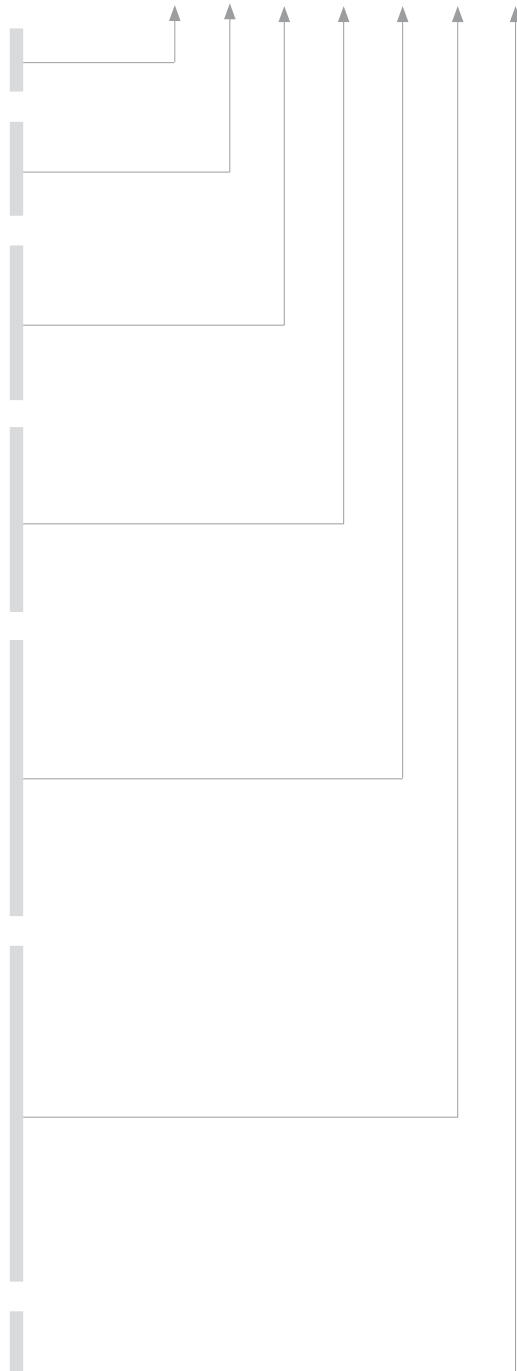
KEY COMPOSITION	
Earth	E
Neutral	N
Phase 1	1
Phase 2	2
Phase 3	3

INSULATOR COLOR	
GREEN 	GN
BLUE 	BL
BROWN 	BR
BLACK 	BK
GREY 	GY
RED 	RD
YELLOW 	YE
WHITE 	WH

CABLE CONDUCTOR SIZE (For 25-150 mm ² cables the reduction sleeves are included)	
25 mm ²	025
35 mm ²	035
50 mm ²	050
75 mm ²	075
95 mm ²	095
120 mm ²	120
150 mm ²	150
185 mm ²	185
240 mm ²	240
300 mm ²	300

CABLE GLAND	
M 40 x 1,5 Clamping Range 15 - 23 mm diameter	MQ
M 40 x 1,5 Clamping Range 19 - 28 mm diameter	MP
M 40 x 1,5 Clamping Range 22 - 32 mm diameter	MR

ACCESSORIES	
Secondary lock	SPXTKEY
Protective plastic cap kit for source connectors	SPXDCS-SC
Protective plastic cap kit for drain connectors	SPXD-SC











PART NUMBER EXPLANATION

CONNECTOR SERIES	
Power Syntax Series	SPZ

MAXIMUM CURRENT RATING	
Up to 400 Amp SCREW (25 to 95 mm ²)	4

CONNECTOR STYLE	
Line Drain	LD
Line Source	LS

KEY COMPOSITION	
Earth	E
Neutral	N
Phase 1	1
Phase 2	2
Phase 3	3

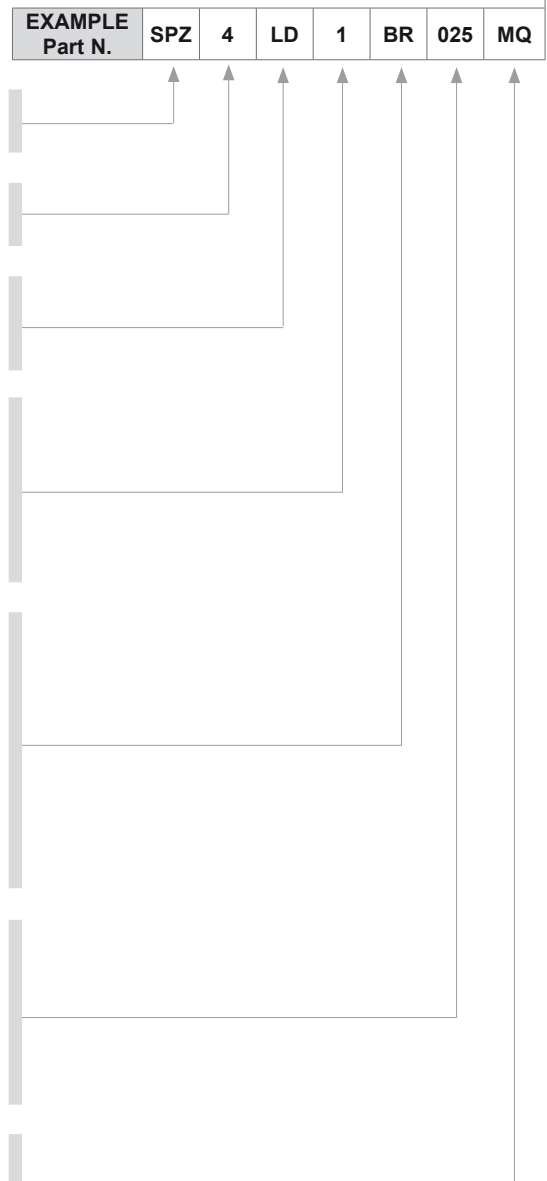
INSULATOR COLOR	
GREEN 	GN
BLUE 	BL
BROWN 	BR
BLACK 	BK
GREY 	GY
RED 	RD
YELLOW 	YE
WHITE 	WH

CABLE CONDUCTOR SIZE (For 25-95 mm ² cables the reduction sleeves are included)	
25 mm ²	025
35 mm ²	035
50 mm ²	050
75 mm ²	075
95 mm ²	095

CABLE GLAND	
M 40 x 1,5 Clamping Range 15 - 23 mm diameter	MQ
M 40 x 1,5 Clamping Range 19 - 28 mm diameter	MP

ACCESSORIES	
Secondary lock	SPXTKEY
Protective plastic cap kit for source connectors	SPXDCS-SC
Protective plastic cap kit for drain connectors	SPXD-SC

Part N.							
EXAMPLE Part N.	SPZ	4	LD	1	BR	025	MQ



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