

## QUICK STUDY GUIDE

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	Series	Pin Configuration(s)	Description
	<b>SVK</b>	13, 19, 25, 37, 54, 85, 100 & 150 pins	<i>Panel &amp; inline; IP67 waterproof rated; MIL-C-5015 compliant; gold or silver contacts</i>
	<b>SVS</b>	72 & 101 pins	
	<b>SHD</b>	13, 19, 25, 37, 54, 85, 100 & 150 pins	<i>Roadline: Enhanced, robust, heavy-duty version of the SVK Series</i>
	<b>SV</b>	24 Audio & 6 Video (Coax) Pins	<i>Panel &amp; Inline Audio/Video Hybrid Connectors; gold plated precision contacts</i>
	<b>SMA</b>	122 & 176 pins	<i>Hermaphroditic IP67 panel &amp; inline audio, up to 56 channels; gold plated solder contacts</i>
	<b>SPK</b>	4, 8 & 19 pins	<i>Pro loudspeaker panel &amp; inline; rubber locking ring; CA-COM mateable; silver &amp; gold solder or crimp contacts</i>
	<b>SPK8</b>	8 pin	<i>Adapter; CA-COM 8 compatible; male one end, female other end</i>
	<b>SB</b>	2, 3, 4, 6, 7, 8 & 9 pins	<i>HMI Ballast &amp; Lamp connector; 400W - 200KW; configurable; bayonet lock &amp; coupling roller; silver plated contacts</i>
	<b>SSX</b>	19 & 16 pin   UL & Industrial Versions	<i>Lighting connector; Socapex 419 compatible; panel &amp; inline; fast wiring, indestructible; IP67; first make, last break gold or silver plated contacts</i>
	<b>SPX</b>	Single Pole High Amperage Power Connectors	<i>Power 400A - 750A; panel &amp; inline; US, EU, UK &amp; AU color codes; IP67; IP2X; high impact shell; silver plated contacts</i>
	<b>SPZ</b>		
	<b>Cables</b>	Application Specific Cables	<i>Expertly engineered pro audio &amp; video features; power distribution; data</i>
	<b>Drums</b>	Cable Drums (featuring optional IO Side Panels)	
	<b>Glands</b>	Metric & PG types	<i>Glands, standard or spiral flex, metal, strain relief mesh grips, hanger grips</i>
	<b>Tooling</b>	Tooling & Accessories	<i>Contact us for more information</i>

v14.0



**SB**  
**BALLAST**  
**SERIES**  
**CONNECTORS**

***syntax***  
***no compromise***

# 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
- Standard insulating insert range -55° to 125° C (available -70° to 200°)
- 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

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

\* see Table C2



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

**Table C1**  
**CONTACTS RATING**

Size	Max Current	Rated Current	Max Voltage Drop	Wire section (mm <sup>2</sup> )	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 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**

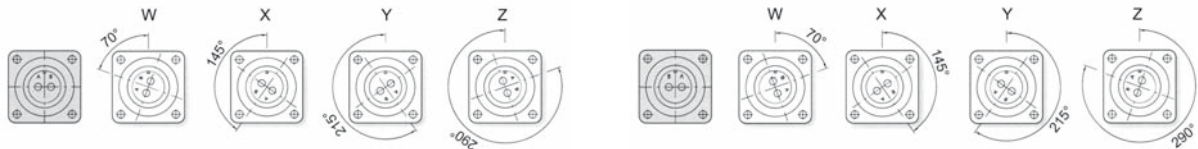
**DEGREES FOR ALTERNATE INSERT POSITIONS**

		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
ROTATION DEGREES	W	80	90	80	35	70	-	80	35	110	70	70	80	65	35	-	
	X	-	180	-	110	145	110	-	110	250	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
22-1, 22-2, 22-22	21	P4	13	18	
	29	P5	14	25	
24-2, 24-11	16	P3	9	14	
	21	P4	13	18	
28A-9, 28-22, 28-3	29	P5	14	25	
	21	P4	13	18	
28-6, 28-10	29	P5	14	25	
	21	P4	13	18	
32A-9, 32-5	29	P5	14	25	
	21	P4	13	18	
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.

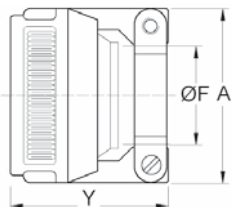


Table F

Standard version

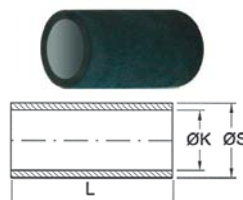
Size arrangement	C	Code	Clamping range ØF		Y	A
			Min	Max		
16S-1, 16-10	8C	C3	8	13.58	32.3	28.1
20-15, 22-1, 22-2, 22-22	12C	C5	11.3	19	35.7	37.3
24-2, 24-11, 28A-9, 28-22, 28-3, 28-6, 28-10	16C	C6	15.5	23.8	39	43.2
32A-9, 32-5	20C	C7	23.4	31.8	44.8	54
40A-10	28C	C9	30	41.3	52.3	63.4

## 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.



## PART NUMBER EXPLANATION

Part N.

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

CONNECTOR SERIES	Code
SB Ballast	<b>SB</b>

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)	<b>W</b>
X rotation degrees (see Table D pag. 26)	<b>X</b>
Y rotation degrees (see Table D pag. 26)	<b>Y</b>
Z rotation degrees (see Table D pag. 26)	<b>Z</b>
- NO ROTATION	<b>-</b>

INSERT TYPE	Code
M = male	<b>M</b>
F = female	<b>F</b>

COUPLING TERMINATION	Code
- = with ramps	<b>-</b>
S = standard locking ring	<b>S</b>
R = rubber coated locking ring	<b>R</b>
X = ergonomic standard locking ring with roller pins locking ring	<b>X</b>
Y = ergonomic longer locking ring with roller pins locking ring	<b>Y</b>

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

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

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

SPECIAL VERSION (upon request)	Code
L = shell grounding	<b>L</b>

