

QUICK STUDY GUIDE

P.O. Box 414, Littleton CO 80160 | 303-347-8150 | Fax 303-347-8160

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

v14.0



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 |

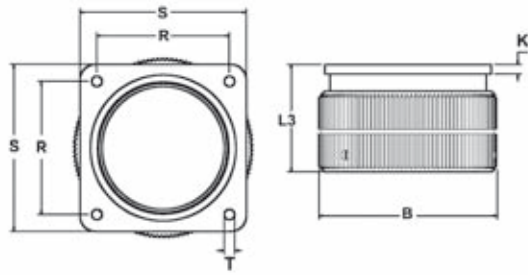
CONNECTORS RATING

| 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

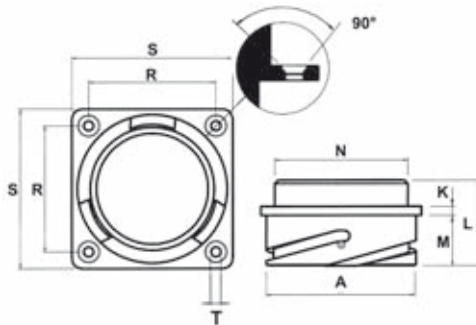
CUT-OUT DIMENSIONS

PANEL FEMALE



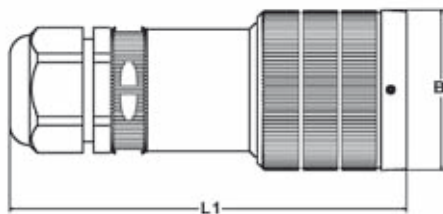
| N° pin | shell size | BØ Max | L3 | K | R | S | T |
|------------|------------|--------|------|------|-------|------|-----|
| | | | Max | ±0.2 | ±0.1 | ±0.3 | H13 |
| 13 - 19 | 20 | 43.0 | 38.1 | 4 | 29.4 | 38.0 | 3.2 |
| 25 | 24 | 50.4 | 40.6 | 4 | 34.9 | 44.5 | 3.7 |
| 37 | 28 | 56.0 | 40.8 | 4 | 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



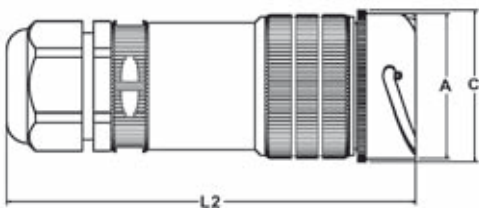
| N° pin | shell size | AØ | K | L | M | ØN | R | S | T |
|------------|------------|----------|------|------|---------|-------|------|------|-----|
| | | +0/-0.15 | ±0.2 | ±0.3 | ±0.4/-0 | Max | ±0.1 | ±0.3 | H13 |
| 13 - 19 | 20 | 34.2 | 4 | 34.5 | 19 | 31.75 | 29.4 | 38.1 | 3.2 |
| 25 | 24 | 40.9 | 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



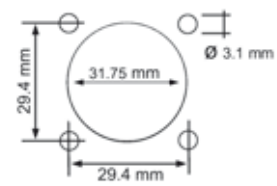
| N° pin | shell size | BØ Max | L1 Max | Cable clamp Metric | Ø cable Min.-Max. |
|----------------|------------|--------|--------|--------------------|-------------------|
| 13 - 19 | 20 | 43.0 | 153 | M 20 | 6 - 14 |
| 25 | 24 | 50.4 | 153 | M 25 | 6 - 18 |
| 37 | 28 | 56.0 | 158 | M 32 | 7 - 25 |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

INLINE MALE

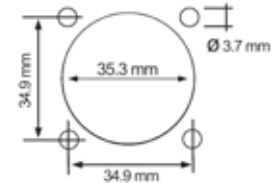


| N° pin | shell size | AØ Max | ØC | L2 Max | Cable clamp Metric | Ø cable Min.-Max. |
|----------------|------------|----------|-----|--------|--------------------|-------------------|
| | | +0/-0.15 | Max | | | |
| 13 - 19 | 20 | 40.0 | 43 | 142 | M 20 | 6 - 14 |
| 25 | 24 | 40.9 | 44 | 154 | M 25 | 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 |

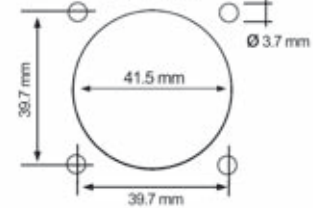
13/19 pin



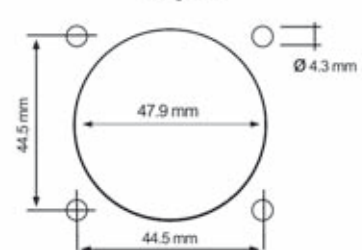
25 pin



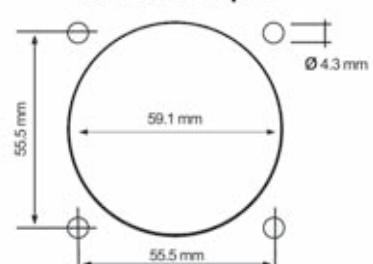
37 pin



54 pin

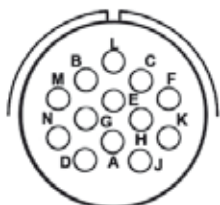


85/100/150 pin

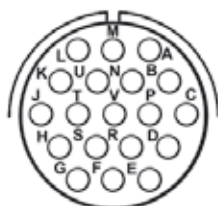


INSERT LAYOUTS AND WIRING LIST

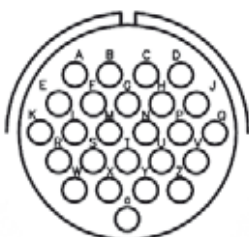
FRONT VIEW OF MALE INSERT



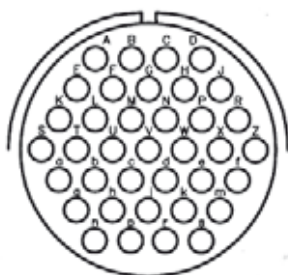
13 pin / size 20



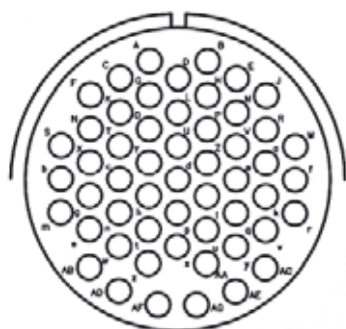
19 pin / size 20



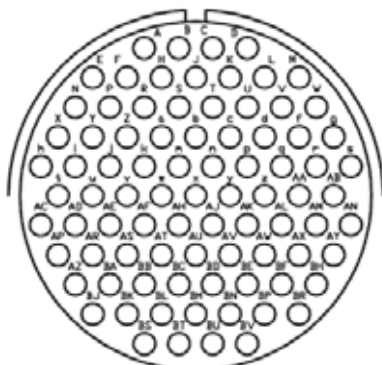
25 pin / size 24



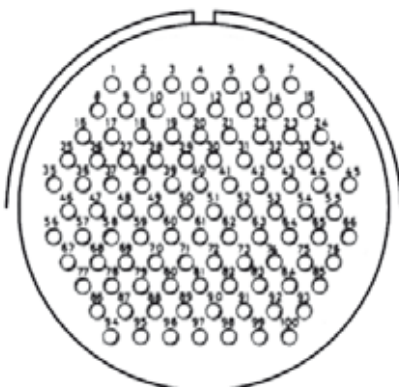
37 pin / size 28



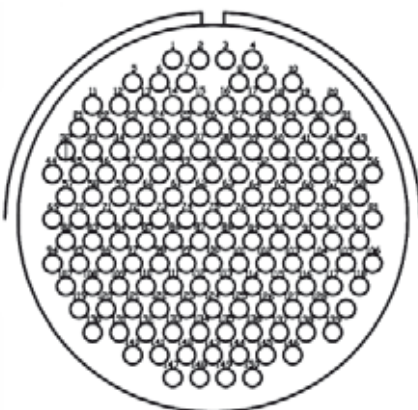
54 pin / size 32



85 pin / size 40



100 pin / size 40



150 pin / size 40

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

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

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

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

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

| 85 pin - 28 channels | | | |
|----------------------|-----|------|-----|
| Ch | Hot | Cold | Gnd |
| No. | + | - | ⏏ |
| 1 | A | B | C |
| 2 | E | F | H |
| 3 | J | K | L |
| 4 | N | P | R |
| 5 | S | T | U |
| 6 | X | Y | Z |
| 7 | a | b | c |
| 8 | d | f | g |
| 9 | h | 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 |

| 100 pin - 32 channels | | | |
|-----------------------|-----|------|-----|
| Ch | Hot | Cold | Gnd |
| No. | + | - | ⏏ |
| 1 | 1 | 2 | 3 |
| 2 | 4 | 5 | 6 |
| 3 | 7 | 8 | 9 |
| 4 | 10 | 11 | 12 |
| 5 | 13 | 14 | 15 |
| 6 | 16 | 17 | 18 |
| 7 | 19 | 20 | 21 |
| 8 | 22 | 23 | 24 |
| 9 | 25 | 26 | 27 |
| 10 | 28 | 29 | 30 |
| 11 | 31 | 32 | 33 |
| 12 | 34 | 35 | 36 |
| 13 | 37 | 38 | 39 |
| 14 | 40 | 41 | 42 |
| 15 | 43 | 44 | 45 |
| 16 | 46 | | |

