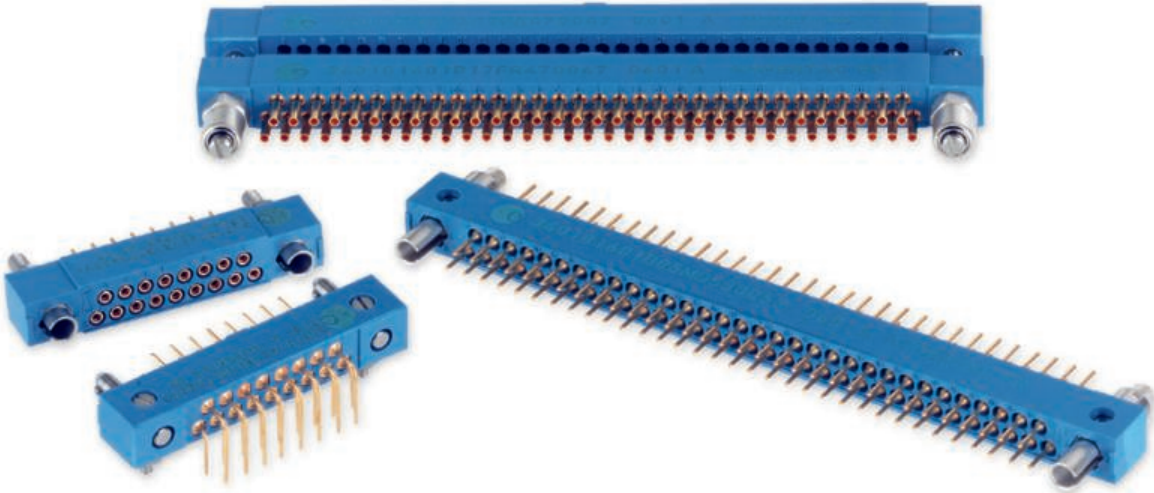


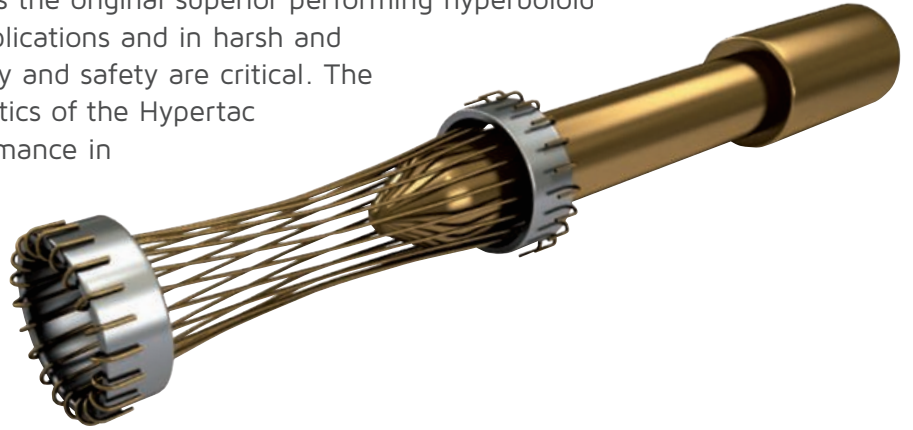
KNB/KNC/KNND Series

Medium & High Density PCB Connectors



Hypertac[®] Hyperboloid Technology

Smiths Interconnect offers an extensive range of superior contact technologies suitable for standard and custom solutions. Hypertac[®] (HYPERboloid conTACT) is the original superior performing hyperboloid contact technology designed for use in all applications and in harsh and demanding environments where high reliability and safety are critical. The inherent electrical and mechanical characteristics of the Hypertac hyperboloid contact ensures unrivalled performance in terms of reliability, number of mating cycles, low contact force and minimal contact resistance. The shape of the contact sleeve is formed by hyperbolically arranged contact wires, which align themselves elastically as contact lines around the pin, providing a number of linear contact paths.



Features

Low insertion/extraction forces

The angle of the socket wires allows tight control of the pin insertion and extraction forces. The spring wires are smoothly deflected to make line contact with the pin.

Long contact life

The smooth and light wiping action minimizes wear on the contact surfaces. Contacts perform up to 100,000 insertion/extraction cycles with minimal degradation in performance.

Lower contact resistance

The design provides a far greater contact area and the wiping action of the wires insures a clean and polished contact surface. Our contact technology has about half the resistance of conventional contact designs.

Higher current ratings

The design parameters of the contact (e.g., the number, diameter and angle of the wires) may be modified for any requirement. The number of wires can be increased so the contact area is distributed over a larger surface. Thus, the high current carried by each wire because of its intimate line contact, can be multiplied many times.

Immunity to shock & vibration

The low mass and resultant low inertia of the wires enable them to follow the most abrupt or extreme excursions of the pin without loss of contact. The contact area extends 360° around the pin and is uniform over its entire length. The 3 dimensional symmetry of the Hypertac contact design guarantees electrical continuity in all circumstances.

Benefits

High density interconnect systems

Significant reductions in size and weight of sub-system designs. No additional hardware is required to overcome mating and unmating forces.

Low cost of ownership

The Hypertac contact technology will surpass most product requirements, thus eliminating the burden and cost of having to replace the connector or the entire subsystem.

Low power consumption

The lower contact resistance of our technology results in a lower voltage drop across the connector reducing the power consumption and heat generation within the system.

Maximum contact performance

The lower contact resistance of the Hypertac contact reduces heat build-up; therefore Hypertac contacts are able to handle far greater current in smaller contact assemblies without the detrimental effects of high temperature.

Reliability under harsh environments

Harsh environmental conditions require connectors that will sustain their electrical integrity even under the most demanding conditions such as shock and vibration. The Hypertac contact provides unmatched stability in demanding environments when failure is not an option.

Contents

KN Series - Medium Density PCB Connectors

KNB series (2 rows).....	2
KXB series (2 rows).....	18
KNC/KND series (3 rows)	21
Contacts.....	36
Tools and accessories.....	37

Technical Characteristics

Contact diameter	HYPERTAC® type Ø 0.60 mm rear removable
Number of contact	Up to 120
Pitch	2.54 mm between rows - 1.27 mm between quicuncial contacts
Rows	2

Materials & Platings

Contact	Brass or bronze	
Molding	Glass fiber filled diallyl - Phtalate	
Guides	Stainless steel or nickel plated brass	
	Standard	ESA
Pin body	0.25 µm gold / 1.27 µm Ni	1.27 µm gold / 1.27 µm Ni (min.)
Socket body	0.25 µm gold / 1.27 µm Ni on active area 1.27 µm Ni on non active area	0.25 µm gold / 1.27 µm Ni (min.)
Socket wires	1 µm gold / 0.20 µm Ni	1.27 µm gold / 0.20 µm Ni (min.)

Electrical

Current grade rating (at 25°C)	Standard grade: 3 A max. - ESA grade: 5 A max.
Dielectric withstanding voltage	1200 Vrms
Contact resistance	≤8 mΩ
Insulation resistance	>104 MΩ (500 Vcc)

Mechanical

Mating & unmating cycle	5000
Guiding	By two outside guides (2 guiding styles) and one central guide (3 guiding styles)
Keying	By rotating of outside polarized guides (up to 36 keying)

Environmental

Temperature range	-55° C to 125° C
Conformity	MIL C 55302, ESA/ESCC3401/016 - 3401/017, NF C-UTE C 93-424

How To Order



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* For 90° & straight terminations (splicing on PCB)
 ** RoHS compliant for 90° & straight terminations (splicing on PCB)

Hypertac & ESA Correspondence Table

HYPERTAC **KNB**

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* Please consult us

Contact Terminations

Plug

Receptacle

Male

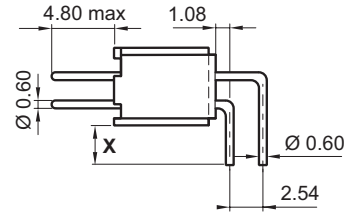
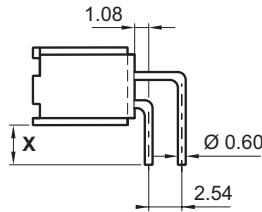
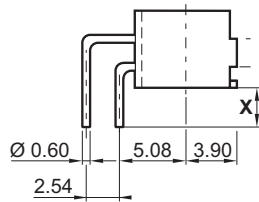
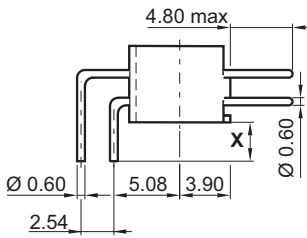
Female

Female

Male

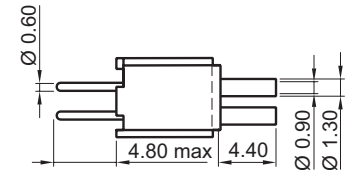
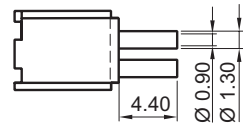
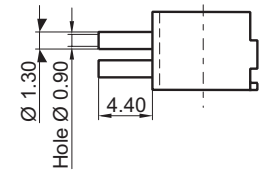
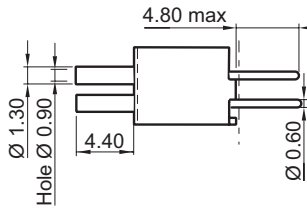
90° Through board solder

Ref: **10** (X=3) Ref : **MC & FC** - Ref: **11** (X=4) Ref : **ML & FL**



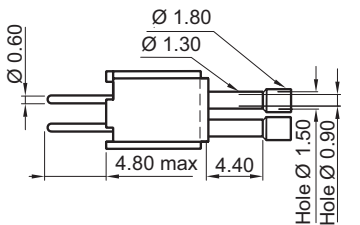
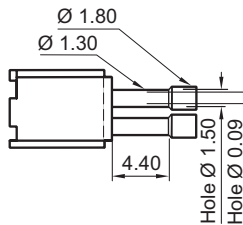
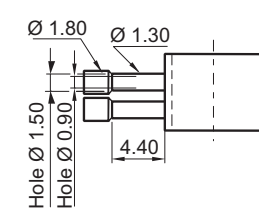
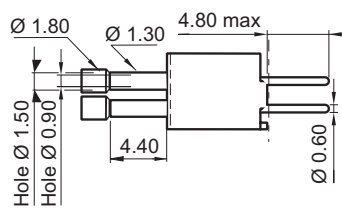
Crimp (AWG 28-26 & 24-22)

Ref: **20** Ref : **MR & FR**



Crimp (AWG 28-26 & 24-22) & Crimp on sheath (Ø 1.45)

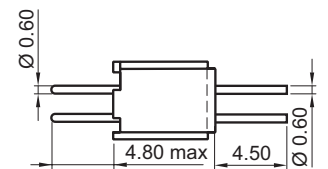
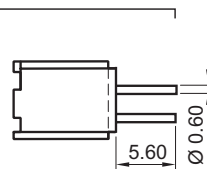
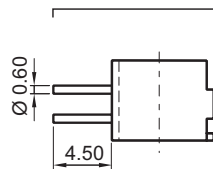
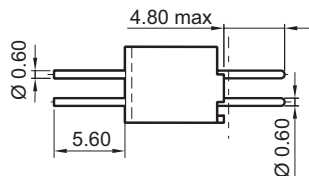
Ref: **21**



Straight through board solder

Ref: **30** Ref : **MD & FD** Ref **31**

See: 90° Through board solder



Contact Terminations

Plug

Receptacle

Male

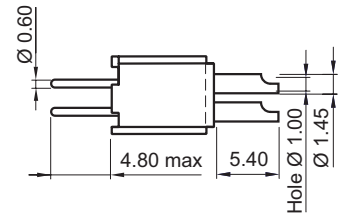
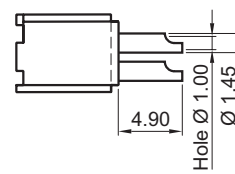
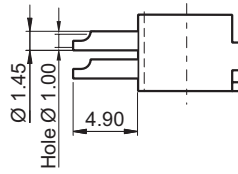
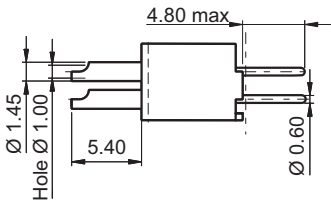
Female

Female

Male

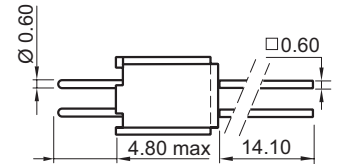
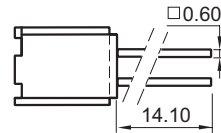
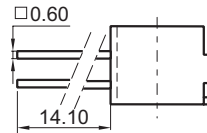
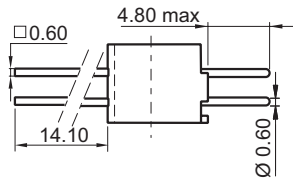
Solder bucket (AWG 22 max)

Ref: **40** Ref : **MS & FS**



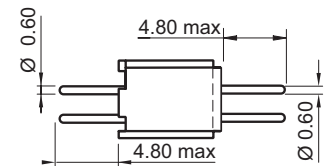
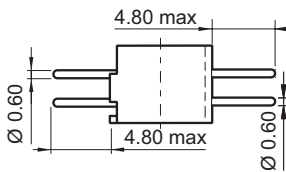
Wire wrap (3 wrapping levels)

Ref: **51** Ref : **MY & FY**



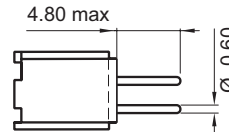
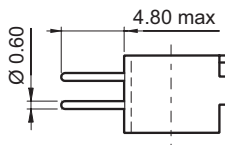
Saver (male-male)

Ref: **90**



Saver (female-male)

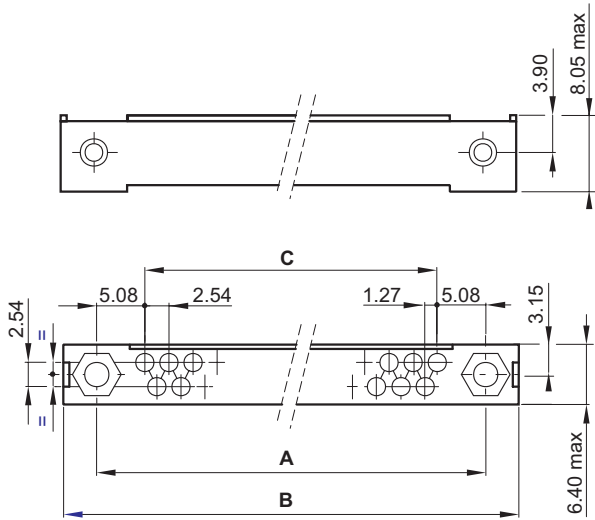
Ref: **91** Ref : **FM**



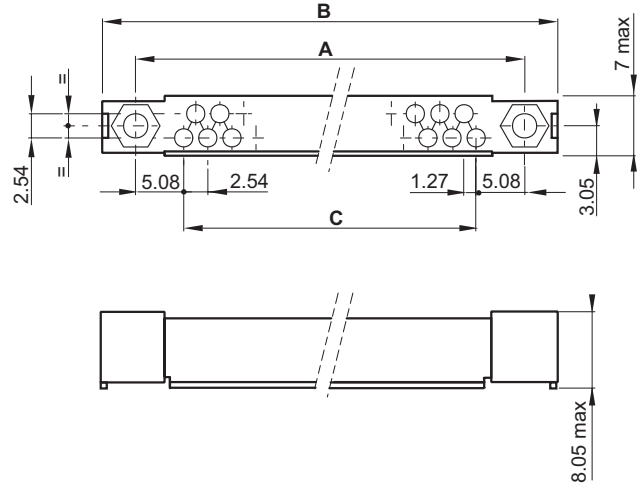
Connector Dimensions

Plug

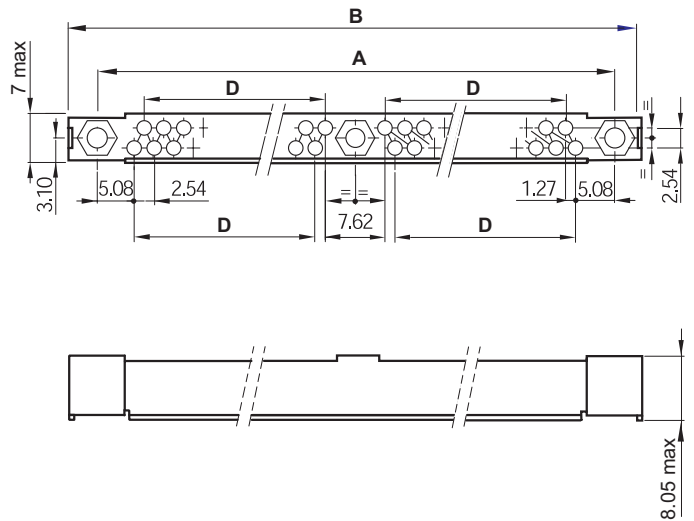
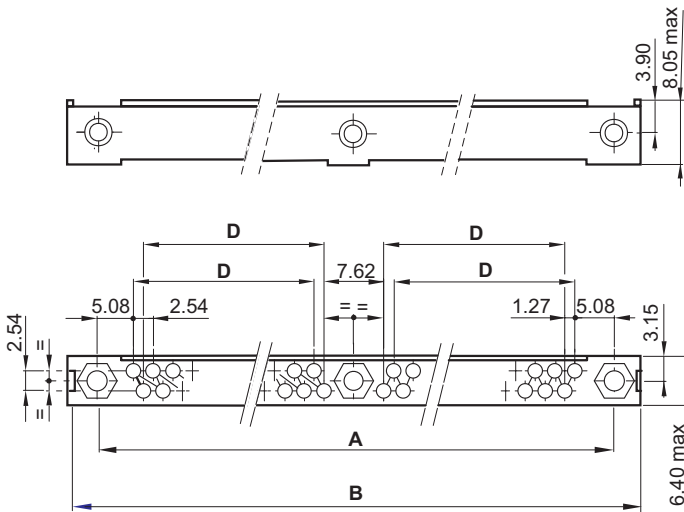
17 to 65 contacts



Receptacle



72 to 120 contacts



No. of contacts	17	29	41	53	65	72	84	96	120
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	167.64
B max	38.50	53.70	69.00	84.20	99.50	114.70	129.90	145.20	175.50
C	20.32	35.56	50.80	66.04	81.28	-	-	-	-
D	-	-	-	-	-	43.18	50.80	58.42	73.66

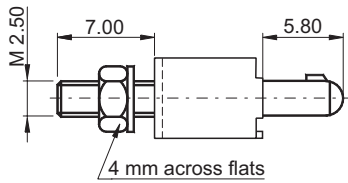
Guide Styles

Plug & Receptacle

Male

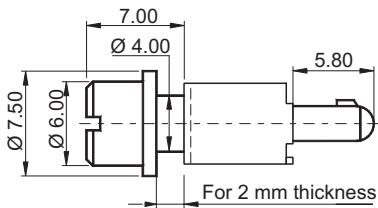
Polarized vertical mount

Ref: 111 Ref : 35



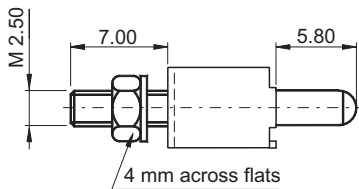
Polarized vertical float mount

Ref: 113 Ref : 55



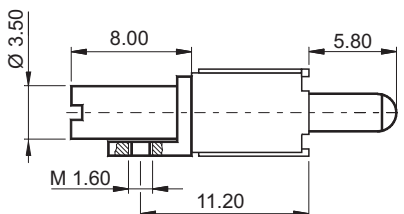
Unpolarized vertical mount

Ref: 127 Ref : 28



Unpolarized transverse mount

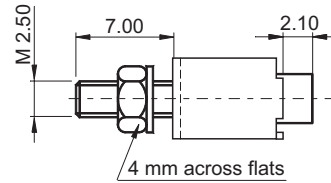
Ref: 131 Ref : 31



Female

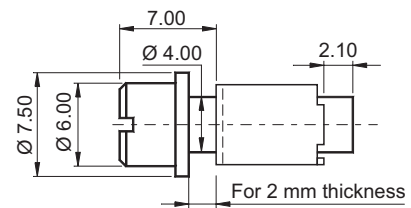
Polarized vertical mount

Ref: 121 Ref : 36



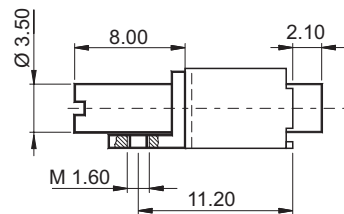
Polarized vertical float mount

Ref: 123 Ref : 54



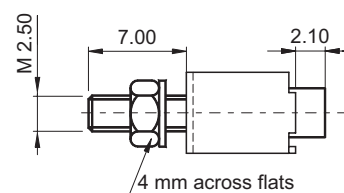
Polarized transverse mount

Ref: 124 Ref : 41



Unpolarized vertical mount

Ref: 126 Ref : 29



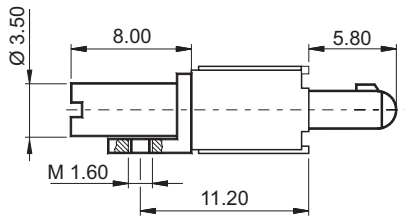
Guide Styles

Plug & Receptacle

Male

Polarized transverse mount

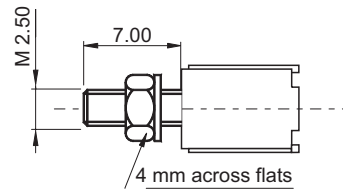
Ref: **145** Ref : 40



Female

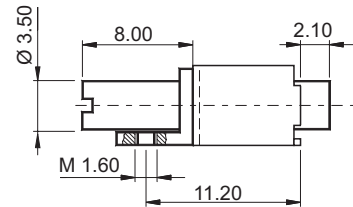
All polarized vertical mount

Ref: **130**



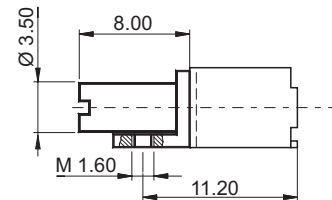
Unpolarized transverse mount

Ref: **132** Ref : 32



All polarized transverse mount

Ref: **133**



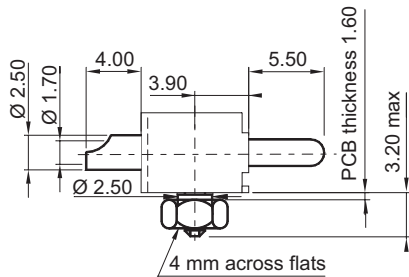
Guide Styles

Plug & Receptacle

Male

Power or mass transverse mount

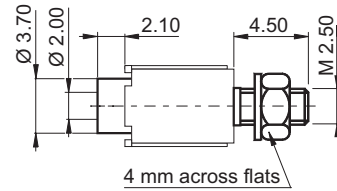
Ref: **191**



Female

Power or mass vertical mount

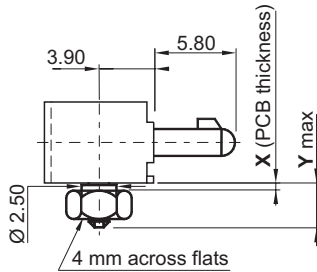
Ref: **190**



Male plug only

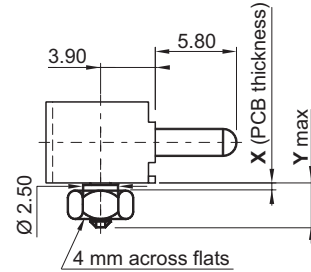
Polarized transverse mount

Ref: **10 110** Ref: **33** X=1.60 Y=3.20
 Ref: **11 110** Ref: **72** X=2.40 Y=4.90



Unpolarized transverse mount

Ref: **10 125** Ref: **26** X=1.60 Y=3.20
 Ref: **11 125** Ref: **71** X=2.40 Y=4.90



Locking Device Compatibility Chart

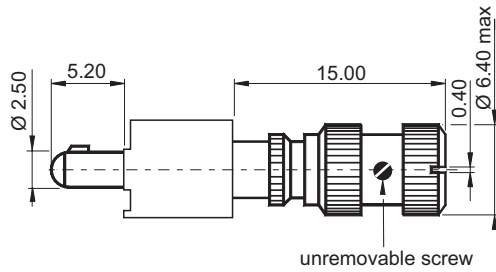
		R	P	R	P	R	P	R	P	R	P	R	P	R	P				
Compatible																Receptacle	Molding		
																Plug			
P																	290		
R																			
P																	231		
R																			
P																	211		
R																			
P																	207		
R																			
P																	205		
R																			
P																	203		
R																			
P																	201		
R																			
		Receptacle																	
		Plug																	
Molding				232		219		215		212		210		208		204		202	
																Male locking devices			
																		Female locking devices	

Male Locking Styles

Plug & Receptacle

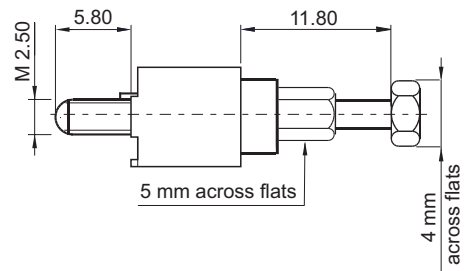
Jack 1/4 turn lock, free connector

Ref: **201**



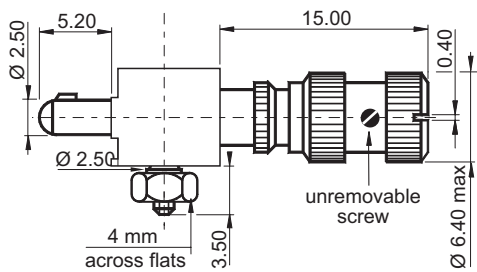
Jackscrew, free connector

Ref: **211** Ref : **51**



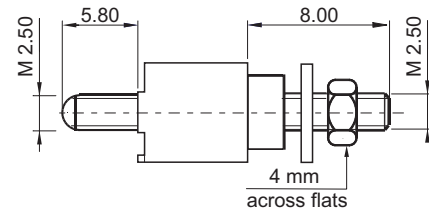
Jack 1/4 turn lock, transverse mount

Ref: **203** PCB thickness **1.60**



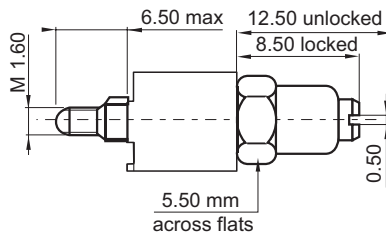
Jackscrew, vertical mount

Ref: **231** Ref : **46**



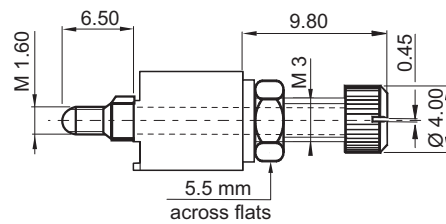
Jackscrew, free connector

Ref: **207** Ref : **47**



Jackscrew, vertical mount

Ref: **290** Ref : **81**

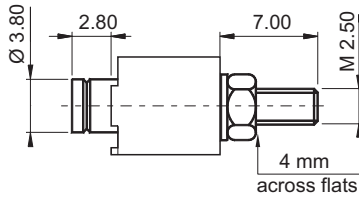


Female Locking Styles

Plug & Receptacle

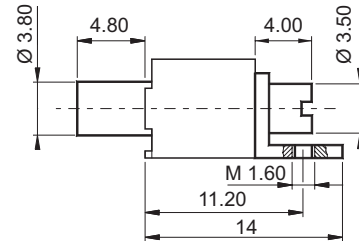
Jack 1/4 turn lock, vertical mount

Ref: **202**



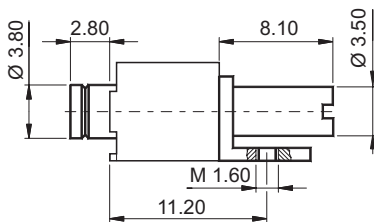
Jackscrew, transverse mount

Ref: **212** Ref : **52**



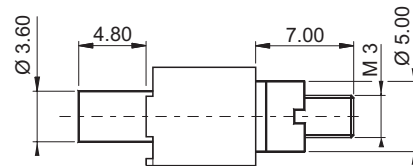
Jack 1/4 turn lock, transverse mount

Ref: **204**



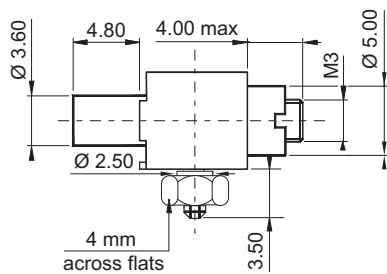
Jackscrew, vertical mount

Ref: **215** Ref : **53**



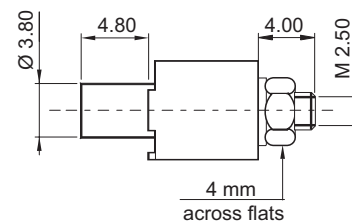
Jackscrew, transverse mount

Ref: **10 208** Ref : **48** PCB thickness 1.60
 Ref: **11 208** Ref : **79** PCB thickness 2.40



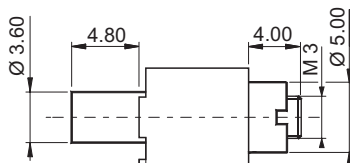
Jackscrew, vertical mount

Ref: **219** Ref : **80**



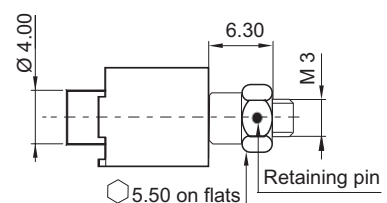
Jackscrew, free connector

Ref: **210** Ref : **50**



Rotating jackscrew, free connector

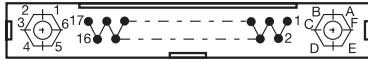
Ref: **232** Ref : **45**



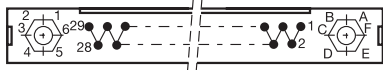
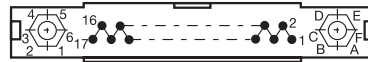
Mating Side Layout View

Plug

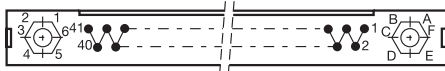
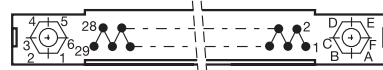
Receptacle



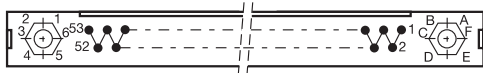
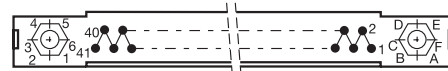
017



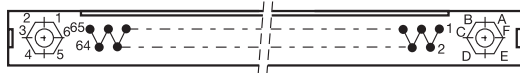
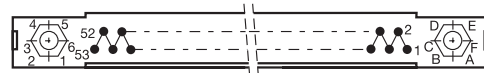
029



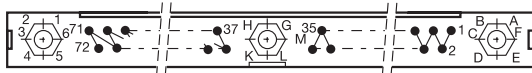
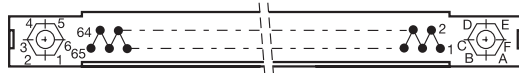
041



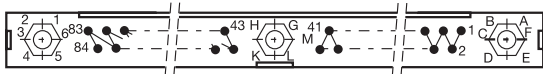
053



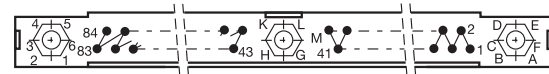
065



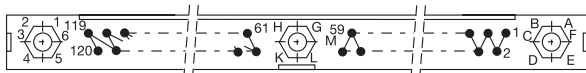
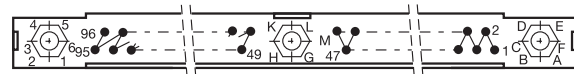
072



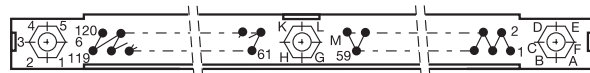
084



096

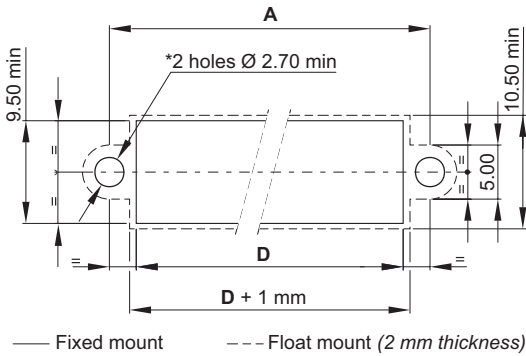


120

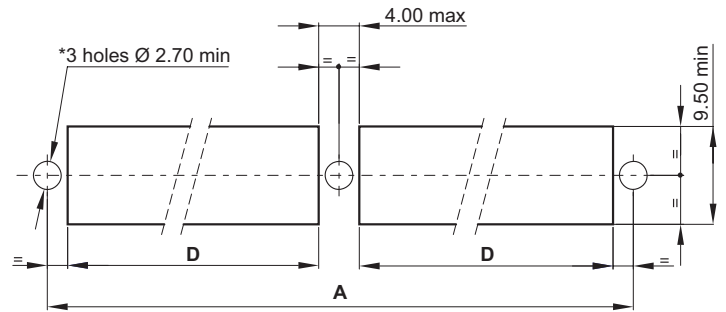


Panel Preparation Details

17 to 65 Contacts



72 to 120 Contacts



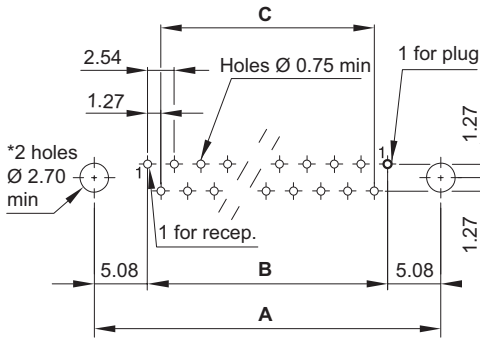
Panel: female or male, plug or receptacle, terminations 20 - 40 - 51
Guide styles: 111 - 121 - 126 - 127 - 130 - 190 (Fixed Mount) - 113 - 123 (Float Mount)
Locking styles: 202 - 215* - 219 - 231
 * for ref: 215, holes \varnothing 3.20 mm

No. of contacts	17	29	41	53	65	72	84	96	120
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	167.64
D	25.90	41.10	56.40	71.60	86.90	48.50	56.00	63.30	78.80

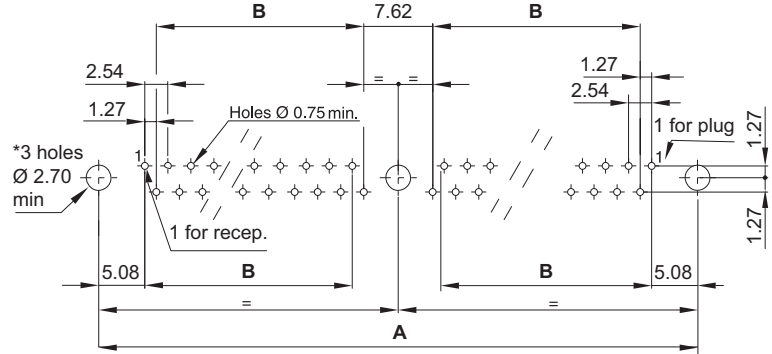
Board Preparation Details

Mother board

17 to 65 Contacts



72 to 120 Contacts



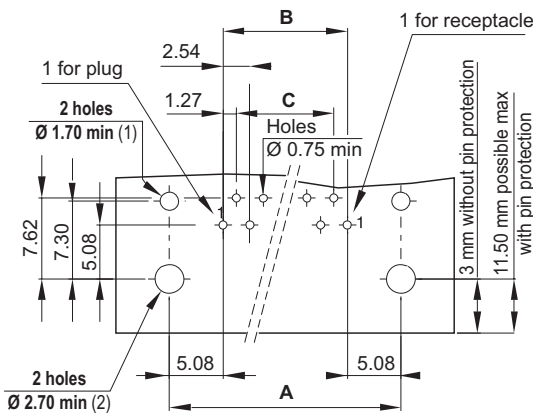
Mother Board: female or male, plug or receptacle, straight solder termination

Guide styles: 111 - 121 - 126 - 127 - 130 - 190 Locking styles: 202 - 215* - 219 - 231

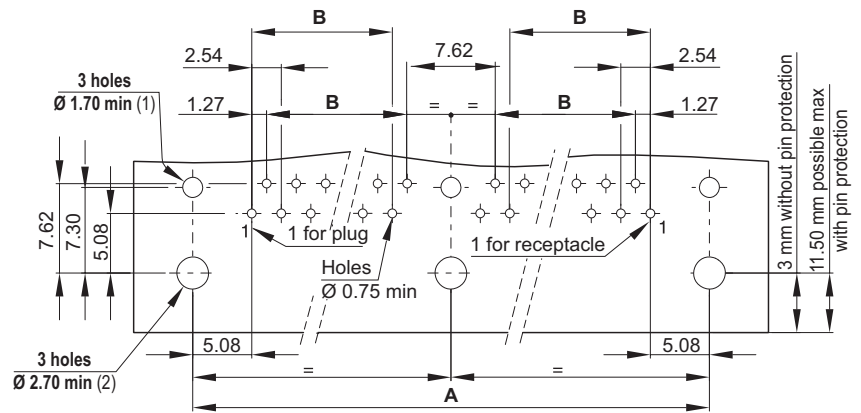
* for ref: 215, holes Ø 3.20 mm

Daughter board

17 to 65 Contacts



72 to 120 Contacts



Daughter Board: female or male, plug or receptacle, 90° termination

(1) **Guide styles:** 124 - 131 - 132 - 133 - 145 Locking styles: 204 - 212

(2) **Guide styles:** 110 - 125 - 191 Locking styles: 203 - 208

No. of contacts	17	29	41	53	65	72	84	96	120
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	167.64
B	20.32	35.56	50.80	66.04	81.28	43.18	50.80	58.42	73.66
D	17.78	33.02	48.26	63.50	78.74	-	-	-	-

Technical Characteristics

Contact diameter	HYPERTAC® type Ø 0.60 mm rear removable
Number of contact	53
Pitch	2.54 mm between rows - 1.27 mm between quicuncial contacts
Rows	2

Materials & Platings

Contact	Brass or bronze
Molding	Glass fiber filled diallyl - Phtalate
Guides	Stainless steel or nickel plated brass
Pin body	0.25 µm gold / 1.27 µm Ni
Socket body	0.25 µm gold / 1.27 µm Ni on active area; 1.27 µm Ni on non active area
Socket wires	1 µm gold / 0.20 µm Ni

Electrical

Current rating (at 25°C)	3 A max.
Dielectric withstanding voltage	1200 Vrms
Contact resistance	≤8 mΩ
Insulation resistance	>104 MΩ (500 Vcc)

Mechanical

Mating & unmating cycle	5000
Guiding	By two outside guides (2 guiding styles) and one central guide (3 guiding styles)
Keying	By rotating of outside polarized guides (up to 36 keying)

Environmental

Temperature range	-55° C to 125° C
Conformity	NF C-UTE C 93-424

How To Order



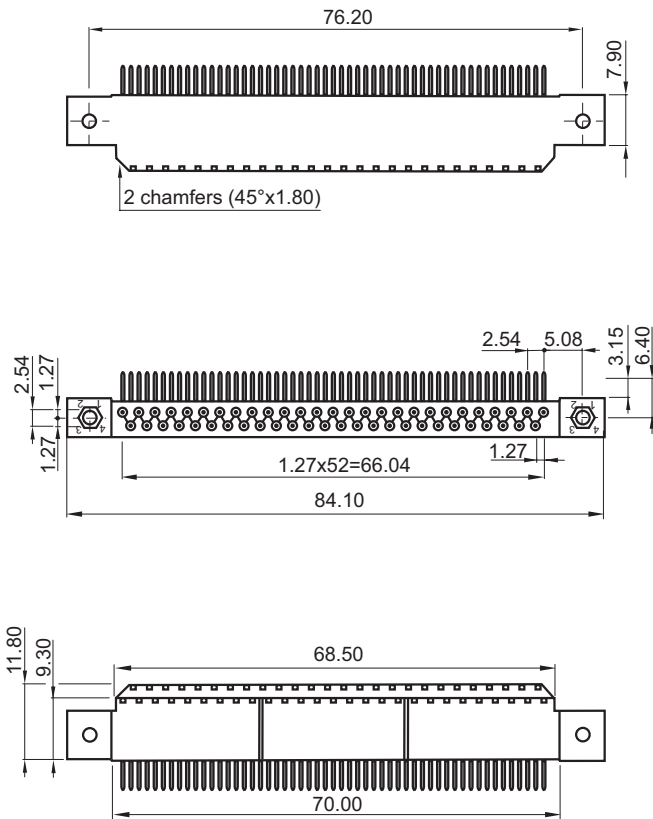
1 Thermoplastic material	X																																																		
2 Molding polarity	<p>NF C-UTE C 93-424 MIL-C-55302 SPACE GRADE</p> <table border="1"> <tr><td>12</td><td>14</td><td>54</td><td>Female plug</td></tr> <tr><td>13</td><td>15</td><td>55</td><td>Male plug</td></tr> <tr><td>16</td><td>18</td><td>56</td><td>Tinned female plug*</td></tr> <tr><td>17</td><td>19</td><td>57</td><td>Tinned male plug*</td></tr> </table>	12	14	54	Female plug	13	15	55	Male plug	16	18	56	Tinned female plug*	17	19	57	Tinned male plug*	<p>NF C-UTE C 93-424 MIL-C-55302 SPACE GRADE</p> <table border="1"> <tr><td>1A</td><td>1C</td><td>5A</td><td>Tinned female plug**</td></tr> <tr><td>1B</td><td>1D</td><td>5B</td><td>Tinned male plug**</td></tr> <tr><td>22</td><td>24</td><td>44</td><td>Female receptacle</td></tr> <tr><td>23</td><td>25</td><td>45</td><td>Male receptacle</td></tr> </table>	1A	1C	5A	Tinned female plug**	1B	1D	5B	Tinned male plug**	22	24	44	Female receptacle	23	25	45	Male receptacle	<p>NF C-UTE C 93-424 MIL-C-55302 SPACE GRADE</p> <table border="1"> <tr><td>26</td><td>28</td><td>46</td><td>Tinned female receptacle*</td></tr> <tr><td>27</td><td>29</td><td>47</td><td>Tinned male receptacle*</td></tr> <tr><td>2A</td><td>2C</td><td>-</td><td>Tinned female receptacle**</td></tr> <tr><td>2B</td><td>2D</td><td>-</td><td>Tinned male receptacle**</td></tr> </table>	26	28	46	Tinned female receptacle*	27	29	47	Tinned male receptacle*	2A	2C	-	Tinned female receptacle**	2B	2D	-	Tinned male receptacle**
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* No RoHS compliant = 16 et 17

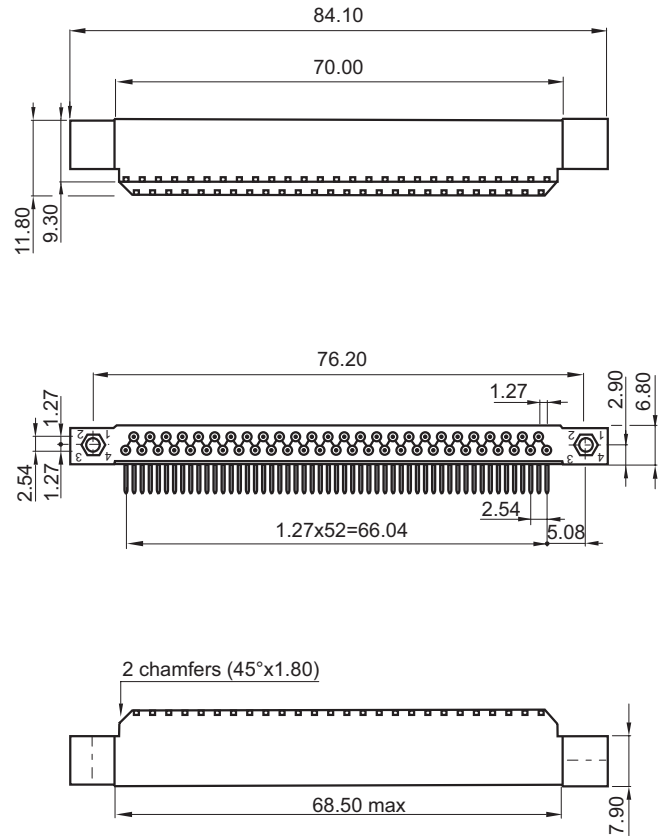
** RoHS Compliant = 1A et 1B

Connector Dimensions

Plug



Receptacle



Technical Characteristics

Contact diameter	HYPERTAC® type Ø 0.60 mm rear removable
Number of contact	Up to 160
Pitch	2.54 mm between rows - 1.27 mm between quicuncial contacts
Rows	3

Materials & Platings

Contact	Brass or bronze	
Molding	Glass fiber filled diallyl - Phtalate	
Guides	Stainless steel or nickel plated brass	
	Standard	ESA
Pin body	0.25 µm gold / 1.27 µm Ni	1.27 µm gold / 1.27 µm Ni (min)
Socket body	0.25 µm gold / 1.27 µm Ni on active area 1.27 µm Ni on non active area	0.25 µm gold / 1.27 µm Ni (min)
Socket wires	1 µm gold / 0.20 µm Ni	1.27 µm gold / 0.20 µm Ni (min)

Electrical

Current grade rating (at 25°C)	Standard grade: 3 A max - ESA grade: 5 A max
Dielectric withstanding voltage	1200 Vrms
Contact resistance	≤8 mΩ
Insulation resistance	>104 MΩ (500 Vcc)

Mechanical

Mating & unmating cycle	5000
Guiding	By two outside guides (2 guiding styles) and one central guide (3 guiding styles)
Keying	By rotating of outside polarized guides (up to 36 keying)

Environmental

Temperature range	-55°C to 125°C
Conformity	MIL C 55302, ESA/ESCC3401/016 - 3401/017, NF C-UTE C 93-424

How To Order



1 Series																																					
2 Pitch or type	N 1.27 mm pitch, rear removable contacts																																				
3 Model	C 3 rows centered fixing D 3 rows uncentered fixing																																				
4 Number of contacts	KNC 062 080 098 160 KND 026 044 062 080 098 108 126 144																																				
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* For 90° & straight terminations (splicing on PCB)
 ** RoHS compliant for 90° & straight terminations (splicing on PCB)

Hypertac & ESA Correspondence Table

HYPERTAC **KNC**

34 01 016 01 B

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6

<p>1 ESCC component number</p>																																																																																														
<p>2 Mounting</p>	<table border="1"> <thead> <tr> <th colspan="4">HYPERTAC</th> <th colspan="4">ESA</th> </tr> </thead> <tbody> <tr> <td>Plug KNB 017</td><td>01</td> <td>Plug KNB 096</td><td>08</td> <td>Receptacle KNB 053</td><td>16</td> <td>Plug KNB 072</td><td>56</td> <td>Plug KNC 098</td><td>62</td> </tr> <tr> <td>Plug KNB 029</td><td>02</td> <td>Plug KNB 120</td><td>10</td> <td>Receptacle KNB 065</td><td>17</td> <td>Receptacle KNB 072</td><td>57</td> <td>Receptacle KNC 098</td><td>63</td> </tr> <tr> <td>Plug KNB 041</td><td>03</td> <td>Plug KNC 160</td><td>12</td> <td>Receptacle KNB 084</td><td>19</td> <td>Plug KNC 062</td><td>58</td> <td></td><td></td> </tr> <tr> <td>Plug KNB 053</td><td>04</td> <td>Receptacle KNB 017</td><td>13</td> <td>Receptacle KNB 096</td><td>20</td> <td>Receptacle KNC 062</td><td>59</td> <td></td><td></td> </tr> <tr> <td>Plug KNB 065</td><td>05</td> <td>Receptacle KNB 029</td><td>14</td> <td>Receptacle KNB 120</td><td>22</td> <td>Plug KNC 080</td><td>60</td> <td></td><td></td> </tr> <tr> <td>Plug KNB 084</td><td>07</td> <td>Receptacle KNB 041</td><td>15</td> <td>Receptacle KNC 160</td><td>24</td> <td>Receptacle KNC 080</td><td>61</td> <td></td><td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">REMINDER SPATIAL P.P.P. (Party Polarity Protection)</th> <th colspan="2">EXAMPLE</th> </tr> </thead> <tbody> <tr> <td>Female receptacle</td><td>44</td> <td>Plug female</td><td>54</td> <td colspan="2">KNC 062 44 30 113</td> </tr> <tr> <td>Male receptacle</td><td>45</td> <td>Plug male</td><td>55</td> <td colspan="2">P.P.P. </td> </tr> </tbody> </table>								HYPERTAC				ESA				Plug KNB 017	01	Plug KNB 096	08	Receptacle KNB 053	16	Plug KNB 072	56	Plug KNC 098	62	Plug KNB 029	02	Plug KNB 120	10	Receptacle KNB 065	17	Receptacle KNB 072	57	Receptacle KNC 098	63	Plug KNB 041	03	Plug KNC 160	12	Receptacle KNB 084	19	Plug KNC 062	58			Plug KNB 053	04	Receptacle KNB 017	13	Receptacle KNB 096	20	Receptacle KNC 062	59			Plug KNB 065	05	Receptacle KNB 029	14	Receptacle KNB 120	22	Plug KNC 080	60			Plug KNB 084	07	Receptacle KNB 041	15	Receptacle KNC 160	24	Receptacle KNC 080	61			REMINDER SPATIAL P.P.P. (Party Polarity Protection)				EXAMPLE		Female receptacle	44	Plug female	54	KNC 062 44 30 113		Male receptacle	45	Plug male	55	P.P.P.	
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<p>5 Locking type In center</p>	<p>00 For 2 guide connectors</p> <p>-- For 3 guide connectors (see table 4, Locking type - On left side)</p> <table border="1"> <thead> <tr> <th colspan="4">HYPERTAC</th> <th colspan="4">ESA</th> </tr> </thead> <tbody> <tr> <td>KNB 10 125</td><td>26</td> <td>KNC 10 125</td><td>27</td> <td>KN 127</td><td>28</td> <td>KN 126</td><td>29</td> <td colspan="2"></td> </tr> </tbody> </table>								HYPERTAC				ESA				KNB 10 125	26	KNC 10 125	27	KN 127	28	KN 126	29																																																																						
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<p>6 Locking type On right side</p>	<p>(see table 4, Locking type - On left side)</p>																																																																																													

* Please consult us

Contact Terminations

Plug

Receptacle

Male

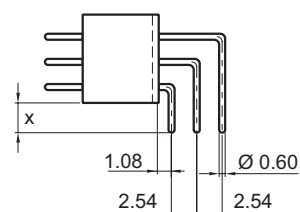
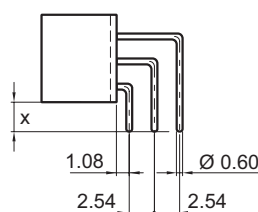
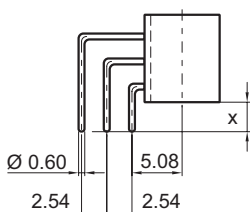
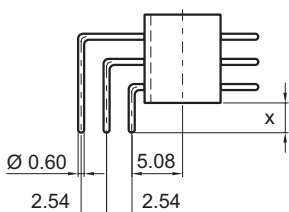
Female

Female

Male

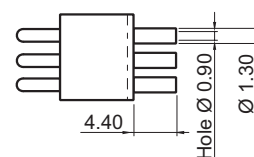
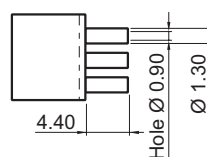
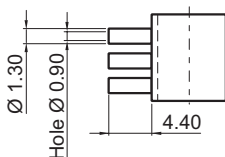
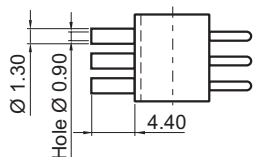
90° Through board solder

Ref: **10** (X=3) Ref : **MC & FC** - Ref: **11** (X=4) Ref : **ML & FL**



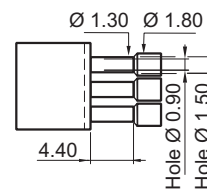
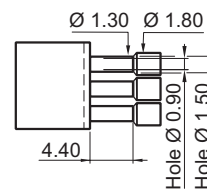
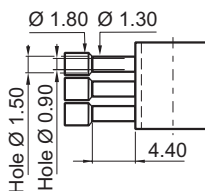
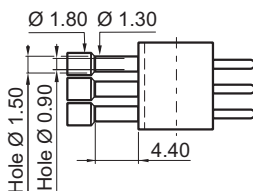
Crimp (AWG 28-22)

Ref: **20** Ref : **MR & FR**



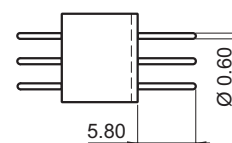
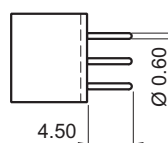
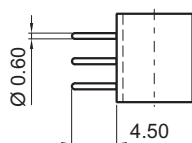
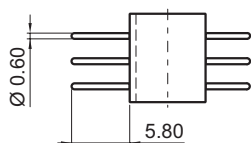
Crimp (AWG 28-22)

Ref: **21**



Straight through board solder

Ref: **30** Ref : **MD & FD**



Contact Terminations

Plug

Receptacle

Male

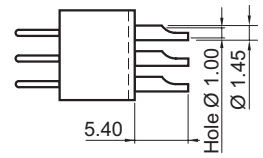
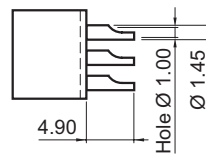
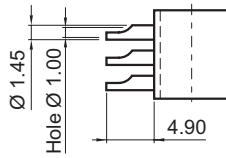
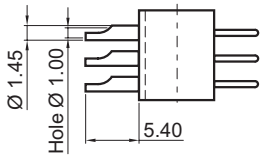
Female

Female

Male

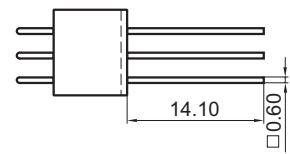
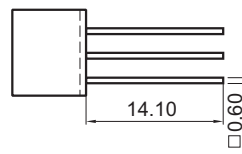
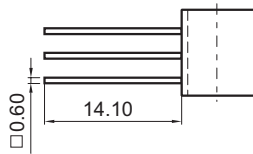
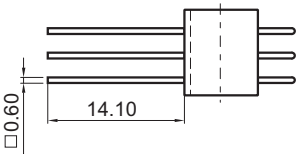
Solder bucket (AWG 22 max)

Ref: **40** Ref: **MS & FS**



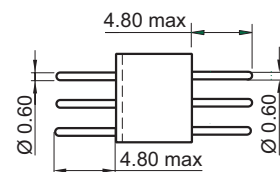
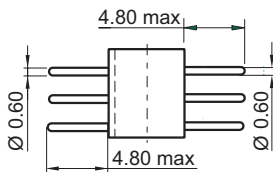
Wire wrap (3 wrapping levels)

Ref: **51** Ref: **MY & FY**



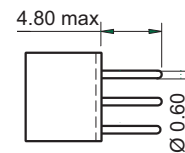
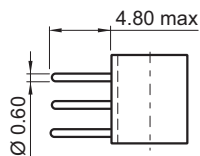
Saver (male-male)

Ref: **90**



Saver (female-male)

Ref: **91** Ref: **FM**

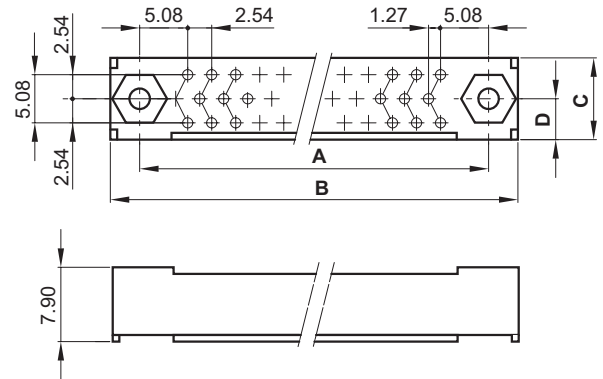
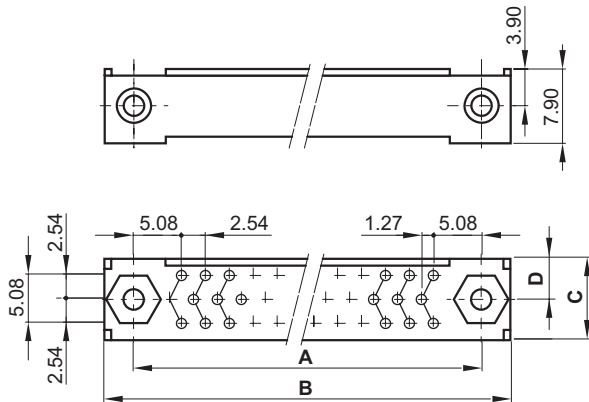


Dimensions

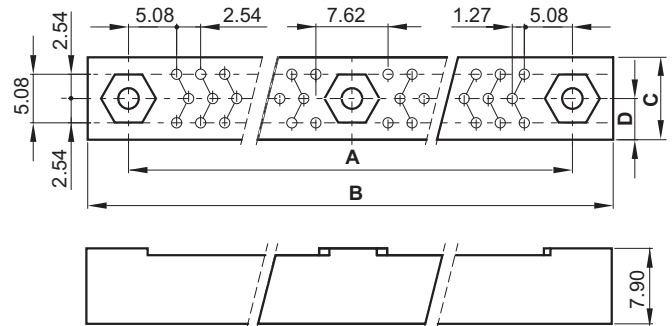
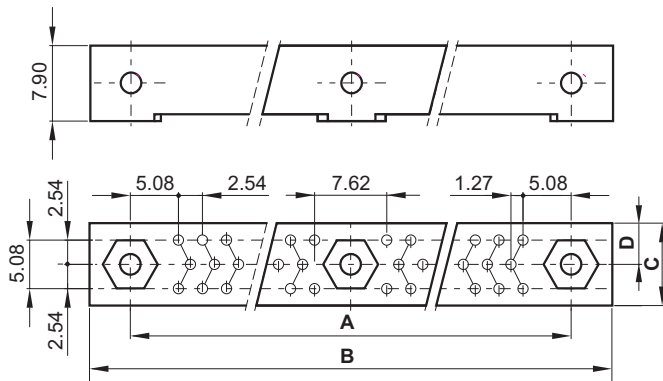
Plug

Receptacle

26 to 98 contacts



108 to 160 contacts



		No. of contacts	26	44	62	80	98	108	126	144	160
KNC	Plug & Receptacle	A	-	-	60.96	76.20	91.44	-	-	-	149.86
		B max	-	-	69.00	84.20	99.50	-	-	-	158.00
	Plug	C max	-	-	9.45	9.45	9.45	-	-	-	9.30
		D	-	-	4.42	4.42	4.42	-	-	-	4.70
	Receptacle	C max	-	-	9.30	9.30	9.30	-	-	-	9.30
		D	-	-	4.17	4.17	4.17	-	-	-	4.70
KND	Plug & Receptacle	A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	-
		B max	38.50	53.70	69.00	84.20	99.50	114.70	129.90	145.20	-
	Plug	C min	8.95	8.95	8.95	8.95	8.95	8.95	8.95	8.95	-
		C max	9.55	9.55	9.55	9.55	9.55	9.55	9.55	9.55	-
		D	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	-
	Receptacle	C max	9.35	9.35	9.35	9.35	9.35	9.35	9.35	9.35	-
		D	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	-

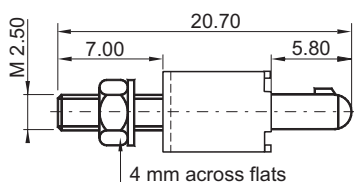
Guide Styles

Plug & Receptacle

Male

Polarized vertical mount

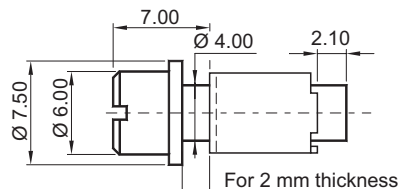
Ref: **111** Ref : **35**



Female

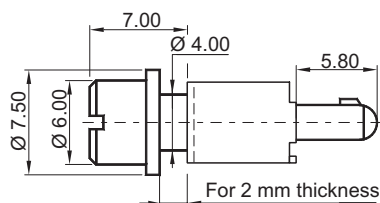
Polarized vertical float mount

Ref: **123** Ref : **54**



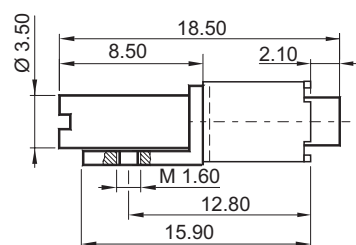
Polarized vertical float mount

Ref: **113** Ref : **55**



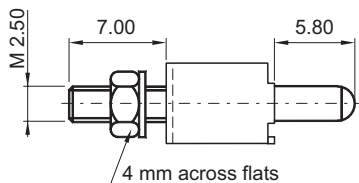
Polarized transverse mount

Ref: **124** Ref : **74**



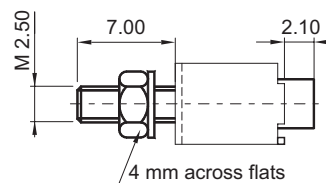
Unpolarized vertical mount

Ref: **127** Ref : **28**



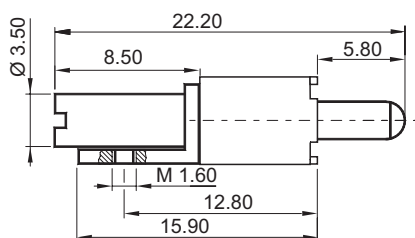
Unpolarized vertical mount

Ref: **126** Ref : **29**



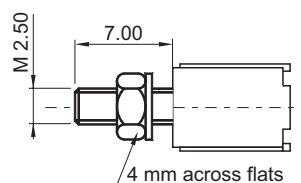
Unpolarized transverse mount

Ref: **131**



All polarized vertical mount

Ref: **130**



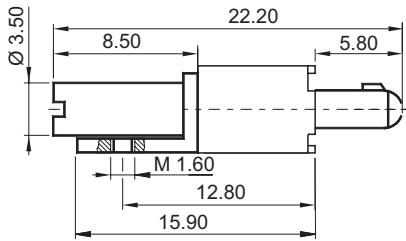
Guide Styles

Plug & Receptacle

Male

Polarized transverse mount

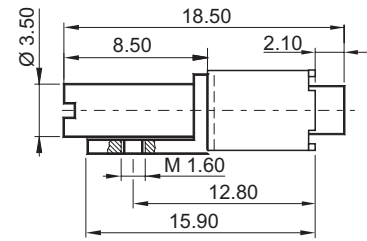
Ref: **145**



Female

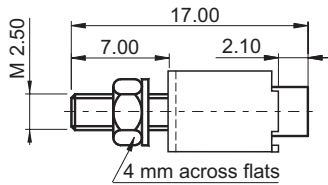
Unpolarized transverse mount

Ref: **132** Ref: **75**



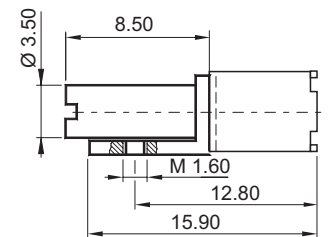
Polarized vertical mount

Ref: **121** Ref: **36**



All polarized transverse mount

Ref: **133**



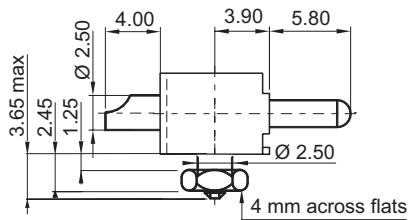
Guide Styles

Plug & Receptacle

Male

Power or mass vertical mount

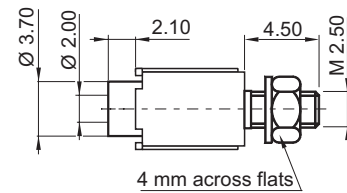
Ref: **191** PCB thickness **1.60**



Female

Power or mass vertical mount

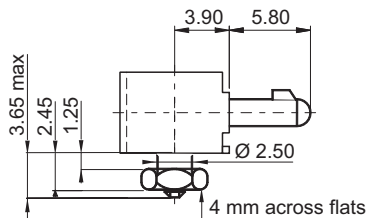
Ref: **190**



Male plug only

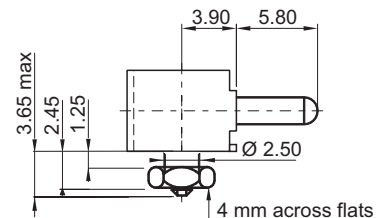
Polarized transverse mount

Ref: **10 110** Ref : **34** PCB thickness **1.60**



Unpolarized transverse mount

Ref: **10 125** Ref : **27** PCB thickness **1.60**



Locking Devices Compatibility Chart

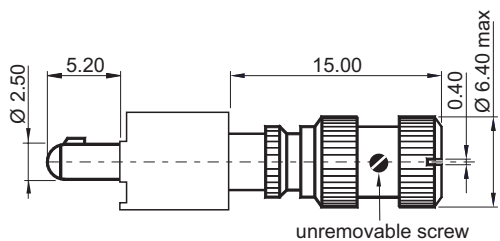
		R	P	R	P	R	P	R	P	R	P	R	P	R	P
Compatible															
												Receptacle	Molding		
												Plug			
P															
R															
P															
R															
P															
R															
P															
R															
P															
R															
P															
R															
												Male locking devices			
												Female locking devices			
Receptacle															
Plug															
Molding															
		232	219	215	212	210	208	204	202						

Male Locking Styles

Plug & Receptacle

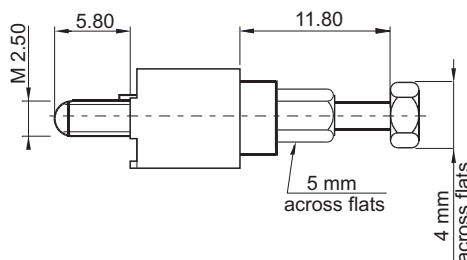
Jack 1/4 turn lock, free connector

Ref: **201**



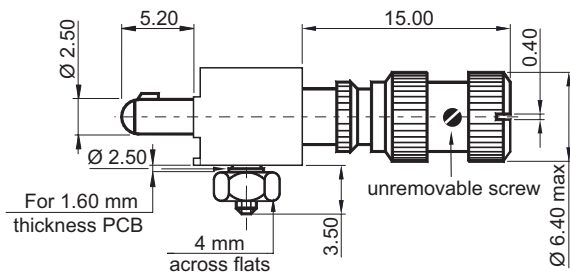
Jackscrew, free connector

Ref: **211** Ref : **51**



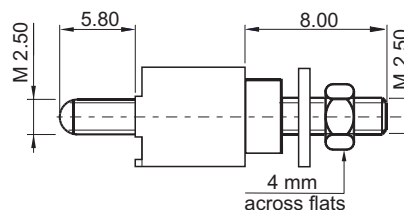
Jack 1/4 turn lock, transverse mount

Ref: **206**



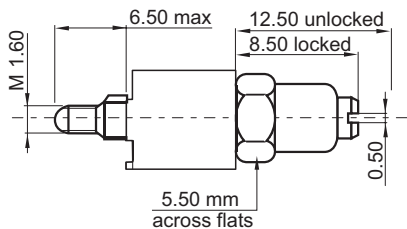
Jackscrew, vertical mount

Ref: **231** Ref : **46**



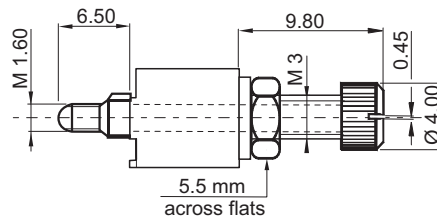
Jackscrew, free connector

Ref: **207** Ref : **47**



Jackscrew, vertical mount

Ref: **290** Ref : **81**

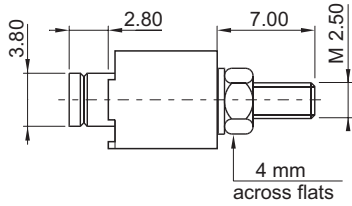


Female Locking Styles

Plug & Receptacle

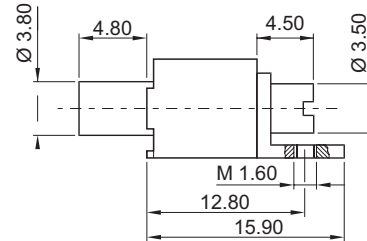
Jack 1/4 turn lock, vertical mount

Ref: **202**



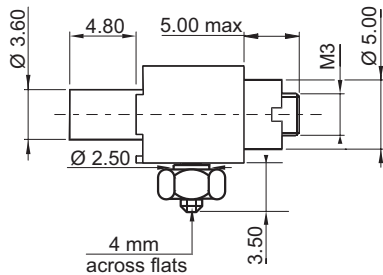
Jackscrew, transverse mount

Ref: **212**



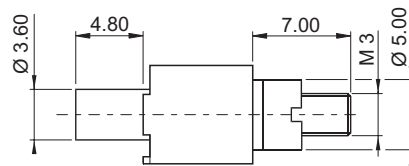
Jackscrew, transverse mount

Ref: **10 209** Ref: **49** PCB thickness 1.60



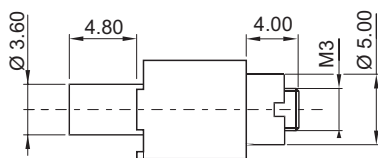
Jackscrew, vertical mount

Ref: **215** Ref: **53**



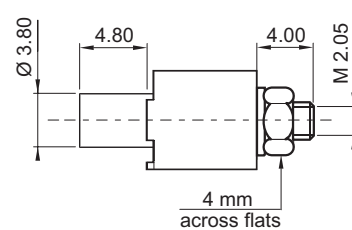
Jackscrew, free connector

Ref: **210** Ref: **50**



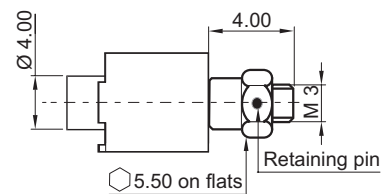
Jackscrew, vertical mount

Ref: **219** Ref: **80**



Rotating jackscrew

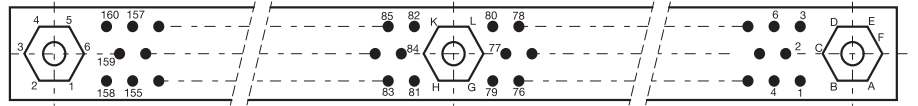
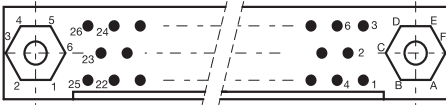
Ref: **232**



Receptacle Mating Side Layout View

26 to 98 contacts

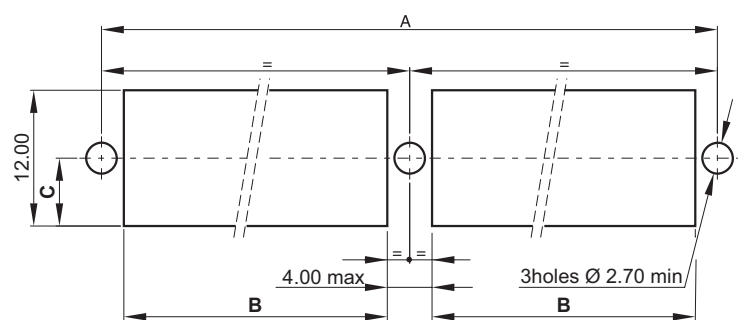
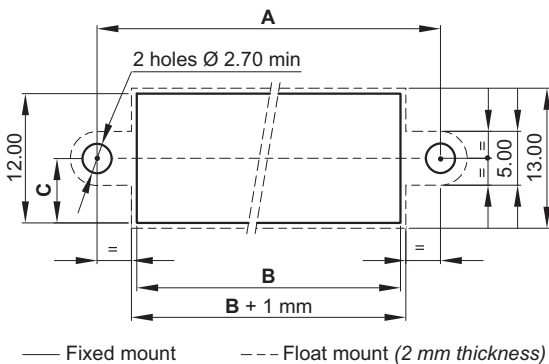
108 to 160 contacts



Panel Preparation Details

26 to 98 contacts

108 to 160 contacts



Panel: female or male, plug or receptacle

Terminations: 40 - 51

Guide styles: 111 - 121 (*Fixed Mount*)

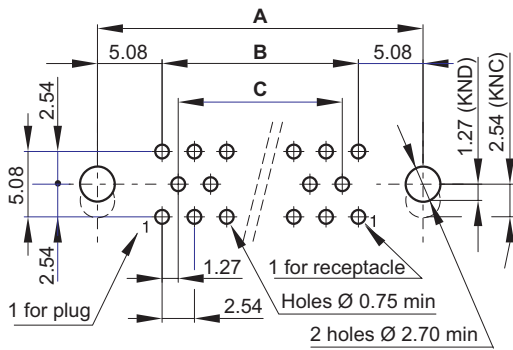
Guide styles: 113 - 123 - 202 (*Float Mount*)

No. of contacts	26	44	62	80	98	108	126	144	160
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	149.86
B min	25.90	41.10	56.40	71.60	86.90	48.50	56.00	63.60	69.95
C (KNC)	-	-	6.00	6.00	6.00	-	-	-	6.00
C (KND)	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	-

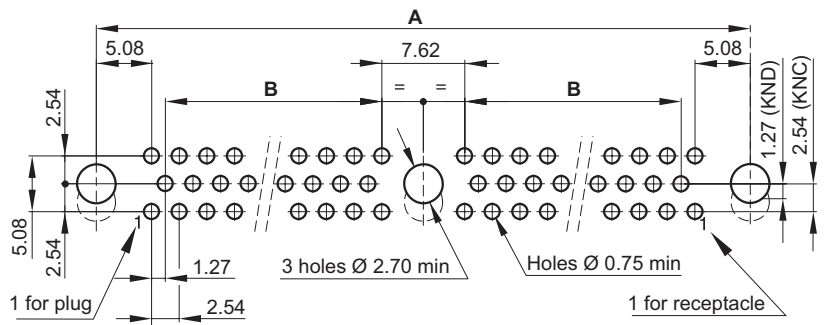
Board Preparation Details

Mother board

26 to 98 Contacts



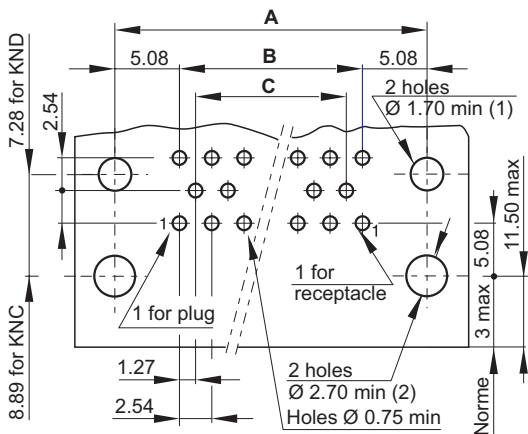
108 to 160 Contacts



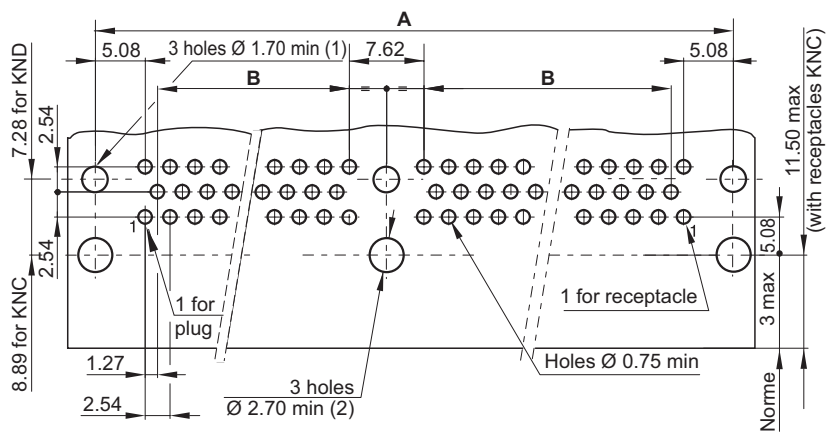
Mother Board: female or male, plug or receptacle, straight solder termination
Guide styles: 111 - 121- 202

Daughter board

26 to 98 Contacts



108 to 160 Contacts



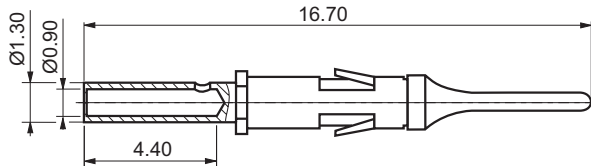
Daughter Board: female or male, plug or receptacle, 90° termination
 (1) **Guide styles:** 124 (2) **Guide styles:** 110 - 206

No. of contacts	26	44	62	80	98	108	126	144	160
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	149.86
B	20.32	35.56	50.80	66.04	81.28	43.18	50.80	58.42	64.77
C	17.78	33.02	48.26	63.50	78.74	-	-	-	-

Contacts

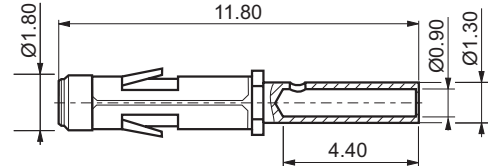
Male

Crimp terminations AWG 22-28 (0.079 - 0.34 mm²)



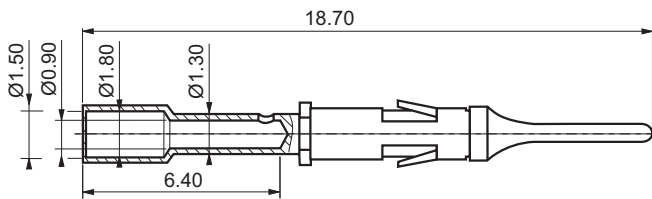
Reference	Part number
KN- ---13 20 ---	006 042 1- 20R OG
KN- ---55 20 --- MR	006 042 1- 20P OF 3401 017 004B

Female

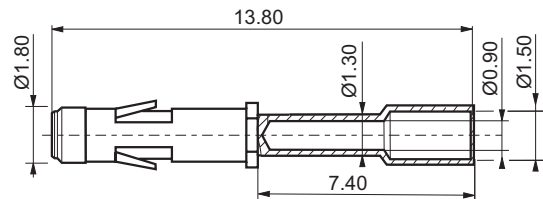


Reference	Part number
KN- ---22 20 ---	006 042 2- 20R GO
KN- ---44 20 --- FR	006 042 2- 20P J9 3401 017 015B

Crimp terminations AWG 22-28 (0.079 - 0.34 mm²) & Sheath Ø1.45



Reference	Part number
KN- ---13 20 ---	006 063 1- 21R OG
KN- ---55 20 ---	006 063 1- 20R OF



Reference	Part number
KN- ---22 20 ---	006 063 2- 21R GO
KN- ---44 20 ---	006 063 2- 21R J3

Tools and accessories

Crimp tool & Positioner



Ref: S_102
(M22520/2.01)

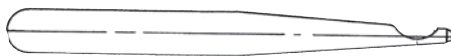


Contact part number	Crimp tool	AWG	Wire cross section	Positioner	Tool turret	Selector position
006 042 1- 20R OG 006 042 2- 20R GO	ASTRO TOOL M22520/2.01	28	0.079	SS-0060000001		3
		26	0.14			4
		24	0.20			4
		22	0.34			5
	DANIELS M22520/2.01	28	0.079	SS-0060000001		3
		26	0.14			4
		24	0.20			4
		22	0.34			5

006 063 1- 21R OG 006 063 2- 21R GO	2 operations	ASTRO TOOL M22520/2.01	28	0.079	SS-0060000001		3	
			26	0.14			4	
			24	0.20			4	
			22	0.34			5	
		1 st crimp (lead)	DANIELS M22520/2.01	28	0.079	SS-0060000001		3
				26	0.14			4
				24	0.20			4
				22	0.34			5
	2 nd crimp (sheath)	ASTRO TOOL M22520/2.01	28	0.079	SS-0060000002		*	
			26	0.14			6	
			24	0.20			7	
			22	0.34			7	
		DANIELS M22520/2.01	28	0.079	SS-0060000002		*	
			26	0.14			6	
			24	0.20			7	
			22	0.34			7	

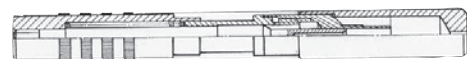
	1 operation	52007	28	0.079		SP717	2
			26	0.14			3
			24	0.20			4
			22	0.34			4

Insertion



SM-0060000001

Extraction



SD-0060000006

Alignment Combs

for 90° through board termination

2 fixing points
3 fixing points

HPF107/B
SP. 006 00 00 004

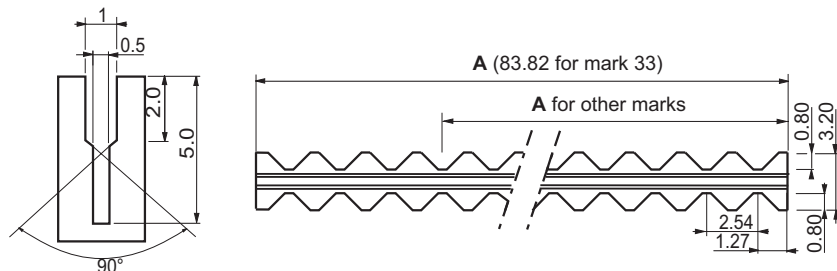
Screwdriver for m3 nut

208 locking devices
215 locking devices

S_075

Accessories

Antistatic Pin Protector



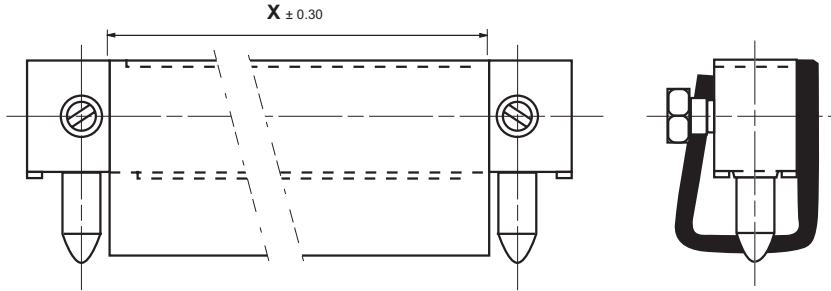
Ordering information
KNB - - - - 314
 ↑
 Ref

Use	A	Ref	Use	A	Ref
KNB 017	24.13	009	KNB 096	62.23	024
KND 026			KND 144		
KNB 029 KND 044	39.37	015	KNB 053	69.85	027
			KNC 080 & 160		
			KND 080		
KNB 072 KND 108	46.99	018	KNB 120	77.47	030
KNB 041 & 084	54.61	021	KNB 065	83.82	033
KNC 062			KNC 098		
KND 062 & 126			KND 098		

Note: Each part number contains only one header.
 To equip fully the connector, you have to order 2, 3, 4 or 6 identical headers.
 Header can fit on contacts or be positioned between rows.

Accessories

Pin Protector (*extruded polypropylene*)



Ordering information

K N - - - - 308
 B, C or D Number of positions

KNB	017	029	041	053	065	072	084	096	120
X ± 0.30	25.50	40.70	56	71.20	86.50	48.40	56	63.60	78.80
Qty	1	1	1	1	1	2	2	2	2

KNC	062	080	098	119	160
X ± 0.30	66	81.20	96.40	114.20	155.00
Qty	1	1	1	1	1

KND	026	044	108	126	144
X ± 0.30	35.50	50.70	111.70	127.00	142.20
Qty	1	1	1	1	1

Disclaimer

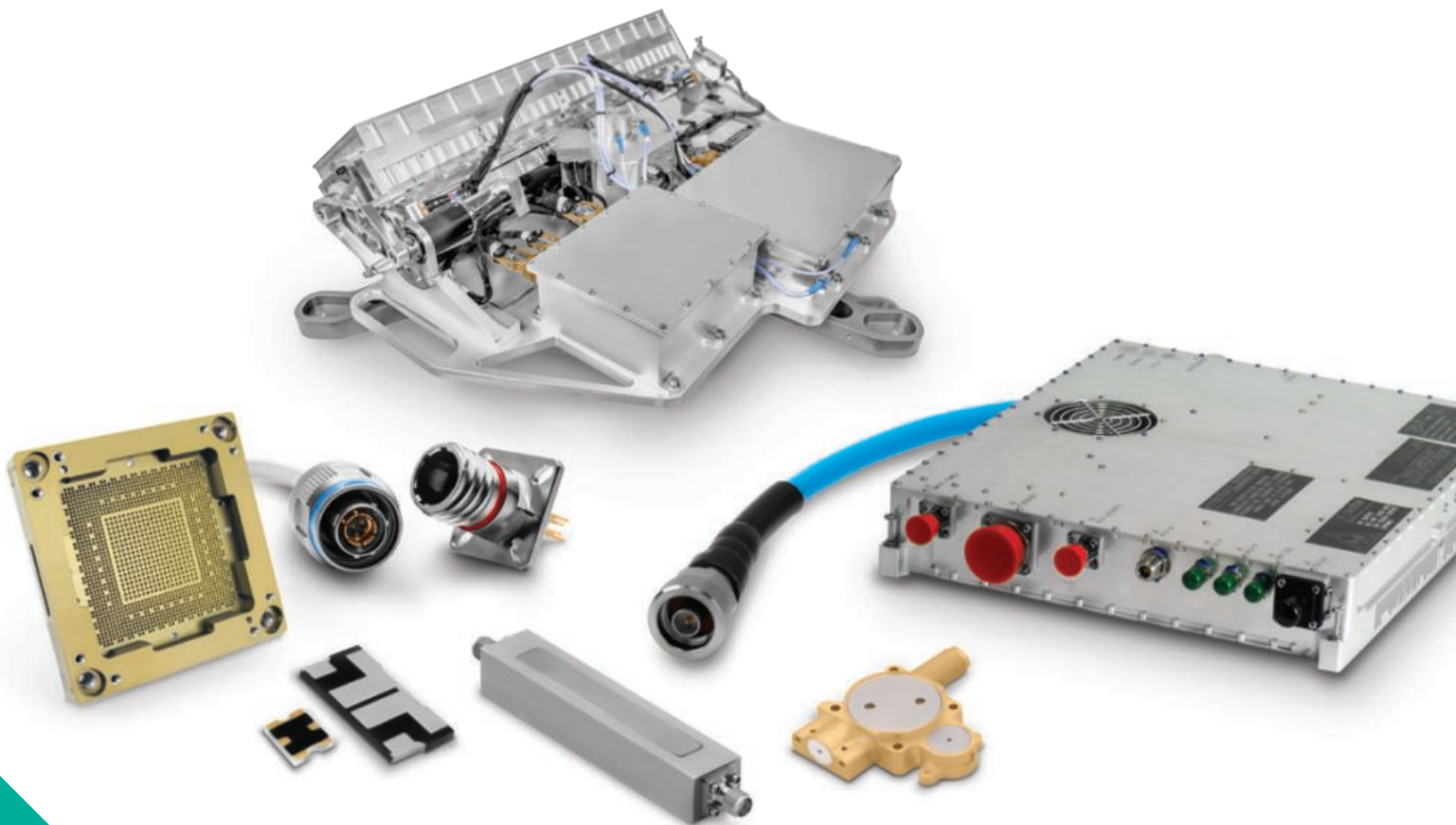
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