



**Medium Density PCB Connectors**  
**MIL C 55302**  
**ESA/ESCC3401/016, 3401/017**  
**NF C-UTE C 93-424**

- Equipped with 0.60mm rear removable contacts
- High density interconnection
- Up to 120 signal contacts / 2 rows
- 2.54mm between rows
- 1.27mm between contacts quincuncial
- Low contact insertion
- Low contact resistance
- Polarization by guiding or locking devices
- 5000 mating and unmating cycles

## Technical Characteristics

<b>MATERIALS</b>		
<b>Moulding</b>	Glass fiber filled diallyl - phtalate	
<b>Contacts</b>	Brass or bronze	
<b>Guides - coding styles - screws</b>	Stainless steel or nickel plated brass or ARCAP	
<b>PLATING</b>	<b>Standard</b>	<b>ESA</b>
<b>Pin</b>	0.25µm Gold/1.27µm Ni	1.27µm Gold/1.27µm Ni (min)
<b>Socket body</b>	0.25µm Gold/1.27µm Ni on activ area 1.27µm Ni on non activ area	0.25µm Gold/1.27µm Ni (min)
<b>Socket wires</b>	1µm Gold/0.20µm Ni	1.27µm Gold/0.20µm Ni (min)
<b>Guides (brass)</b>	Ni	Ni
<b>DIELECTRIC WITHSTANDING VOLTAGE</b>	1 200Vrms	
<b>CURRENT RATING (at 25 °C)</b>	Standard quality: 3A Max ESA approved: 5A Max	
<b>INSULATION RESISTANCE</b>	> 10 <sup>4</sup> MΩ (500Vcc)	
<b>CONTACT RESISTANCE</b>	≤ 8mΩ	
<b>TEMPERATURE RANGE</b>	-55°C +125°C	
<b>CONTACTS</b>	HYPERTAC® type Ø 0.60mm rear removable	
<b>PITCH</b>	2.54mm between rows 1.27mm between quincuncial contacts	
<b>GUIDING</b>	By two outside guides (2 guiding styles) and one central guide (3 guiding styles)	
<b>KEYING</b>	By rotating of outside polarised guides (Up to 36 keyings)	
<b>MASS &amp; POWER CONTACTS</b>	HYPERTAC® type can be used instead of outside guides	

## Ordering Information

<b>SERIES</b>	<b>K</b>	<b>N</b>	<b>B</b>	<b>017</b>	<b>22</b>	<b>51</b>	<b>121</b>	
<b>PITCH OR TYPE</b>								
<b>N</b>   1.27 mm pitch, rear removable contacts								
<b>MODEL</b>								
<b>B</b>   2 rows								
<b>NUMBER OF CONTACTS</b>								
<b>017</b> <b>029</b> <b>041</b> <b>053</b> <b>065</b>	For the right angle 053 layout, KNB must be replaced by KXB (details on page18)							
<b>072</b> <b>084</b> <b>096</b> <b>120</b>								
<b>MOULDING POLARITY</b>								
NF C-UTE C 93-424	NF C-UTE C 93-424							
MIL-C-55302	MIL-C-55302							
Ⓢ ESA/ESCC 3401/01601B	Ⓢ ESA/ESCC 3401/01601B							
SPACE GRADE	SPACE GRADE							
<b>12</b> <b>14</b> <b>54</b> <b>54</b> Female plug	<b>22</b> <b>24</b> <b>44</b> <b>44</b> Female receptacle						* For 90° & straight terminations (splicing on PCB) ** RoHS compliant for 90° & straight terminations (splicing on PCB)	
<b>13</b> <b>15</b> <b>55</b> <b>55</b> Male plug	<b>23</b> <b>25</b> <b>45</b> <b>45</b> Male receptacle							
<b>16</b> <b>18</b> - <b>56</b> Tinned female plug*	<b>26</b> <b>28</b> - <b>46</b> Tinned female receptacle*							
<b>17</b> <b>19</b> - <b>57</b> Tinned male plug*	<b>27</b> <b>29</b> - <b>47</b> Tinned male receptacle*							
<b>1A</b> <b>1C</b> - <b>5A</b> Tinned female plug**	<b>2A</b> <b>2C</b> - - Tinned female receptacle**							
<b>1B</b> <b>1D</b> - <b>5B</b> Tinned male plug**	<b>2B</b> <b>2D</b> - - Tinned male receptacle**							
<b>TERMINATION STYLES</b> (see p. 6)								
Ⓢ <b>10</b> Through board solder - 90° - length 3mm	Ⓢ <b>30</b> Through board solder - straight							
Ⓢ <b>11</b> Through board solder - 90° - length 4mm	Ⓢ <b>40</b> Solder bucket							
Ⓢ <b>20</b> Crimp (Contact: see p. 33)	Ⓢ <b>51</b> Wire wrap (3 wrapping levels)							
<b>21</b> Double crimp (Contact: see p. 33)	Ⓢ <b>91</b> Female - male							
<b>MOUNTING HARDWARE</b>								
<b>GUIDE STYLES</b> (see p. 10-11) - (Consult us for special guides)								
Ⓢ <b>110</b> Male polarised, transverse mount, standard plug	Ⓢ <b>125</b> Male unpolarised, transverse mount							
Ⓢ <b>111</b> Male polarised, vertical mount	Ⓢ <b>126</b> Female unpolarised, vertical mount							
Ⓢ <b>113</b> Male polarised, float mount	Ⓢ <b>127</b> Male unpolarised, vertical mount							
Ⓢ <b>121</b> Female polarised, vertical mount	<b>130</b> Female unpolarised, vertical mount							
Ⓢ <b>123</b> Female polarised, float mount	Ⓢ <b>131</b> Male unpolarised, transverse mount							
Ⓢ <b>124</b> Female polarised, transverse mount	Ⓢ <b>132</b> Female unpolarised, transverse mount							
Ⓢ <b>145</b> Male polarised, transverse mount on receptacle only	<b>133</b> Female all polarised, transverse mount							
<b>190</b> Female power or mass contact, vertical mount	<b>191</b> Male power or mass contact, vertical mount							
<b>LOCKING STYLES</b> (see p. 13-14)								
Female receptacle	Male plug							
<b>202</b> 1/4 turn, vertical mount	<b>201</b> 1/4 turn, free connector							
<b>204</b> 1/4 turn, transverse mount	<b>203</b> 1/4 turn, transverse mount							
Ⓢ <b>208</b> Jackscrew, transverse mount	Ⓢ <b>207</b> Jackscrew, free connector							
Ⓢ <b>210</b> Jackscrew, free connector	Ⓢ <b>211</b> Jackscrew, free connector							
Ⓢ <b>212</b> Jackscrew, transverse mount	Ⓢ <b>290</b> Jackscrew, vertical mount							
Ⓢ <b>215</b> Jackscrew, vertical mount								
Ⓢ <b>219</b> Jackscrew, vertical mount								
Ⓢ <b>232</b> Jackscrew, with operation button								

Ⓢ : To convert HYPERTAC references to ESA references, see tables 1, 2 & 3 on next page

## ESA & HYPERTAC Correspondance Table

Example: KNB 029 44 40 113

**34 01 016 01 B**

**14**

**FS**

**55**

**00**

**55**

ESCC COMPONENT NUMBER

MOUNTING

See table 1

TERMINATION STYLE

See table 2

LOCKING TYPE - ON LEFT SIDE

See table 3

LOCKING TYPE - IN CENTER

**00** For 2 guide connectors

-- For 3 guide connectors, see table 3

LOCKING TYPE - ON RIGHT SIDE

See table 3

TABLE 1					
Part numbers	esa	Part numbers	esa	Part numbers	esa
Plug KNB 017	<b>01</b>	Receptacle KNB 017	<b>13</b>	Plug KNB 072	<b>56</b>
Plug KNB 029	<b>02</b>	Receptacle KNB 029	<b>14</b>	Receptacle KNB 072	<b>57</b>
Plug KNB 041	<b>03</b>	Receptacle KNB 041	<b>15</b>	Plug KNC 062	<b>58</b>
Plug KNB 053	<b>04</b>	Receptacle KNB 053	<b>16</b>	Receptacle KNC 062	<b>59</b>
Plug KNB 065	<b>05</b>	Receptacle KNB 065	<b>17</b>	Plug KNC 080	<b>60</b>
Plug KNB 084	<b>07</b>	Receptacle KNB 084	<b>19</b>	Receptacle KNC 080	<b>61</b>
Plug KNB 096	<b>08</b>	Receptacle KNB 096	<b>20</b>	Plug KNC 098	<b>62</b>
Plug KNB 120	<b>10</b>	Receptacle KNB 120	<b>22</b>	Receptacle KNC 098	<b>63</b>
Plug KNC 160	<b>12</b>	Receptacle KNC 160	<b>24</b>		

TABLE 2		
Part numbers		esa
Bent male	10	<b>MC</b>
Bent long male	11	<b>ML</b>
Crimp male	20	<b>MR</b>
Straight male	30	<b>MD</b>
Solder bucket male	40	<b>MS</b>
Mini-wrapping male	51	<b>MY</b>
Bent female	10	<b>FC</b>
Bent long fem.	11	<b>FL</b>
Crimp female	20	<b>FR</b>
Straight female	30	<b>FD</b>
Solder bucket fem.		<b>FS</b>
Mini-wrapping fem.	51	<b>FY</b>
Female-male	91	<b>FM</b>

REMINDER SPATIAL P.P.P. (Party Polarity Protection)				EXAMPLE	
Female receptacle	<b>44</b>	Plug female	<b>54</b>	KNB 029 <b>44</b> 40 113 P.P.P.	
Male receptacle	<b>45</b>	Plug male	<b>55</b>		

TABLE 3							
Part numbers	esa	Part numbers	esa	Part numbers	esa	Part numbers	esa
Guideless Connector	<b>00</b>	KN _____ 111	<b>35</b>	KNC _____ 10 209	<b>49</b>	KNB _____ 10 230	<b>73</b>
KNB _____ 10 125	<b>26</b>	KN _____ 121	<b>36</b>	KN _____ 210	<b>50</b>	KNC _____ 124	<b>74</b>
KNC _____ 10 125	<b>27</b>	KNB _____ 145	<b>40</b>	KN _____ 211	<b>51</b>	KNC _____ 132	<b>75</b>
KN _____ 127	<b>28</b>	KNB _____ 124	<b>41</b>	KNB _____ 212	<b>52</b>	KNC _____ 11 110	<b>76</b>
KN _____ 126	<b>29</b>	KNC _____ 10 230	<b>43</b>	KN _____ 215	<b>53</b>	KNC _____ 11 125	<b>77</b>
KNB _____ 131	<b>31</b>	KN _____ 232	<b>45</b>	KN _____ 123	<b>54</b>	KNB _____ 11 208	<b>79</b>
KNB _____ 132	<b>32</b>	KN _____ 231	<b>46</b>	KN _____ 113	<b>55</b>	KN _____ 219	<b>80</b>
KNB _____ 10 110	<b>33</b>	KN _____ 207	<b>47</b>	KNB _____ 11 125	<b>71</b>	KN _____ 290	<b>81</b>
KNC _____ 10 110	<b>34</b>	KNB _____ 10 208	<b>48</b>	KNB _____ 11 110	<b>72</b>	please consult us	

## Contact Terminations

### Plugs

### Receptacles

#### Male

#### Female

#### Female

#### Male

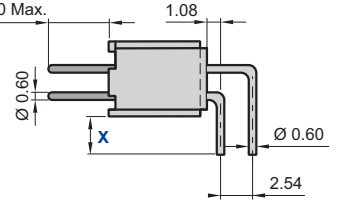
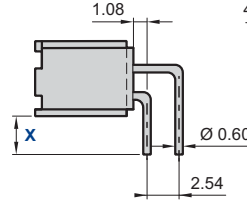
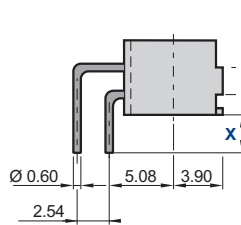
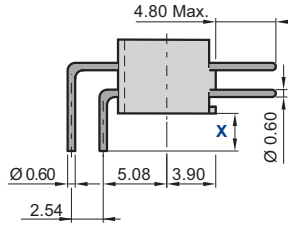
### 90° through board solder

Ref: **10** (X= 3)

Ref: **MC**  
**FC**

Ref: **11** (X= 4)

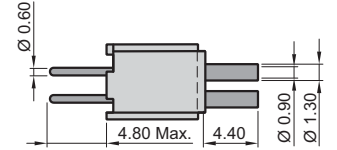
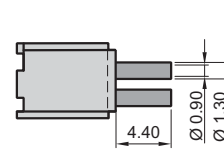
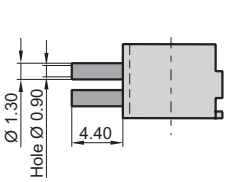
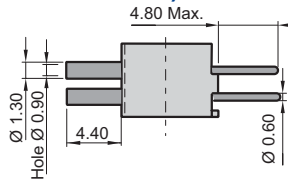
Ref: **ML**  
**FL**



### Crimp (AWG 28-26 & 24-22)

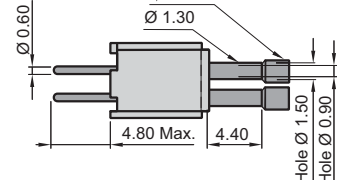
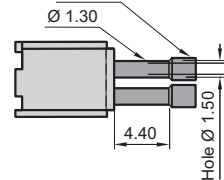
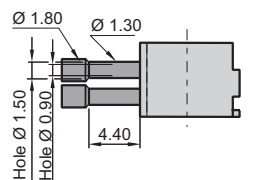
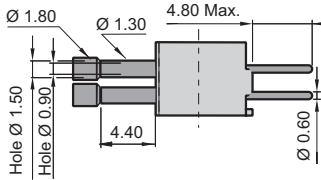
Ref: **20**

Ref: **MR**  
**FR**



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

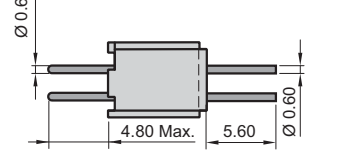
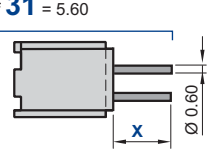
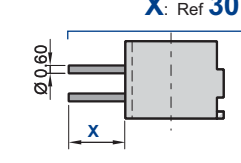
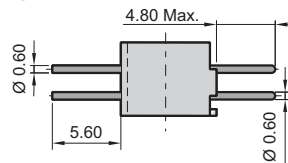
Ref: **21**



### Straight through board solder

Ref: **30**

Ref: **MD**  
**FD**

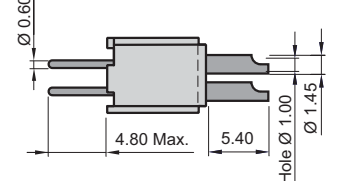
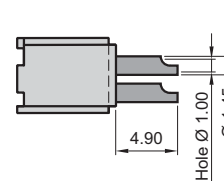
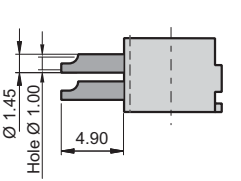
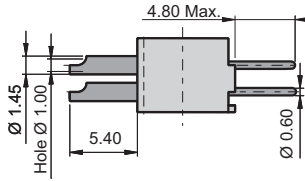


X: Ref **30** = 4.50, ref **31** = 5.60

### Solder bucket (AWG 22 Max.)

Ref: **40**

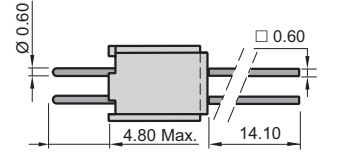
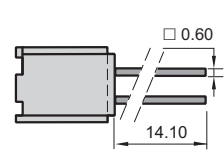
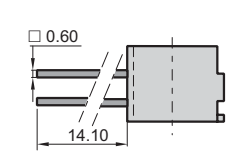
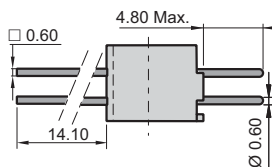
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**FS**



### Wire wrap (3 wrapping levels)

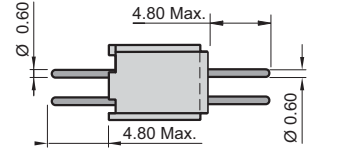
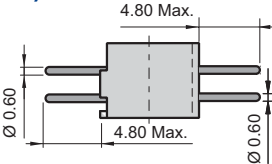
Ref: **51**

Ref: **MY**  
**FY**



### Saver (Male-Male)

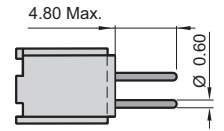
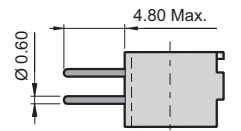
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### Saver (Female-Male)

Ref: **91**

Ref: **FM**

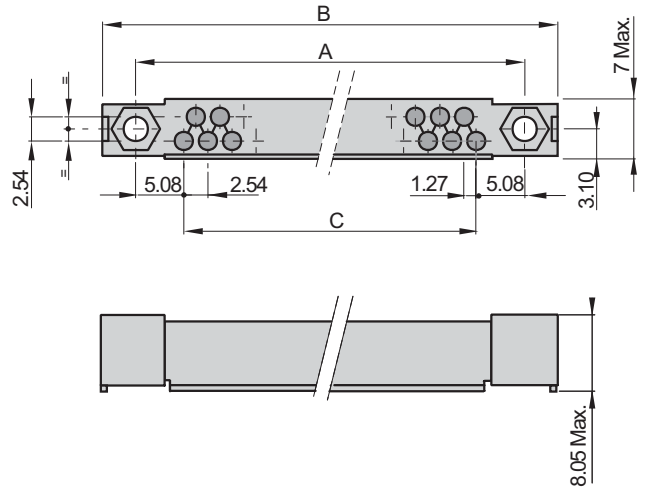
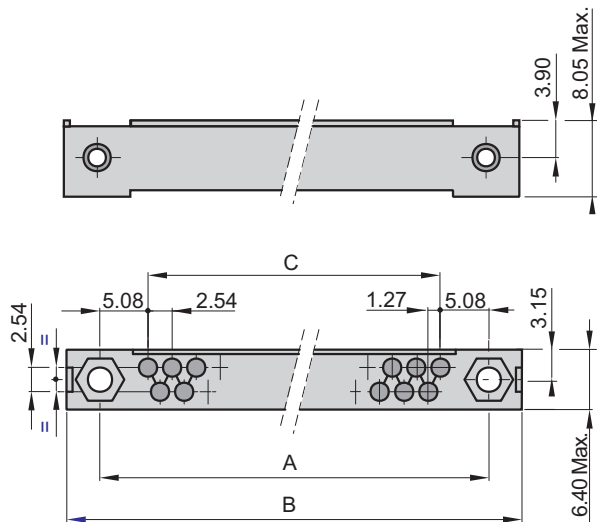


**Dimensions**

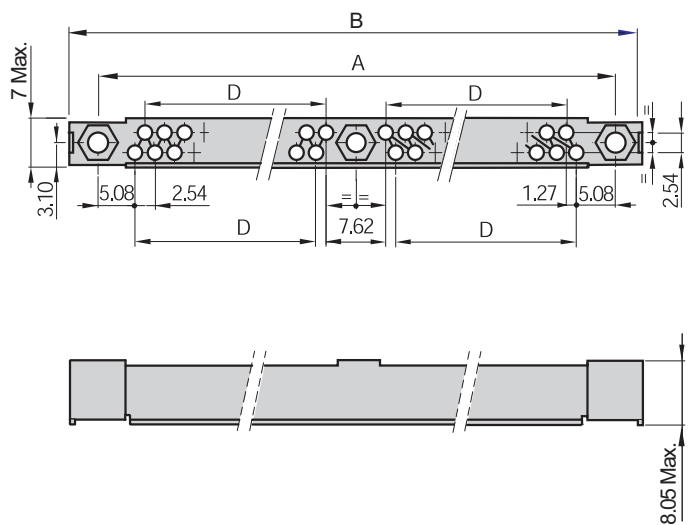
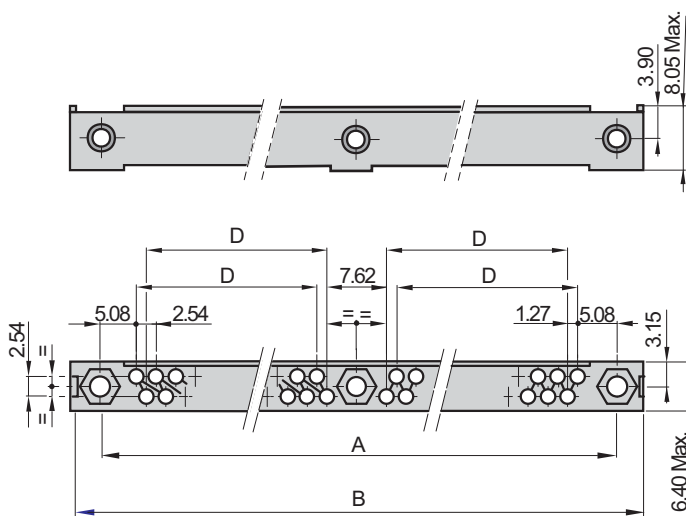
**Plugs**

**Receptacles**

**17 to 65 Contacts**



**72 to 120 Contacts**



Nb. of contacts	17	29	41	53	65	72	84	96	120
<b>A</b>	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	167.64
<b>B Max.</b>	38.50	53.70	69	84.20	99.50	114.70	129.90	145.20	175.50
<b>C</b>	20.32	35.56	50.80	66.04	81.28	-	-	-	-
<b>D</b>	-	-	-	-	-	43.18	50.80	58.42	73.66

## Guide Device and Compatibility

**Legend:**

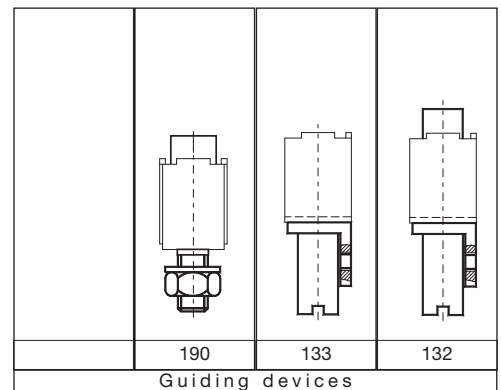
- Compatible
- Compatible provided that PCB does not protect male contacts
- FF = Female Plug
- FM = Male Plug
- EF = Female Receptacle
- EM = Male Receptacle

	E	E	F	F	E	E	F	F	E	E	F	F
	M	F	F	M	M	F	F	M	M	F	F	M
	23	22	12	13	23	22	12	13	23	22	12	13
	█	█			█	█			█	█		
							█	█			█	█
					█	█	█	█	█	█	█	█
	█	█	█									
	█	█	█									
	█	█	█									

FF	12		█	█					
FM	13		█	█					
EM	23	█		█					
EF	22	█		█					
EM	23	█		█					
EF	22	█		█					
FF	12		█		█	█	█	█	█
FM	13		█		█	█	█	█	█
EM	23	█			█	█	█	█	█
EF	22	█			█	█	█	█	█
FF	12		█	█					
FM	13		█	█					
FF	12		█		█	█	█	█	█
FM	13		█		█	█	█	█	█
EM	23	█			█	█	█	█	█
EF	22	█			█	█	█	█	█
FF	12		█	█					
FM	13		█	█					

	█								
		█							
						█			
							█		
								█	
									█
						█			
									█

Polarity	Receptacle	Plug	90°	Straight	Solder bucket	Crimp	Wire wrap - PPC
			10 30	11 31	40	21	51
	Moulding		Contact				



## Polarity Termination Chart

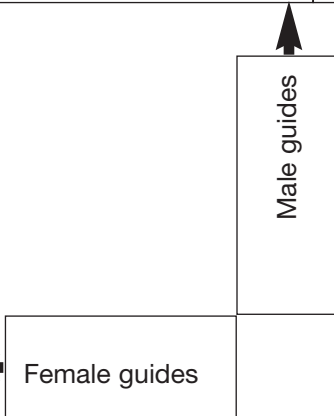
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M	F	F	M	M	F	F	M	M	F	F	M	M	F	F	M	M	F	F	M
23	22	12	13	23	22	12	13	23	22	12	13	23	22	12	13	23	22	12	13
■	■			■	■			■	■			■	■			■	■		
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■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Polarity	
Receptacle	Moulding
Plug	
90°	10 11
Straight	30 31
Solder bucket	40
Crimp	20 21
Wire wrap	51

		■																	■
			■																■
				■															■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

	191	Guiding devices
	145	
	131	
	127	
	125	
	113	
	111	
	110	

130	126	124	123	121
Guiding devices				



**Nota:** For the global understanding of the chart, please print pages 8 and 9

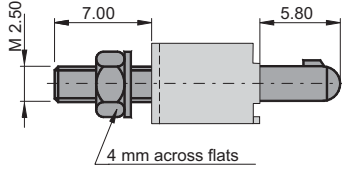
## Guide Styles Plugs & Receptacles

### Male

### Female

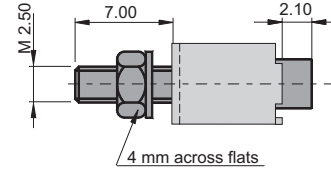
#### Polarised vertical mount

Ref: **111**  
Ref Ⓢ: **35**



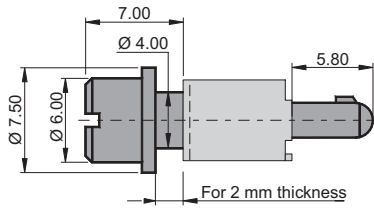
#### Polarised vertical mount

Ref: **121**  
Ref Ⓢ: **36**



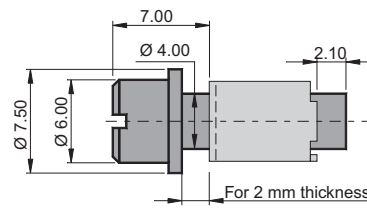
#### Polarised vertical float mount

Ref: **113**  
Ref Ⓢ: **55**



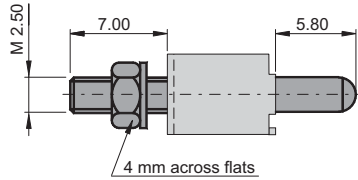
#### Polarised vertical float mount

Ref: **123**  
Ref Ⓢ: **54**



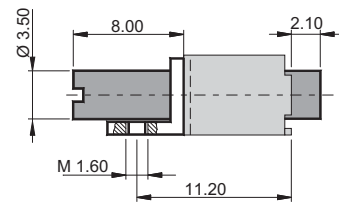
#### Unpolarised vertical mount

Ref: **127**  
Ref Ⓢ: **28**



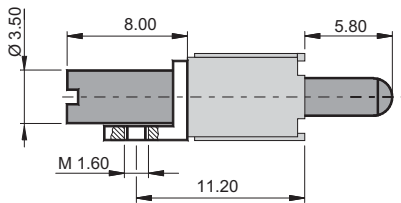
#### Polarised transverse mount

Ref: **124**  
Ref Ⓢ: **41**



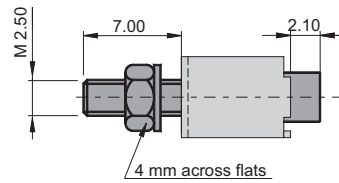
#### Unpolarised transverse mount

Ref: **131**  
Ref Ⓢ: **31**



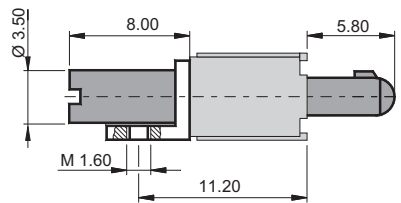
#### Unpolarised vertical mount

Ref: **126**  
Ref Ⓢ: **29**



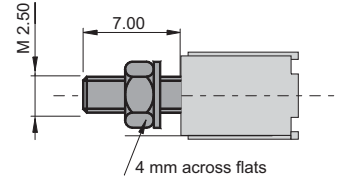
#### Polarised transverse mount

Ref: **145**  
Ref Ⓢ: **40**



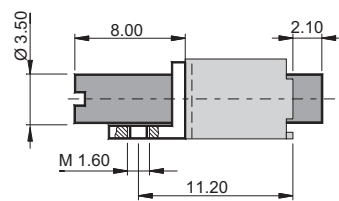
#### All polarised vertical mount

Ref: **130**



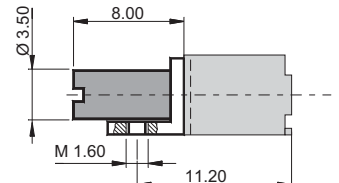
#### Unpolarised transverse mount

Ref: **132**  
Ref Ⓢ: **32**



#### All polarised transverse mount

Ref: **133**



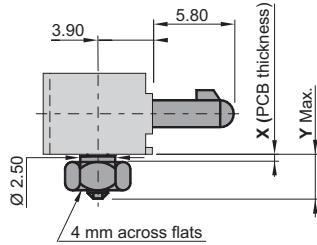


**Guide Styles  
Male Plugs Only**

**Polarised transverse mount**

Ref: **10 110**  
 Ref: **33**  
 X = 1.60 Y= 3.20

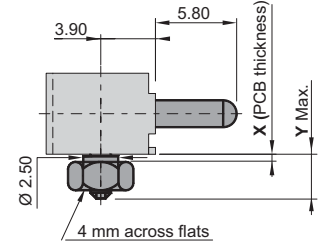
Ref: **11 110**  
 Ref: **72**  
 X = 2.40 Y= 4.90



**Unpolarised transverse mount**

Ref: **10 125**  
 Ref: **26**  
 X = 1.60 Y= 3.20

Ref: **11 125**  
 Ref: **71**  
 X = 2.40 Y= 4.90



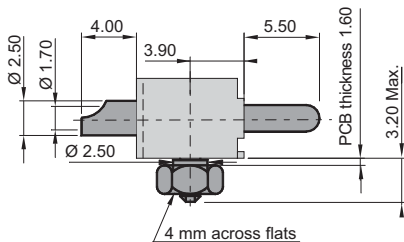
**Plugs & Receptacles**

**Male**

**Female**

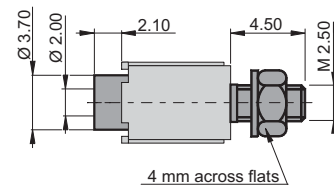
**Power or mass transverse mount**

Ref: **191**



**Power or mass vertical mount**

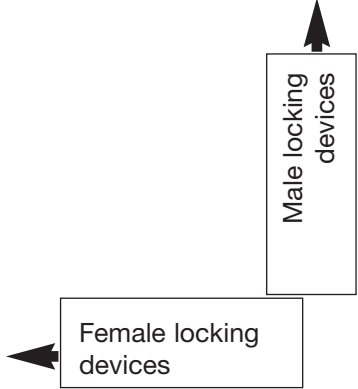
Ref: **190**



## Locking Device Compatibility Chart

		R	P	R	P	R	P	R	P	R	P	R	P	R	P	R	P			
		■		■		■		■		■				■		■			Receptacle	Moulding
			■		■		■		■		■		■		■		■		Plug	
P			■				■				■		■						290	
R		■							■		■									
P			■	■															231	
R		■			■															
P			■			■				■									211	
R		■					■				■									
P			■				■				■								207	
R		■							■		■									
P			■											■		■			205	
R		■													■		■			
P			■											■		■			203	
R															■		■			
P			■											■		■			201	
R		■													■		■			
				232	219	215	212	210	208	204	202									
Receptacle		Plug																		
Moulding																				

■ Compatible

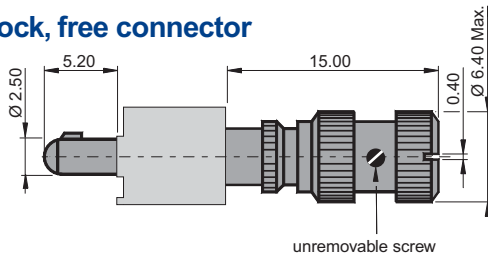


## Male Locking Styles

### Plugs & Receptacles

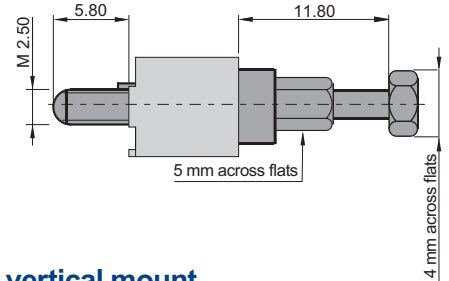
#### Jack 1/4 turn lock, free connector

Ref: **201**



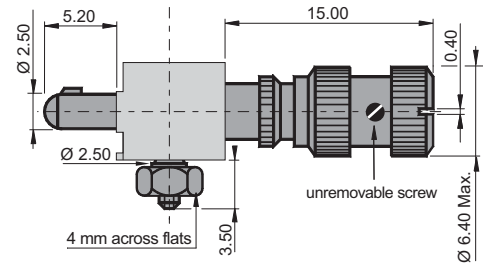
#### Jackscrew, free connector

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



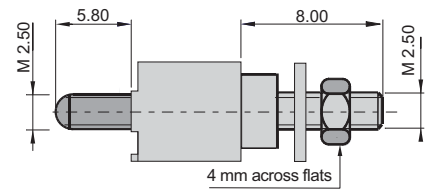
#### Jack 1/4 turn lock, transverse mount

Ref: **203**  
PCB thickness 1.60



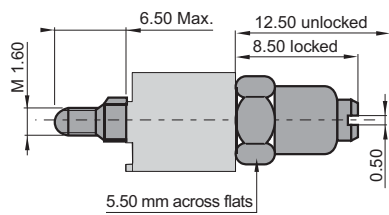
#### Jackscrew, vertical mount

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



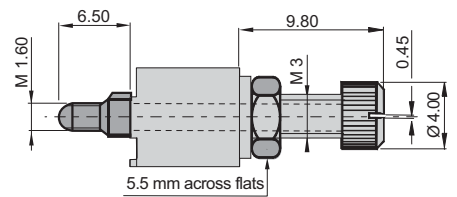
#### Jackscrew, free connector

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



#### Jackscrew, vertical mount

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

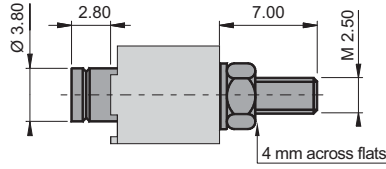


## Female Locking Styles

### Plugs & Receptacles

#### Jack 1/4 turn lock, vertical mount

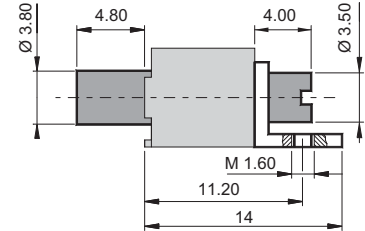
Ref: **202**



#### Jackscrew, transverse mount

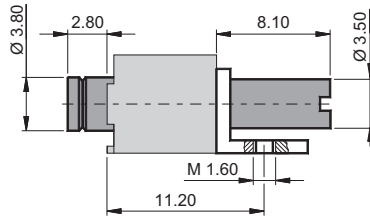
Ref: **212**

Ref Ⓢ: **52**



#### Jack 1/4 turn lock, transverse mount

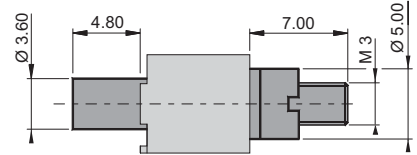
Ref: **204**



#### Jackscrew, vertical mount

Ref: **215**

Ref Ⓢ: **53**



#### Jackscrew, transverse mount

Ref: **208**

Term.: **10**

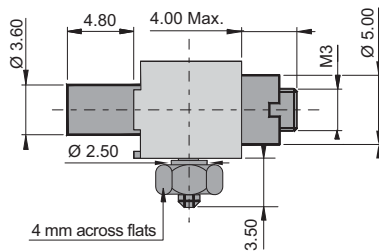
PCB thickness **1.60**

Ref Ⓢ: **48**

Term.: **11**

PCB thickness **2.40**

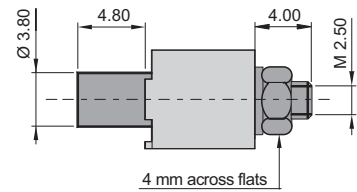
Ref Ⓢ: **79**



#### Jackscrew, vertical mount

Ref: **219**

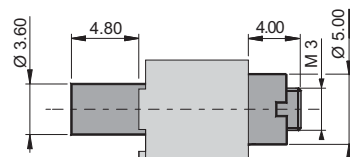
Ref Ⓢ: **80**



#### Jackscrew, free connector

Ref: **210**

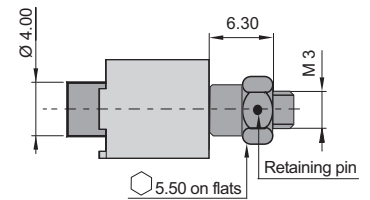
Ref Ⓢ: **50**



#### Rotating jackscrew, free connector

Ref: **232**

Ref Ⓢ: **45**

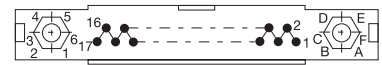
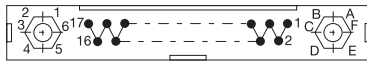


**Mating Side Layout View**

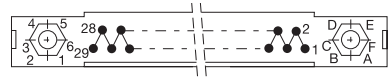
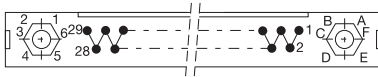
**Plugs**

**Receptacles**

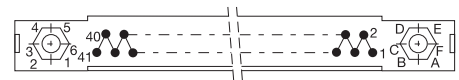
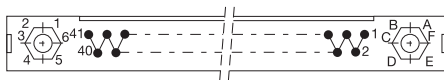
017



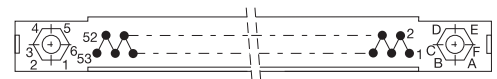
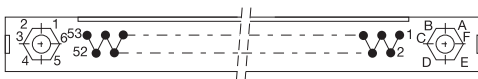
029



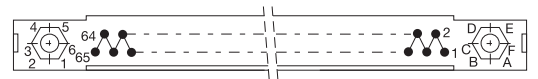
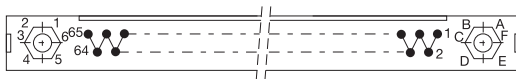
041



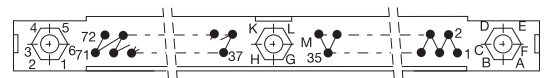
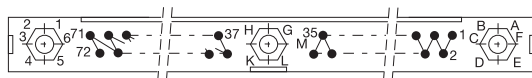
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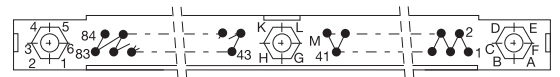
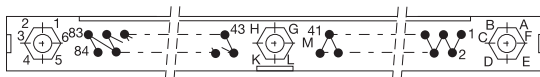
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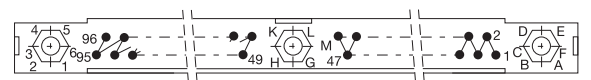
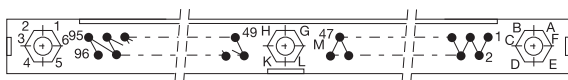
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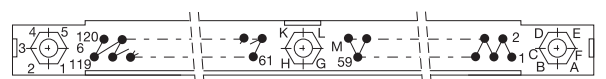
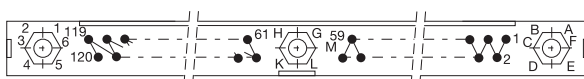
084



096

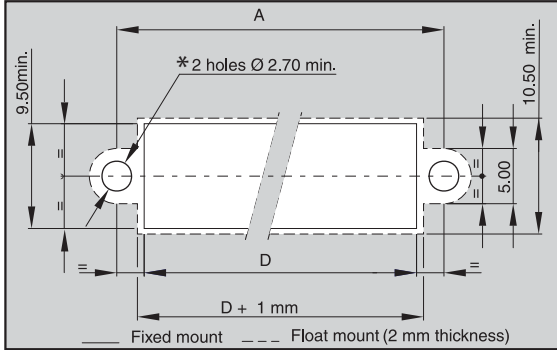


120

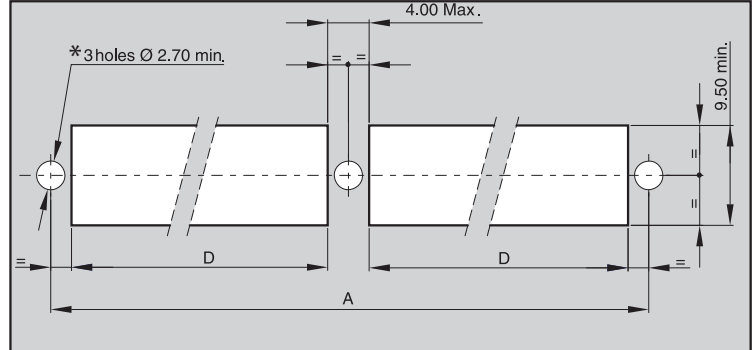


## Panel Preparation Details

### 17 to 65 Contacts



### 72 to 120 Contacts



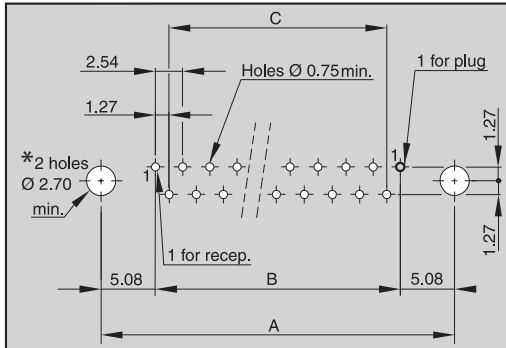
\* For ref 215, holes  $\varnothing 3.20$  min.

**Panel: Female or Male, plugs or receptacles, terminations 20 - 40 - 51**  
**Guide Styles: 111 - 121 - 126 - 127 - 130 - 190 (Fixed Mount). 113 - 123 (Float Mount)**  
**Locking Styles: 202 - 215\* - 219 - 231**

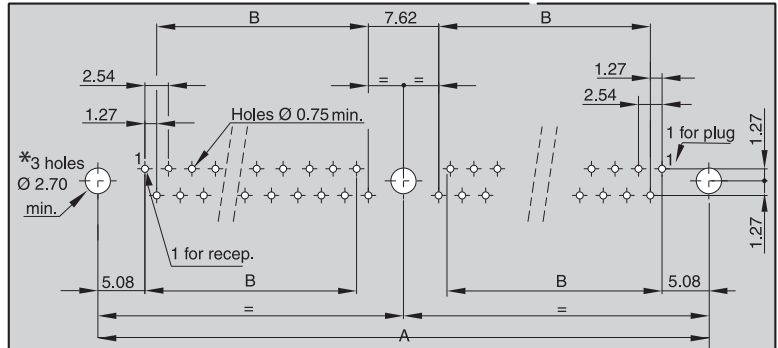
Nb. of contacts	17	29	41	53	65	72	84	96	120
<b>A</b>	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	167.64
<b>D</b>	25.90	41.10	56.40	71.60	86.90	48.50	56.00	63.30	78.80

## Board Preparation Details

### Mother board 17 to 65 Contacts



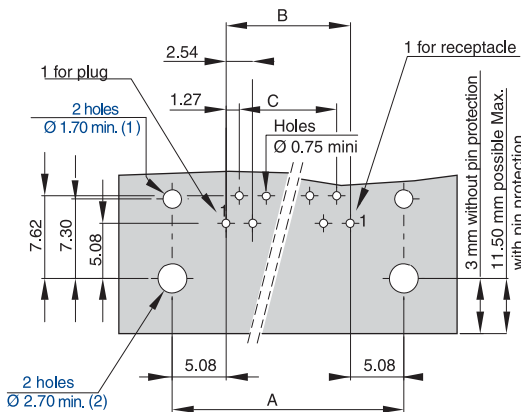
### 72 to 120 Contacts



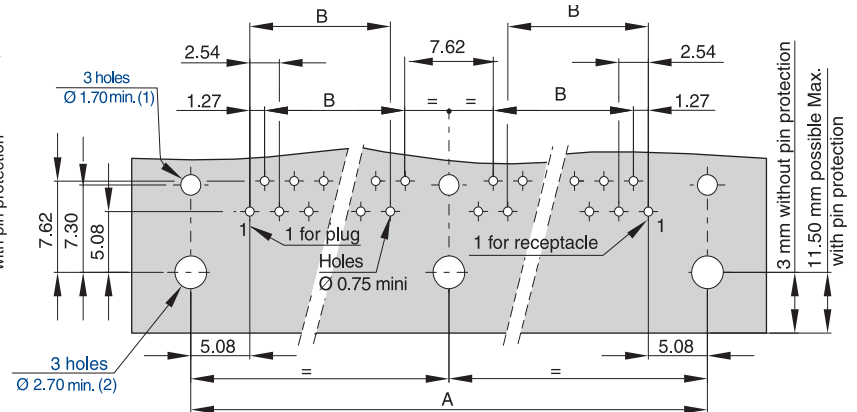
\* For ref 215, holes Ø 3.20 min.

**Mother Board: Female or Male, plugs or receptacles, straight solder terminations**  
**Guide Styles: 111 - 121 - 126 - 127 - 130 - 190 Locking Styles: 202 - 215\* - 219 - 231**

### Daughter board 17 to 65 Contacts

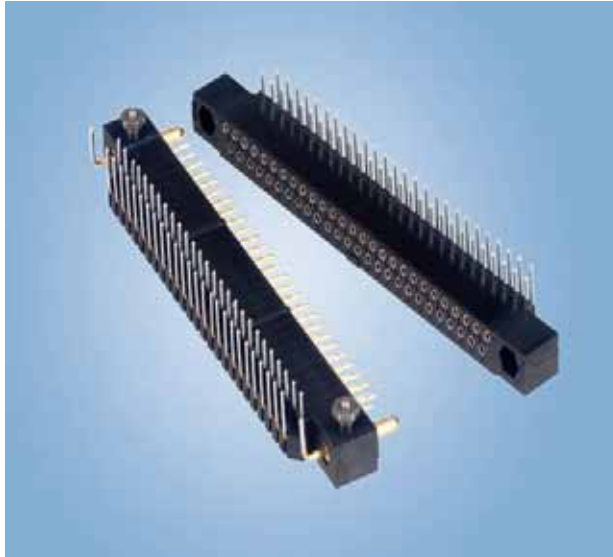


### 72 to 120 Contacts



**Daughter Board: Female or Male, plugs or receptacles, 90° terminations**  
**(1) Guide Styles: 124 - 131 - 132 - 133 - 145 Locking Styles: 204 - 212**  
**(2) Guide Styles: 110 - 125 - 191 Locking Styles: 203 - 208**

Nb. of contacts	17	29	41	53	65	72	84	96	120
<b>A</b>	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	167.64
<b>B</b>	20.32	35.56	50.80	66.04	81.28	43.18	50.80	58.42	73.66
<b>C</b>	17.78	33.02	48.26	63.50	78.74	-	-	-	-

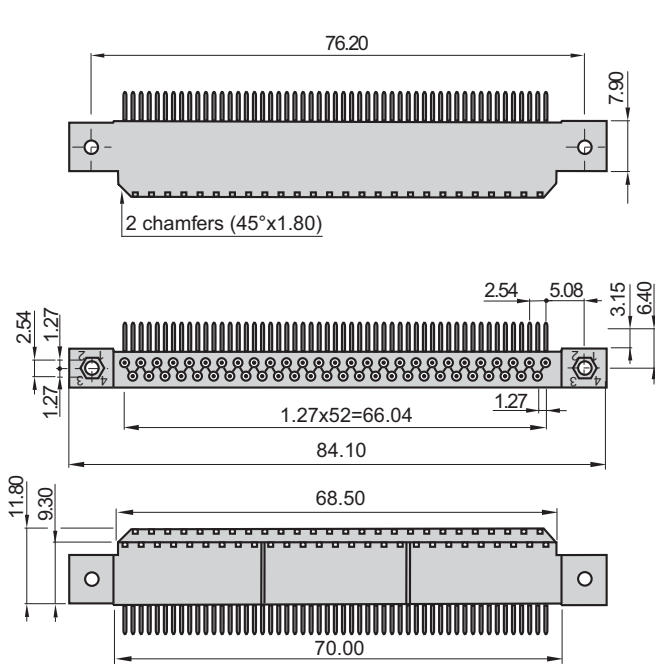


**Right Angle Monobloc Insulator**

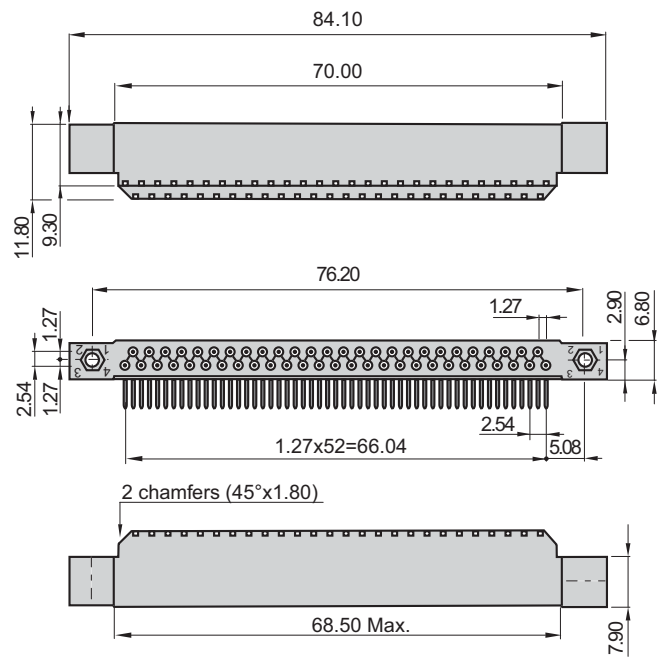
- Concerns the 053 layout on standard or MIL C plating
- Thermoplastic material
- Compliant with NF-UTE-C 93-424
- Contact anti-rotation device
- Conserve the other KNB characteristics

**Dimensions**

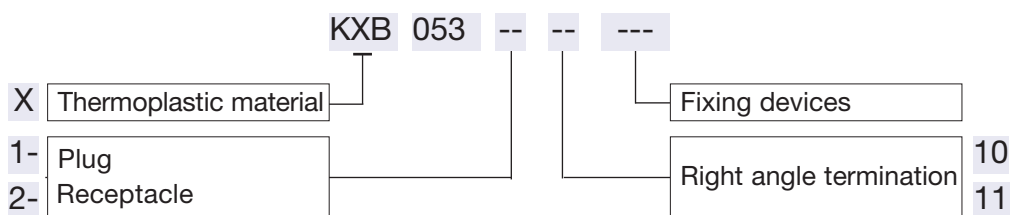
**Plug**



**Receptacle**



**Part Number**







**Medium Density PCB Connectors**  
**MIL C 55302**  
**ESA/ESCC3401/016, 3401/017**  
**NF C-UTE C 93-424**

- Equipped with 0.60mm rear removable contacts
- High density interconnection
- Up to 160 signal contacts / **3 rows**
- 2.54mm between rows
- 1.27mm between contacts quincuncial
- Low contact insertion
- Low contact resistance
- Polarization by guiding or locking devices
- 5000 mating and unmating cycles

### Technical Characteristics

<b>MATERIALS</b>		
<b>Moulding</b>	Glass fiber filled diallyl - phtalate	
<b>Contacts</b>	Brass or bronze	
<b>Guides - coding styles - screws</b>	Stainless steel or nickel plated brass or ARCAP	
<b>PLATING</b>	<b>Standard</b>	<b>ESA</b>
<b>Pin</b>	0.25µm Gold/1.27µm Ni	1.27µm Gold/1.27µmNi (min.)
<b>Socket body</b>	0.25µm Gold/1.27µm Ni on activ area 1.27µm Ni on non activ area	0.25µm Gold/1.27µm Ni (min.)
<b>Socket wires</b>	1µm Gold/0.20µm Ni	1.27µm Gold/0.20µmNi (min.)
<b>Guides (brass)</b>	Ni	Ni
<b>DIELECTRIC WITHSTANDING VOLTAGE</b>	1 200Vrms	
<b>CURRENT RATING (at 25 °C)</b>	Standard quality: 3A Max. ESA approved: 5A Max.	
<b>INSULATION RESISTANCE</b>	> 10 <sup>4</sup> MΩ (500Vcc)	
<b>CONTACT RESISTANCE</b>	≤ 8mΩ	
<b>TEMPERATURE RANGE</b>	-55°C +125°C	
<b>CONTACTS</b>	HYPERTAC® type Ø 0.60mm rear removable	
<b>PITCH</b>	2.54mm between rows 1.27mm between quincuncial contacts	
<b>GUIDING</b>	By two outside guides (2 guiding styles) and one central guide (3 guiding styles)	
<b>KEYING</b>	By rotating of outside polarised guides (36 keyings possible)	
<b>MASS &amp; POWER CONTACTS</b>	HYPERTAC® type can be used instead of outside guides	

### Ordering Information

SERIES	<b>K N C</b>				<b>062</b>	<b>22</b>	<b>51</b>	<b>121</b>	
PITCH OR TYPE									
<b>N</b>	1.27 mm pitch, rear removable contacts								
MODEL									
<b>C</b>	3 rows centered fixing		<b>D</b>	3 rows uncentered fixing					
NUMBER OF CONTACTS									
<b>KNC</b>	<b>062</b>	<b>080</b>	<b>098</b>	<b>160</b>					
<b>KND</b>	<b>026</b>	<b>044</b>	<b>062</b>	<b>080</b>	<b>098</b>	<b>108</b>	<b>126</b>	<b>144</b>	
MOULDING POLARITY									
NF C-UTE C 93-424					NF C-UTE C 93-424				
MIL-C-55302					MIL-C-55302				
ESA/ESCC 3401/01601B					ESA/ESCC 3401/01601B				
SPACE GRADE					SPACE GRADE				
<b>12</b>	<b>14</b>	<b>54</b>	<b>54</b>	Female plug	<b>22</b>	<b>24</b>	<b>44</b>	<b>44</b>	Female receptacle
<b>13</b>	<b>15</b>	<b>55</b>	<b>55</b>	Male plug	<b>23</b>	<b>25</b>	<b>45</b>	<b>45</b>	Male receptacle
<b>16</b>	<b>18</b>	-	<b>56</b>	Tinned female plug*	<b>26</b>	<b>28</b>	-	<b>46</b>	Tinned female receptacle*
<b>17</b>	<b>19</b>	-	<b>57</b>	Tinned male plug*	<b>27</b>	<b>29</b>	-	<b>47</b>	Tinned male receptacle*
<b>1A</b>	<b>1C</b>	-	<b>5A</b>	Tinned female plug**	<b>2A</b>	<b>2C</b>	-	-	Tinned female receptacle**
<b>1B</b>	<b>1D</b>	-	<b>5B</b>	Tinned male plug**	<b>2B</b>	<b>2D</b>	-	-	Tinned male receptacle**

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

#### TERMINATION STYLES (see p. 22)

- ⊕ **10** Through board solder - 90° - length 3mm
- ⊕ **11** Through board solder - 90° - length 4mm
- ⊕ **20** Crimp (Contact: see p. 31)
- ⊕ **21** Double crimp (Contact: see p. 33)
- ⊕ **30** Through board solder - straight
- ⊕ **40** Solder bucket
- ⊕ **51** Wire wrap (3 wrapping levels)
- ⊕ **91** Female - male

#### MOUNTING HARDWARE

GUIDE STYLES (see p. 26-27) - (Consult us for special guide)

- ⊕ **110** Male polarised, transverse mount, standard plug
- ⊕ **111** Male polarised, vertical mount
- ⊕ **113** Male polarised, float mount
- ⊕ **121** Female polarised, vertical mount
- ⊕ **123** Female polarised, float mount
- ⊕ **124** Female polarised, transverse mount
- ⊕ **145** Male polarised, transverse mount on receptacle only
- ⊕ **190** Female power or mass contact, vertical mount
- ⊕ **125** Male unpolarised, transverse mount
- ⊕ **126** Female unpolarised, vertical mount
- ⊕ **127** Male unpolarised, vertical mount
- ⊕ **130** Female unpolarised, vertical mount
- ⊕ **131** Male unpolarised, transverse mount
- ⊕ **132** Female unpolarised, transverse mount
- ⊕ **133** Female all polarised, transverse mount
- ⊕ **191** Male power or mass contact, vertical mount

LOCKING STYLES (see p. 29-30)

- |   |   |
|---|---|
| Female receptacle                             | Male plug                               |
| ⊕ <b>202</b> 1/4 turn, vertical mount         | ⊕ <b>201</b> 1/4 turn, free connector   |
| ⊕ <b>204</b> 1/4 turn, transverse mount       | ⊕ <b>203</b> 1/4 turn, transverse mount |
| ⊕ <b>208</b> Jackscrew, transverse mount      | ⊕ <b>207</b> Jackscrew, free connector  |
| ⊕ <b>210</b> Jackscrew, free connector        | ⊕ <b>211</b> Jackscrew, free connector  |
| ⊕ <b>212</b> Jackscrew, transverse mount      | ⊕ <b>290</b> Jackscrew, vertical mount  |
| ⊕ <b>215</b> Jackscrew, vertical mount        |   |
| ⊕ <b>219</b> Jackscrew, vertical mount        |   |
| ⊕ <b>232</b> Jackscrew, with operation button |   |

⊕ : To convert HYPERTAC references to ESA references, see tables 1, 2 & 3 on next page

## ESA & HYPERTAC Correspondance Table

Example: KNC 062 44 20 121

**34 01 016 01 B**

**59**

**FR**

**36**

**00**

**36**

ESCC COMPONENT NUMBER

MOUNTING

See table 1

TERMINATION STYLE

See table 2

LOCKING TYPE - ON LEFT SIDE

See table 3

LOCKING TYPE - IN CENTER

**00** For 2 guide connectors

-- For 3 guide connectors, see table 3

LOCKING TYPE - ON RIGHT SIDE

See table 3









TABLE 1					
 Part numbers	esa	 Part numbers	esa	 Part numbers	esa
Plug KNB 017	<b>01</b>	Receptacle KNB 017	<b>13</b>	Plug KNB 072	<b>56</b>
Plug KNB 029	<b>02</b>	Receptacle KNB 029	<b>14</b>	Receptacle KNB 072	<b>57</b>
Plug KNB 041	<b>03</b>	Receptacle KNB 041	<b>15</b>	Plug KNC 062	<b>58</b>
Plug KNB 053	<b>04</b>	Receptacle KNB 053	<b>16</b>	Receptacle KNC 062	<b>59</b>
Plug KNB 065	<b>05</b>	Receptacle KNB 065	<b>17</b>	Plug KNC 080	<b>60</b>
Plug KNB 084	<b>07</b>	Receptacle KNB 084	<b>19</b>	Receptacle KNC 080	<b>61</b>
Plug KNB 096	<b>08</b>	Receptacle KNB 096	<b>20</b>	Plug KNC 098	<b>62</b>
Plug KNB 120	<b>10</b>	Receptacle KNB 120	<b>22</b>	Receptacle KNC 098	<b>63</b>
Plug KNC 160	<b>12</b>	Receptacle KNC 160	<b>24</b>		

TABLE 2		
 Part numbers		esa
Bent male	10	<b>MC</b>
Bent long male	11	<b>ML</b>
Crimp male	20	<b>MR</b>
Straight male	30	<b>MD</b>
Solder bucket male	40	<b>MS</b>
Mini-wrapping male	51	<b>MY</b>
Bent female	10	<b>FC</b>
Bent long fem.	11	<b>FL</b>
Crimp female	20	<b>FR</b>
Straight female	30	<b>FD</b>
Solder bucket fem.40		<b>FS</b>
Mini-wrapping fem. 51		<b>FY</b>
Female-male	91	<b>FM</b>

REMINDER SPATIAL P.P.P. (Party Polarity Protection)				EXAMPLE	
Female receptacle	<b>44</b>	Plug female	<b>54</b>	KNC 029 <b>44</b> 40 113 P.P.P.	
Male receptacle	<b>45</b>	Plug male	<b>55</b>		

TABLE 3							
 Part numbers	esa	 Part numbers	esa	 Part numbers	esa	 Part numbers	esa
Guideless Connector	<b>00</b>	KN _____ 111	<b>35</b>	KNC _____ 10 209	<b>49</b>	KNB _____ 10 230	<b>73</b>
KNB _____ 10 125	<b>26</b>	KN _____ 121	<b>36</b>	KN _____ 210	<b>50</b>	KNC _____ 124	<b>74</b>
KNC _____ 10 125	<b>27</b>	KNB _____ 145	<b>40</b>	KN _____ 211	<b>51</b>	KNC _____ 132	<b>75</b>
KN _____ 127	<b>28</b>	KNB _____ 124	<b>41</b>	KNB _____ 212	<b>52</b>	KNC _____ 11 110	<b>76</b>
KN _____ 126	<b>29</b>	KNC _____ 10 230	<b>43</b>	KN _____ 215	<b>53</b>	KNC _____ 11 125	<b>77</b>
KNB _____ 131	<b>31</b>	KN _____ 232	<b>45</b>	KN _____ 123	<b>54</b>	KNB _____ 11 208	<b>79</b>
KNB _____ 132	<b>32</b>	KN _____ 231	<b>46</b>	KN _____ 113	<b>55</b>	KN _____ 219	<b>80</b>
KNB _____ 10 110	<b>33</b>	KN _____ 207	<b>47</b>	KNB _____ 11 125	<b>71</b>	KN _____ 290	<b>81</b>
KNC _____ 10 110	<b>34</b>	KNB _____ 10 208	<b>48</b>	KNB _____ 11 110	<b>72</b>	please consult us	

**Contact Terminations**

**Plugs**

**Receptacles**

**Male**

**Female**

**Female**

**Male**

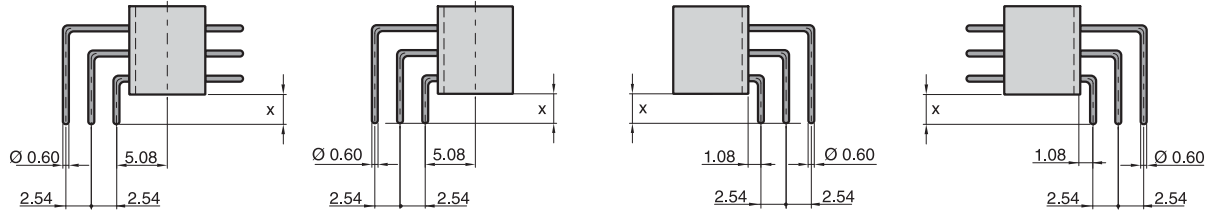
**90° through board solder**

Ref: **10** (X= 3)

Ref: **MC**  
**FC**

Ref: **11** (X= 4)

Ref: **ML**  
**FL**



**Crimp (AWG 28-26 & 24-22)**

Ref: **20**

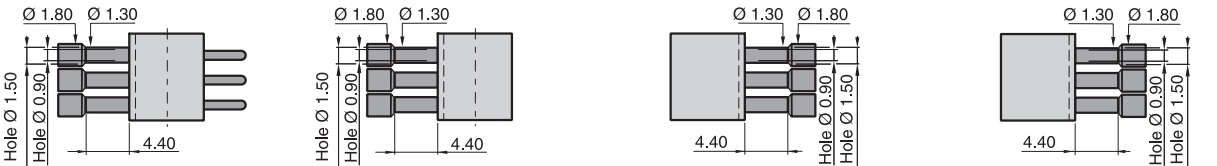
Ref: **MR**  
**FR**



**Crimp (AWG 28-26 & 24-22)**

Ref: **21**

Ref: **MR**  
**FR**



**Straight through board solder**

Ref: **30**

Ref: **MD**  
**FD**



**Solder bucket (AWG 22 Max.)**

Ref: **40**

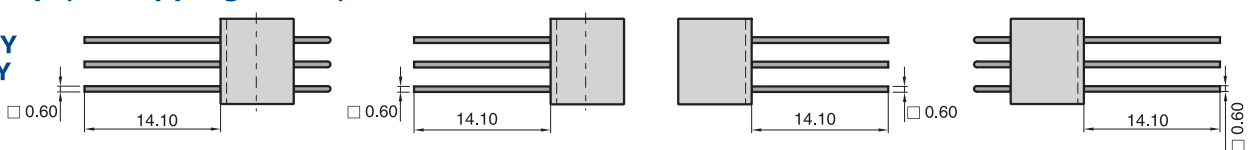
Ref: **MS**  
**FS**



**Wire wrap (3 wrapping levels)**

Ref: **51**

Ref: **MY**  
**FY**



**Saver (Male-Male)**

Ref: **90**



**Saver (Female-Male)**

Ref: **91**

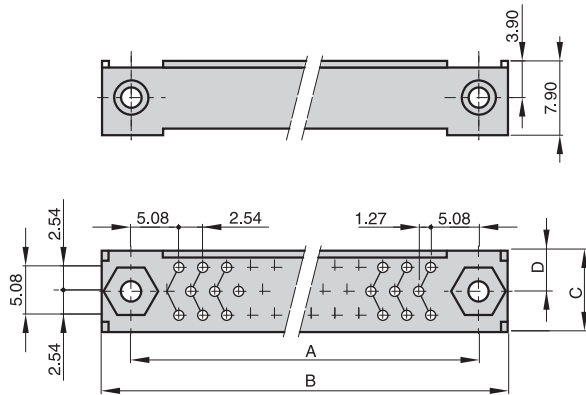
Ref: **FM**



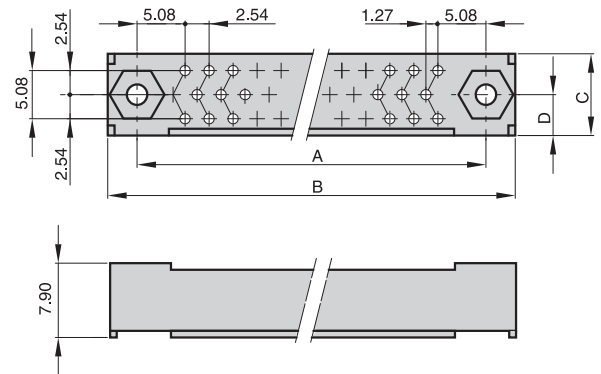
## Dimensions

### Plugs

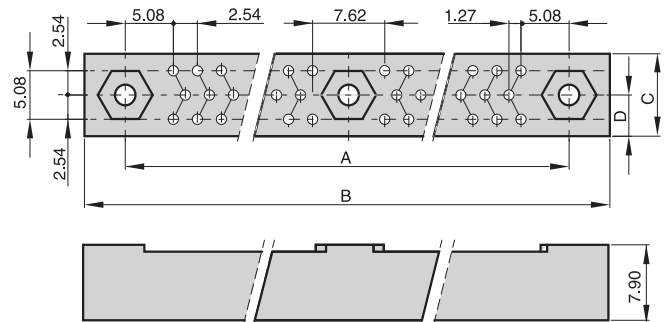
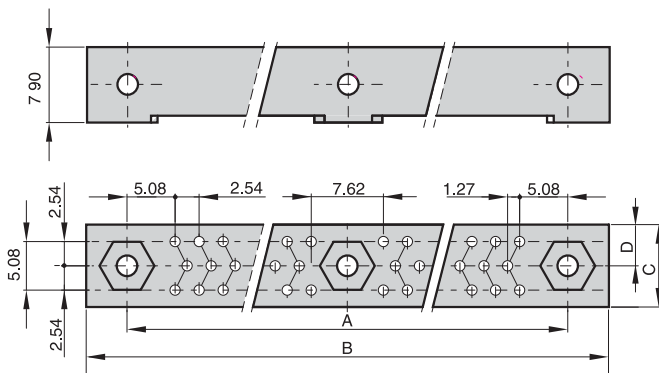
#### 26 to 98 Contacts



### Receptacles



#### 108 to 160 Contacts



Number 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	84.20	99.50	-	-	-	158	
	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	-	-	4.70	4.70	4.70	-	-	-	4.70	
KN D	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	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	8.95	-
		C Max.	9.55	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	3.15	-
	Receptacle	C Max.	9.35	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	3.10	-

## Guiding Device and Compatibility

**Legend:**

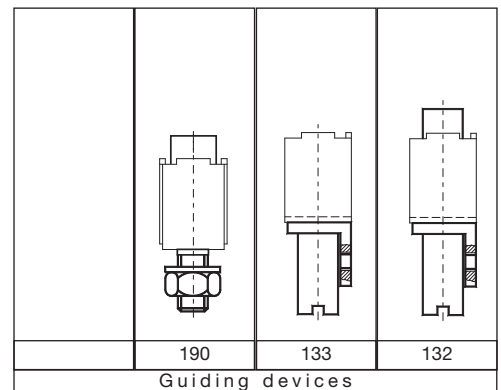
- Compatible
- Compatible provided that PCB does not protect male contacts
- FF = Female Plug
- FM = Male Plug
- EF = Female Receptacle
- EM = Male Receptacle

	E	E	F	F	E	E	F	F	E	E	F	F
	M	F	F	M	M	F	F	M	M	F	F	M
	23	22	12	13	23	22	12	13	23	22	12	13
	█	█			█	█			█	█		
							█	█			█	█
					█	█	█	█	█	█	█	█
	█	█	█									
	█	█	█									
	█	█	█									

FF	12		█	█					
FM	13		█	█					
EM	23	█		█					
EF	22	█		█					
EM	23	█		█					
EF	22	█		█					
FF	12		█		█	█	█	█	█
FM	13		█		█	█	█	█	█
EM	23	█			█	█	█	█	█
EF	22	█			█	█	█	█	█
FF	12		█	█					
FM	13		█	█					
FF	12		█		█	█	█	█	█
FM	13		█		█	█	█	█	█
EM	23	█			█	█	█	█	█
EF	22	█			█	█	█	█	█
FF	12		█	█					
FM	13		█	█					

	█								
		█							
						█			
							█		
								█	
									█
						█			
							█		
								█	
									█

Polarity	Receptacle	Plug	90°	Straight	Solder bucket	Crimp	Wire wrap - PPC
			10	30		20	
			11	31	40	21	51
	Moulding		Contact				





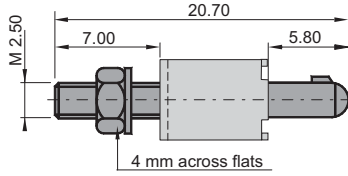
**Guide Styles  
Plugs & Receptacles**

**Male**

**Female**

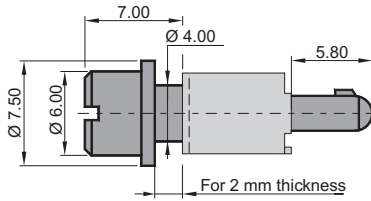
**Polarised vertical mount**

Ref: **111**  
Ref. Ⓞ: **35**



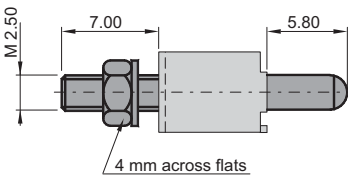
**Polarised vertical float mount**

Ref: **113**  
Ref. Ⓞ: **55**



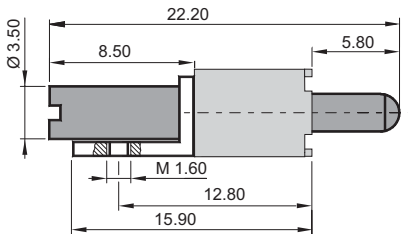
**Unpolarised vertical mount**

Ref: **127**  
Ref. Ⓞ: **28**



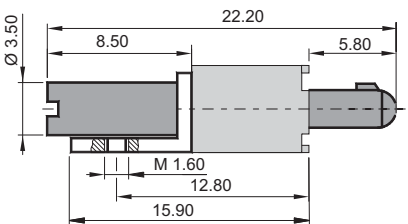
**Unpolarised transverse mount**

Ref: **131**



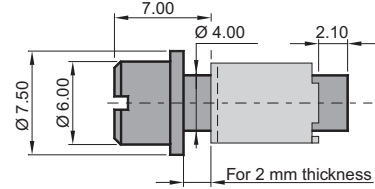
**Polarised transverse mount**

Ref: **145**



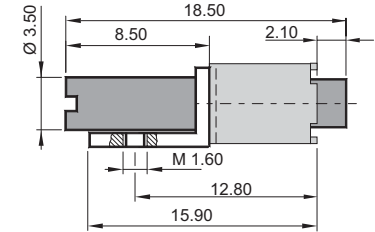
**Polarised vertical float mount**

Ref: **123**  
Ref. Ⓞ: **54**



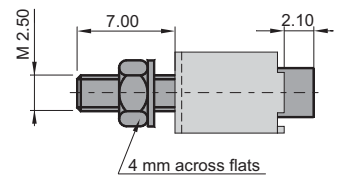
**Polarised transverse mount**

Ref: **124**  
Ref. Ⓞ: **74**



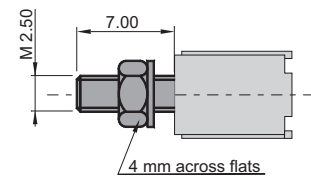
**Unpolarised vertical mount**

Ref: **126**  
Ref. Ⓞ: **29**



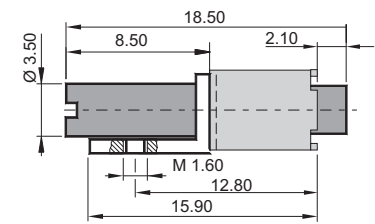
**All polarised vertical mount**

Ref: **130**



**Unpolarised transverse mount**

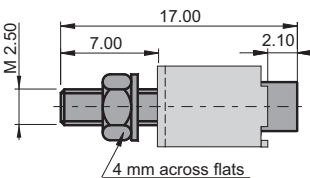
Ref: **132**  
Ref. Ⓞ: **75**



**Female**

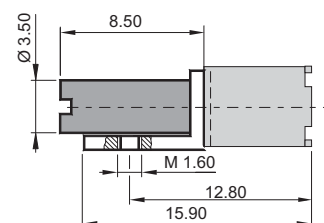
**Polarised vertical mount**

Ref: **121**  
Ref. Ⓞ: **36**



**All polarised transverse mount**

Ref: **133**

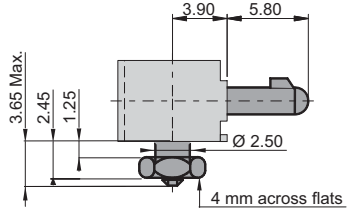




**Guide Styles**  
**Male Plugs only**

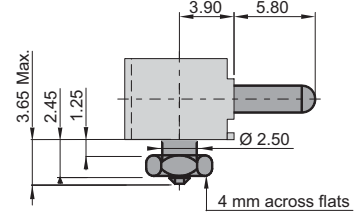
**Polarised transverse mount**

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



**Unpolarised transverse mount**

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



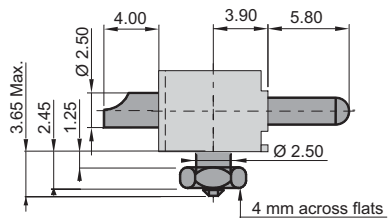
**Plugs & Receptacles**

**Male**

**Female**

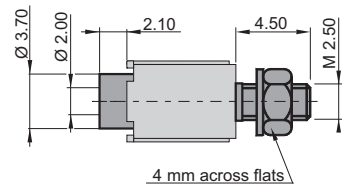
**Power or mass vertical mount**

Ref: **191**  
PCB thickness 1.60



**Power or mass vertical mount**

Ref: **190**



## Locking Devices Compatibility Chart

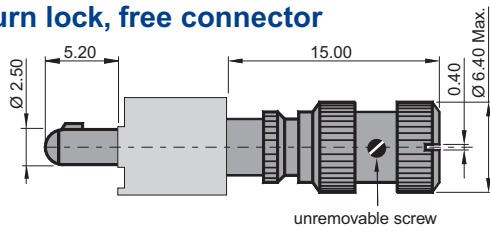
		R P		R P		R P		R P		R P		R P		R P		R P					
		■		■		■		■		■				■		■			Receptacle	Moulding	
			■		■		■		■		■		■		■		■		Plug		
P		■				■				■		■						290			
R			■				■		■		■		■								
P		■		■														231			
R			■		■																
P		■				■				■								211			
R			■		■				■												
P		■				■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

■ Compatible

**Male Locking Styles  
Plugs & Receptacles**

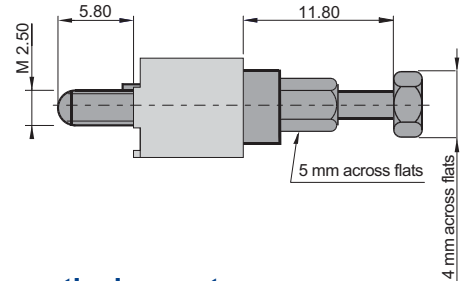
**Jack 1/4 turn lock, free connector**

Ref: **201**



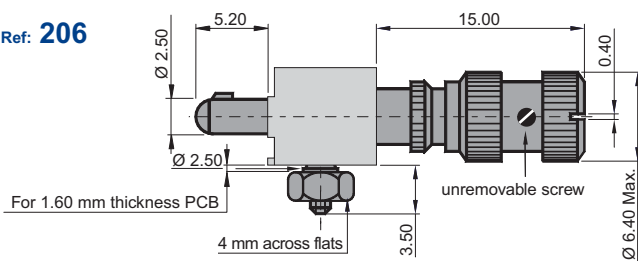
**Jackscrew, free connector**

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



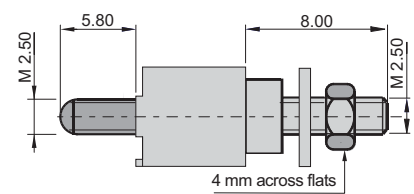
**Jack 1/4 turn lock, transverse mount**

Ref: **206**



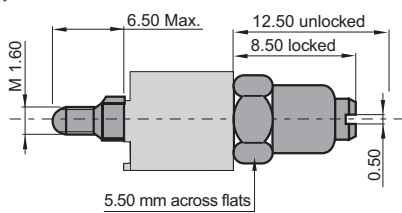
**Jackscrew, vertical mount**

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



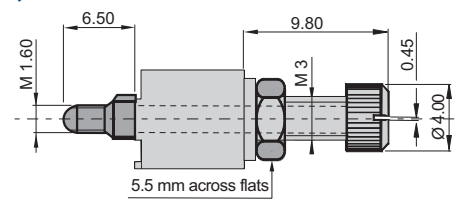
**Jackscrew, free connector**

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



**Jackscrew, vertical mount**

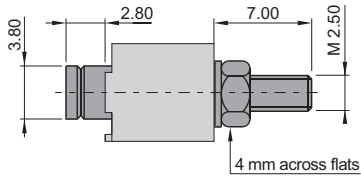
Ref: **290**  
Ref: **81**



## Female Locking Styles Plugs & Receptacles

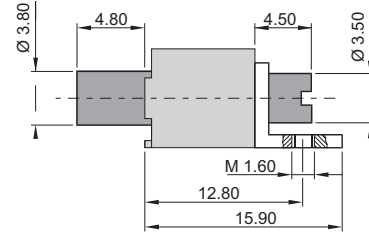
**Jack 1/4 turn lock, vertical mount**

Ref: **202**



**Jackscrew, transverse mount**

Ref: **212**



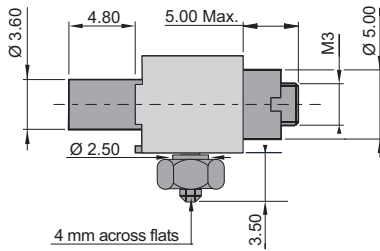
**Jackscrew, transverse mount**

Ref: **209**

Term.: **10**

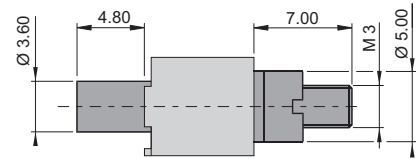
PCB thickness 1.60

Ref ☉: **49**



**Jackscrew, vertical mount**

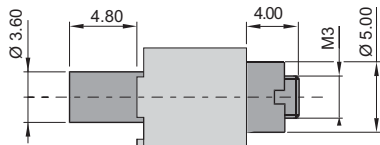
Ref: **215**  
Ref ☉: **53**



**Jackscrew, free connector**

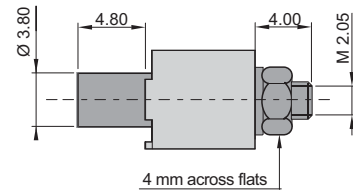
Ref: **210**

Ref ☉: **50**



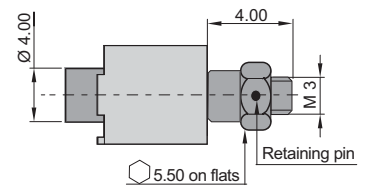
**Jackscrew, vertical mount**

Ref: **219**  
Ref ☉: **80**



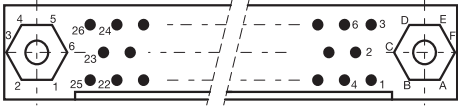
**Rotating jackscrew**

Ref: **232**

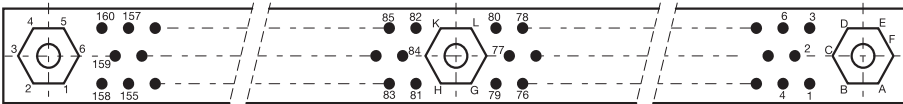


**Receptacle Mating Side Layout View**

**26 to 98 Contacts**



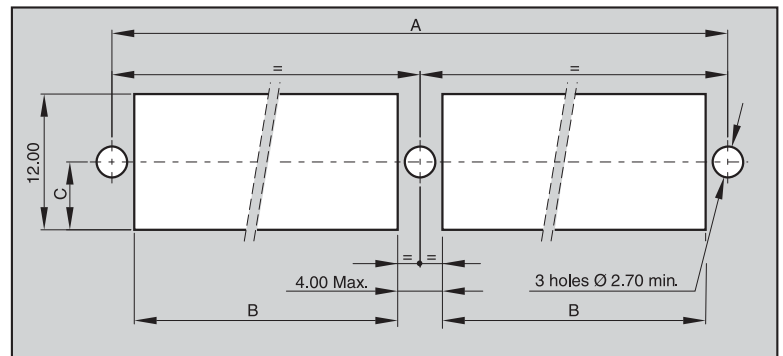
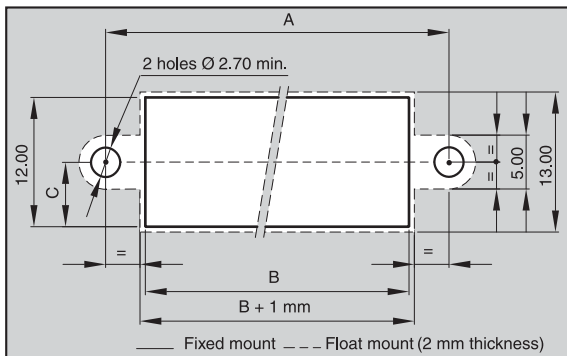
**108 to 160 Contacts**



**Panel Preparation Details**

**26 to 98 Contacts**

**108 to 160 Contacts**



**Panel: Female or male, plugs or receptacles**

**Terminations: 40 - 51**

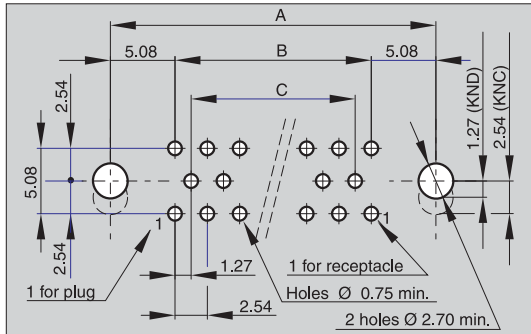
**Guide Styles: 111 - 121 - (Fixed Mount)**

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

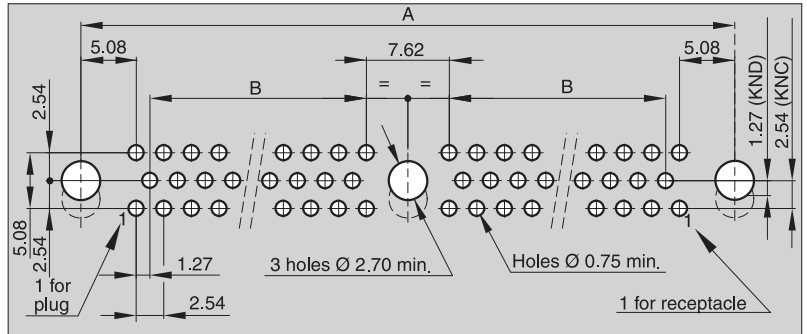
Nb. of contacts	26	44	62	80	98	108	126	144	160
<b>A</b>	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	149.86
<b>B min.</b>	25.90	41.10	56.40	71.60	86.90	48.50	56.00	63.60	69.95
<b>C (KNC)</b>	-	-	6.00	6.00	6.00	-	-	-	6.00
<b>C (KND)</b>	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	-

## Board Preparation Details

### Mother Board 26 to 98 Contacts

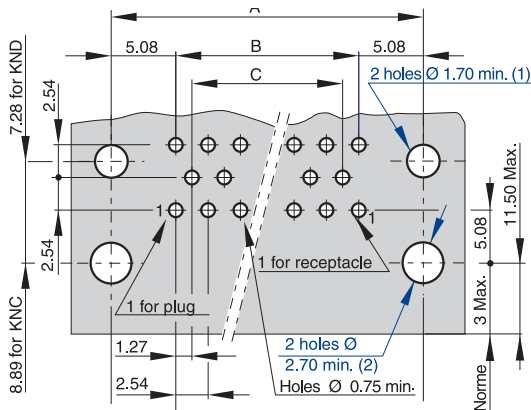


### 108 to 160 Contacts

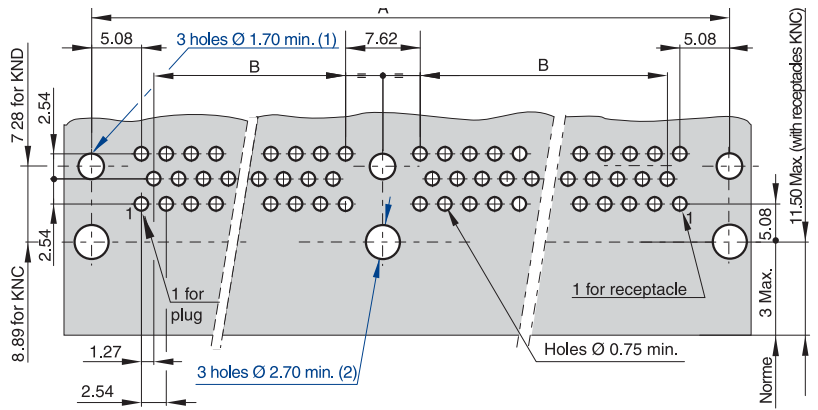


Mother Board: Female or Male, plugs or receptacles, straight solder terminations  
Guide Styles: 111 - 121- 202

### Daughter Board 26 to 98 Contacts



### 108 to 160 Contacts



Daughter Board: Female or Male, plugs or receptacles, 90° terminations  
(1) Guide Styles: 124 (2) Guide Styles: 110 - 206

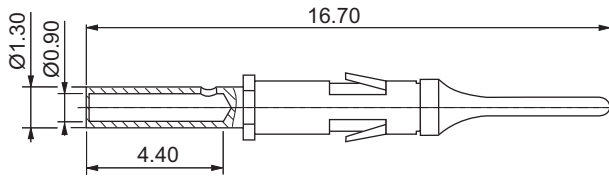
Nb. of contacts	26	44	62	80	98	108	126	144	160
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	149.86
B	20.32	35.56	50.80	66.04	81.28	43.18	50.80	58.42	64.77
C	17.78	33.02	48.26	63.50	78.74	-	-	-	-

**Contacts**

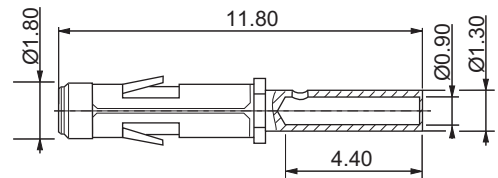
**Male**

**Female**

**Crimp Terminations AWG 22-28 (0.079 - 0.34mm<sup>2</sup>)**

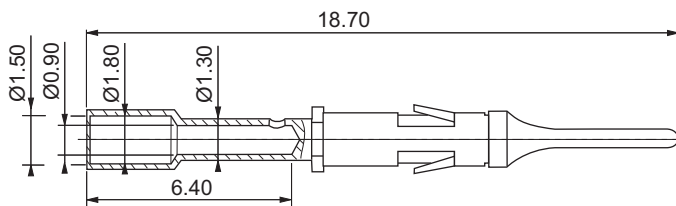


Reference	Part number
KN- ---13 20 ---	0060421-20ROG
KN- ---55 20 ---	0060421-20POF
Ⓒ MR	3401017004B

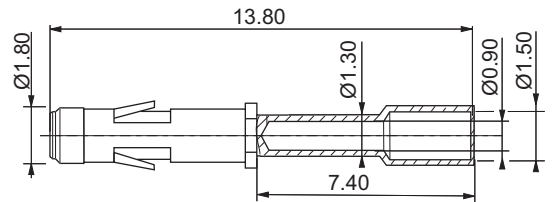


Reference	Part Number
KN- ---22 20 ---	0060422-20RG0
KN- ---44 20 ---	0060422-20PJ9
Ⓒ FR	3401017015B

**Crimp Terminations AWG 22-28 (0.079 - 0.34mm<sup>2</sup>) & Sheath Ø1.45**



Reference	Part number
KN- ---13 20 ---	0060631-21ROG
KN- ---55 20 ---	0060631-20ROF



Reference	Part number
KN- ---22 20 ---	0060632-21RG0
KN- ---44 20 ---	0060632-21RJ3

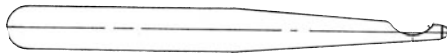
## Tools

### Crimp tool & Positioner



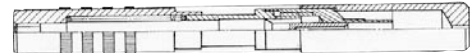
Contact part number	Crimp tool	Gauje AWG	Wire cross section	Positioner	Tool turret	Selector position			
0060421-20ROG 0060422-20RGO	ASTRO TOOL M22520/2.01	28	0.079	SS-0060000001		3			
		26	0.14			4			
		24	0.20			4			
		22	0.34			5			
		28	0.079			3			
	DANIELS M22520/2.01	26	0.14			4			
		24	0.20			4			
		22	0.34			5			
		<b>2 operations</b>							
		0060631-21ROG 0060632-21RGO	ASTRO TOOL M22520/2.01			28	0.079	SS-0060000001	
26	0.14			4					
24	0.20			4					
22	0.34			5					
28	0.079			3					
DANIELS M22520/2.01	26		0.14	4					
	24		0.20	4					
	22		0.34	5					
	<b>1st crimp (lead)</b>								
	0060631-21ROG 0060632-21RGO		ASTRO TOOL M22520/2.01	28	0.079	SS-0060000002			
26		0.14		6					
24		0.20		7					
22		0.34		7					
28		0.079		*					
DANIELS M22520/2.01		26	0.14	6					
		24	0.20	7					
		22	0.34	7					
		<b>2nd crimp (sheath)</b>							
		0060631-21ROG 0060632-21RGO	52007	28	0.079				SP717
26	0.14			3					
24	0.20			4					
22	0.34			4					
28	0.079			2					
<b>1 operation</b>									

### Insertion



SM-0060000001

### Extraction



SD-0060000006

### Alignment Combs

for 90° through board terminations

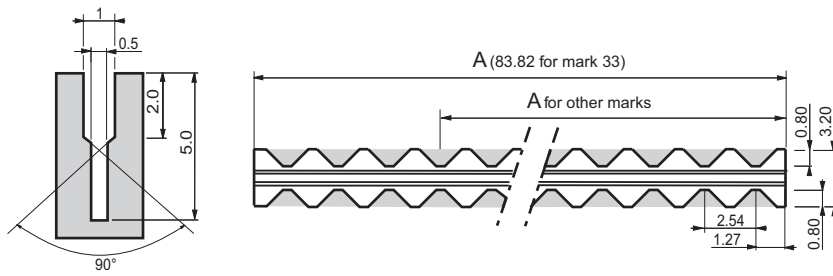
2 fixing points **SP. 006 00 00 006**  
 3 fixing points **SP. 006 00 00 004**

### Screwdriver for M3 Nut

208 locking devices  
 215 locking devices **S\_075**



**Accessories**  
**Antistatic Pin Protector**

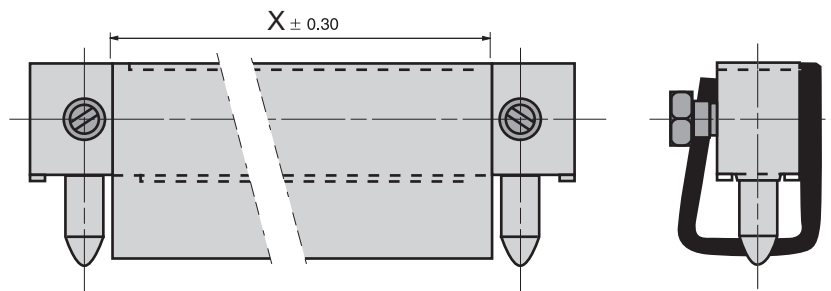


Ordering information  
**KNB - - - 314**  
↑  
Ref

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

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.

**Pin Protector (extruded polypropylene)**



<b>KNB</b>	<b>017</b>	<b>029</b>	<b>041</b>	<b>053</b>	<b>065</b>	<b>072</b>	<b>084</b>	<b>096</b>	<b>120</b>
X $\pm 0,30$	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
<b>KNC</b>	<b>062</b>	<b>080</b>	<b>098</b>	<b>119</b>	<b>160</b>				
X $\pm 0,30$	66	81.20	96.40	114.20	155.00				
Qty	1	1	1	1	1				
<b>KND</b>	<b>026</b>	<b>044</b>	<b>108</b>	<b>126</b>	<b>144</b>				
X $\pm 0,30$	35.50	50.70	111.70	127.00	142.20				
Qty	1	1	1	1	1				

Ordering information  
**KN - - - 308**  
↑  
B, C  
or D ↑  
number  
of positions