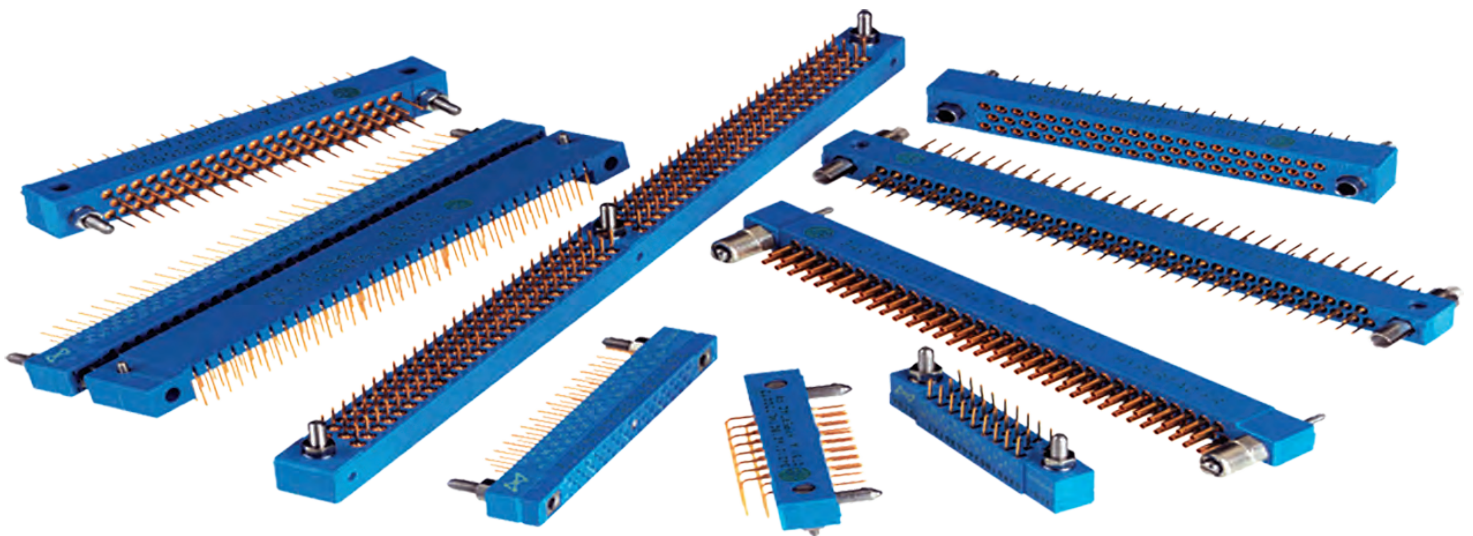


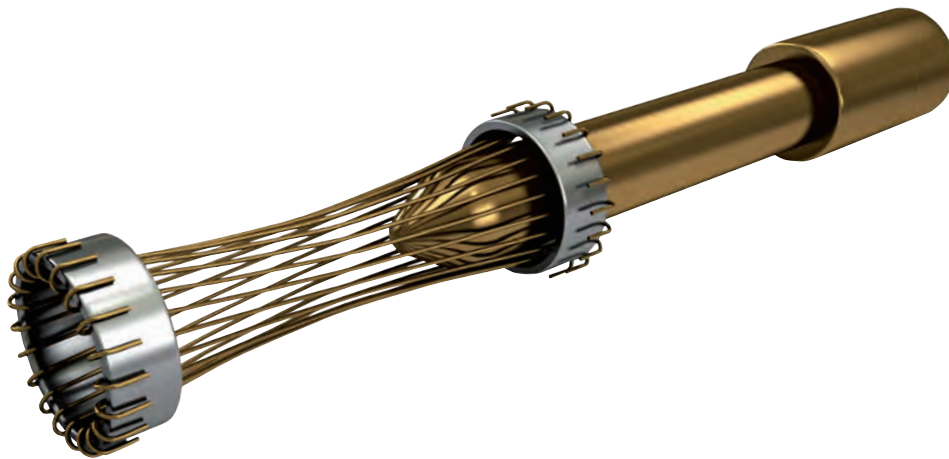
K CONNECTOR SERIES

Medium & High Density PCB Connectors



HYPERBOLOID TECHNOLOGY

Smiths Connectors 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.



FEATURE

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.

BENEFIT

HIGH DENSITY INTERCONNECT SYSTEMS

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

TABLE OF CONTENTS

KN SERIES - Medium Density PCB Connectors

- ▶ KNB series (2 rows)2
- ▶ KXB series (2 rows)19
- ▶ KNC/KND series (3 rows)22
- ▶ Contacts.....38
- ▶ Accessories and tools39

KM SERIES - High Density PCB Connectors

- ▶ KMC Series (3 rows).....42
- ▶ KMH Series (3 rows).....65
- ▶ Accessories and tools71

TECHNICAL CHARACTERISTICS

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

MATERIALS & PLATINGS

Contact	Brass or bronze
Moulding	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 activ area 1.27 µm Ni on non activ 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 rating (at 25°C)	Standard: 3 A max ESA: 5 A max
Dielectric withstanding voltage	1200 Vrms
Contact resistance	≤ 8 mΩ
Insulation resistance	> 10 ⁴ 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 polarised guides (up to 36 keying)

ENVIRONMENTAL

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

Dimension are in mm

HOW TO ORDER

KNB

1 2 3

4

5

6

7

1 ▸ SERIES

2 ▸ PITCH OR TYPE **N** 1.27 MM PITCH, REAR REMOVABLE CONTACTS3 ▸ MODEL **B** 2 ROWS

4 ▸ NUMBER OF CONTACTS

0 1 7 0 2 9 0 4 1 0 5 3 0 6 5 0 7 2 0 8 4 0 9 6 1 2 0

For the right angle 053 layout, KNB must be replaced by KXB - (details on page 20)

7 ▸ MOULDING POLARITY

NF C-UTE C 93-424

MIL-C-55302

ESA/ESCC 3401/01601B

SPACE GRADE

12	14	54	54	Female plug	1A	1C	-	5A	Tinned female plug**	26	28	-	46	Tinned female receptacle*
13	15	55	55	Male plug	1B	1D	-	5B	Tinned male plug**	27	29	-	47	Tinned male receptacle*
16	18	-	56	Tinned female plug*	22	24	44	44	Female receptacle	2A	2C	-	-	Tinned female receptacle**
17	19	-	57	Tinned male plug*	23	25	45	45	Male receptacle	2B	2D	-	-	Tinned male receptacle**

6 ▸ TERMINATION STYLES

10	Through board solder - 90° - length 3 mm	21	Double crimp	51	Wire wrap (3 wrapping levels)
11	Through board solder - 90° - length 4 mm	30	Through board solder - straight	91	Female - male
20	Crimp	40	Solder bucket		

7 ▸ MOUNTING HARDWARE

GUIDE STYLES (consult us for special guides)

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

LOCKING STYLES

MALE PLUG		FEMALE RECEPTACLE	
201	1/4 turn, free connector	202	1/4 turn, vertical mount
203	1/4 turn, transverse mount	204	1/4 turn, transverse mount
207	Jackscrew, free connector	208	Jackscrew, transverse mount
211	Jackscrew, free connector	210	Jackscrew, free connector
290	Jackscrew, vertical mount	212	Jackscrew, transverse mount
		215	Jackscrew, vertical mount
		219	Jackscrew, vertical mount
		232	Jackscrew, with operation button

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

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

HYPERTAC & ESA CORRESPONDANCE TABLE

HYPERTAC

KNB

34 01 016 01 B

123456

1

ESCC COMPONENT NUMBER

2

MOUNTING

HYPERTAC	ESA
Plug KNB 01701	Plug KNB 09608
Plug KNB 02902	Plug KNB 12010
Plug KNB 04103	Plug KNC 16012
Plug KNB 05304	Receptacle KNB 01713
Plug KNB 06505	Receptacle KNB 02914
Plug KNB 08407	Receptacle KNB 04115
	Receptacle KNB 05316
	Receptacle KNB 06517
	Receptacle KNB 08419
	Receptacle KNB 09620
	Receptacle KNB 12022
	Receptacle KNC 16024
	Plug KNB 07256
	Receptacle KNB 07257
	Plug KNC 06258
	Receptacle KNC 06259
	Plug KNC 08060
	Receptacle KNC 08061
	Plug KNC 09862
	Receptacle KNC 09863

REMINDER SPATIAL P.P.P. (Party Polarity Protection)

Female receptacle44

Male receptacle45

Plug female54

Plug male55

EXAMPLE
KNB 02944 40 113
P.P.P.

HYPERTAC	ESA
Bent male 10MC	Solder bucket male 40MS
Bent long male 11ML	Mini-wrapping male 51MY
Crimp male 20MR	Bent female 10FC
Straight male 30MD	Bent long female 11FL
	Crimp female 20FR
	Straight female 30FD
	Solder bucket female 40FS
	Mini-wrapping female 51FY
	Female-male 91FM

HYPERTAC	ESA
Guideless connector00	KNB10 11033
KNB10 12526	KNC10 11034
KNC10 12527	KN11135
KN12728	KN12136
KN12629	KNB14540
KNB13131	KNB12441
KNB13232	KNC10 23043
	KN23245
	KN23146
	KN20747
	KNB10 20848
	KNC10 20949
	KN21050
	KN21151
	KNB21252
	KN21553
	KN12354
	KN11355
	KNB11 12571
	KNB11 11072
	KN10 23073
	KNC12474
	KNC13275
	KNC11 11076
	KNC11 12577
	KNB11 20879
	KN21980
	KN290*81

5

LOCKING TYPE - IN CENTER

00

FOR 2 GUIDE CONNECTORS

- -

FOR 3 GUIDE CONNECTORS (see table 4, LOCKING TYPE - ON LEFT SIDE)

6

LOCKING TYPE - ON RIGHT SIDE

(see table 4, LOCKING TYPE - ON LEFT SIDE)

* Please consult us

Dimension are in mm

► CONTACT TERMINATIONS

PLUG

RECEPTACLE

MALE

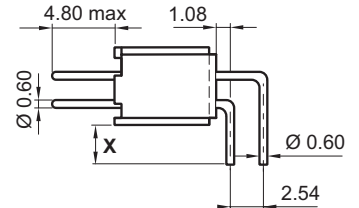
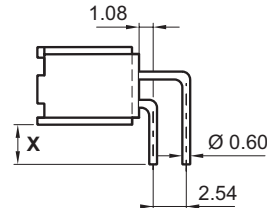
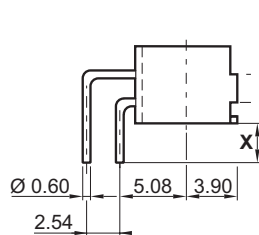
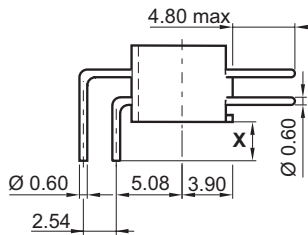
FEMALE

FEMALE

MALE

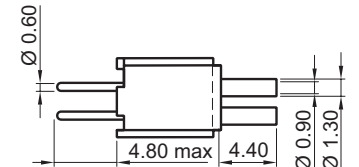
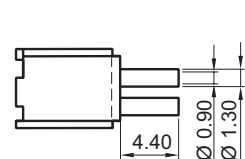
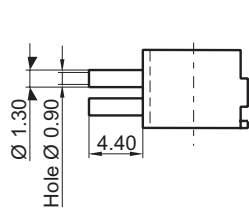
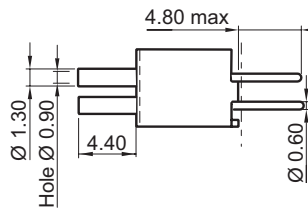
90° THROUGH BOARD SOLDER

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



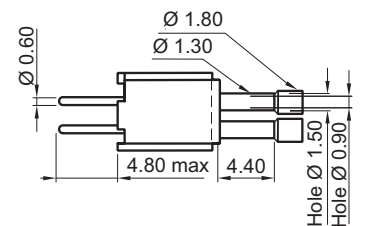
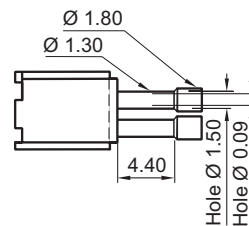
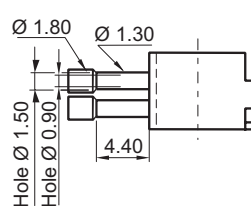
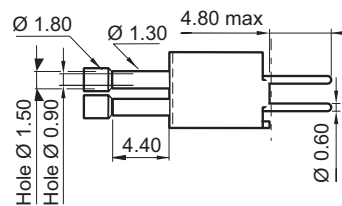
CRIMP (AWG 28-26 & 24-22)

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



CRIMP (AWG 28-26 & 24-22) & CRIMP ON SHEATH (Ø 1.45)

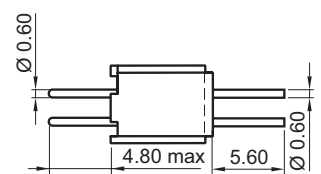
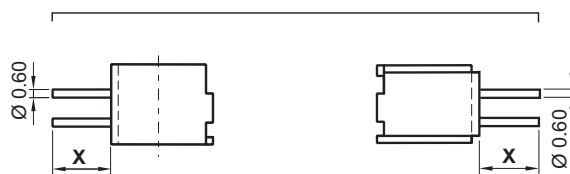
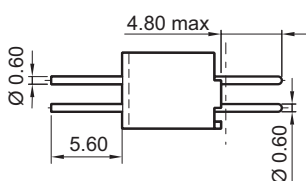
Ref: **21**



STRAIGHT THROUGH BOARD SOLDER

Ref: **30** (X=4.50) Ref : **MD & FD** Ref **31** (5.60)

See: 90° Through board solder



CONTACT TERMINATIONS

PLUG

RECEPTACLE

MALE

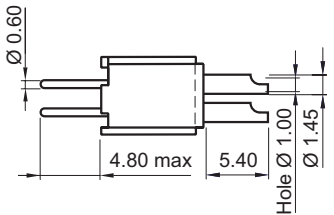
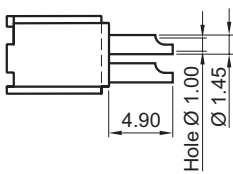
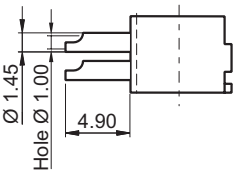
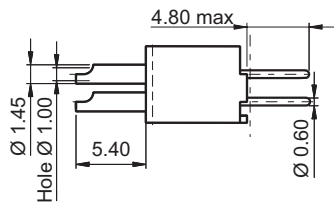
FEMALE

FEMALE

MALE

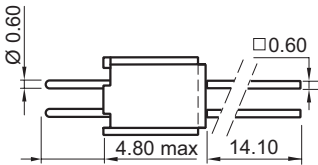
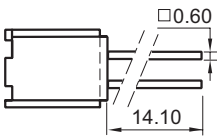
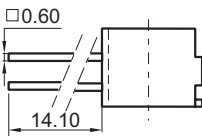
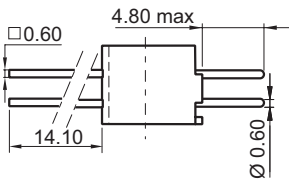
SOLDER BUCKET (AWG 22 max)

Ref: 40 Ref : MS & FS



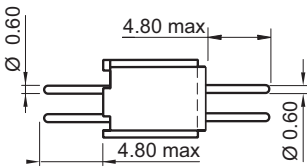
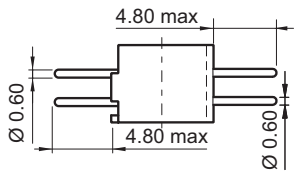
WIRE WRAP (3 wrapping levels)

Ref: 51 Ref : MY & FY



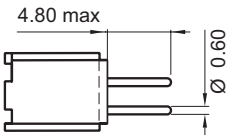
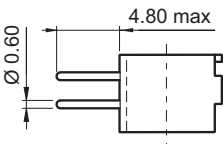
SAVER (male-male)

Ref: 90



SAVER (female-male)

Ref: 91 Ref : FM

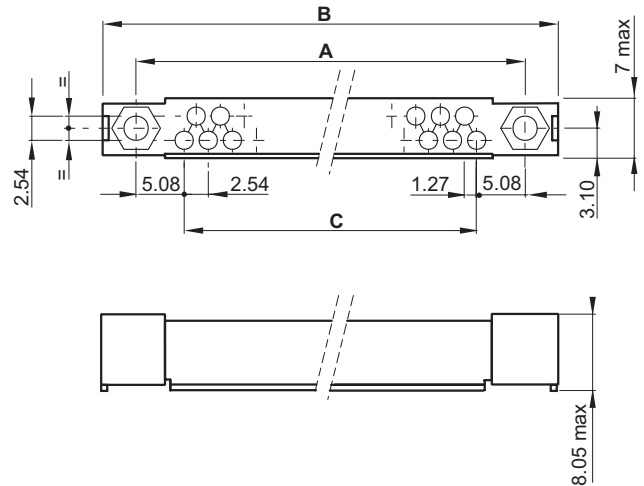
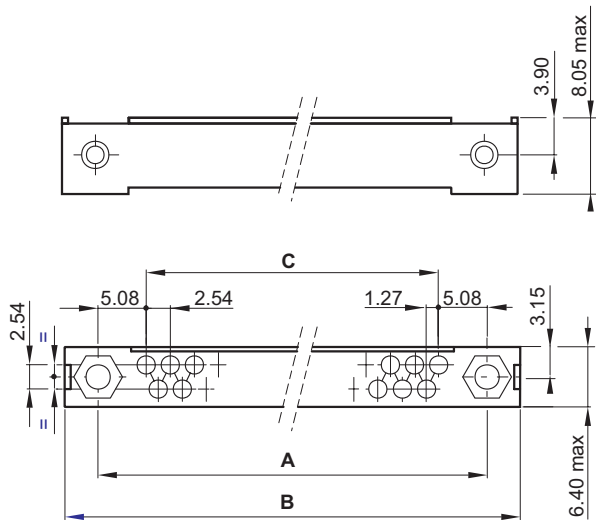


CONNECTOR DIMENSIONS

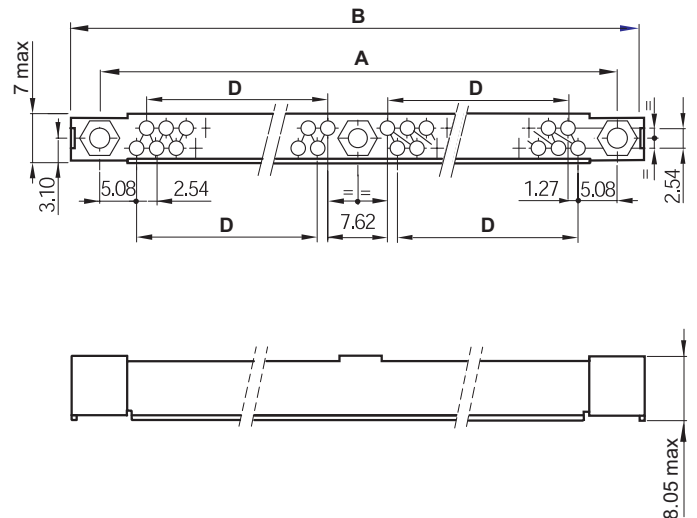
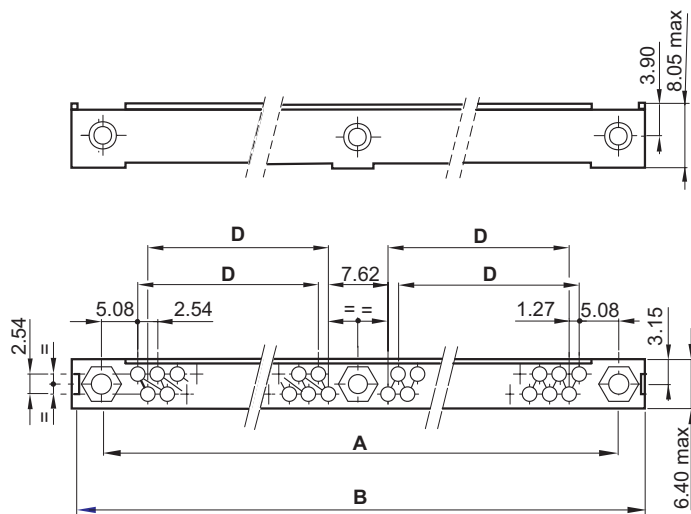
PLUG

RECEPTACLE

17 TO 65 CONTACTS

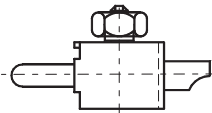
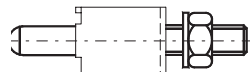
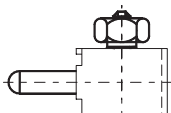
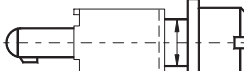
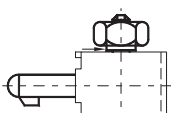


72 TO 120 CONTACTS



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

[illegible]

MR 23	FR 22	FP 12	MP 13	MR 23	FR 22	FP 12	MP 13	MR 23	FR 22	FP 12	MP 13	MR 23	FR 22	FP 12	MP 13	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		

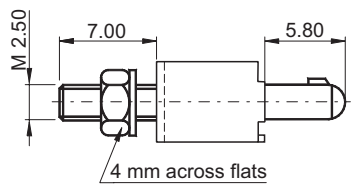
GUIDE STYLES

PLUG & RECEPTACLE

MALE

POLARISED VERTICAL MOUNT

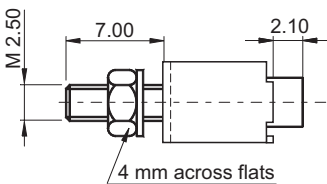
Ref: 111 Ref : 35



FEMALE

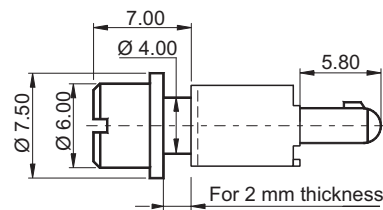
POLARISED VERTICAL MOUNT

Ref: 121 Ref : 36



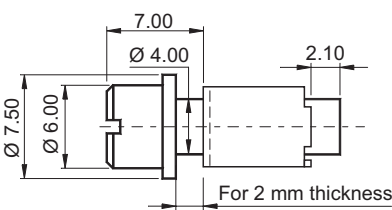
POLARISED VERTICAL FLOAT MOUNT

Ref: 113 Ref : 55



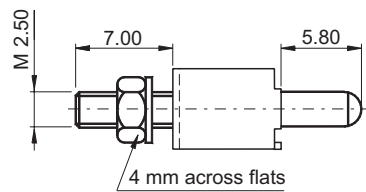
POLARISED VERTICAL FLOAT MOUNT

Ref: 123 Ref : 54



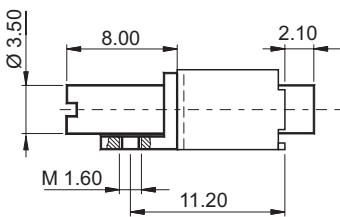
UNPOLARISED VERTICAL MOUNT

Ref: 127 Ref : 28



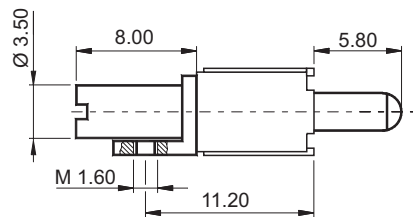
POLARISED TRANSVERSE MOUNT

Ref: 124 Ref : 41



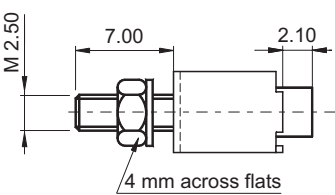
UNPOLARISED TRANSVERSE MOUNT

Ref: 131 Ref : 31



UNPOLARISED VERTICAL MOUNT

Ref: 126 Ref : 29



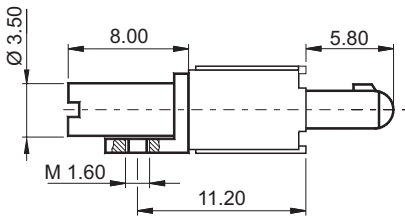
GUIDE STYLES

PLUG & RECEPTACLE

MALE

POLARISED TRANSVERSE MOUNT

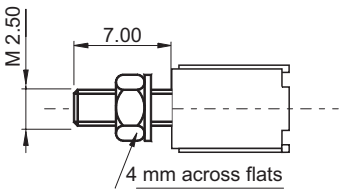
Ref: 145 Ref : 40



FEMALE

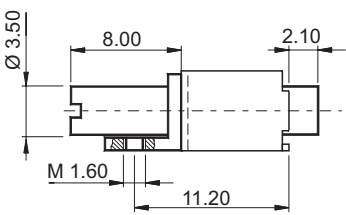
ALL POLARISED VERTICAL MOUNT

Ref: 130



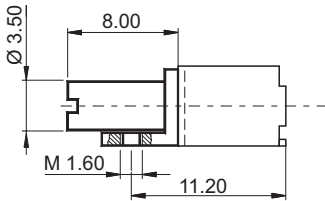
UNPOLARISED TRANSVERSE MOUNT

Ref: 132 Ref : 32



ALL POLARISED TRANSVERSE MOUNT

Ref: 133



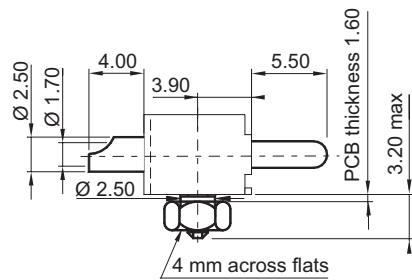
GUIDE STYLES

PLUG & RECEPTACLE

MALE

POWER OR MASS TRANSVERSE MOUNT

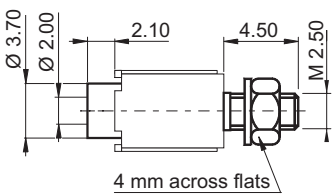
Ref: 191



FEMALE

POWER OR MASS VERTICAL MOUNT

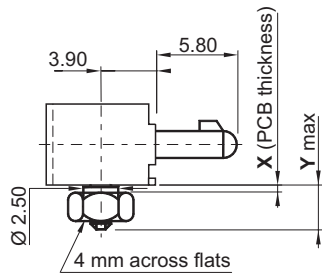
Ref: 190



MALE PLUG ONLY

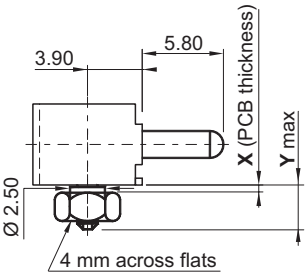
POLARISED TRANSVERSE MOUNT

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



LOCKING DEVICE COMPATIBILITY CHART

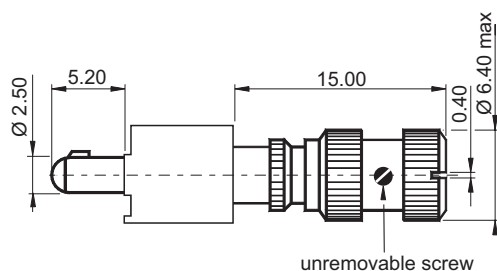
		R		P	R		P	R		P	R		P	R		P	R		P	R		P	R		P	Receptacle		Moulding				
Compatible																										Plug						
P																												290				
	R																															
P																												231				
	R																															
P																												211				
	R							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

► MALE LOCKING STYLES

PLUG & RECEPTACLE

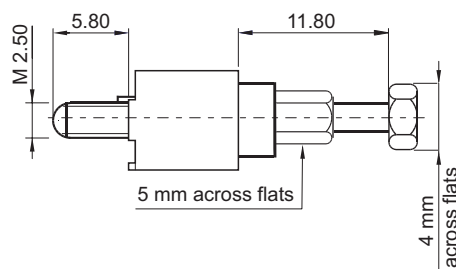
JACK 1/4 TURN LOCK, FREE CONNECTOR

Ref: **201**



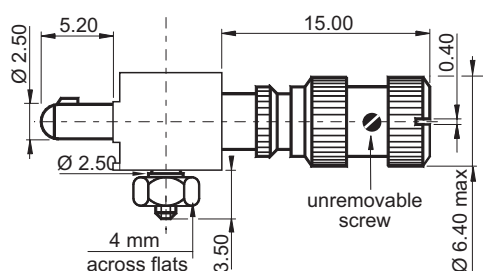
JACKSCREW, FREE CONNECTOR

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



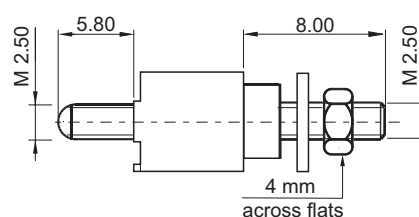
JACK 1/4 TURN LOCK, TRANSVERSE MOUNT

Ref: **203** PCB thickness 1.60



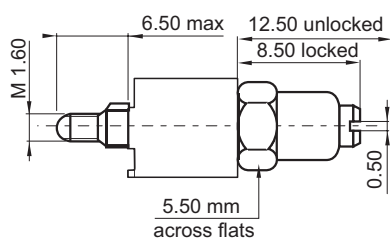
JACKSCREW, VERTICAL MOUNT

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



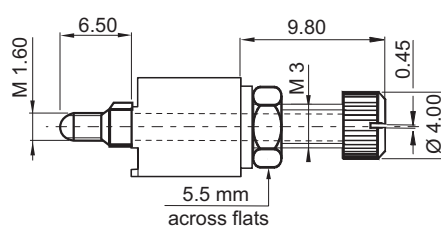
JACKSCREW, FREE CONNECTOR

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



JACKSCREW, VERTICAL MOUNT

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

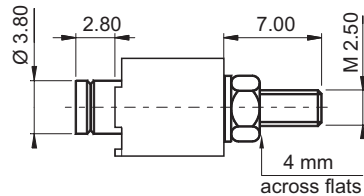


► FEMALE LOCKING STYLES

PLUG & RECEPTACLE

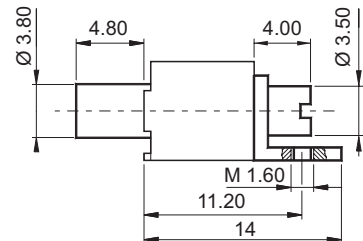
JACK 1/4 TURN LOCK, VERTICAL MOUNT

Ref: **202**



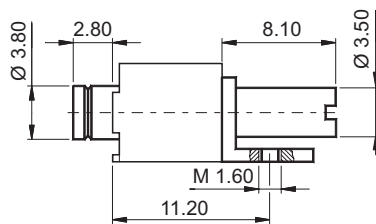
JACKSCREW, TRANSVERSE MOUNT

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



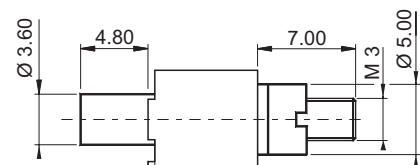
JACK 1/4 TURN LOCK, TRANSVERSE MOUNT

Ref: **204**



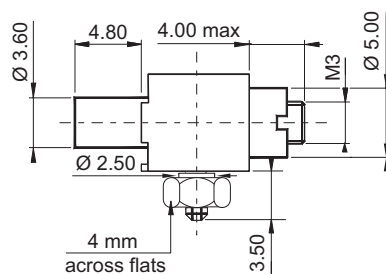
JACKSCREW, VERTICAL MOUNT

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



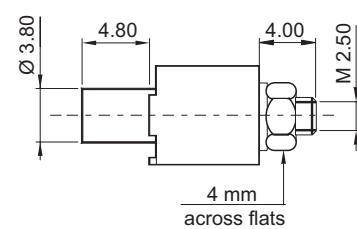
JACKSCREW, TRANSVERSE MOUNT

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



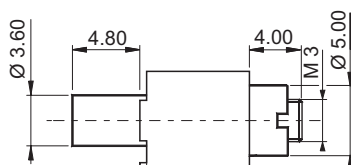
JACKSCREW, VERTICAL MOUNT

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



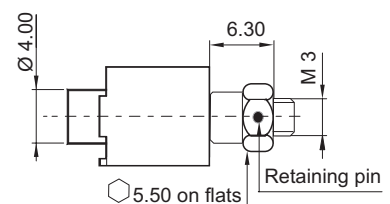
JACKSCREW, FREE CONNECTOR

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



ROTATING JACKSCREW, FREE CONNECTOR

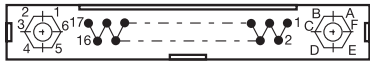
Ref: **232** Ref : **45**



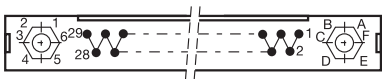
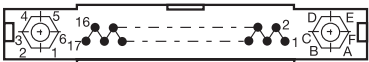
MATING SIDE LAYOUT VIEW

PLUG

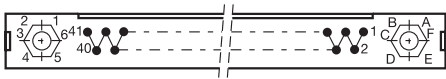
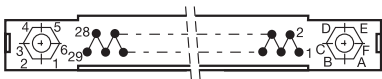
RECEPTACLE



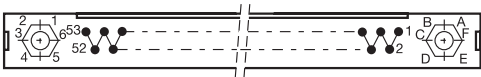
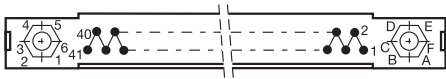
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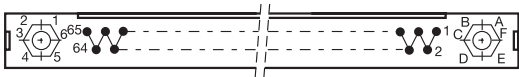
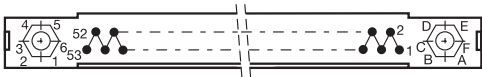
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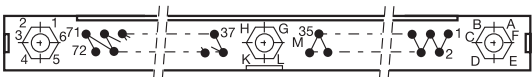
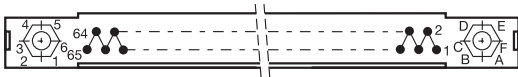
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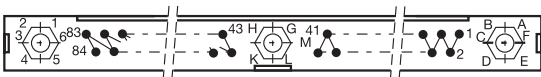
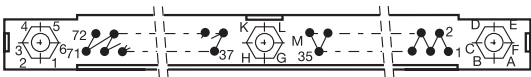
053



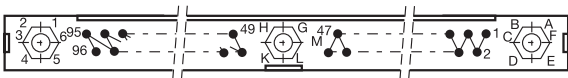
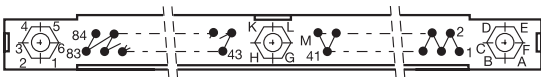
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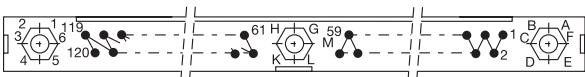
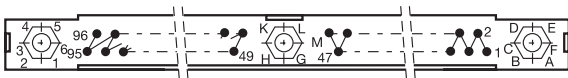
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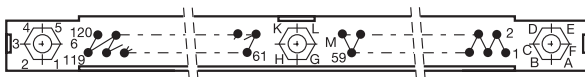
084



096

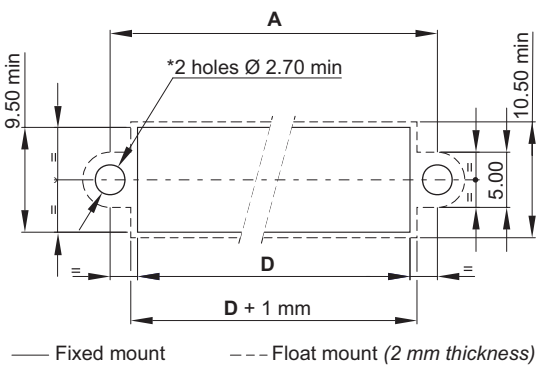


120

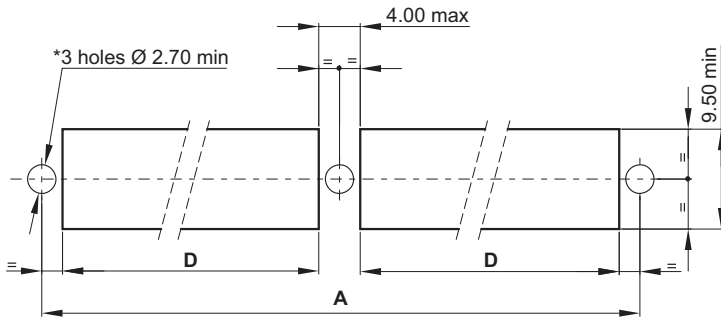


PANEL PREPARATION DETAILS

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

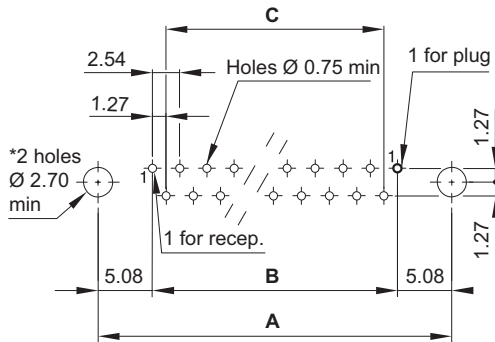
No. of contacts	17	29	41	53	65	72	84	96	120
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	167.64
D	25.90	41.10	56.40	71.60	86.90	48.50	56.00	63.30	78.80

* for ref: 215, holes Ø 3.20 mm

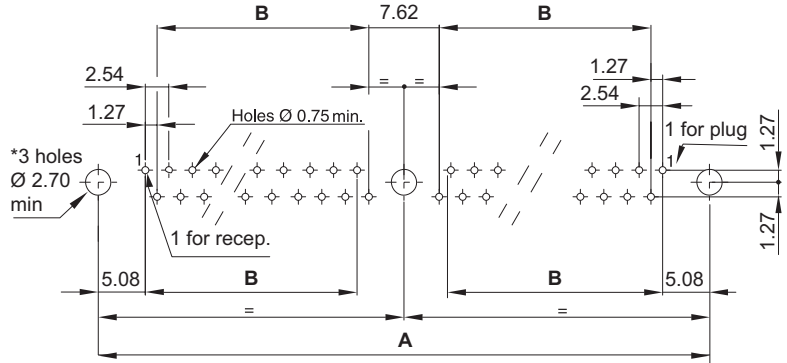
BOARD PREPARATION DETAILS

MOTHER BOARD

17 TO 65 CONTACTS



72 TO 120 CONTACTS

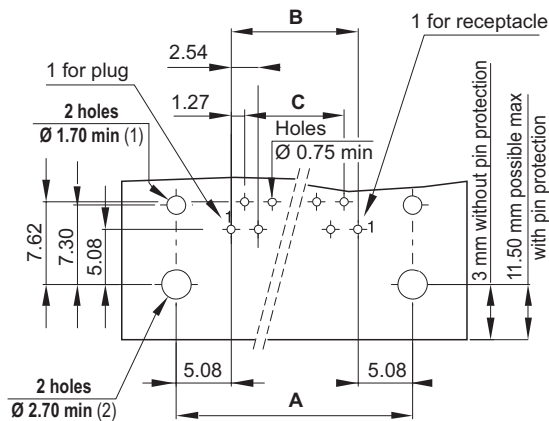


Mother Board: Female or male, plug or receptacle, straight solder termination
Guide styles: 111 - 121 - 126 - 127 - 130 - 190 Locking styles: 202 - 215* - 219 - 231

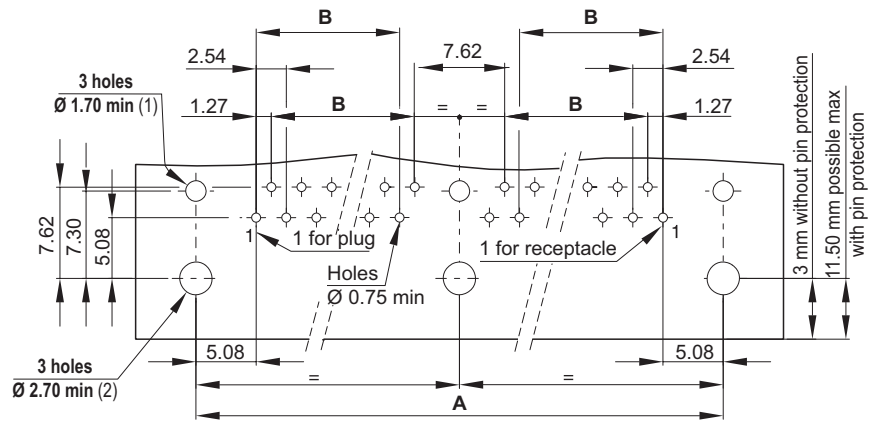
* for ref: 215, holes Ø 3.20 mm

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	2.54mm between rows 1.27mm between quicuncial contacts
Rows	2

MATERIALS & PLATINGS

Contact	Brass or bronze
Moulding	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 activ area 1.27 µm Ni on non activ 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 rating (at 25°C)	Standard: 3 A max ESA: 5 A max
Dielectric withstanding voltage	1200 Vrms
Contact resistance	≤ 8 mΩ
Insulation resistance	> 10 ⁴ 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 polarised guides (up to 36 keying)

ENVIRONMENTAL

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

HOW TO ORDER



1

THERMOPLASTIC MATERIAL

X

2

MOULDING POLARITY

NF C-UTE C 93-424

MIL-C-55302

SPACE GRADE

12	14	54	Female plug	1A	1C	5A	Tinned female plug**	26	28	46	Tinned female receptacle*
13	15	55	Male plug	1B	1D	5B	Tinned male plug**	27	29	47	Tinned male receptacle*
16	18	56	Tinned female plug*	22	24	44	Female receptacle	2A	2C	-	Tinned female receptacle**
17	19	57	Tinned male plug*	23	25	45	Male receptacle	2B	2D	-	Tinned male receptacle**

3

TERMINATION STYLES

10	Through board solder - 90°- length 3 mm	21	Double crimp	51	Wire wrap (3 wrapping levels)
11	Through board solder - 90°- length 4 mm	30	Through board solder - straight	91	Female - male
20	Crimp	40	Solder bucket		

4

MOUNTING HARDWARE

GUIDE STYLES***

110	Male polarised, transverse mount, standard plug	131	Male unpolarised, transverse mount
121	Female polarised, vertical mount	145	Male polarised, transverse mount on receptacle only
124	Female polarised, transverse mount	191	Male power or mass contact, vertical mount
125	Male unpolarised, transverse mount		

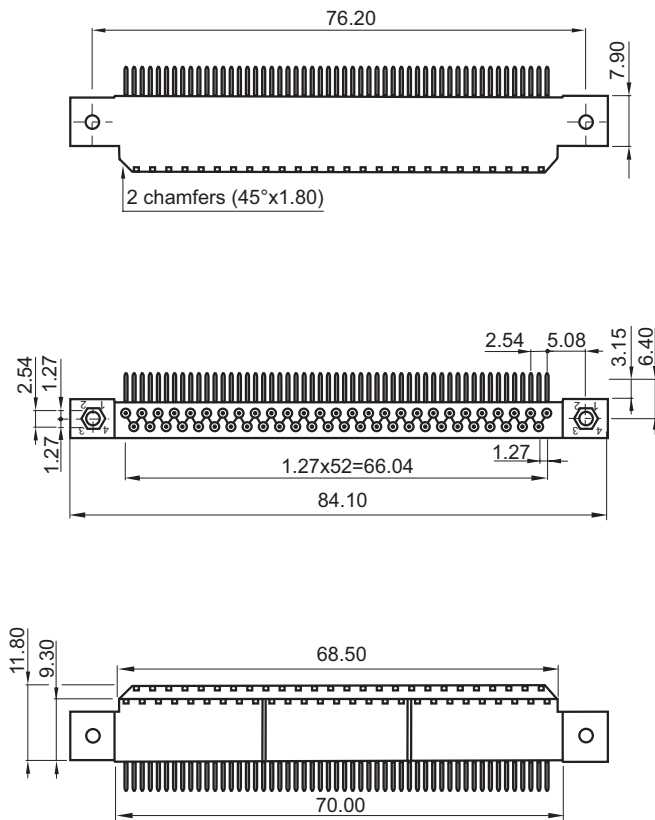
LOCKING STYLES***

FEMALE RECEPTACLE		MALE PLUG	
204	1/4 turn, transverse mount	218	Jackscrew, transverse mount
		203	1/4 turn, transverse mount

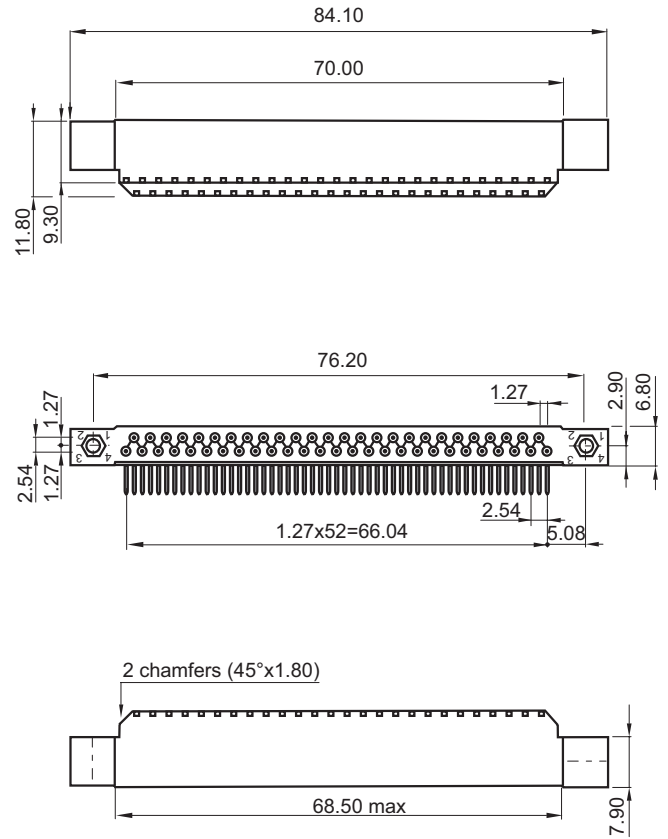
* For 90° & straight terminations (splicing on PCB)
** RoHS compliant for 90° & straight terminations (splicing on PCB)
*** Refer to page 3 for details for mounting hardware

CONNECTOR DIMENSIONS

PLUG



RECEPTACLE



TECHNICAL CHARACTERISTICS

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

MATERIALS & PLATINGS

Contact	Brass or bronze
Moulding	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 activ area 1.27 µm Ni on non activ 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 rating (at 25°C)	Standard: 3 A max ESA: 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 polarised guides (up to 36 keying)

ENVIRONMENTAL

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

HOW TO ORDER

K N

1 2 3



4



5



6



7

1 ▸ SERIES

2 ▸ PITCH OR TYPE **N** 1.27 MM PITCH, REAR REMOVABLE CONTACTS3 ▸ 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

5 ▸ MOULDING POLARITY

NF C-UTE C 93-424

MIL-C-55302

ESA/ESCC 3401/01601B

SPACE GRADE

12	14	54	54	Female plug	1A	1C	-	5A	Tinned female plug**	26	28	-	46	Tinned female receptacle*
13	15	55	55	Male plug	1B	1D	-	5B	Tinned male plug**	27	29	-	47	Tinned male receptacle*
16	18	-	56	Tinned female plug*	22	24	44	44	Female receptacle	2A	2C	-	-	Tinned female receptacle**
17	19	-	57	Tinned male plug*	23	25	45	45	Male receptacle	2B	2D	-	-	Tinned male receptacle**

6 ▸ TERMINATION STYLES

10	Through board solder - 90° - length 3 mm	21	Double crimp	51	Wire wrap (3 wrapping levels)
11	Through board solder - 90° - length 4 mm	30	Through board solder - straight	91	Female - male
20	Crimp	40	Solder bucket		

7 ▸ MOUNTING HARDWARE

GUIDE STYLES (consult us for special guides)

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

LOCKING STYLES

MALE PLUG		FEMALE RECEPTACLE	
201	1/4 turn, free connector	202	1/4 turn, vertical mount
203	1/4 turn, transverse mount	204	1/4 turn, transverse mount
207	Jackscrew, free connector	208	Jackscrew, transverse mount
211	Jackscrew, free connector	210	Jackscrew, free connector
290	Jackscrew, vertical mount	212	Jackscrew, transverse mount
		215	Jackscrew, vertical mount
		219	Jackscrew, vertical mount
		232	Jackscrew, with operation button

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

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

HYPERTAC & ESA CORRESPONDANCE TABLE

HYPERTAC

KNC

34 01 016 01 B

123456

1

ESCC COMPONENT NUMBER

2

MOUNTING

HYPERTAC		ESA					
Plug KNB 017	01	Plug KNB 096	08	Receptacle KNB 053	16	Plug KNB 072	56
Plug KNB 029	02	Plug KNB 120	10	Receptacle KNB 065	17	Receptacle KNB 072	57
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 029 44 40 113			
Male receptacle	45	Plug male	55	P.P.P.			

HYPERTAC		ESA			
Bent male 10	MC	Solder bucket male 40	MS	Crimp female 20	FR
Bent long male 11	ML	Mini-wrapping male 51	MY	Straight female 30	FD
Crimp male 20	MR	Bent female 10	FC	Solder bucket female 40	FS
Straight male 30	MD	Bent long female 11	FL	Mini-wrapping female 51	FY
				Female-male 91	FM

HYPERTAC		ESA					
Guideless connector	00	KNB 10 110	33	KN 232	45	KNB 212	52
KNB 10 125	26	KNC 10 110	34	KN 231	46	KN 215	53
KNC 10 125	27	KN 111	35	KN 207	47	KN 123	54
KN 127	28	KN 121	36	KNB 10 208	48	KN 113	55
KN 126	29	KNB 145	40	KNC 10 209	49	KNB 11 125	71
KNB 131	31	KNB 124	41	KN 210	50	KNB 11 110	72
KNB 132	32	KNC 10 230	43	KN 211	51	KNB 10 230	73
						KNC 124	74
						KNC 132	75
						KNC 11 110	76
						KNC 11 125	77
						KNB 11 208	79
						KN 219	80
						KN 290*	81

5

LOCKING TYPE - IN CENTER

00 FOR 2 GUIDE CONNECTORS

- - FOR 3 GUIDE CONNECTORS (see table 4, LOCKING TYPE - ON LEFT SIDE)

6

LOCKING TYPE - ON RIGHT SIDE

(see table 4, LOCKING TYPE - ON LEFT SIDE)

* Please consult us

CONTACT TERMINATIONS

PLUG

RECEPTACLE

MALE

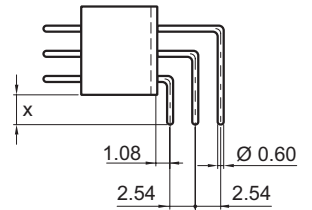
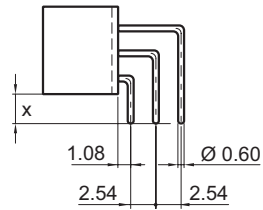
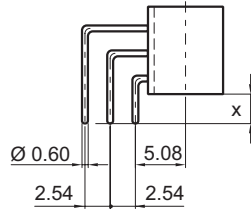
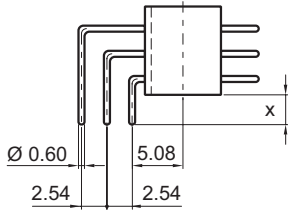
FEMALE

FEMALE

MALE

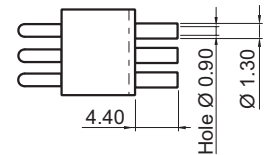
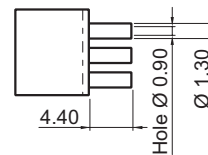
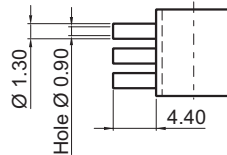
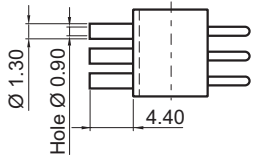
90° THROUGH BOARD SOLDER

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



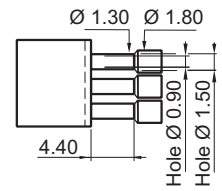
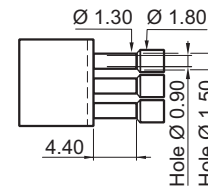
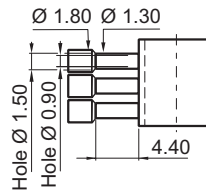
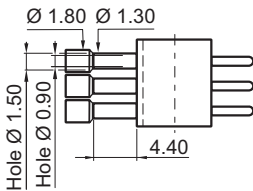
CRIMP (AWG 28-22)

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



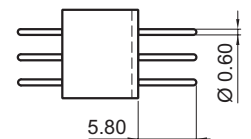
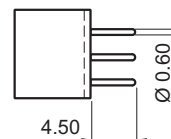
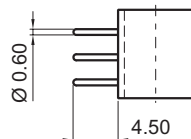
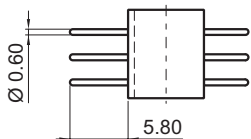
CRIMP (AWG 28-22)

Ref: **21**



STRAIGHT THROUGH BOARD SOLDER

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



CONTACT TERMINATIONS

PLUG

RECEPTACLE

MALE

FEMALE

FEMALE

MALE

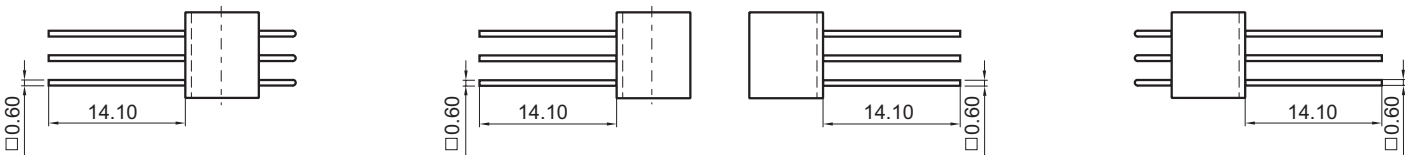
SOLDER BUCKET (AWG 22 max)

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

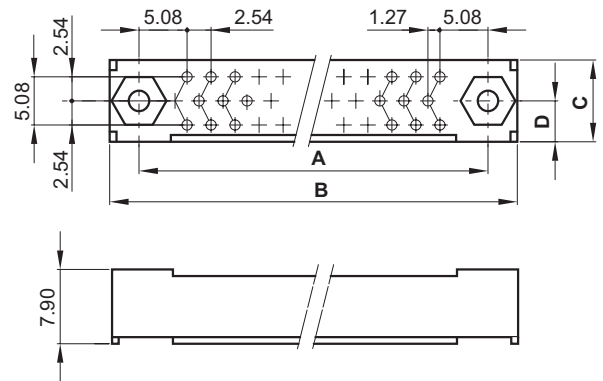
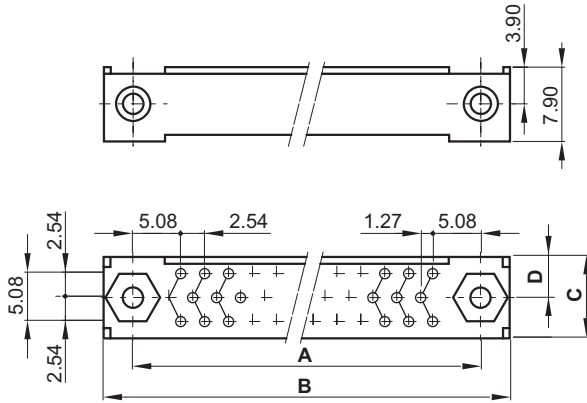


► DIMENSIONS

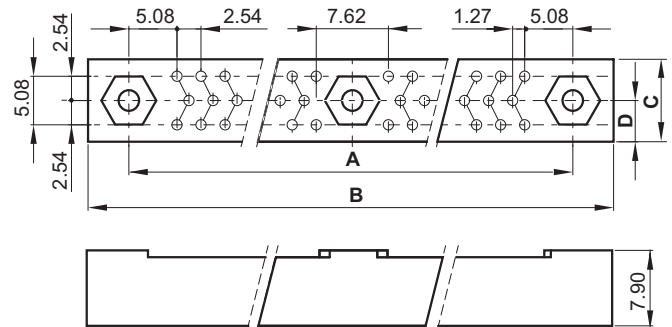
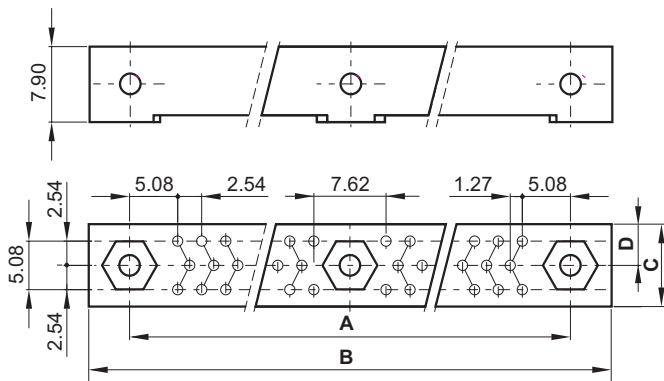
PLUG

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	—	—	4.70	4.70	4.70	—	—	—	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 DEVICE AND POLARITY TERMINATION COMPATIBILITY CHART

Legend:

	Compatible
	Compatible special saver connector

FP = Female Plug

MP = Male Plug

FR = Female Receptacle

MR = Male Receptacle

Polarity	Receptacle	FP 12						
		MP 13						
		MR 23						
		FR 22						
	Plug	MR 23						
		FR 22						
		FP 12						
		MP 13						
	90°	FP 12						
		MP 13						
		MR 23						
		FR 22						
	Straight	FP 12						
		MP 13						
		MR 23						
		FR 22						
	Solder bucket	FP 12						
		MP 13						
		MR 23						
		FR 22						
	Crimp	FP 12						
		MP 13						
		MR 23						
		FR 22						
Wire wrap - PPC	FP 12							
	MP 13							
	MR 23							
	FR 22							
Moulding								
Contact								

[illegible]

											191	Guiding devices					
										145							
										131							
										127							
										125							
										113							
										111							
										110							
																Male guides	
Female guides																	

126	124	123	121
Guiding devices			

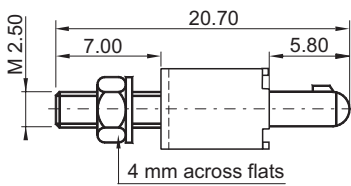
GUIDE STYLES

PLUG & RECEPTACLE

MALE

POLARISED VERTICAL MOUNT

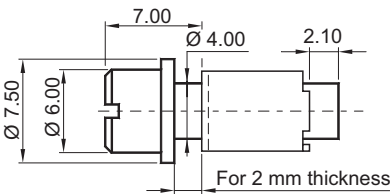
Ref: 111 Ref : 35



FEMALE

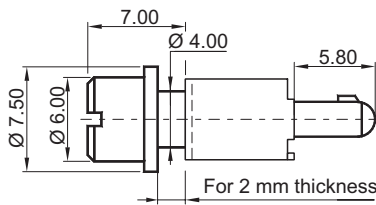
POLARISED VERTICAL FLOAT MOUNT

Ref: 123 Ref : 54



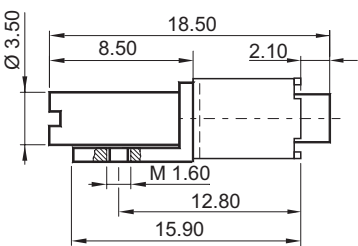
POLARISED VERTICAL FLOAT MOUNT

Ref: 113 Ref : 55



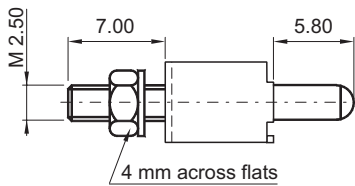
POLARISED TRANSVERSE MOUNT

Ref: 124 Ref : 74



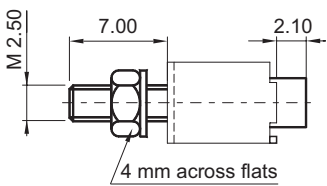
UNPOLARISED VERTICAL MOUNT

Ref: 127 Ref : 28



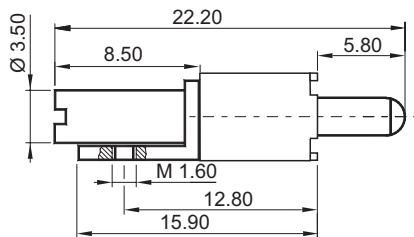
UNPOLARISED VERTICAL MOUNT

Ref: 126 Ref : 29



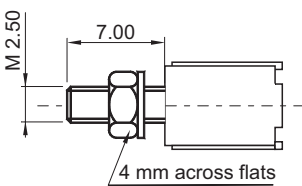
UNPOLARISED TRANSVERSE MOUNT

Ref: 131



ALL POLARISED VERTICAL MOUNT

Ref: 130



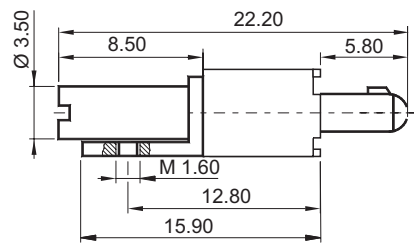
GUIDE STYLES

PLUG & RECEPTACLE

MALE

POLARISED TRANSVERSE MOUNT

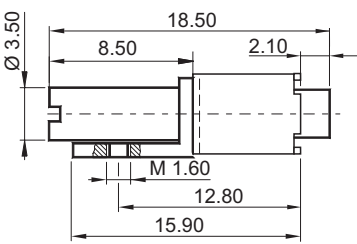
Ref: 145



FEMALE

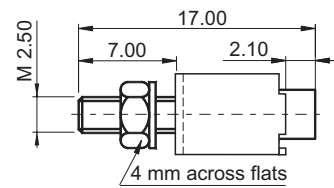
UNPOLARISED TRANSVERSE MOUNT

Ref: 132 Ref: 75



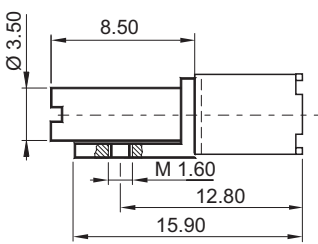
POLARISED VERTICAL MOUNT

Ref: 121 Ref: 36



ALL POLARISED TRANSVERSE MOUNT

Ref: 133



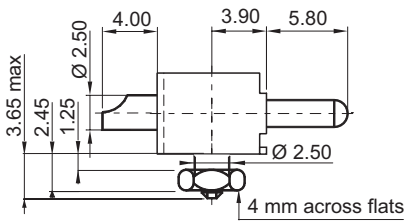
GUIDE STYLES

PLUG & RECEPTACLE

MALE

POWER OR MASS VERTICAL MOUNT

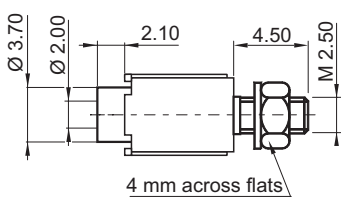
Ref: 191 PCB thickness 1.60



FEMALE

POWER OR MASS VERTICAL MOUNT

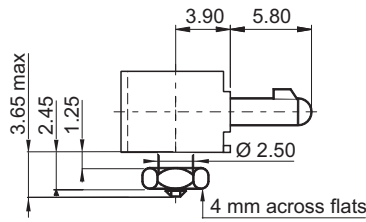
Ref: 190



MALE PLUG ONLY

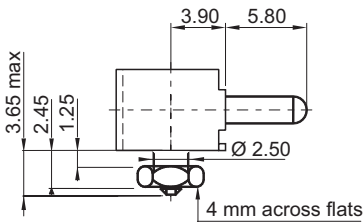
POLARISED TRANSVERSE MOUNT

Ref: 10 110 Ref: 34 PCB thickness 1.60



UNPOLARISED TRANSVERSE MOUNT

Ref: 10 125 Ref: 27 PCB thickness 1.60



▶ LOCKING DEVICES COMPATIBILITY CHART

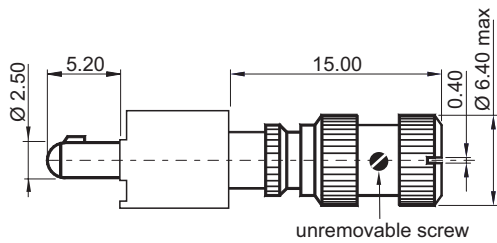
		R P		R P		R P		R P		R P		R P		R P			
Compatible																Receptacle	Moulding
																Plug	
P																	290
R																	
P																	231
R																	
P																	211
R																	
P																	207
R																	
P																	205
R								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

MALE LOCKING STYLES

PLUG & RECEPTACLE

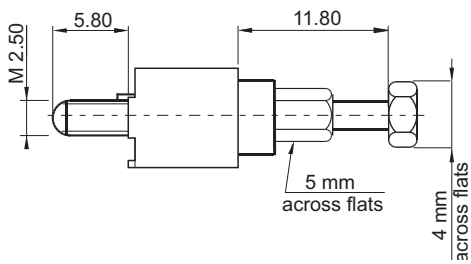
JACK 1/4 TURN LOCK, FREE CONNECTOR

Ref: 201



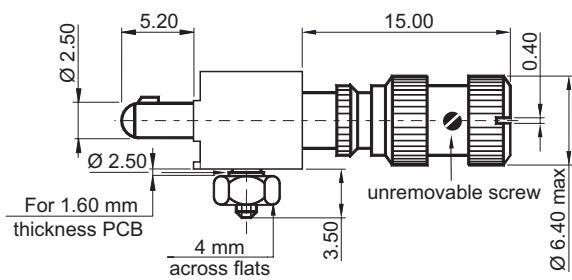
JACKSCREW, FREE CONNECTOR

Ref: 211 Ref : 51



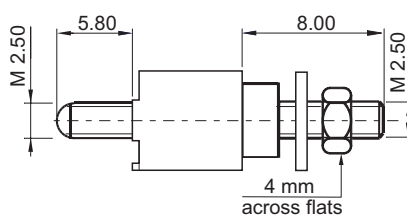
JACK 1/4 TURN LOCK, TRANSVERSE MOUNT

Ref: 206



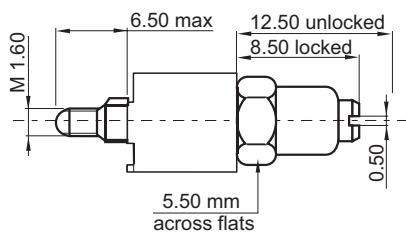
JACKSCREW, VERTICAL MOUNT

Ref: 231 Ref : 46



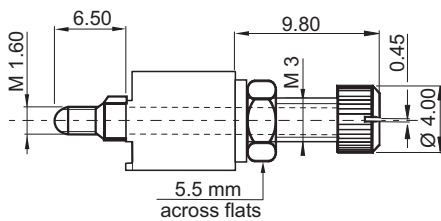
JACKSCREW, FREE CONNECTOR

Ref: 207 Ref : 47



JACKSCREW, VERTICAL MOUNT

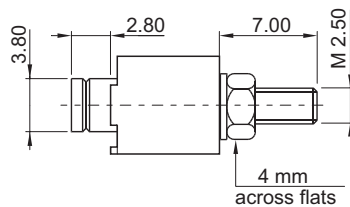
Ref: 290 Ref : 81



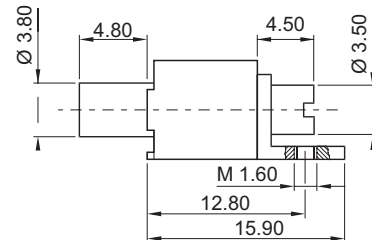
► FEMALE LOCKING STYLES

PLUG & RECEPTACLE

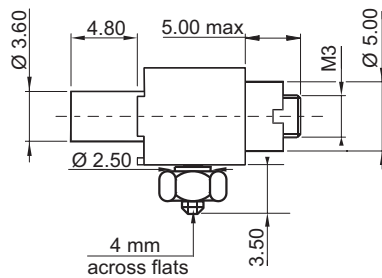
JACK 1/4 TURN LOCK, VERTICAL MOUNT

Ref: **202**

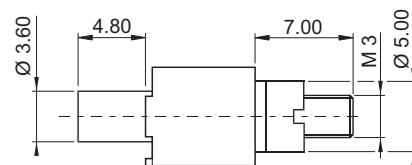
JACKSCREW, TRANSVERSE MOUNT

Ref: **212**

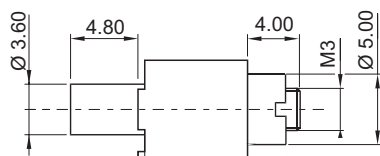
JACKSCREW, TRANSVERSE MOUNT

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

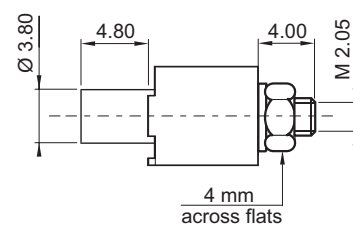
JACKSCREW, VERTICAL MOUNT

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

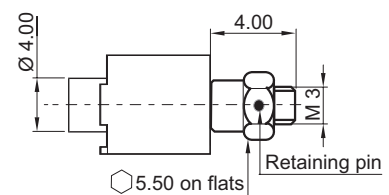
JACKSCREW, FREE CONNECTOR

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

JACKSCREW, VERTICAL MOUNT

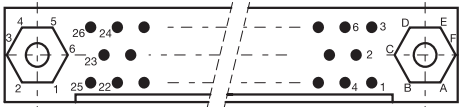
Ref: **219** Ref: **80**

ROTATING JACKSCREW

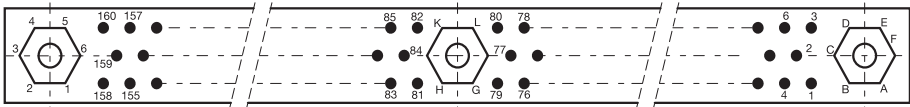
Ref: **232**

RECEPTACLE MATING SIDE LAYOUT VIEW

26 TO 98 CONTACTS

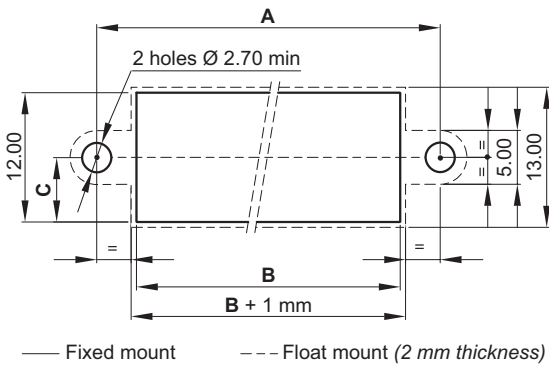


108 TO 160 CONTACTS

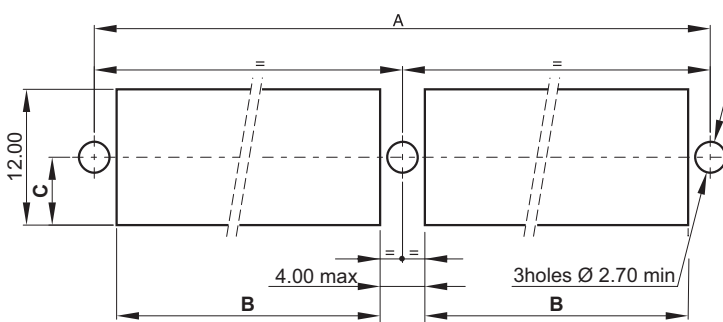


PANEL PREPARATION DETAILS

26 TO 98 CONTACTS



108 TO 160 CONTACTS



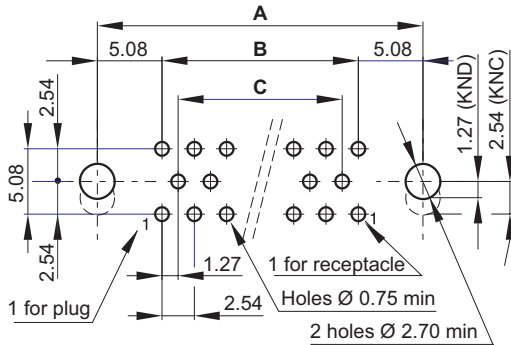
Panel: Female or male, plug or receptacle
Terminations: 40 - 51
Guide styles: 111 - 121 (Fixed Mount)
Guide styles: 113 - 123 - 202 (Float Mount)

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	—

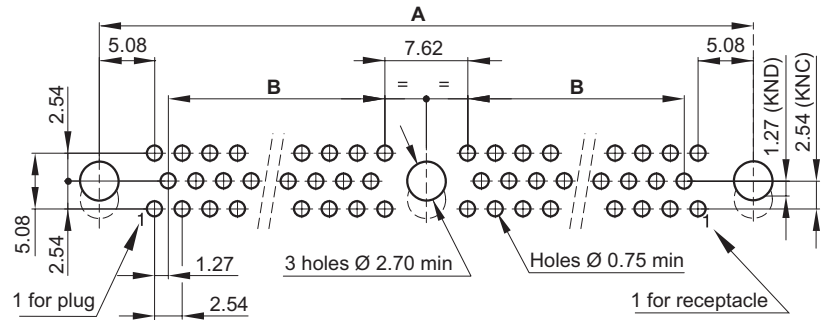
► BOARD PREPARATION DETAILS

MOTHER BOARD

26 TO 98 CONTACTS



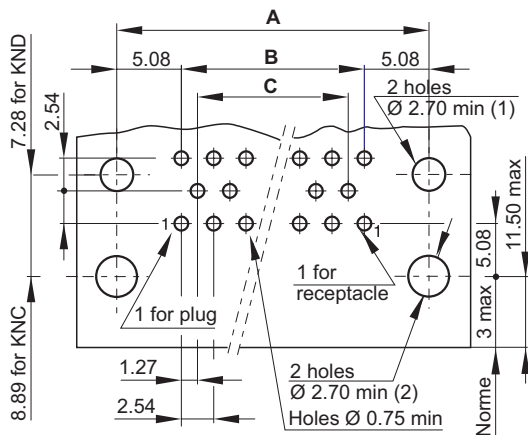
108 TO 160 CONTACTS



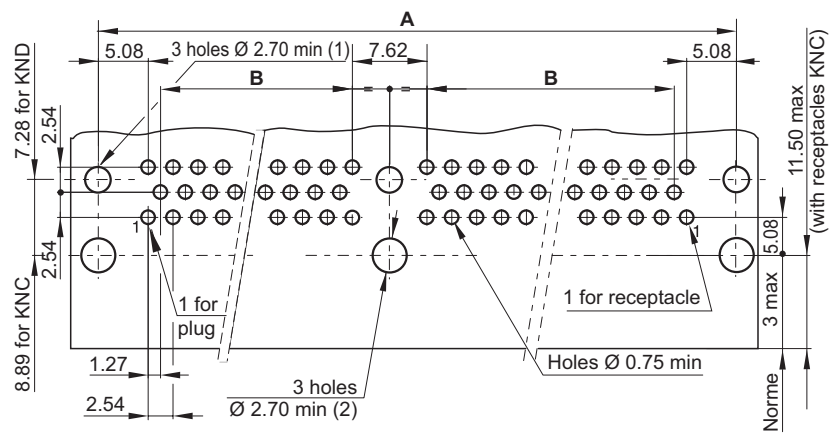
Mother Board: Female or male, plug or receptacle, straight solder termination
Guide styles: 111 - 121- 202

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

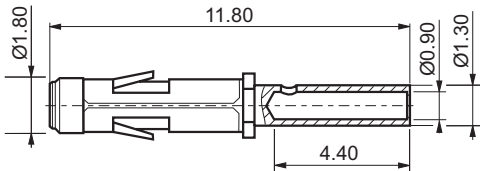
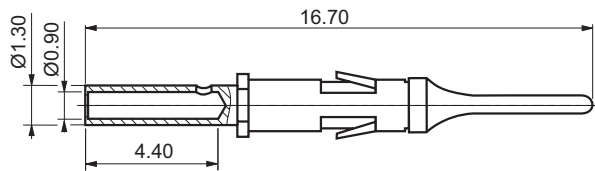
No. of contacts	26	44	62	80	98	108	126	144	160
A	30.48	45.72	60.96	76.20	91.44	106.68	121.92	137.16	149.86
B	20.32	35.56	50.80	66.04	81.28	43.18	50.80	58.42	64.77
C	17.78	33.02	48.26	63.50	78.74	—	—	—	—

CONTACTS

MALE

FEMALE

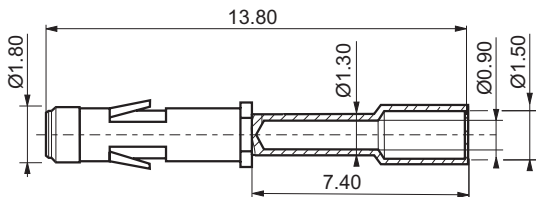
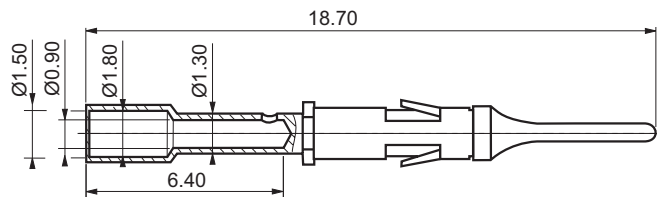
CRIMP TERMINATIONS AWG 22-28 (0.079 - 0.34 mm²)



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

Reference	Part number
KN- ---22 20 ---	006 042 2- 20R G0
KN- ---44 20 ---	006 042 2- 20P J9
FR	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 G0
KN- ---44 20 ---	006 063 2- 21R J3

► TOOLS

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 G0		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 G0	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
		DANIELS 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)	ASTRO TOOL M22520/2.01	28	0.079	SS-0060000001		*
			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
	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

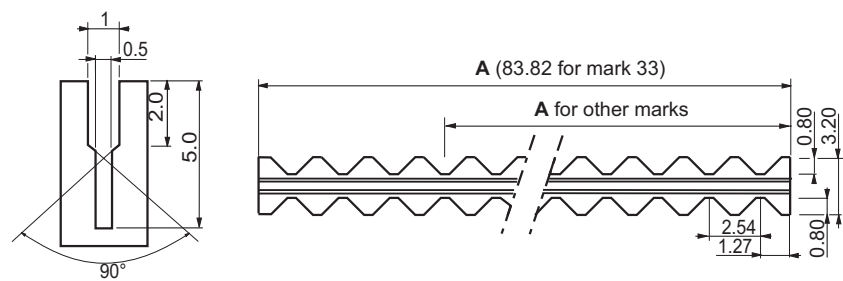
2 fixing points **SP. 006 00 00 006**
 3 fixing points **SP. 006 00 00 004**

SCREWDRIVER FOR M3 NUT

208 locking devices
 215 locking devices **S_075**

ACCESSORIES

ANTISTATIC PIN PROTECTOR



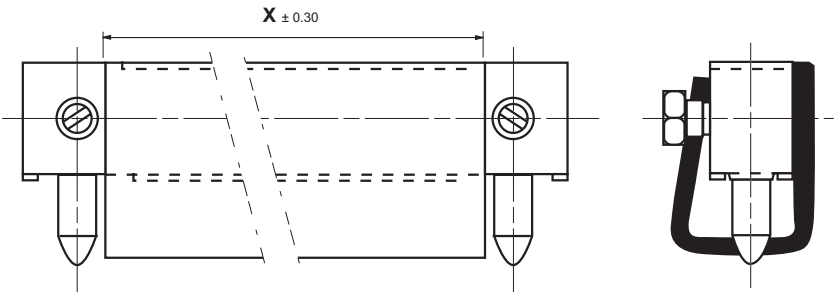
Ordering information
KNB - - - - 314
↑
Ref

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

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

KN - - - - 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				

TECHNICAL CHARACTERISTICS

Contact diameter	HYPERTAC® type Ø 0.50 mm rear removable
Number of contact	Up to 162
Pitch	1.905mm between rows 1.27mm between quicuncial contacts
Rows	3

MATERIALS & PLATINGS

Contact	Brass or bronze
Moulding	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 activ area 1.27 µm Ni on non activ 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 rating (at 25°C)	3 A max
Dielectric withstanding voltage	800 Vrms
Contact resistance	≤ 8 mΩ
Insulation resistance	> 10 ⁴ 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 polarised guides (up to 16 keying)

ENVIRONMENTAL

Temperature range	-55° C + 125° C
Conformity	ESA/ESCC 3401/039, NF C-UTE C 93-424

Dimension are in mm

HOW TO ORDER

HYPERTAC & ESA CORRESPONDANCE TABLE

ESA	3401/039 01B
-----	--------------



1



2



3



4



5

1 ▸ SERIES

2 ▸ NUMBER OF CONTACTS

0 2 6 0 4 4 0 6 2 0 8 0 0 9 8 1 4 4 1 6 2

3 ▸ MOULDING POLARITY

NF C-UTE C 93-424

ESA/ESCC 3401/03901B

SPACE GRADE

12	-	54	Female plug	1A	-	-	Tinned female plug**	26	-	46	Tinned female receptacle*
13	55	55	Male plug	1B	-	-	Tinned male plug**	27	-	47	Tinned male receptacle*
16	-	56	Tinned female plug*	22	44	44	Female receptacle	2A	-	-	Tinned female receptacle**
17	-	57	Tinned male plug*	23	-	45	Male receptacle	2B	-	-	Tinned male receptacle**

4 ▸ TERMINATION STYLES

1 0	90° length 3 mm ("A" moulding)	3 0	Through board solder - straight - length 4.5 mm	5 1	Wire wrap (3 wrapping levels)
1 0	90° length 3 mm ("B" moulding)	3 1	Through board solder - straight - length 5.6 mm	9 0	Male - male
1 1	90° length 4 mm ("A" moulding)	4 0	Solder bucket	9 1	Female - male
1 3	90° length 5.5 mm ("B" moulding)	5 0	Wire wrap (2 wrapping levels)		

5 ▸ MOUNTING HARDWARE

GUIDE STYLES (consult us for special guides)

110	Male polarised, transverse mount ⁽¹⁾	127	Male unpolarised, vertical mount ⁽²⁾	156	Male unpolarised, transverse mount ⁽²⁾
111	Male polarised, vertical mount ⁽²⁾	128	Male unpolarised, float mount ⁽²⁾	173	Female unpolarised, transverse mount ⁽¹⁾
112	Male polarised, vertical mount ⁽²⁾	130	Female unpolarised, vertical mount ⁽²⁾	174	Female polarised, transverse mount ⁽¹⁾
113	Male polarised, float mount ⁽²⁾	133	Female unpolarised, transverse mount ⁽²⁾	190	Female power or mass contact, vertical mount ⁽²⁾
121	Female polarised, vertical mount ⁽²⁾	143	Female polarised, vertical mount ⁽²⁾	191	Male power or mass contact, transverse mount ⁽¹⁾
123	Female polarised, float mount ⁽²⁾	153	Female unpolarised, transverse mount ⁽²⁾	703	Female - male unpolarised guide ⁽²⁾
124	Female polarised, transverse mount ⁽²⁾	154	Female polarised, transverse mount ⁽²⁾		
125	Male unpolarised, transverse mount ⁽¹⁾	155	Male unpolarised, transverse mount ⁽²⁾		

LOCKING STYLES

FEMALE		MALE	
202	Jackscrow, vertical mount ⁽²⁾	201	Jackscrow, free connector ⁽²⁾
203	Jackscrow, transverse mount ⁽¹⁾	205	Jackscrow, transverse mount ⁽¹⁾
204	Jackscrow, transverse mount ⁽²⁾	206	Jackscrow, free connector ⁽²⁾
207	Jackscrow, vertical mount ⁽²⁾		

⁽¹⁾ Moulding A - ⁽²⁾ Moulding B

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

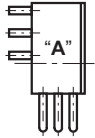
** RoHS conform for 90° & straight terminations (splicing on PCB)

► MOULDING STYLES

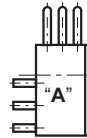
PLUG

RECEPTACLE

ONE PART (moulding A)

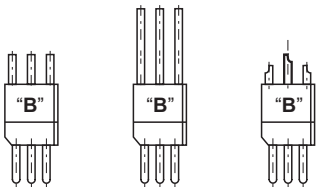


- Fitted with male contacts**
- 90° through board solder

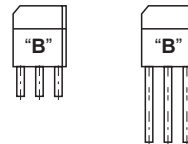


- Fitted with male contacts**
- 90° through board solder
(same design as the "A" plug type but printed as receptacle)

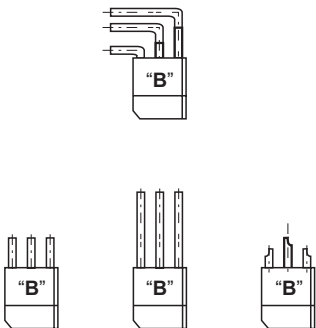
TWO PARTS (moulding B)



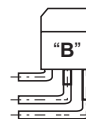
- Fitted with male contacts (pins)**
- Straight through board solder
 - Wire wrap type
(2 and 3 wrapping levels)
 - Solder bucket



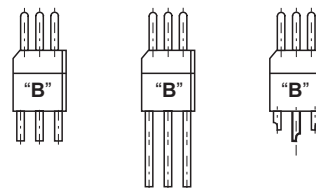
- Fitted with female contacts**
- Straight through board solder
 - Wire wrap type
(2 and 3 wrapping levels)
 - Solder bucket
(same design as the "B" plug type but printed as receptacle)



- Fitted with female contacts (sockets)**
- 90° through board solder
Note: the spacing of the rows for board preparation is different to the spacing of the plug fitted with the 90° termination
 - Straight through board solder
 - Wire wrap type
(2 and 3 wrapping levels)
 - Solder bucket



- Fitted with female contacts (sockets)**
- 90° through board solder
Note: the spacing of the rows for board preparation is different to the spacing of the plug fitted with the 90° termination



- Fitted with male contacts (pins)**
- Straight through board solder
 - Wire wrap type
(2 and 3 wrapping levels)
 - Solder bucket
(same design as the "B" plug type but printed as receptacle)

► CONTACT TERMINATIONS

PLUG

RECEPTACLE

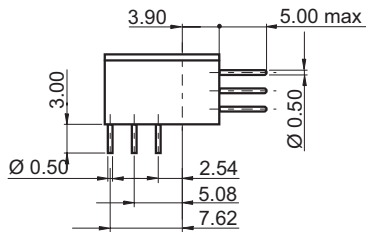
MALE

FEMALE

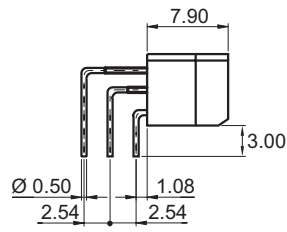
FEMALE

MALE

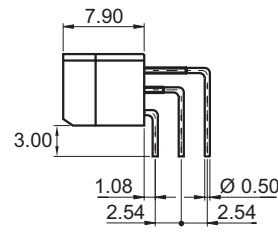
90° THROUGH BOARD SOLDER

Ref: **10** Ref: **10** (only A Moulding)

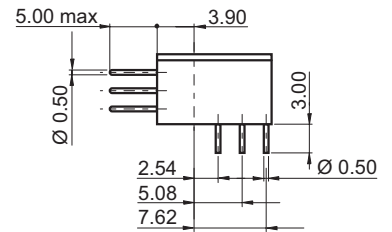
Moulding "A"



Moulding "B"

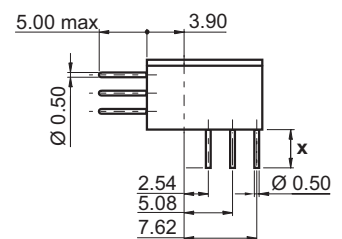
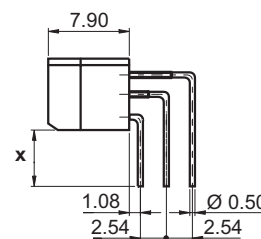
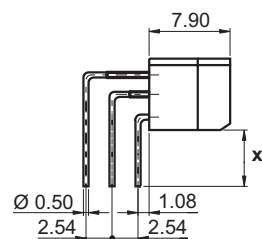
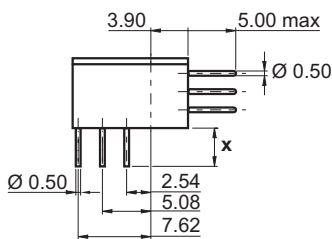


Moulding "B"

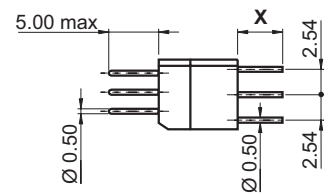
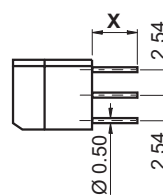
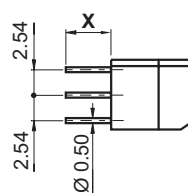
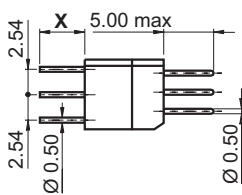


Moulding "A"

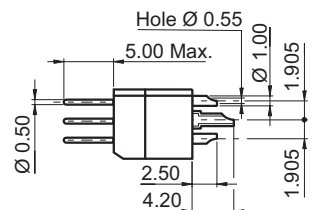
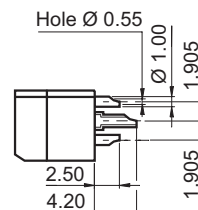
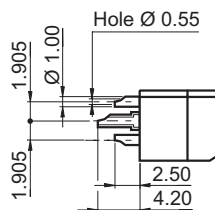
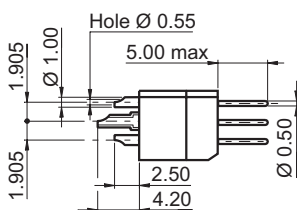
90° THROUGH BOARD SOLDER

Moulding A Ref: **11** (X=4.00) Moulding B Ref: **13** (X=5.50)

STRAIGHT THROUGH BOARD SOLDER

Ref: **30** (X=4.50) Ref: **30** Ref: **31** (X=5.60) Ref: **31**

SOLDER BUCKET (AWG 26 max)

Ref: **40** Ref: **40****Note:** moulding A and B need different preparation board details for 90° tail termination.

CONTACT TERMINATIONS

PLUG

RECEPTACLE

MALE

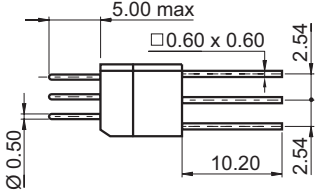
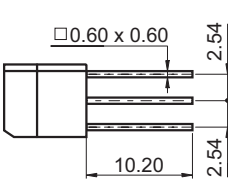
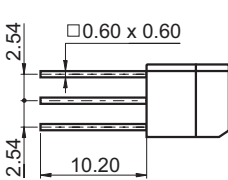
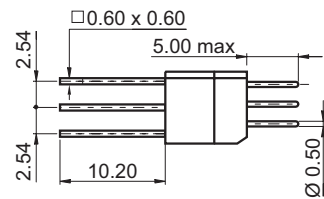
FEMALE

FEMALE

MALE

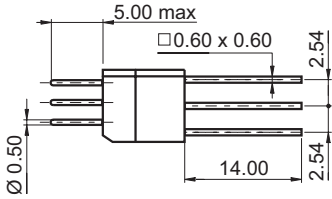
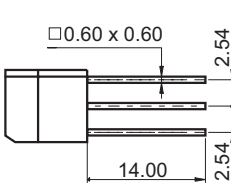
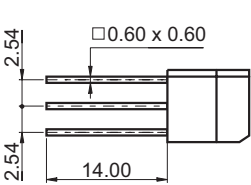
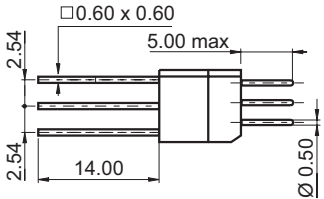
WIRE WRAP (2 wrapping levels)

Ref: 50 Ref : 50



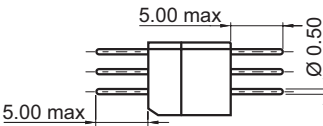
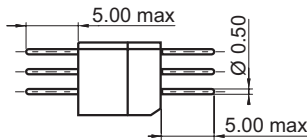
WIRE WRAP (3 wrapping levels)

Ref: 51 Ref : 51



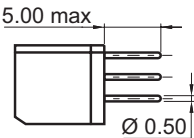
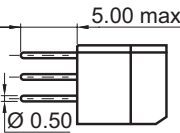
SAVER (Male-Male)

Ref: 90



SAVER (Female-Male)

Ref: 91 Ref : 91



Note: moulding A and B need different preparation board details for 90° tail termination.

DIMENSIONS

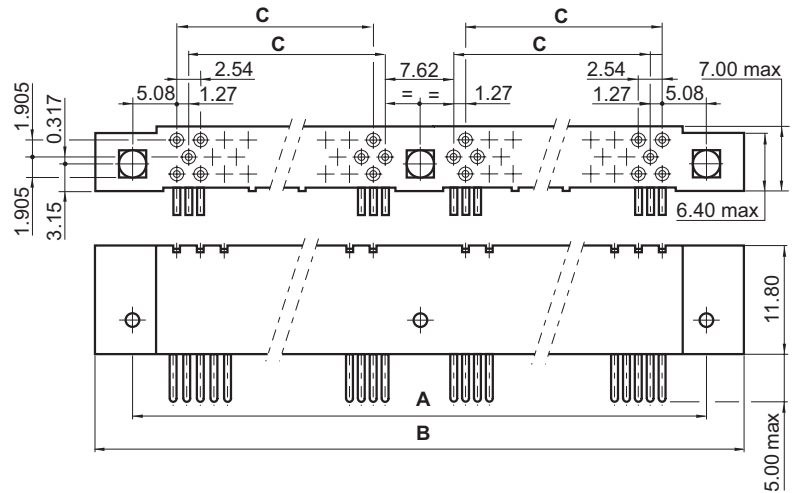
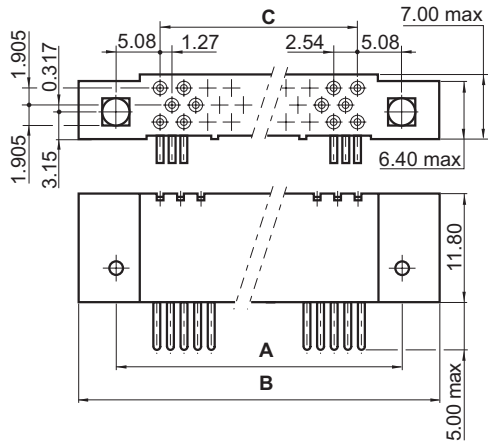
26 TO 98 CONTACTS

144 TO 162 CONTACTS

ONE PART (moulding A)

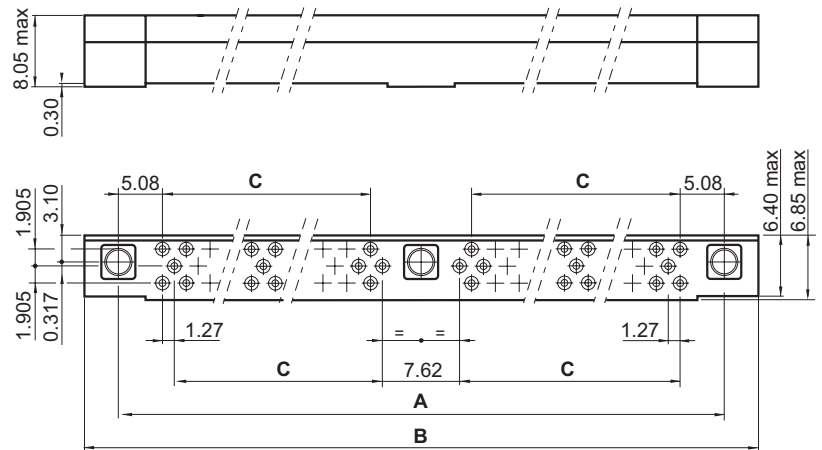
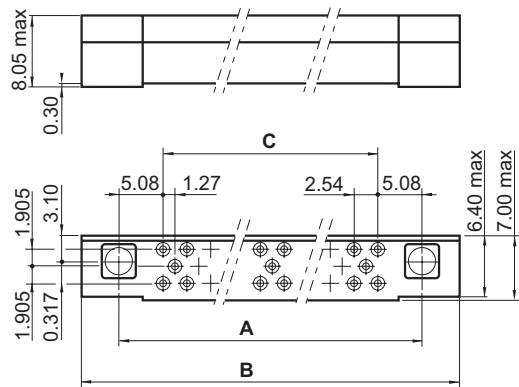
90° male plug
90° male receptacle

KMC ... 13 10 ...
KMC ... 23 10 ...



TWO PARTS (moulding B)

Female or male receptacle KMC ... 2 ...
Female or male plug KMC ... 1 ...



No. of contacts	26	44	62	80	98	144	162
A	30.48	45.72	60.96	76.20	91.44	137.16	152.40
B max	38.50	53.70	69.00	84.20	99.50	145.20	160.40
C	20.32	35.56	50.80	66.04	81.28	58.42	66.04

▶ GUIDE DEVICE & POLARITY TERMINATION COMPATIBILITY CHART

703	190	174	173	154

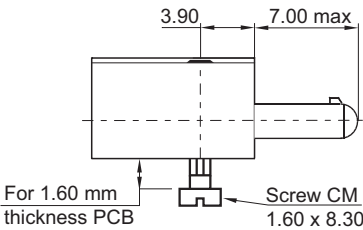
Guide devices

FR 22	FP 12	FR 22	FP 12	MR 23	FR 22	FP 12	MP 13	MR 23	FR 22	FP 12	MP 13	FR 22	FP 12	MR 23	FR 22	FP 12	MP 13	Polarity				Moulding	Contact
																		All pinning	A				
																		All pinning	B				
																		90°	13F	11M	10	Male or female	
																		Straight		31	30		
																		Solder bucket			40		
																		Wire wrap		51	50		
																		Female/male	Male/male	91	90		

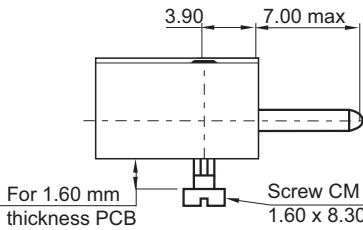
MALE GUIDE STYLES

POLARISED TRANSVERSE MOUNT (moulding A)

Ref: 110 Ref: 110

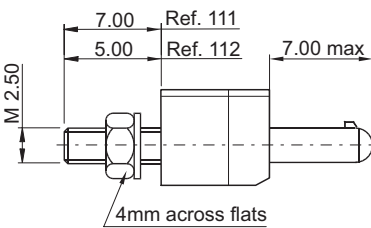


UNPOLARISED TRANSVERSE MOUNT (moulding A) CENTRAL GUIDE (KMC 144-162)

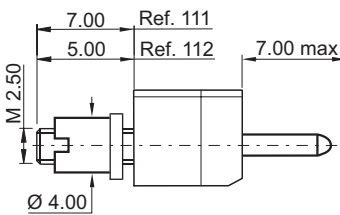


POLARISED VERTICAL MOUNT (moulding B)

Ref: 111 Ref: 112

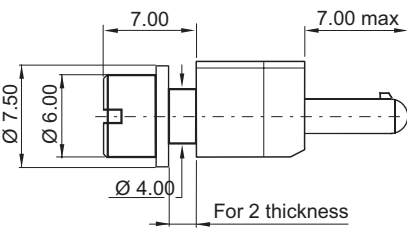


UNPOLARISED VERTICAL MOUNT (moulding B) CENTRAL GUIDE (KMC 144-162)

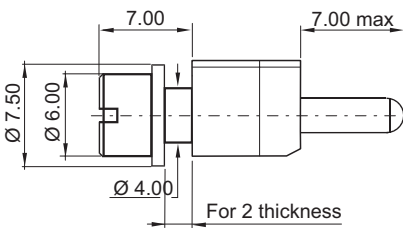


POLARISED VERTICAL FLOAT MOUNT (moulding B)

Ref: 113

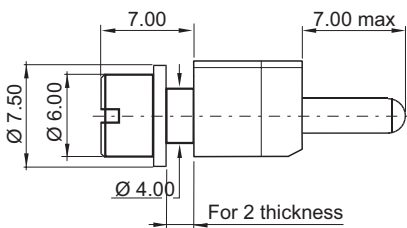


UNPOLARISED VERTICAL FLOAT MOUNT (moulding B) CENTRAL GUIDE (KMC 144-162)



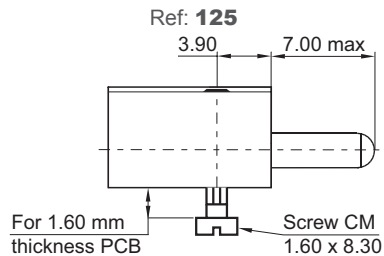
POLARISED VERTICAL FLOAT MOUNT (moulding B)

Ref: 128

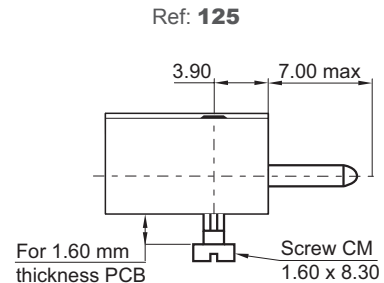


► MALE GUIDE STYLES

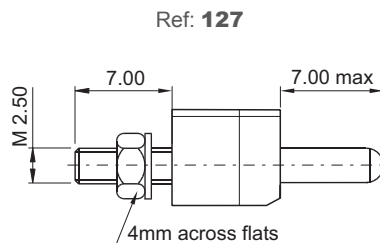
UNPOLARISED TRANSVERSE MOUNT (moulding A)



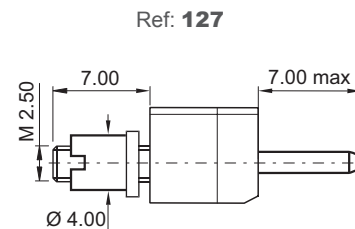
UNPOLARISED TRANSVERSE MOUNT (moulding A) CENTRAL GUIDE (KMC 144-162)



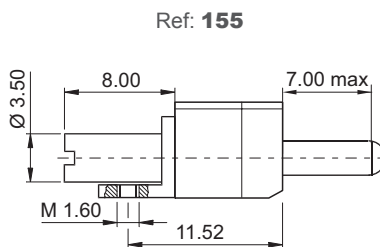
UNPOLARISED VERTICAL MOUNT (moulding B)



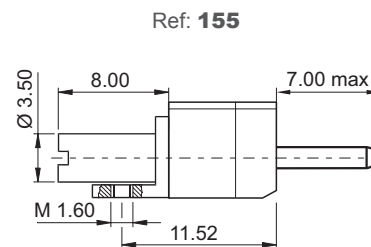
UNPOLARISED VERTICAL MOUNT (moulding B) CENTRAL GUIDE (KMC 144-162)



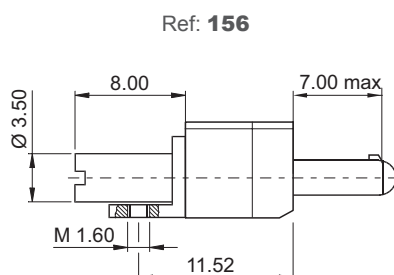
UNPOLARISED TRANSVERSE MOUNT (moulding B)



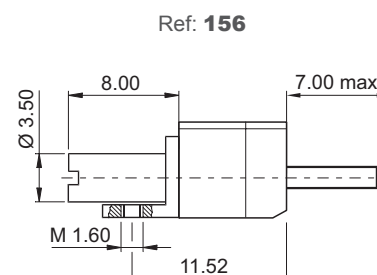
UNPOLARISED TRANSVERSE MOUNT (moulding B) CENTRAL GUIDE (KMC 144-162)



POLARISED TRANSVERSE MOUNT (moulding B)



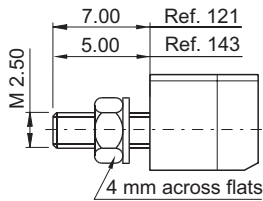
UNPOLARISED TRANSVERSE MOUNT (Moulding B) CENTRAL GUIDE (KMC 144-162)



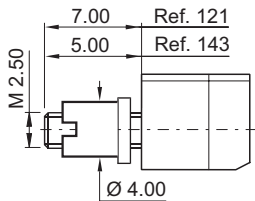
► FEMALE GUIDE STYLES

POLARISED VERTICAL MOUNT
(moulding B)

Ref : 121 Ref: 143 Ref : 143

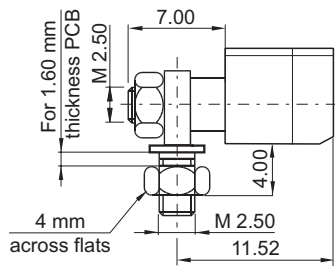


UNPOLARISED VERTICAL MOUNT (moulding B)
CENTRAL GUIDE (KMC 144-162)

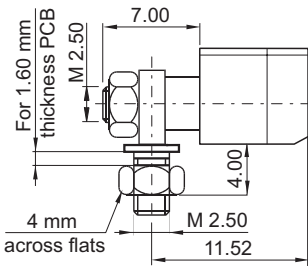


POLARISED TRANSVERSE MOUNT
(moulding B)

Ref: 124

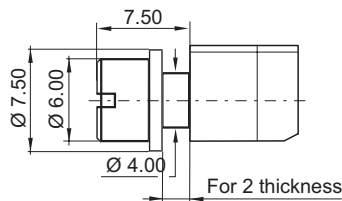


UNPOLARISED TRANSVERSE MOUNT (moulding B)
CENTRAL GUIDE (KMC 144-162)



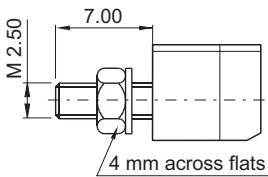
POLARISED VERTICAL FLOAT MOUNT
(moulding B)

Ref: 123

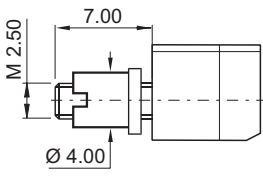


ALL KEYING TYPES
(moulding B)

Ref: 130



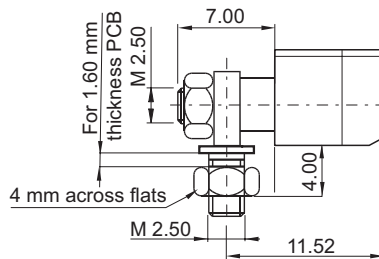
ALL KEYING TYPES (moulding B)
CENTRAL GUIDE (KMC 144-162)



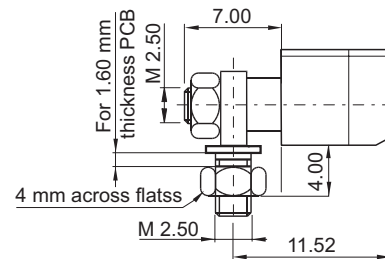
► FEMALE GUIDE STYLES

ALL KEYING TYPES (moulding B)

Ref: **133**

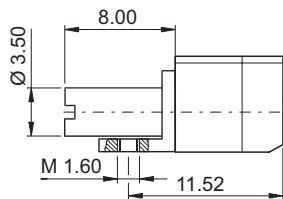


ALL KEYING TYPES (moulding B) CENTRAL GUIDE (KMC 144-162)

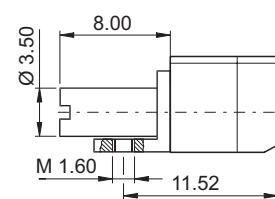


ALL KEYING TYPES (moulding B)

Ref: **153**

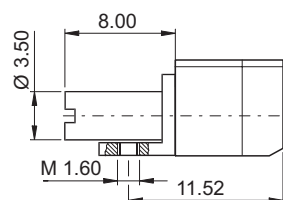


ALL KEYING TYPES (moulding B) CENTRAL GUIDE (KMC 144-162)

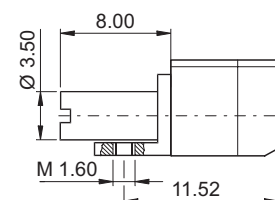


POLARISED TRANSVERSE MOUNT (moulding B)

Ref: **154**



UNPOLARISED TRANSVERSE MOUNT (moulding B) CENTRAL GUIDE (KMC 144-162)

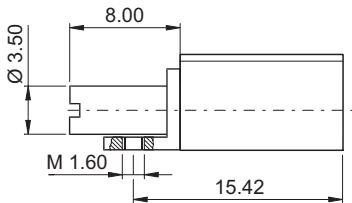


GUIDE STYLES

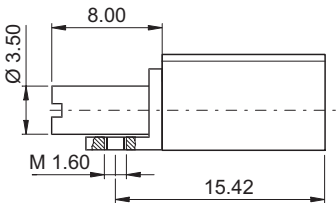
FEMALE

UNPOLARISED TRANSVERSE MOUNT (moulding A)

Ref: 173

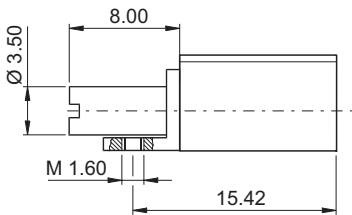


UNPOLARISED TRANSVERSE MOUNT (moulding A) CENTRAL GUIDE (KMC 144-162)

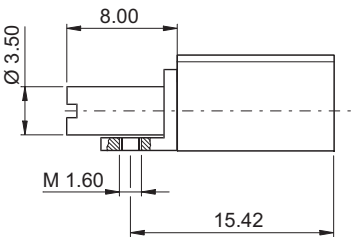


POLARISED TRANSVERSE MOUNT (moulding A)

Ref: 174



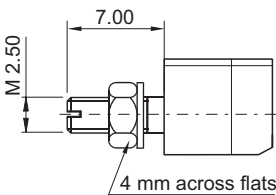
UNPOLARISED TRANSVERSE MOUNT (moulding A) CENTRAL GUIDE (KMC 144-162)



FEMALE

MASS AND POWER CONTACT (moulding B)

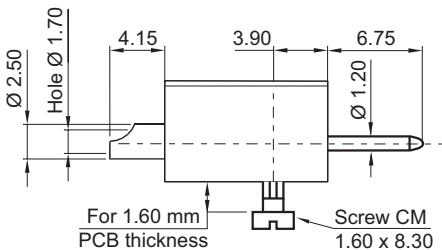
Ref: 190



MALE

MASS AND POWER CONTACT (moulding A)

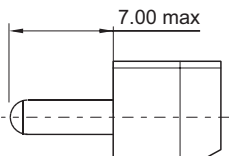
Ref: 191



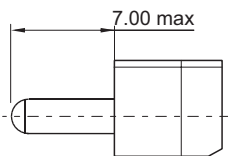
FEMALE - MALE

UNPOLARISED TRANSVERSE MOUNT (moulding B)

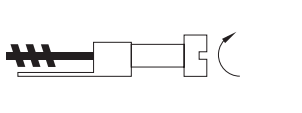
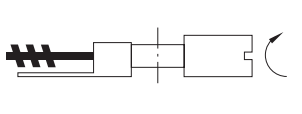
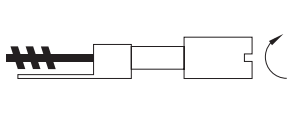
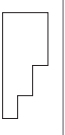
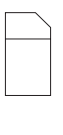
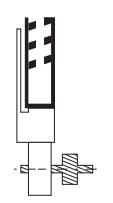
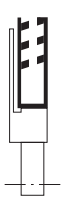
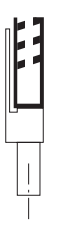
Ref: 703 Ref: 703



UNPOLARISED TRANSVERSE MOUNT (moulding B) CENTRAL GUIDE (KMC 144-162)



▶ LOCKING DEVICE COMPATIBILITY CHART

						A	Moulding
						B	
							206
							205
							201
					Male locking devices		
A	B				Female locking devices		
Moulding		204	203	202/207			

 Compatible

NOTE: the connector must be fitted with its locking devices before soldering on the PCB (straight through board solder):

- ▶ Connector on PCB: impossibility to change the keying.
- ▶ If you need to change the keying:
 - pierce PCB through Ø 3.70, fixing devices
 - use 054826.000R shouldered washer

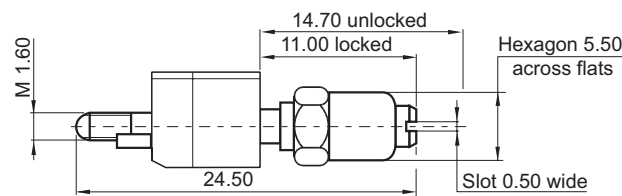
(for 202 and 207)

LOCKING STYLES

MALE

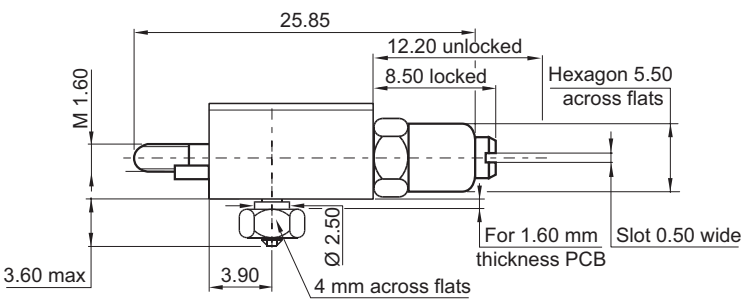
JACKSCREW, FREE CONNECTOR (moulding B)

Ref: 201 Ref: 201
For KMC 144-162 the supplied central guide is Ref: 111



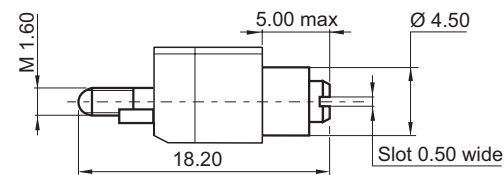
JACKSCREW, TRANSVERSE MOUNT (moulding A)

Ref: 205
For KMC 144-162 the supplied central guide is Ref: 110



JACKSCREW, FREE CONNECTOR (moulding B)

Ref: 206 Ref: 206
For KMC 144-162 the supplied central guide is Ref: 112



LOCKING STYLES

FEMALE

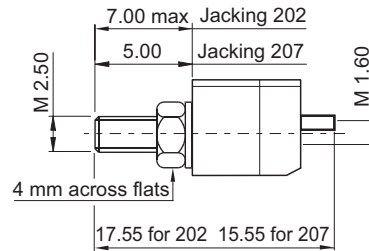
NON ROTATING JACKSCREW, VERTICAL MOUNT (moulding B)

Ref: **202** Ref:  **202**

For **KMC 144-162** jackscrew 202 the supplied central guide is Ref: **121**

Ref: **207**

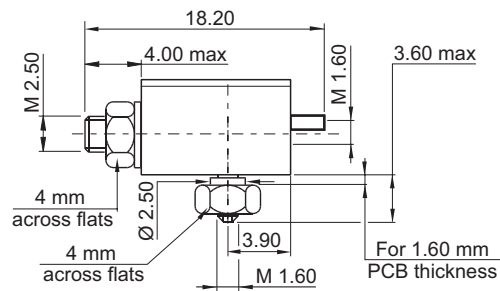
jackscrew 207 the supplied central guide is Ref: **143**



NON ROTATING JACKSCREW, TRANSVERSE MOUNT (moulding A)

Ref: **203**

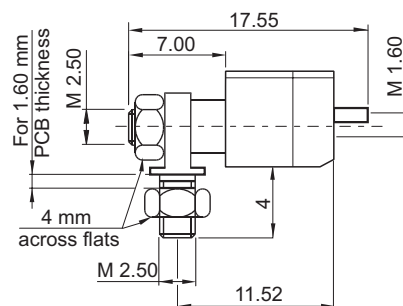
For **KMC 144-162** jackscrew 202 the supplied central guide is Ref: **173**



NON ROTATING JACKSCREW, TRANSVERSE MOUNT (moulding B)

Ref: **204** Ref:  **204**

For **KMC 144-162** the supplied central guide is Ref: **111**

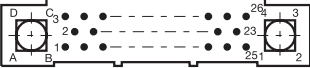
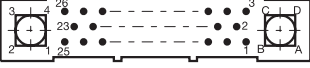
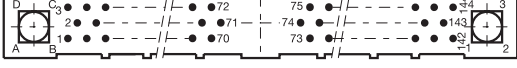
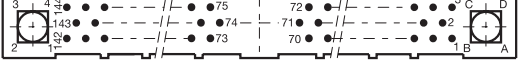
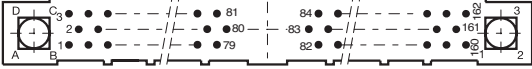
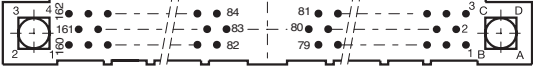


► MATING SIDE LAYOUT VIEW

MOULDING A

PLUG

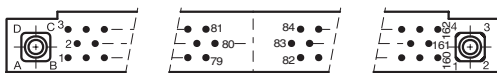
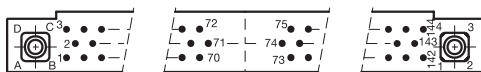
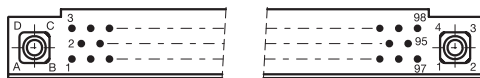
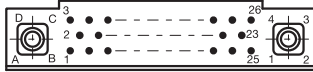
RECEPTACLE

	026	
	044	
	062	
	080	
	098	
	144	
	162	

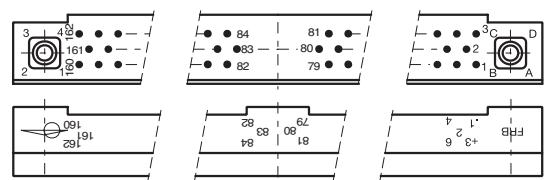
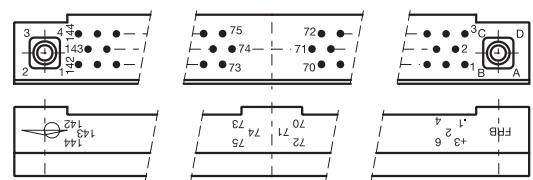
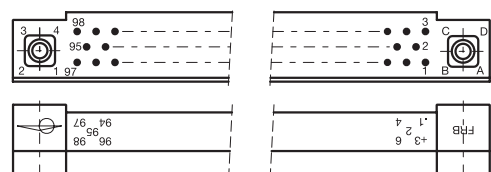
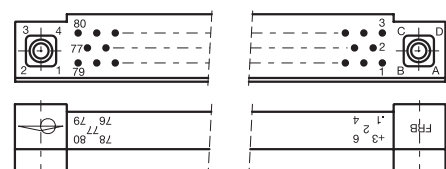
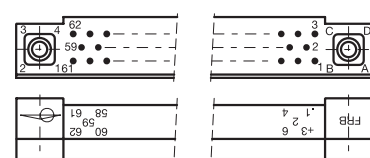
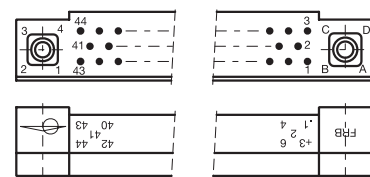
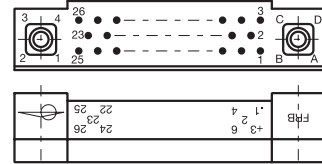
► MATING SIDE LAYOUT VIEW

MOULDING B

PLUG



RECEPTACLE



026

044

062

080

098

144

162

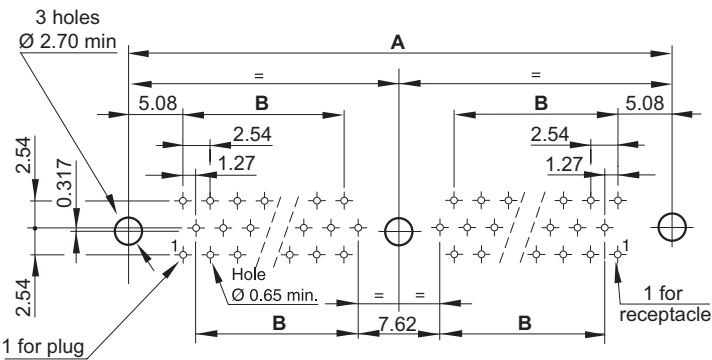
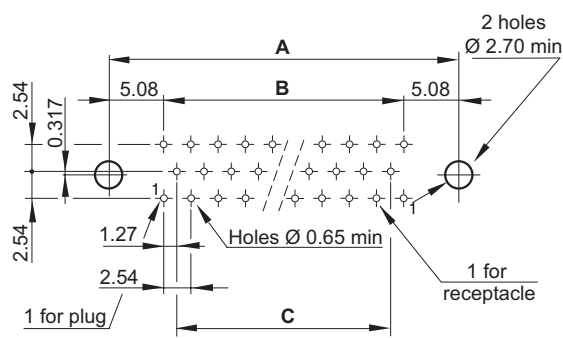
BOARD PREPARATION DETAILS

TWO PARTS (moulding B)

26 TO 98 CONTACTS

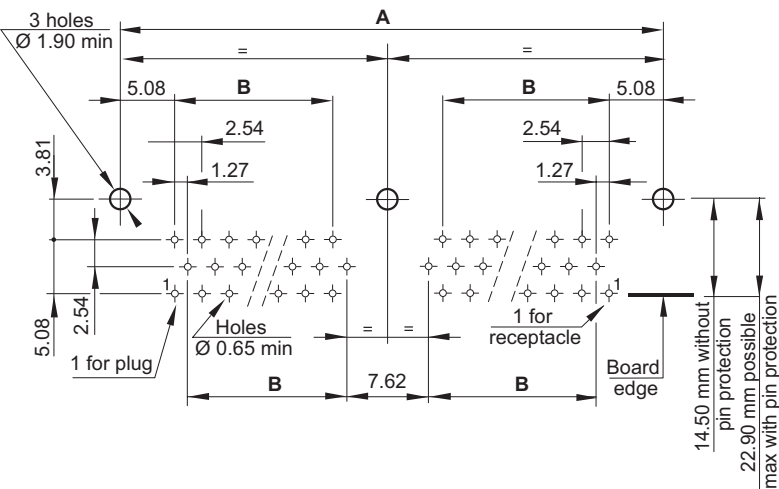
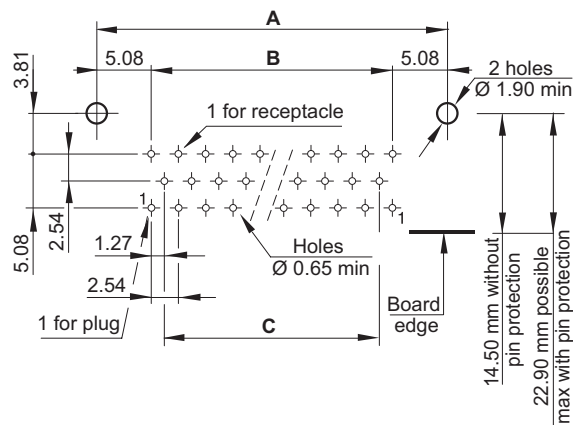
144 TO 162 CONTACTS

MOTHER BOARD



Female or male, plug or receptacle, straight solder terminations 30 or 31
Guide styles: 111 - 112 - 121 - 127 - 130 - 143 - 190

DAUGHTER BOARD



Female or male, plug or receptacle, 90° termination
Guide styles: 153 - 154 - 155 - 156

No. of contacts	26	44	62	80	98	144	162
A	30.48	45.72	60.96	76.20	91.44	137.16	152.40
B	20.32	35.56	50.80	66.04	81.28	58.42	66.04
C	17.78	33.02	48.26	63.50	78.74	—	—

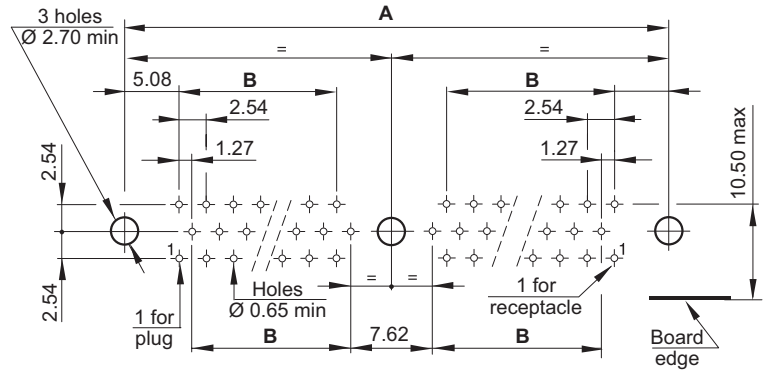
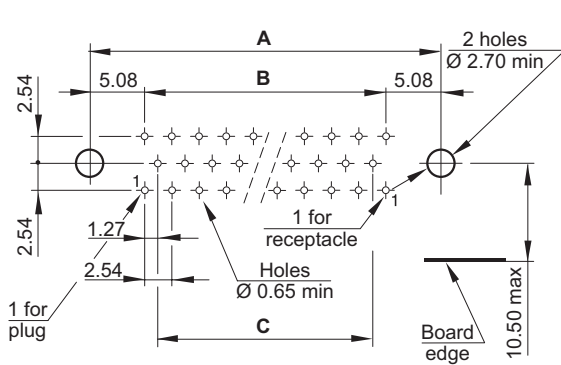
► BOARD PREPARATION DETAILS

TWO PARTS (moulding B)

26 TO 98 CONTACTS

144 TO 162 CONTACTS

DAUGHTER BOARD

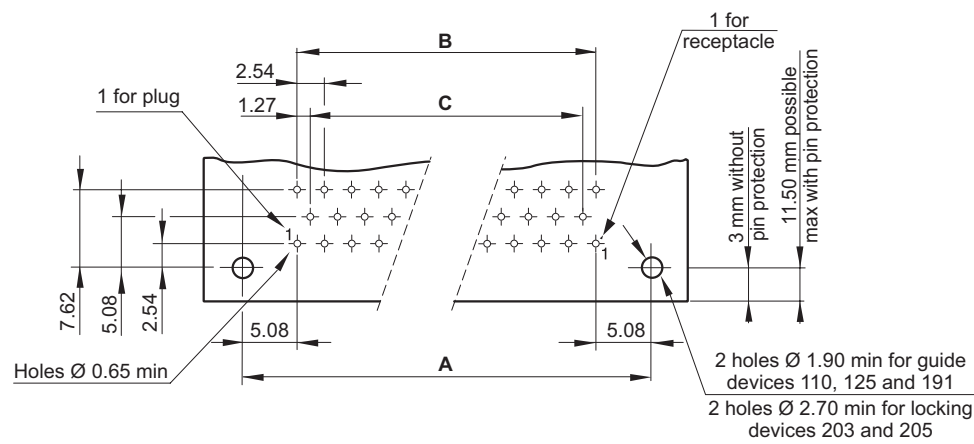


Female or male, plug or receptacle, 90° termination
Guide styles: 124 - 133

No. of contacts	26	44	62	80	98	144	162
A	30.48	45.72	60.96	76.20	91.44	137.16	152.40
B	20.32	35.56	50.80	66.04	81.28	58.42	66.04
C	17.78	33.02	48.26	63.50	78.74	—	—

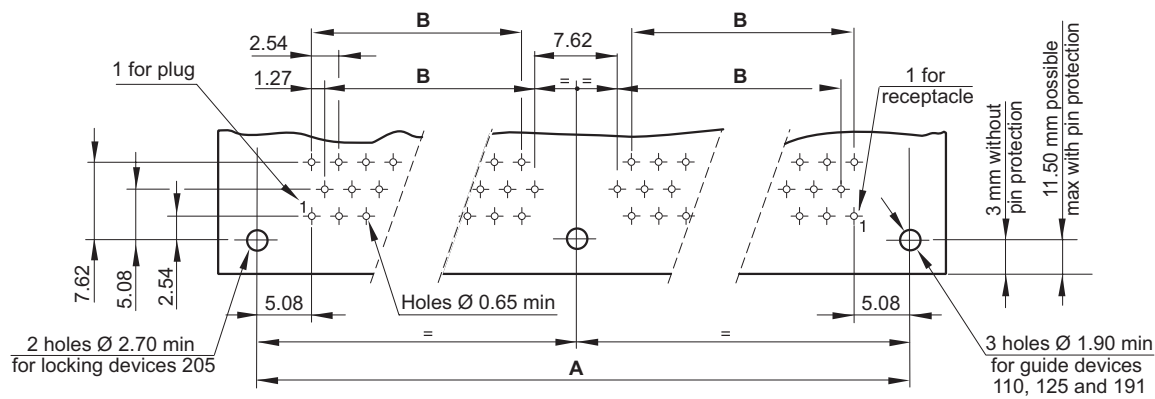
► BOARD PREPARATION DETAILS

ONE PART (moulding A)
DAUGHTER BOARD
26 TO 98 CONTACTS



Male, plug or receptacle, 90° termination
Guide styles: 110 - 125 - 191 - 203 - 205

144 TO 162 CONTACTS



Male, plug or receptacle, 90° termination
Guide styles: 110 - 125 - 191 - 205

No. of contacts	26	44	62	80	98	144	162
A	30.48	45.72	60.96	76.20	91.44	137.16	152.40
B	20.32	35.56	50.80	66.04	81.28	58.42	66.04
C	17.78	33.02	48.26	63.50	78.74	—	—

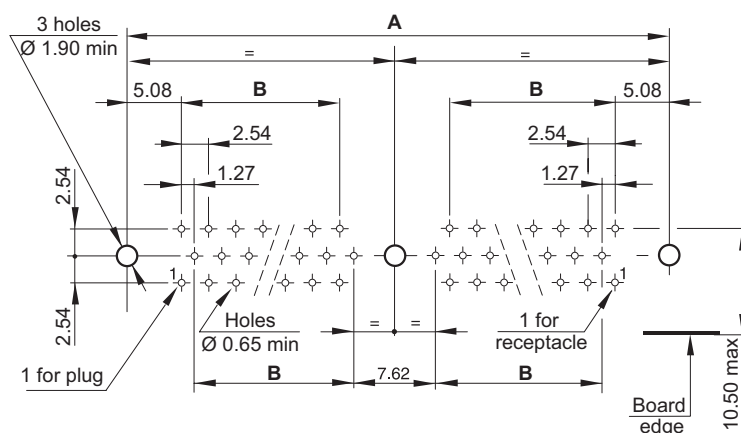
144 TO 162 CONTACTS

63

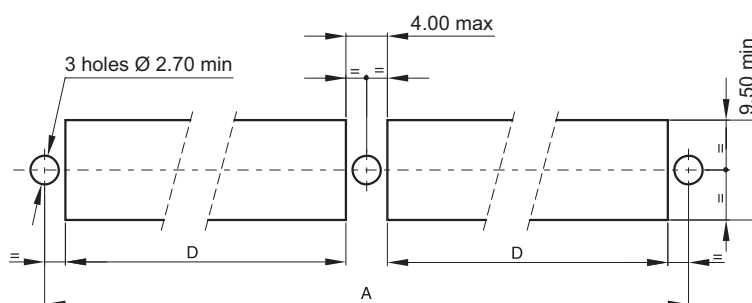
TWO PARTS (moulding B)

144 TO 162 CONTACTS

DAUGHTER BOARD



DAUGHTER BOARD



Female or male, plug or receptacle, 90° termination 40 - 50 - 51
Guide styles: 111 - 112 - 121 - 127 -130 - 143 - 190 - (Fixed Mount)
Guide styles: 113 - 123 - 128 - (Float Mount)
Locking Styles: 202 - 207

No. of contacts	26	44	62	80	98	144	162
A	30.48	45.72	60.96	76.20	91.44	137.16	152.40
B	20.32	35.56	50.80	66.04	81.28	58.42	66.04
C	17.78	33.02	48.26	63.50	78.74	—	—
D	25.90	41.20	56.40	71.60	86.90	63.60	71.60

TECHNICAL CHARACTERISTICS

	SIGNAL CONTACT	POWER CONTACT	HIGH FREQUENCY CONTACT
Contact diameter	HC® Ø 0.50 mm	HC® Ø 2 mm	HE 807 type
Number of contact	Up to 162		
Pitch	1.905mm between rows 1.27mm between quicuncial contacts	5.08 on 1 row	
Rows	3		

ELECTRICAL

Current rating (at 25°C)	3 A max	15 A	0.5 A
Dielectric withstanding voltage	800 Vrms		
Nominal voltage	180 Vrms 50HZ		
Impedance	50Ω		
Contact resistance	≤ 8 mΩ	≤ 2 mΩ	≤ 10 mΩ
Insulation resistance	10 ⁴ mΩ (500 Vcc)		≥ 10 ⁷ MΩ

ENVIRONMENTAL

Temperature range	-55° C + 125° C		
Mating forces	FI ≤ 8N - FS ≤ 3N		1N ≤ FI/FS ≤ 5N
Conformity	NF C-UTE C 93-424		

MATERIALS & PLATINGS

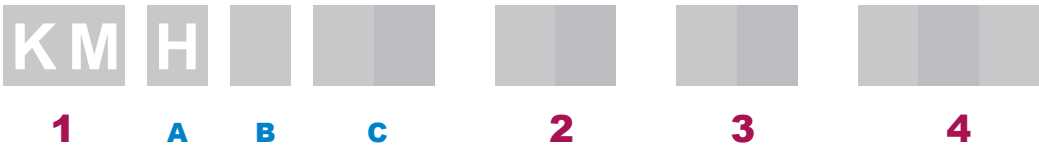
Contact	Brass or bronze
Moulding	Glass fiber filled diallyl - Phtalate
Guides	Stainless steel or nickel plated brass
Pin body	Standard: 0.25 µm Gold / 1.27 µm Ni Space: 1.27 µm Gold / 1.27 µm Ni (min)
Socket body	Standard: 0.25 µm Gold / 1.27 µm Ni on activ area -1.27 µm Ni on non activ area Space: 0.25 µm Gold / 1.27 µm Ni (min)
Socket wires	Standard: 1 µm Gold / 0.20 µm Ni Space: 1.27 µm Gold / 0.20 µm Ni (min)

MECHANICAL

Mating & unmating cycle	5000
Guiding	By two outside guides (2 guiding styles) and one central guide (3 guidind styles)
Keying	By rotating of outside polarised guides (up to 16 keying)

Dimension are in mm

HOW TO ORDER



1 ▶ TYPE

A
H MOULDING WITH CAVITIES FOR SPECIAL CONTACTS

B
3 **6** NUMBER OF CAVITIES FOR SPECIAL CONTACTS

B
26 **44** **80** **90** **26** NUMBER OF SIGNAL CONTACTS 0.50 MM

2 ▶ MOULDING POLARITY

NF C-UTE C 93-424 **SPACE GRADE**

12	54	Female plug	1A	-	Tinned female plug**	26	46	Tinned female receptacle*
13	55	Male plug	1B	-	Tinned male plug**	27	47	Tinned male receptacle*
16	56	Tinned female plug*	22	44	Female receptacle	2A	-	Tinned female receptacle**
17	57	Tinned male plug*	23	45	Male receptacle	2B	-	Tinned male receptacle**

3 ▶ TERMINATION STYLES

(See KMC Ordering information p.43)

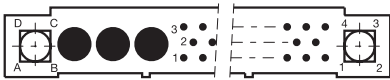
4 ▶ MOUNTING HARDWARE

GUIDE STYLES (see p. 50 to 54) - (Consult us for special guides) - See KMC ordering information p. 43

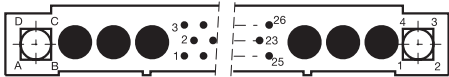
LOCKING STYLES (see p. 56-57) - See KMC ordering information p. 43

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

LAYOUT



No. of fixings	KMH layout	No. of special contact cavities	No. of signal contacts
2	326	3	26
2	344	3	44
2	380	3	80
3	390	3	90

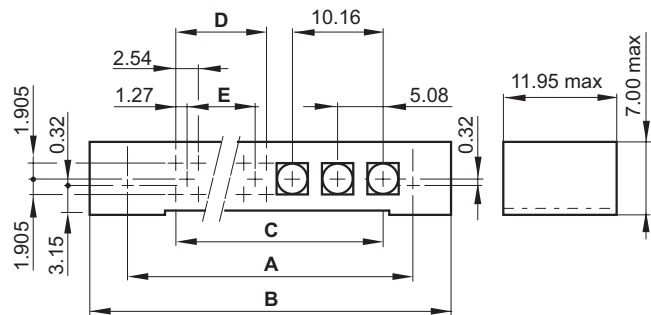


KMH layout	No. of special contact cavities	No. of signal contacts	KMH layout equivalent dimensions
			044
626	6	26	062
			098
			108

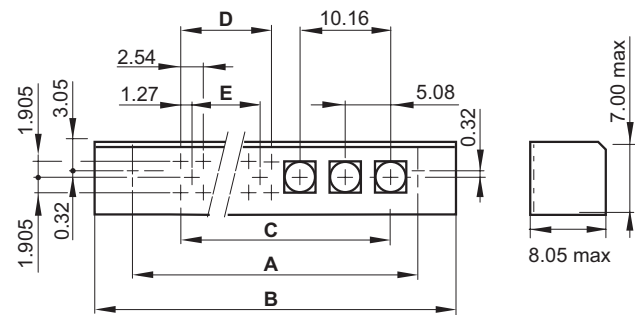
DIMENSIONS

26 TO 80 SIGNAL CONTACTS & 3 SPECIAL CONTACT CAVITIES

One part plug (moulding A)
only KMH 380

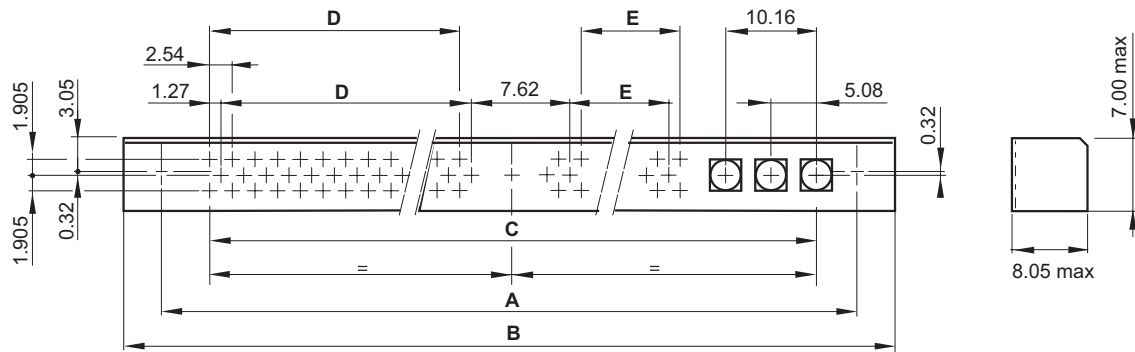


Two parts plug & receptacle (moulding B)
KMH 326, 344, 380



90 SIGNAL CONTACTS & 3 SPECIAL CONTACT CAVITIES

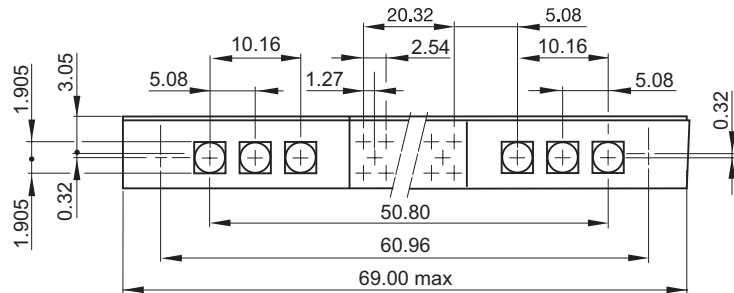
Two parts plug & receptacle (moulding B) KMH 390



KMH layout	A	B max	C	D	E	KMH layout equivalent dimensions
326	45.72	53.70	35.56	20.32	17.78	044
344	60.96	69.00	50.80	35.56	33.02	062
380	91.44	99.50	81.28	66.04	63.50	098
390	106.68	114.70	96.52	43.18	27.94	108

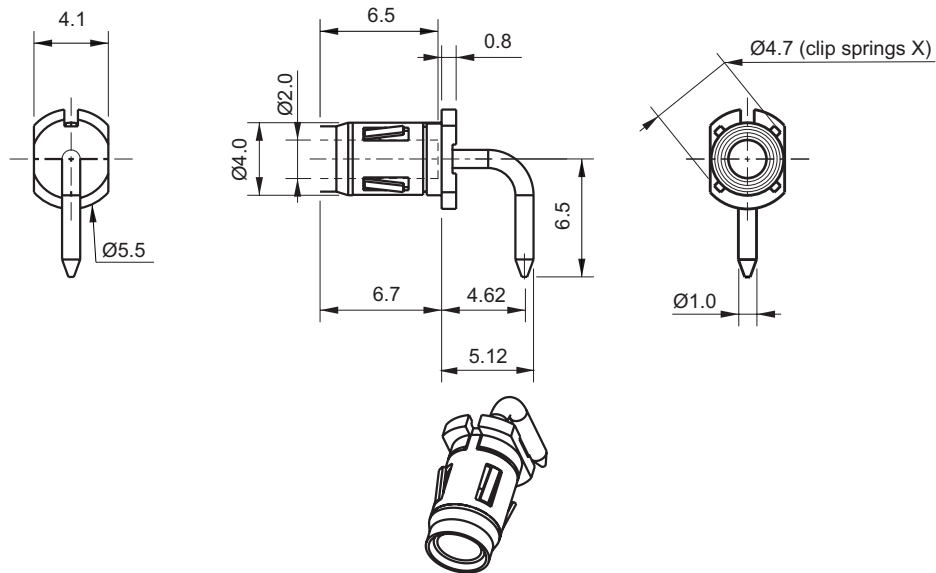
26 SIGNAL CONTACTS & 6 SPECIAL CONTACT CAVITIES

Two parts plug & receptacle (moulding B) with special contact cavities on both extremities KMH 626



► POWER & HIGH FREQUENCY CONTACTS (NF C-UTE C 93-569)

EXAMPLE OF CONTACT OVERVIEW (020 084 2- 10R N1)



Male	P/N	Female	P/N
90° termination	020 085 1- 10R OG	90° termination	020 084 2- 10R G1
Straight termination	020 087 1- 30R OG	Straight termination	020 056 2- 30R G1
Solder bucket termination	020 091 1- 40R OG	Solder bucket termination	020 060 2- 40R G1

► COAXIAL CONTACTS

	Male P/N	Female P/N
Vertical mount, suitable for flexible cable Ø 1.9 max ref. KX 21 A (RG 178 B/U or RG 196)	KMX 3-M 081	KMX 3-F 081
Transverse mount, suitable for flexible cable Ø 1.9 max ref. KX 21 A (RG 178 B/U or RG 196) Usable with mother board, thickness 3.2 mm max	KMX 3-M 092	KMX 3-F 092
Vertical mount, suitable for flexible cable Ø 2.5 max ref. KX 22 A (RG 316)	KMX 3-M 101	KMX 3-F 101
Transverse mount, suitable for flexible cable Ø 2.5 max ref. KX 22 A (RG 316) Usable with mother board, thickness 3.2 mm max	KMX 3-M 112	KMX 3-F 112
Vertical mount, suitable to semi-rigid cable Ø 2.2 max ref. KS 1 A (RG 405 - UT 85)	KMX 3-M 131	KMX 3-F 131
Transverse mount, suitable to semi-rigid cable Ø 2.2 max ref. KS 1 A (RG 405 - UT 85) Usable with mother board, thickness 3.2 mm max	KMX 3-M 142	KMX 3-F 142
Straight tail termination for direct mount on to PCB	KMX 3-M 041	KMX 3-F 041
90° tail termination for direct mount on to PCB	KMX 3-M 032	KMX 3-F 032
SMT termination	KMX 3-M 172	KMX 3-F 172

▶ ACCESSORIES & TOOLS

SCREWDRIVERS

Reference	Use	Pinning			Remark
S_____028	- Connector fitted with female guides - "B" moulding - Cover's fixing screw for female guide	144	to	162	These three screwdrivers can be delivered in a same packing under the reference S_____036
S_____029	- Connector fitted with male guides - "B" moulding - Cover's fixing screw for female guide and screw central fixing on wiring side	144	to	162	
S_____033	- "B" moulding - Cover's fixing screws	026	to	162	

SPECIAL CONTACT EXTRACTION TOOL



SD.030 00 CX 003

PIN PROTECTOR

Reference	Use	Guide style
KMC..._____302* ↙ Pinning	KMC... 13..110-KMC...23..111 KMC ... 13..111	Polarised male guide
KMC..._____303* ↙ Pinning	KMC... 13..125	Unpolarised male guide
KMC..._____304* ↙ Pinning	KMC... 23..153	Unpolarised female guide
KMC..._____305* ↙ Pinning	KMC... 23..121 KMC... 23..154	Polarised female guide

* Antistatic material **Note:** these 4 references are not available for the 162 contacts version

Disclaimer 2014

All of the information included in this catalogue is believed to be accurate at the time of printing. It is recommended, however, that users should independently evaluate the suitability of each product for their intended application and be sure that each product is properly installed, used and maintained to achieve desired results.

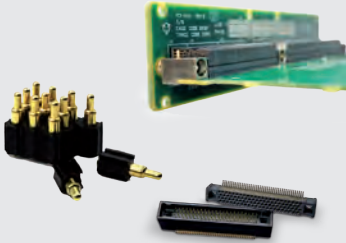
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SMITHS CONNECTORS PRODUCT LINES

PCB



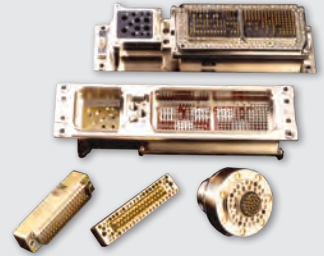
- ▶ Low, medium and high density board-to-board, cable to board and stacking
- ▶ Rugged standard
- ▶ Low profile
- ▶ Signal, power, coaxial & high speed configurations
- ▶ Spring probe connectors
- ▶ Mixed signal, power and coaxial contact connectors

POWER



- ▶ Circular
- ▶ Configurable rectangular
- ▶ Ruggedized
- ▶ Single and Multi-Way Connectors
- ▶ Power contact up to 1,200 Amps
- ▶ Excellent performance in harsh environment conditions
- ▶ Cable assembling

EMI/EMP FILTER



- ▶ EMI/RFI filtering and transient protection
- ▶ RoHS compliant solderless filter connectors available
- ▶ Circular, ARINC, D-Subminiature
- ▶ Filtered adapters for "bolt on" EMI solutions

MODULAR/RECTANGULAR



- ▶ Configurable with modules for signal, power, coax, fiber optics and/or pneumatics
- ▶ Easy configuration in a single frame
- ▶ For rack & panel, and cable applications
- ▶ Guided hardware for blind
- ▶ D-sub connectors
- ▶ Micro-D style
- ▶ Signal connectors for hand held and docking stations

CIRCULAR



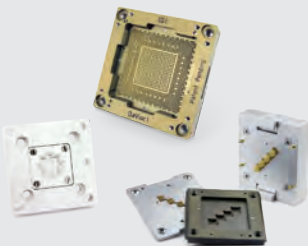
- ▶ Crimp and solder terminations
 - ▶ Various types of cable clamps
 - ▶ Stamped hyperboloid contact
- MEDICAL**
- ▶ Plastic & Metal
 - ▶ Push Pull/Push-button latch mechanism

HEAVY DUTY



- ▶ Ultra reliable hyperboloid contact
- ▶ Modular solution: signal, power, data contacts, and fiber optics
- ▶ Up to o 250A, coax 50 ohms
- ▶ Rugged aluminum shell
- ▶ High resistance in harsh environment
- ▶ EMC shielding
- ▶ Easy cable mounting

SPRING PROBES



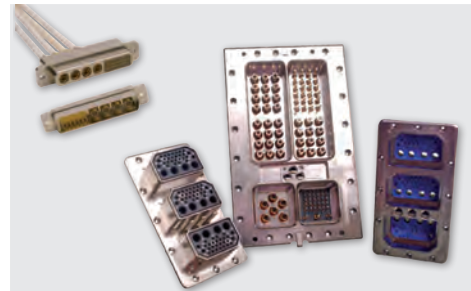
- ▶ Z-axis compliant
- ▶ Blind mate engagement
- ▶ Long cycle life
- ▶ High density
- ▶ Extreme miniaturization
- ▶ Printed circuit board test
- ▶ Bare board test
- ▶ Coaxial contacts

MIL/AERO STANDARD



- ▶ MIL and ARINC standards
- ▶ Rectangular, Circular, D-Sub and Rack and Panel Connectors
- ▶ Filter, Fiber optic, high speed, RF, and spring probe connectors

HIGH SPEED COPPER/FIBER



- ▶ Quadrx and Twinax Connectors
- ▶ Rugged D-Sub Connectors
- ▶ ARINC and MIL-STD Contacts
- ▶ Micro Twinax/Quadrx
- ▶ Butt-Joint and Expanded Beam Contacts
- ▶ ARINC 801 Termini
- ▶ Floating Fiber Termini

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