SIB/DIS/TIS - Series

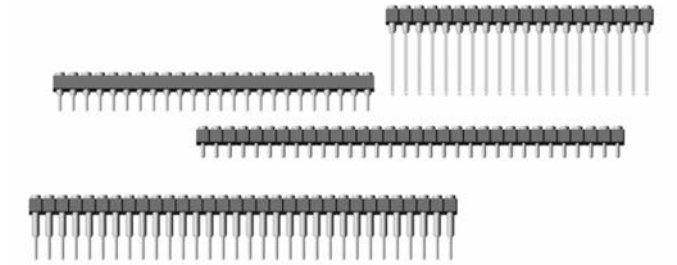
Socket Strips

2,54mm pitch

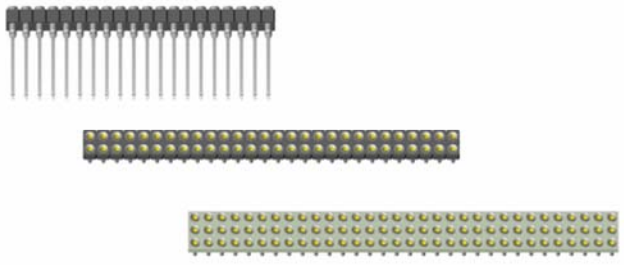
RoHS 2002/95/EC compliant

E-tec Interconnect

Single-in-line strips



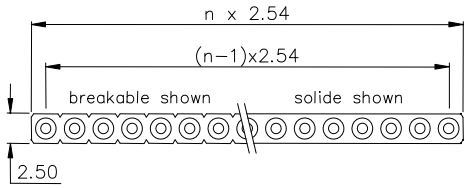
Dual- & triple-in-line strips



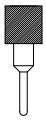
SIB Series

single-in-line Strips
breakable and solid insulator available

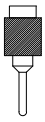
Unless otherwise specifically requested, the strips will be delivered either in solid or breakable plastic depending on availability of the insulator bodies.



"head flush"

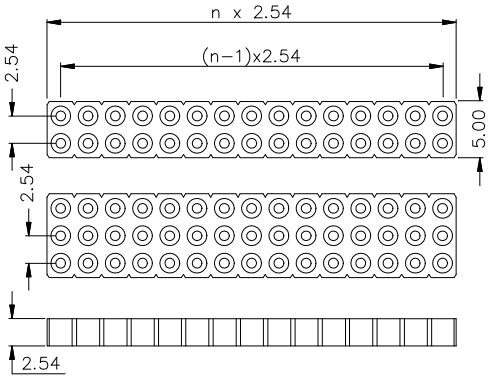


"head above"



DIS & TIS Series

dual and triple row 2,54mm grid



SIB Series

Standard "head flush"

SIB-1xx-Fxxx-xx

Alternative: "head above"

SIB-1xx-Sxxx-xx

Number of contacts standard breakable sizes

20; 32 and 40

Number of contacts either breakable or solid available

from **02** to **40**

DIS Series

DIS-2xx-Fxxx-xx

Number of contacts available

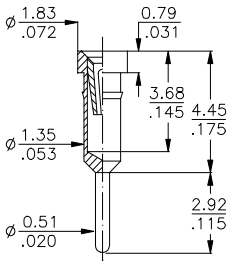
from **04** to **80**

TIS Series

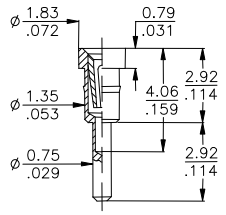
TIS-3xx-Exxx-xx

Number of contacts available

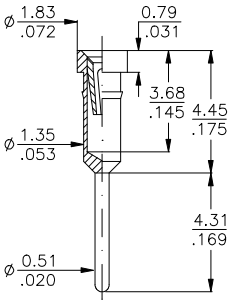
from **06** to **96**



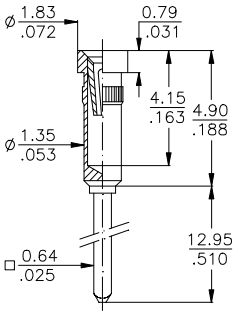
001 Standard terminal



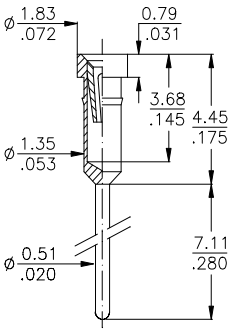
047 Low profile terminal



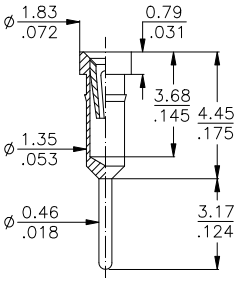
008 long tail terminal



003 3-level w/w



009 extra long tail



010 Carrier terminal

Strips

Other lengths & pin-outs available on request.

Specifications

refer to page 49 of this catalogue

Terminals

For other terminal styles please refer to the pages 46 to 48 of this catalogue or contact your closest sales office.

How to order

XXX - x xx - X xxx - xx

Series
SIB = single-in-line strips.
DIS = dual-in-line strips...
TIS = triple-in-line strips..

Rows
.....**1**
.....**2**
.....**3**

Nbr of contacts
see above table

Insulator
F = head flush
S = head above
E = Epoxy FR4 *TIS Series only*

Terminal style
see drawings above or refer to pages 46 to 48 of this catalogue for other types.

Plating
- 95 = tin/gold
- 55 = gold/gold
- 99 = tin/tin
(tin is leadfree)

SIB/DIS/TIS - Series

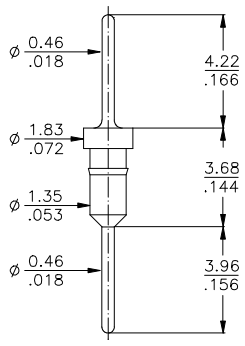
Adapter Strips

2,54mm pitch

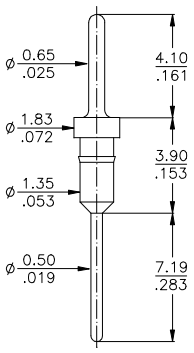
RoHS 2002/95/EC compliant

E-tec Interconnect

Board to Board Terminals



077



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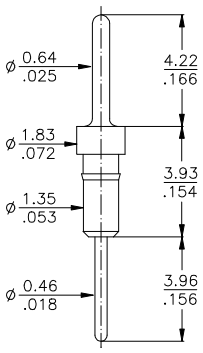
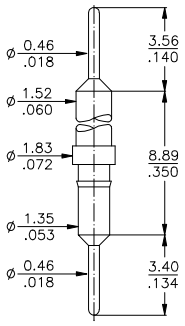
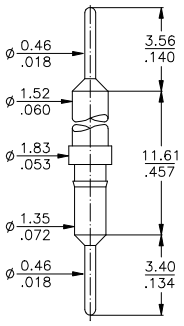


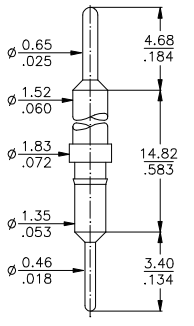
037



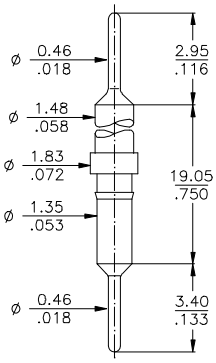
058



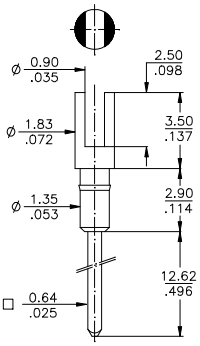
059



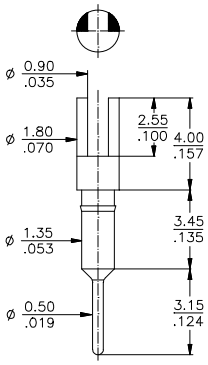
056



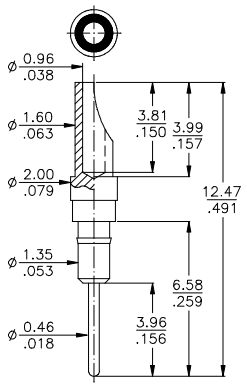
542



038

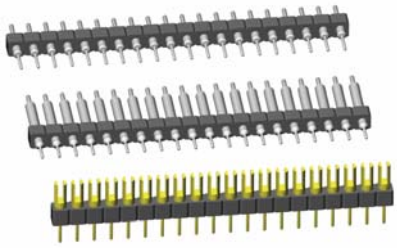


353

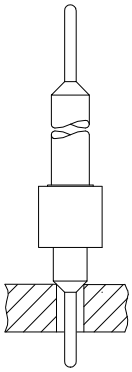


036

Many other terminals and custom specific terminal styles are available on request, or refer to the pages 46 to 48 of this catalogue.

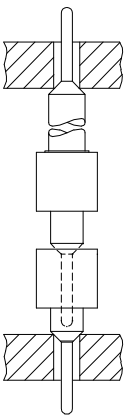


Application Examples



Possible Terminals:

037; 056; 057; 058; 059
077; 220; 542; 544
562; 583; 770



Possible Terminals:

037; 056; 057; 058; 059
077; 078; 542; 544
562; 583; 770

How to order

XXX - x xx - X xxx - xx

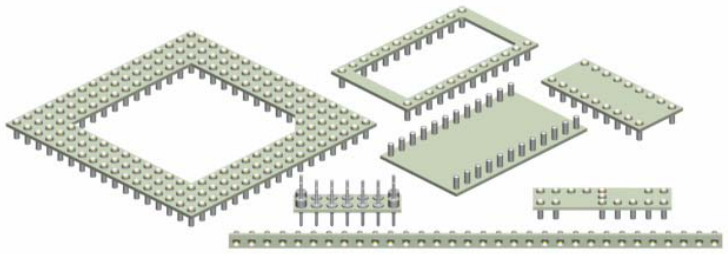
Series	Rows	Nbr of contacts	Insulator	Terminal style	Plating
SIB = single-in-line strips.	.....**1**	1-row = 02 to 40	**S** = Plastic	*see drawings above or refer to pages 46 to 48 of this catalogue for other types.*	**- 55** = gold
DIS = dual-in-line strips...	.....**2**	2-row = 04 to 80	**E** = Epoxy FR4 *(TIS Series only)*		**- 99** = tin *(leadfree)*
TIS = triple-in-line strips..	.....**3**	3-row = 06 to 96	dimension see socket strip page 5		

Super Low Profile Sockets & Adapters

RoHS 2002/95/EC compliant

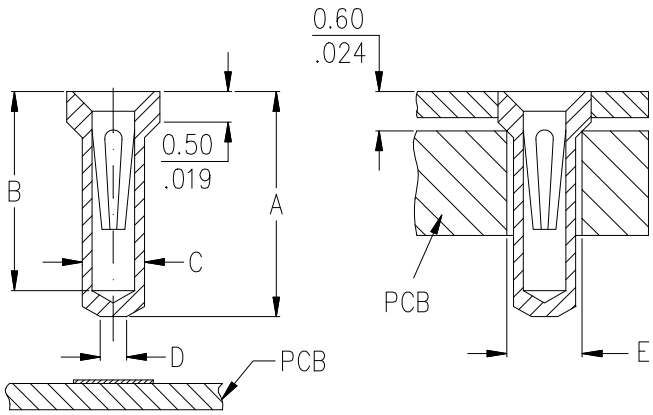
E-tec Interconnect

E-tec's super low profile sockets and adapters are designed for use in applications where height above board is most critical.
The sockets have a profile of 0,60mm above board and they can be combined with the adapters to achieve a board to board interconnection height of 2,20mm max.
Also available in this socket range are the ultra low profile SMT sockets with a height above board of only 3,45mm.



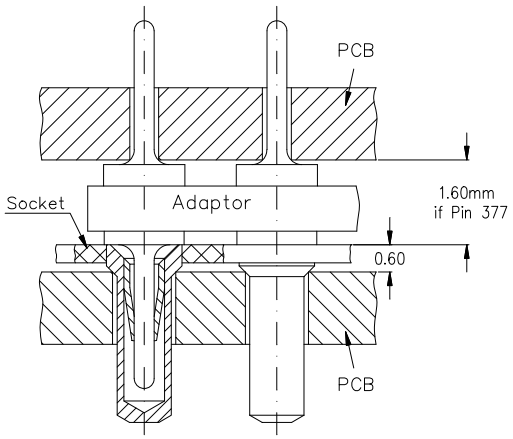
Super Low Profile Sockets

SMT use | through hole use

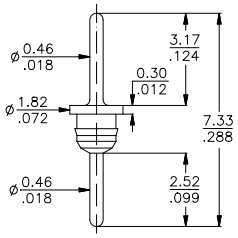


Terminal style	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
144	3,45/.136	3,05/.120	0,94/.037	0,45/.018	1,15/.045

Super Low Profile Adapters



Adapter Pin



Style 377

Specifications

Mechanical data

Force per contact (avg)	0,70N insertion / 0.25N extraction
Contact life	>50 cycles min.
Solderability	as per IEC 60068-2-58

Material

Terminal *(RoHS compliant)*	BeCu
Insulator *(RoHS compliant)*	Glass Epoxy FR4

Electrical data

Breakdown voltage at 60 Hz	500 V AC
Contact resistance at 1A	4,3 mΩ typ
Insulation resistance	5×10^9 Ω min.
Current rating	1A max., 100V
Capacitance	2 pF max.
Operating temperature	–55 °C to +125 °C

How to order

XXX - x xx - E xxx (-xxX) - xx (/x)

Series

- **LSP** = DIP sockets
- **SSP** = SIP sockets
- **DSP** = 2-row SIP´s
- **PGS** = PGA sockets
- **ZZS** = Zig-Zag sockets

DIP spacing / Nbr of contacts

see pages

- for LSP series: POS
- for SSP series: SIB/SIS
- for DSP series: DIS
- for ZZS series: ZZP
- for PGS series: PGA (only nbr of contacts)

Terminal styles

See drawings above for 2,54mm and 2,00mm pitch.

For 1,27mm pitch please contact nearest sales office.

Plating

- **- 95** = tin/gold *(tin leadfree)* *(not available for adapter terminals)*
- **- 55** = gold/gold
- **- 99** = tin/tin *(leadfree)*

Pitch

Complete with

- **1** = 1,27mm
- **2** = 2,00mm

2.54mm pitch is standard.

Others available on request

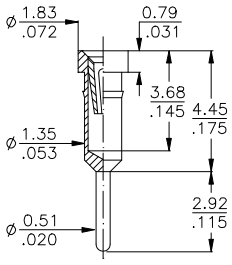
Grid size & Configuration code *only for PGA sockets*

Please refer to PGA socket pages 29 to 31

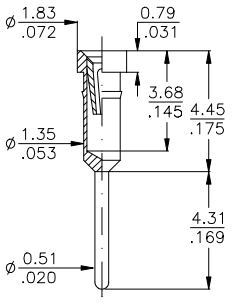
RoHS 2002/95/EC compliant

E-tec Interconnect

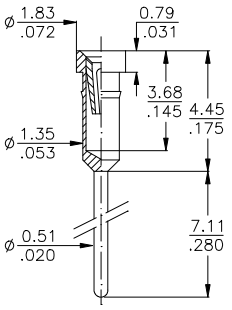
Socket Terminals



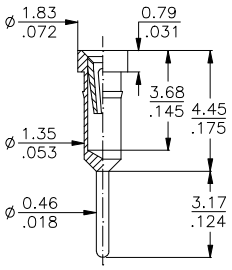
001



008

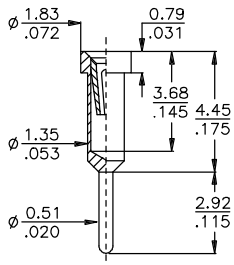


009



010

Terminal for Carrier use



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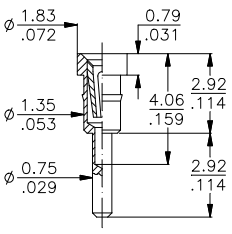
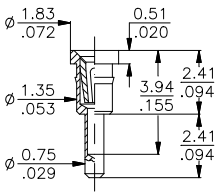
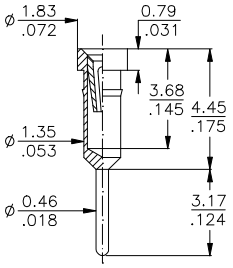


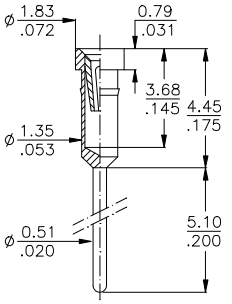
047



083

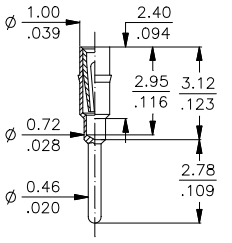


095 (soft brass)



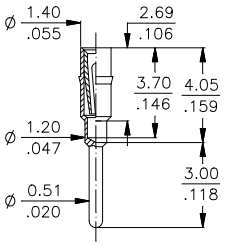
250

for pitch 1,27mm/.050" & 1,50mm/.059"



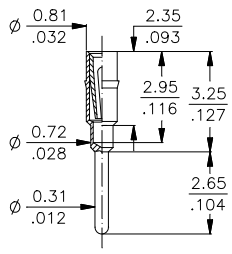
117

for pitch 1,778mm/.070" & 2,00mm/.079"



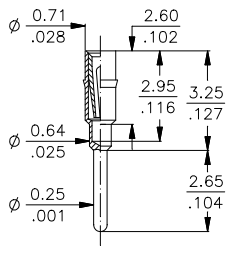
118

for pitch 1,00mm/.039"



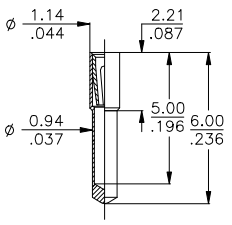
172

for pitch 0,80mm/.031"



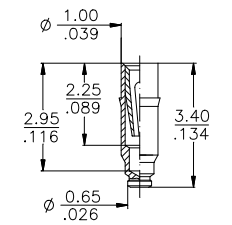
174

for pitch 1,27mm/.050"



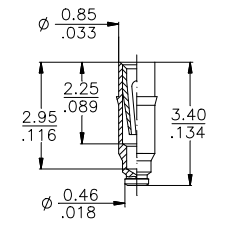
148

for SMT pitch 1,27mm/.050" 1,50mm/.059" – 2,00mm/.079"



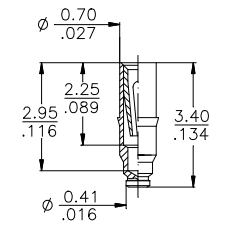
119

for SMT pitch 1,00mm/.039"



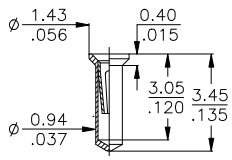
167

for SMT pitch 0,80mm/.031"



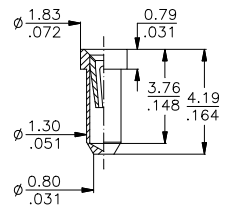
169

for SMT use possible



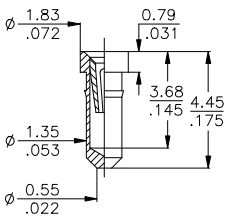
014

for SMT use possible



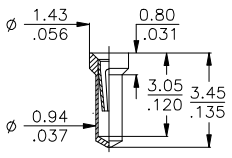
016

for SMT use possible



093

for SMT use possible



144

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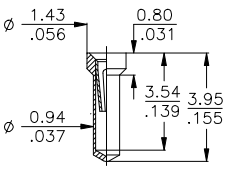

147

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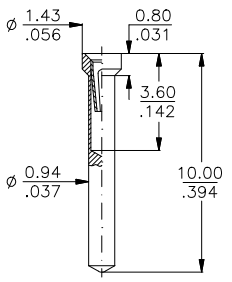
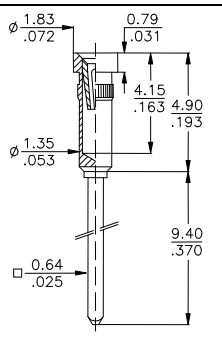


157

Wire Wrap Terminals



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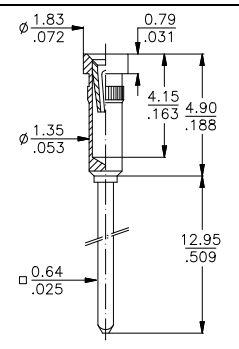

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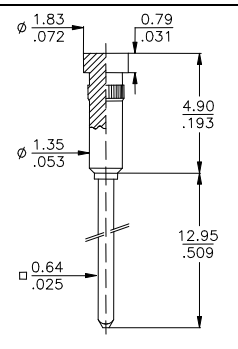
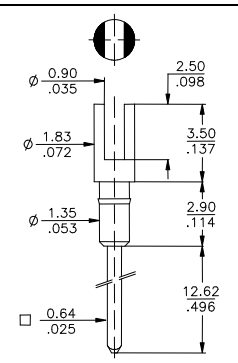
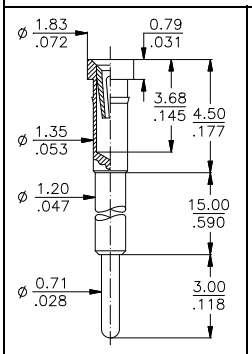


030 (Nail Head)



038

Raised Terminals



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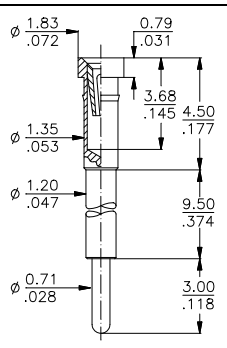

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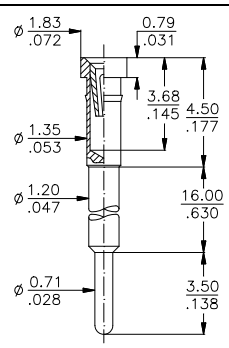

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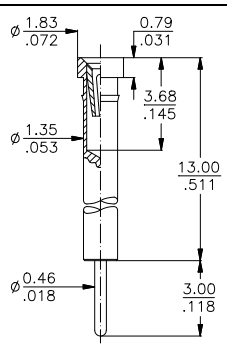

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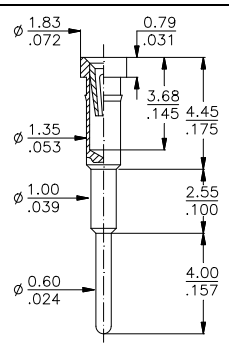

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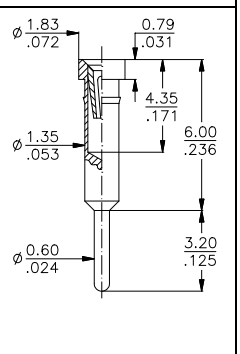

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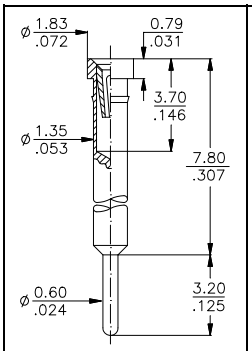

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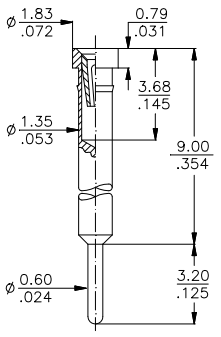

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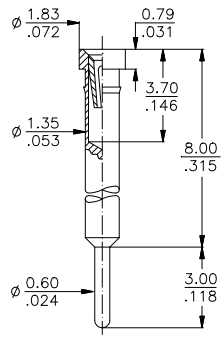

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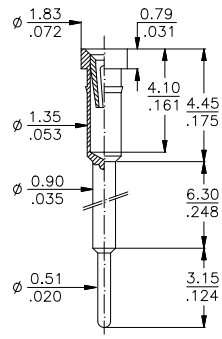
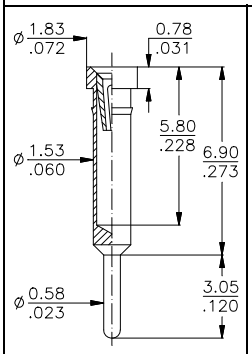


623

„Jumbo“ Contact & Male Terminals

(Contact accepts 0,64mm/.025” sq. & 0,90mm/.036” dia. Pins)



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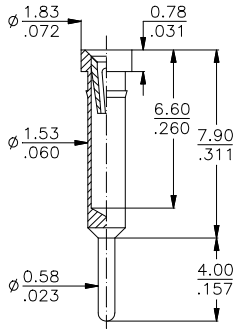

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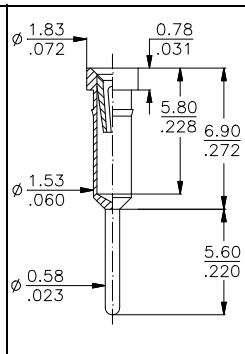

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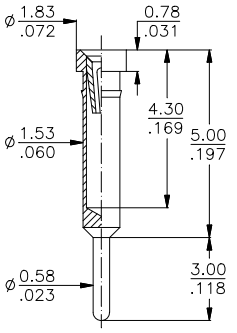

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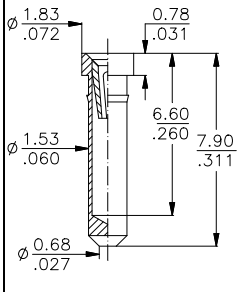
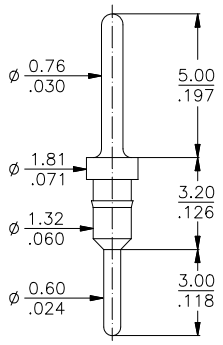
for SMT use



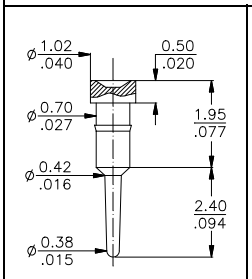
702

male Terminal



379

Solder Adapter Terminals



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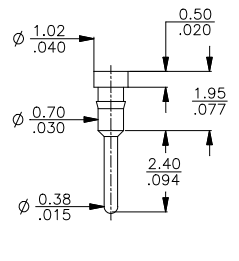

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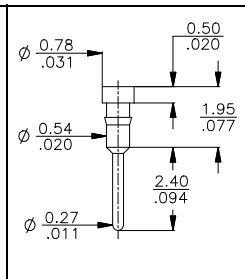

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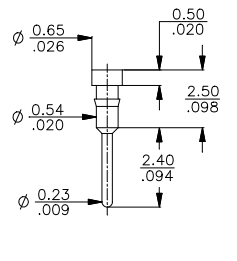

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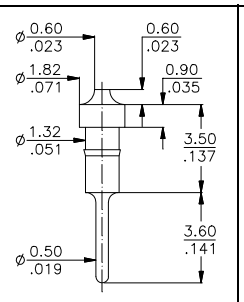

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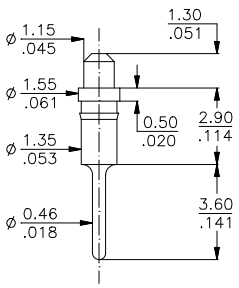
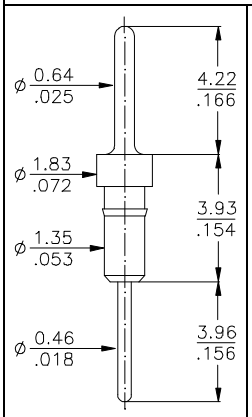


182

RoHS 2002/95/EC compliant

E-tec Interconnect

Board to Board Terminals



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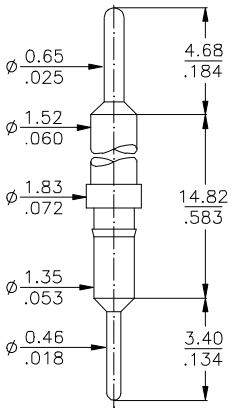

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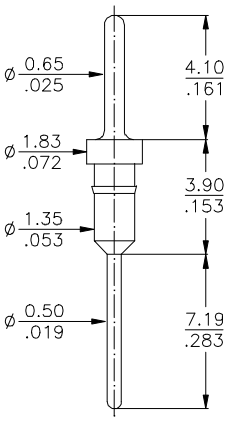

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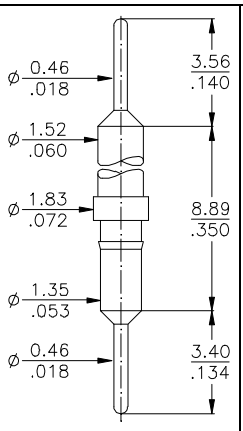

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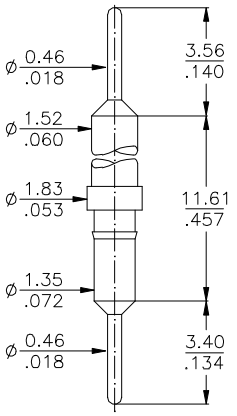

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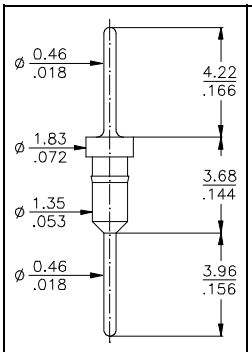

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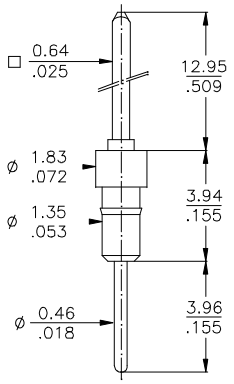

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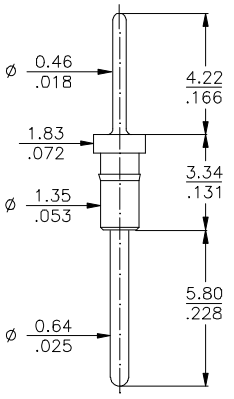

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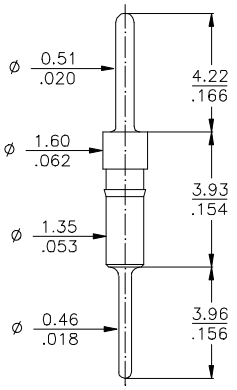

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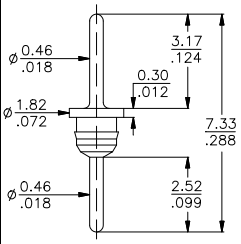

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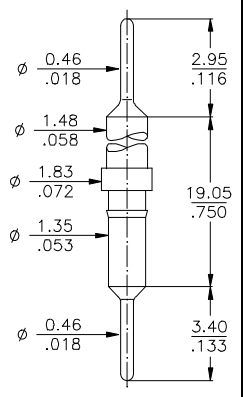

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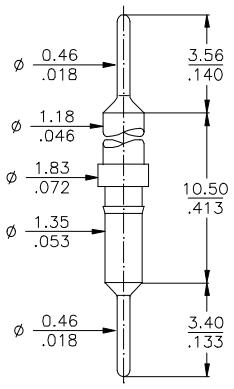

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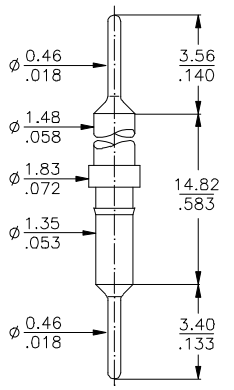

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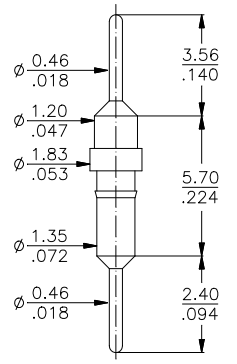

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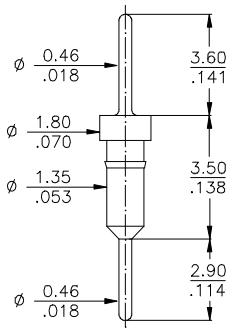
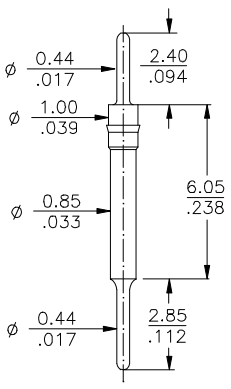


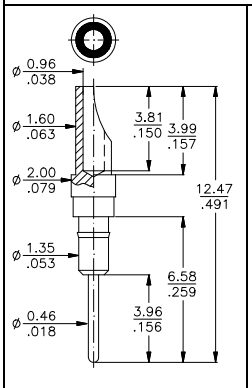
770

for pitch 1,27mm/.050“



774

Header Terminals



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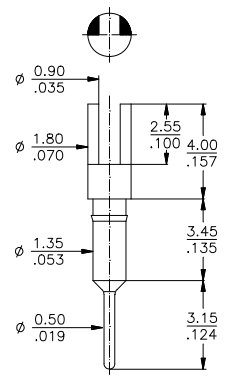

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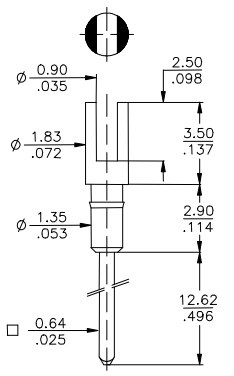


038 (Wire Wrap)

General Specifications for Precision Pin Sockets

Mechanical data

Average forces for available clip types:	
Standard type	1.80N insertion / 0.90N extraction
Low force type	0.70N insertion / 0.25N extraction
Super low force type	0.40N insertion / 0.15N extraction
High force type	4.00N insertion / 2.50N extraction
„Jumbo“ contact	1.40N insertion / 0.25N extraction
Other clips and forces available on request	
Contact life	min. 100 cycles
Vibration as per EN60352-4	sinusoidal, 10 to 500 Hz, 10g, 1 octave/min, 10 cycles for each axis
Shock as per EN60352-4	half sine, 50g, 11ms, 3 shocks in 3 axes
Thermal shock as per IEC 60068-2-14	-55°C/+125°C, 5 cycles, 30 minutes
Solderability as per IEC 60068-2-58	245°C to 255°C 5 sec; Sn97Ag3 solder alloy
Dry heat steady state as per IEC 60068-2-2	260°C for 20 sec.
Cold stead state as per IEC 60068-2-1	-55°C, 2h
Damp heat cyclic as per IEC 60068-2-30	55°C, 90-100%rH, 24h
Moisture sensitivity Level (JEDEC J-STD-020C)	2 for PBT & Nylon 1 for all other materials
PCB holes for 2.54mm pitch standard connectors	1.00mm diameter
Coplanarity thru-hole	0.30mm
General tolerances	+/- 0.10mm
Operating temperature (standard)	–55°C to +125°C

Processing temperature

injection molded insulator (high temp)	+250°C +0/-5°C for 20~40 sec. (reflow solder)
injection molded insulator (PBT)	+250°C +0/-5°C for 10 sec. (wave solder only)
Epoxy FR4 (Standard)	+220°C min. for 10 sec.
Epoxy FR4 (hi temp)	+260°C min. for 60 sec.

Electrical data

Contact resistance at 1A	4,3 mΩ typ.
Current rating (except “Jumbo” contact)	1A max.
“Jumbo” contact	3A max.
Contact capacitance at 1MHz	2pF max.
Insulation resistance at 500V DC for std & hi-temp	5×10^9 Ω min.
Insulation resistance at 500V DC for FR4 Epoxy	$>10^4$ MΩ
Breakdown voltage at 60 Hz	500 V AC min.
Contact resistance after 1000 ins./ext. cycles	≤ 7 mΩ

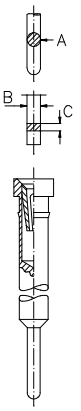
Material *(RoHS compliant)*

	Belongs to page:
Standard temperature plastic: PBT UL 94 V-0	14, 15, 16, 23, 17,19, 20, 24 25, 26, 27, 29
High-temp plastic: Nylon, PCT, SPS, PPS, LCP UL 94 V-0	5, 6, 7, 8, 9, 10, 11, 12, 13, 14 15, 16, 21, 22, 20, 25, 26, 27 28, 33, 34, 35, 36, 37, 38, 39 40, 41, 42, 43
Epoxy FR4: UL 94 V-0 & UL 94 V-1	32, 5, 6, 7, 18, 22, 24, 29
PBT, Nylon, PCT, SPS, PPS, LCP & Epoxy FR4	If necessary pls. contact E-tec for Material specification.

Terminal: CuZn
Contact: BeCu

Male pin dimensions for standard clip
(except „Jumbo Contact“)
(DIN 41 870, IEC 191 for square IC-legs)

DIM	min.	max.
„A“ ∅	0,42 .016“	0,56 .022“
„B“ ▯	0,36 .014“	0,55 .023“
„C“ ▭	0,20 .008“	0,30 .014“



General information concerning the E-tec interconnect products

Plating:

Standard tin plating:
min. 2.50µm Sn *(leadfree)* over Ni

Standard gold plating:
flash, max. 0,10µm Au over Ni

Higher gold platings are offered on request

Specifications:

The data contained in this catalog is of general nature and refers to standard products.
For example a „Current rating“ at an ambient temperature of 25° C reflects the value per individual contact.
Should you require any further data or test reports, you can obtain this information from your nearest E-tec sales office.
The E-tec connectors conform with signal integrity requirements at high data and frequency rates. However we cannot offer a general information about the max. frequency or data transmission rate. For such a statement, it would require more information about the chosen configuration and pin-out, the length of the cable and/or any other specific requirements regarding the application itself and its related signal integrity.

E-tec SMT connectors, male or female, are offered with a coplanarity of max. 0,10mm. They are adapted to all modern SMT soldering processes and they can be handled easily with all currently existing placing techniques. Customers may choose between various packaging options, such as tray, tube and tape & reel.

GENERAL POLICY