Features

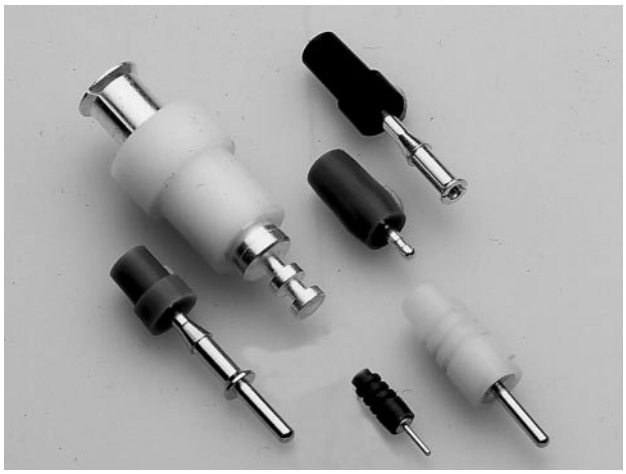
- Simple economical assembly.
- Self-retaining mechanism.
- Rapid assembly.
- High insulation resistance.
- Low capacitance.
- Pressure Sealing.

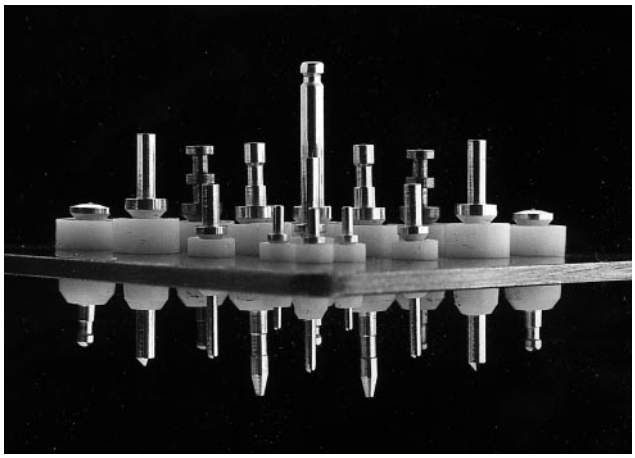
Approvals

- Approved to DEF-STAN 59-40 (Pt. 2 Sect. 2)

Application

- Chassis mounting insulated stand off and lead through terminals.
- Pressure bulkhead feedthrough sealing applications.





Barb Cone Lock® Insulated Terminals

The Barb Cone Lock® technology designed by Oxley Developments is now well established and still represents a large proportion of the business. The concept utilises the unique characteristics of our High PTFE which is made to an Oxley recipe, it is a key part of how the product performs. The PTFE has an elastic property which allows the barbed metal spill to lock itself in place by gently expanding the PTFE underneath the chassis during insertion. This ensures a long life, stable fixing in the chassis which is a fundamental part of the product's success.

The product has seen use in a whole host of applications from the military, nuclear and space industries to the medical and telecommunications industries. There is a vast range of types and styles to suit a variety of hole sizes and chassis thicknesses. There are also the "CEEL" high sealing versions for use in applications involving vacuums and differential pressures.

The spills are precision turned, high specification brass material with a silver plating finish as standard. Other finishes are available on request.

We also have the capability to manufacture Barb Cone Locks® in a variety of exotic metals for thermocouple applications.

Oxley Inc.
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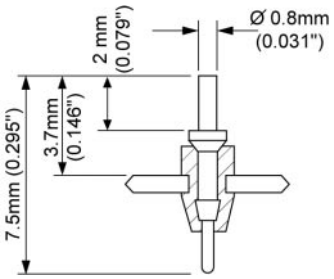
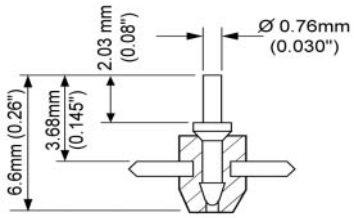
Prefix: 062/-

Mounting Hole Diameter:
1.57 mm (0.062") nominal
Chassis Thickness:
0.56 mm (0.022") - 0.71 mm (0.028")
Max. Outside Dia. of Bush:
2.7 mm (0.106")
Current Rating (A):
0.5
Rated Voltage at Sea Level (kV d.c.):
0.5
Proof Voltage at Sea Level (kV d.c.):
2.5
Capacitance (pF) (max):
0.5
Assembly Tool:
AT 1/01

062 Range



062

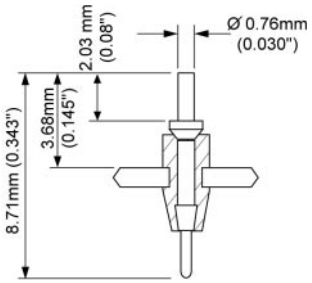


062/SO

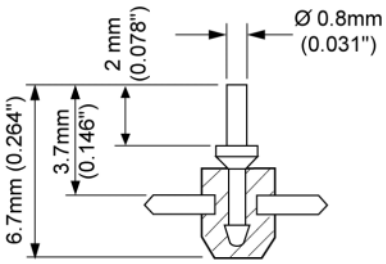
Prefix: 078/-

Mounting Hole Diameter:
1.98 mm (0.078") nominal
Chassis Thickness:
1.2 mm (0.047") - 1.6 mm (0.062")
Max. Outside Dia. of Bush:
2.8 mm (0.110")
Current Rating (A):
1
Rated Voltage at Sea Level (kV d.c.):
0.5
Proof Voltage at Sea Level (kV d.c.):
2.5
Capacitance (pF) (max):
0.5
Assembly Tool:
AT 1/01

078 Range



078



078/SO

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Prefix: 093/-

Mounting Hole Diameter:
2.36 mm (0.093")

Chassis Thickness:
2.03 mm (0.08") - 2.3 mm (0.09")

Max. Outside Dia. of Bush:
3.6 mm (0.142")

Assembly Tool:
AT 1/11

Exceptions

Assembly Tool:
093/6/H: AT 1/03

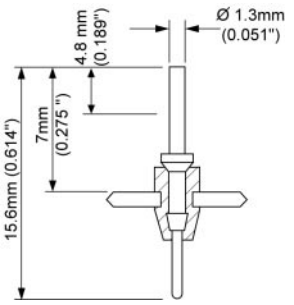
Chassis Thickness:

-/16P:
1.2 mm (0.047") - 1.6 mm (0.063")

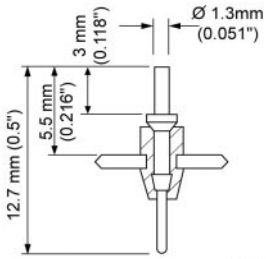
-/18P:
0.91 mm (0.036") - 1.2 mm (0.047")

-/20P:
0.71 mm (0.028") - 0.91 mm (0.036")

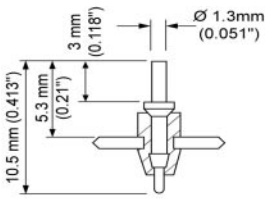
093 Range



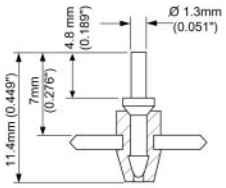
093/16P



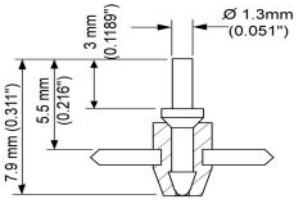
093/18P



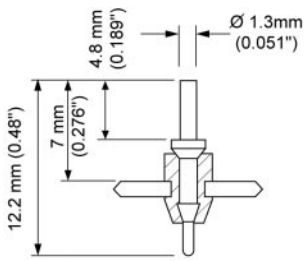
093/20P



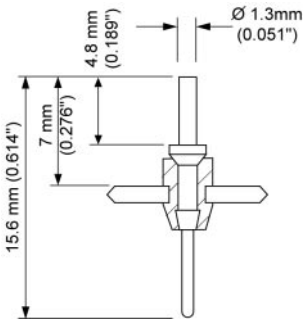
093/SO/16P



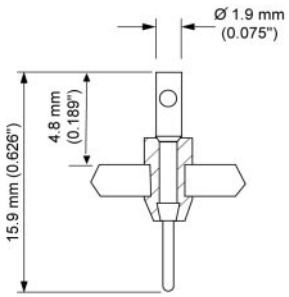
093/SO/18P



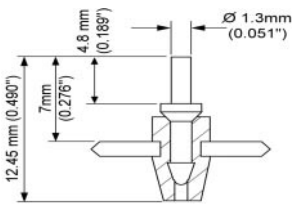
093/20/LP



093/093



093/6/H



093/093/SO

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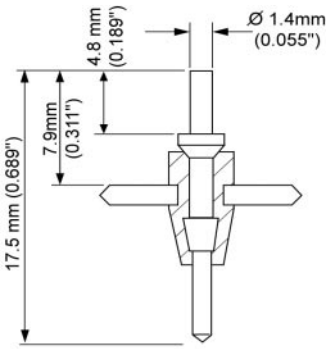
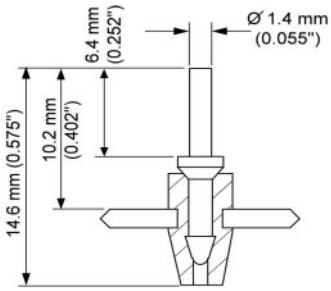
Prefix: 125/-

Mounting Hole Diameter:
3.18 mm (0.125")
Chassis Thickness:
1.2 mm (0.047") - 1.6 mm (0.063")
Max. Outside Dia. of Bush after Assembly:
5.7 mm (0.224")
Assembly Tool:
AT 1/05

125 Range



125/LP

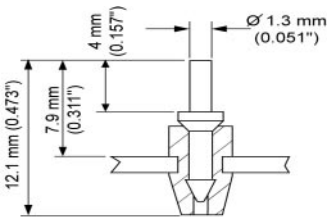


125/SO/LP

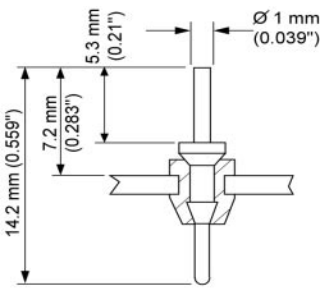
Prefix: 136/-

Mounting Hole Diameter:
3.45 mm (0.136")
Chassis Thickness:
1.2 mm (0.047") - 1.6 mm (0.063")
Max. Outside Dia. of Bush after Assembly:
4.7 mm (0.185")
Assembly Tool:
136/SO AT 1/11
136/LP AT 1/17

136 Range



136/SO

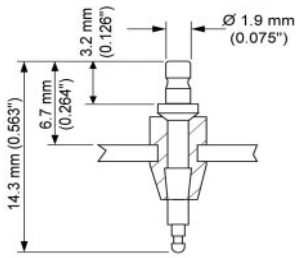


136/LP

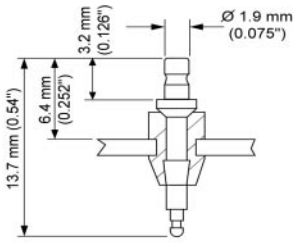
Prefix: 156/-

Mounting Hole Diameter:
3.96 mm (0.156")
Chassis Thickness:
1.2 mm (0.047") - 1.6 mm (0.063")
Max. Outside Dia. of Bush after Assembly:
5.4 mm (0.213")
Assembly Tool:
156, 156/20, 156/20/S: AT 1/02
156/DT: AT 1/06

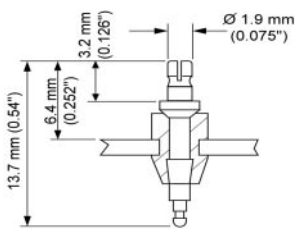
156 Range



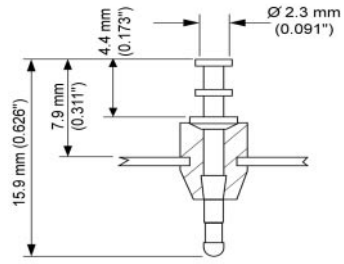
156



156/20



156/20S



156/DT

Exceptions:

Chassis Thickness:
-/20:
0.71 mm (0.028") - 0.91 mm (0.036")
-/DT:
1 mm (0.039") - 1.4 mm (0.0055")

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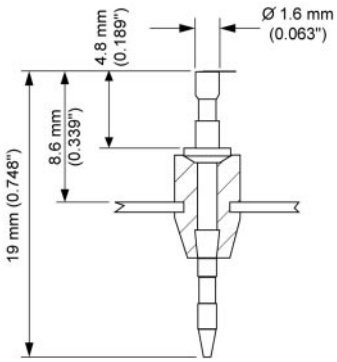
Prefix: 156/-

Mounting Hole Diameter:
3.96 mm (0.156")
Chassis Thickness:
1.2 mm (0.047") - 1.6 mm (0.062")
Max. Outside Dia. of Bush:
5.4 mm (0.213")
Assembly Tool:
AT 1/05

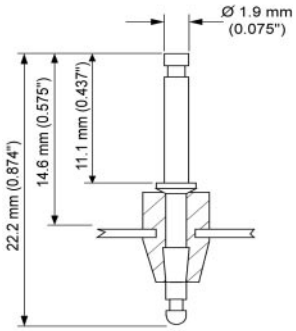
Exceptions:

Chassis Thickness:
-/10P:
2.3 mm (0.09") - 3.2 mm (0126")
-/20P:
0.71 mm (0.028") - 0.91 mm (0.036")
Assembly Tool:
156E: AT 1/02
156L: AT 1/14

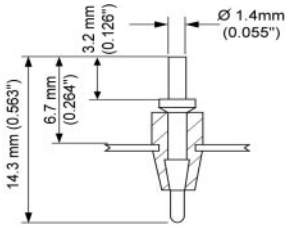
156 Range (continued)



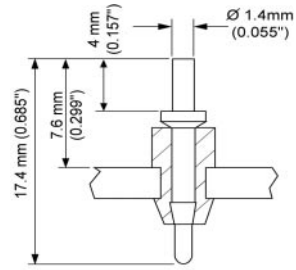
156/E



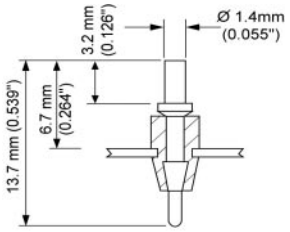
156/L



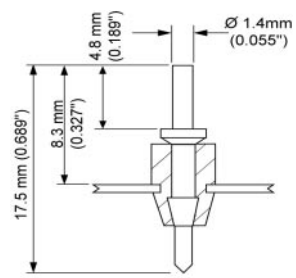
156/P



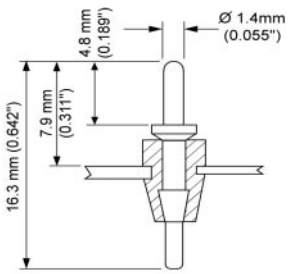
156/10P



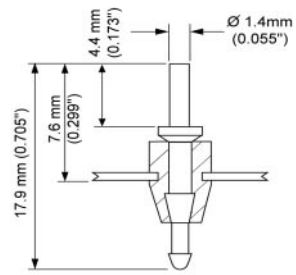
156/20P



156/LP



156/LPR



156/AT

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156 Range (continued)

Prefix: 156/-

Mounting Hole Diameter:
3.96 mm (0.156")

Chassis Thickness:
1.2 mm (0.047") - 1.6 mm (0.062")

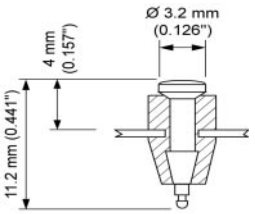
Max. Outside Dia. of Bush:
5.4 mm (0.213")

Assembly Tool:
AT 1/05

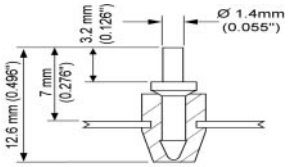
Exceptions:

Chassis Thickness:
-/10P:
2.3 mm (0.09") - 3.2 mm (0126")
-/20P:
0.71 mm (0.028") - 0.91 mm (0.036")

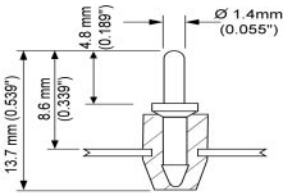
Assembly Tool:
156/SO/XL: AT 1/02
156/LP/B2: AT 1/09
LS/B2/156: AT 2/01
ATS 3/05



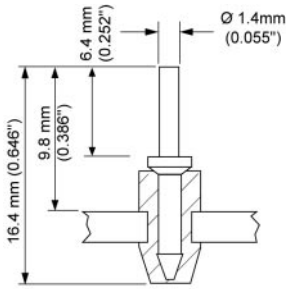
156/M



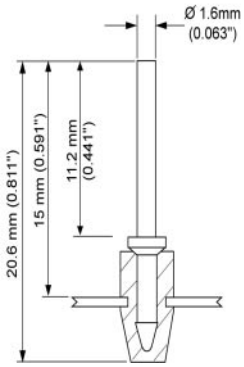
156/SO/P



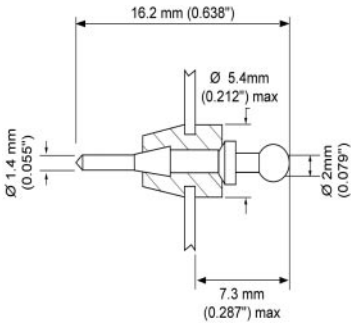
156/SO/LPR



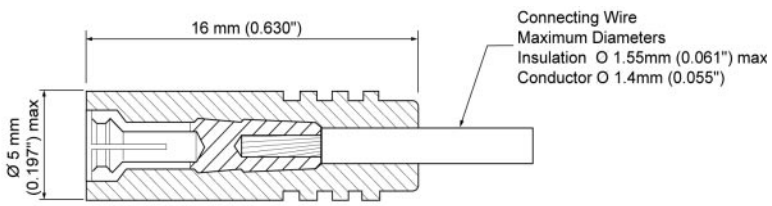
156/SO/10P



156/SO/XL



156/LP/B2



LS/B2/156
To suit 156/LP/B2)

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187 Range

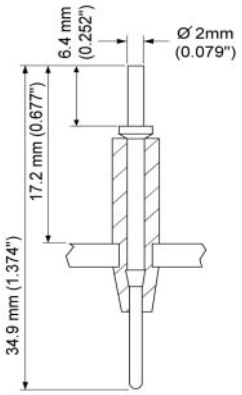
Prefix: 187/-

Mounting Hole Diameter:
4.75 mm (0.187")

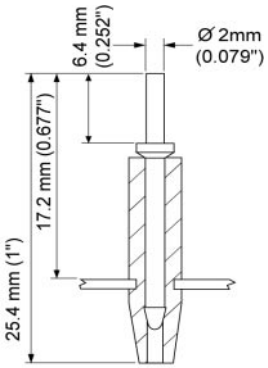
Chassis Thickness:
1.6 mm (0.062") - 2.3 mm (0.09")

Max. Outside Dia. of Bush after Assembly:
7.4 mm (0.291")

Assembly Tool:
AT 1/06



187



187/SO

250 Range

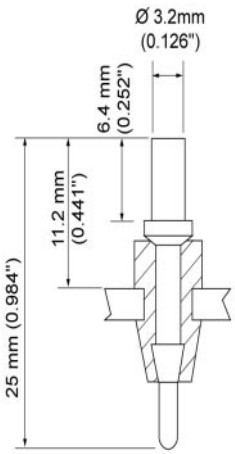
Prefix: 250/-

Mounting Hole Diameter:
6.35 mm (0.250")

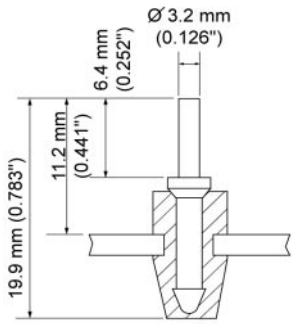
Chassis Thickness:
2.3 mm (0.09") - 3.2 mm (0.126")

Max. Outside Dia. of Bush after Assembly:
8.9 mm (0.350")

Assembly Tool:
AT 1/07



250



250/SO

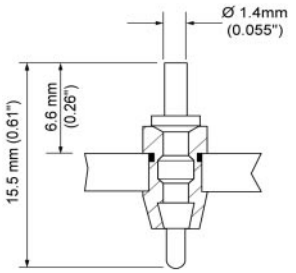
Suffix: CEEL

Mounting Hole Diameter: 156/
3.96 mm (0.156")
Mounting Hole Diameter: 250/
6.35 mm (0.250")
Chassis Thickness:
2.4 mm (0.094") - 3.2 mm (0.126")
Assembly Tool:
156/-/CEEL AT1/05
250/-/CEEL AT1/07

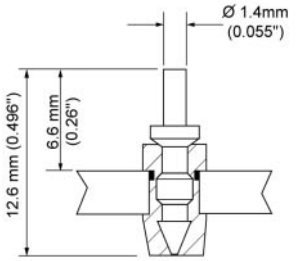
Leakage Rate (-/-CEEL)

Less than 10^{-3} µl/sec of Helium.
1 atmosphere differential pressure
(15 lb/in^2) at 20 ºC , equivalent to a depth of 10 m in sea water.

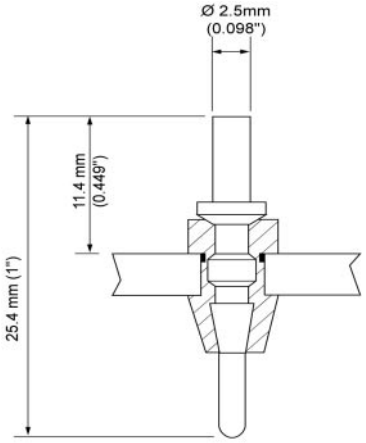
CEEL (Improved Environmental Sealing)



156/10P/CEEL



156/SO/10P/CEEL



250/10P/CEEL

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Materials

Spill	Brass
Bush	High dispersion grade PTFE
Finishes:	
Spill	Standard silver, other finishes available on request
Bush	Colours available: white, black and red

Characteristics

Insulation Resistance	> 2 x 10^6 MOhms
Climatic Category	-55 to +125 °C, 56 days damp heat (IEC 68:55/125/56)

Prefix No.	Current Rating (A)	Rated Voltage at Sea Level (kV d.c.)	Proof Voltage at Sea Level (kV d.c.)	Capacitance (pF) max.
062	0.5	0.5	2.5	0.5
078	1	0.5	2.5	0.5
093	1	1.5	4.5	0.8
125	5	2	5.5	0.8
136	5	2	5.5	0.8
156	5	3	7.5	0.8
187	5	5	11.5	1
250	15	4	9.5	1.7

Assembly Tools

Component Type Number	Tool Number	Component Type Number	Tool Number
062/-	AT 1/01	156	AT 1/02
078/-	AT 1/01	156/SO/XL	AT 1/02
093/-	AT 1/11	156/-	AT 1/05
093/6H	AT 1/03	156/-/CEEL	AT 1/05
125/-	AT 1/05	156/DT	AT 1/06
136/SO	AT 1/11	156/L	AT 1/14
136/LP	AT 1/17	187/-	AT 1/06
156/E	AT 1/02	250/-	AT 1/07
156/20	AT 1/02	156/LP/B2	AT 1/09
156/20/S	AT 1/02	LS/B2/156	AT 2/01 ATS 3/05

Assembly Procedure

1 Ensure holes are within tolerance and deburred.
2 Place bush into hole supporting the chassis underneath and using the appropriate assembly tool, press the spill slowly through the bush until the positive detent action firmly locks the assembly into place.

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Mounting Details and Shoulder Diameter

Prefix No.	Mounting Hole Details		Chassis Thickness	Max. Outside Dia. of Bush After Assembly
	ins ± 0.002	mm ± 0.05		
062	0.062	1.57	0.56 mm (0.022") - 0.71 mm (0.028")	2.7 mm (0.106")
078	0.078	1.98	1.2 mm (0.047") - 1.6 mm (0.062")	2.8 mm (0.110")
093	0.093	2.36	2.03 mm (0.08") - 2.3 mm (0.09")	3.6 mm (0.142")
125	0.125	3.18	1.2 mm (0.047") - 1.6 mm (0.062")	5.7 mm (0.224")
136	0.136	3.45	1.2 mm (0.047") - 1.6 mm (0.062")	4.7 mm (0.185")
156	0.156	3.96	1.2 mm (0.047") - 1.6 mm (0.062")	5.4 mm (0.213")
187	0.187	4.75	1.6 mm (0.062") - 2.3 mm (0.09")	7.4 mm (0.291")
250	0.250	6.35	2.3 mm (0.09") - 3.2 mm (0.126")	8.9 mm (0.350")

Chassis Thickness Exceptions

Type	Chassis Thickness
-/10P	2.3 mm (0.09") - 3.2 mm (0.126")
-/16P	1.2 mm (0.047") - 1.6 mm (0.063")
-/18P	0.91 mm (0.036") - 1.2 mm (0.047")
-/20P	0.71 mm (0.028") - 0.91 mm (0.036")
093/20/LP	0.71 mm (0.028") - 0.91 mm (0.036")
093/SO/20LP	0.71 mm (0.028") - 0.91 mm (0.036")
093/6/H	3.2 mm (0.126") - 4.5 mm (0.177")
156/DT	1 mm (0.039") - 1.4 mm (0.055")
156/20S	0.71 mm (0.028") - 0.91 mm (0.036")

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