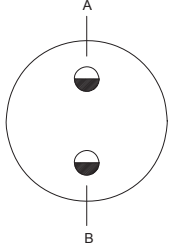
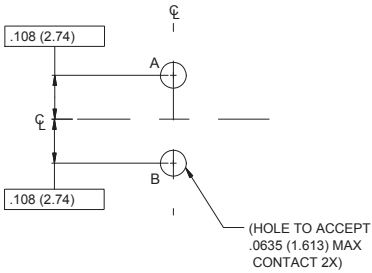
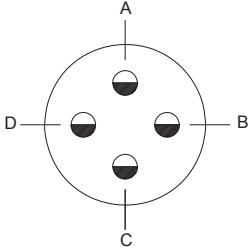
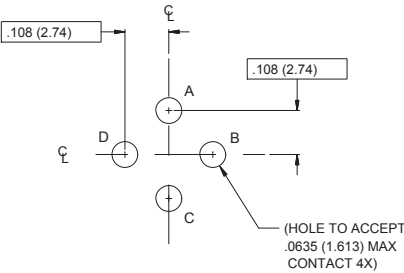
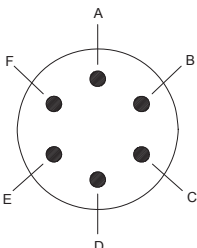
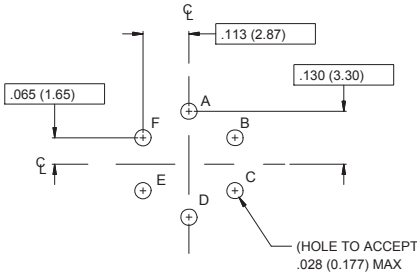
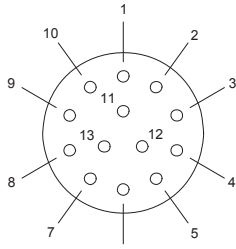
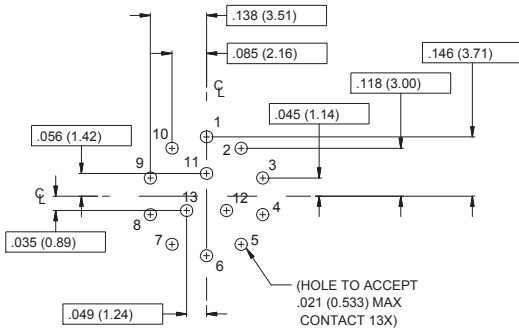


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**Geo-Marine® PCB Footprints: Size 10**

Insert Arrangement	PCB Footprint
 <p>Insert Arrangement 10-2 2 #16 Contacts</p>	 <p>Pin Connector</p>
 <p>Insert Arrangement 10-4 4 #16 Contacts</p>	 <p>Pin Connector</p>
 <p>Insert Arrangement 10-6 6 #20 Contacts</p>	 <p>Pin Connector</p>
 <p>Insert Arrangement 10-13 13 #22 Contacts</p>	 <p>Pin Connector</p>

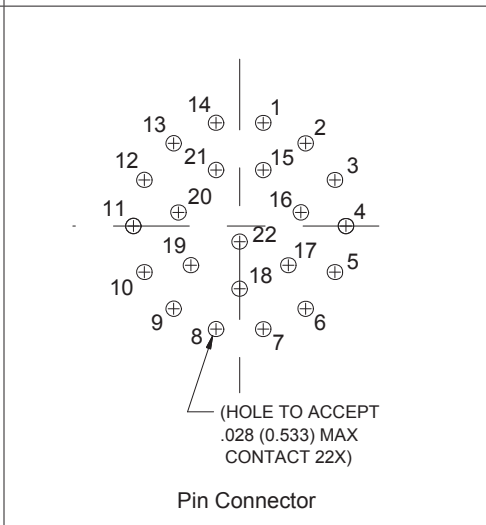
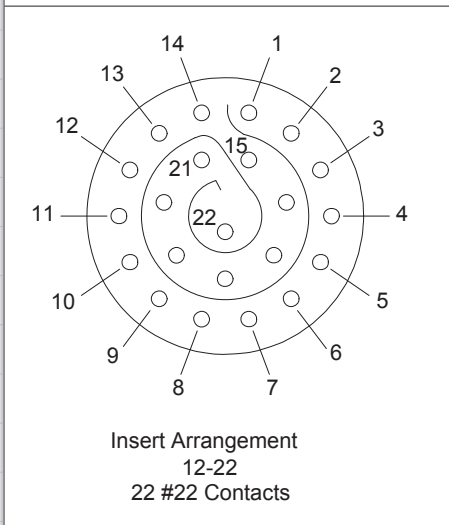
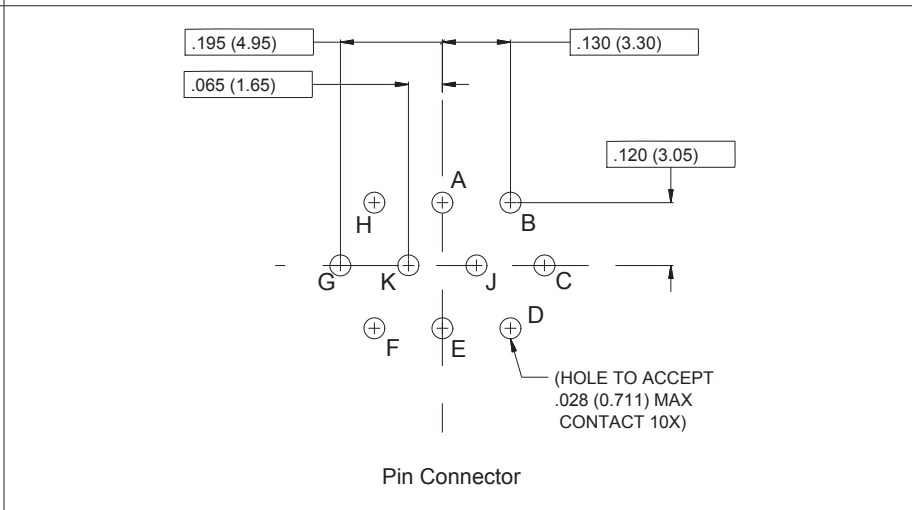
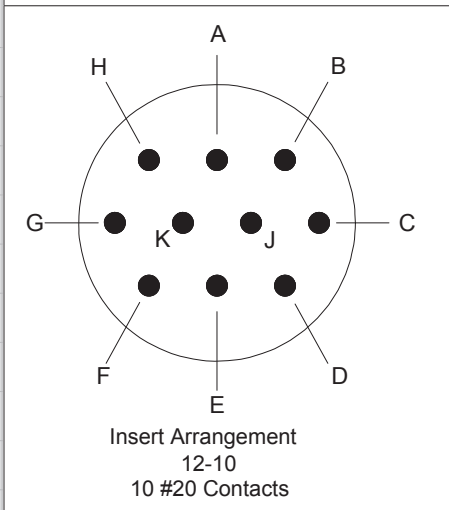
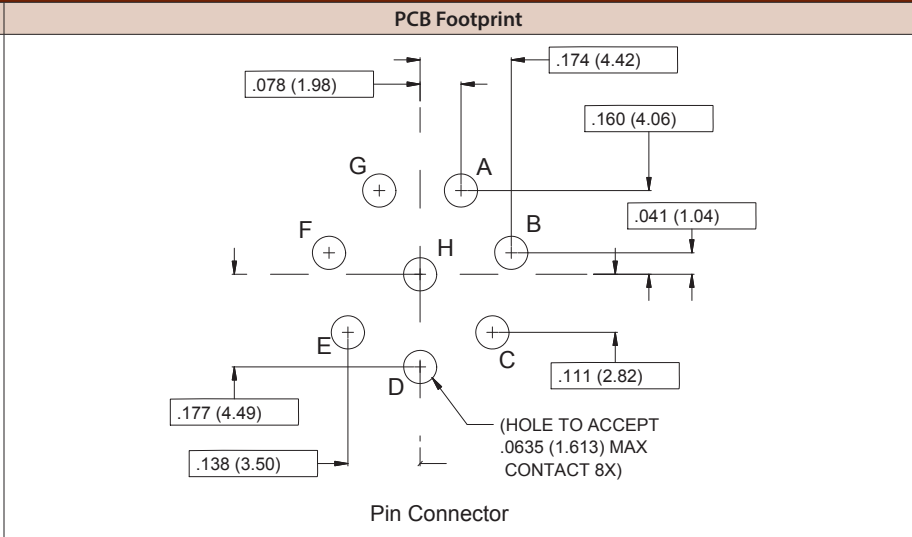
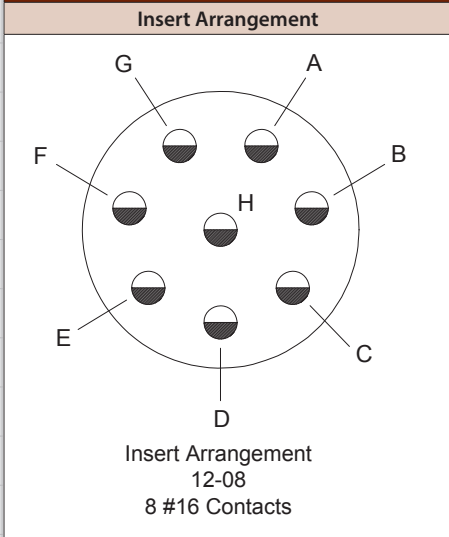
**Series 22 Geo-Marine®**  
**Harsh-Environment Connectors, Cables and Accessories**  
**PCB Footprints**



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**Geo-Marine® PCB Footprints: Size 12**



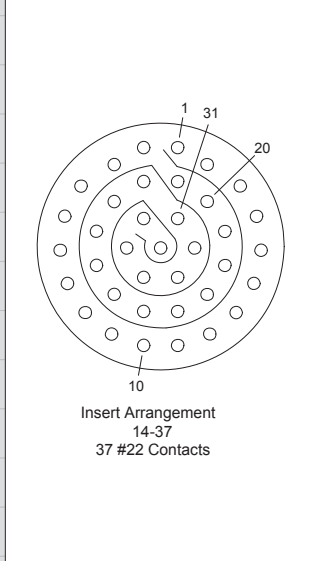
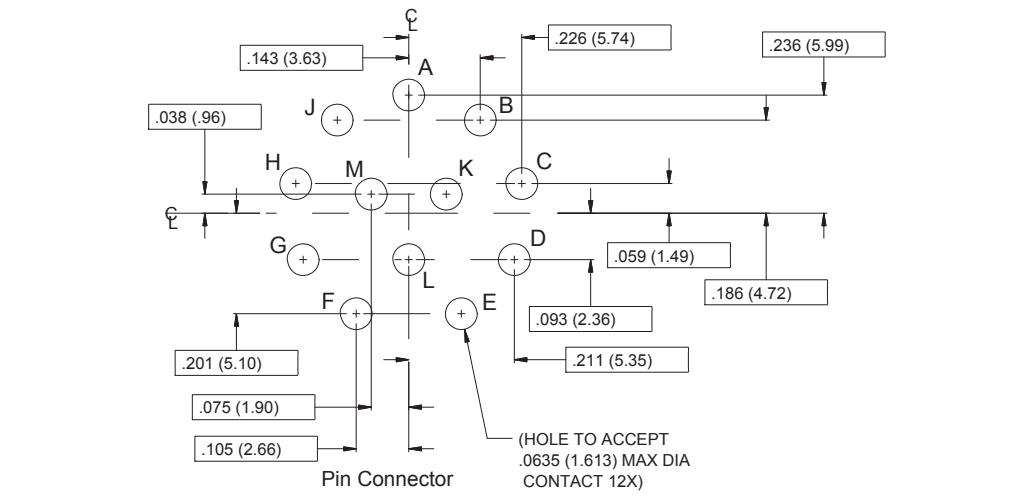
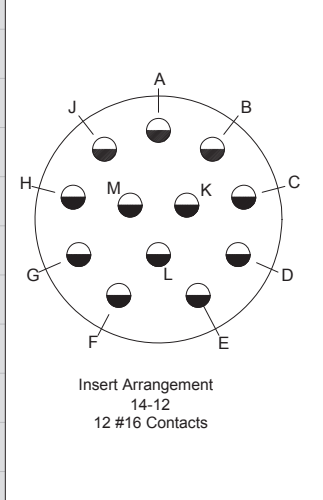
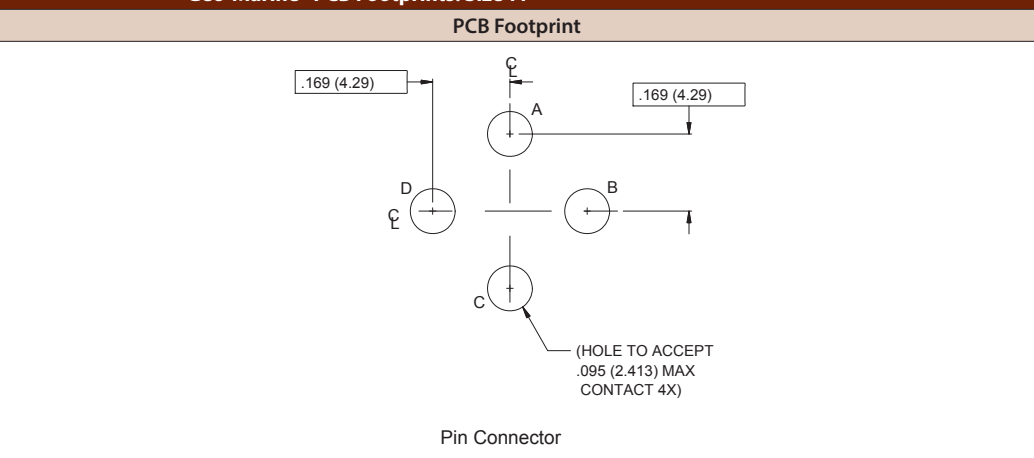
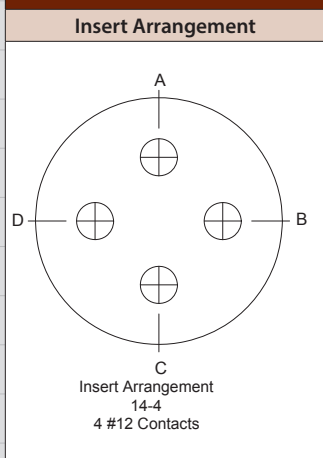
I.D. NO.	X	Y
	In. mm.	In. mm.
1	.045 (1.14)	.197 (5.00)
2	.126 (3.20)	.158 (4.01)
3	.182 (4.62)	.088 (2.23)
4	.203 (5.15)	.000 (.000)
5	.182 (4.62)	-.088 (-2.23)
6	.126 (3.20)	-.158 (-4.01)
7	.045 (1.14)	-.197 (-5.00)
8	-.045 (-1.14)	-.197 (-5.00)
9	-.126 (-3.20)	-.158 (-4.01)
10	-.182 (-4.62)	-.088 (-2.23)
11	-.203 (-5.15)	.000 (.000)
12	-.182 (-4.62)	.088 (2.23)
13	-.126 (-3.20)	.158 (4.01)
14	-.045 (-1.14)	.197 (5.00)
15	.045 (1.14)	.107 (2.72)
16	.117 (2.97)	.026 (0.660)
17	.093 (2.36)	-.075 (-1.90)
18	.000 (.000)	-.120 (-3.05)
19	-.093 (-2.36)	-.075 (-1.90)
20	-.117 (-2.97)	.026 (0.660)
21	-.045 (-1.14)	.107 (2.72)
22	.000 (.000)	-.030 (-0.762)



# Series 22 Geo-Marine® Harsh-Environment Connectors, Cables and Accessories PCB Footprints

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## Geo-Marine® PCB Footprints: Size 14



**PCB Footprint**

**Pin Connector**

I.D. NO.	X		Y	
	In. mm	In. mm	In. mm	In. mm
1	.045 (1.14)	.262 (6.65)	.123 (3.12)	.119 (3.02)
2	.123 (3.12)	.217 (5.51)	.170 (4.31)	.040 (1.02)
3	.211 (5.35)	.160 (4.06)	.170 (4.31)	-.050 (-1.27)
4	.254 (6.45)	-.080 (2.03)	.123 (3.12)	-.127 (-3.22)
5	.266 (6.75)	-.010 (-0.25)	.045 (1.14)	-.172 (-4.36)
6	.247 (6.27)	-.098 (-2.48)	-.045 (-1.14)	-.172 (-4.36)
7	.200 (5.08)	-.175 (-4.44)	.25 (-6.35)	-.127 (-3.22)
8	.130 (3.30)	-.232 (-5.89)	-.170 (-4.31)	-.050 (-1.27)
9	.045 (1.14)	-.262 (-6.65)	-.170 (-4.31)	.040 (1.02)
10	-.045 (-1.14)	-.262 (-6.65)	-.123 (-3.12)	.119 (3.02)
11	-.130 (-3.30)	-.232 (-5.89)	-.045 (-1.14)	.172 (4.36)
12	-.200 (-5.08)	-.175 (-4.44)	.045 (1.14)	.074 (1.87)
13	-.247 (-6.27)	-.098 (-2.48)	.090 (2.28)	-.004 (-0.10)
14	-.266 (-6.75)	-.010 (-0.25)	.045 (1.14)	-.082 (-2.08)
15	-.254 (-6.45)	.080 (2.03)	-.045 (-1.14)	-.082 (-2.08)
16	-.211 (-5.35)	.160 (4.06)	-.090 (-2.28)	-.004 (-0.10)
17	-.123 (-3.12)	.217 (5.51)	-.045 (-1.14)	.074 (1.87)
18	-.045 (-1.14)	.262 (6.65)	.000 (0.00)	-.004 (-0.10)
19	.045 (1.14)	.172 (4.36)		

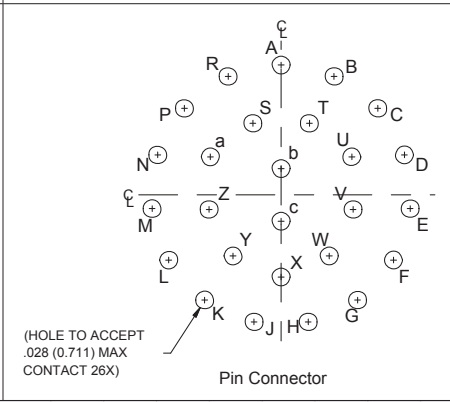
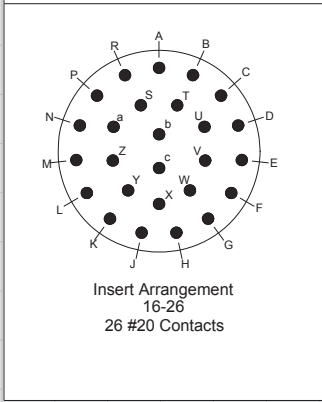
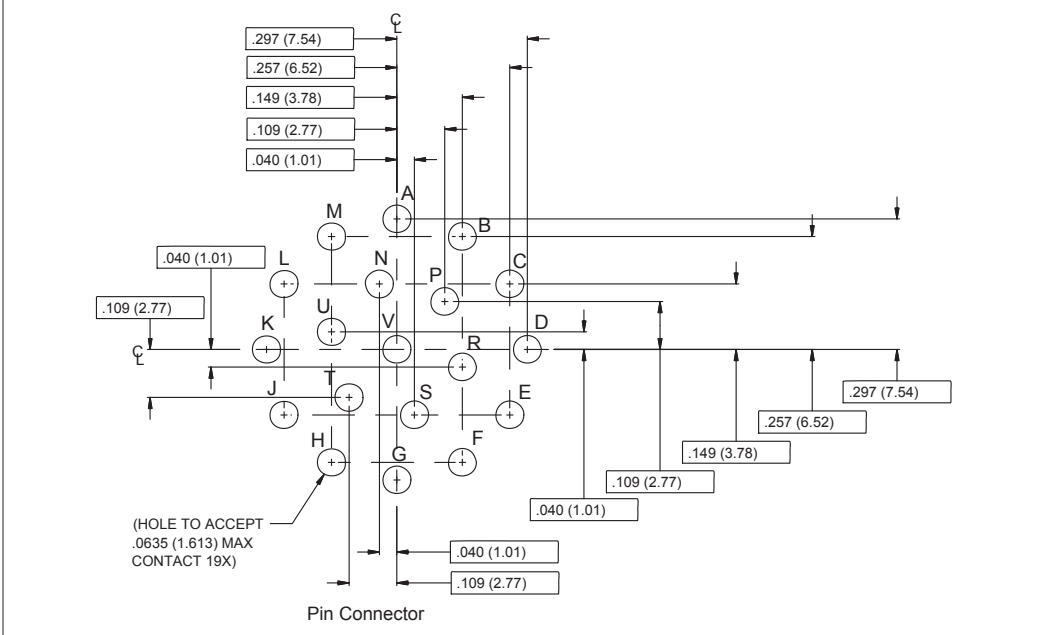
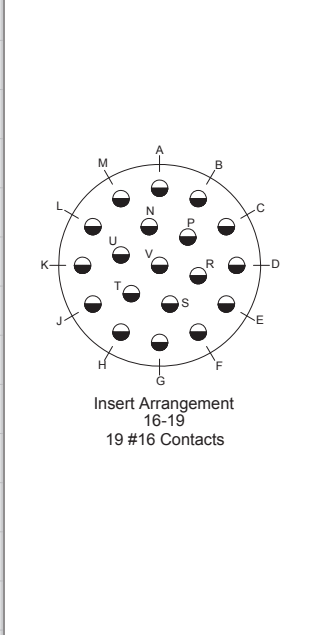
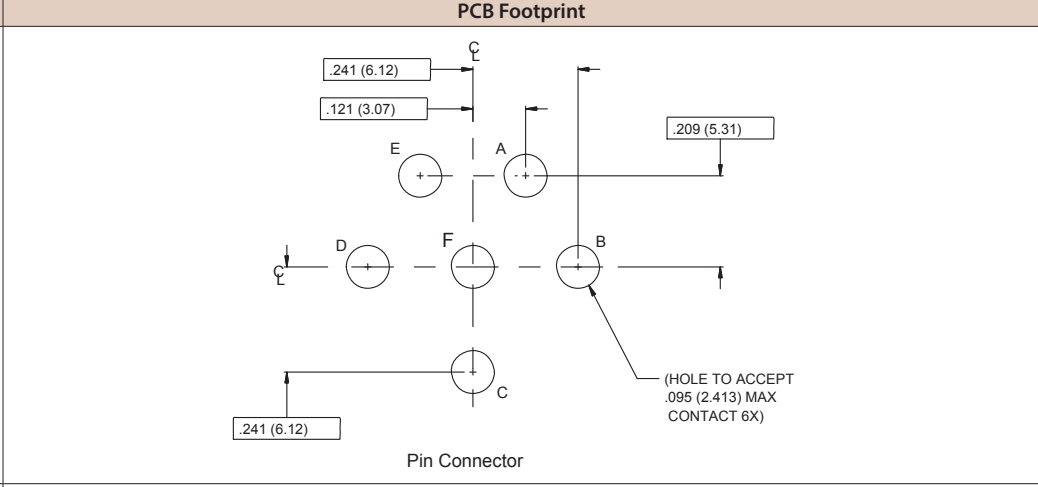
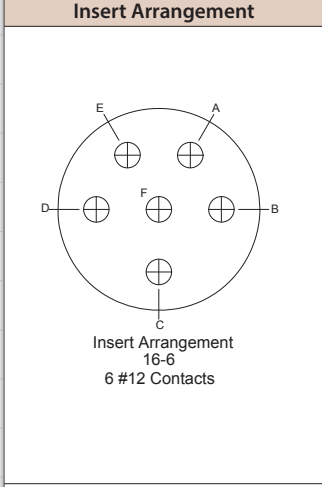
# Series 22 Geo-Marine® Harsh-Environment Connectors, Cables and Accessories PCB Footprints



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## Geo-Marine® PCB Footprints: Size 16



I.D. NO	X		Y		I.D. NO	X		Y	
	In.	mm	In.	mm		In.	mm	In.	mm
A	.000	(0.00)	.321	(81.53)	P	-.239	(-6.07)	.214	(5.43)
B	.131	(3.32)	.293	(7.44)	R	-.131	(-3.32)	.293	(7.44)
C	.239	(6.07)	.214	(5.43)	S	-.070	(-1.77)	.177	(4.49)
D	.305	(7.74)	.099	(2.51)	T	.070	(1.77)	.177	(4.49)
E	.319	(8.10)	-.034	(-0.86)	U	.175	(4.44)	.094	(2.38)
F	.278	(7.06)	-.161	(-4.08)	V	.178	(4.52)	-.036	(-0.91)
G	.189	(4.80)	-.260	(-6.60)	W	.119	(3.02)	-.151	(-3.83)
H	.067	(1.70)	-.314	(-7.97)	X	.000	(0.00)	-.203	(-5.15)
J	-.067	(-1.70)	-.314	(-7.97)	Y	-.119	(-3.02)	-.151	(-3.83)
K	-.189	(-4.80)	-.260	(-6.60)	Z	-.178	(-4.52)	-.036	(-0.91)
L	-.278	(-7.06)	-.161	(-4.08)	a	-.175	(-4.44)	.094	(2.38)
M	-.319	(-8.10)	-.034	(-0.86)	b	.000	(0.00)	.065	(1.65)
N	-.305	(-7.74)	.099	(2.51)	c	.000	(0.00)	-.065	(-1.65)



# Series 22 Geo-Marine® Harsh-Environment Connectors, Cables and Accessories PCB Footprints

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## Geo-Marine® PCB Footprints: Size 16 (continued)

Insert Arrangement		PCB Footprint						
<p>Insert Arrangement 16-55 55 #22 Contacts</p>		<p>(HOLE TO ACCEPT .021 (0.533) MAX CONTACT 55X)</p> <p>Pin Connector</p>						
I.D. NO	X In. mm	Y In. mm	I.D. NO	X In. mm	Y In. mm	I.D. NO	X In. mm	Y In. mm
1	-.312 (-7.92)	.086 (2.18)	20	-.078 (-1.98)	.041 (1.04)	39	.078 (1.98)	-.319 (-8.10)
2	-.312 (-7.92)	-.004 (-0.10)	21	-.078 (-1.98)	-.049 (-1.24)	40	.172 (4.36)	.279 (7.08)
3	-.312 (-7.92)	-.094 (-2.38)	22	-.078 (-1.98)	-.139 (-3.53)	41	.156 (3.96)	.176 (4.47)
4	-.242 (-6.14)	.221 (5.61)	23	-.078 (-1.98)	-.229 (-5.81)	42	.156 (3.96)	.086 (2.18)
5	-.234 (-5.94)	.131 (3.32)	24	-.078 (-1.98)	-.319 (-8.10)	43	.156 (3.96)	-.004 (-0.10)
6	-.234 (-5.94)	.041 (1.04)	25	.000 (0.00)	.329 (8.35)	44	.156 (3.96)	-.094 (-2.38)
7	-.234 (-5.94)	-.049 (-1.24)	26	.000 (0.00)	.176 (4.47)	45	.156 (3.96)	-.184 (-4.67)
8	-.234 (-5.94)	-.139 (-3.53)	27	.000 (0.00)	.086 (2.18)	46	.156 (3.96)	-.274 (-6.95)
9	-.234 (-5.94)	-.229 (-5.81)	28	.000 (0.00)	-.004 (-0.10)	47	.242 (6.14)	.221 (5.61)
10	-.172 (-4.36)	.279 (7.08)	29	.000 (0.00)	-.094 (-2.38)	48	.234 (5.94)	.131 (3.32)
11	-.156 (-3.96)	.176 (4.47)	30	.000 (0.00)	-.184 (-4.67)	49	.234 (5.94)	.041 (1.04)
12	-.156 (-3.96)	.086 (2.18)	31	.000 (0.00)	-.274 (-6.95)	50	.234 (5.94)	-.049 (-1.24)
13	-.156 (-3.96)	-.004 (-0.10)	32	.089 (2.26)	.316 (8.02)	51	.234 (5.94)	-.139 (-3.53)
14	-.156 (-3.96)	-.094 (-2.38)	33	.078 (1.98)	.221 (5.61)	52	.234 (5.94)	-.229 (-5.81)
15	-.156 (-3.96)	-.184 (-4.67)	34	.078 (1.98)	.131 (3.32)	53	.312 (7.92)	.086 (2.18)
16	-.156 (-3.96)	-.274 (-6.95)	35	.078 (1.98)	.041 (1.04)	54	.312 (7.92)	-.004 (-0.10)
17	-.089 (-2.26)	.316 (8.02)	36	.078 (1.98)	-.049 (-1.24)	55	.312 (7.92)	-.094 (-2.38)
18	-.078 (-1.98)	.221 (5.61)	37	.078 (1.98)	-.139 (-3.53)			
19	-.078 (-1.98)	.131 (3.32)	38	.078 (1.98)	-.229 (-5.81)			

## Geo-Marine® PCB Footprints: Size 18

Insert Arrangement		PCB Footprint						
<p>Insert Arrangement 18-8 8 #12 Contacts</p>		<p>(HOLE TO ACCEPT .095 (2.41) MAX CONTACT 8X)</p> <p>Pin Connector</p>						
<p>Insert Arrangement 18-11 11 #16 Contacts</p>		<p>(HOLE TO ACCEPT .055 (1.613) MAX CONTACT 11X)</p> <p>Pin Connector</p>						
<p>Insert Arrangement 18-22 22 #16 Contacts</p>		<p>(HOLE TO ACCEPT .028 (0.711) MAX CONTACT 22X)</p> <p>Pin Connector</p>						
I.D. NO	X In. mm	Y In. mm	I.D. NO	X In. mm	Y In. mm	I.D. NO	X In. mm	Y In. mm
A	.077 (1.95)	.332 (8.43)	M	-.307 (-7.79)	-.146 (3.70)			
B	.210 (5.33)	.267 (6.78)	N	-.210 (-5.33)	.267 (6.78)			
C	.307 (7.79)	.146 (3.70)	P	-.077 (-1.95)	.332 (8.43)			
D	.341 (8.66)	.000 (0.00)	R	.000 (0.00)	.190 (4.82)			
E	.307 (7.79)	-.146 (-3.70)	S	.150 (3.81)	.120 (3.04)			
F	.210 (5.33)	-.267 (-6.78)	T	.185 (4.69)	-.043 (-1.09)			
G	.077 (1.95)	-.332 (-8.43)	U	.077 (1.95)	-.173 (-4.39)			
H	-.077 (-1.95)	-.332 (-8.43)	V	-.077 (-1.95)	-.173 (-4.39)			
J	-.210 (-5.33)	-.267 (-6.78)	W	-.185 (-4.69)	-.043 (-1.09)			
K	-.307 (-7.79)	-.146 (-3.70)	X	-.150 (-3.81)	.120 (3.04)			
L	-.341 (-8.66)	.000 (0.00)	Y	.000 (0.00)	.000 (0.00)			

# Series 22 Geo-Marine® Harsh-Environment Connectors, Cables and Accessories PCB Footprints



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## Geo-Marine® PCB Footprints: Size 18 (continued)

Insert Arrangement		PCB Footprint																																																																																																																																																																																																																																																																																																																																																																												
<p>Insert Arrangement 18-32 32 #20 Contacts</p>	<p>Pin Connector (HOLE TO ACCEPT .0435 (1.105) MAX CONTACT 32X)</p>	<table border="1"> <thead> <tr> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> </tr> <tr> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> </tr> </thead> <tbody> <tr><td>A</td><td>.066</td><td>(1.67)</td><td>.353</td><td>(8.96)</td><td>N</td><td>-.357</td><td>(-9.06)</td><td>-.033</td><td>(-0.83)</td><td>a</td><td>-.065</td><td>(-1.65)</td><td>-.221</td><td>(-5.61)</td></tr> <tr><td>B</td><td>.189</td><td>(4.80)</td><td>.305</td><td>(7.74)</td><td>P</td><td>-.345</td><td>(-8.76)</td><td>.098</td><td>(2.48)</td><td>b</td><td>-.174</td><td>(-4.41)</td><td>-.151</td><td>(-3.83)</td></tr> <tr><td>C</td><td>.286</td><td>(7.26)</td><td>.217</td><td>(5.51)</td><td>R</td><td>-.286</td><td>(-7.26)</td><td>.217</td><td>(5.51)</td><td>c</td><td>-.228</td><td>(-5.79)</td><td>-.033</td><td>(-0.83)</td></tr> <tr><td>D</td><td>.345</td><td>(8.76)</td><td>.098</td><td>(2.48)</td><td>S</td><td>-.189</td><td>(-4.80)</td><td>.305</td><td>(7.74)</td><td>d</td><td>-.209</td><td>(-5.30)</td><td>.095</td><td>(2.41)</td></tr> <tr><td>E</td><td>.357</td><td>(9.06)</td><td>-.033</td><td>(-0.83)</td><td>T</td><td>-.066</td><td>(-1.67)</td><td>.353</td><td>(8.96)</td><td>e</td><td>-.124</td><td>(-3.14)</td><td>.193</td><td>(4.90)</td></tr> <tr><td>F</td><td>.321</td><td>(8.15)</td><td>-.160</td><td>(-4.06)</td><td>U</td><td>.000</td><td>(0.00)</td><td>.230</td><td>(5.84)</td><td>f</td><td>.000</td><td>(0.00)</td><td>.096</td><td>(2.43)</td></tr> <tr><td>G</td><td>.242</td><td>(6.14)</td><td>-.265</td><td>(-6.73)</td><td>V</td><td>.124</td><td>(3.14)</td><td>.193</td><td>(4.90)</td><td>g</td><td>.096</td><td>(2.43)</td><td>.000</td><td>(0.00)</td></tr> <tr><td>H</td><td>.130</td><td>(3.30)</td><td>-.335</td><td>(-8.50)</td><td>W</td><td>.209</td><td>(5.30)</td><td>.095</td><td>(2.41)</td><td>h</td><td>.000</td><td>(0.00)</td><td>-.096</td><td>(-2.43)</td></tr> <tr><td>J</td><td>.000</td><td>(0.00)</td><td>-.359</td><td>(-9.11)</td><td>X</td><td>.228</td><td>(5.79)</td><td>-.033</td><td>(-0.83)</td><td>j</td><td>-.096</td><td>(-2.43)</td><td>.000</td><td>(0.00)</td></tr> <tr><td>K</td><td>-.130</td><td>(-3.30)</td><td>-.335</td><td>(-8.50)</td><td>Y</td><td>.174</td><td>(4.41)</td><td>-.151</td><td>(-3.83)</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>L</td><td>-.242</td><td>(-6.14)</td><td>-.265</td><td>(-6.73)</td><td>Z</td><td>.065</td><td>(1.65)</td><td>-.221</td><td>(-5.61)</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>M</td><td>-.321</td><td>(-8.15)</td><td>-.160</td><td>(-4.06)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>						I.D. NO	X		Y		I.D. NO	X		Y		In.	mm	In.	mm	In.	mm	In.	mm	A	.066	(1.67)	.353	(8.96)	N	-.357	(-9.06)	-.033	(-0.83)	a	-.065	(-1.65)	-.221	(-5.61)	B	.189	(4.80)	.305	(7.74)	P	-.345	(-8.76)	.098	(2.48)	b	-.174	(-4.41)	-.151	(-3.83)	C	.286	(7.26)	.217	(5.51)	R	-.286	(-7.26)	.217	(5.51)	c	-.228	(-5.79)	-.033	(-0.83)	D	.345	(8.76)	.098	(2.48)	S	-.189	(-4.80)	.305	(7.74)	d	-.209	(-5.30)	.095	(2.41)	E	.357	(9.06)	-.033	(-0.83)	T	-.066	(-1.67)	.353	(8.96)	e	-.124	(-3.14)	.193	(4.90)	F	.321	(8.15)	-.160	(-4.06)	U	.000	(0.00)	.230	(5.84)	f	.000	(0.00)	.096	(2.43)	G	.242	(6.14)	-.265	(-6.73)	V	.124	(3.14)	.193	(4.90)	g	.096	(2.43)	.000	(0.00)	H	.130	(3.30)	-.335	(-8.50)	W	.209	(5.30)	.095	(2.41)	h	.000	(0.00)	-.096	(-2.43)	J	.000	(0.00)	-.359	(-9.11)	X	.228	(5.79)	-.033	(-0.83)	j	-.096	(-2.43)	.000	(0.00)	K	-.130	(-3.30)	-.335	(-8.50)	Y	.174	(4.41)	-.151	(-3.83)						L	-.242	(-6.14)	-.265	(-6.73)	Z	.065	(1.65)	-.221	(-5.61)						M	-.321	(-8.15)	-.160	(-4.06)																																																																																																																																																																											
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<p>Insert Arrangement 18-66 66 #22 Contacts</p>	<p>Pin Connector (HOLE TO ACCEPT .021 (0.533) MAX CONTACT 66X)</p>	<table border="1"> <thead> <tr> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> <th rowspan="2">I.D. 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<tr><td>4</td><td>-.279</td><td>(-7.08)</td><td>.225</td><td>(5.71)</td><td>26</td><td>-.045</td><td>(-1.14)</td><td>.270</td><td>(6.85)</td><td>48</td><td>.123</td><td>(3.12)</td><td>-.135</td><td>(-3.42)</td></tr> <tr><td>5</td><td>-.279</td><td>(-7.08)</td><td>.135</td><td>(3.42)</td><td>27</td><td>-.045</td><td>(-1.14)</td><td>.180</td><td>(4.57)</td><td>49</td><td>.123</td><td>(3.12)</td><td>-.225</td><td>(-5.71)</td></tr> <tr><td>6</td><td>-.279</td><td>(-7.08)</td><td>.045</td><td>(1.14)</td><td>28</td><td>-.045</td><td>(-1.14)</td><td>.090</td><td>(2.28)</td><td>50</td><td>.123</td><td>(3.12)</td><td>-.315</td><td>(-8.00)</td></tr> <tr><td>7</td><td>-.279</td><td>(-7.08)</td><td>-.045</td><td>(-1.14)</td><td>29</td><td>-.045</td><td>(-1.14)</td><td>.000</td><td>(0.00)</td><td>51</td><td>.201</td><td>(5.10)</td><td>.270</td><td>(6.85)</td></tr> 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<tr><td>12</td><td>-.201</td><td>(-5.10)</td><td>.090</td><td>(2.28)</td><td>34</td><td>.045</td><td>(1.14)</td><td>.360</td><td>(9.14)</td><td>56</td><td>.201</td><td>(5.10)</td><td>-.180</td><td>(-4.57)</td></tr> <tr><td>13</td><td>-.201</td><td>(-5.10)</td><td>.000</td><td>(0.00)</td><td>35</td><td>.045</td><td>(1.14)</td><td>.270</td><td>(6.85)</td><td>57</td><td>.201</td><td>(5.10)</td><td>-.270</td><td>(-6.85)</td></tr> <tr><td>14</td><td>-.201</td><td>(-5.10)</td><td>-.090</td><td>(-2.28)</td><td>36</td><td>.045</td><td>(1.14)</td><td>.180</td><td>(4.57)</td><td>58</td><td>.279</td><td>(7.08)</td><td>.225</td><td>(5.71)</td></tr> <tr><td>15</td><td>-.201</td><td>(-5.10)</td><td>-.180</td><td>(-4.57)</td><td>37</td><td>.045</td><td>(1.14)</td><td>.090</td><td>(2.28)</td><td>59</td><td>.279</td><td>(7.08)</td><td>.135</td><td>(3.42)</td></tr> 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<tr><td>20</td><td>-.123</td><td>(-3.12)</td><td>.045</td><td>(1.14)</td><td>42</td><td>.045</td><td>(1.14)</td><td>-.360</td><td>(-9.14)</td><td>64</td><td>.357</td><td>(9.06)</td><td>.090</td><td>(2.28)</td></tr> <tr><td>21</td><td>-.123</td><td>(-3.12)</td><td>-.045</td><td>(-1.14)</td><td>43</td><td>-.123</td><td>(-3.12)</td><td>.315</td><td>(8.00)</td><td>65</td><td>.357</td><td>(9.06)</td><td>.000</td><td>(0.00)</td></tr> <tr><td>22</td><td>-.123</td><td>(-3.12)</td><td>-.135</td><td>(-3.42)</td><td>44</td><td>-.123</td><td>(-3.12)</td><td>.225</td><td>(5.71)</td><td>66</td><td>.357</td><td>(9.06)</td><td>-.090</td><td>(-2.28)</td></tr> </tbody> </table>						I.D. 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NO	X		Y		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	1	-.357	(-9.06)	.090	(2.28)	23	-.123	(-3.12)	-.225	(-5.71)	45	.123	(3.12)	.135	(3.42)	2	-.357	(-9.06)	.000	(0.00)	24	-.123	(-3.12)	-.315	(-8.00)	46	.123	(3.12)	.045	(1.14)	3	-.357	(-9.06)	-.090	(-2.28)	25	-.045	(-1.14)	.360	(9.14)	47	.123	(3.12)	-.045	(-1.14)	4	-.279	(-7.08)	.225	(5.71)	26	-.045	(-1.14)	.270	(6.85)	48	.123	(3.12)	-.135	(-3.42)	5	-.279	(-7.08)	.135	(3.42)	27	-.045	(-1.14)	.180	(4.57)	49	.123	(3.12)	-.225	(-5.71)	6	-.279	(-7.08)	.045	(1.14)	28	-.045	(-1.14)	.090	(2.28)	50	.123	(3.12)	-.315	(-8.00)	7	-.279	(-7.08)	-.045	(-1.14)	29	-.045	(-1.14)	.000	(0.00)	51	.201	(5.10)	.270	(6.85)	8	-.279	(-7.08)	-.135	(-3.42)	30	-.045	(-1.14)	-.090	(-2.28)	52	.201	(5.10)	.180	(4.57)	9	-.279	(-7.08)	-.225	(-5.71)	31	-.045	(-1.14)	-.180	(-4.57)	53	.201	(5.10)	.090	(2.28)	10	-.201	(-5.10)	.270	(6.85)	32	-.045	(-1.14)	-.270	(-6.85)	54	.201	(5.10)	.000	(0.00)	11	-.201	(-5.10)	.180	(4.57)	33	-.045	(-1.14)	-.360	(-9.14)	55	.201	(5.10)	-.090	(-2.28)	12	-.201	(-5.10)	.090	(2.28)	34	.045	(1.14)	.360	(9.14)	56	.201	(5.10)	-.180	(-4.57)	13	-.201	(-5.10)	.000	(0.00)	35	.045	(1.14)	.270	(6.85)	57	.201	(5.10)	-.270	(-6.85)	14	-.201	(-5.10)	-.090	(-2.28)	36	.045	(1.14)	.180	(4.57)	58	.279	(7.08)	.225	(5.71)	15	-.201	(-5.10)	-.180	(-4.57)	37	.045	(1.14)	.090	(2.28)	59	.279	(7.08)	.135	(3.42)	16	-.201	(-5.10)	-.270	(-6.85)	38	.045	(1.14)	.000	(0.00)	60	.279	(7.08)	.045	(1.14)	17	-.123	(-3.12)	.315	(8.00)	39	.045	(1.14)	-.090	(-2.28)	61	.279	(7.08)	-.045	(-1.14)	18	-.123	(-3.12)	.225	(5.71)	40	.045	(1.14)	-.180	(-4.57)	62	.279	(7.08)	-.135	(-3.42)	19	-.123	(-3.12)	.135	(3.42)	41	.045	(1.14)	-.270	(-6.85)	63	.279	(7.08)	-.225	(-5.71)	20	-.123	(-3.12)	.045	(1.14)	42	.045	(1.14)	-.360	(-9.14)	64	.357	(9.06)	.090	(2.28)	21	-.123	(-3.12)	-.045	(-1.14)	43	-.123	(-3.12)	.315	(8.00)	65	.357	(9.06)	.000	(0.00)	22	-.123	(-3.12)	-.135	(-3.42)	44	-.123	(-3.12)	.225	(5.71)	66	.357	(9.06)	-.090	(-2.28)
		I.D. NO	X		Y		I.D. NO		X		Y			I.D. NO	X		Y																																																																																																																																																																																																																																																																																																																																																													
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1	-.357	(-9.06)	.090	(2.28)	23	-.123	(-3.12)	-.225	(-5.71)	45	.123	(3.12)	.135	(3.42)																																																																																																																																																																																																																																																																																																																																																																
2	-.357	(-9.06)	.000	(0.00)	24	-.123	(-3.12)	-.315	(-8.00)	46	.123	(3.12)	.045	(1.14)																																																																																																																																																																																																																																																																																																																																																																
3	-.357	(-9.06)	-.090	(-2.28)	25	-.045	(-1.14)	.360	(9.14)	47	.123	(3.12)	-.045	(-1.14)																																																																																																																																																																																																																																																																																																																																																																
4	-.279	(-7.08)	.225	(5.71)	26	-.045	(-1.14)	.270	(6.85)	48	.123	(3.12)	-.135	(-3.42)																																																																																																																																																																																																																																																																																																																																																																
5	-.279	(-7.08)	.135	(3.42)	27	-.045	(-1.14)	.180	(4.57)	49	.123	(3.12)	-.225	(-5.71)																																																																																																																																																																																																																																																																																																																																																																
6	-.279	(-7.08)	.045	(1.14)	28	-.045	(-1.14)	.090	(2.28)	50	.123	(3.12)	-.315	(-8.00)																																																																																																																																																																																																																																																																																																																																																																
7	-.279	(-7.08)	-.045	(-1.14)	29	-.045	(-1.14)	.000	(0.00)	51	.201	(5.10)	.270	(6.85)																																																																																																																																																																																																																																																																																																																																																																
8	-.279	(-7.08)	-.135	(-3.42)	30	-.045	(-1.14)	-.090	(-2.28)	52	.201	(5.10)	.180	(4.57)																																																																																																																																																																																																																																																																																																																																																																
9	-.279	(-7.08)	-.225	(-5.71)	31	-.045	(-1.14)	-.180	(-4.57)	53	.201	(5.10)	.090	(2.28)																																																																																																																																																																																																																																																																																																																																																																
10	-.201	(-5.10)	.270	(6.85)	32	-.045	(-1.14)	-.270	(-6.85)	54	.201	(5.10)	.000	(0.00)																																																																																																																																																																																																																																																																																																																																																																
11	-.201	(-5.10)	.180	(4.57)	33	-.045	(-1.14)	-.360	(-9.14)	55	.201	(5.10)	-.090	(-2.28)																																																																																																																																																																																																																																																																																																																																																																
12	-.201	(-5.10)	.090	(2.28)	34	.045	(1.14)	.360	(9.14)	56	.201	(5.10)	-.180	(-4.57)																																																																																																																																																																																																																																																																																																																																																																
13	-.201	(-5.10)	.000	(0.00)	35	.045	(1.14)	.270	(6.85)	57	.201	(5.10)	-.270	(-6.85)																																																																																																																																																																																																																																																																																																																																																																
14	-.201	(-5.10)	-.090	(-2.28)	36	.045	(1.14)	.180	(4.57)	58	.279	(7.08)	.225	(5.71)																																																																																																																																																																																																																																																																																																																																																																
15	-.201	(-5.10)	-.180	(-4.57)	37	.045	(1.14)	.090	(2.28)	59	.279	(7.08)	.135	(3.42)																																																																																																																																																																																																																																																																																																																																																																
16	-.201	(-5.10)	-.270	(-6.85)	38	.045	(1.14)	.000	(0.00)	60	.279	(7.08)	.045	(1.14)																																																																																																																																																																																																																																																																																																																																																																
17	-.123	(-3.12)	.315	(8.00)	39	.045	(1.14)	-.090	(-2.28)	61	.279	(7.08)	-.045	(-1.14)																																																																																																																																																																																																																																																																																																																																																																
18	-.123	(-3.12)	.225	(5.71)	40	.045	(1.14)	-.180	(-4.57)	62	.279	(7.08)	-.135	(-3.42)																																																																																																																																																																																																																																																																																																																																																																
19	-.123	(-3.12)	.135	(3.42)	41	.045	(1.14)	-.270	(-6.85)	63	.279	(7.08)	-.225	(-5.71)																																																																																																																																																																																																																																																																																																																																																																
20	-.123	(-3.12)	.045	(1.14)	42	.045	(1.14)	-.360	(-9.14)	64	.357	(9.06)	.090	(2.28)																																																																																																																																																																																																																																																																																																																																																																
21	-.123	(-3.12)	-.045	(-1.14)	43	-.123	(-3.12)	.315	(8.00)	65	.357	(9.06)	.000	(0.00)																																																																																																																																																																																																																																																																																																																																																																
22	-.123	(-3.12)	-.135	(-3.42)	44	-.123	(-3.12)	.225	(5.71)	66	.357	(9.06)	-.090	(-2.28)																																																																																																																																																																																																																																																																																																																																																																

## Geo-Marine® PCB Footprints: Size 20

Insert Arrangement		PCB Footprint																																																																																																																																																																																								
<p>Insert Arrangement 20-11 11 #12 Contacts</p>	<p>Pin Connector (HOLE TO ACCEPT .095 (2.413) MAX CONTACT 11X)</p>	<table border="1"> <thead> <tr> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> </tr> <tr> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> </tr> </thead> <tbody> <tr><td>A</td><td>.000</td><td>(0.00)</td><td>.399</td><td>(10.13)</td><td>L</td><td>-.282</td><td>(-7.16)</td><td>-.282</td><td>(-7.16)</td><td>X</td><td>.152</td><td>(3.86)</td><td>-.207</td><td>(-5.25)</td></tr> <tr><td>B</td><td>.152</td><td>(3.86)</td><td>.369</td><td>(9.37)</td><td>M</td><td>-.369</td><td>(-9.37)</td><td>-.152</td><td>(-3.86)</td><td>Y</td><td>.000</td><td>(0.00)</td><td>-.245</td><td>(-6.22)</td></tr> <tr><td>C</td><td>.282</td><td>(7.16)</td><td>.282</td><td>(7.16)</td><td>N</td><td>-.400</td><td>(-10.16)</td><td>.000</td><td>(0.00)</td><td>Z</td><td>-.152</td><td>(-3.86)</td><td>-.207</td><td>(-5.25)</td></tr> <tr><td>D</td><td>.369</td><td>(9.37)</td><td>.152</td><td>(3.86)</td><td>P</td><td>-.369</td><td>(-9.37)</td><td>.152</td><td>(3.86)</td><td>a</td><td>-.233</td><td>(-5.91)</td><td>-.076</td><td>(-1.93)</td></tr> <tr><td>E</td><td>.400</td><td>(10.16)</td><td>.000</td><td>(0.00)</td><td>R</td><td>-.282</td><td>(-7.16)</td><td>.282</td><td>(7.16)</td><td>b</td><td>-.233</td><td>(-5.91)</td><td>.076</td><td>(1.93)</td></tr> <tr><td>F</td><td>.369</td><td>(9.37)</td><td>-.152</td><td>(-3.86)</td><td>S</td><td>-.152</td><td>(-3.86)</td><td>.369</td><td>(9.37)</td><td>c</td><td>-.152</td><td>(-3.86)</td><td>.207</td><td>(5.25)</td></tr> <tr><td>G</td><td>.282</td><td>(7.16)</td><td>-.282</td><td>(-7.16)</td><td>T</td><td>.000</td><td>(0.00)</td><td>.245</td><td>(6.22)</td><td>d</td><td>-.076</td><td>(-1.93)</td><td>.076</td><td>(1.93)</td></tr> <tr><td>H</td><td>.152</td><td>(3.86)</td><td>-.369</td><td>(-9.37)</td><td>U</td><td>.152</td><td>(3.86)</td><td>.207</td><td>(5.25)</td><td>e</td><td>.076</td><td>(1.93)</td><td>.076</td><td>(1.93)</td></tr> <tr><td>J</td><td>.000</td><td>(0.00)</td><td>-.399</td><td>(-10.13)</td><td>V</td><td>.233</td><td>(5.91)</td><td>.076</td><td>(1.93)</td><td>f</td><td>.076</td><td>(1.93)</td><td>-.076</td><td>(-1.93)</td></tr> <tr><td>K</td><td>-.152</td><td>(-3.86)</td><td>-.369</td><td>(-9.37)</td><td>W</td><td>.233</td><td>(5.91)</td><td>-.076</td><td>(-1.93)</td><td>g</td><td>-.076</td><td>(-1.93)</td><td>-.076</td><td>(-1.93)</td></tr> </tbody> </table>						I.D. NO	X		Y		I.D. NO	X		Y		I.D. NO	X		Y		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	A	.000	(0.00)	.399	(10.13)	L	-.282	(-7.16)	-.282	(-7.16)	X	.152	(3.86)	-.207	(-5.25)	B	.152	(3.86)	.369	(9.37)	M	-.369	(-9.37)	-.152	(-3.86)	Y	.000	(0.00)	-.245	(-6.22)	C	.282	(7.16)	.282	(7.16)	N	-.400	(-10.16)	.000	(0.00)	Z	-.152	(-3.86)	-.207	(-5.25)	D	.369	(9.37)	.152	(3.86)	P	-.369	(-9.37)	.152	(3.86)	a	-.233	(-5.91)	-.076	(-1.93)	E	.400	(10.16)	.000	(0.00)	R	-.282	(-7.16)	.282	(7.16)	b	-.233	(-5.91)	.076	(1.93)	F	.369	(9.37)	-.152	(-3.86)	S	-.152	(-3.86)	.369	(9.37)	c	-.152	(-3.86)	.207	(5.25)	G	.282	(7.16)	-.282	(-7.16)	T	.000	(0.00)	.245	(6.22)	d	-.076	(-1.93)	.076	(1.93)	H	.152	(3.86)	-.369	(-9.37)	U	.152	(3.86)	.207	(5.25)	e	.076	(1.93)	.076	(1.93)	J	.000	(0.00)	-.399	(-10.13)	V	.233	(5.91)	.076	(1.93)	f	.076	(1.93)	-.076	(-1.93)	K	-.152	(-3.86)	-.369	(-9.37)	W	.233	(5.91)	-.076	(-1.93)	g	-.076	(-1.93)	-.076	(-1.93)
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A	.000	(0.00)	.399	(10.13)	L	-.282	(-7.16)	-.282	(-7.16)	X	.152	(3.86)	-.207	(-5.25)																																																																																																																																																																												
B	.152	(3.86)	.369	(9.37)	M	-.369	(-9.37)	-.152	(-3.86)	Y	.000	(0.00)	-.245	(-6.22)																																																																																																																																																																												
C	.282	(7.16)	.282	(7.16)	N	-.400	(-10.16)	.000	(0.00)	Z	-.152	(-3.86)	-.207	(-5.25)																																																																																																																																																																												
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E	.400	(10.16)	.000	(0.00)	R	-.282	(-7.16)	.282	(7.16)	b	-.233	(-5.91)	.076	(1.93)																																																																																																																																																																												
F	.369	(9.37)	-.152	(-3.86)	S	-.152	(-3.86)	.369	(9.37)	c	-.152	(-3.86)	.207	(5.25)																																																																																																																																																																												
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J	.000	(0.00)	-.399	(-10.13)	V	.233	(5.91)	.076	(1.93)	f	.076	(1.93)	-.076	(-1.93)																																																																																																																																																																												
K	-.152	(-3.86)	-.369	(-9.37)	W	.233	(5.91)	-.076	(-1.93)	g	-.076	(-1.93)	-.076	(-1.93)																																																																																																																																																																												
<p>Insert Arrangement 20-30 30 #16 Contacts</p>	<p>Pin Connector (HOLE TO ACCEPT .028 (0.711) MAX CONTACT 30X)</p>	<table border="1"> <thead> <tr> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> <th rowspan="2">I.D. NO</th> <th colspan="2">X</th> <th colspan="2">Y</th> </tr> <tr> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> <th>In.</th> <th>mm</th> </tr> </thead> <tbody> <tr><td>A</td><td>.000</td><td>(0.00)</td><td>.399</td><td>(10.13)</td><td>L</td><td>-.282</td><td>(-7.16)</td><td>-.282</td><td>(-7.16)</td><td>X</td><td>.152</td><td>(3.86)</td><td>-.207</td><td>(-5.25)</td></tr> <tr><td>B</td><td>.152</td><td>(3.86)</td><td>.369</td><td>(9.37)</td><td>M</td><td>-.369</td><td>(-9.37)</td><td>-.152</td><td>(-3.86)</td><td>Y</td><td>.000</td><td>(0.00)</td><td>-.245</td><td>(-6.22)</td></tr> <tr><td>C</td><td>.282</td><td>(7.16)</td><td>.282</td><td>(7.16)</td><td>N</td><td>-.400</td><td>(-10.16)</td><td>.000</td><td>(0.00)</td><td>Z</td><td>-.152</td><td>(-3.86)</td><td>-.207</td><td>(-5.25)</td></tr> <tr><td>D</td><td>.369</td><td>(9.37)</td><td>.152</td><td>(3.86)</td><td>P</td><td>-.369</td><td>(-9.37)</td><td>.152</td><td>(3.86)</td><td>a</td><td>-.233</td><td>(-5.91)</td><td>-.076</td><td>(-1.93)</td></tr> <tr><td>E</td><td>.400</td><td>(10.16)</td><td>.000</td><td>(0.00)</td><td>R</td><td>-.282</td><td>(-7.16)</td><td>.282</td><td>(7.16)</td><td>b</td><td>-.233</td><td>(-5.91)</td><td>.076</td><td>(1.93)</td></tr> <tr><td>F</td><td>.369</td><td>(9.37)</td><td>-.152</td><td>(-3.86)</td><td>S</td><td>-.152</td><td>(-3.86)</td><td>.369</td><td>(9.37)</td><td>c</td><td>-.152</td><td>(-3.86)</td><td>.207</td><td>(5.25)</td></tr> <tr><td>G</td><td>.282</td><td>(7.16)</td><td>-.282</td><td>(-7.16)</td><td>T</td><td>.000</td><td>(0.00)</td><td>.245</td><td>(6.22)</td><td>d</td><td>-.076</td><td>(-1.93)</td><td>.076</td><td>(1.93)</td></tr> <tr><td>H</td><td>.152</td><td>(3.86)</td><td>-.369</td><td>(-9.37)</td><td>U</td><td>.152</td><td>(3.86)</td><td>.207</td><td>(5.25)</td><td>e</td><td>.076</td><td>(1.93)</td><td>.076</td><td>(1.93)</td></tr> <tr><td>J</td><td>.000</td><td>(0.00)</td><td>-.399</td><td>(-10.13)</td><td>V</td><td>.233</td><td>(5.91)</td><td>.076</td><td>(1.93)</td><td>f</td><td>.076</td><td>(1.93)</td><td>-.076</td><td>(-1.93)</td></tr> <tr><td>K</td><td>-.152</td><td>(-3.86)</td><td>-.369</td><td>(-9.37)</td><td>W</td><td>.233</td><td>(5.91)</td><td>-.076</td><td>(-1.93)</td><td>g</td><td>-.076</td><td>(-1.93)</td><td>-.076</td><td>(-1.93)</td></tr> </tbody> </table>						I.D. NO	X		Y		I.D. NO	X		Y		I.D. NO	X		Y		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	A	.000	(0.00)	.399	(10.13)	L	-.282	(-7.16)	-.282	(-7.16)	X	.152	(3.86)	-.207	(-5.25)	B	.152	(3.86)	.369	(9.37)	M	-.369	(-9.37)	-.152	(-3.86)	Y	.000	(0.00)	-.245	(-6.22)	C	.282	(7.16)	.282	(7.16)	N	-.400	(-10.16)	.000	(0.00)	Z	-.152	(-3.86)	-.207	(-5.25)	D	.369	(9.37)	.152	(3.86)	P	-.369	(-9.37)	.152	(3.86)	a	-.233	(-5.91)	-.076	(-1.93)	E	.400	(10.16)	.000	(0.00)	R	-.282	(-7.16)	.282	(7.16)	b	-.233	(-5.91)	.076	(1.93)	F	.369	(9.37)	-.152	(-3.86)	S	-.152	(-3.86)	.369	(9.37)	c	-.152	(-3.86)	.207	(5.25)	G	.282	(7.16)	-.282	(-7.16)	T	.000	(0.00)	.245	(6.22)	d	-.076	(-1.93)	.076	(1.93)	H	.152	(3.86)	-.369	(-9.37)	U	.152	(3.86)	.207	(5.25)	e	.076	(1.93)	.076	(1.93)	J	.000	(0.00)	-.399	(-10.13)	V	.233	(5.91)	.076	(1.93)	f	.076	(1.93)	-.076	(-1.93)	K	-.152	(-3.86)	-.369	(-9.37)	W	.233	(5.91)	-.076	(-1.93)	g	-.076	(-1.93)	-.076	(-1.93)
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F	.369	(9.37)	-.152	(-3.86)	S	-.152	(-3.86)	.369	(9.37)	c	-.152	(-3.86)	.207	(5.25)																																																																																																																																																																												
G	.282	(7.16)	-.282	(-7.16)	T	.000	(0.00)	.245	(6.22)	d	-.076	(-1.93)	.076	(1.93)																																																																																																																																																																												
H	.152	(3.86)	-.369	(-9.37)	U	.152	(3.86)	.207	(5.25)	e	.076	(1.93)	.076	(1.93)																																																																																																																																																																												
J	.000	(0.00)	-.399	(-10.13)	V	.233	(5.91)	.076	(1.93)	f	.076	(1.93)	-.076	(-1.93)																																																																																																																																																																												
K	-.152	(-3.86)	-.369	(-9.37)	W	.233	(5.91)	-.076	(-1.93)	g	-.076	(-1.93)	-.076	(-1.93)																																																																																																																																																																												

A

Geo-Marine® PCB Footprints: Size 20 (continued)

Insert Arrangement	PCB Footprint
<p>Insert Arrangement 20-38 8 #16 Contacts 30 #22 Contacts</p>	<p>Pin Connector</p>
<p>Insert Arrangement 20-41 41 #20 Contacts</p>	<p>PIN CONNECTOR</p>
<p>Insert Arrangement 20-79 79 #22 Contacts</p>	<p>Pin Connector</p>

I.D. NO	X	Y	I.D. NO	X	Y	I.D. NO	X	Y	I.D. NO	X	Y
	In. mm	In. mm		In. mm	In. mm		In. mm	In. mm		In. mm	In. mm
1	.053 (1.35)	426 (10.82)	21	-.427 (-10.84)	-.048 (-1.22)	41	-.098 (-2.48)	-.322 (-8.18)	61	-.134 (-3.40)	-.199 (-5.05)
2	.146 (3.71)	404 (10.26)	22	-.427 (-10.84)	.048 (1.22)	42	-.184 (-4.67)	-.280 (-7.11)	62	-.208 (-5.28)	-.139 (-3.53)
3	.232 (5.89)	362 (9.19)	23	-.406 (-10.31)	.141 (3.58)	43	-.258 (-6.55)	-.220 (-5.59)	63	-.237 (-6.02)	-.048 (-1.22)
4	.306 (7.77)	302 (7.67)	24	-.365 (-9.27)	.227 (5.76)	44	-.311 (-7.90)	-.141 (-3.58)	64	-.237 (-6.02)	.048 (1.22)
5	.365 (9.27)	227 (5.76)	25	-.306 (-7.77)	.302 (7.67)	45	-.332 (-8.43)	-.048 (-1.22)	65	-.208 (-5.28)	.139 (3.53)
6	.406 (10.31)	141 (3.58)	26	-.232 (-5.89)	.362 (9.19)	46	-.332 (-8.43)	.048 (1.22)	66	-.134 (-3.40)	.199 (5.05)
7	.427 (10.84)	.048 (1.22)	27	-.146 (-3.71)	.404 (10.26)	47	-.311 (-7.90)	.141 (3.58)	67	-.048 (-1.22)	.146 (3.71)
8	.427 (10.84)	-.048 (-1.22)	28	-.053 (-1.35)	.426 (10.82)	48	-.258 (-6.55)	.220 (5.59)	68	.048 (1.22)	.146 (3.71)
9	.406 (10.31)	-.141 (-3.58)	29	.000 (0.00)	.323 (8.20)	49	-.184 (-4.67)	.280 (7.11)	69	-.125 (-3.17)	.090 (2.28)
10	.365 (9.27)	-.227 (-5.76)	30	.098 (2.48)	.322 (8.18)	50	-.098 (-2.48)	.322 (8.18)	70	.155 (3.94)	.000 (0.00)
11	.306 (7.77)	-.302 (-7.67)	31	.184 (4.67)	.280 (7.11)	51	-.048 (-1.22)	.241 (6.12)	71	.125 (3.17)	-.090 (-2.28)
12	.232 (5.89)	-.362 (-9.19)	32	.258 (6.55)	.220 (5.59)	52	.048 (1.22)	.241 (6.12)	72	.048 (1.22)	-.146 (-3.71)
13	.146 (3.71)	-.404 (-10.26)	33	.311 (7.90)	-.141 (-3.58)	53	.134 (3.40)	.199 (5.05)	73	.048 (1.22)	-.146 (-3.71)
14	.053 (1.35)	-.426 (-10.82)	34	.332 (8.43)	.048 (1.22)	54	.208 (5.28)	.139 (3.53)	74	-.125 (-3.17)	-.090 (-2.28)
15	-.053 (-1.35)	-.426 (-10.82)	35	.332 (8.43)	-.048 (-1.22)	55	.237 (6.02)	.048 (1.22)	75	-.155 (-3.94)	.000 (0.00)
16	-.146 (-3.71)	-.404 (-10.26)	36	.311 (7.90)	-.141 (-3.58)	56	.237 (6.02)	-.048 (-1.22)	76	-.125 (-3.17)	.090 (2.28)
17	-.232 (-5.89)	-.362 (-9.19)	37	.258 (6.55)	-.220 (-5.59)	57	.208 (5.28)	-.139 (-3.53)	77	.000 (0.00)	.053 (1.35)
18	-.306 (-7.77)	-.302 (-7.67)	38	.184 (4.67)	-.280 (-7.11)	58	.134 (3.40)	-.199 (-5.05)	78	.048 (1.22)	-.029 (-0.74)
19	-.365 (-9.27)	-.227 (-5.76)	39	.098 (2.48)	-.322 (-8.18)	59	.048 (1.22)	-.241 (-6.12)	79	-.048 (-1.22)	-.029 (-0.74)
20	-.406 (-10.31)	-.141 (-3.58)	40	.000 (0.00)	-.347 (-8.81)	60	-.048 (-1.22)	-.241 (-6.12)			

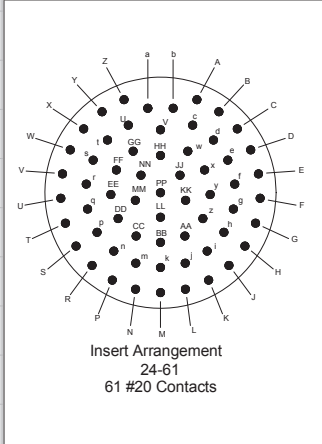
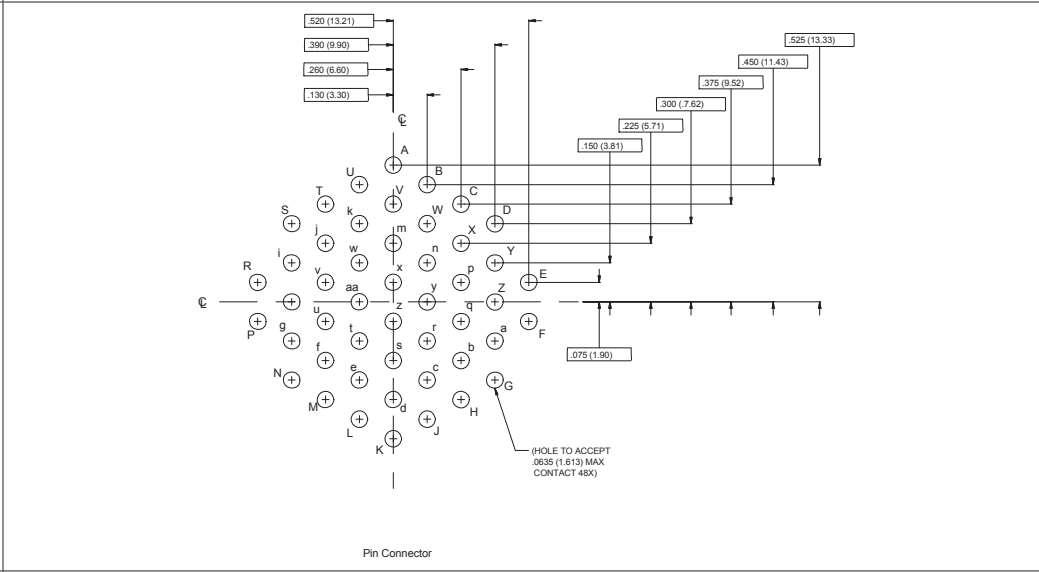
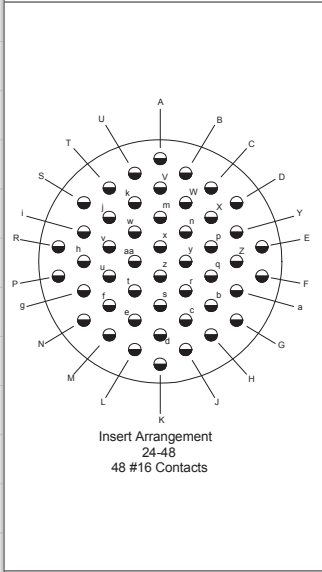
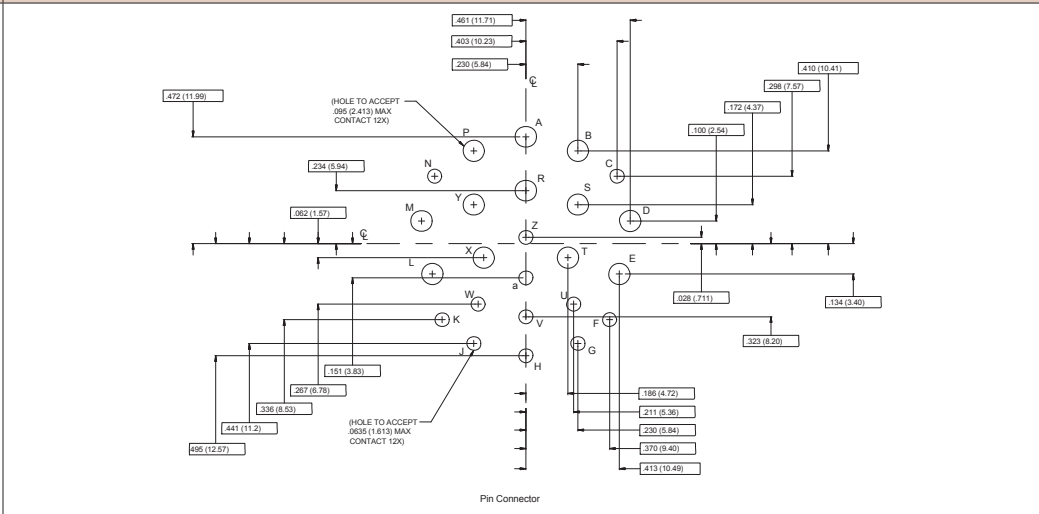
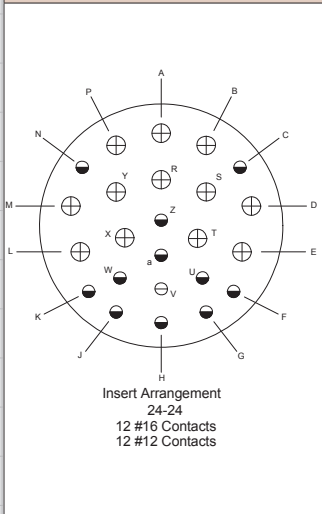
# Series 22 Geo-Marine® Harsh-Environment Connectors, Cables and Accessories PCB Footprints



Geo-Marine  
Introduction

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## Geo-Marine® PCB Footprints: Size 24



**PCB Footprint**

Pin Connector

I.D. NO.	X	Y	I.D. NO.	X	Y	I.D. NO.	X	Y
	in. mm.	in. mm.		in. mm.	in. mm.		in. mm.	in. mm.
A	.196 (4.98)	.500 (12.7)	a	.068 (1.72)	.454 (11.53)	AA	.131 (3.33)	-.233 (-5.92)
B	.314 (7.98)	.435 (11.05)	b	-.068 (-1.72)	.454 (11.53)	BB	.000 (0.00)	-.267 (-6.78)
C	.413 (10.5)	.343 (8.71)	c	.173 (4.39)	.363 (9.22)	CC	-.131 (-3.33)	-.233 (-5.92)
D	.485 (12.3)	.230 (5.84)	d	.285 (7.24)	.283 (7.19)	DD	-.228 (-5.79)	-.139 (-3.53)
E	.527 (13.4)	.101 (2.57)	e	.362 (9.19)	.175 (4.44)	EE	-.267 (-6.78)	-.010 (-.254)
F	.536 (13.6)	-.030 (-.762)	f	.399 (10.1)	.046 (1.17)	FF	-.237 (-6.02)	.122 (3.099)
G	.511 (13.0)	-.164 (-4.165)	g	.392 (9.95)	-.088 (-2.24)	GG	-.147 (-3.73)	.223 (5.66)
H	.454 (11.5)	-.287 (-7.29)	h	.341 (8.66)	-.213 (-5.41)	HH	.000 (0.00)	-.200 (-5.08)
J	.368 (9.34)	-.391 (-9.93)	i	.251 (6.37)	-.314 (-7.97)	JJ	.105 (2.67)	-.094 (2.39)
K	.259 (6.58)	-.470 (-11.94)	j	.133 (3.38)	-.379 (-9.63)	KK	.135 (3.43)	-.041 (-1.04)
L	.134 (3.40)	-.519 (-13.18)	k	.000 (0.00)	-.402 (-10.21)	LL	.000 (0.00)	-.132 (-3.35)
M	.000 (0.00)	-.537 (-13.64)	m	-.133 (-3.38)	-.379 (-9.63)	MM	-.135 (-3.43)	-.041 (-1.04)
N	-.134 (-3.40)	-.519 (-13.18)	n	-.251 (-6.37)	-.314 (-7.97)	NN	-.105 (-2.67)	.094 (2.39)
P	-.259 (-6.58)	-.470 (-11.94)	p	-.341 (-8.66)	-.213 (-5.41)	PP	.000 (0.00)	.000 (0.00)
R	-.368 (-9.34)	-.391 (-9.93)	q	-.392 (-9.95)	-.088 (-2.24)			
S	-.454 (-11.5)	-.287 (-7.29)	r	-.399 (-10.1)	.046 (1.17)			
T	-.511 (-13.0)	-.164 (-4.16)	s	-.362 (-9.19)	.175 (4.44)			
U	-.536 (-13.6)	-.030 (-.762)	t	-.285 (-7.24)	.283 (7.19)			
V	-.527 (-13.4)	.101 (2.57)	u	-.173 (-4.39)	.363 (9.22)			
W	-.485 (-12.3)	.230 (5.84)	v	.000 (0.00)	.338 (8.58)			
X	-.413 (-10.5)	.343 (8.71)	w	.147 (3.73)	.223 (5.66)			
Y	-.314 (-7.98)	.435 (11.05)	x	.237 (6.02)	.122 (3.099)			
Z	-.196 (-4.98)	.500 (12.7)	y	.267 (6.78)	-.010 (-.254)			
			z	.228 (5.79)	-.139 (-3.53)			



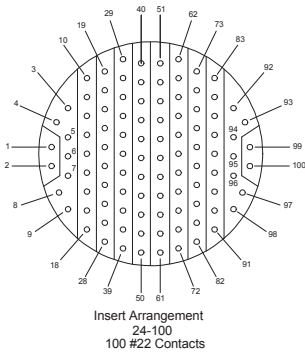


# Series 22 Geo-Marine® Harsh-Environment Connectors, Cables and Accessories PCB Footprints

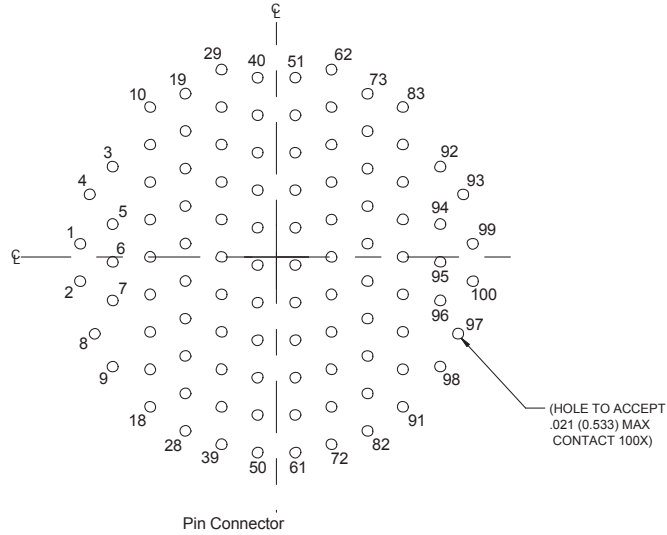
A

## Geo-Marine® PCB Footprints: Size 24

### Insert Arrangement



### PCB Footprint



Pin Connector

I.D. NO.	X		Y		I.D. NO.	X		Y		I.D. NO.	X		Y	
	In. mm.	In. mm.	In. mm.	In. mm.		In. mm.	In. mm.	In. mm.	In. mm.		In. mm.	In. mm.	In. mm.	In. mm.
1	-.550 (-13.97)	.039 (.990)	26	.255 (-6.48)	- .278 (-7.06)	51	.053 (1.35)	.502 (12.75)	76	.255 (6.48)	-.142 (3.607)			
2	-.550 (-13.97)	-.068 (-1.73)	27	.255 (-6.48)	-.383 (-9.73)	52	.053 (1.35)	.397 (10.08)	77	.255 (6.48)	.037 (.940)			
3	-.459 (-11.67)	.253 (6.42)	28	.255 (-6.48)	-.488 (-12.39)	53	.053 (1.35)	.292 (7.42)	78	.255 (6.48)	-.068 (-1.73)			
4	-.523 (-13.3)	.175 (4.44)	29	.154 (-3.91)	.525 (13.34)	54	.053 (1.35)	.187 (4.75)	79	.255 (6.48)	-.173 (-4.39)			
5	-.459 (-11.67)	.092 (2.34)	30	-.154 (-3.91)	.420 (10.67)	55	.053 (1.35)	.082 (2.083)	80	.255 (6.48)	-.278 (-7.06)			
6	-.459 (-11.67)	-.014 (-.355)	31	-.154 (-3.91)	.315 (8.00)	56	.053 (1.35)	-.023 (-.584)	81	.255 (6.48)	-.383 (-9.73)			
7	-.459 (-11.67)	-.122 (-3.099)	32	-.154 (-3.91)	.210 (5.33)	57	.053 (1.35)	-.128 (-3.25)	82	.255 (6.48)	-.488 (-12.39)			
8	-.509 (-12.9)	-.215 (-5.46)	33	-.154 (-3.91)	.105 (2.67)	58	.053 (1.35)	-.233 (-5.92)	83	.354 (8.99)	.420 (10.67)			
9	-.459 (-11.67)	-.307 (-7.80)	34	.154 (-3.91)	.000 (0.00)	59	.053 (1.35)	-.338 (-8.58)	84	.354 (8.99)	.315 (8.00)			
10	-.354 (-8.99)	.420 (10.67)	35	-.154 (-3.91)	-.105 (-2.67)	60	.053 (1.35)	-.443 (-11.25)	85	.354 (8.99)	.210 (5.33)			
11	-.354 (-8.99)	.315 (8.00)	36	-.154 (-3.91)	-.210 (-5.33)	61	.053 (1.35)	-.548 (-13.92)	86	.354 (8.99)	.105 (2.67)			
12	-.354 (-8.99)	.210 (5.33)	37	-.154 (-3.91)	-.315 (-8.00)	62	.154 (3.91)	.525 (13.34)	87	.354 (8.99)	.000 (0.00)			
13	-.354 (-8.99)	.105 (2.67)	38	-.154 (-3.91)	-.420 (-10.67)	63	.154 (3.91)	.420 (10.67)	88	.354 (8.99)	-.105 (-2.67)			
14	-.354 (-8.99)	.000 (0.00)	39	.154 (-3.91)	-.525 (-13.34)	64	.154 (3.91)	.315 (8.00)	89	.354 (8.99)	-.210 (-5.33)			
15	-.354 (-8.99)	-.105 (-2.67)	40	.053 (-1.35)	.502 (12.75)	65	.154 (3.91)	.210 (5.33)	90	.354 (8.99)	-.315 (-8.00)			
16	-.354 (-8.99)	-.210 (-5.33)	41	-.053 (-1.35)	.397 (10.08)	66	.154 (3.91)	.105 (2.67)	91	.354 (8.99)	-.420 (-10.67)			
17	-.354 (-8.99)	-.315 (-8.00)	42	-.053 (-1.35)	.292 (7.42)	67	.154 (3.91)	.000 (0.00)	92	.459 (11.66)	.253 (6.42)			
18	-.354 (-8.99)	-.420 (-10.67)	43	-.053 (-1.35)	.187 (4.75)	68	.154 (3.91)	-.105 (-2.67)	93	.523 (13.28)	.175 (4.44)			
19	-.255 (-6.47)	.457 (11.60)	44	-.053 (-1.35)	.082 (2.08)	69	.154 (3.91)	-.210 (-5.33)	94	.459 (11.66)	.092 (2.34)			
20	-.255 (-6.47)	.352 (8.94)	45	-.053 (-1.35)	-.023 (-.58)	70	.154 (3.91)	-.315 (-8.00)	95	.459 (11.66)	-.014 (-.356)			
21	-.255 (-6.47)	.247 (6.27)	46	-.053 (-1.35)	-.128 (-3.25)	71	.154 (3.91)	-.420 (-10.67)	96	.459 (11.66)	-.122 (-3.10)			
22	-.255 (-6.47)	.142 (3.61)	47	-.053 (-1.35)	-.233 (-5.92)	72	.154 (3.91)	-.525 (-13.34)	97	.509 (12.93)	-.215 (-5.46)			
23	-.255 (-6.47)	.037 (.94)	48	-.053 (-1.35)	-.338 (-8.58)	73	.255 (6.48)	.457 (11.60)	98	.459 (11.66)	-.307 (-7.80)			
24	-.255 (-6.47)	-.068 (-1.73)	49	-.053 (-1.35)	-.443 (-11.25)	74	.255 (6.48)	.352 (8.94)	99	.550 (13.97)	.039 (.991)			
25	-.255 (-6.47)	-.173 (-4.39)	50	-.053 (-1.35)	-.548 (-13.92)	75	.255 (6.48)	.247 (6.27)	100	.550 (13.97)	-.068 (-1.73)			

# Series 22 Geo-Marine® Harsh-Environment Connectors, Cables and Accessories PCB Footprints

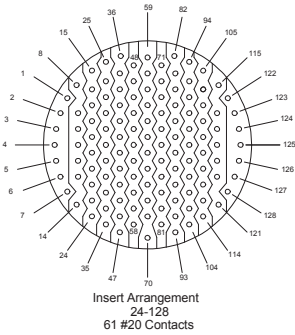


Geo-Marine  
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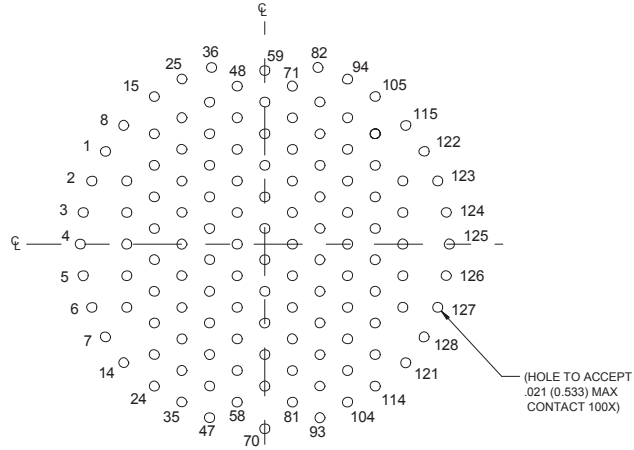
A

## Geo-Marine® PCB Footprints: Size 24

### Insert Arrangement



### PCB Footprint



### Pin Connector

I.D. NO.	X In. mm.	Y In. mm.	I.D. NO.	X In. mm.	Y In. mm.	I.D. NO.	X In. mm.	Y In. mm.	I.D. NO.	X In. mm.	Y In. mm.
1	-.479 (-12.17)	.279 (7.09)	33	-.249 (-6.32)	-.285 (-7.24)	65	.000 (0.000)	-.047 (-1.19)	97	.249 (6.32)	.190 (4.82)
2	-.520 (-13.21)	.190 (4.82)	34	-.249 (-6.32)	-.380 (-9.65)	66	.000 (0.000)	-.142 (-3.607)	98	.249 (6.32)	.095 (2.41)
3	-.546 (-13.87)	.095 (2.41)	35	-.249 (-6.32)	-.475 (-12.06)	67	.000 (0.000)	-.237 (-6.02)	99	.249 (6.32)	.000 (0.000)
4	-.555 (-14.1)	.000 (0.000)	36	-.160 (-4.06)	.531 (13.48)	68	.000 (0.000)	-.332 (-8.43)	100	.249 (6.32)	.095 (-2.41)
5	-.546 (-13.87)	-.095 (-2.41)	37	-.166 (-4.21)	.427 (10.84)	69	.000 (0.000)	-.427 (-10.84)	101	.249 (6.32)	.190 (-4.82)
6	-.520 (-13.2)	-.190 (-4.82)	38	-.166 (-4.21)	.332 (8.43)	70	.000 (0.000)	-.555 (-14.1)	102	.249 (6.32)	.285 (-7.24)
7	-.479 (-12.17)	-.279 (-7.09)	39	-.166 (-4.21)	.237 (6.02)	71	.083 (2.11)	.475 (12.06)	103	.249 (6.32)	.380 (-9.65)
8	-.424 (-10.77)	.357 (9.07)	40	-.166 (-4.21)	.142 (3.607)	72	.083 (2.11)	.380 (9.65)	104	.249 (6.32)	.475 (-12.06)
9	-.415 (-10.54)	.190 (4.82)	41	-.166 (-4.21)	.047 (1.19)	73	.083 (2.11)	.285 (7.24)	105	.332 (8.43)	.444 (11.27)
10	-.415 (-10.54)	.095 (2.41)	42	-.166 (-4.21)	-.047 (-1.19)	74	.083 (2.11)	.190 (4.82)	106	.332 (8.43)	.332 (8.43)
11	-.415 (-10.54)	.000 (0.000)	43	-.166 (-4.21)	-.142 (-3.607)	75	.083 (2.11)	.095 (2.41)	107	.332 (8.43)	.237 (6.02)
12	-.415 (-10.54)	-.095 (-2.41)	44	-.166 (-4.21)	-.237 (-6.02)	76	.083 (2.11)	.000 (0.000)	108	.332 (8.43)	.142 (3.607)
13	-.415 (-10.54)	-.190 (-4.82)	45	-.166 (-4.21)	-.332 (-8.43)	77	.083 (2.11)	-.095 (-2.41)	109	.332 (8.43)	.047 (1.19)
14	-.424 (-10.77)	-.357 (-9.07)	46	-.166 (-4.21)	-.427 (-10.84)	78	.083 (2.11)	-.190 (-4.82)	110	.332 (8.43)	.047 (-1.19)
15	-.332 (-8.43)	.444 (11.27)	47	-.166 (-4.21)	-.522 (-13.26)	79	.083 (2.11)	-.285 (-7.24)	111	.332 (8.43)	.142 (-3.607)
16	-.332 (-8.43)	.332 (8.43)	48	-.083 (-2.11)	.475 (12.06)	80	.083 (2.11)	-.380 (-9.65)	112	.332 (8.43)	.237 (-6.02)
17	-.332 (-8.43)	.237 (6.02)	49	-.083 (-2.11)	.380 (9.65)	81	.083 (2.11)	-.475 (-12.06)	113	.332 (8.43)	.332 (-8.43)
18	-.332 (-8.43)	.142 (3.607)	50	-.083 (-2.11)	.285 (7.24)	82	.160 (4.06)	.531 (13.5)	114	.332 (8.43)	.427 (-10.84)
19	-.332 (-8.43)	.047 (1.19)	51	-.083 (-2.11)	.190 (4.82)	83	.166 (4.21)	.427 (10.84)	115	.424 (10.77)	.357 (9.07)
20	-.332 (-8.43)	-.047 (-1.19)	52	-.083 (-2.11)	.095 (2.41)	84	.166 (4.21)	.332 (8.43)	116	.415 (10.54)	.190 (4.82)
21	-.332 (-8.43)	-.142 (-3.607)	53	-.083 (-2.11)	.000 (0.000)	85	.166 (4.21)	.237 (6.02)	117	.415 (10.54)	.095 (2.41)
22	-.332 (-8.43)	-.237 (-6.02)	54	-.083 (-2.11)	-.095 (-2.41)	86	.166 (4.21)	.142 (3.607)	118	.415 (10.54)	.000 (0.000)
23	-.332 (-8.43)	-.332 (-8.43)	55	-.083 (-2.11)	-.190 (-4.82)	87	.166 (4.21)	.047 (1.19)	119	.415 (10.54)	.095 (2.41)
24	-.332 (-8.43)	-.427 (-10.84)	56	-.083 (-2.11)	-.285 (-7.24)	88	.166 (4.21)	-.047 (-1.19)	120	.415 (10.54)	.190 (-4.82)
25	-.249 (-6.32)	.496 (12.6)	57	-.083 (-2.11)	-.380 (-9.65)	89	.166 (4.21)	-.142 (-3.607)	121	.424 (10.77)	.357 (-9.07)
26	-.249 (-6.32)	.380 (9.65)	58	-.083 (-2.11)	-.475 (-12.06)	90	.166 (4.21)	-.237 (-6.02)	122	.479 (12.17)	.279 (7.08)
27	-.249 (-6.32)	.285 (7.24)	59	.000 (0.000)	.522 (13.26)	91	.166 (4.21)	-.332 (-8.43)	123	.520 (13.2)	.190 (4.82)
28	-.249 (-6.32)	.190 (4.82)	60	.000 (0.000)	.427 (10.84)	92	.166 (4.21)	-.427 (-10.84)	124	.546 (13.87)	.095 (2.41)
29	-.249 (-6.32)	.095 (2.41)	61	.000 (0.000)	.332 (8.43)	93	.166 (4.21)	-.522 (-13.26)	125	.555 (14.1)	.000 (0.000)
30	-.249 (-6.32)	.000 (0.000)	62	.000 (0.000)	.237 (6.02)	94	.249 (6.32)	.496 (12.6)	126	.546 (13.87)	.095 (-2.41)
31	-.249 (-6.32)	-.095 (-2.41)	63	.000 (0.000)	.142 (3.607)	95	.249 (6.32)	.380 (9.65)	127	.520 (13.2)	.190 (-4.82)
32	-.249 (-6.32)	-.190 (-4.82)	64	.000 (0.000)	.047 (1.19)	96	.249 (6.32)	.285 (7.24)	128	.479 (12.17)	.279 (-7.08)