

Standard  
Density  
Rectangular

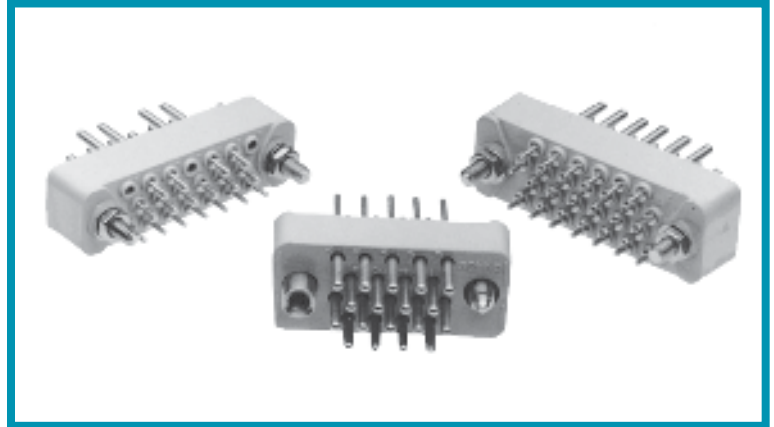
# HEAVY-DUTY RECTANGULAR PRINTED BOARD CONNECTORS WITH STRAIGHT SOLDER CONTACTS



Positronic Industries  
connectpositronic.com

Size 16 Contacts  
Conforms to  
MIL-DTL-28748  
IEC Publication 807-1

U.L. Recognized,  
File #E49351  
Telecommunication  
U.L. File #E140980



GAP SERIES

GAP Series connectors are heavy-duty, multi-pole, low profile, high reliability connectors. Contacts are male only with 0.062 inch [1.57mm] diameters, rated to 7.5 amperes per contact. Termination style is straight solder printed board mount. GAP Series connectors are intermateable with Positronic GMCT Series connectors.

A wide array of mounting, locking and polarizing accessories

is available for this series. For details, see the Heavy-Duty Rectangular Connector Accessories section.

Due to its printed board mount termination style, and its 0.062 inch [1.57mm] diameter contacts, the GAP Series is ideal for heavy-duty applications found in avionics, medical equipment, telecommunications, instrumentation and process control applications.

## GAP SERIES TECHNICAL CHARACTERISTICS

### MILITARY SPECIFICATIONS:

Conforms to MIL-DTL-28748.

### INTERNATIONAL STANDARDS:

IEC 807-1.  
U.L. Recognized.

### MATERIALS AND FINISHES:

<b>Insulator:</b>	Glass filled DAP per ASTM-D-5948 type SDG-F. Grey color is standard, black available.
<b>Fixed Contacts:</b>	Copper alloy with gold flash over nickel. Other finishes available upon request.
<b>Jackscrew System:</b>	Passivated stainless steel.
<b>Polarizing Guides:</b>	Copper alloy with nickel plate or passivated stainless steel.
<b>Vibration Locks:</b>	Copper alloy with zinc plate and chromate seal.

### MECHANICAL CHARACTERISTICS:

<b>Fixed Contacts:</b>	<b>Male</b> – Size 16: 0.062 inch [1.57 mm] diameter.
<b>Contact Retention in Insulator:</b>	10 lbs. [44.5N] minimum.
<b>Contact Termination:</b>	Straight printed board mounted.
<b>Locking Systems:</b>	Friction, vibration locks and jackscrews.
<b>Polarization:</b>	Guide pins and guide sockets, and jackscrew system.
<b>Mechanical Operations:</b>	1000 operations per IEC 512-5.
<b>Jackscrews:</b>	Standard threads, 6-32 UNC. Metric threads, M3X0.5 available.

### ELECTRICAL CHARACTERISTICS:

<b>Contact Current Rating (maximum):</b>	7.5 amperes limited at contact termination diameter.
<b>Initial Contact Resistance:</b>	0.003 ohms.
<b>Flash over Voltage:</b>	2500 V.AC [rms].
<b>Test Voltage:</b>	1200 V.AC [rms].
<b>Insulation Resistance (minimum):</b>	5 G ohms.
<b>Clearance and Creepage Distance (minimum):</b>	0.047 inch [1.19 mm].
<b>Working Temperature:</b>	-55°C to 125°C.
<b>Working Voltage:</b>	250 V.AC [rms].



For RoHS options  
see page 25.



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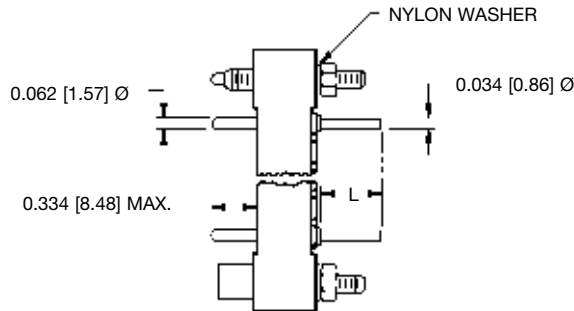
# HEAVY-DUTY RECTANGULAR PRINTED BOARD CONNECTORS WITH STRAIGHT SOLDER CONTACTS

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## STRAIGHT SOLDER CONTACTS

MALE ONLY

CONTACT MATERIAL: COPPER ALLOY  
CONTACT FINISH: GOLD FLASH OVER NICKEL



CONTACT CODE	L
DS3	0.093 [2.36]
DS4	0.125 [3.18]
DS5	0.156 [3.96]
DS6	0.187 [4.75]

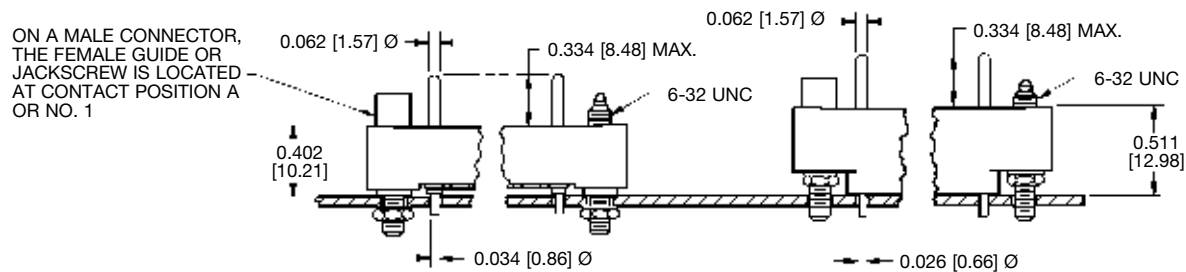
Typical Part Number: GAP34MDS6T0000

SEE GMCT SERIES PRINTED BOARD  
HOLE PATTERN PAGE FOR CONNECTOR  
VARIANT CONTACT HOLE POSITIONS

SPECIFY CONTACT CODE IN STEP 4 OF  
ORDERING INFORMATION FOR DESIRED  
LENGTH OF CONTACT TERMINATION

### GAP SERIES, LOW PROFILE, PRINTED BOARD MOUNT CONNECTOR

### GMCT SERIES, HIGH PROFILE, PRINTED BOARD MOUNT CONNECTOR



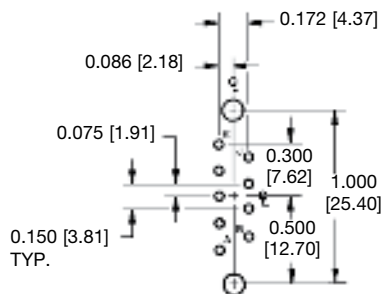
GAP34MDS4T0000

GMCT34M0T0000 WITH  
MDS125N CONTACTS INSTALLED

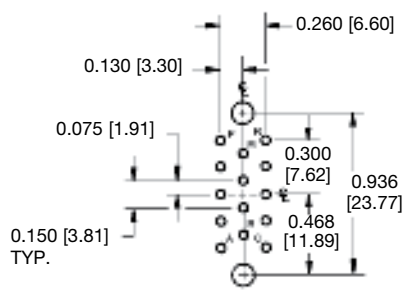


## CONTACT HOLE POSITION DIMENSIONS AND PRINTED BOARD HOLE PATTERN

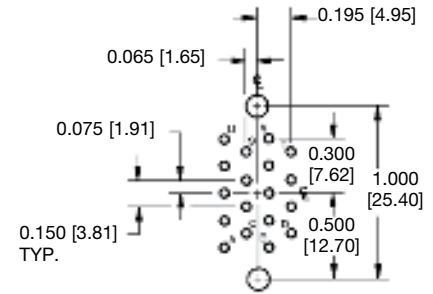
### MATING FACE OF MALE CONNECTOR



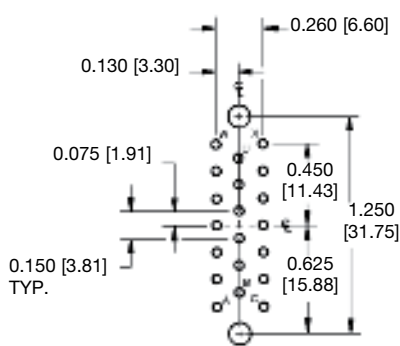
SIZE 9



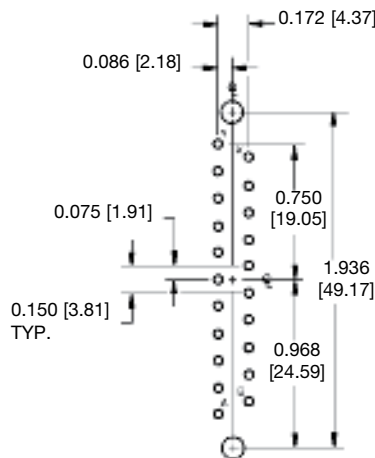
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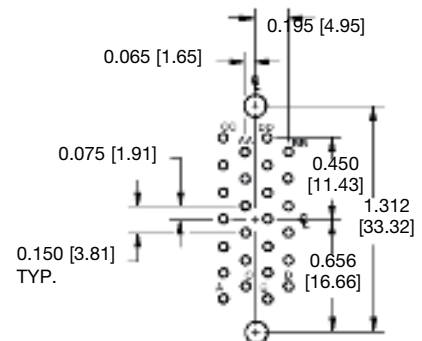
SIZE 18



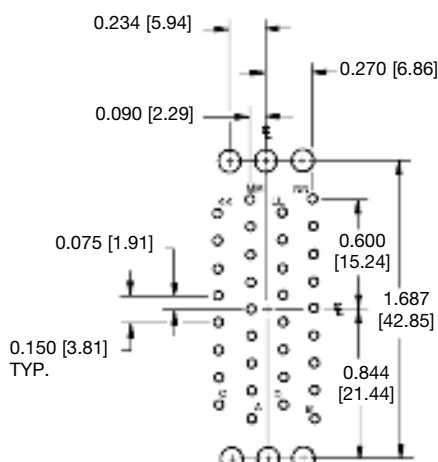
SIZE 20



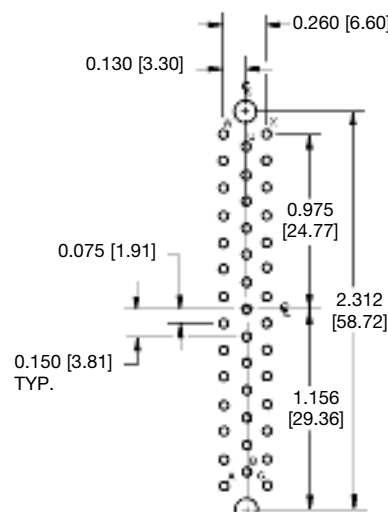
SIZE 21



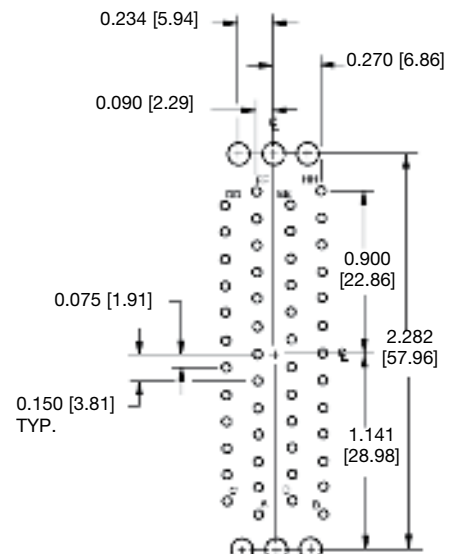
SIZE 26



SIZE 34



SIZE 41



SIZE 50

**HOLE IDENTIFICATION FOR REFERENCE ONLY**

**SUGGEST 0.120 [3.05] Ø HOLES IN PRINTED BOARD FOR CONNECTOR MOUNTING HOLES**

**SUGGEST 0.052 [1.32] Ø HOLES IN PRINTED BOARD FOR GAP SERIES CONNECTOR CONTACT TERMINATIONS**

**DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE. 24**



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## ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 9

STEP	1	2	3	4	5	6	7	8	9	10	11
EXAMPLE	GAP	26	M	DS4	T	0	0	0	0	/AA	-14

### STEP 1 - BASIC SERIES

GAP Series  
(Male Connector Only).

### STEP 2 - CONNECTOR VARIANTS

9, 14, 18, 20, 21, 26, 34, 41, 50

### STEP 3 - CONNECTOR GENDER

M - Male insulator only

### STEP 4 - CONTACT TERMINATION TYPE

- DS3 - Straight solder 0.093 [2.36]
- DS4 - Straight solder 0.125 [3.18]
- DS5 - Straight solder 0.156 [3.96]
- DS6 - Straight solder 0.187 [4.75]

### \*STEP 5 - POLARIZING GUIDES AND JACKSCREW SYSTEM

- G - Polarizing grounding guides.
- N - Polarizing guides.
- NSS - Stainless steel polarizing guides.
- T - Fixed jackscrews.
- 0 - If no polarizing guides or jackscrews are required.

### \*STEP 6 - SHELLS

- P - Male shell, not available on 41 variant.
- R - Female shell, not available on 41 variant.
- 0 - If no shells or mounting plates are required.

### STEP 11 - SPECIAL OPTIONS

- 14 - Contacts plated 0.000030 [0.76µ] gold over nickel.
- 50 - Contacts plated 0.000050 [1.27µ] gold over copper.

**CONTACT TECHNICAL SALES  
FOR SPECIAL OPTIONS**

### STEP 10 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - Compliant per EU Directive 2002/95/EC (RoHS)



**NOTE:** If compliance to environmental legislation is not required, this step will not be used. Example: GAP26MDS4T0000

### \*STEP 9 - ADDITIONAL FEATURES

- B - For black anodized aluminum parts.
- R - For yellow chromate coating on aluminum parts.
- V - Lock tab, offered on 9, 14, 18, 20, 21, 26, 34 and 41 variants.
- 0 - If no additional options are required.

### \*STEP 8 - CABLE ADAPTERS (HOODS)

- 0 - Not offered for GAP series.

### \*STEP 7 - POLARIZATION POSITIONS OF SHELLS

Select letter to designate position of male pin or female slot for polarization system.

A, B, C, D, E, F, G

- 0 - If no polarization is required or if no shells are required.

**\*NOTE:** FOR DETAILS OF ITEMS LISTED IN STEPS 5 THROUGH 9, SEE HEAVY-DUTY RECTANGULAR CONNECTOR ACCESSORIES SECTION ON PAGES 44-59.