# DIN 41612 Connector System

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# DIN

## SPECIFICATIONS

| Series | 6003 | 6033 | 6043 |
|---|---|---|---|
| **DIN 41612 Style** | D & E | B & C | Q & R |
| **GENERAL** | | | |
| No. of Contacts | 32,48 | 32,48,64,96 | 20,32,48,96 |
| Temperature Range | -65°C to +125°C | -60°C to +140°C | -65°C to +140°C |
| **ELECTRICAL DATA** | | | |
| Current Rating | 4 Amps @ 70°C | 1 Amp @ 70°C | 1 Amp @ 70°C |
| Contact Resistance | 20 Milliohms (Max) | 20 Milliohms (Max) | 20 Milliohms (Max) |
| **MATERIALS** | | | |
| Insulator | Polycarbonate | Thermoplastic Polyester | Thermoplastic Polyester |
| Contact (Pin) | CuZn | CuZn | CuZn or CuSn |
| Contact (Socket) | CuZn | CuZn | CuSn, CuNiSn |
| **MATING FORCES** | | | |
| Insertion Force (Max) | 32 Pos. 8.8 lb (39N)<br>48 Pos. 13.2 lb (59N) | 30 Pos. 6.3 lb (28N)<br>32 Pos. 6.7 lb (30N)<br>48 Pos. 10.1 lb (45N)<br>64 Pos. 13.5 lb (60N)<br>96 Pos. 20.2 lb (90N) | 20 Pos. 4.2 lb (19N)<br>32 Pos. 6.7 lb (30N)<br>48 Pos. 10.1 lb (45N)<br>64 Pos. 13.5 lb (60N)<br>96 Pos. 20.2 lb (90N) |
| Withdrawal Force (Min.) | .54 oz (15g) per contact | .54 oz (15g) per contact | .54 oz (15g) per contact |
| **Approvals** | | | |

## PRESS-FIT PERFORMANCE

**C-Press® Straight Tail**
Max. insertion force — 40 lbs. (178N)
Min. retention force — 10 lbs. (44N)
Hole deformation — per MIL-STD-2166

**Right Angle Press-fit**
Max. insertion force — 33 lbs. (150N)
Min. retention force — 6.6 lbs. (30N)
Hole deformation — per MIL-STD-2166

## PERFORMANCE LEVELS

**Winchester DIN connectors are manufactured to the performance levels prescribed by the standard of DIN 41612, part 5.**

**Performance Level 1**
500 mating cycles total, consisting of:
250 mating cycles/21 days gas test with 10 ppm S02/250 mating cycles.

**Performance Level 2**
400 mating cycles total, consisting of:
200 mating cycles/4 days gas test with 10 ppm S02/200 mating cycles.

**Performance Level 3**
50 mating cycles, no gas test.

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## SPECIFICATIONS

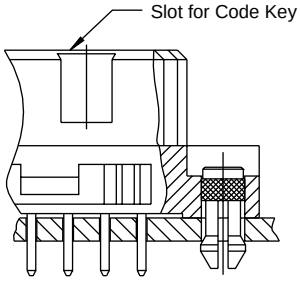
| Series | 6053 | 6063 | 6093 |
|---|---|---|---|
| **DIN 41612 Style** | C<br>Flat cable (IDC socket) | M | M<br>Inverse |
| **GENERAL** | | | |
| No. of Contacts (Max.) | 32,64 | 24,42,60,78<br>Max. 8 special contacts | 24,42,60,78<br>Max 8 Special Contacts |
| Temperature Range | -65°C to +140°C | -65°C to +140°C | -65°C to +140°C |
| **ELECTRICAL DATA** | | | |
| Current Rating | 1 Amp @ 70°C | 1 A, High Current<br>Contact 10-40A | 1 A, High Current<br>Contact 10-40A |
| Contact Resistance | 20 Milliohms (Max) | 20 Milliohms (Max)<br>High Current<br>Contact 1 Milliohm (Max) | 20 Milliohms (Max)<br>High Current<br>Contact 1 Milliohm (Max) |
| **MATERIALS** | | | |
| Insulator | Thermoplastic Polyester | Thermoplastic Polyester | Thermoplastic Polyester |
| Contact (Pin) | — | CuZn | — |
| Contact (Socket) | CuNiSn | CuZn | CuSn |
| **MATING FORCES** | | | |
| Insertion Force (Max) | 32 Pos. 6.6 lb (29N)<br>64 Pos. 13.2 lb (59N) | Depending on<br>Contact Arrangement | Depending on<br>Contact Arrangement |
| Withdrawal Force (Min.) | .54 oz (15g) per contact | .54 oz (15g) Signal Contact | .54 oz (15g) Signal contact |
| **Approvals** | | | |

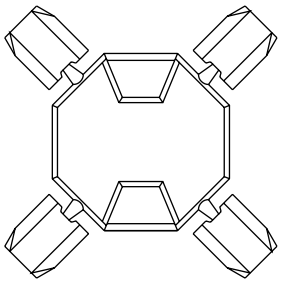
## SPECIAL FEATURES

### Code Keys

The 6033 series standard DIN connectors are designed with an effective code keying method built in. This is useful to assure that only specific connector pairs are allowed to mate in a system.

1. Install the code key into any chosen slot(s) on the female socket connector. Code keys are supplied in groups of four individual keys supplied on a carrier.
2. Use the polarization knock-out tool supplied by Winchester to remove the corresponding slot in the wall of the male DIN connector. (Part number 107-43822).



*Polarization Key for DIN style B & C connectors catalog number 109-24670*

## SPECIFICATIONS

| Series | 6101 | 6105 | 6133 |
|---|---|---|---|
| **DIN 41612 Style** | 4 Row<br>Inverse | M<br>Inverse<br>Press-fit Male | C<br><br>Press-fit Female |
| **GENERAL** | | | |
| No. of Contacts (Max.) | 128 | 6,24,42,60,78 per row<br>Max 10 special contacts | 96 |
| Temperature Range | -65°C to +140°C | -65°C to +140°C | - 65°C to +140°C |
| **ELECTRICAL DATA** | | | |
| Current Rating | 1 Amp @ 70°C | 1 Amp @ 70°C | 2 Amp @ 70°C |
| Contact Resistance | 20 Milliohms (Max) | 20 Milliohms (Max) | 20 Milliohms (Max) |
| **MATERIALS** | | | |
| Insulator | Thermoplastic Polyester | Thermoplastic Polyester | Thermoplastic Polyester |
| Contact (Pin) | CuNiSn | Copper Alloy 725 | CuZn |
| Contact (Socket) | CuNiSn | — | CuZn |
| **MATING FORCES** | | | |
| Insertion Force (Max) | 128 Pos. 26.4 lb (117N) | Depending on contact arrangement | 96 Pos. 19.8 lb (88N) |
| Withdrawal Force (Min.) | .54 oz (15g) per contact | .54 oz (15g) Signal contact | .54 oz (15g) per contact |
| **Approvals** | | | |

## SPECIAL FEATURES

### First-Make and Late-Make Contacts

Winchester male pin DIN connectors are available with three levels of mating pin lengths for the optimal sequencing of power, signal, and ground contact in your system.

| | Standard Length | First-Make Pin Length | Last-Make Pin Length |
|---|---|---|---|
| Type C Male Connectors (6033 Series) | .193”<br>4.9 mm | .232”<br>5.9 mm | .161”<br>4.1 mm |
| Type R Male Connectors (6043 Series) | .189”<br>4.8 mm | .216”<br>5.49 mm | .162”<br>4.11 mm |

First-Make Late-Break and Late-Make First-Break contacts are also available on other Winchester DIN series. Consult the factory for custom loading and sequencing applications.

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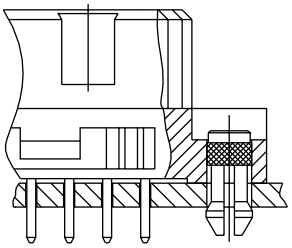
## SPECIFICATIONS

| Series | 6163 | 7043 | 93 |
|---|---|---|---|
| **DIN 41612 Style** | M<br>Compliant Pin | Q and R<br>Male with special switching contacts | H |
| **GENERAL** | | | |
| No. of Contacts (Max.) | 6,24,42,60,78 per row Max.<br>10 special contacts | 32 per row max | 11, 15 per row |
| Temperature Range | -65°C to +140°C | -65°C to +140°C | -55°C to +125°C |
| **ELECTRICAL DATA** | | | |
| Current Rating | 2 Amps @ 70°C | 1 Amp @ 30°C rise, fully loaded | 11 Amp @ 70°C (93 H15 Series)<br>15 Amps @ 70°C (93 H11 Series) |
| Contact Resistance | 20 Milliohms (Max) | 2 Milliohms (Max) | 15 Millohms (Max) |
| **MATERIALS** | | | |
| Insulator | Thermoplastic Polyester | Thermoplastic Polyester | Polycarbonate |
| Contact (Pin) | — | Copper Alloy | CuZn |
| Contact (Socket) | CuZn | Beryllium Copper | CuZn |
| **MATING FORCES** | | | |
| Insertion Force (Max) | 3.4 oz (96g) per contact | Depending upon contact arrangement | 15 Pos. 19.8 lb (88N) |
| Withdrawal Force (Min.) | .54 oz (15g) per signal contact | | .045 lb (.2N) min. |
| **Approvals** | | | |

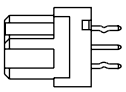
## SPECIAL FEATURES

### Printed Circuit Board Retention

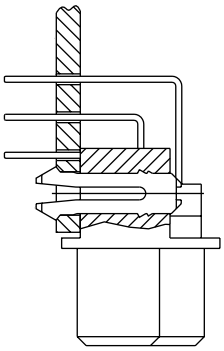
To assist retention of the connector to the PCB during the assembly and soldering operation, Winchester offers three separate solutions.



*P.C.B. Retention Clip for vertical mounted connectors.*



*P.C.B. Retention Tail for vertical mounted connectors.*

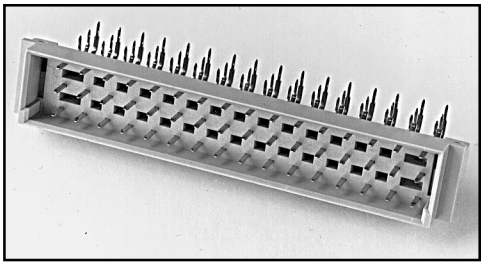


*P.C.B. Retention Clip for right angle mounted connectors.*

# DIN Styles D & E Standard 41612

## 6003 Series

## Pin Connector

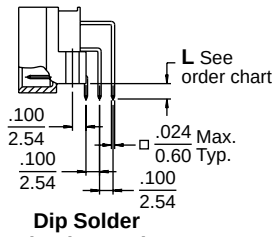


**Range of Applications - Rigid Systems, Power Supplies and Industrial Electronics Applications.**

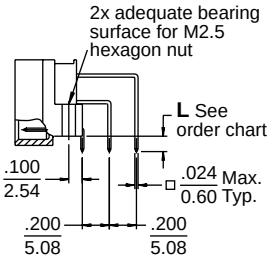
The connectors of this series have been designed with .200" (5.08 mm) spacing between adjacent contacts. This spacing, in conjunction with heavy tail cross-sections, allows the connectors to be used at higher operating voltages. Current rating is 4 Amps at 70°C

## OUTLINE

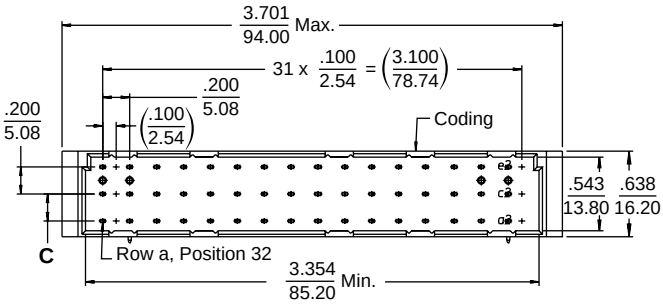
**Style E**
**3 Rows of 16 = 48 Positions**



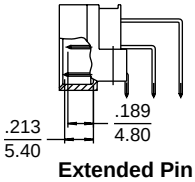

**Dip Solder Termination Code = 1**




**Dip Solder Termination Code = 0**

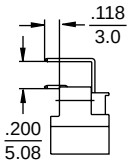


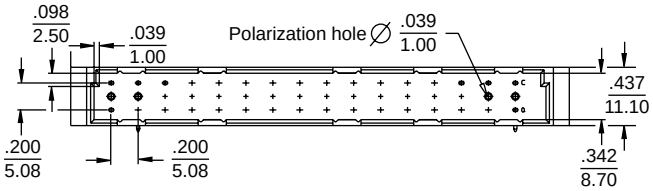

**Catalog Number: 48P600319310 Shown**

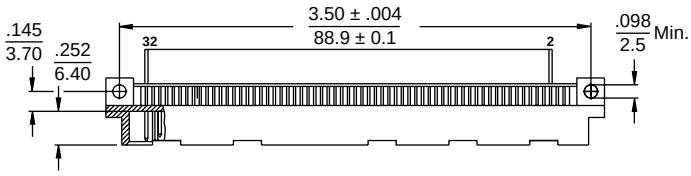



**Extended Pin**
**◐ = E1**

**Style D**
**2 Rows of 16 = 32 Positions**




## ORDERING INFORMATION

**Example:** 32P-6003-1531-0

| 32P | 6003 | 15 | 31 | 0 | ◐ |
|---|---|---|---|---|---|

■ Step 1
**Style:**
**32P** = D-2 x 16
**48P** = E-3 x 16

■ Step 2
**Series:**
**6003**

■ Step 3
**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 11 | All even positions | A |
| 15 | All even positions | A & C |
| 17 | All even positions | A, C & E |
| 18 | All even positions | A & E |

■ Step 4
**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5
**Termination:**

| Code | Dip Solder |
|---|---|
| 0 | .118 (3.0 mm) for Row Spacing .200 (5.08 mm) |
| 1 | .118 (3.0 mm) for Row Spacing .100 (2.54 mm) |

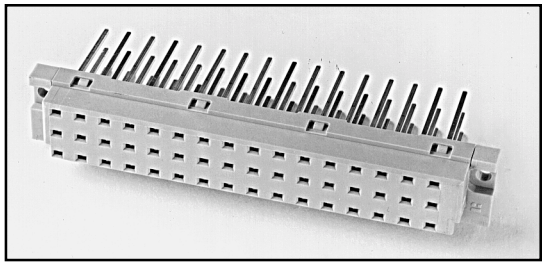
■ Step 6
**Special Features:**

| Code | Options |
|---|---|
| Blank | None |
| E1 | Extended pin in outer positions of Row A Extended .024 (0.6 mm) |

# DIN Styles D & E Standard 41612

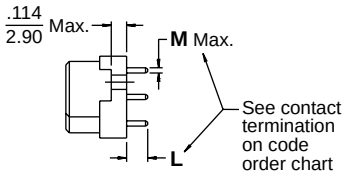
## 6003 Series

## Socket Connector

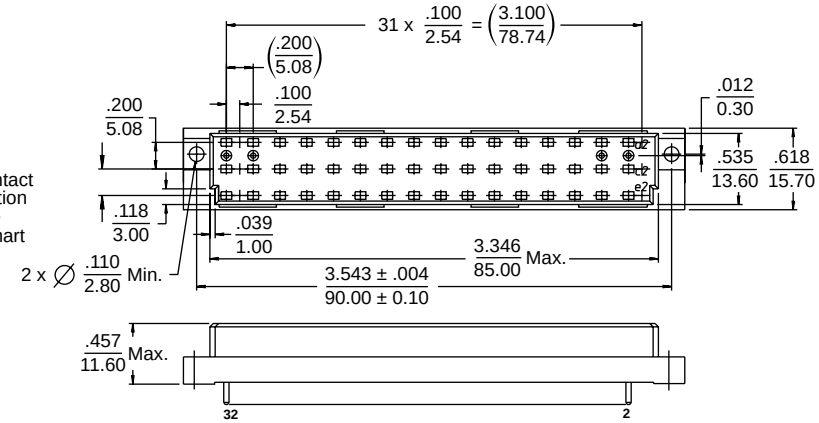


## OUTLINE

**Style E**
**3 Rows of 16 = 48 Positions**

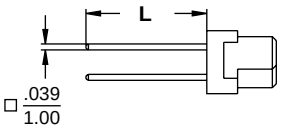


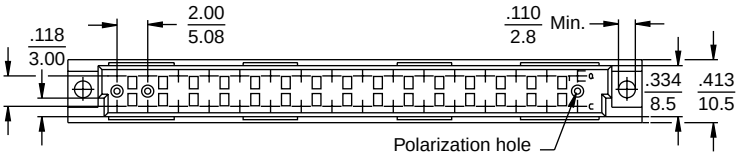

**Press-fit = 9**
**Dip Solder = 2, 3 or 5**
**Mini Wire Wrap = 7**
**Contact Terminations**




**Catalog Number 48S600319312 Shown**

**Style D**
**2 Rows of 16 = 32 Positions**




## ORDERING INFORMATION

**Example:** 32S-6003-1522-3

| 32S | 6003 | 15 | 22 | 3 |
|---|---|---|---|---|

■ Step 1

**Style:**
**32S =** D-2 x 16
**48S =** E-3 x 16

■ Step 2

**Series:**
**6003**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 11 | All even positions | A |
| 15 | All even positions | A & C |
| 17 | All even positions | A, C & E |
| 18 | All even positions | A & E |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5

| Code | Dip Solder |
|---|---|
| 2 | L = .157 / 4.00<br>M = □ .039 / 1.00 |
| 3 | L = .157 / 4.00<br>M = □ .024 / 0.60 |
| 5 | L = .098 / 2.50<br>M = □ .024 / 0.60 |

| Code | Wire Wrap |
|---|---|
| 7 | L = .787 / 20.00<br>M = □ .039 / 1.00 |

| Press-Fit | |
|---|---|
| 9 | L = .181 / 4.60<br>M = □ .0024 / .060 |

*Recognized under the Component Program of Underwriters Laboratories Inc. File No. E31650*

*CSA File No. 701364*


For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **48**



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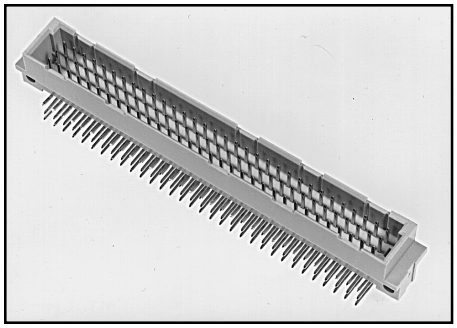
# DIN Styles B & C Standard 41612

## 6033 Series

## Pin Connector

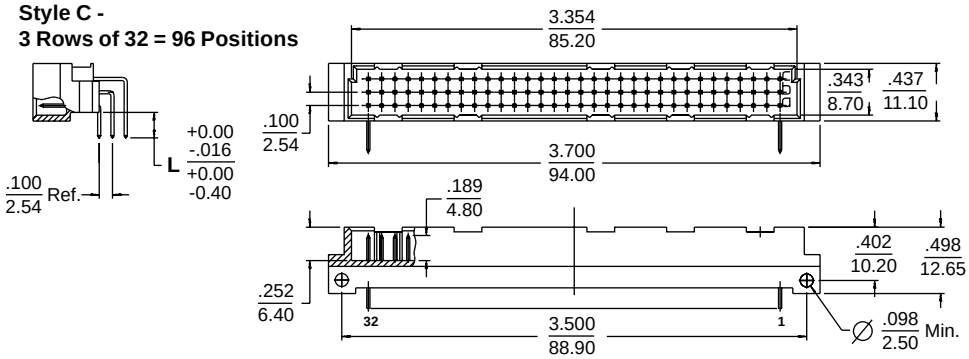


### Range of Applications - High Density Telecommunications and Data Systems

Commonly referred to as "Standard DIN", this plug and receptacle is a very popular motherboard to daughterboard interconnect. The right angle plug connector is used on the daughterboard and the receptacle is mounted to the motherboard or backpanel. Popularity is reinforced by its characteristics of high density (30 per inch in a 3-row configuration), cost effectiveness (compatible with edgecard), high reliability (serving telecommunications for over two decades) and standardization (all products conforming to DIN 41612 are intermateable and interchangeable).

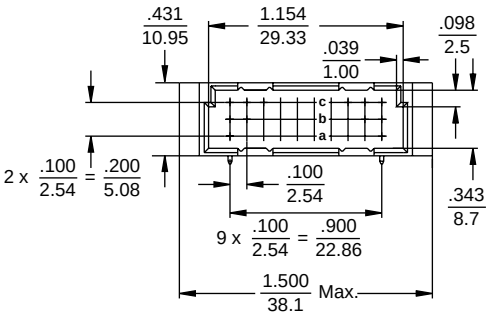
## OUTLINE

**Style C -**
**3 Rows of 32 = 96 Positions**



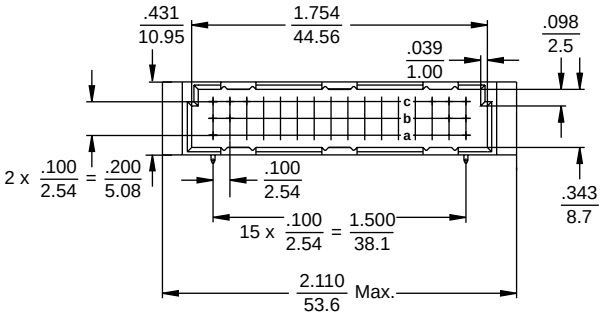

**Catalog Number 96P603307310 Shown**

**Style Third C**
**3 Rows of 10 = 30 Positions**




**(3 Rows of 10)**

**Style Half C**
**3 Rows of 16 = 48 Positions**



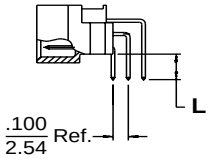

**(3 Rows of 16)**

## TERMINATION TYPES

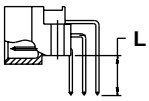
A wide termination selection of solder, wire wrap and compliant pins are available.

**DIP solder**
**termination codes 0 or 4**

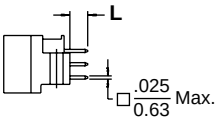
**Right-angle press fit**
**termination code 9**




**Mini wire wrap**
**termination codes 6 or 7**




**Special DIP solder straight tail**
**termination code 3**




For installation tooling, see page DN / **47**

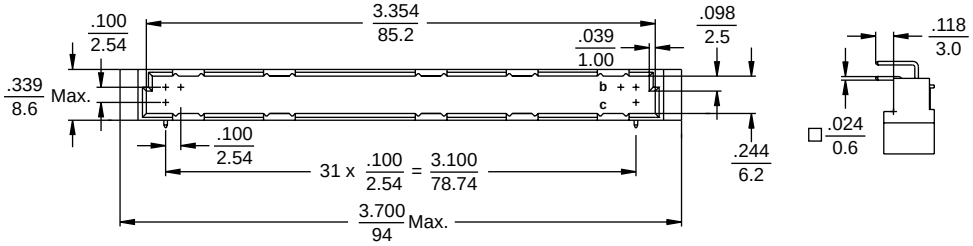
# DIN Styles B & C Standard 41612

## 6033 Series

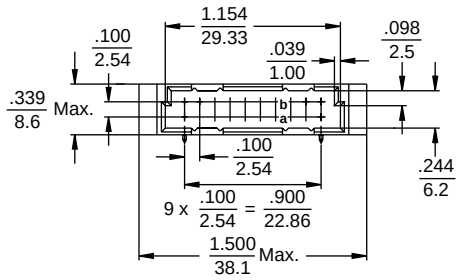
## Pin Connector

### OUTLINE

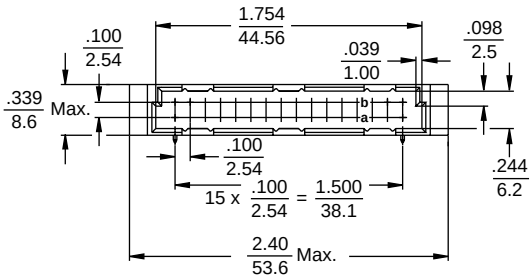
**Style B**
**2 Rows of 32 = 64 Positions**

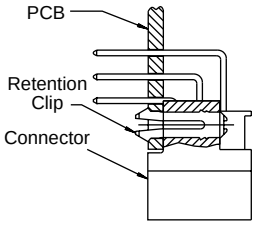


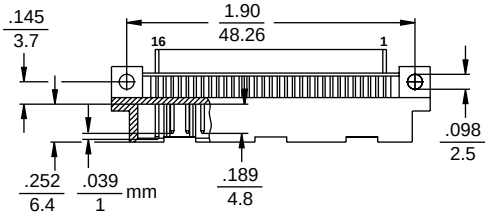

**Style B**
**2 Rows of 10 = 20 Positions**




**Style Half B**
**2 Rows of 16 = 32 Positions**




### ORDERING INFORMATION

**Example:** 96P-6033-0731-0

| 96P | 6033 | 07 | 31 | 0 | ◐ |
|---|---|---|---|---|---|

■ Step 1

**Style:**

**20P =** Third B 2 x 10
**30P =** Third C 3 x 10
**32P =** Half B 2 x 16
**48P =** Half C 3 x 16
**64P =** B-2 x 32
**96P =** C-3 x 32

■ Step 2

**Series:**
**6033**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5

**Termination:**

| Code | Dip Solder |
|---|---|
| 0 | L = .118 (3 mm) |
| 3 | L = .118 (3 mm) |
| 4 | L = .173 (4.39 mm) |

| Code | Mini Wire Wrap |
|---|---|
| 6 | L = .512 (13 mm) |
| 7 | L = .669 (17 mm) |

| Code | Right angle press-fit |
|---|---|
| 9 | L = .134 (3.40 mm) |

(See DN/**20** for more right angle press-fit information)

■ Step 6

**Special Features:**

| Code | Options |
|---|---|
| Blank | No special options |
| T | Retention clip installed for .063 (1.60) P.C.B. |
| R | Retention clip installed for .098 (2.49) P.C.B. |
| S | Retention clip installed for .125 (3.18) P.C.B. |
| E1 | Outer Pins of Row A Extended |
| E3 | Outer Pins of Row C Extended |
| E13 | Outer Pins of Row A & C Extended |
| *Note: | Retention clip not available for use when termination code = 3 |

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E31650, and File No. E136181*

*CSA File No. 701364 and 34182*


For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **49**
For installation tooling, see page DN / **47**



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# DIN Styles C Standard 41612

## 6033 Series

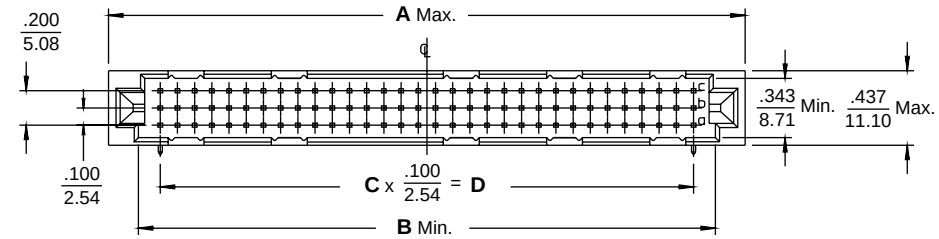
## Pin Connector

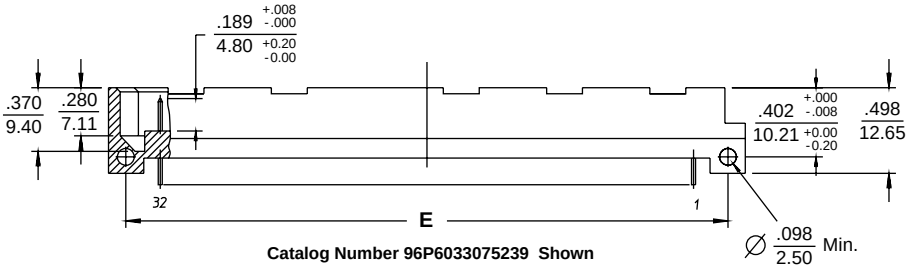
### AVAILABLE CONFIGURATIONS

**Guided Configuration (Reverse Polarization)**

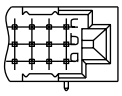
- With the addition of the guide feature, up to 0.080" of misalignment in any direction can be accommodated.
- Greatly reduces the chances of "pin-stubbing" when using extended length first-make last-break contacts.
- Excellent for blind-mating applications
- Also available in Inverse (Style R) configurations. See Pages DN/**22**
- Mates with 6133 series Guided DIN, See Page DN/**12**

### OUTLINE




**Catalog Number 96P6033075239 Shown**



**Catalog Number 96P6033075240 Shown**
Reversed polarization shown typical both ends

| Catalog Number | A | B | C | D | E |
|---|---|---|---|---|---|
| **96P6033** □□△△◺ | 3.700 / 94.00 | 3.354 / 85.20 | 31 | 3.100 / 78.74 | 3.500 / 88.90 |
| **48P6033** □□△△◺ | 2.126 / 54.00 | 1.756 / 44.60 | 15 | 1.500 / 38.10 | 1.900 / 48.26 |

### ORDERING INFORMATION

**Example:** 96P-6033-07-5240

| 96P | 6033 | 07 | 5240 | ◐ |
|---|---|---|---|---|

**Step 1**
**Style:**
**48P =** Half C 3 x 16
**96P =** C-3 x 32

**Step 2**
**Series:**
**6033**

**Step 3**
**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |

**Step 4**
**Deviation Code:**

| Code | Description |
|---|---|
| 5240 | Reverse Polarization |
| 5307 | Reverse Polarization and Press-Fit Termination |

**Step 5**
**Special Features:**

| Code | Description | PCB Thk M | N | P |
|---|---|---|---|---|
| Blank | None | — | — | — |
| T | PCB retention clip installed (see section Y-Y) | .063 / 1.60 | .116 / 2.95 | .266 / 6.75 |
| R | | .098 / 2.49 | .151 / 3.83 | .231 / 5.87 |

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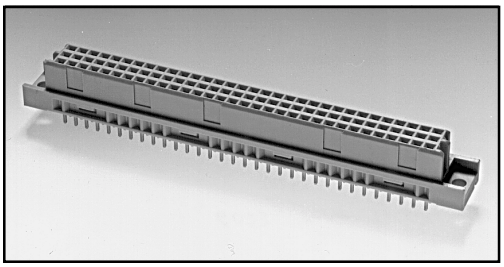
# DIN Styles B & C Standard 41612

## 6033 Series

## Socket Connector



### Extensive Product Offering

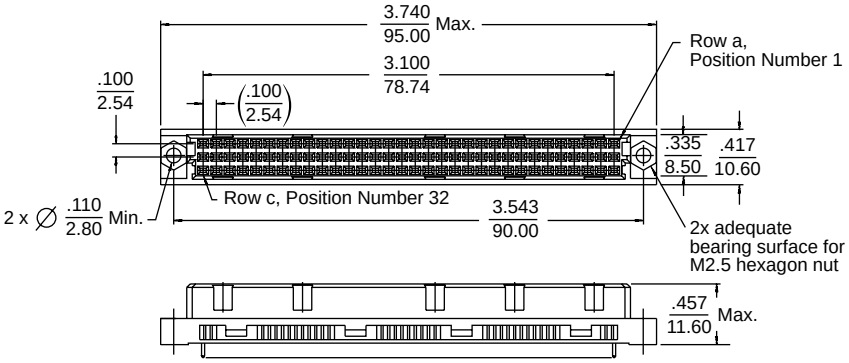
Winchester Electronics offers the full range of DIN Styles B and C connectors. In addition, half sizes (B/2 and C/2) as well as one-third size (B/3 and C/3) are available. A wide variety of termination styles and contact loading configurations are offered to provide a high degree of design flexibility.

For **C-Press**® compliant pin terminations, see the 6133 series on page DN / **12**

## OUTLINE

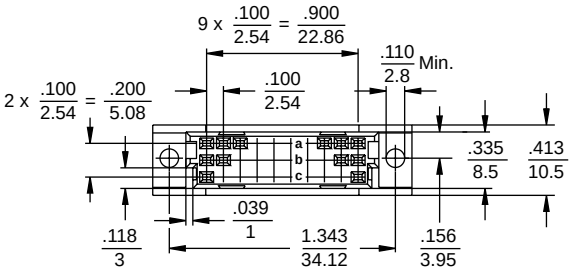
**NOTE:** *Push on Insulator DIN*
*See 6133 Series, Page DN / **12***

**Style C**
**3 Rows of 32 = 96 Positions**

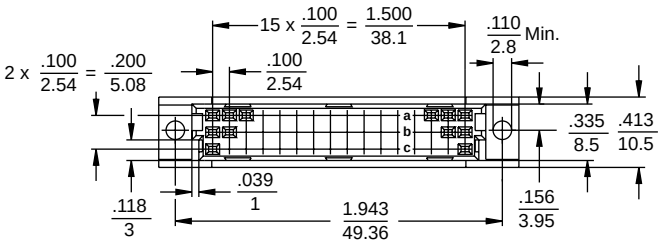



**Catalog Number 96S60330731V Shown**

**Style Third C**
**3 Rows of 10 = 30 Positions**

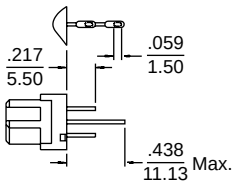



**Style Half C**
**3 Rows of 16 = 48 Positions**

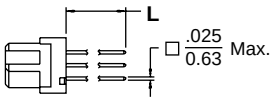



## TERMINATION TYPES

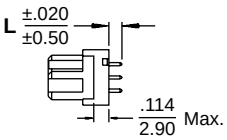
**Solder Eyelet**
**Termination Code 4**




**Mini Wire-Wrap**
**Termination Code 0 or 1**




**Dip Solder**
**Termination Code 2 or 4**

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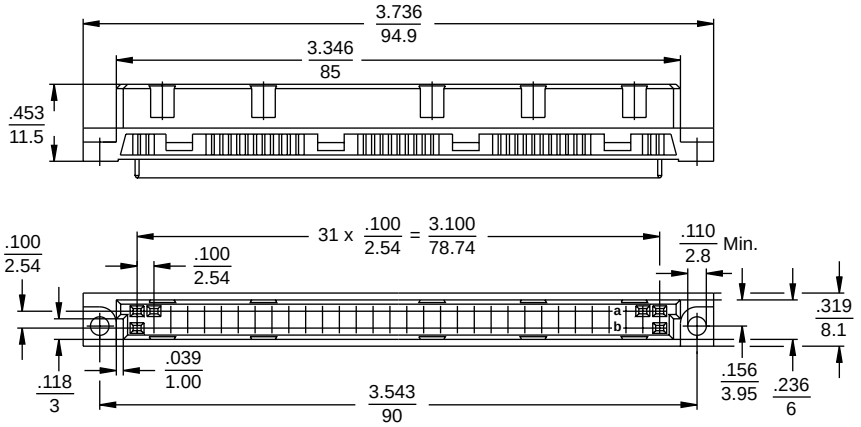
# DIN Styles B & C Standard 41612

## 6033 Series

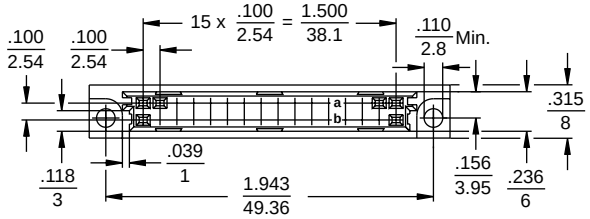
## Socket Connector

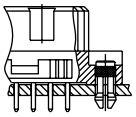
### OUTLINE

**Style B**
**2 Rows of 32 = 64 Positions**



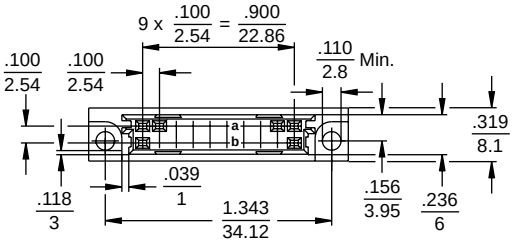

**Style Half B**
**2 Rows of 16 = 32 Positions**

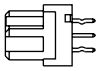


**P.C.B. Retention Clip**
**Special Feature ◐ = R**

**Third B**
**2 Rows of 10 = 20 Positions**



**P.C.B. Retention Tails**
**Special Feature ◐ = K**

Located in the first and last positions of the outside rows.

### ORDERING INFORMATION

**Example:** 96S-6033-0731-2

| 96S | 6033 | 07 | 31 | 2 | ◐ |
|---|---|---|---|---|---|

■ Step 1

**Style:**

**20S =** Third B 2 x 10
**30S =** Third C 3 x 10
**32S =** Half B 2 x 16
**48S =** Half C 3 x 16
**64S =** B-2 x 32
**96S =** C-3 x 32

■ Step 2

**Series:**

**6033**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5

**Termination:**

| Code | Dip Solder |
|---|---|
| 2 | L = .157 (4 mm) |
| 4 | Solder Eyelet |
| V | L = .114 (2.9 mm) |

| Code | Mini Wire Wrap |
|---|---|
| 1 | L = .512 (13 mm) |
| 0 | L = .669 (17 mm) |

■ Step 6

**Special Features:**

| Code | Options |
|---|---|
| Blank | No special options |
| T | P.C.B. retention clip installed for .063(1.60) P.C.B. |
| R | P.C.B. retention clip installed for .098 (2.49) P.C.B. |
| K | P.C.B. retention tails |

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181*

*CSA File No. 34182*

For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **49**

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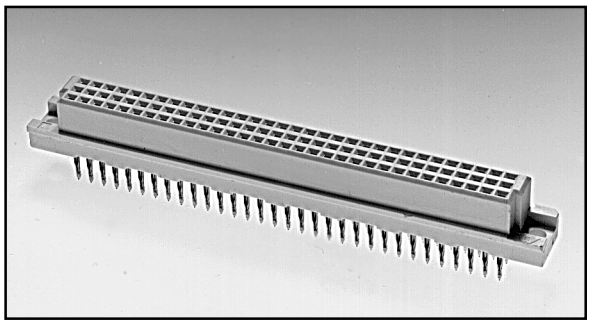
# DIN Styles B & C Standard 41612

## 6133 Series

## POI — Push-On-Insulator — Socket Connector

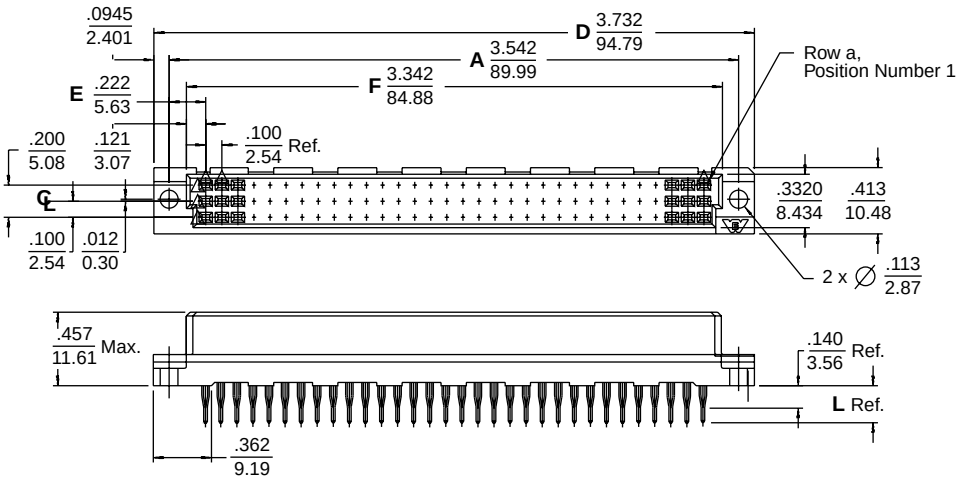


This standard DIN Type C female socket connector with **C-Press**® contacts requires no elaborate tooling for insertion into the PCB. A wide range of tail lengths, plating options, and insulator styles provides maximum flexibility in standard VME as well as custom bus applications.

For installation instructions see page DN / **13.**

## OUTLINE

**Standard Configuration**



**Mounting Ear Configuration Code 2 or 4**

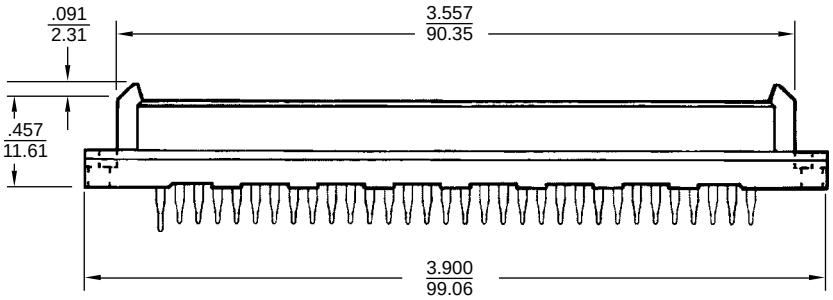
**Catalog Number 613396S193107 Shown**

## OPTIONAL CONNECTOR CONFIGURATION

- With the addition of the guide feature, up to 0.080" of misalignment in any direction can be accommodated.
- Greatly reduces the chances of "pin-stubbing" when using extended length first-make last-break contacts.
- Excellent for blind-mating applications
- Also available in Inverse (Style R) configurations. See Page DN / **22**

### Guided Configuration (Reverse Polarization)

96 Position guided vertical mount female socket connector with **C-Press**® compliant pin contacts. Press on the insulator design uses flat-rock tooling for rapid installation. Mates with 6033 Series (Style C Guided Male DIN, page DN / **9**




**Catalog Number 613396S195187 Shown**

## DIMENSIONS

| Size | A | D | E | F |
|---|---|---|---|---|
| 613348S (3 rows of 16) | 1.968 (49.98) | 2.157 (54.78) | .234 (5.94) | 1.742 (44.24) |
| 613396S (3 rows of 32) | 3.543 (89.99) | 3.732 (94.79) | .222 (5.63) | 3.342 (84.88) |

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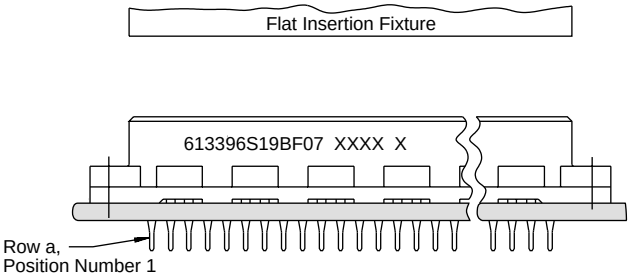
# DIN Styles B & C Standard 41612

## 6133 Series

## POI — Push-On-Insulator — Socket Connector

### INSTALLATION INSTRUCTIONS

Commonly referred to as "Push on the Insulator" Connector, this **C-Press**® connector does not require any special tooling for installation into the printed circuit board. The insertion fixture must be flat and overlap the mating surface of the connector.




**NOTE:** Consult Winchester Electronics for **C-Press**® applications with backpanel thickness less than .093" and for bare copper plated through holes without solder.

### ORDERING INFORMATION

| 6133 | 96S | 1 | 9 | BF | 07 |
|---|---|---|---|---|---|

■ Step 1
**Series:**
**6133**

■ Step 2
**Style:**
**96S =** 3 Rows of 32
**48S =** 3 Rows of 16

■ Step 3
**Mounting Ears:**
**1 =** With / Natural Color
**2 =** Without / Natural
**3 =** With / Black
**4 =** Without / Black

■ Step 4
**C-Press**®
**Tail Length "L":**
**6 =** .783 (19.88)
**7 =** .669 (17.00)
**8 =** .463 (11.76)
**9 =** .185 (4.70)
**B =** .512 (13.00)

■ Step 5
**Contact Plating:**

| Code | Mating Area | Termination End | Contact Under Plate | Performance Level |
|---|---|---|---|---|
| BF | Gold Flash over .000015 min. Palladium Nickel | Tin / Lead | .000100 min. Nickel | 2 |
| DC | Gold Flash over .000015 min. Palladium Nickel | Gold Flash over .000015 min. Palladium Nickel | .000100 min. Nickel | 2 |
| 22 | .000050 min. Gold | Tin / Lead | .000100 min. Nickel | 1 |
| 33 | .000050 min. Gold | .000030 min. Gold | .000100 min. Nickel | 1 |
| FC | Gold Flash over .000015 min. Palladium Nickel | Gold Flash | .000100 min. Nickel | 2 |
| 31 | .000030 min. Gold | Tin / Lead | .000060 min. Nickel | 2 |
| 32 | .000030 min. Gold | Gold Flash | .000060 min. Nickel | 2 |
| BJ | Gold Flash over .000040 min. Palladium Nickel | Tin / Lead | .000100 min. Nickel | 1 |

■ Step 6
**Contact Loading:**

| Code | Contact Sequence | Row |
|---|---|---|
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181*

For specifications, see page DN / **3**
For P.C. Board hole patterns, see page DN / **54**

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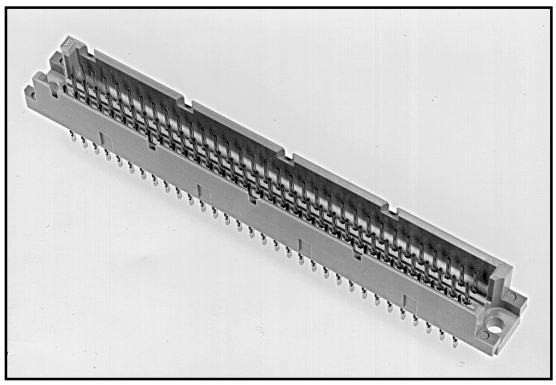
# DIN Styles Q & R Inverted 41612

## 6043 Series

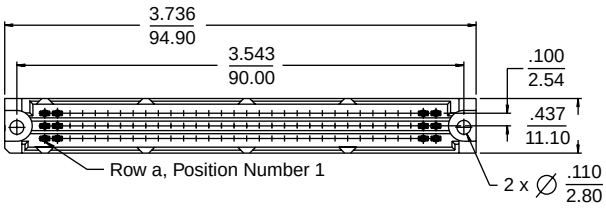
## Pin Connector

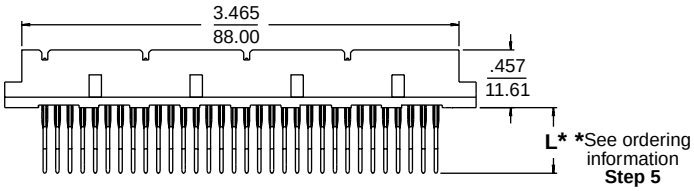


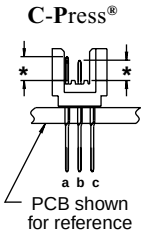
This Series is called Inverted DIN, or Reverse DIN. Utilizing the same contact system of "Standard DIN", the gender of the contacts has been changed for better application costs and easier repairability. Now the receptacle is the right angle daughterboard connector and the plug or header is used on the motherboard. These advantages over "Standard DIN" make Inverted DIN one the most popular DIN styles worldwide. All the contact loading variations and terminations of "Standard DIN" have been integrated into these connectors.

## OUTLINE

**Style R**
**3 Rows of 32 = 96 Positions**

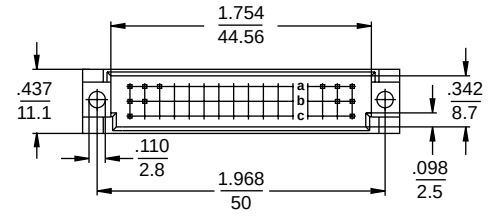


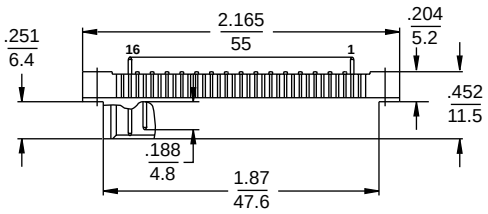



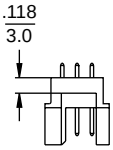




*Note: Standard Mating Length .189/4.80
◐ Available Options = .216 / 5.49 (First make last break)
.162 / 4.11 (Last make first break)

**Style Half R**
**3 Rows of 16 = 48 Positions**




For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **51**
For installation tooling, see page DN / **47**

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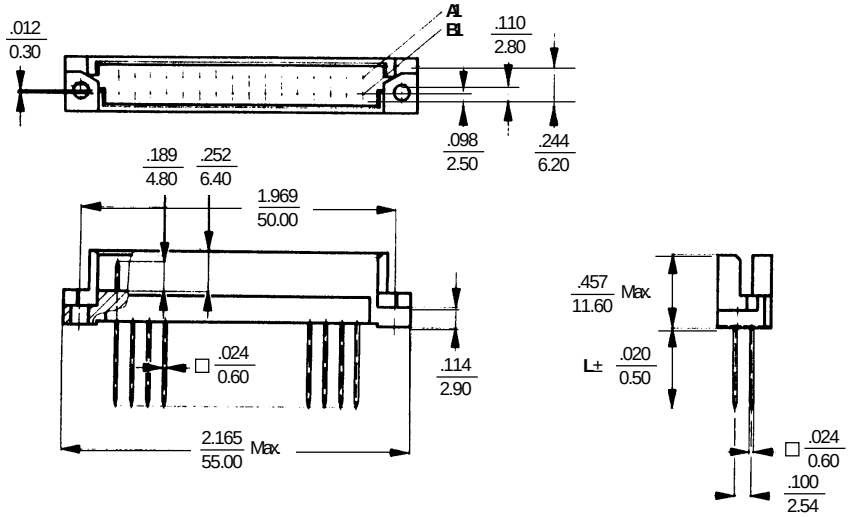
# DIN Styles Q & R Inverted 41612

## 6043 Series

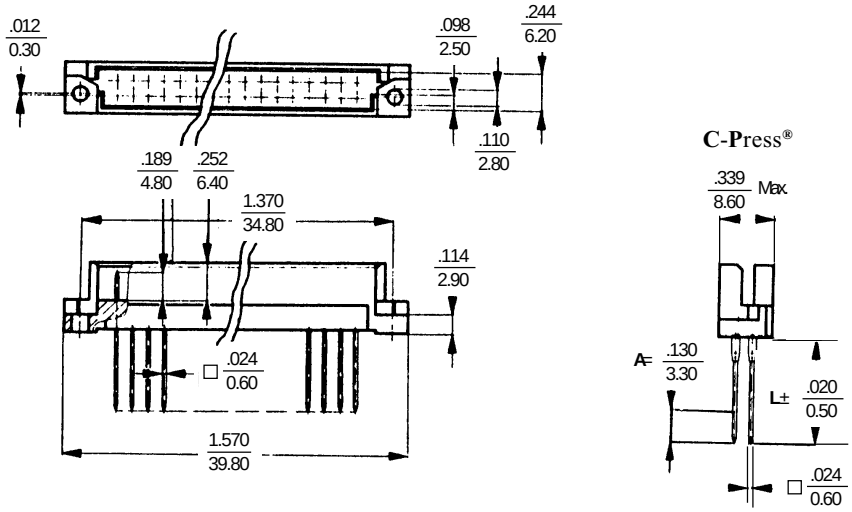
## Pin Connector

### outline

**Style Half Q**
**2 Rows of 16 = 32 Positions**




**Style Third Q**
**2 Rows of 10 = 20 Positions**




### ORDERING INFORMATION

**Example:** 96P-6043-0731-0

| 96P | 6043 | 07 | 31 | 0 | ◐ |
|---|---|---|---|---|---|

**Step 1**

**Style:**

**20P =** Third Q 2 x 10
**32P =** Half Q 2 x 16
**48P =** Half R 3 x 16
**96P =** R - 3 x 32

**Step 2**

**Series:**
**6043**

**Step 3**

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

**Step 4**

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

**Step 5**

**Termination:**

| Code | Dip Solder |
|---|---|
| 3 | L = .157 (4 mm) |
| V | L = .098 (2.5 mm) |

| Code | Mini Wire Wrap |
|---|---|
| 5 | L = .315 (8 mm) |
| 1 | L = .512 (13 mm) |
| 0 | L = .669 (17 mm) |

| Code | C-Press®* |
|---|---|
| 6 | L = .810 (20.6 mm) |
| 7 | L = .650 (16.5 mm) |
| 8 | L = .510 (13.0 mm) |
| 9 | L = .220 (5.6 mm) |

**Step 6**

**Special Features:**

| Code | Options |
|---|---|
| Blank | None |
| E | Extended Pin. First make last break contacts. Consult Winchester |

**20P-6043 Connector not available in C-Press®*

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181 and E31650*

*CSA File No. 701364*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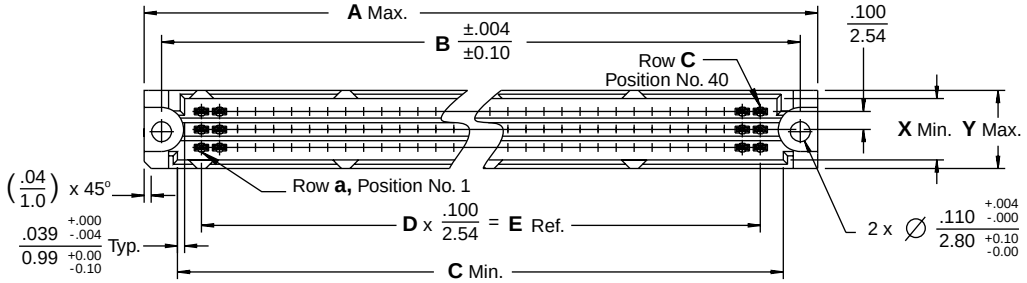
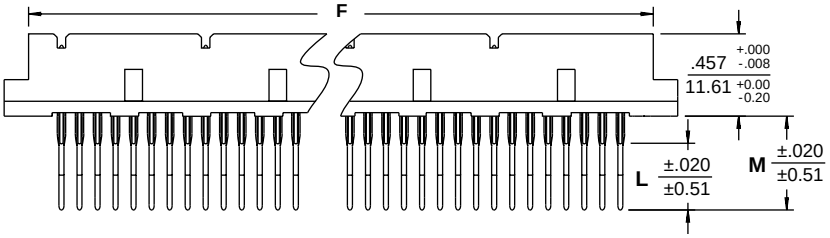
# DIN Style R Inverted 41612

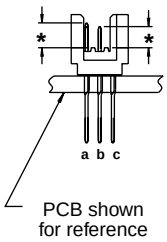
## 6043 Series

## Expanded Style Pin Connector

### OUTLINE




*Note: Standard Mating Length .189/4.80
Available Options = .216 / 5.49 (First make last break)
.162 / 4.11 (Last make first break)

| Catalog Number | A | B | C | D | E | F | G | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| 150P6043□□△△◺◑ | 5.540 / 140.70 | 5.343 / 135.70 | 5.154 / 130.90 | 49 | 4.900 / 124.50 | 5.265 +.000 -.004 / 133.70 +0.00 -0.10 | 5.343 / 135.70 | .343 / 8.70 | .437 / 11.10 |
| 120P6043□□△△◺◑ | 4.540 / 115.30 | 4.343 / 110.30 | 4.154 / 105.50 | 39 | 3.900 / 99.06 | 4.265 ±.004 / 108.30 ±0.10 | —— | | |

### ORDERING INFORMATION

**Example:** 150P-6043-0731-2

| 150P | 6043 | 07 | 31* | 2* | ◑ |
|---|---|---|---|---|---|

■ Step 1

**Style:**

**150P =** R-3 x 50
**120P =** R-3 x 40

■ Step 2

**Series:**

**6043**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 03 | All positions | C |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

■ Step 4

**Pin Contact Plating Code:**

| Code | Mating Area | Terminal |
|---|---|---|
| 22 | .000050 / 1.2µm Min. Gold | Tin / Lead |
| 31 | .000030 / 0.8µm Min. Gold | Tin / Lead |

■ Step 5

**Termination:**

| Code C-Press® Pin Contact | L Wire Wrap Length | M Tail Length | Standard Mating Length (Standard Contacts) V |
|---|---|---|---|
| 6 | .66 / 16.8 | .81 / 20.6 | .189 +.008 -.000 / 4.80 +0.20 -0.00 |
| 7 | .50 / 12.7 | .65 / 16.5 | |
| 8 | .36 / 9.1 | .51 / 13.0 | |
| 9 | .07 / 1.8 | .22 / 5.6 | |

■ Step 6

**Special Features:**

| Code | Options |
|---|---|
| E | Extended pin first make last break contcts. Consult Winchester. |

* For selective loading and other variations the last four positions are replaced by a factory assigned deviation number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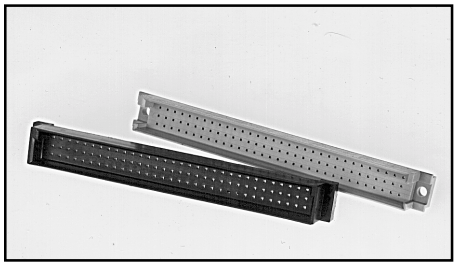
# DIN Styles Q & R Inverted 41612

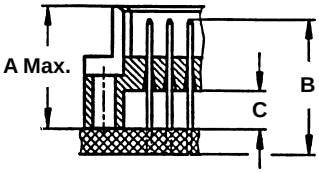
## 96P6043I0 Series

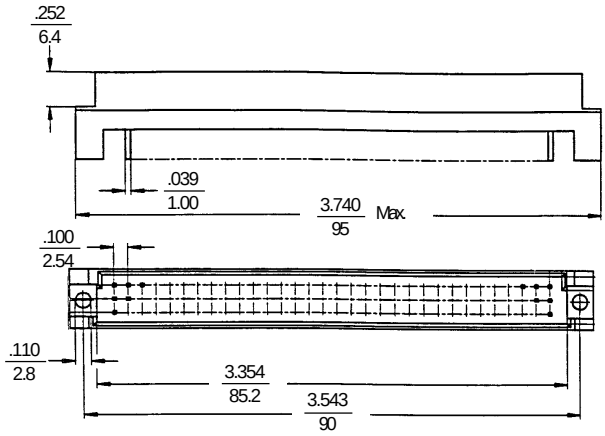
## Rear Plug-up Housings

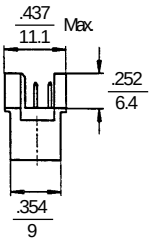
These rear plug-up "shrouds" are installed over the wire wrap pins of a backpanel mounted DIN header or socket to provide an additional connector on the secondary side of the printed circuit board. They can be secured with mounting hardware for additional retention, and are ideal for mid-plane connections or ribbon cable attachment using the 6053 series IDC DIN connectors.



| Catalog Number | A max | B | C | P.C.B. Thickness |
|---|---|---|---|---|
| 96P6043I0 | 11.50 | 13 | 0.5 | 2.36 (.093) - 3.17 (.125) |
| 96P6043I01 | 12.10 | 13 | 1.5 | 2.36 (.093) - 1.57 (.062) |
| 96P6043I02 | 11.30 | 13 | 0.7 | 3.17 (.126) |
| 96P6043I03 | 16.10 | 17 | 5.5 | 2.36 (.093) - 1.57 (.062) |
| 96P6043I04 | 15.30 | 17 | 4.7 | 2.36 (.093) - 3.17 (.125) |

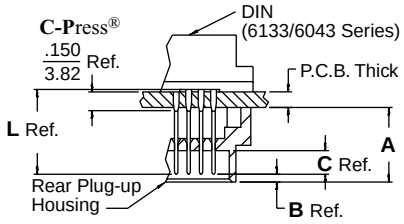


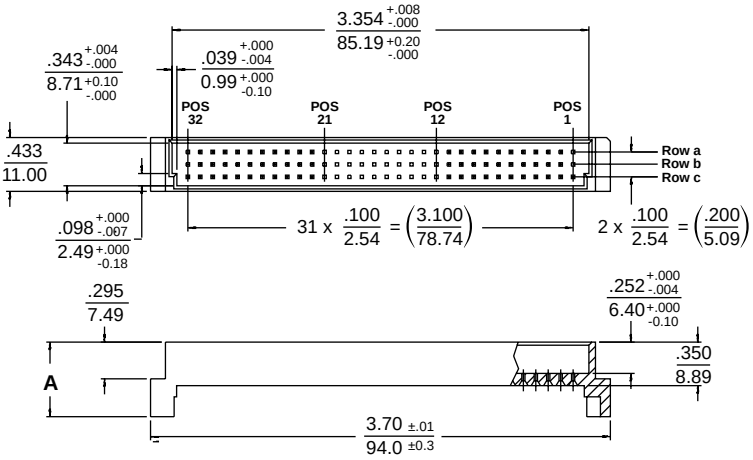




## 105867 Series

These housings are press-fit over the connector tails and require no mounting hardware.




**Press-Fit DIN Connector Shown**




**Catalog Number 105867-01 Shown**

Catalog Number Code: **105867 - ◐ 0**

| L | P.C.B. Thick - .125 Ref. | | | | P.C.B. Thick - .093 Ref. | | | |
|---|---|---|---|---|---|---|---|---|
| | Catalog Number ◐ | A | B | C | Catalog Number ◐ | A | B | C |
| .453/11.51 | 5 | .420/10.67 | .092/2.34 | .160/4.06 | 5 | .420/10.67 | .060/1.52 | .192/4.88 |
| .516/13.11 | 4 | .450/11.43 | .059/1.50 | .193/4.90 | 6 | .480/12.19 | .057/1.45 | .195/4.95 |
| .366/9.30 | 7 | .350/8.89 | .109/2.77 | .143/3.63 | 7 | .350/8.89 | .077/1.96 | .175/4.44 |
| .662/16.81 | 1 | .600/15.24 | .063/1.60 | .189/4.80 | 1 | .600/15.24 | .031/.79 | .221/5.61 |
| .674/17.12 | 1 | .600/15.24 | .051/1.30 | .201/5.10 | 1 | .600/15.24 | .019/.48 | .233/5.92 |
| .788/20.10 | 2 | .750/19.05 | .087/2.21 | .165/4.19 | 2 | .750/19.05 | .055/1.40 | .197/5.00 |
| .819/20.80 | 2 | .750/19.05 | .056/1.42 | .196/4.98 | 2 | .750/19.05 | .024/.61 | .228/5.79 |
| .512/13.00 | 4 | .450/11.43 | .063/1.60 | .189/4.80 | 6 | .480/12.19 | .061/1.55 | .191/4.85 |
| .669/17.00 | 1 | .600/15.24 | .056/1.42 | .196/4.98 | 1 | .600/15.24 | .024/.61 | .228/5.79 |
| .858/21.80 | 2 | .750/19.05 | .017/.43 | .235/5.97 | none | — | — | — |

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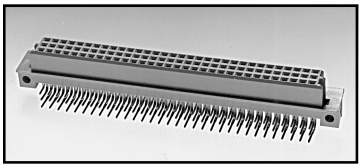
# DIN Styles Q & R Inverted 41612

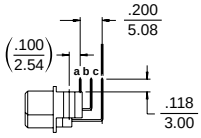
## 6043 Series

## Socket Connector



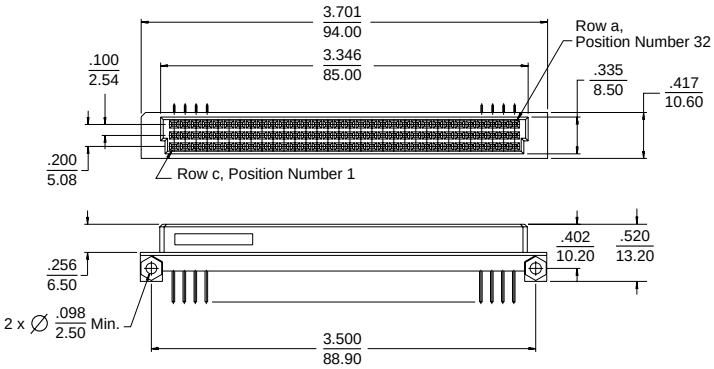
### OUTLINE

**Style R**
**3 Rows of 32 = 96 Positions**
**Part No 96S-6043 Only**



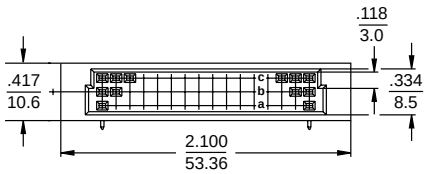

**Dip Solder Tail**
**Termination Code = 0**

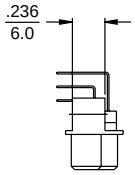
**Right Angle Press-Fit**
**Termination Code = 9**

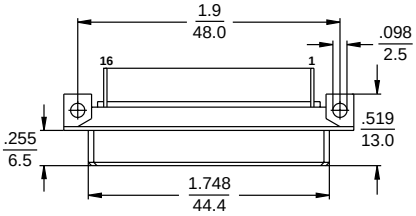



**Catalog Number 96S604307310 Shown**

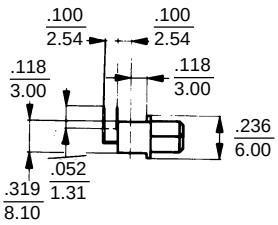
**Style Half R**
**3 Rows of 16 = 48 Positions**
**Part No. 48S-6043 Only**

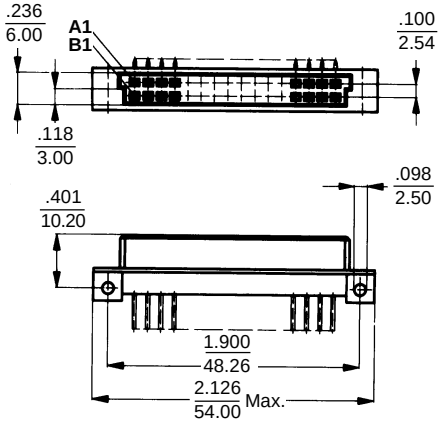


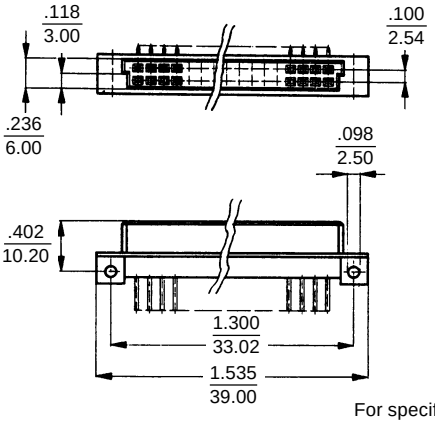




**Style Half Q**
**2 Rows of 16 = 32 Positions**

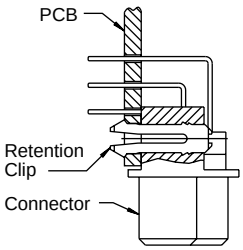



**Style Third Q**
**2 Rows of 10 = 20 Positions**




◐ = **P.C.B. Retention Clip Installed**




For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **51**
For installation tooling, see page DN / **47**

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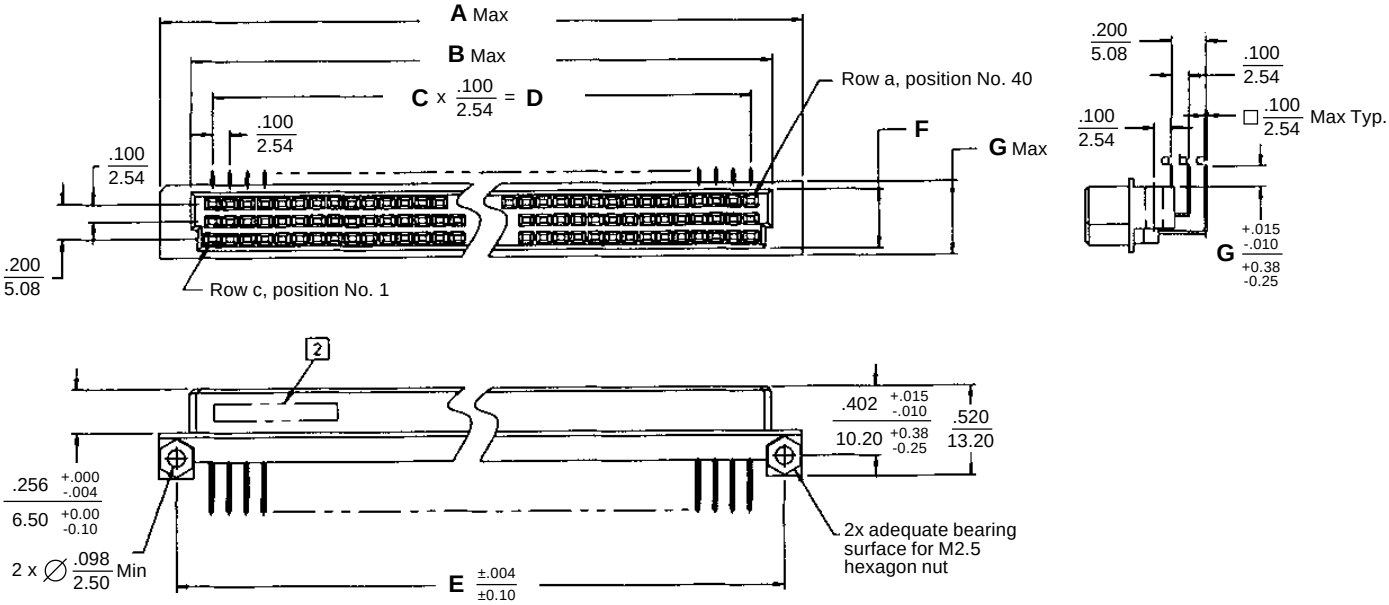
# DIN Styles Q & R Inverted 41612

## 6043 Series

## Socket Connector

### OUTLINE




**Catalog Number 120S604307-310 Shown**

### ORDERING INFORMATION

**Example:** 96S-6043-0731-0

| 96S | 6043 | 07 | 31 | 0 | ◐ |
|---|---|---|---|---|---|

■ Step 1

**Style:**

**20S =** Third Q 2 x 10
**32S =** Half Q 2 x 16
**48S =** Half R 3 x 16
**96S =** R - 3 x 32
**120S =** R - 3 x 40
**150S =** R - 3 x 50

■ Step 2

**Series:**
**6043**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5

**Termination:**

| Code | Dip Solder |
|---|---|
| 0 | L = .118 (3 mm) |

| Code | Right angle press-fit |
|---|---|
| 9 | L = .118 (3 mm) 96S and 48S only |

(See DN/**20** for more right angle press-fit information)

■ Step 6

**Special Features:**

| Code | Options |
|---|---|
| Blank | None |
| T | P.C.B. retention clip installed for .063 (1.60) P.C.B. |
| R | P.C.B. retention clip installed for .098 (2.49) P.C.B. |
| S | P.C.B. retention clip installed for .125 (3.18) P.C.B. |

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181 and E31650*

*CSA File No. 34182 and 701364*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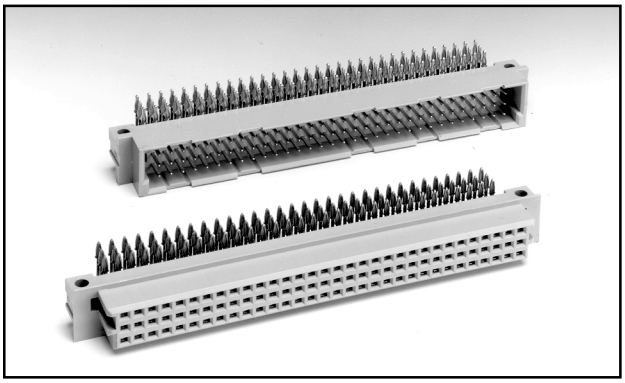
# DIN 41612 Right Angle Press-Fit

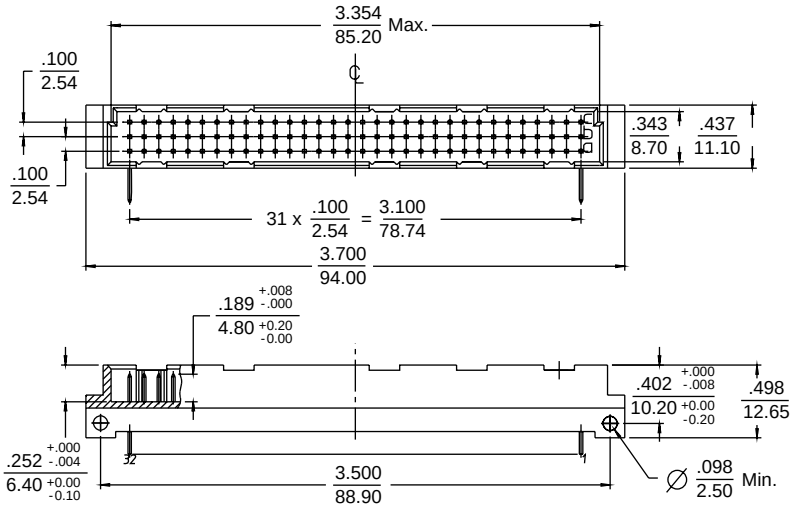
## 6033 Series

## Pin Connector

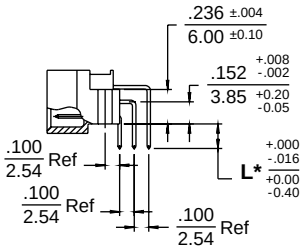


This connector is the ideal solution to installing right angle DIN 41612 connectors onto today's surface mount PCB's. This connector reduces assembly time and cost with one simple press-fit opertion. It's designed for industry standard O.039 in. (1 mm) diameter plated through holes and provides a drop in replacement for existing solder tail DIN connectors.

## OUTLINE




**Catalog Number 96P603307319 Shown**




**Contact Terminations**

***See code order chart**

## ORDERING INFORMATION

**Example:** 96 P6033 07 229

| 96P6033 | 07 | 22 | 9 |
|---|---|---|---|

■ Step 1

| Code | Description |
|---|---|
| 96 | C = 3x32 |

■ Step 2

| Code | Contact Loading Sequence |
|---|---|
| 05 | All Positions Rows A & C |
| 07 | All Positions Rows A, B & C |
| 15 | Even Positions Rows A & C |
| 17 | Even Positions Rows A, B & C |

■ Step 3

| Code | Mating Area |
|---|---|
| 22 | Class 1 |
| 31 | Class 2 |

■ Step 4

| Code | Termination Type | L |
|---|---|---|
| 9 | Press-Fit (90º) | .134 / 3.40 |

(See DN/**7** for standard solder tail configurations)


For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **49**
For installation tooling, see page DN / **47**



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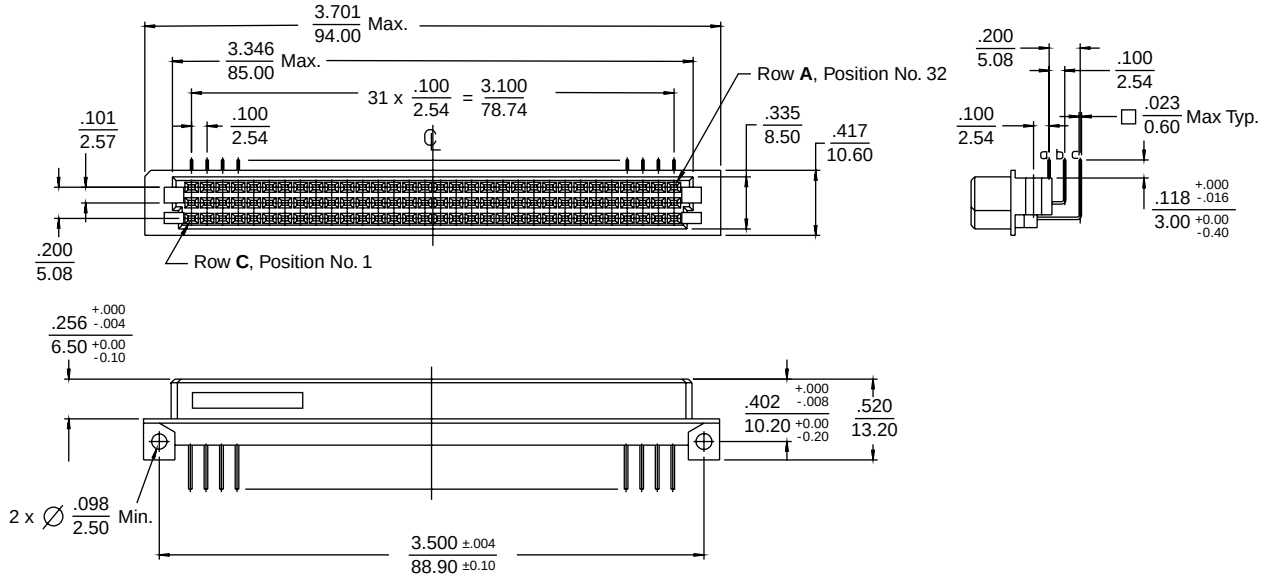
# DIN 41612 Right Angle Press-Fit

## 6043 Series — Socket Connector

### OUTLINE




**Catalog Number 96S604307220 Shown**

### ORDERING INFORMATION

**Example:** 96 S6043 07 229

| 96S6043 | 07 | 22 | 9 |
|---|---|---|---|

■ Step 1

| Code | Description |
|---|---|
| 96 | R = 3x32 |
| 48 | R = 3x16 |

■ Step 2

| Code | Contact Loading Sequence |
|---|---|
| 05 | All Positions Rows A & C |
| 07 | All Positions Rows A, B & C |
| 15 | Even Positions Rows A & C |
| 17 | Even Positions Rows A, B & C |

■ Step 3

| Code | Mating Area |
|---|---|
| 22 | Class 1 |
| 31 | Class 2 |

■ Step 4

| Code | Termination Type | L |
|---|---|---|
| 9 | Press-Fit (90°) | .134 / 3.40 |

(See DN / **19** for standard solder tail configurations)


For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **51**
For installation tooling, see page DN / **47**



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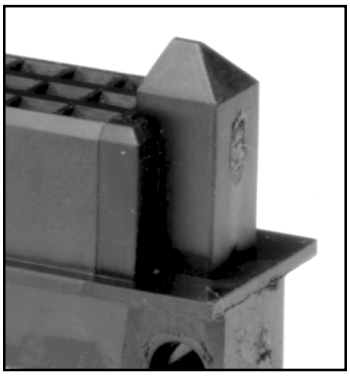
# Guided DIN 3 & 4 Row Inverted 41612

## 6043 Series

## Guided Pin Connector

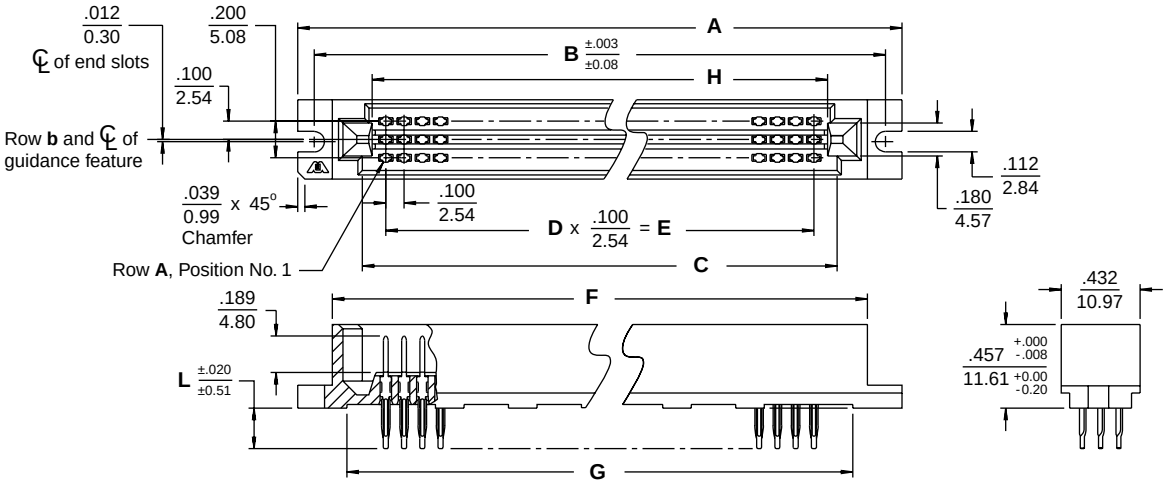


Winchester Electronics is pleased to offer our Guided Eurocard Connectors. This significant enhancement to the standard DIN Eurocard format greatly increases the degree of misalignment that can be accommodated between connectors during mating.

- With the addition of the guide feature, up to 0.080" of misalignment in any direction can be accommodated.
- Greatly reduces the chances of "pin-stubbing" when using extended length first-make last-break contacts.
- Excellent for blind-mating applications
- Also available in standard (Style C) configuration, see pages DN/**9**

## OUTLINE

**3 Row Configuration**




| Catalog Number | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 210P 6043 07 4761 | 7.866 / 199.80 | 7.684 / 195.17 | 7.158 / 181.81 | 69 | 6.900 / 175.26 | 7.486 / 190.14 | 7.326 / 186.08 | 7.046 / 178.97 |
| 150P 6043 07 4761 | 5.866 / 149.00 | 5.684 / 144.37 | 5.158 / 131.01 | 49 | 4.900 / 124.46 | 5.486 / 139.34 | 5.326 / 135.28 | 5.046 / 128.17 |
| 120P 6043 07 4761 | 4.866 / 123.60 | 4.684 / 118.97 | 4.158 / 105.61 | 39 | 3.900 / 99.06 | 4.486 / 113.94 | 4.326 / 109.88 | 4.046 / 102.77 |
| 96P 6043 07 4761 | 4.066 / 103.28 | 3.884 / 98.65 | 3.358 / 85.29 | 31 | 3.100 / 78.74 | 3.686 / 93.62 | 3.526 / 89.56 | 3.246 / 82.45 |

For specifications, see page DN / **1**
For P.C. Board hole patterns, see page DN / **51**
For installation tooling, see page DN / **47**

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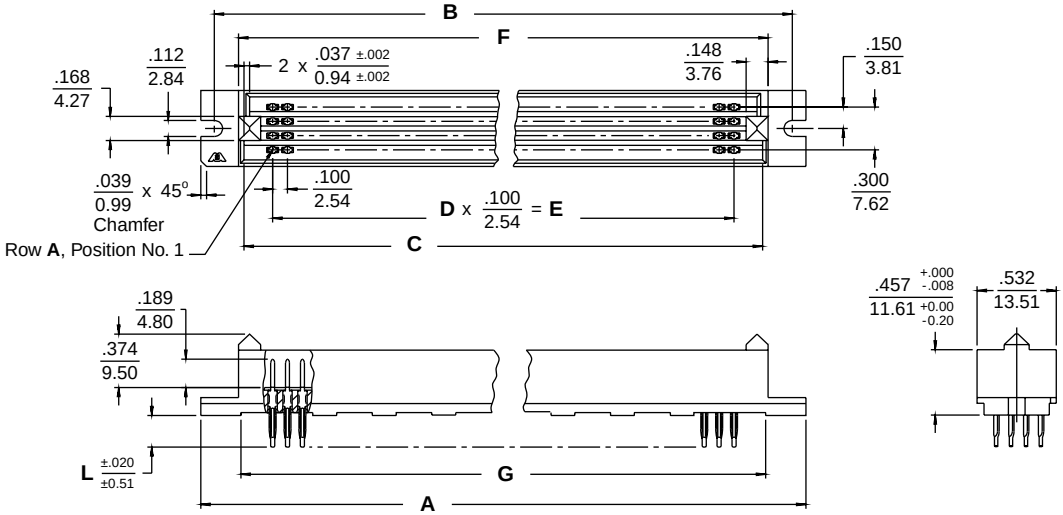
# Guided DIN 3 & 4 Row Inverted 41612

## 6043 Series

## Guided Pin Connector

### OUTLINE

**4 Row Configuration**




**Catalog Number 200P 6101 08 4761 Shown**

| Catalog Number | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 200P 6101 08 4761 | 5.866 / 149.00 | 5.684 / 144.37 | 5.284 / 134.21 | 49 | 4.900 / 124.46 | 5.358 / 136.09 | 5.326 / 135.28 |

### ORDERING INFORMATION

**Example:** 96P-6043-07-4761

| 96P | 6043 | 07 | 4761 |
|---|---|---|---|

■ Step 1

**Style:**

**96P =** 3 x 32
**120P =** 3 x 40
**150P =** 3 x 50
**200P =** 4 x 50
**210P =** 3 x 70

■ Step 2

**Series:**

**6043 =** 3 Row
**6101 =** 4 Row

■ Step 3

**Contact Configuration:**

| Code | Contact Loading Sequence |
|---|---|
| 01 | All Positions Row A |
| 04 | All Positions Rows A & B |
| 05 | All Positions Rows A & C |
| 07 | All Positions Rows A, B & C |
| 08 | All Positions Rows A, B, C & D |

■ Step 4

**Guided DIN Deviation Number:***

| Deviation Number | Performance Class | | Termination "L" |
|---|---|---|---|
| | Contact Area | Terminal | |
| 4761 | Class 2 | Tin / Lead | .220 / 5.59 |

*Consult Winchester sales for options other than the standard 4761.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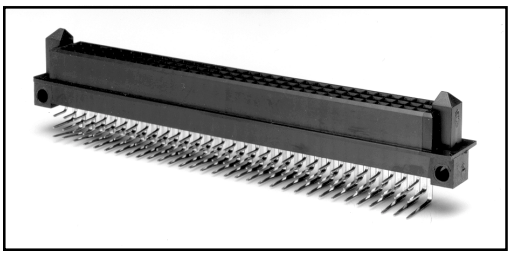
# Guided DIN 3 & 4 Row Inverted 41612

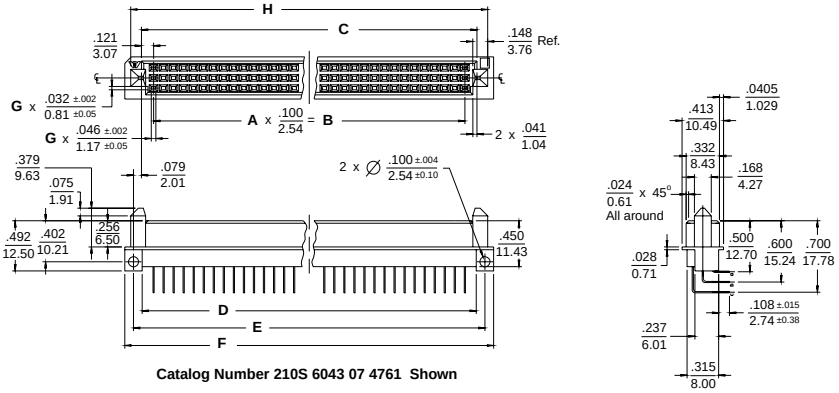
## 6043 Series

## Guided Socket Connector



## OUTLINE

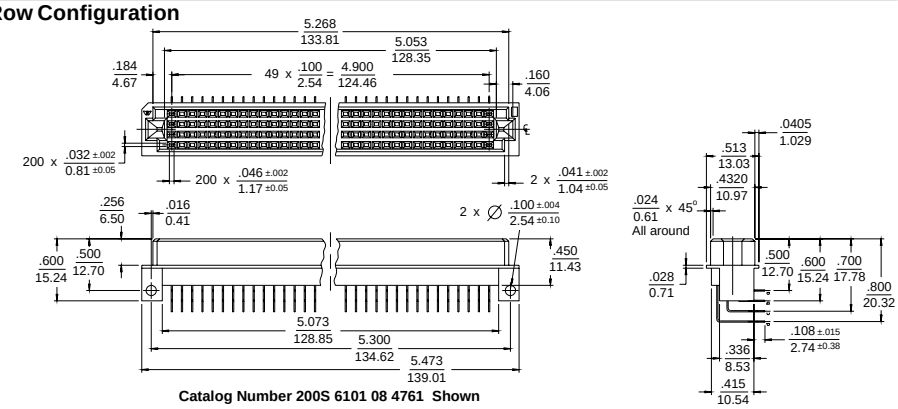
### 3 Row Configuration




Catalog Number 210S 6043 07 4761 Shown

| Catalog Number | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 210S 6043 07 4761 | 31 | 6.900 / 175.26 | 7.142 / 181.41 | 7.127 / 181.03 | 7.300 / 185.42 | 7.473 / 189.81 | 210 | 7.354 / 186.79 |
| 150S 6043 07 4761 | 49 | 4.900 / 124.46 | 5.142 / 130.61 | 5.127 / 130.23 | 5.300 / 134.62 | 5.473 / 139.01 | 150 | 5.354 / 135.99 |
| 120S 6043 07 4761 | 39 | 3.900 / 99.06 | 4.142 / 105.21 | 4.127 / 104.83 | 4.300 / 109.22 | 4.473 / 113.61 | 120 | 4.354 / 110.59 |
| 96S 6043 07 4761 | 31 | 3.100 / 78.74 | 3.342 / 84.89 | 3.327 / 84.51 | 3.500 / 88.90 | 3.673 / 93.29 | 96 | 3.554 / 90.27 |

### 4 Row Configuration




Catalog Number 200S 6101 08 4761 Shown


For specifications, see page DN / **1**

For P.C. Board hole patterns, see page DN / **51**


## ORDERING INFORMATION

**Example:** 96S-6043-07-4761

| 96S | 6043 | 07 | 4761 |
|---|---|---|---|

■ Step 1

**Style:**

**96S =** 3 x 36
**120S =** 3 x 32
**150S =** 3 x 50
**200S =** 4 x 50 (4 row)
**210S =** 3 x 70

■ Step 2

**Series:**

**6043 =** 3 Row
**6101 =** 4 Row (200S only)

■ Step 3

**Contact Configuration:**

| Code | Contact Loading Sequence |
|---|---|
| 01 | All Positions Row A |
| 04 | All Positions Rows A & B |
| 05 | All Positions Rows A & C |
| 07 | All Positions Rows A, B & C |
| 08 | All Positions Rows A, B, C & D |

■ Step 4

**Guided DIN Deviation Number:***

| Deviation Number | Performance Class: Contact Area | Performance Class: Terminal | Termination "L" |
|---|---|---|---|
| 4761 | Class 2 | Tin / Lead | .220 / 5.59 |

*Consult Winchester sales for options other than the standard 4761.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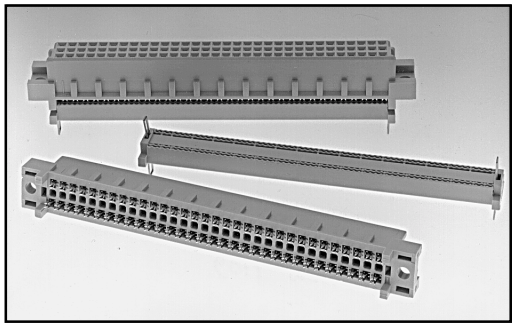
# DIN Standard 41612

## 6053 Series

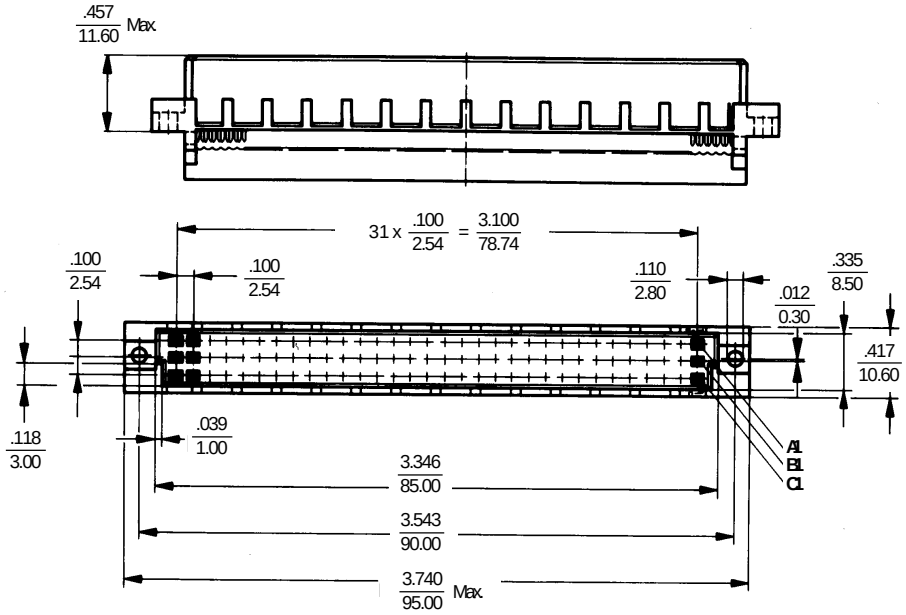
## Insulation Displacement
## IDC Flat Cable — Socket



This socket DIN connector accommodates roundwire flat ribbon cable using Flex-Com® IDC (Insulation Displacement Connection) termination. Two mounting ear configurations with or without strain relief enables this connector to cover a wide range of applications. When used with other Standard or Inverted DIN plug connectors, wire to board applications are achieved. Also popular usage is plug-on capability to the gold plated wire wrap tails of the DIN connector.

## OUTLINE

**Style C**
**3 Row Housing**
**2 Rows Loaded X 32 = 64 Positions**




For specifications, see page DN / **2**
For installation tooling, see page DN / **47**

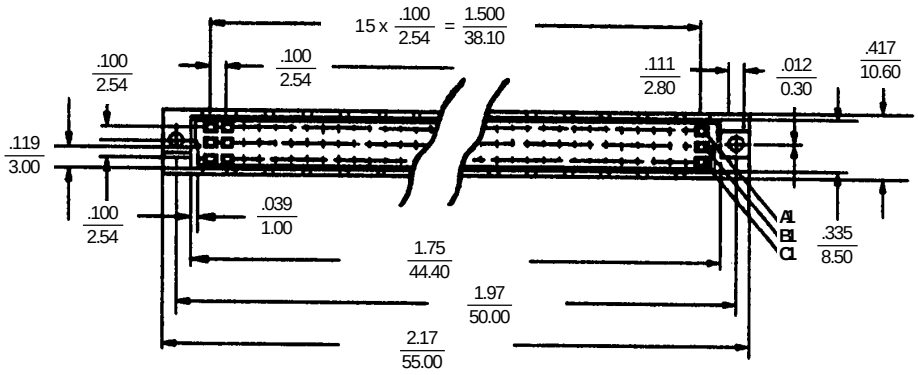
# DIN Standard 41612

## 6053 Series

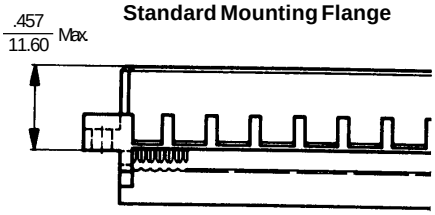
## Insulation Displacement
## IDC Flat Cable — Socket

### OUTLINE

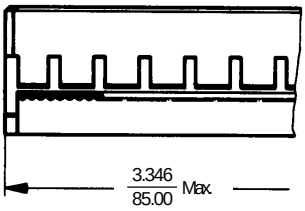
**Style Half C**
**3 Row Housing**
**2 Rows Loaded X 16 = 32 Positions**



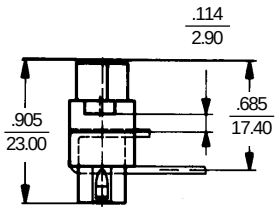

**Standard Mounting Flange**




**Without Mounting Flange**




**With Strain Relief**




### ORDERING INFORMATION

**Example:** 96S-6053-0531-13

| 96S | 6053 | 05 | 31 | 1 | 3 |
|---|---|---|---|---|---|

■ Step 1
**Style:**
**48S** = Half C
**96S** = C

■ Step 2
**Series:**
**6053**

■ Step 3
**Contact Configuration:**

| Code | Rows |
|---|---|
| 04 | A & B |
| 05 | A & C |

■ Step 4
**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5
**Termination:**

| Code | IDC for flat cable |
|---|---|
| 1 | AWG 28/7 and AWG 30/1 |

■ Step 6
**Mounting:**

| Code | Mounting flange | Strain relief |
|---|---|---|
| 1 | No Flange | Without |
| 2 | No Flange | With |
| 3 | Standard flange | Without |
| 4 | Standard flange | With |

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181 and E31650*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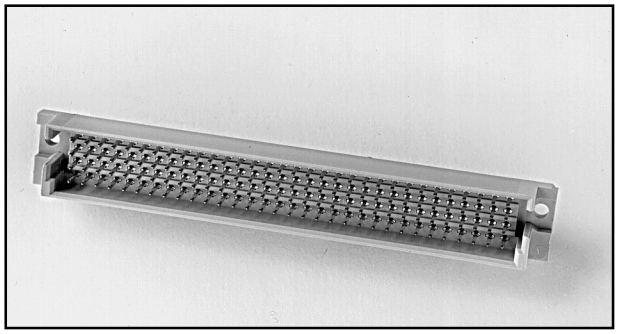
# DIN
# Expanded Four Row

## 6101 Series

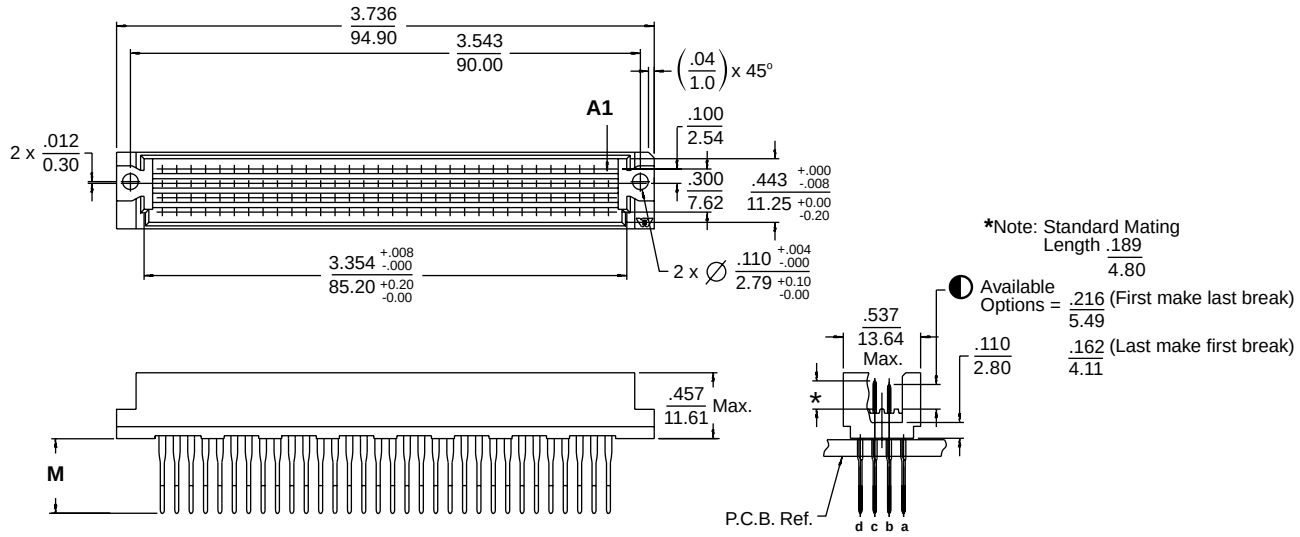
## Pin Connector



This Inverted DIN connector series conforms to style R with the addition of a fourth row of 32 contacts for a total of 128 contacts for higher density applications.

## OUTLINE

**4 Rows of 32 = 128 Positions**
**(Similar To Style R)**




**Catalog Number 128P610108318 Shown**

## ORDERING INFORMATION

**Example:** 128P-6101-0831-9

| 128P | 6101 | 08 | 31 | 9 | ◐ |
|---|---|---|---|---|---|

■ Step 1
**Style:**
**128P =** R
4 x 32

■ Step 2
**Series:**
**6101**

■ Step 3
**Contact Configuration:**

| Code | Row |
|---|---|
| 08 | A , B, C & D |

■ Step 4
**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5
**Termination:**

| Code | C-Press® Tail Length |
|---|---|
| 6 | M = .81/20.6 |
| 7 | M = .65/16.5 |
| 8 | M = .51/13.0 |
| 9 | M = .22/5.6 |

■ Step 6
**Special Features:**

| Code | Options |
|---|---|
| Blank | None |
| E | Extended Pin. First make last break contacts. Consult Winchester |

**20P-6043 Connector not available in* C-Press®

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E31650*

*CSA File No. 34182*


For specifications, see page DN / **3**
For P.C. Board hole patterns, see page DN / **53**
For installation tooling, see page DN / **47**



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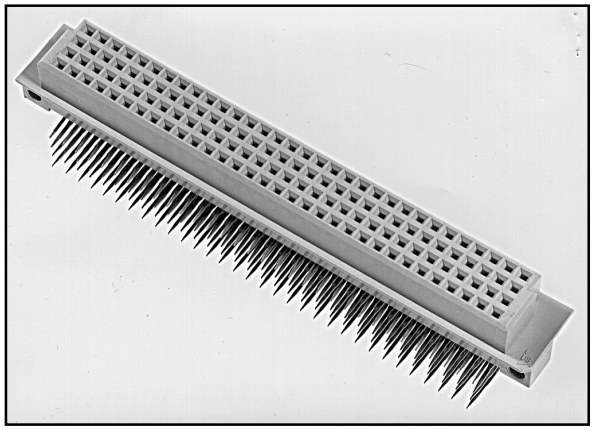
# DIN
# Expanded Four Row

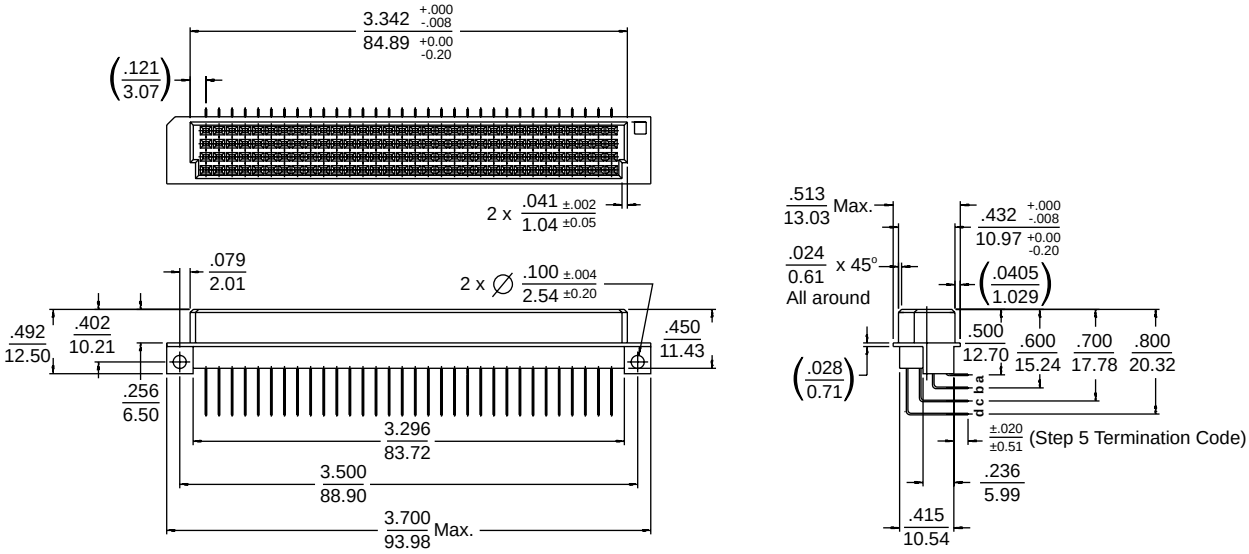
## 6101 Series

## Socket Connector



## OUTLINE

**4 Rows of 32 = 128 Positions**
**(Similar To Style R)**




**Catalog Number 128S610108310 Shown**

## ORDERING INFORMATION

**Example:** 128S-6101-0831-0

| 128S | 6101 | 08 | 31 | 0 |
|---|---|---|---|---|

■ Step 1
**Style:**
**128S =** R
4 x 32

■ Step 2
**Series:**
**6101**

■ Step 3
**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 08 | 1,2,3 ... 32 | A , B, C & D |

■ Step 4
**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5
**Termination:**

| Code | |
|---|---|
| 0 | .118 (3 mm) Solder |
| 2 | .146 (3.7 mm) Solder |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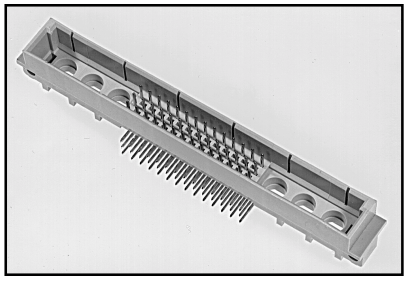
# DIN Style M
# Multipurpose 41612

## 6063 Series

## Multipurpose Pin Connector



**Wide Choice Of Contact Configurations — Ideal for power supplies, telecom, and video applications.**

Referred to as "Multipurpose DIN" or "Hybrid DIN", this connector family combines the usage of signal contacts with high current, high voltage, coaxial, and fiber optic contacts. Contacts are ordered separately and can be combined in whatever way necessary to meet packaging and design requirements.

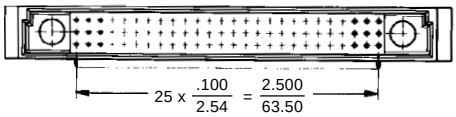
## OUTLINE

**Special Contacts:**

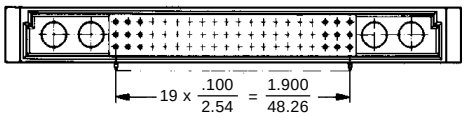
- High Current
- High Voltage
- Coax

See page DN / 37-40

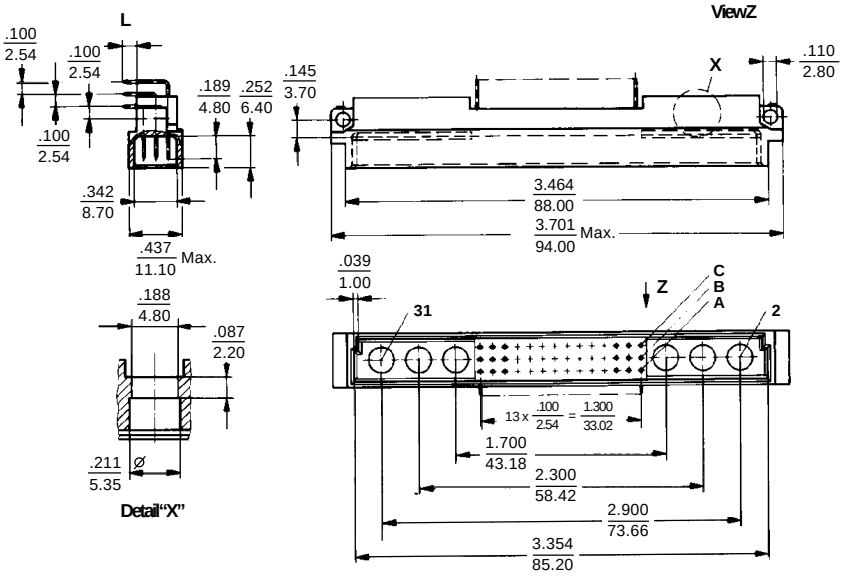
**78 Signal - 2 Special**



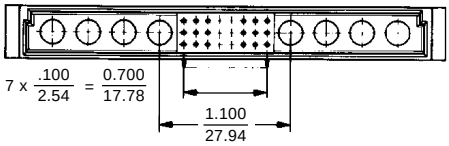

**60 Signal - 4 Special**




**42 Signal - 6 Special**




**24 Signal - 8 Special**




## ORDERING INFORMATION

**Example:** 42P-6063-0731-0

| 42P | 6063 | 07 | 31 | 0 | ◐ |
|---|---|---|---|---|---|

**Step 1**

**Style:**

**24P =** 24 + 8
**42P =** 42 + 6
**60P =** 60 + 4
**78P =** 78 + 2

**Step 2**

**Series:**
**6063**

**Step 3**

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

**Step 4**

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 31 | Class 2 | Tin / Lead |
| 22 | Class 1 | Tin / Lead |

Special configuration for CompactPCI™ power supplies: 24P6063075366 - consult factory for additional and related product information.

**Step 5**

**Termination:**

| Code | Dip Solder |
|---|---|
| 0 | L = 118 (3 mm) |

**Step 6**

**Special Features:**

| Code | Options |
|---|---|
| Blank | None |
| E1 | Outer Pins Of Row A Extended |
| E3 | Outer Pins Of Row C Extended |
| E13 | Outer Pins Of Row A & C Extended |

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181 and E31650*

For specifications, see page DN / **2**
For P.C. Board hole patterns, see page DN / **52**
For installation tooling, see page DN / **47**

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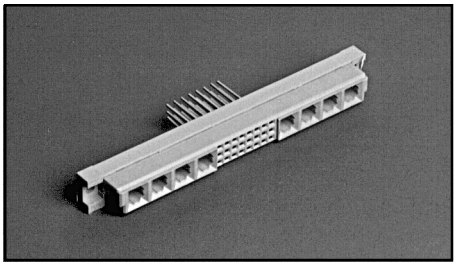
# DIN Style M
# Multipurpose 41612

## 6063 Series

## Multipurpose Socket Connector



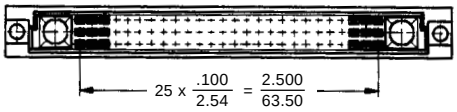
## OUTLINE

**Special Contacts:**

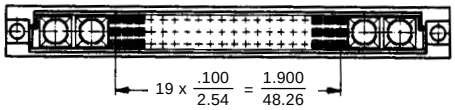
- High Current
- High Voltage
- Coax

See page DN / **37-40**

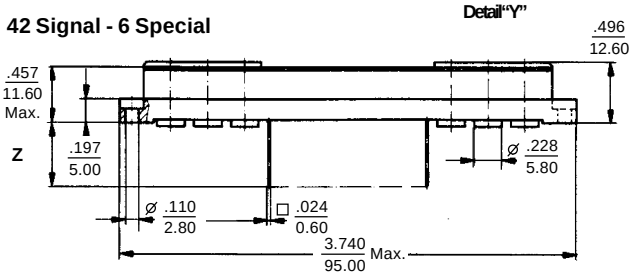
**78 Signal - 2 Speical**

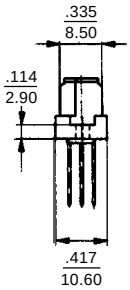



**60 Signal - 4 Special**

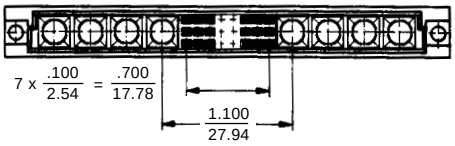


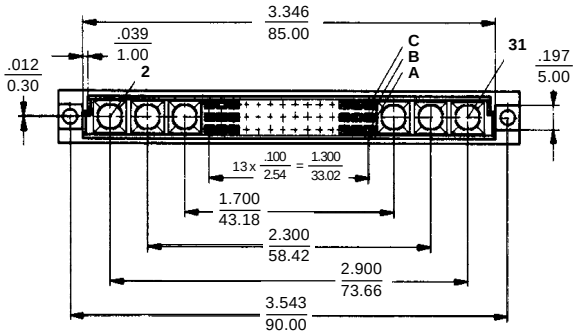

**42 Signal - 6 Special**

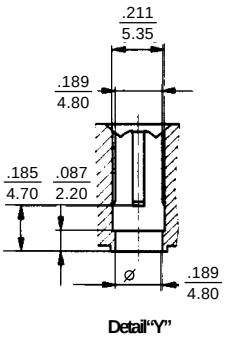



**24 Signal - 8 Special**




## ORDERING INFORMATION

**Example:** 42S-6063-0731-2

| 42S | 6063 | 07 | 31 | 2 |
|---|---|---|---|---|

■ Step 1

**Style:**

**24S =** 24 + 8
**42S =** 42 + 6
**60S =** 60 + 4
**78S =** 78 + 2

■ Step 2

**Series:**
**6063**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 31 | Class 2 | Tin / Lead |
| 22 | Class 1 | Tin / Lead |

■ Step 5

**Termination:**

| Code | Dip Solder |
|---|---|
| V | .024 x .012<br>L = .098 (2.5 mm) |
| 2 | .024 x .01<br>L = .158 (4 mm) |

| Code | Mini Wire-wrap |
|---|---|
| 5 | L = .287 (7.3 mm) |
| 1 | L = .512 (13 mm) |

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181*

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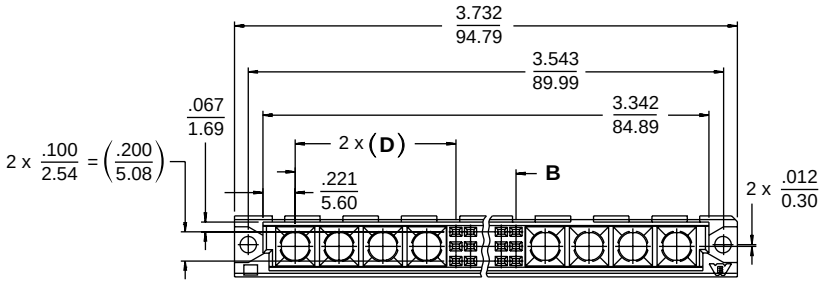
# DIN Style M
# Multipurpose 41612

## 6163 Series

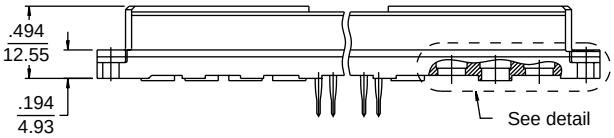
## Multipurpose Socket Connector With C-Press® Compliant Pins

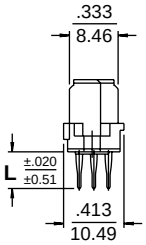
The 6163 series is a press-fit implementation of the DIN style M multipurpose female socket connectors. It features a press on the insulator design for ease of assembly to the P.C.B. This connector also has the unique capability of being customized with flush multipurpose contact openings on the base of the insulator which allows the connector to be fully seated to the P.C.B. when utilizing high current P.C. B. mount contacts.

## OUTLINE

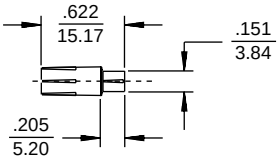



**Catalog Number 24S616307319 Shown**



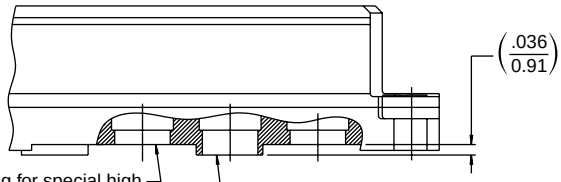

**Press-Fit Power Contact**




**Catalog Number 01S60634932 Shown**

High current press-fit contact for use in ∅.138±.003 / 3.50±0.08 plated thru hole.

Max. Insertion Force: 32lbs./ 142N
Min. Retention Force: 20lbs./ 89N
Current Rating: 40 amp per DIN 41626




Flush opening for special high current P.C.B. mount contacts

Raised opening

## ORDERING INFORMATION

**Example:** 42S-6163-0731-6

| 42S | 6163 | 07 | 31 | 6 | ◐ |
|---|---|---|---|---|---|

**Step 1**

**Style:**

| Code | |
|---|---|
| 6S | = 6 + 10 |
| 24S | = 24 + 8 |
| 42S | = 42 + 6 |
| 60S | = 60 + 4 |
| 78S | = 78 + 2 |

**Step 2**

**Series:**
**6163**

**Step 3**

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

**Step 4**

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| BF | Class 2 | Tin / Lead |
| | Palladium Nickel with Gold Flash | |
| 22 | Class 1 Gold | Tin / Lead |
| 31 | Class 2 Gold | Tin / Lead |

Special configuration for CompactPCI™ power supplies: 24S6163073191 - consult factory for additional and related product information.

*UL File No. E31650 pending*
*CSA File No. 34182 pending*

**Step 5**

**Termination:**

| Code C-Press® Socket Contact | Tail Length |
|---|---|
| 6 | L = .78 / 19.9 |
| 7 | L = .67 / 17.0 |
| 8 | L = .46 / 11.8 |
| 9 | L = .19 / 4.8 |
| B | L = .51 / 13.0 |

**Step 6**

**Special Features:**

| Code | Options |
|---|---|
| Blank | Standard, all power openings have raised rings that engage P.C.B. |
| 1 | All power openings flush. |
| | Further variations upon request. |

For specifications, see page DN / **4**
For P.C. Board hole patterns, see page DN / **55**

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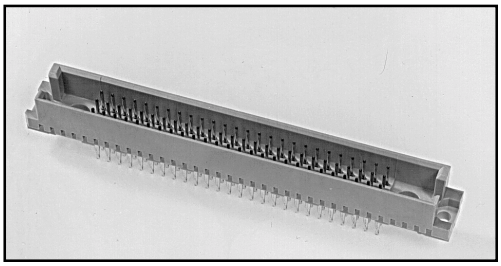
# DIN Inverse Style M Multipurpose 41612

## 6093 Series

## Multipurpose Pin Connector



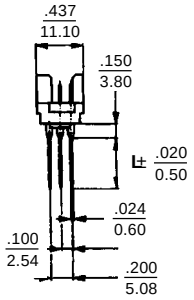
This Inverse Style M DIN connector is offered with Winchester **C-Press**® terminations for press-fit backpanel applications. The same range of special purpose contacts are available for both the pin and socket connectors as is for the standard Style M configurations.

## OUTLINE

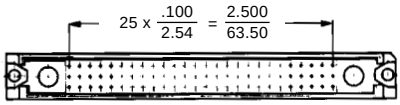
**Special Contacts:**

- High Current
- High Voltage
- Coax

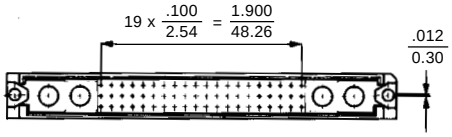
See page DN / **37-40**



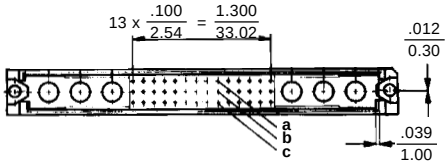

**78 Signal - 2 Special**



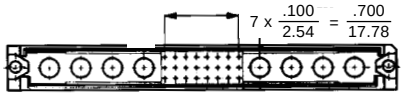

**60 Signal - 4 Special**



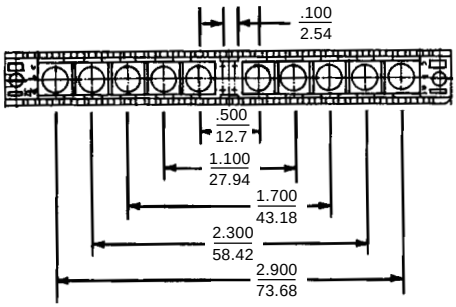

**42 Signal - 6 Special**

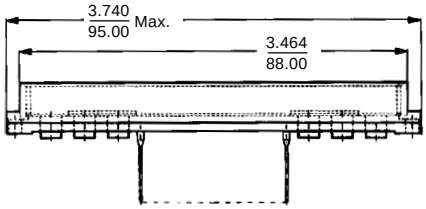



**Pin Connector 24 Signal - 8 Special**




**6 Signal - 10 Special**




## ORDERING INFORMATION

**Example:** 42P-6093-0731-6

| 42P | 6093 | 07 | 31 | 6 | ◐ |
|---|---|---|---|---|---|

■ Step 1

**Style:**

**06P =** 6 + 10
**24P =** 24 + 8
**42P =** 42 + 6
**60P =** 60 + 4
**78P =** 78 + 2

■ Step 2

**Series:**
**6093**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 31 | Class 2 | Tin / Lead |
| 22 | Class 1 | Tin / Lead |

■ Step 5

**Termination:**

| Code | C-Press® |
|---|---|
| 6 | L = .637 (16.2 mm) |
| 7 | L = .523 (13.3 mm) |
| 8 | L = .370 (9.4 mm) |
| 9 | L = .079 (2.0 mm) |

■ Step 6

**Special Features:**

| Code | Options |
|---|---|
| Blank | None |
| E | Extended Pin. First make last break contacts. Consult Winchester |

*Recognized under the Component Program of Underwriters Laboratories Inc. File No. E136181, to Standard UL 1863*

For specifications, see page DN / **2**
For P.C. Board hole patterns, see page DN / **52**
For installation tooling, see page DN / **47**

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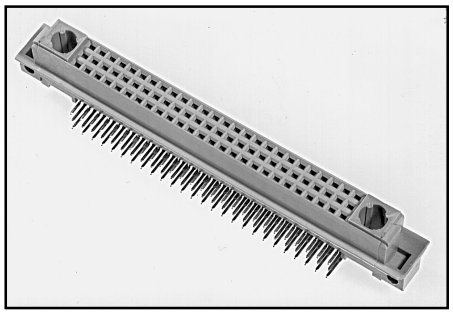
# DIN Inverse Style M
## Multipurpose

## 6093 Series

## Multipurpose Socket Connector



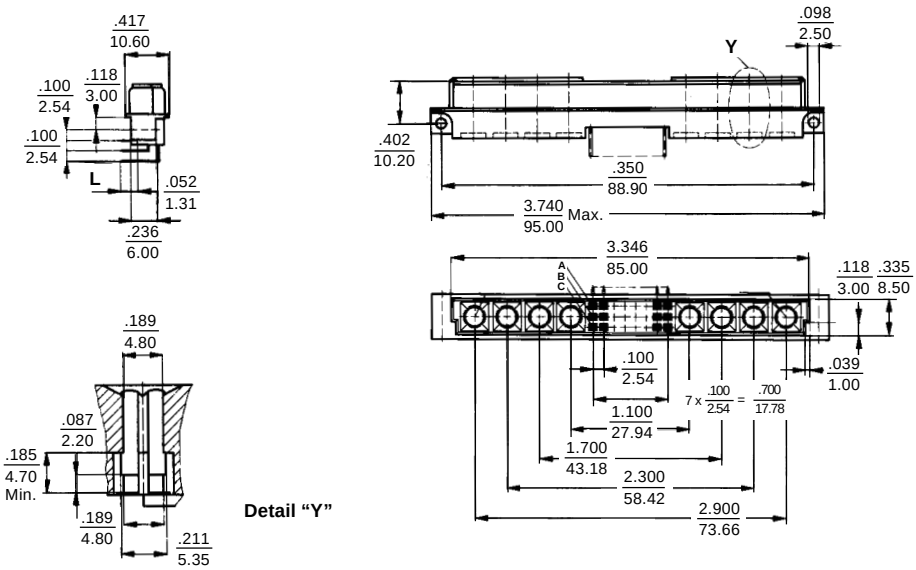
## OUTLINE

**Special Contacts:**

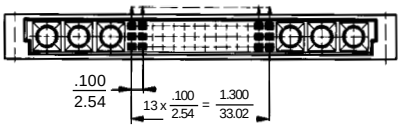
- High Current
- High Voltage
- Coax

See page DN / **37-40**

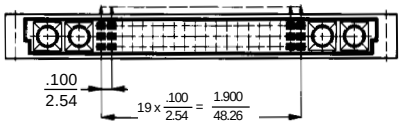
**Socket Connector 24 Contacts**



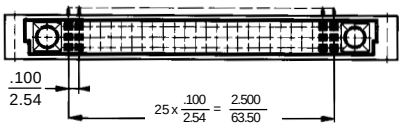

**Socket Connector 42 Contacts**




**Socket Connector 60 Contacts**




**Socket Connector 78 Contacts**




## ORDERING INFORMATION

**Example:** 24S 6093-0731-0

| 24S | 6093 | 07 | 31 | 0 |
|---|---|---|---|---|

■ Step 1

**Style:**

**06S =** 6 + 10
**24S =** 24 + 8
**42S =** 42 + 6
**60S =** 60 + 4
**78S =** 78 + 2

■ Step 2

**Series:**
**6093**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | |
| 15 | Even positions | |
| 17 | Even positions | |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5

**Termination:**

| Code | Dip Solder |
|---|---|
| 2 | .024 x .012<br>L = .146 (3.7 mm) |
| 0 | .024 x .012<br>L = .118 (3 mm) |

*Recognized under the Component Program of Underwriters Laboratories Inc. File No. E136181, to Standard UL 1863*

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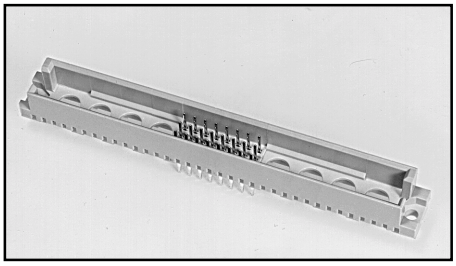
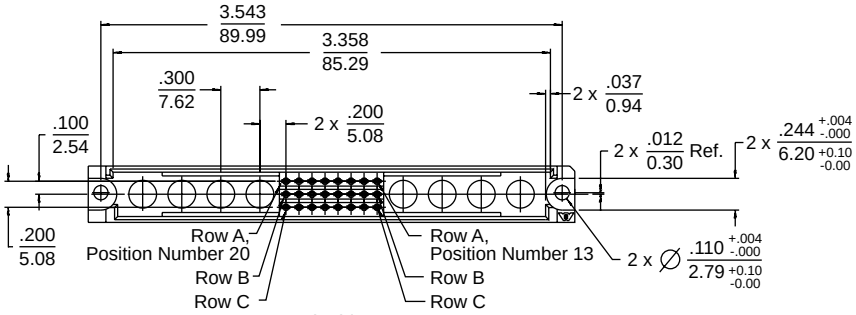
## 6105 Series

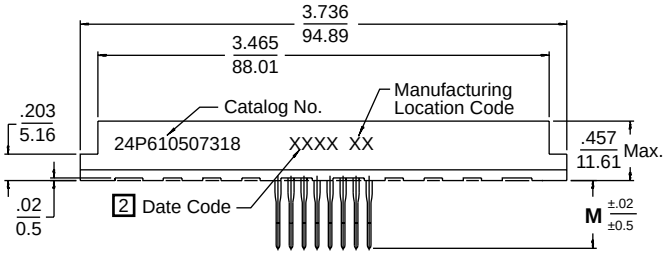
## Multipurpose Pin Connector



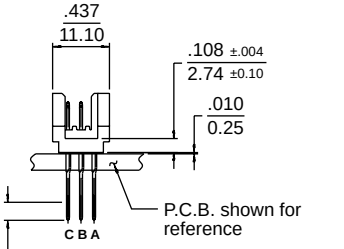
Recognized as the leader in compliant pin **C-Press**® technology, Winchester has developed this special version of the Inverse Multipurpose DIN pin connector. Uniquely designed for mixed power, coax, and signal applications, this connector provides from 2 to 10 high current or coaxial contacts for press-fit backpanel applications.

## OUTLINE

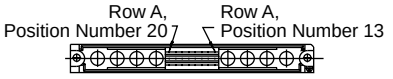



**Catalog Number 24P610507318 Shown**

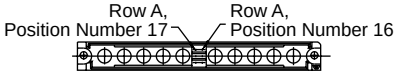


**Catalog Number 78P610507319 Shown**

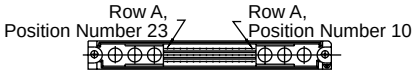



**Catalog Number 24P610507319 Shown**

**Catalog Number 60P610507319 Shown**




**Catalog Number 06P610507319 Shown**




**Catalog Number 42P610507319 Shown**

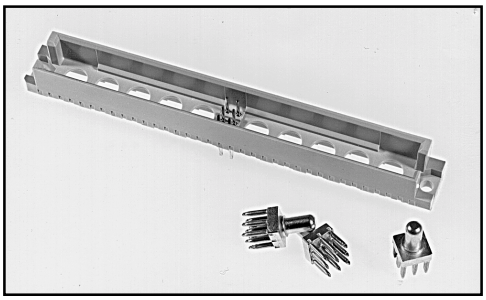
## TECHNICAL DATA

| | |
|---|---|
| **Temperature range:** | -65º / 140ºC |
| **Current rating at 70ºC:** | 1 A |
| **High voltage test:** | 1 kV |
| **Creepage distance Contact/Contact:** | 1,2 mm |
| **Creeping distance Contact/ground plane:** | 1,8 mm |
| **Air distance Contact/Contact:** | 1,2 mm |
| **Air distance Contact/ground plane:** | 1,6 mm |
| **Contact resistance:** | Max 20 M ohms |
| **Insulation resistance:** | Min. $10^{12}$ ohms |
| **Moulding material:** | Thermopl. Polyester GV |
| **Burning properties acc. to UL 94:** | VO |
| **Base material of pin contacts:** | CuNi9Sn |

# DIN Inverse Style M Multipurpose

## 6105 Series

## Multipurpose Pin Connector



## ORDERING INFORMATION

**Example:** 78P-6105-0731-9

| 78P | 6105 | 07 | 31 | 9 | ◐ |
|---|---|---|---|---|---|

■ Step 1

**Style:**

| Code | Signal Contacts | Inverse |
|---|---|---|
| 06 | 6 Signal Contacts 2 Positions/Row | Full DIN |
| 24 | 24 Signal Contacts 8 Positions/Row | Full DIN |
| 42 | 42 Signal Contacts 14 Positions/Row | Full DIN |
| 60 | 60 Signal Contacts 20 Positions/Row | Full DIN |
| 78 | 78 Signal Contacts 26 Positions/Row | Full DIN |

■ Step 2

**Series:**
**6105**

■ Step 3

**Contact Configuration:**

| Code | Contact Sequence | Row |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |
| 05 | All positions | A & C |
| 07 | All positions | A, B & C |
| 14 | Even positions | A & B |
| 15 | Even positions | A & C |
| 17 | Even positions | A, B & C |

■ Step 4

**Performance Class:**

| Code | Contact Area | Terminal |
|---|---|---|
| 31 | Class 2 | Tin / Lead |
| 22 | Class 1 | Tin / Lead |

■ Step 5

**Termination:**

| Code | C-Press®* |
|---|---|
| 6 | M = .81 (20.6 mm) |
| 7 | M = .65 (16.5 mm) |
| 8 | M = .51 (13.0 mm) |
| 9 | M = .22 (5.6 mm) |

■ Step 6

**Special Features:**

| Code | Options |
|---|---|
| Blank | None |
| E | Extended pin. First make last break contacts. Consult Winchester. |

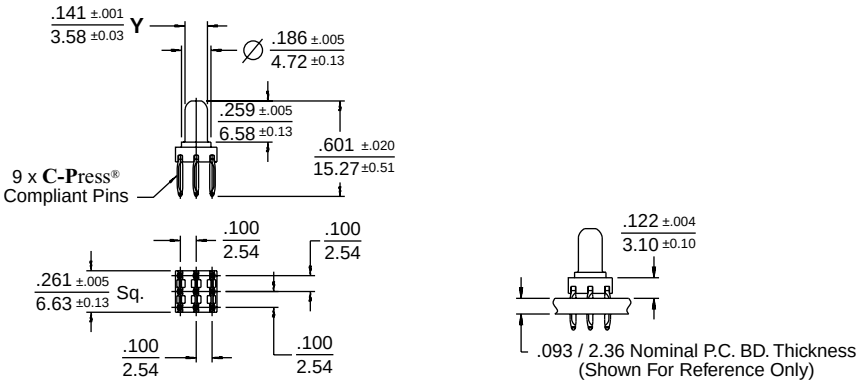
*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E136181 and E31650*

For specifications, see page DN / **3**
For P.C. Board hole patterns, see page DN / **54**
For installation tooling, see page DN / **47**

## OUTLINE

**C-Press® Power Contact**

Part Number: 121-27379-1
Order separately




**Catalog Number 121-27379-1 Shown**

## TECHNICAL DATA

**POWER CONTACT BODY**

**Material** Brass

**Finish:** .000003 / 0.08µm Min. Gold flash over .000025 / 0.64µm Min. palladium nickel

**C-Press® COMPLIANT PINS**

**Material:** Copper alloy.

**Finish Area:** .000050 / 1.2µm to .0001000 / 2.5µm tin-lead

**Rated current at 70ºC:** 22.5 A

**Operating Temperature Range:** -55ºC to +106ºC

**Contact Resistance:** 2.0 Milliohms max initial between contact and plated thru hole

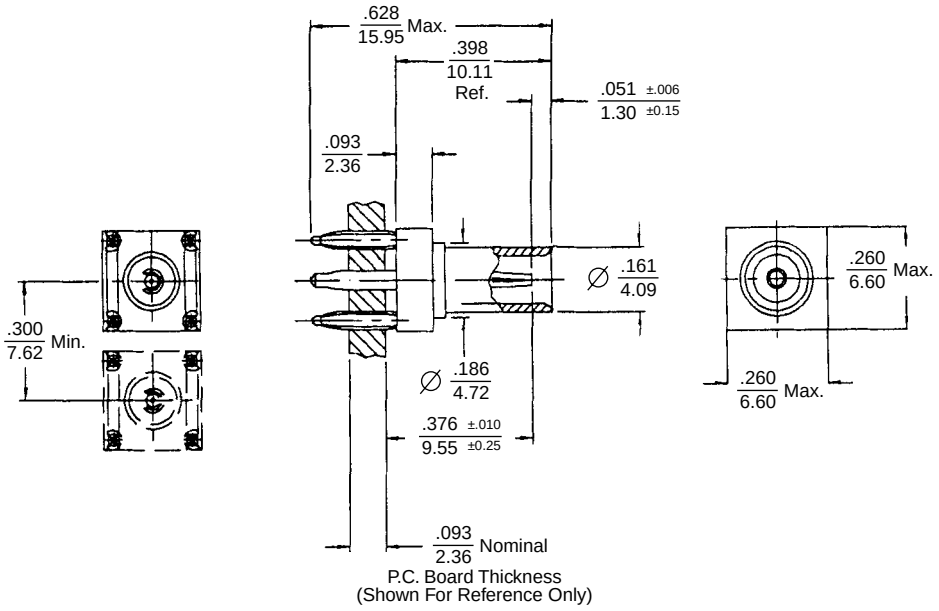
## 6105 Series

# Multipurpose Pin Connector

## OUTLINE

**C-Press® Coaxial Contact**

Part Number: 121-26327-1
Order separately




## TECHNICAL DATA

### MATERIALS

| | |
|---|---|
| **Body:** | Brass Alloy |
| Finish - | Gold over Nickel |
| **C-Press® Socket Contact:** | Phosphor Bronze |
| Finish - | Gold over Nickel |
| Quantity - | 1 required |
| **C-Press® Ground Contacts:** | Copper Alloy |
| Finish - | Tin Lead over Nickel |
| Quantity - | 4 required |

### PERFORMANCE CHARACTERISTICS

*These connectors meet the requirements of DIN 41626/2*

| | |
|---|---|
| **Impedance:** | 50 ohms |
| **Operating Frequency:** | Max 2 Ghz |
| **Reflection:** | Max 0.05 to 1 Ghz<br>Max 0.07 to 4 Ghz<br>Max 0.1 to 10 Ghz |
| **Peak Voltage:** | 750 V to 50 Hz |
| **Insulation Resistance:** | 10 Megohms |
| **Temperature Range:** | -65° to +165°C |

### CONNECTOR TO P.C.B.

| | |
|---|---|
| **Max. Insertion Force:** | 200 lbs. / (45 N) |
| **Max. Retention Force:** | 50 lbs. / (11 N) |

Winchester Electronics
400 Park Road ▪ Watertown, Connecticut 06795-0500 ▪ Phone: (860) 945-5000 ▪ FAX: (860) 945-5191 ▪ Internet: http://www.litton-wed.com

# DIN Special Contacts

## 6063 Series

## TECHNICAL DATA

*These contacts meet the requirements of DIN 41626*

**COAXIAL CONTACTS**

| | |
|---|---|
| **Body/outer contact:** | CuZn 30 Pb 2 |
| **Spring parts:** | CuBe |
| **Insulators:** | PTFE |
| **Plating:** | See ordering information Step 3 |
| **Fixing clip:** | CuBe |
| **Crimp barrel:** | Cu |
| **Impedance:** | See ordering information Step 2 |
| **Operating frequency:** | Max. 2 GHz |
| **Reflection:** | Max. 0.05 to 1 GHz<br>Max. 0.07 to 4 GHz<br>Max. 0.1 to 10 GHz |
| **Peak voltage:** | 750 V 50 Hz |
| **Insulation resistance:** | 10 Mohms |
| **Temperature range:** | -65°C to +165°C |
| **Cable:** | See ordering information |

**HIGH CURRENT CONTACTS**

| | |
|---|---|
| **Pin contact:** | CuZn |
| **Socket contact:** | CuSn |
| **Fixing clip:** | CuBe |
| **Plating:** | See ordering information Step 3 |
| **Current rating at 70°C:** | See ordering information Step 2 — Consider cable limitations |
| **Contact resistance:** | Max. 1 Mohms |
| **Temperature range:** | -55°C to +125°C |

**HIGH VOLTAGE CONTACTS**

| | |
|---|---|
| **Body:** | POM |
| **Pin contact:** | CuZn |
| **Socket contact:** | CuSn |
| **Fixing clip:** | CuBe |
| **Max. operating voltage:** | 3.8 kV |
| **Current rating:** | 1.5 A at +70°C |
| **Contact resistance:** | Max. 10M ohms |
| **Insulation resistance:** | Min. 10 ohms |
| **Plating:** | 15 µ in. / 38µm Au over Ni |

## ORDERING INFORMATION

***6063 ◐◐ △△

■ Step 1

**Contact Type Code:**

| ***6063 Code | Description | Application |
|---|---|---|
| 01S6063 | Socket Contact | 6063, 6093 and 6163 Socket Connectors |
| 01P6063 | Pin Contact | 6063, 6093 and 6105 Pin Connectors |

■ Step 2

**Contact Style Code:**

| Code | Contact Description | Termination Application | D | L |
|---|---|---|---|---|
| 00 | 50Ω Coaxial | RG178B/U, RG196A/U | — | — |
| 01 | 50Ω Coaxial | RG174B/U, RG188A/U | | |
| 02 | 75Ω Coaxial | RG179B/U, RG187A/U | | |
| 10 | 50Ω Coaxial | PC-Board | | |
| 11 | 50Ω Coaxial | PC-Board | | |
| 12 | 50Ω Coaxial | RG178B/U, RG196A/U | | |
| 13 | 50Ω Coaxial | RG174B/U, RG188A/U | | |
| 14 | 75Ω Coaxial | RG179B/U, RG187A/U | | |
| 20 | 40A Current | Wire (Solder) | .187 / 4.75 | .315 / 8.00 |
| 21 | 30A Current | Wire (Solder) | .138 / 3.51 | |
| 22 | 20A Current | Wire (Crimp) | .094 / 2.40 Min. | .386 / 9.80 |
| 23 | 30A Current | Wire (Crimp) | .134 / 3.40 Min. | |
| 24 | 10A Current | Wire (Crimp) | .067 / 1.70 Min. | |
| 25 | 40A Current | FMLB Wire (Crimp) | .189 / 4.80 | |
| 26 | 40A Current | Wire (Crimp) | | |
| 27 | 30A Current | PC-Board | — | — |
| 29 | 10A Current | Wire (Crimp) | .071 / 1.80 | .386 / 9.80 |
| 30 | High Voltage | Wire AWG 20 | — | — |
| 41 | 30A Current | PC-Board | | |
| 42 | 40A Current | PC-Board | | |
| 43 | 40A Current | PC-Board | | |
| 44 | 40A Current | PC-Board (FMLB) | | |
| 45 | 40A Current | PC-Board | | |
| 46 | 10A Current | PC-Board (FMLB) | | |
| 47 | 10A Current | PC-Board (FMLB) | | |
| 49 | 40A Current | PC-Board (Press-Fit) | — | — |
| 51 | 10A Current | PC-Board | | |
| 52 | 40A Current | PC-Board (FMLB) | | |

■ Step 3

**Special Contact Plating Code:**

| Code | Mating Area | Terminal End |
|---|---|---|
| 31 | 30 µin. / .76 µm Gold over nickel | Tinned |
| 32 | 30 µin. / .76 µm Gold over nickel | Goldflash* |

**Note: Standard Product. Plating code 31 is standard option on contact styles 27 and 41 only.*

Winchester Electronics

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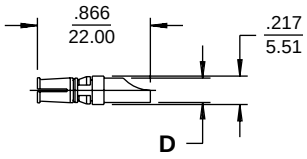
## 6063 Series

# Multipurpose Pin / Socket Connector

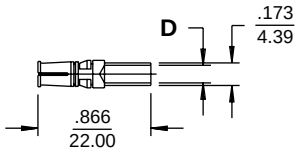
These contacts are designed for use with Series 6063/6093 pin and socket connectors. The user can easily insert these contacts into the moldings. If necessary they can be removed with a special hand-tool.

## HIGH CURRENT CONTACTS

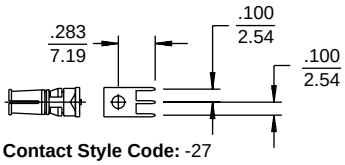
### For Socket Connectors



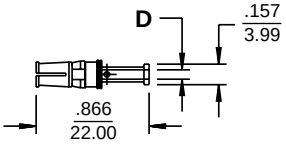

**Contact Style Code:** -20, -21



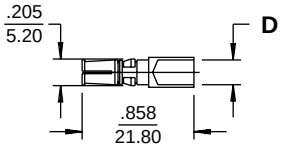

**Contact Style Code:** -23, -26




**Contact Style Code:** -27




**Contact Style Code:** -22, -24, -29

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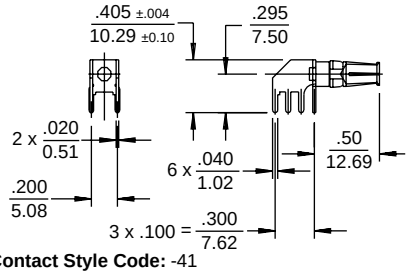


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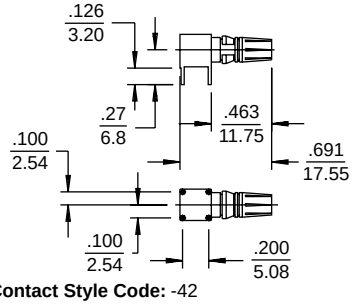


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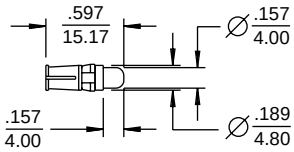


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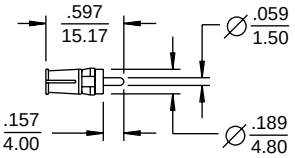
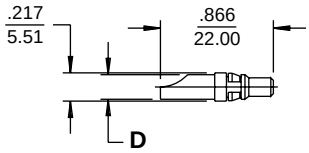
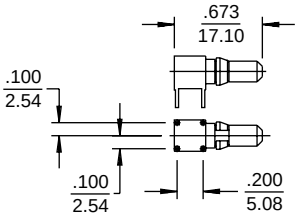



**Contact Style Code:** -46

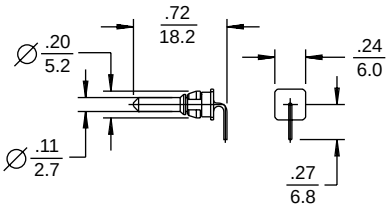
### For Pin Connectors



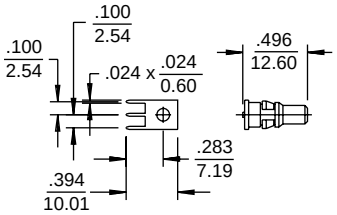

**Contact Style Code:** -20, -21



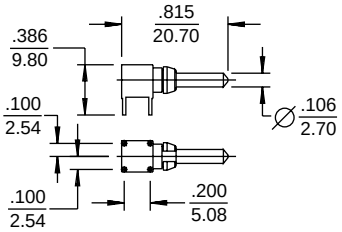

**Contact Style Code:** -43



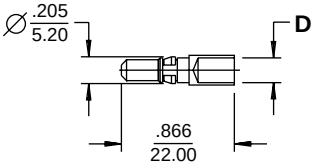

**Contact Style Code:** -47




**Contact Style Code:** -27




**Contact Style Code:** -44



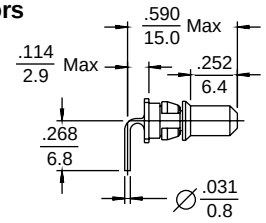

**Contact Style Code:** -22, -23, -24, -26

## 6063 Series

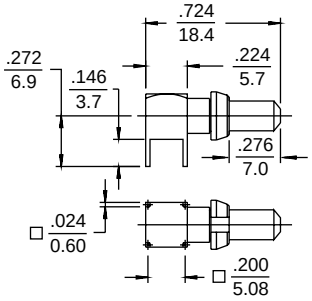
# Multipurpose Pin / Socket Connector

## HIGH CURRENT CONTACTS

### For Pin Connectors

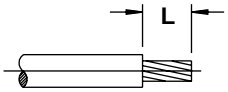



**Contact Style Code:** -51



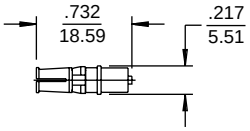

**Contact Style Code:** -52

### Cable Requirements



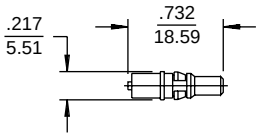

## HIGH VOLTAGE CONTACTS

### For Socket Connectors



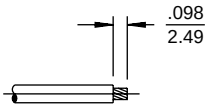

**Contact Style Code:** -30

### For Pin Connectors




**Contact Style Code:** -30

### Cable Requirements

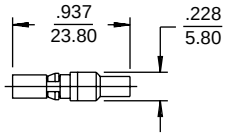


## 6063 Series

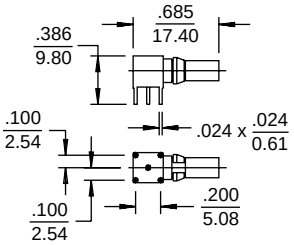
# Multipurpose Pin / Socket Connector

## COAXIAL CONTACTS

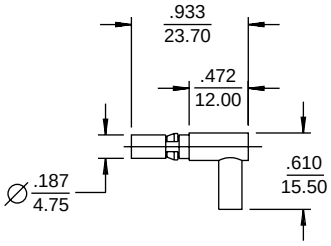
### For Socket Connectors



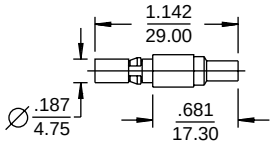

**Contact Style Code:** -00, -01



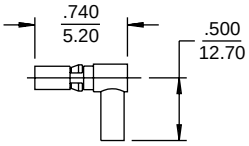

**Contact Style Code:** -11



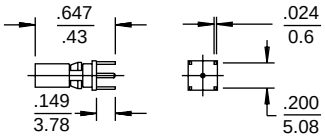

**Contact Style Code:** -14




**Contact Style Code:** -02

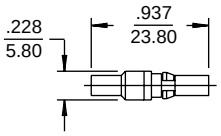



**Contact Style Code:** -12, -13

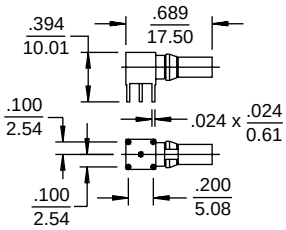



**Contact Style Code:** -10

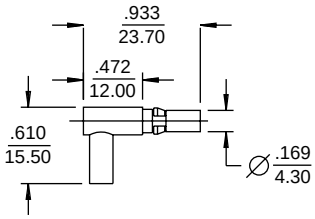
### For Pin Connectors



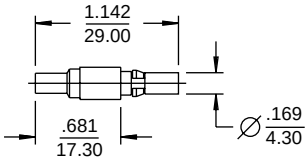

**Contact Style Code:** -00, -01




**Contact Style Code:** -11

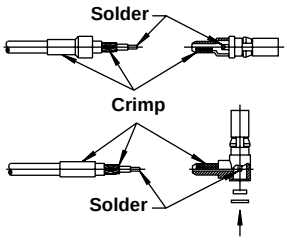



**Contact Style Code:** -14

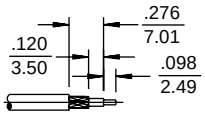



**Contact Style Code:** -02

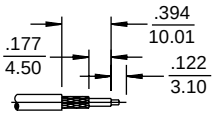
### Cable Requirements




### Socket or Pin

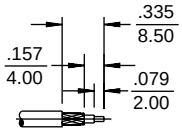



**Straight**

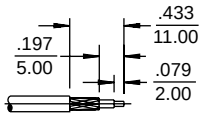



**Right Angle**

**Contact Style Code:** -00, -01, -11, -12, -13




**Contact Style Code:** -02

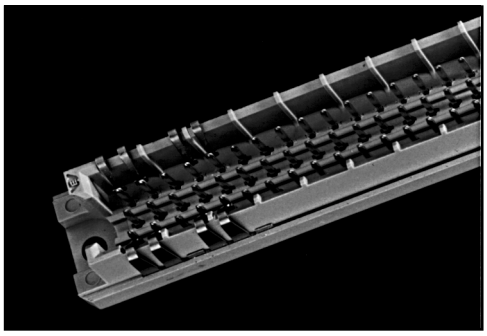



**Contact Style Code:** -14

# DIN Style Q & R Inverse

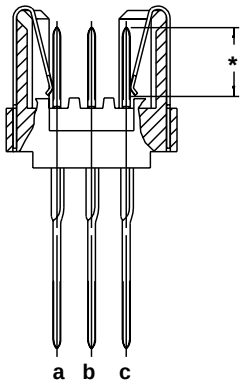
## 7043 Series

## Switching DIN / Pin Connector



Winchester's switching DIN Connector provides a unique solution to a common requirement in many of today's bus-based computer architectures. Daisy-chaining circuits on a bus often necessitates the use of manual backplane jumpering to accommodate empty card slot positions. Now, Winchester offers a simple solution to lower installed costs in our male DIN connector with integral switching contacts.

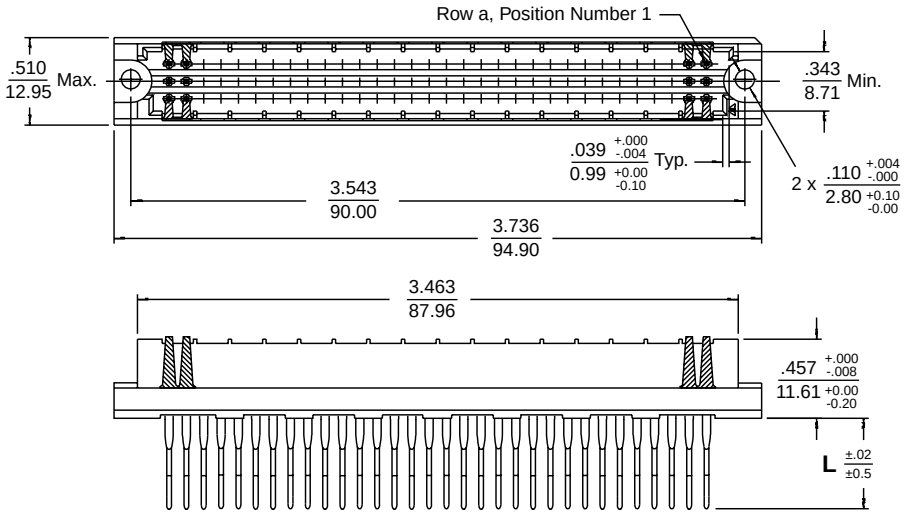
## OUTLINE

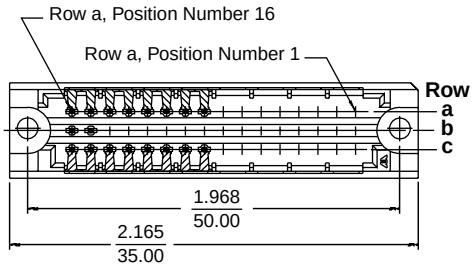



***Standard mating length:** .189 / 4.80

**Available Options:**
.216 / 5.49 (First Make Last Break)
.162 / 4.11 (Last Make First Break)

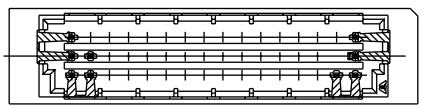
**3 Rows of 32 = 96 Positions**
**(Similar to Style R)**




**Catalog Number 704348P310702 Shown**

Switching clips can electrically short any pair or multiple pairs of signal pins in the a & c rows when the mating connector is absent. Upon insertion of a standard DIN socket connector, the electrical connection between the shorted contact pairs is broken before the signal contacts engage.



**3 Rows of 16 = 48 Positions**
**(Similar to Style R/2)**
**Catalog Number 704348P310701 Shown**

Switching clips can also be used to short a & b row pins but only on the ends of the connector, i.e. 1a - 1b, 16a - 16b, 32a - 32b. When this configuration is used, there are no mounting holes on the ends of the connectors.

## 7043 Series

# Switching DIN / Pin Connector

## Automatic Switching Contacts Eliminate Manual Jumpers

### Automatic Jumper Shunts

Upon insertion of a standard DIN female socket connector, the electrical connection between shorted contact pairs is broken before the signal contacts engage. The mated connector pair now performs the function of a standard DIN 41612 interconnect.

### Design Flexibility

Any number of adjacent pins in the outer rows of the connector can be electrically shorted when the mating connector is absent.

### Easy Implementation

The Winchester *Switching DIN* connector is a direct replacement for standard DIN connectors. Existing designs can take advantage of the unique benefits of this connector.

### High Performance

The high quality switching contacts meet all the *performance requirements of DIN class 2.* (Other performance levels available upon request).

## ORDERING INFORMATION

**Example:** 7043-48P-93107-02

| 7043 | 48P | 9 | 31 | 07 | ◐ |
|---|---|---|---|---|---|

■ Step 1

**Series:**

**7043**
Inverted switching DIN

■ Step 2

**Style:**

**96P =** R, 3 x 32
**48P =** R/2, 3 x 16

■ Step 3

**Termination:**

C-Press®

| Pin Contact Code | Tail Length |
|---|---|
| 6 | L = .81 / 20.6 |
| 7 | L = .65 / 16.5 |
| 8 | L = .51 / 13.0 |
| 9 | L = .23 / 5.8 |

■ Step 4

**Plating:**

| Code | Mating Area | Termination End |
|---|---|---|
| 22 | Class 1 | Tin / Lead |
| 31 | Class 2 | Tin / Lead |

■ Step 5

**Loading Configuration:**

| Code | Cotact Loading Configuration |
|---|---|
| 05 | All positions in rows a & c |
| 07 | All positions in rows a, b & c |

■ Step 6

**Consult sales for available options**

- Switching clip quantity and location
- Selective loading and FMLB pins

For specifications, see page DN / **4**
For P.C. Board hole patterns, see page DN / **51**
For installation tooling, see page DN / **47**

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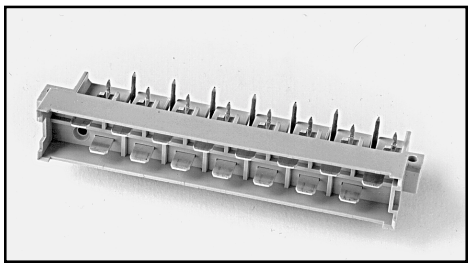
# DIN Style H Standard 41612

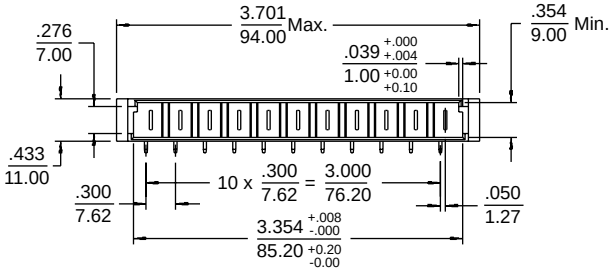
## 93H Series

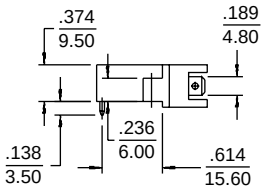
## Pin Connector



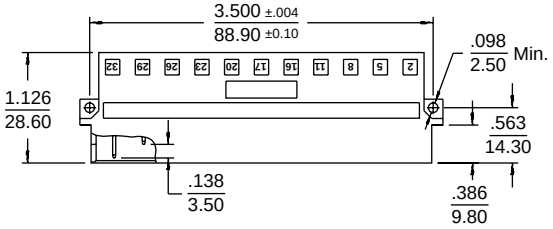
The DIN Style H connector series is specially designed for maximum current carrying capacity. With a current rating of up to 20 amps, these connectors are well suited for power supplies or other high power applications requiring either P.C.B. or discrete wire termination.

## OUTLINE

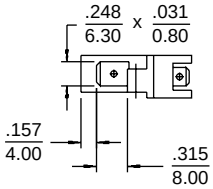


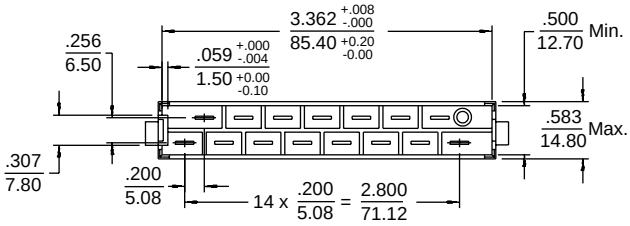

**Right Angle Solder Termination Code = 4**

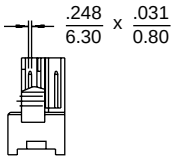



**Catalog Number 93HP11014 Shown**

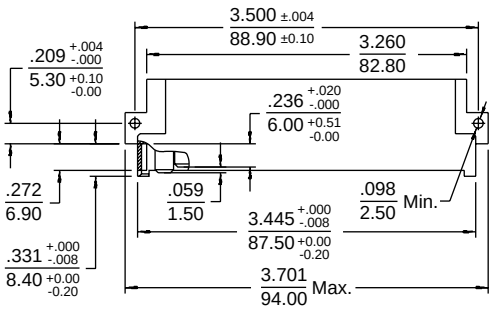



**Spade Terminal Termination Code = A**

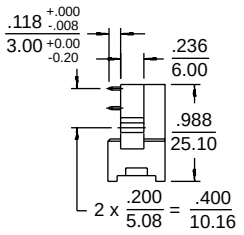



**Spade Terminal Termination Code = A**




**Catalog Number 93HP15041A Shown**




**Dip Solder Termination Code = 3**

*Recognized under the Component Program of Underwriters Laboratories Inc., File No. E31650*

*CSA File No. 701364*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# DIN Style H Standard 41612

## 93H Series

## Pin Connector

### ORDERING INFORMATION

**Example:** 93HP150413

| 93HP | 15 | 04 | 1 | 3 |
|---|---|---|---|---|

■ Step 1

**Style:**

**HP =** DIN style H, pin

■ Step 2

**Contact Positions:**

**15 =** 1 row of 8 & 1 row of 7 positions

**11 =** 1 row of 11 positions

■ Step 3

**Contact Configuration:**

| Code | Loading Positions | Loading Rows |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |

■ Step 4

**Performance Class:**

| Code | Mating Area |
|---|---|
| 1 | Class 1 |

■ Step 5

**Termination:**

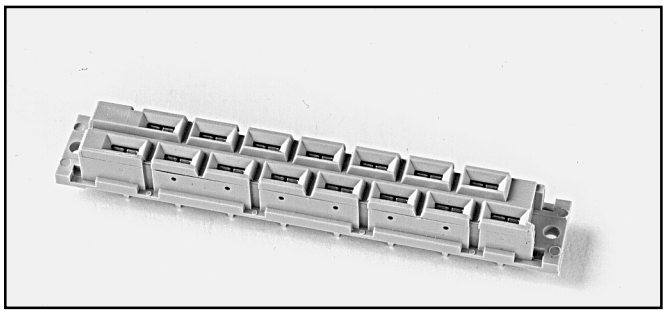
| Code | Termination Type | Size | Availability |
|---|---|---|---|
| 3 | Right Angle Solder | Ø .031/0.8 x .118/3.0 LG. | H15 Male |
| 4 | Right Angle Solder | Ø .031/0.8 x .138/3.5 LG. | H11 Male |
| A | Spade Terminal | .248/6.3 x .031/0.8 x .315/8 LG. | All Configurations |

For P.C. Board hole patterns, see page DN/56

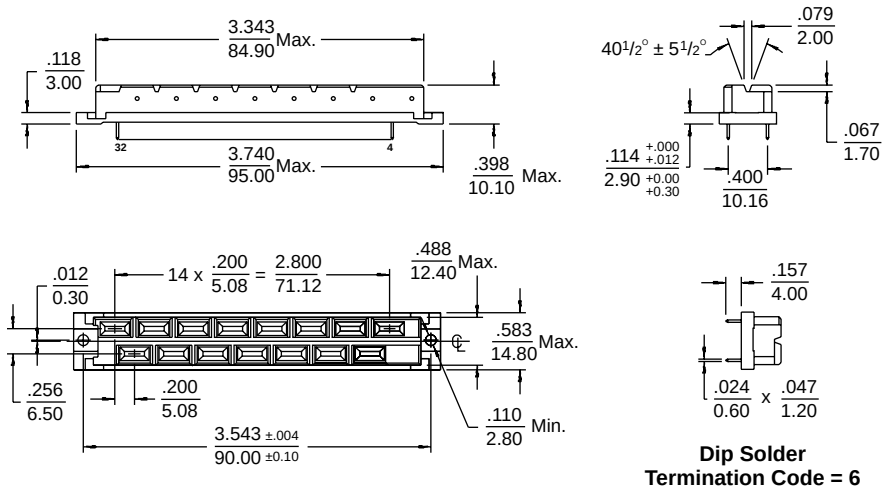
# DIN Style H Standard 41612

## 93H Series

## Socket Connector

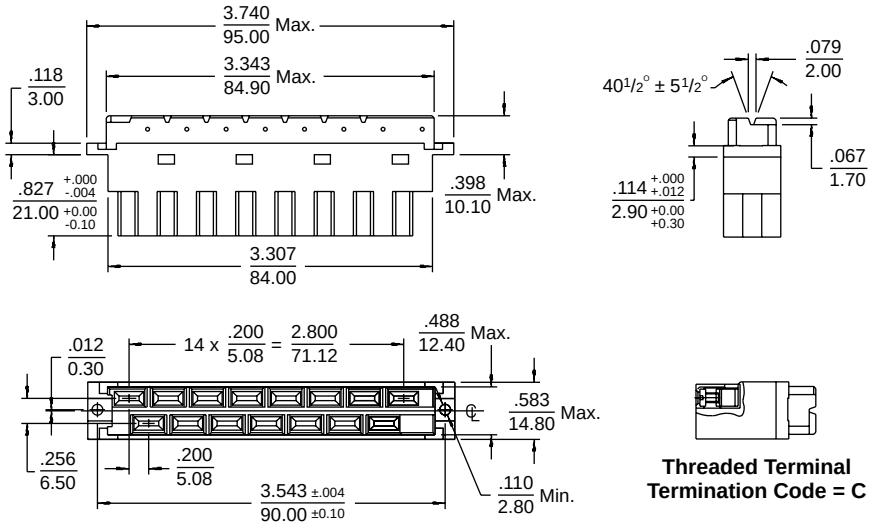


### OUTLINE




**Catalog Number 93HS150416 Shown**

**Dip Solder Termination Code = 6**




**Catalog Number 93HS15041C Shown**

**Threaded Terminal Termination Code = C**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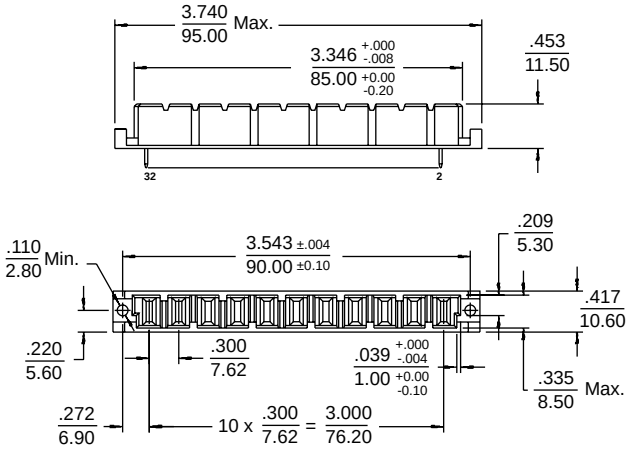
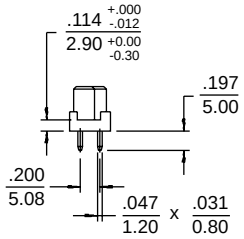
# DIN Style H Standard 41612

## 93H Series — Socket Connector

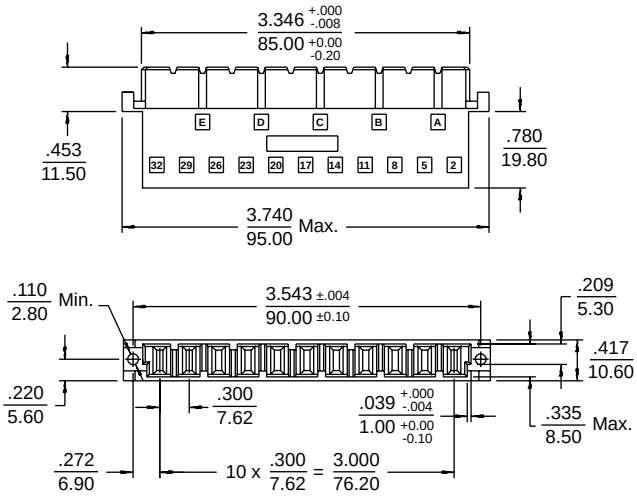
### OUTLINE



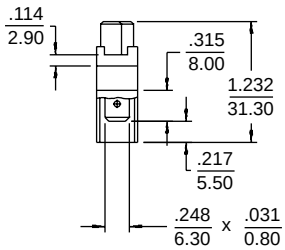

Catalog Number 93HS11011B Shown




**Power Dip Solder Termination Code = B**




Catalog Number 93HS11011A Shown




**Spade Terminal Termination Code = A**

### ORDERING INFORMATION

**Example:** 93HS150416

| 93HS | 15 | 04 | 1 | 6 |
|---|---|---|---|---|

■ Step 1

**Style:**

**HS =** DIN style H, socket

■ Step 2

**Contact Positions:**

**15 =** 1 row of 8 & 1 row of 7 positions

**11 =** 1 row of 11 positions

■ Step 3

**Contact Configuration:**

| Code | Loading Positions | Loading Rows |
|---|---|---|
| 01 | All positions | A |
| 04 | All positions | A & B |

■ Step 4

**Performance Class:**

| Code | Mating Area |
|---|---|
| 1 | Class 1 |

■ Step 5

**Termination:**

| Code | Termination Type | Size | Availability |
|---|---|---|---|
| 5 | Solder Eyelet | Ø .070/1.8 x .236/6.0 LG. | H15 Female |
| 6 | Dip Solder | .024/0.6 Thk. x .047/1.2 W x .157/4.0 LG. | H15 Female |
| 7 | Dip Solder | .024/0.6 Thk. x .047/1.2 W x .394/10.0 LG. | H15 Female |
| A | Spade Terminal | □.248/6.3 x .031/0.8 x .315/8 LG. | All Configurations |
| B | Power Dip Solder | 2 x (.047/1.2 x .031/0.8) on .200/5.08 centers | H11 Female |
| C | Threaded Terminal | | H15 Female |

For P.C. Board hole patterns, see page DN/56

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## Series 6033

| Description | Catalog No. |
|---|---|
| Insertion Tool Right -Angle Press-Fit Termination | 107-43829-01 |
| Single Contact Insertion Tip | 107-42336 |
| Dracon Handle | 107-42055 |
| Single Contact Knock-Out Tip | 107-42031 |
| Dracon Handle | 107-42055 |
| Single Contact Broken Pin Removal Tool | 107-42120 |
| Dracon Handle | 107-42055 |
| Coding Tool for 6033 Series Pin Connectors | 107-43822 |
| Insulator Removal Tool | |
| 96S 6033 without coding device | 712-6033-196 |
| 64S 6033 without coding device | 712-6033-164 |
| 48S 6033 without coding device | 712-6033-148 |
| Dracon Handle Extension 8" | 107-10921 |
| Replacement Blades for Insertion Tool (16 Pos.) | 107-42598 |

## Series 6043 / 6101

| Description | Catalog No. |
|---|---|
| Single Contact Insertion Tip | 107-42298 |
| Dracon Handle | 107-42055 |
| Single Contact Knock-Out Tip | 107-42031 |
| Dracon Handle | 107-42055 |
| Single Contact Broken / Short Pin Removal Tool | 107-42120 |
| Dracon Handle | 107-42055 |
| Insertion Tool | |
| 72P6043 | 107-43422-012 |
| 120P6043 | 107-43804 |
| 150P6043 | 107-43352 |
| 200P6101 | 107-43807 |
| 210P6043 | 107-24666 |
| 128P6101 | 107-43322 |
| 96P6043 | 107-43422-000 |
| 48P6043 | 107-43422-010 |
| Dacron Handle Extension 8" | 107-10921 |
| Single Contact Pull-Out Tool | 107-42533 |
| Single Contact Extension Tool for First Make Last Break Contact | 107-42698 |
| Dracon Handle | 107-42055 |
| Insertion Tool 704396P | 107-43832 |
| Insertion Tool 704348P | 107-43830 |
| Insertion Tool Right -Angle Press-Fit Termination | 107-43829 |

## Series 6063 Special Contacts

| Description | Catalog No. |
|---|---|
| Extraction Tool | 701-6063-611 |
| Replacement Tip | 701-6063-014 |
| Crimp Tool handle for COAX Contacts | 703-5002-000 |
| Crimp Dies for COAX Contacts | 107-43330 |
| Crimp Tool for High Current Contacts | 107-43878 |

## Series 6053 Bench Presses

| Description | Catalog No. |
|---|---|
| Hand Press | 107-1080 |
| Air Press | 107-42680 |

## Series 6093/6105 Insertion Tools

| Connector Code | Catalog No. |
|---|---|
| 06P | 107-43717-006 |
| 24P | 107-43382 |
| 42P | 107-43383 |
| 60P | 107-43717-060 |
| 78P | 107-43717-078 |

## Series 6105 Coax and Power Contact Insertion Tool

| Connector Part No. | Catalog No. |
|---|---|
| 121-27379 Single Contact | 107-43379 |
| 121-27379 Gang Contacts | 107-43380 |
| 121-263271 Single Contact | 107-43859 |
| 121-263271 Removal Tool | 107-43860 |

## Series 6163 / 6133

| Connector Part No. | Catalog No. |
|---|---|
| Insulator Removal Tool | 107-43728 |
| Press-Fit Power 01S6063 4932 | 107-43847-001 |

## Series 6053 Bench Presses

| Connector Series | Platen Cat. No. | | Color Code | Ram Platen Cat. No. | | Gage Blocks for use with Hand Press |
|---|---|---|---|---|---|---|
| | Hand Press | Air Press | | Hand Press | Air Press | |
| VG/IDC Design B64 | 107-0177* | 107-42413 | Blue | 107-0538 | N/A | 107-1089-8 |
| VG/IDC Design C96 | 107-0537* | 107-42414 | Blue | 107-0538 | 107-42415 | 107-1089-9 |

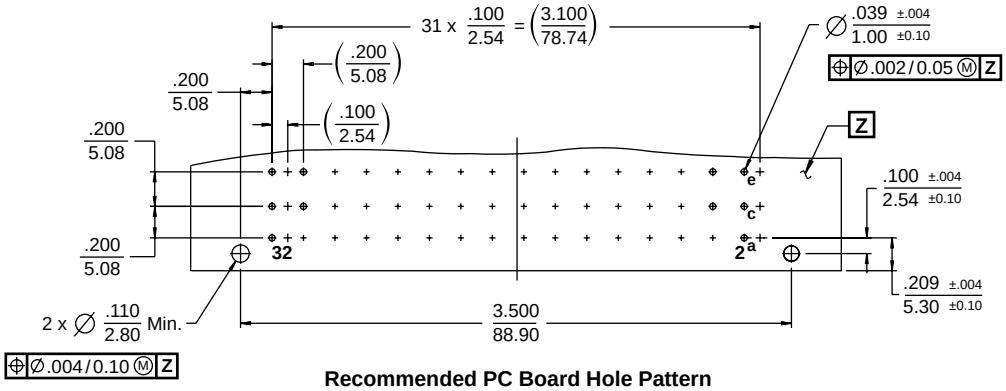
*Gage block included with these platens.

## 6003 Series

## Hole Pattern

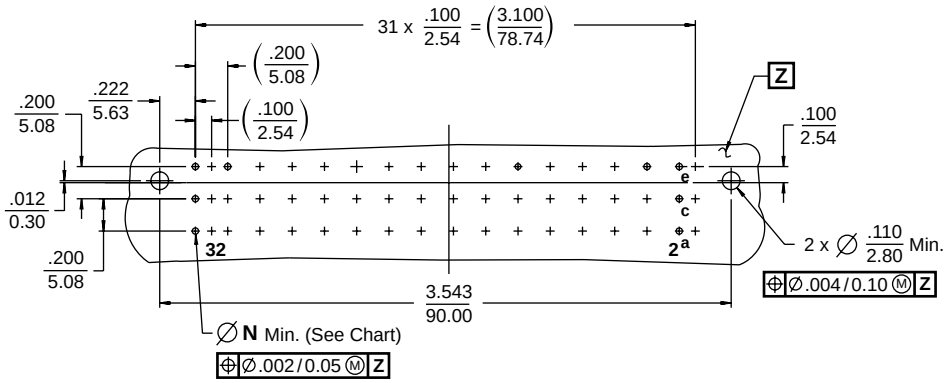
### OUTLINE

**Series 6003**
**Pin Connectors**




**Recommended PC Board Hole Pattern**
**Eliminate Row e Holes For 32P Connector**

**Series 6003**
**Socket Connectors**




**Recommended PC Board Hole Pattern**
**Eliminate Row e Holes For 32S Connectors**

**Contact Termination Code**

| Code | Termination Type | N |
|---|---|---|
| 2 | Dip Solder | Ø .063 / 1.60 |
| 3 | Dip Solder | Ø .035 / 0.90 |
| 5 | Dip Solder | Ø .035 / 0.90 |
| 7 | Wire Wrap | Ø .063 / 1.60 |

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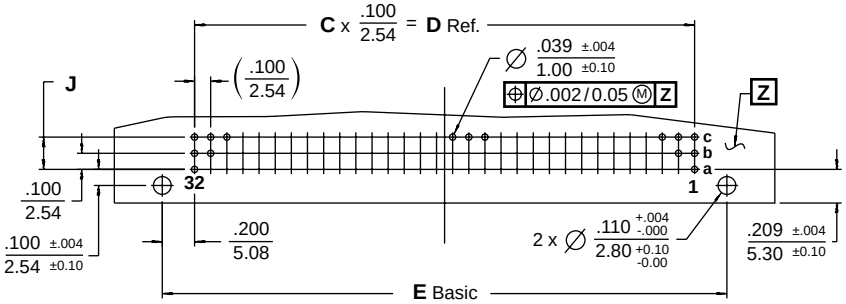
## 6033 Series

# Hole Pattern

### OUTLINE

**Series 6033**
**Pin Connectors**

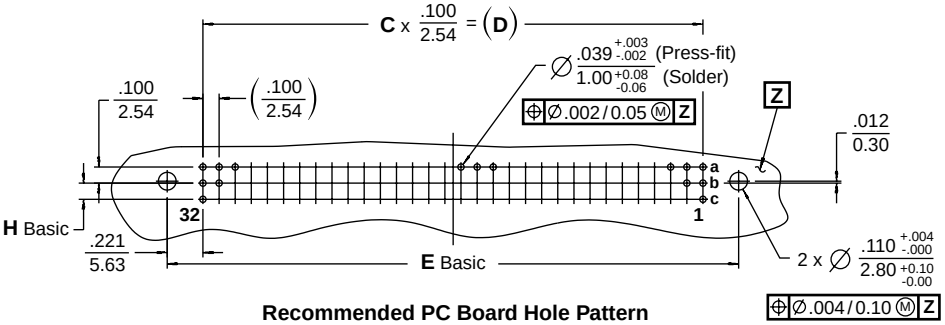



**Recommended PC Board Hole Pattern**
**Eliminate Row c Holes For 32P and 64P Connectors**

**Contact Termination Code**

| Catalog Number | C | D | E | J |
|---|---|---|---|---|
| **96P603307310** | 31 | 3.100/78.74 | 3.500/88.90 | .200/5.08 |
| **64P603307310** | 31 | 3.100/78.74 | 3.500/88.90 | —— |
| **48P603307310** | 15 | 1.500/38.10 | 1.900/48.26 | .200/5.08 |
| **32P603307310** | 15 | 1.500/38.10 | 1.900/48.26 | —— |
| **30P603307310** | 9 | .900/22.86 | 1.300/33.02 | .200/5.08 |

**Series 6033**
**Socket Connectors**




**Recommended PC Board Hole Pattern**
**Eliminate Row c Holes For 32S and 64S Connectors**

**Contact Termination Code**

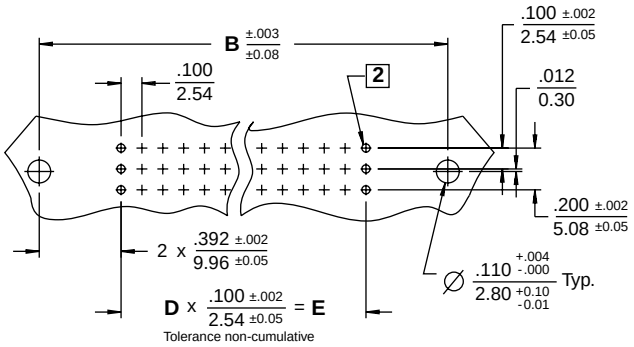
| Catalog Number | C | D | E | H | L |
|---|---|---|---|---|---|
| **96S603307312** | 31 | 3.100/78.74 | 3.543/90.00 | .100/2.54 | See Code Order Chart |
| **64S603307312** | 31 | 3.100/78.74 | 3.543/90.00 | —— | |
| **48S603307312** | 15 | 1.500/38.10 | 1.943/50.00 | .100/2.54 | |
| **32S603307312** | 15 | 1.500/38.10 | 1.943/50.00 | —— | |
| **30S603307312** | 9 | .900/22.86 | 1.343/34.76 | .100/2.54 | |

## 6043 Series

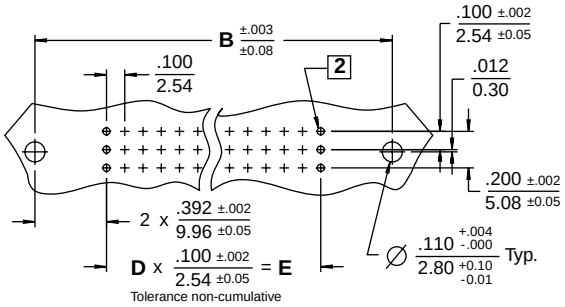
## Hole Pattern

### OUTLINE PIN

| Catalog Number | B | D | E |
|---|---|---|---|
| 210P 6043 07 4761 | 7.684 / 195.17 | 69 | 6.900 / 175.26 |
| 150P 6043 07 4761 | 5.684 / 144.37 | 49 | 4.900 / 124.46 |
| 120P 6043 07 4761 | 4.684 / 118.97 | 39 | 3.900 / 99.06 |
| 96P 6043 07 4761 | 3.884 / 98.65 | 31 | 3.100 / 78.74 |



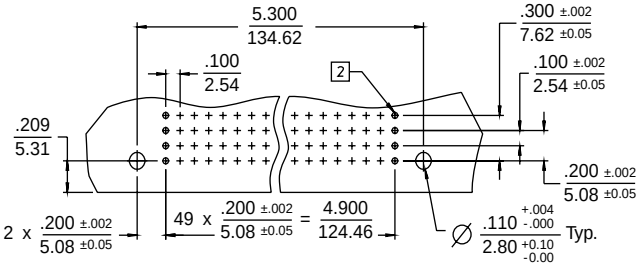

**Recommended P.C. Board Hole Pattern**
**3 Row**



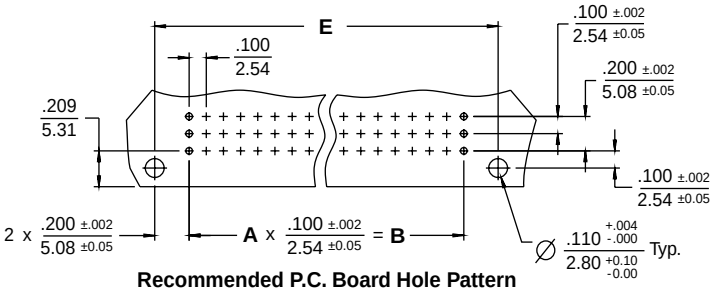

**Recommended P.C. Board Hole Pattern**
**3 Row**

### OUTLINE SOCKET

| Catalog Number | A | B | E |
|---|---|---|---|
| 210S 6043 07 4761 | 69 | 6.900 / 175.26 | 7.300 / 185.42 |
| 150S 6043 07 4761 | 49 | 4.900 / 124.46 | 5.300 / 134.62 |
| 120S 6043 07 4761 | 39 | 3.900 / 99.06 | 4.300 / 109.22 |
| 96S 6043 07 4761 | 31 | 3.100 / 78.74 | 3.500 / 88.90 |




**Recommended P.C. Board Hole Pattern**



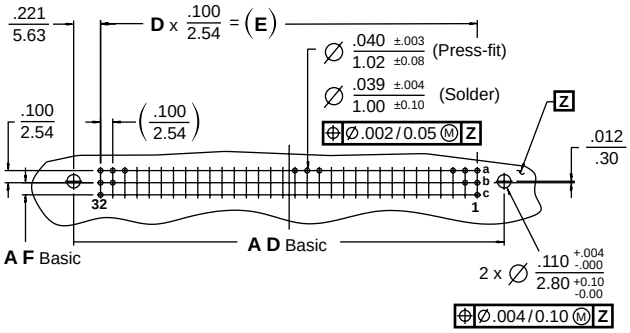

**Recommended P.C. Board Hole Pattern**

## 6043 Series

# Hole Pattern

## OUTLINE

### Series 6043 and 6073 Pin Connectors

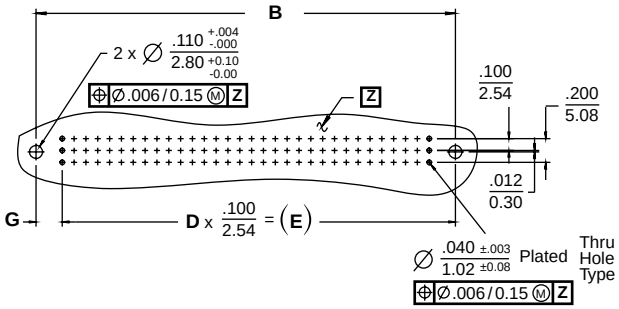



**Recommended PC Board Hole Pattern**
**Eliminate Row c Holes For 20P and 32P Connectors**

**Contact Termination Code**

| Catalog Number | D | E | AD | AF |
|---|---|---|---|---|
| **96P604307310** | 31 | 3.100 / 78.74 | 3.543 / 90.00 | .437 / 11.10 |
| **48P604307310** | 15 | 1.500 / 38.10 | 1.969 / 50.00 | .437 / 11.10 |
| **32P604307310** | 15 | 1.500 / 38.10 | 1.969 / 50.00 | .339 / 8.60 |
| **20P604307310** | 9 | .900 / 22.86 | 1.370 / 34.80 | .339 / 8.60 |
| **120P604307310** | 39 | 3.900 / 99.06 | 4.343 / 110.30 | —— |
| **150P604307310** | 49 | 4.900 / 124.50 | 5.343 / 135.70 | 5.343 / 135.70 |

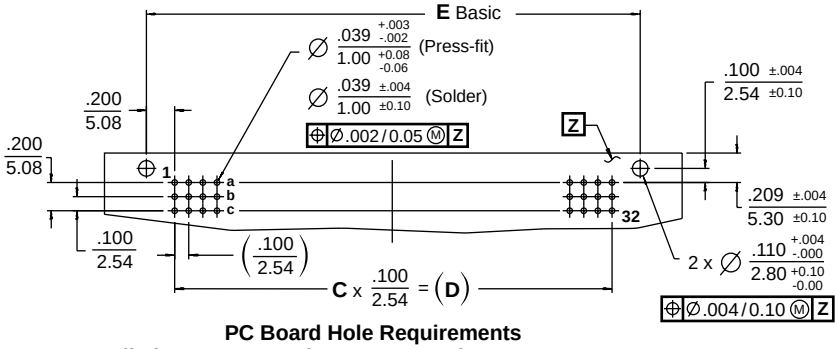
### Series 7043 Pin Connectors




**Recommended PC Board Hole Pattern**

| Catalog Number | B | D | E | G |
|---|---|---|---|---|
| **704396P□□△△◺◑** | 3.543 / 90.00 | 31 | 3.100 / 78.74 | .222 / 5.63 |
| **704348P□□△△◺◑** | 1.968 / 50.00 | 15 | 1.500 / 38.10 | .234 / 5.95 |

### Series 6043 Socket Connectors




**PC Board Hole Requirements**
**Eliminate Row c Holes For 20S and 32S Connectors**

**Contact Termination Code**

| Catalog Number | C | D | E |
|---|---|---|---|
| **96S604307310** | 31 | 3.100 / 78.74 | 3.500 / 88.90 |
| **48S604307310** | 15 | 1.500 / 38.10 | 1.900 / 48.26 |
| **32S604307310** | 15 | 1.500 / 38.10 | 1.900 / 48.26 |
| **20S604307310** | 9 | .900 / 22.86 | 1.300 / 33.02 |
| **120S604307310** | 39 | 3.900 / 99.06 | 4.300 / 109.20 |
| **150S604307310** | 49 | 4.900 / 124.50 | 5.300 / 134.60 |

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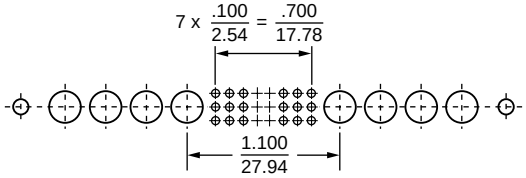
## 6063 / 6093 Series

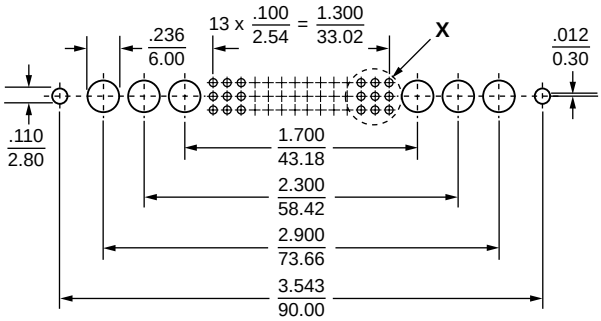
# Hole Pattern

### OUTLINE

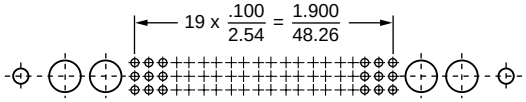
**24S-6063**



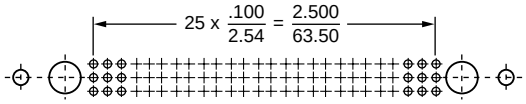

**42S-6063**



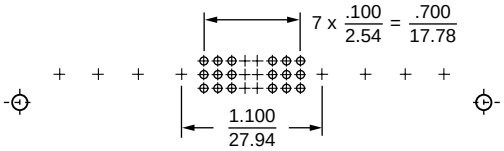

**60S-6063**

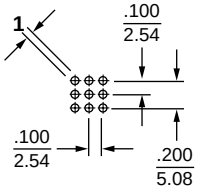



**78S-6063**



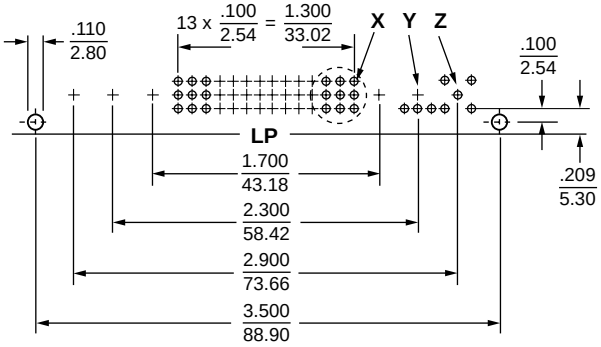

**24P-6063**
**24S-6093**

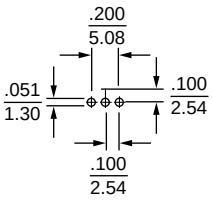



**Detail X**

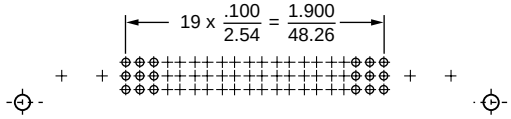
**42P-6063**
**42S-6093**



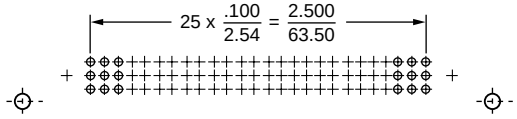



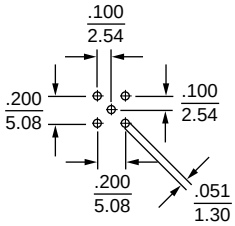

**High Current Contacts**
**(-27 version)**
**Detail Y**

**60P-6063**
**60S-6093**




**78P-6063**
**78S-6093**




**Coaxial Contact**
**Detail Z**

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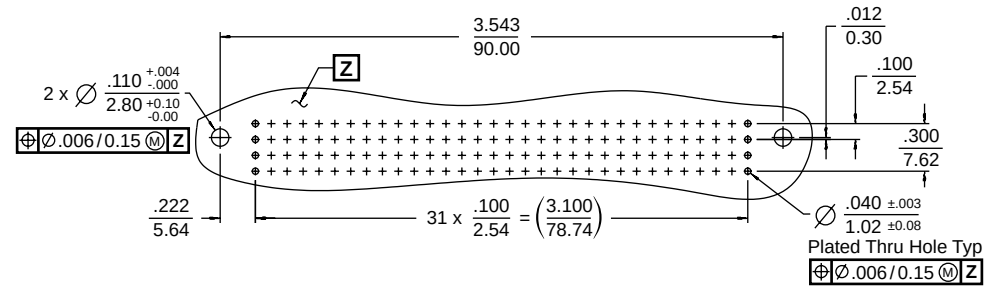
## 6101 Series

## Hole Pattern

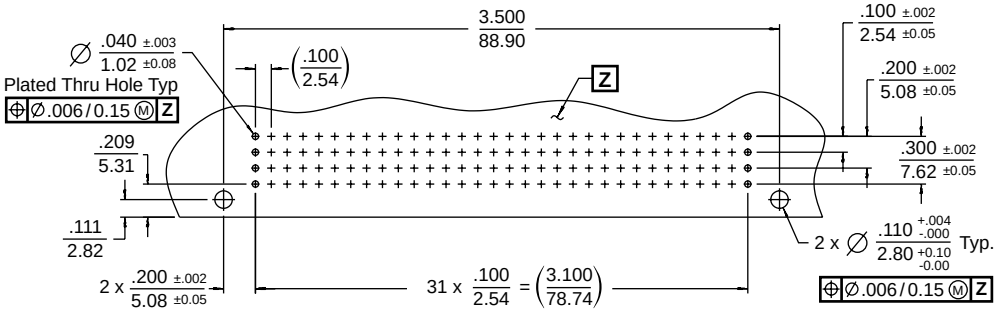
### OUTLINE

**Series 6101**
**Pin Connectors**




**Recommended PC Board Hole Pattern**

**Series 6101**
**Socket Connectors**

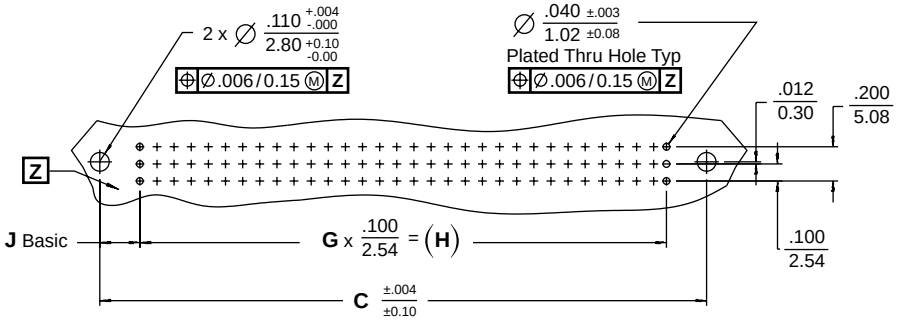



**Recommended PC Board Hole Pattern**

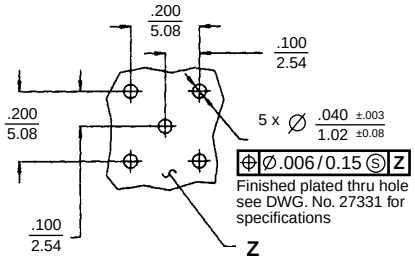
# 6105 & 6133 Series Hole Pattern

## OUTLINE

### Series 6105
### Pin Connectors



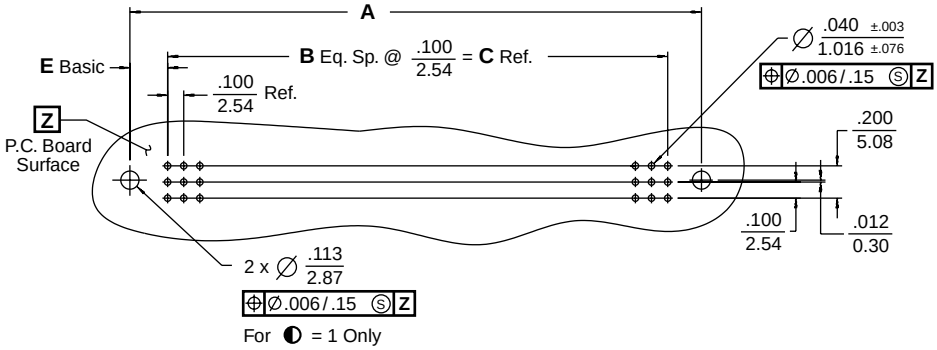

**Recommended PC Board Hole Pattern**




**121 263271** Press-fit coax contact

| Catalog Number | C | G | H | J |
|---|---|---|---|---|
| 78P610507319 | 3.543 / 89.99 | 31 | 3.100 / 78.74 | .222 / 5.64 |
| 60P610507319 | | | | |
| 42P610507319 | | | | |
| 24P610507319 | | | | |
| 06P610507319 | | | | |

### Series 6133
### Socket Connectors




**Recommended PC Board Hole Pattern**

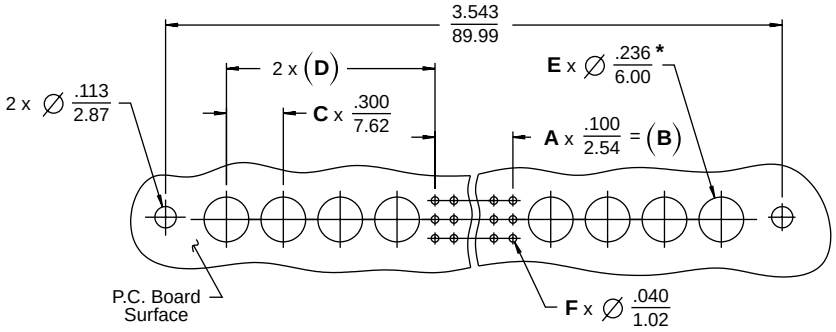
| Part Number | A | B | C | E |
|---|---|---|---|---|
| 613396S19BF07 | 3.543 / 89.99 | 31 | 3.100 / 78.74 | .222 / 5.63 |
| 613348S19BF07 | 1.968 / 49.98 | 15 | 1.500 / 38.10 | .234 / 5.94 |

## 6163 Series

# Hole Pattern

### OUTLINE

**Series 6163**
**Socket Connectors**




* Plated thru hole ∅ .236 / 6.00 should be ∅ .138 / 3.50 when utilizing the press-fit power contact. (ref. page DN / **24**)

**Recommended PC Board Hole Pattern**

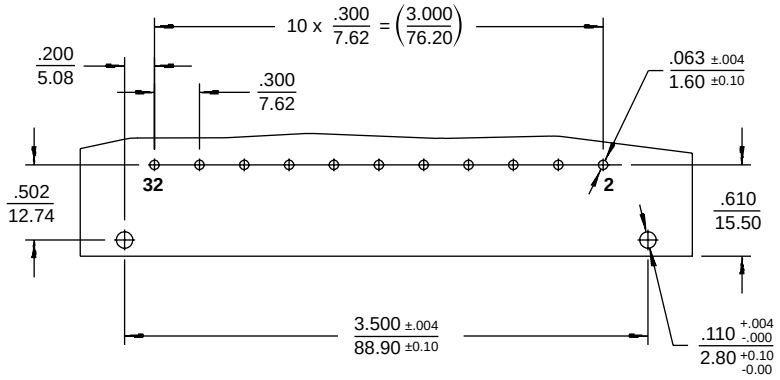
| Catalog Number | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| **78S616307319** | 25 | 2.500 / 63.50 | — | .200 / 5.08 | 2 | 78 |
| **60S616307319** | 19 | 1.900 / 8.26 | 2 | .500 / 12.70 | 4 | 60 |
| **42S616307319** | 13 | 1.300 / 33.02 | 4 | .800 / 20.32 | 6 | 42 |
| **24S616307319** | 7 | .700 / 17.78 | 6 | 1.100 / 27.94 | 8 | 24 |
| **6S616307319** | 1 | .100 / 2.54 | 8 | 1.400 / 35.56 | 10 | 6 |

## 93 Series

## Hole Pattern

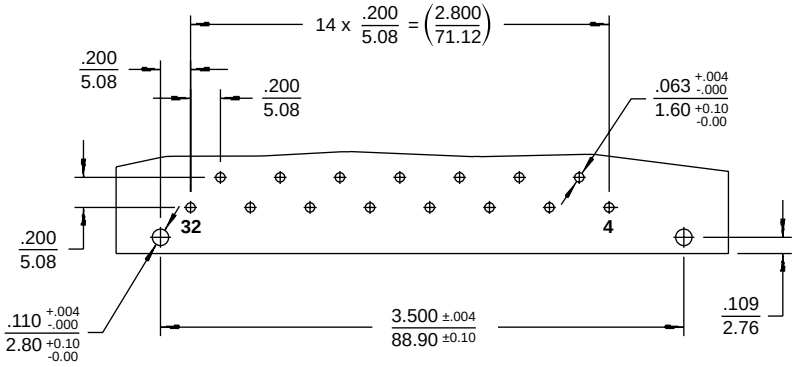
### OUTLINE

**Series 93HP11**
**Pin Connectors**




**Recommended PC Board Hole Requirements**

**Series 93HP15**
**Pin Connectors**



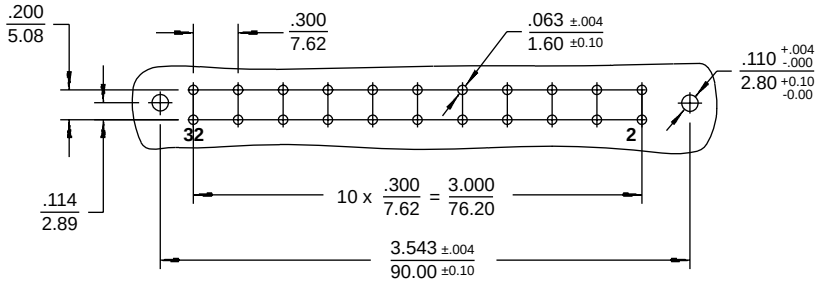

**Recommended PC Board Hole Requirements**

## 93 Series

## Hole Pattern

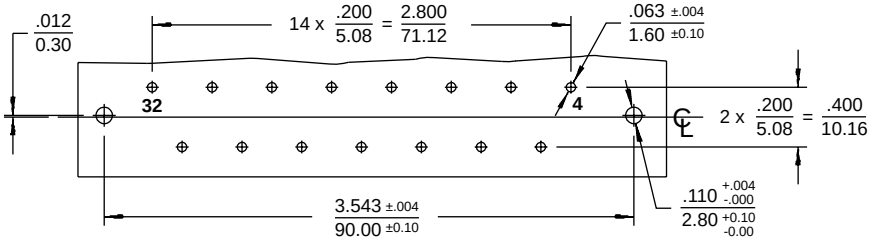
### OUTLINE

**Series 93HS11**
**Socket Connectors**

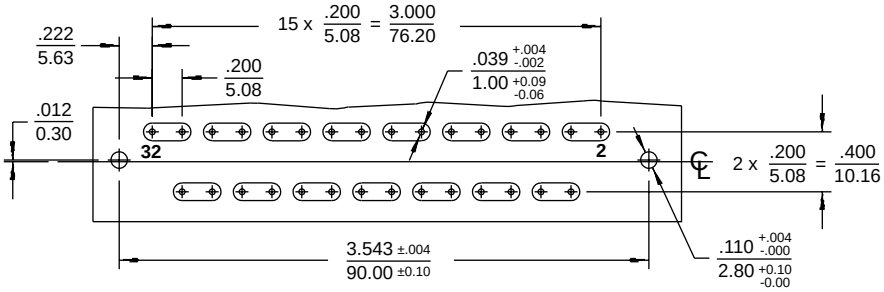



**Recommended PC Board Hole Requirements**

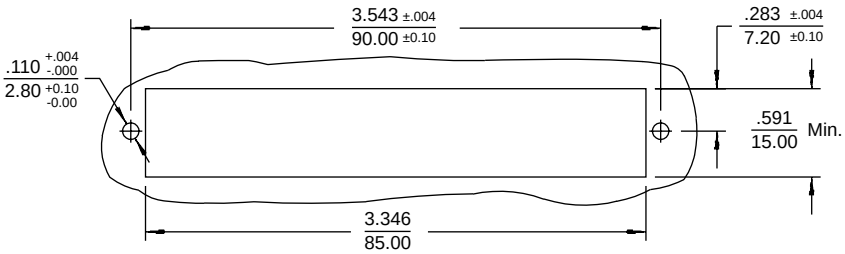
**Series 93HS15**
**Socket Connectors**



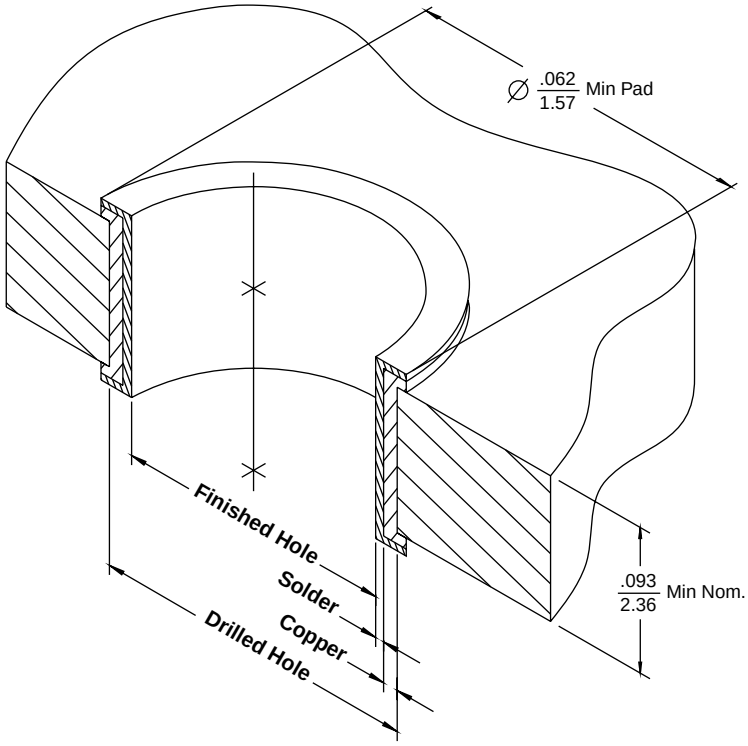
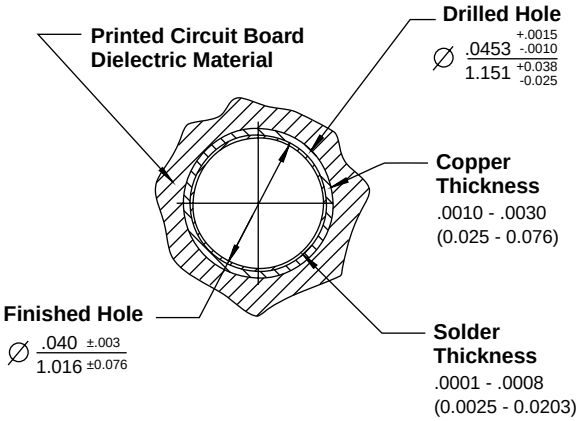

**Termination Code = 6 Or 7, PC Board Hole Requirements**




**Termination Code = 8, PC Board Hole Requirements**




**Termination Code = A Or C, PC Board Hole Requirements**

# C-Press® Compliant Pin
# Plated Thru Holes Requirements

## OUTLINE