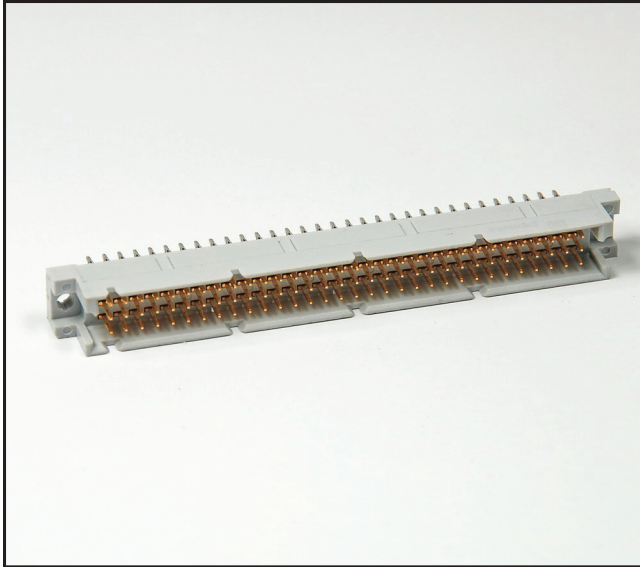


# 3M™ DIN R-Form Plug

Vertical, Solder Tail or Press-Fit Termination

DIN 41612 Series



- Early mate late break (EMLB) grounding contacts for hot swapping
- Select load capability
- Expanded pin counts
- Optional press-fit or solder tail termination
- Mates with C-form and R-form sockets
- Optional retention clip
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3M.com/Interconnects](http://www.3M.com/Interconnects) for compliance information (RIA E1 & C1 apply)

Date Modified: February 2, 2010

TS-2307-E  
Sheet 1 of 3

## Physical

### Insulation:

Material: Glass Filled Polyester (PBT)

Flammability: UL 94V-0

Color: Gray

### Contact:

Material: Copper Alloy

### Plating:

Underplating: 50  $\mu$ ” Min. Nickel

Wiping Area: See Ordering Information

Termination: See Ordering Information

## Electrical

Current Rating: 3.0A at 30°C T-rise above Ambient

Contact Resistance:  $\leq 20$  m $\Omega$

Insulation Resistance:  $\geq 1,000$  M $\Omega$ , 100V<sub>DC</sub>

Withstanding Voltage: 1,000 V<sub>AC</sub> for 1 minute

## Environmental

Temperature Rating: -55°C to 125°C

Process Temperature Rating: Maximum Insulator Temperature 191°C (solder wave process only)

UL File No.: E68080



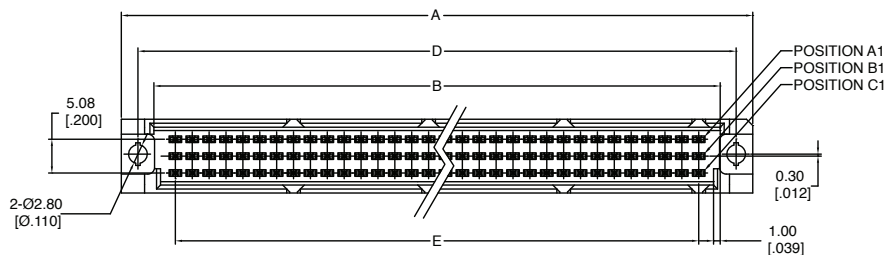
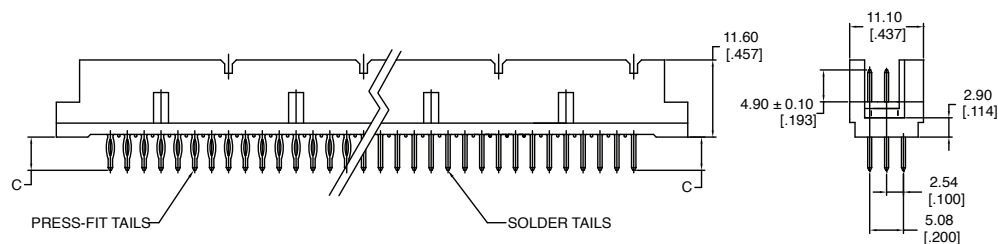
# 3M™ DIN R-Form Plug

Vertical, Solder Tail or Press-Fit Termination

DIN 41612 Series

Table 1

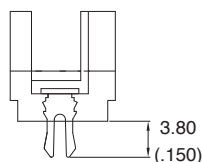
| Contact Quantity | Part Number         | A              | B              | D              | E             |
|------------------|---------------------|----------------|----------------|----------------|---------------|
| 16               | DIN-016RPA-XXX-XXXX | 54.40 [2.142]  | 44.60 [1.756]  | 50.00 [1.969]  | 38.10 [1.500] |
| 32               | DIN-032RPB-XXX-XXXX | 54.40 [2.142]  | 44.60 [1.756]  | 50.00 [1.969]  | 38.10 [1.500] |
| 48               | DIN-048RPC-XXX-XXXX | 54.40 [2.142]  | 44.60 [1.756]  | 50.00 [1.969]  | 38.10 [1.500] |
| 32               | DIN-032RPD-XXX-XXXX | 54.40 [2.142]  | 44.60 [1.756]  | 50.00 [1.969]  | 38.10 [1.500] |
| 16               | DIN-016RPE-XXX-XXXX | 54.40 [2.142]  | 44.60 [1.756]  | 50.00 [1.969]  | 38.10 [1.500] |
| 32               | DIN-032RPA-XXX-XXXX | 95.00 [3.740]  | 85.20 [3.354]  | 90.00 [3.543]  | 78.74 [3.100] |
| 64               | DIN-064RPB-XXX-XXXX | 95.00 [3.740]  | 85.20 [3.354]  | 90.00 [3.543]  | 78.74 [3.100] |
| 96               | DIN-096RPC-XXX-XXXX | 95.00 [3.740]  | 85.20 [3.354]  | 90.00 [3.543]  | 78.74 [3.100] |
| 64               | DIN-064RPD-XXX-XXXX | 95.00 [3.740]  | 85.20 [3.354]  | 90.00 [3.543]  | 78.74 [3.100] |
| 32               | DIN-032RPE-XXX-XXXX | 95.00 [3.740]  | 85.20 [3.354]  | 90.00 [3.543]  | 78.74 [3.100] |
| 40               | DIN-040RPA-XXX-XXXX | 115.40 [4.543] | 105.52 [4.154] | 110.32 [4.343] | 99.06 [3.900] |
| 80               | DIN-080RPB-XXX-XXXX | 115.40 [4.543] | 105.52 [4.154] | 110.32 [4.343] | 99.06 [3.900] |
| 120              | DIN-120RPC-XXX-XXXX | 115.40 [4.543] | 105.52 [4.154] | 110.32 [4.343] | 99.06 [3.900] |
| 80               | DIN-080RPD-XXX-XXXX | 115.40 [4.543] | 105.52 [4.154] | 110.32 [4.343] | 99.06 [3.900] |
| 40               | DIN-040RPE-XXX-XXXX | 115.40 [4.543] | 105.52 [4.154] | 110.32 [4.343] | 99.06 [3.900] |



mm  
[inch]

| Tolerance Unless Noted |        |        |        |
|------------------------|--------|--------|--------|
|                        | X.     | .X     | .XX    |
| mm                     | ± 0.50 | ± 0.25 | ± 0.15 |

[ ] Dimension for Reference Only



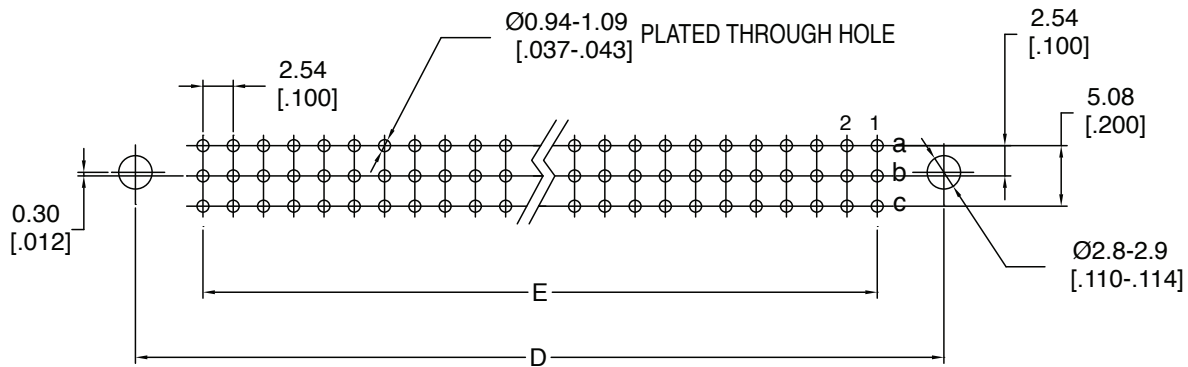
R1 with Retention Clip

TS-2307-E  
Sheet 2 of 3

# 3M™ DIN R-Form Plug

Vertical, Solder Tail or Press-Fit Termination

DIN 41612 Series



## RECOMMENDED PCB LAYOUT

### Ordering Information

DIN - XXXRP X - XXX - XX

Contact Quantity  
SEE TABLE 1

A = A Row only (see note)  
B = Rows A & C Filled  
C = Rows A, B & C Filled  
D = Rows A & B Filled  
E = B Row only (see note)

Termination Options:  
SEE TABLE 2

Plating Options:

SH = 1 - 3 µ" Gold on Contact  
120 - 200 µ" Matte Tin on Terminal  
FJ = 10 - 20 µ" Gold on Contact  
120 - 200 µ" Matte Tin on Terminal  
KR = 30 - 40 µ" Gold on Contact  
120 - 200 µ" Matte Tin on Terminal  
HM = 3 µ" Gold on Contact, 7 µ" Min. PdNi  
120 - 200 µ" Matte Tin on Terminal  
KV = 30 µ" Gold on contact area, 1 - 3 µ" Gold  
on Board Termination

TABLE 2

| SOLDER TERMINATION OPTION NO.    | DIM "C" mm ( in ) | Comment        |
|----------------------------------|-------------------|----------------|
| R1                               | 3.75 (.148)       | with retention |
| S1                               | 3.75 (.148)       | no retention   |
| W                                | 14.70 (.579)      | no retention   |
| PRESS-FIT TERMINATION OPTION NO. |                   |                |
| DPS                              | 5.00 (.197)       |                |
| DPW1                             | 13.25 (.522)      |                |

Note: A and E options are currently not covered in UL File No. E68080.

• This diagram serves only for Part Number descriptive definitions.

PLEASE CONTACT YOUR LOCAL SALES REPRESENTATIVE FOR CUSTOMER SPECIFIC PRODUCT CONFIGURATIONS.

TS-2307-E  
Sheet 3 of 3



Electronic Solutions Division  
Interconnect Solutions  
<http://www.3Mconnector.com>

3M is a trademark of 3M Company.  
For technical, sales or ordering information call  
**800-225-5373**

#### **Important Notice**

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

#### **Warranty; Limited Remedy; Limited Liability.**

This product will be free from defects in material and manufacture for a period of one (1) year from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



#### **3M Electronics Solutions Division**

6801 River Place Blvd.  
Austin, TX 78726-9000  
U.S.A.  
1-800-225-5373  
[www.3Mconnector.com](http://www.3Mconnector.com)

Please recycle. Printed in USA.  
© 3M 2010. All rights reserved.  
RIA-2217B-E

3M is a trademark of 3M Company.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

3M:

[DIN-096SH-457](#) [DIN-064CPB-S1-TR](#) [DIN-048RPC-S1-TR](#) [DIN-096CSC-S3L-TR](#) [DIN-096CSC-PW2-TR](#) [DIN-096CSC-PW1-HS](#) [DIN-064RSB-SR1-HS](#) [DIN-048RSC-SR1-TR](#) [DIN-010CPE-HPS-TR](#) [DIN-096RSC-RR1L-TR](#) [DIN-096CPC-RR1L-TR](#) [DIN-064CSB-S1-TG30](#) [DIN-096RSC-RR1-TG30](#) [DIN-064CPB-SR1-TG30](#) [DIN-048CPC-SR1-TG30](#) [DIN-096RPC-W-KV](#) [DIN-48CPC-CES70369](#) [DIN-096RPC-S1-HM](#) [DIN-048RPC-S1-HM](#) [DIN-016RPA-DPS-FJ](#) [DIN-016RPA-DPS-HM](#) [DIN-016RPA-DPS-KR](#) [DIN-016RPA-DPS-SH](#) [DIN-016RPA-DPW1-FJ](#) [DIN-016RPA-DPW1-KR](#) [DIN-016RPA-DPW1-SH](#) [DIN-016RPA-S1-FJ](#) [DIN-016RPA-S1-HM](#) [DIN-016RPA-S1-KR](#) [DIN-016RPA-S1-SH](#) [DIN-016RPA-W-FJ](#) [DIN-016RPA-W-HM](#) [DIN-016RPA-W-KR](#) [DIN-016RPA-W-SH](#) [DIN-016RPE-DPS-FJ](#) [DIN-016RPE-DPS-HM](#) [DIN-016RPE-DPS-KR](#) [DIN-016RPE-DPS-SH](#) [DIN-016RPE-DPW1-FJ](#) [DIN-016RPE-DPW1-KR](#) [DIN-016RPE-DPW1-SH](#) [DIN-016RPE-S1-FJ](#) [DIN-016RPE-S1-HM](#) [DIN-016RPE-S1-KR](#) [DIN-016RPE-S1-SH](#) [DIN-016RPE-W-FJ](#) [DIN-016RPE-W-HM](#) [DIN-016RPE-W-KR](#) [DIN-016RPE-W-SH](#) [DIN-032RPA-DPS-FJ](#) [DIN-032RPA-DPS-HM](#) [DIN-032RPA-DPS-KR](#) [DIN-032RPA-DPS-SH](#) [DIN-032RPA-DPW1-FJ](#) [DIN-032RPA-DPW1-KR](#) [DIN-032RPA-DPW1-SH](#) [DIN-032RPA-S1-FJ](#) [DIN-032RPA-S1-HM](#) [DIN-032RPA-S1-KR](#) [DIN-032RPA-S1-SH](#) [DIN-032RPA-W-FJ](#) [DIN-032RPA-W-HM](#) [DIN-032RPA-W-KR](#) [DIN-032RPA-W-SH](#) [DIN-032RPB-DPS-FJ](#) [DIN-032RPB-DPS-HM](#) [DIN-032RPB-DPS-KR](#) [DIN-032RPB-DPS-SH](#) [DIN-032RPB-DPW1-FJ](#) [DIN-032RPB-DPW1-KR](#) [DIN-032RPB-DPW1-SH](#) [DIN-032RPB-S1-FJ](#) [DIN-032RPB-S1-HM](#) [DIN-032RPB-S1-KR](#) [DIN-032RPB-S1-SH](#) [DIN-032RPB-W-FJ](#) [DIN-032RPB-W-HM](#) [DIN-032RPB-W-KR](#) [DIN-032RPB-W-SH](#) [DIN-032RPD-DPS-FJ](#) [DIN-032RPD-DPS-HM](#) [DIN-032RPD-DPS-KR](#) [DIN-032RPD-DPS-SH](#) [DIN-032RPD-DPW1-FJ](#) [DIN-032RPD-DPW1-KR](#) [DIN-032RPD-DPW1-SH](#) [DIN-032RPD-S1-FJ](#) [DIN-032RPD-S1-HM](#) [DIN-032RPD-S1-KR](#) [DIN-032RPD-S1-SH](#) [DIN-032RPD-W-FJ](#) [DIN-032RPD-W-HM](#) [DIN-032RPD-W-KR](#) [DIN-032RPD-W-SH](#) [DIN-032RPE-DPS-FJ](#) [DIN-032RPE-DPS-HM](#) [DIN-032RPE-DPS-KR](#) [DIN-032RPE-DPS-SH](#) [DIN-032RPE-DPW1-FJ](#) [DIN-032RPE-DPW1-KR](#)