

# 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

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## 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



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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

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## 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  $\mu$ " Gold on Contact  
120 - 200  $\mu$ " Matte Tin on Terminal
- FJ = 10 - 20  $\mu$ " Gold on Contact  
120 - 200  $\mu$ " Matte Tin on Terminal
- KR = 30 - 40  $\mu$ " Gold on Contact  
120 - 200  $\mu$ " Matte Tin on Terminal
- HM = 3  $\mu$ " Gold on Contact, 7  $\mu$ " Min. PdNi  
120 - 200  $\mu$ " Matte Tin on Terminal
- KV = 30  $\mu$ " Gold on contact area, 1 - 3  $\mu$ " 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.

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