



# Introducing Grace Inertia Connector 3.3

The Grace Inertia Connector series employs an inertia locking mechanism to simultaneously complete the circuit and then “lock” the connector for ideal mating reliability and prevention of mismatching. These small wire-to-wire connectors can be used in a wide range of large electrical products from home appliances to vending machines, and are a great solution to eliminate human error during assembly. TE also provides the connector in a urethane coating on PCB board for usage in a washing machine or other similar applications.

## KEY FEATURES

- The height from PCB to contact is 8mm, preventing urethane coating from flowing into the housing
- Design assurance for preventing header pin deformation when improper insertion happens
- Inertia locking mechanism helps prevent connectors from being disconnected during movement or transportation
- 4 keying methods with different colors avoids blind mating
- Lanceless contacts prevent snagging or entanglement
- Dual beam contact design provides good contact and durability
- Ergonomic design allows easy operation (pulling out manually)
- Designed to be used with an option terminal position assurance device (TPA), which ensures contacts to be fully seated in the housing

## ELECTRICAL

- Voltage Rating: 250V AC/DC
- Current Rating: 4A Max

## MECHANICAL

- Position: 4, 6, 8, 10, 12P (Double Row)
- Pitch: 3.3mm
- Wire Gauge: #20 - #24 AWG
- Wire Insulator Range: 1.5 - 2.5mm

## MATERIALS

- Housing & TPA: UL94-V0 rated nylon
- Colored Housing & Header: Natural, Blue, Red, Yellow (Black for TPA)
- Contacts: Tin-plated Copper Alloy
- Compliance to Glow wire per IEC 60335-1

## APPLICATIONS

- Washing Machine
- Household Appliances
- Urethane Coating on PCB Board

## SPECIFICATIONS & STANDARDS

- Product Specification: 108-106094
- Application Specification: 114-106094
- Tooling & Applicator: 2088571-2 1552510-2
- cURus: E321453. 

**SAMPLES NOW AVAILABLE**

[te.com/products/GI33](http://te.com/products/GI33)



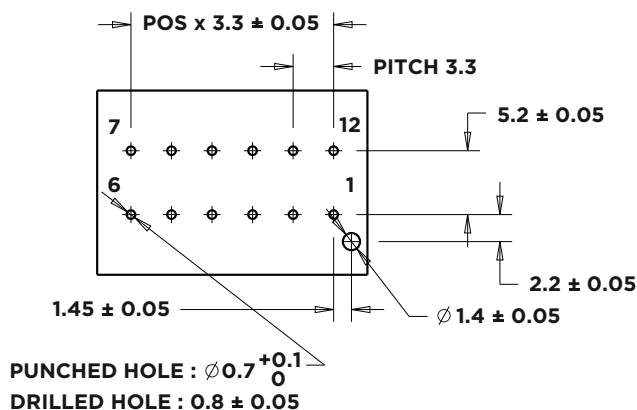
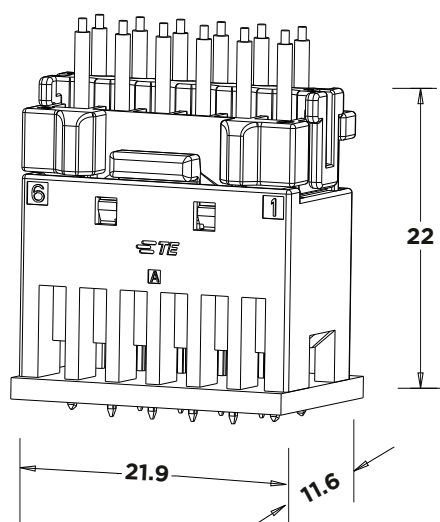
## PRODUCT OFFERING

| Base Number                                      | Base Number | Positions | KEY A<br>■ Natural | KEY B<br>■ Blue | KEY C<br>■ Red | KEY D<br>■ Yellow | ■ Black   |
|--------------------------------------------------|-------------|-----------|--------------------|-----------------|----------------|-------------------|-----------|
| Header Assembly                                  | 1971906     | 4         | 1-1971906-2        | 2-1971906-2     | 3-1971906-2    | 4-1971906-2       | -         |
|                                                  |             | 6         | 1-1971906-3        | 2-1971906-3     | 3-1971906-3    | 4-1971906-3       | -         |
|                                                  |             | 8         | 1-1971906-4        | 2-1971906-4     | 3-1971906-4    | 4-1971906-4       | -         |
|                                                  |             | 10        | 1-1971906-5        | 2-1971906-5     | 3-1971906-5    | 4-1971906-5       | -         |
|                                                  |             | 12        | 1-1971906-6        | 2-1971906-6     | 3-1971906-6    | 4-1971906-6       | -         |
| Plug Housing                                     | 1971905     | 4         | 1-1971905-2        | 2-1971905-2     | 3-1971905-2    | 4-1971905-2       | -         |
|                                                  |             | 6         | 1-1971905-3        | 2-1971905-3     | 3-1971905-3    | 4-1971905-3       | -         |
|                                                  |             | 8         | 1-1971905-4        | 2-1971905-4     | 3-1971905-4    | 4-1971905-4       | -         |
|                                                  |             | 10        | 1-1971905-5        | 2-1971905-5     | 3-1971905-5    | 4-1971905-5       | -         |
|                                                  |             | 12        | 1-1971905-6        | 2-1971905-6     | 3-1971905-6    | 4-1971905-6       | -         |
| TPA                                              | 1971904     | 4         | -                  | -               | -              | -                 | 1971904-2 |
|                                                  |             | 6         | -                  | -               | -              | -                 | 1971904-3 |
|                                                  |             | 8         | -                  | -               | -              | -                 | 1971904-4 |
|                                                  |             | 10        | -                  | -               | -              | -                 | 1971904-5 |
|                                                  |             | 12        | -                  | -               | -              | -                 | 1971904-6 |
| Receptacle Contact,<br>Tin plating, Copper Alloy | 1983780-1   | -         | -                  | -               | -              | -                 | -         |

## PCB LAYOUT

## 12 POSITIONS FOR EXAMPLE

All Dimensions in [mm]



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