

# Introducing Grace Inertia Connector 2.5

The next generation Grace Inertia connectors with 2.5mm pitch, namely GI 2.5, feature advanced design concepts to facilitate more stable, reliable and durable connection. The GI 2.5 connector can be used in a wide range of large electrical products, from home appliances to vending machines that require wire-to-board signal conduction application. These innovative connectors are designed to help customers reduce human error during assembly. The inertia locking mechanism prevents defective products caused by half-mating. The Terminal Position Assurance (TPA) helps to ensure that the contacts are properly seated in the housing and provides an extra measure of protection against contact back-out. The new design structure also cuts down on contact insertion force by as much as 59% during assembly. Ergonomic design and lanceless contacts, which prevent snagging or entanglement, improve safety and efficiency during operation. The new GI connectors also offer 5 types of positions and 4 different colors of keying method, making it easier to identify and avoid mismatching or blind mating.



## KEY FEATURES

- Inertia locking mechanism helps prevent connectors from being disconnected during movement or transportation
- Locking mechanism also prevents defective products caused by half mating
- 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)
- TPA ensures extra strength for contact holding
- One unique contact easier for supplier chain management

## APPLICATIONS

- Air Conditioning
- Refrigerator
- Cooking
- Microwave Oven
- Dishwasher
- Industry Control Box

## ELECTRICAL

- Voltage rating: 50V AC/DC
- Current rating: 3.0A Max


## MECHANICAL

- Number of contact poles: 2, 3, 5, 6, 8
- Pitch: 2.5mm
- Temperature rating: -30°C to 105°C
- Wire Gauge: #22 - #28 AWG
- Offer 2 PCB layout

## MATERIALS

- Housing & TPA: UL94-V0 rated nylon
- Colored Housing & Header: Natural, Blue, Red, Yellow (Black for TPA)
- Contacts: Tin-plated copper alloy

## SPECIFICATIONS & STANDARDS

- Product Specification: 108-106077
- Application Specification: 114-106077
- Tooling & Applicator: 1729418-2 (Auto Machine) 1729688-1 (Hand Machine)
- cURus: E321453. 

**SAMPLES NOW AVAILABLE**

[te.com/products/GI25](http://te.com/products/GI25)

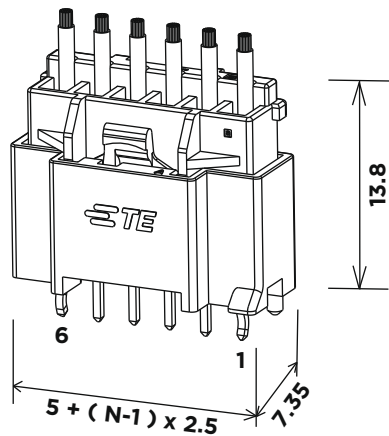


PRODUCT OFFERING

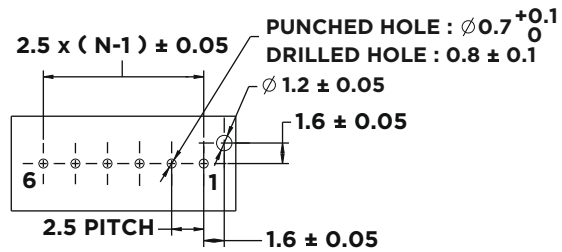
Base Number	Base Number	Positions	KEY A Natural	KEY B Blue	KEY C Red	KEY D Yellow	Black
Header Assembly with Boss pillar D1.0 (Header: 1971797 Post contact: 1971796)	1971798	2P	2-1971798-1	2-1971798-2	2-1971798-3	2-1971798-4	-
		3P	3-1971798-1	3-1971798-2	3-1971798-3	3-1971798-4	-
		5P	5-1971798-1	5-1971798-2	5-1971798-3	5-1971798-4	-
		6P	6-1971798-1	6-1971798-2	6-1971798-3	6-1971798-4	-
		8P	8-1971798-1	8-1971798-2	8-1971798-3	8-1971798-4	-
Header Assembly with Boss pillar D1.5 (Header: 1971799 Post contact: 1971796)	1971800	2P	2-1971800-1	2-1971800-2	2-1971800-3	2-1971800-4	-
		3P	3-1971800-1	3-1971800-2	3-1971800-3	3-1971800-4	-
		5P	5-1971800-1	5-1971800-2	5-1971800-3	5-1971800-4	-
		6P	6-1971800-1	6-1971800-2	6-1971800-3	6-1971800-4	-
		8P	8-1971800-1	8-1971800-2	8-1971800-3	8-1971800-4	-
Plug Housing	1971793	2P	2-1971793-1	2-1971793-2	2-1971793-3	2-1971793-4	-
		3P	3-1971793-1	3-1971793-2	3-1971793-3	3-1971793-4	-
		5P	5-1971793-1	5-1971793-2	5-1971793-3	5-1971793-4	-
		6P	6-1971793-1	6-1971793-2	6-1971793-3	6-1971793-4	-
		8P	8-1971793-1	8-1971793-2	8-1971793-3	8-1971793-4	-
TPA	1971794	2P	-	-	-	-	2-1971794-1
		3P	-	-	-	-	3-1971794-1
		5P	-	-	-	-	5-1971794-1
		6P	-	-	-	-	6-1971794-1
		8P	-	-	-	-	8-1971794-1
Receptacle Contact	1971795-1	-	-	-	-	-	

PCB LAYOUT

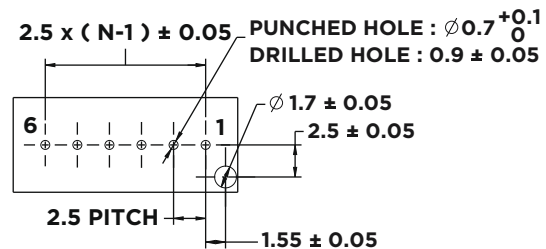
6 POSITIONS FOR EXAMPLE  
All Dimensions in [mm]



Recommendation PCB layout (2-8P)  
Thickness 1.6mm or 2.0mm



X - 1971798 - X



X - 1971800 - X

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[te.com/products/GI25](http://te.com/products/GI25)



TE Connectivity:

[2-1971798-1](#) [3-1971798-2](#) [3-1971798-4](#) [5-1971794-1](#) [2-1971794-1](#) [6-1971794-1](#) [3-1971794-1](#) [8-1971794-1](#)