

# GRACE INERTIA CONNECTORS

## 2.5 mm Centerline

### SECOND GENERATION

TE Connectivity's (TE) second generation GRACE INERTIA 2.5mm pitch connectors features advanced design concepts to facilitate more stable, reliable and durable connection. GRACE INERTIA 2.5mm connectors 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. For high volume manufactures, tape in ammo box packaging is available, which better supports board assembly operations. 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. GRACE INERTIA 2.5mm connectors also offer 2 through 8 positions and multiple colors and physical keying options making it easier to identify connectors and avoid mismatching.



### 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 helps assure pressure mating
- Lanceless contacts prevent snagging or entanglement
- Dual beam contact design enhances contact reliability and durability
- Ergonomic design eases assembly process
- TPA ensures contacts are fully seated
- One unique contact simplifies supply chain management
- Nylon material meets GWEPT and UL 94 V-0 tests
- UL recognized, file E28476

### APPLICATIONS

- Large home appliances
- Small home appliances
- Industrial control

### ELECTRICAL

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

### MECHANICAL

- Number of positions: 2, 3, 5, 6, 8
- Pitch: 2.5mm
- Temperature rating: -30°C to 105°C
- Wire Size #22 - #28 AWG (.079 - .38mm<sup>2</sup>)
- Multiple PCB layout options

### MATERIALS

- Housing & TPA: UL94-V0 rated nylon
- Colors: Housing & Header: Natural, Blue, Red, Yellow, Black; TPA: Black
- Contacts: Tin-plated copper alloy

### SPECIFICATIONS & STANDARDS

- Product Specification: 108-106077
- Application Specification: 114-106077
- Tooling & Applicator: 1729418-2 (Auto Machine) 1729688-1 (Hand Tool)
- cURus: E28476

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Product Offering	Base Number	Position Size	Key A Natural	Key B Blue	Key C Red	Key D Yellow	Key D Black
Header Assembly with Boss	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	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	-
Header Assembly (no boss) with Tape and Ammo Box Packaging	2232546	2P	2-2232546-1	2-2232546-2	2-2232546-3	2-2232546-4	2-2232546-5
		3P	3-2232546-1	3-2232546-2	3-2232546-3	3-2232546-4	3-2232546-5
		5P	5-2232546-1	5-2232546-2	5-2232546-3	5-2232546-4	5-2232546-5
		6P	6-2232546-1	6-2232546-2	6-2232546-3	6-2232546-4	6-2232546-5
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 (Key D does not apply to TPAs)	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	-	-	-	-	-	

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