Ph +612 9482 1944 - Email sales@clarke.com.au - www.clarke.com.au - webshop www.cseonline.com.au





# Latches Specifications

#### Materials

Glass-filled High Temperature Housings:

Thermoplastic UL94V-0

Female contacts: Beryllium Copper

Male contacts

PCB Connector: Phosphor Bronze

Crimp: Brass

Finish: 0.2 - 0.3um (8 - 12u") Gold.

over 1.5 - 2.0µm (60 - 80µ") Nickel

Latches: Copper Alloy

#### > Electrical

#### Current

Individual contacts in isolation: 2.8A max (At 25°C) All contacts simultaneously: 2.0A max (At 25°C) Flex Circuit Assembly: 0.4A max per track (At 25°C)

Working voltage

At sea level 1006 mbar: 450V DC or AC peak At altitude 44 mbar: 250V DC or AC peak

Voltage proof

At sea level 1013 mbar: 600V DC or AC peak

Contact resistance

Initial: 20mΩ max After conditioning: 25mΩ max

Insulation resistance

10GΩ min at 500V DC Initial: After conditioning: >1GΩ min at 500V DC

#### Mechanical

Contact durability: 1000 operations

Mating forces (per contact pair)

Insertion force: 2.8N max Withdrawal force: 0.2N min Contact retention in housing: 6N min

#### Environmental

Environmental classification: 65/150/56 days at 93% RH

Operating temperature: -65°C to +150°C

\*Vibration sensitivity: 10Hz to 2000Hz, 1.5mm,

198mm/s<sup>2</sup> (20G) duration 6 hours \*Bump severity: 390m/s<sup>2</sup> (40G), 4000 ±10 bumps \*Shock severity:

981m/s<sup>2</sup> (100G) for 6ms in Z axis 490m/s<sup>2</sup> (50G) for 11ms in X & Y axes

\*Acceleration severity: 490m/s<sup>2</sup> (50G)

\* Tested with latched connectors.

# Pin Numberin

# **FEMALE** MALE

Patent Published All dimensions in mm.



# **Gecko with Latches Mating Profiles**

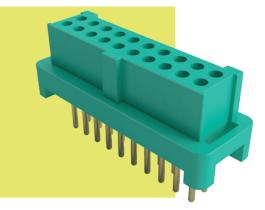
		FEMALE		
		VERTICAL THROUGHBOARD	VERTICAL SMT	CABLE
MALE	VERTICAL THROUGH- BOARD	7.15	7.23	7.90 max
	HORIZONTAL THROUGH- BOARD	8.60	8.68	9.55 max
	VERTICAL SMT	7.23	7.31	8.05 max
	CABLE	9.00 max	9.15 max	9.60 max

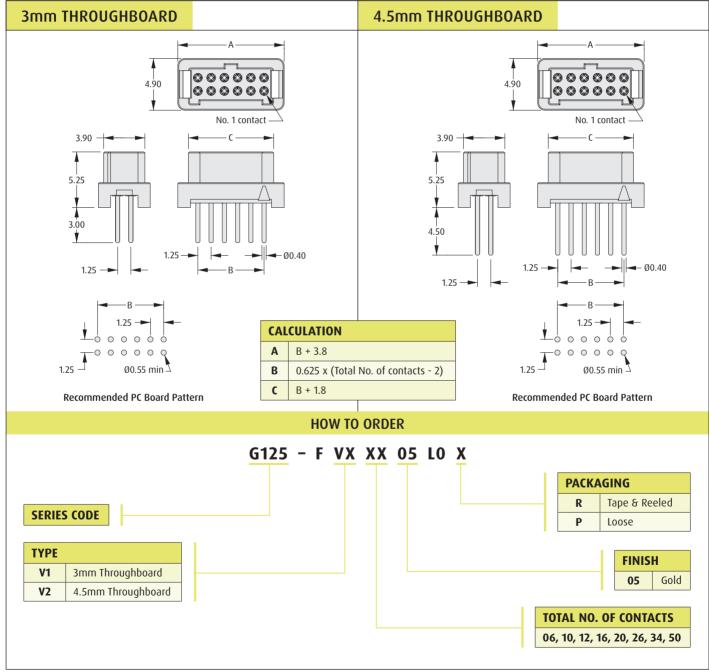
48



#### Female Throughboard

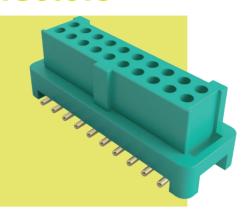
- → 4-finger Beryllium Copper contact.
- ▶ Positive keyway polarization features.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.

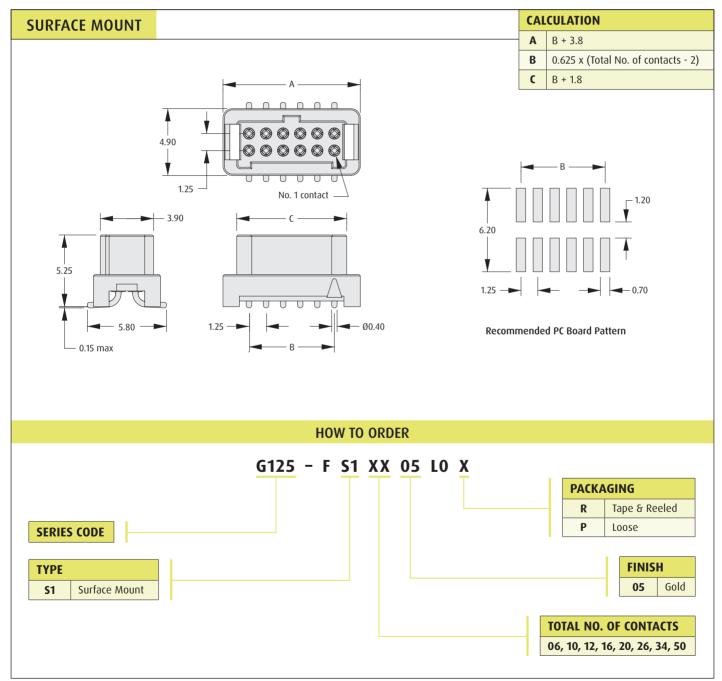




#### **Female Surface Mount**

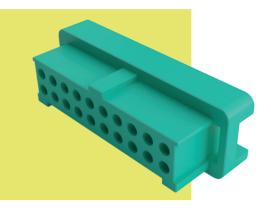
- ♣ 4-finger Beryllium Copper contact.
- ▶ Positive keyway polarization features.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.
- ▶ Available in Tape and Reel Packaging, with Pick and Place cap.

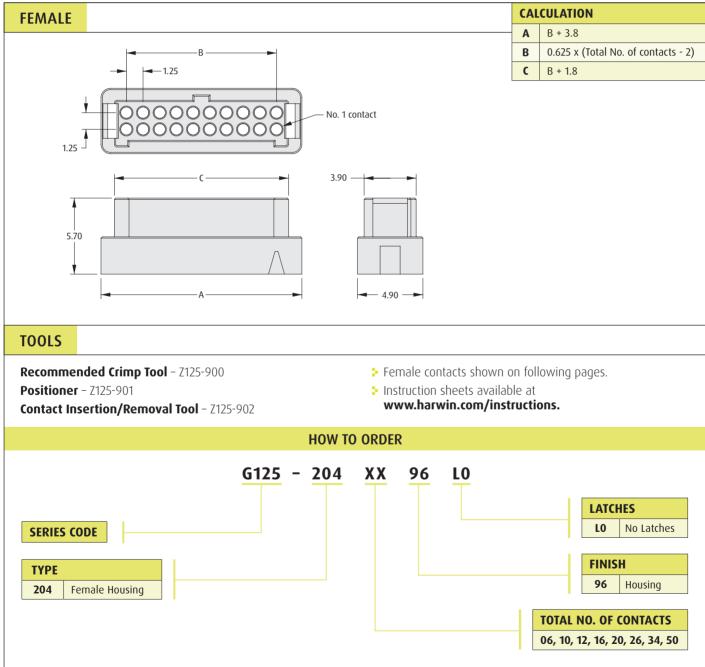




#### Female Crimp Housings

- ▶ Features potting wall for extra security.
- ▶ No. 1 position identified on housing.
- ▶ Withstands extremes of temperature: -65°C to +150°C.
- 3 polarizing points on each housing prevent mis-mating.

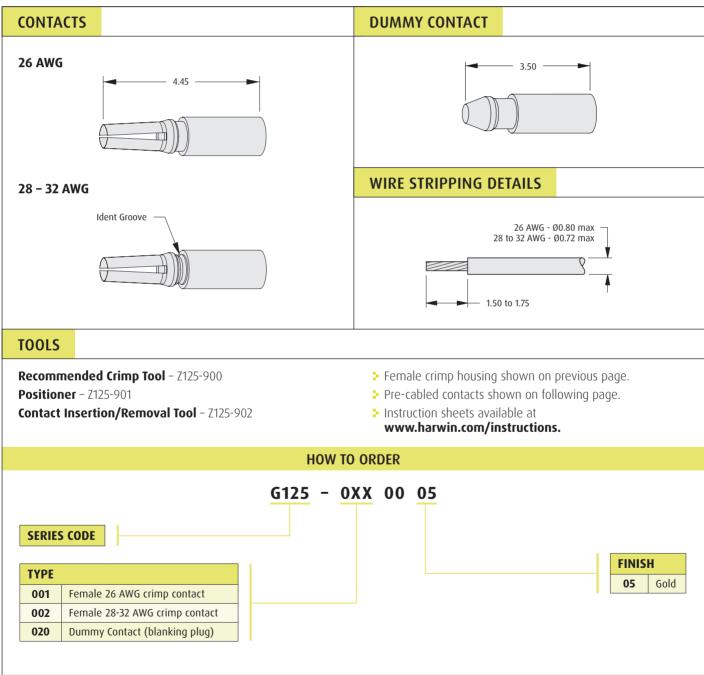




#### Female Crimp Contacts, Dummy Contact

- ♣ 4-finger Beryllium Copper contact on a female connector.
- Crimp barrel meets all crimp guidelines and standards.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.
- Instruction video online at www.harwin.com/harwintv.
- ▶ Dummy Contact can be used for additional polarization of keying of multiple connectors. Also called Blanking Plug.



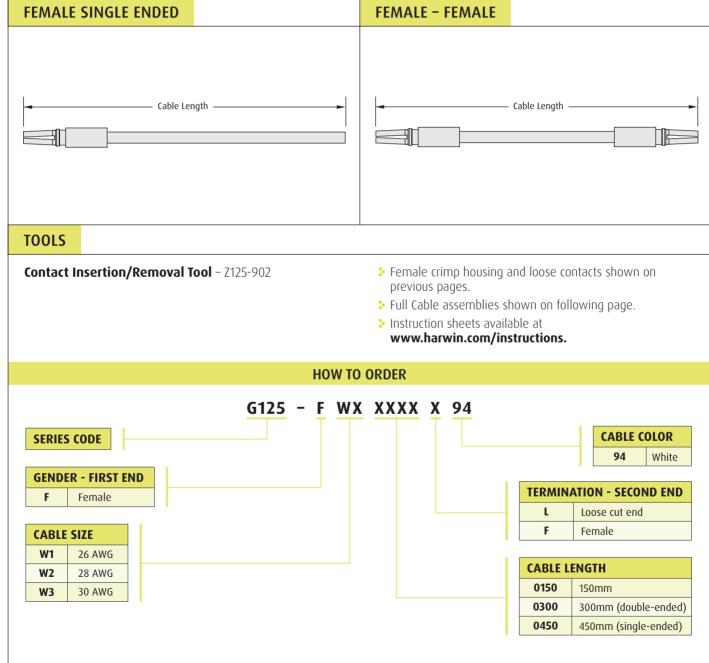


All dimensions in mm.

#### Female Crimp Contacts - Pre-Crimped Wires

- ▶ 4-finger Beryllium Copper contact.
- ▶ Ready for assembling to housing.
- **▶** Crimp barrel meets all crimp guidelines and standards.
- 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.

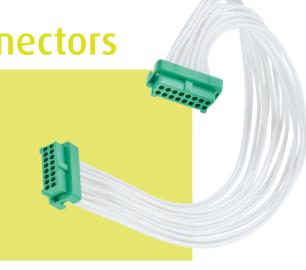


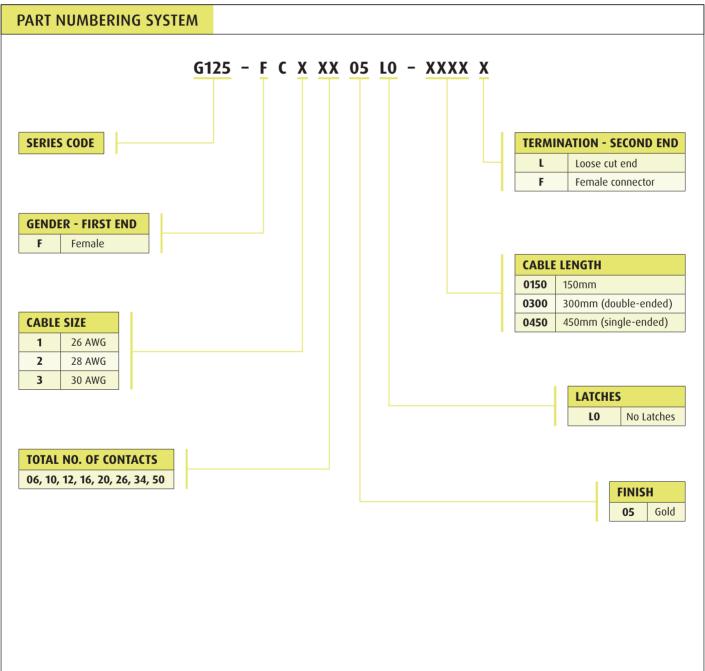




#### **Female Cable Assemblies**

- ♣ 4-finger Beryllium Copper contact.
- ▶ No. 1 position identified on housing.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.
- Back potted for added strain relief.



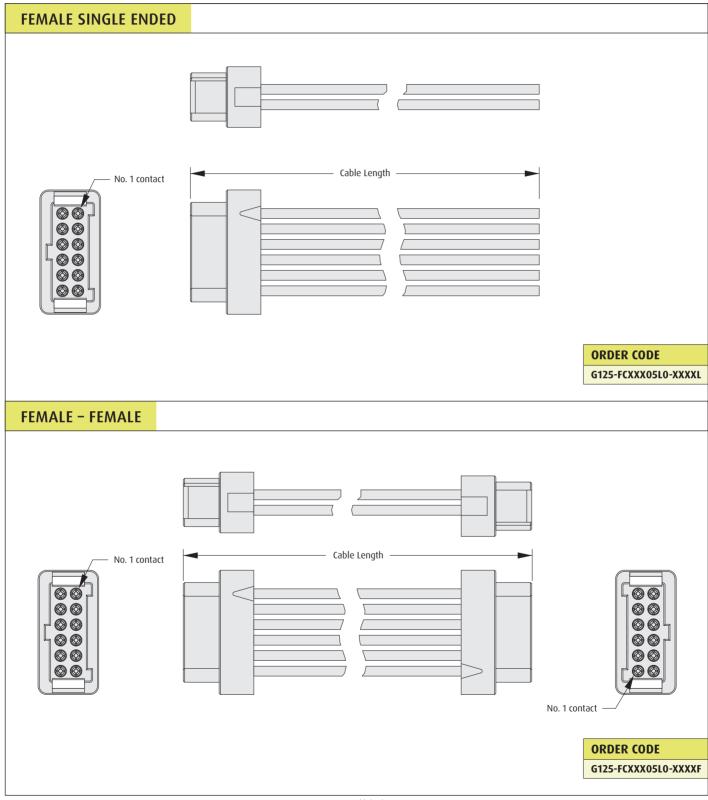


All dimensions in mm.

HARWIN

## Female Cable Assemblies

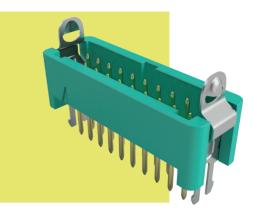
- See previous page for cable length options.
- Cable assemblies are constructed with Contact 1 attached to Contact 1, Contact 2 to Contact 2, etc.

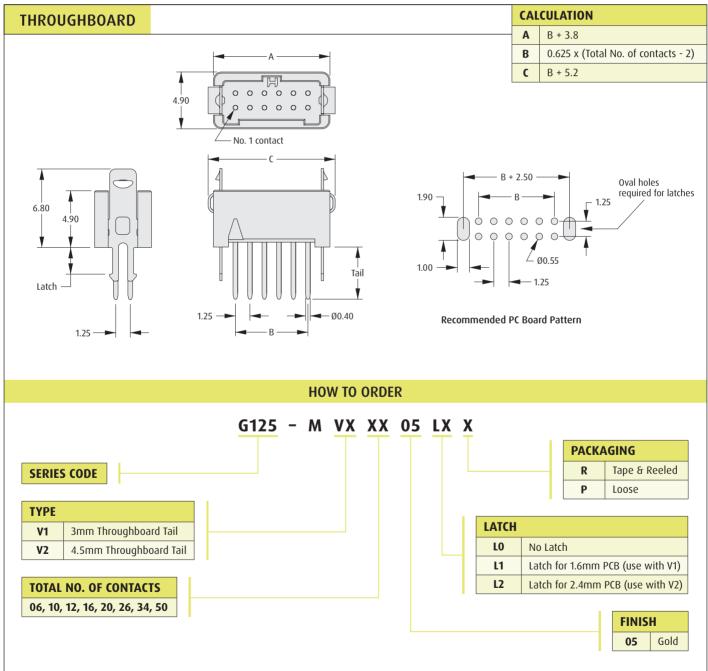




#### Male Vertical Throughboard

- Secure fixing to the PCB via retention barbs for through hole.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.

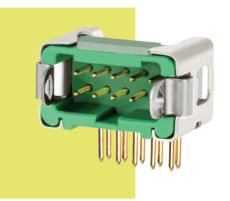


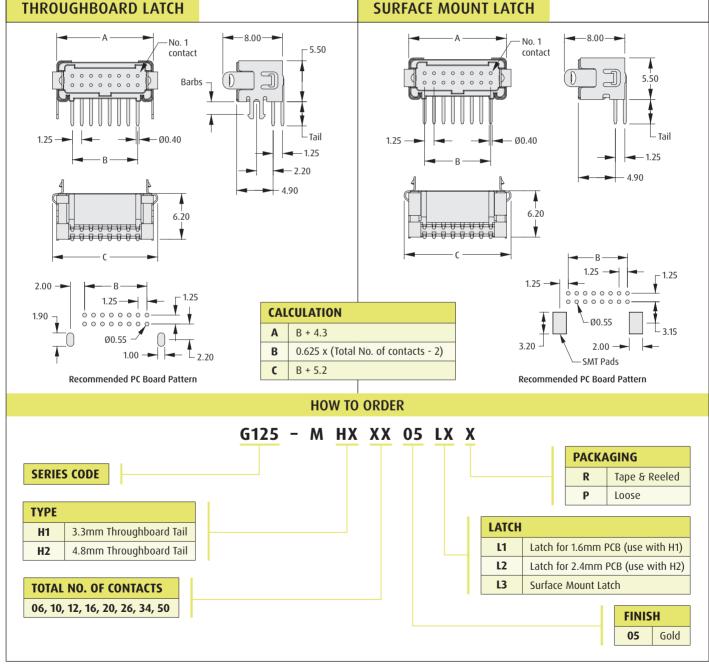




#### Male Horizontal Throughboard - Latched

- Secure fixing to the PCB via retention barbs for through hole.
- Surface mount option for automated assembly.
- - see part numbers Z125-926xx00.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.

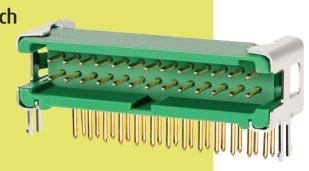


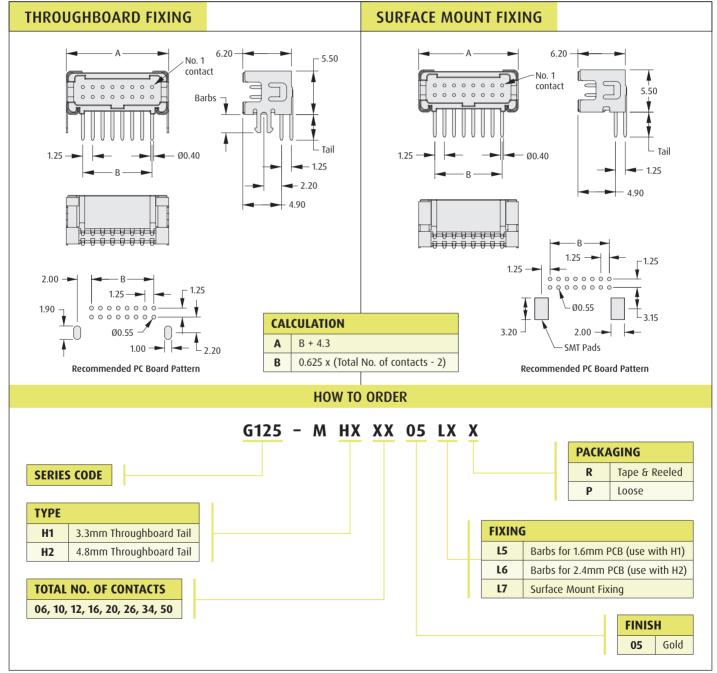




#### Male Horizontal Throughboard - Without Latch

- Secure fixing to the PCB via retention barbs for through hole.
- Surface mount option for automated assembly.
- **▶** 2A current capacity.
- ➤ Withstands extremes of temperature: -65°C to +150°C.



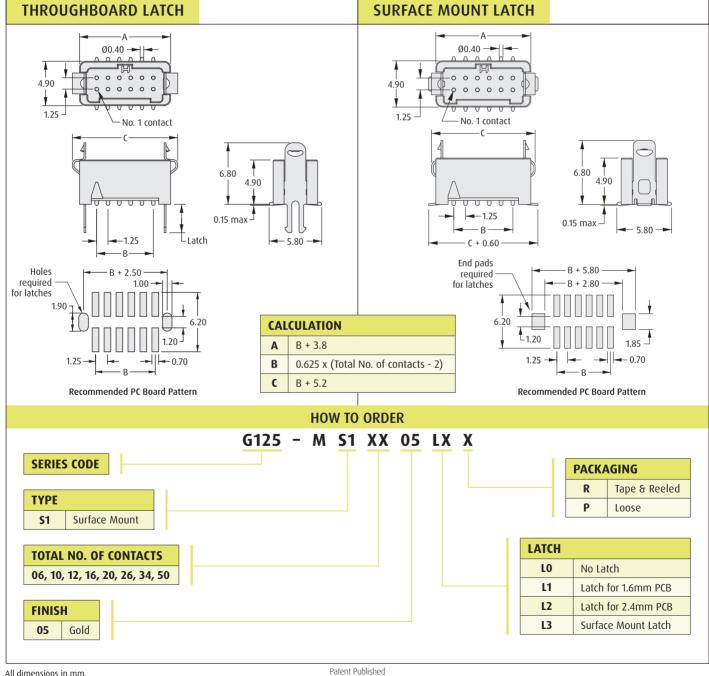


All dimensions in mm.

#### Male Vertical Surface Mount

- Secure fixing to the PCB via hold-down tabs (SMT).
- ▶ Easy-to-release latches require no tooling.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.

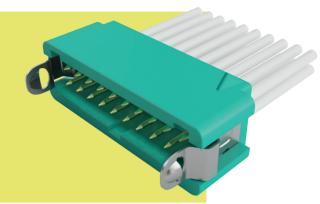


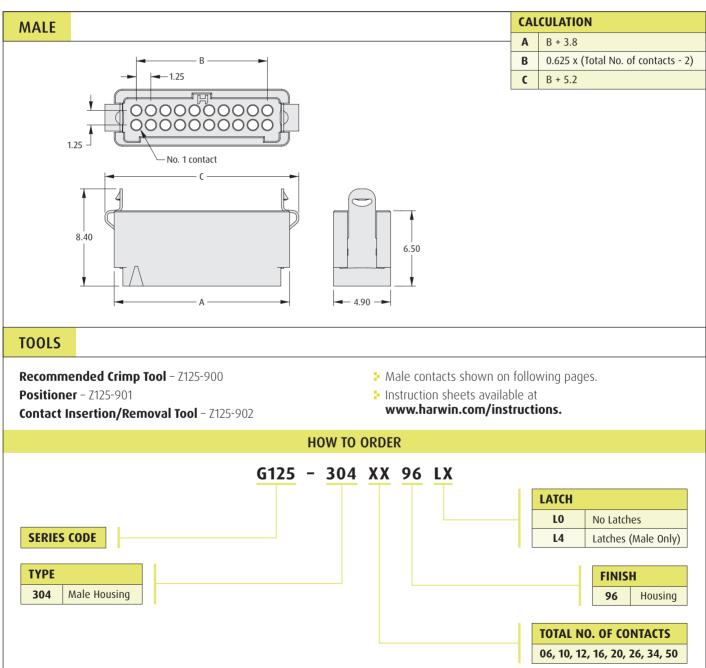


All dimensions in mm.

#### **Male Crimp Housing**

- ▶ Features potting wall for extra security.
- ▶ No. 1 position identified on housing.
- ➤ Withstands extremes of temperature: -65°C to +150°C.
- 3 polarizing points on each housing prevent mis-mating.
- **▶** Easy to release latches require no tooling.

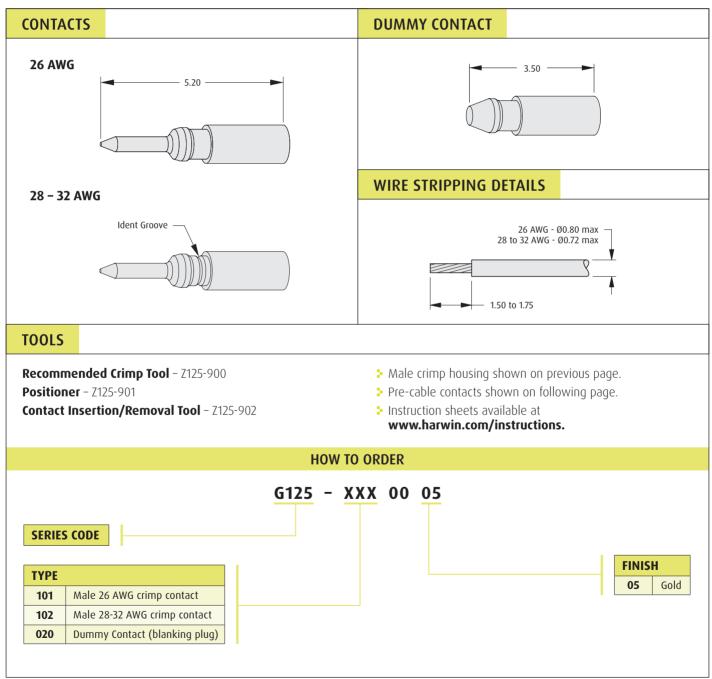




#### **Male Crimp Contacts**

- **▶** Crimp barrel meets all crimp guidelines and standards.
- 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.
- **▶** Instruction video online at www.harwin.com/harwintv.
- ▶ Dummy Contact can be used for additional polarization of keying of multiple connectors. Also called Blanking Plug.

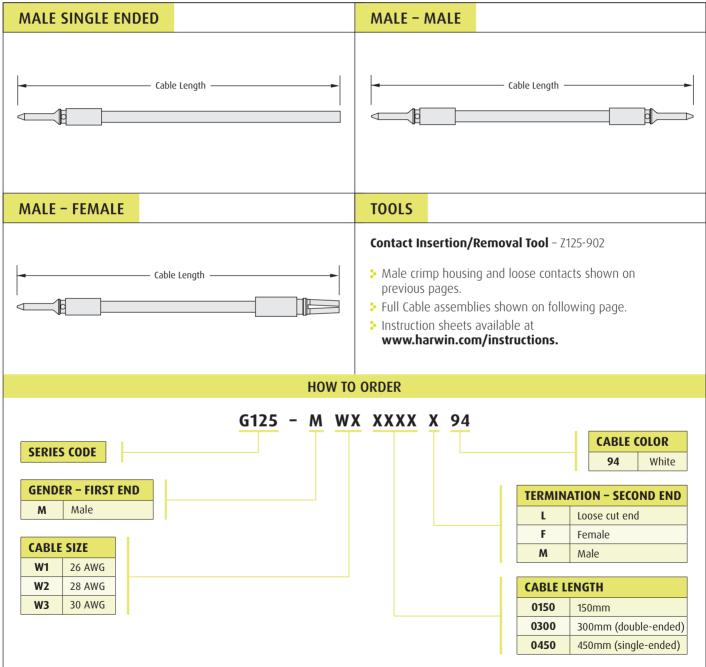




#### Male Crimp Contacts - Pre-Crimped Wires

- Ready for assembling to housing.
- **▶** Crimp barrel meets all crimp guidelines and standards.
- **▶** 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.



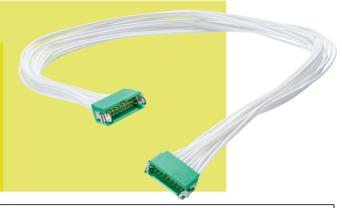


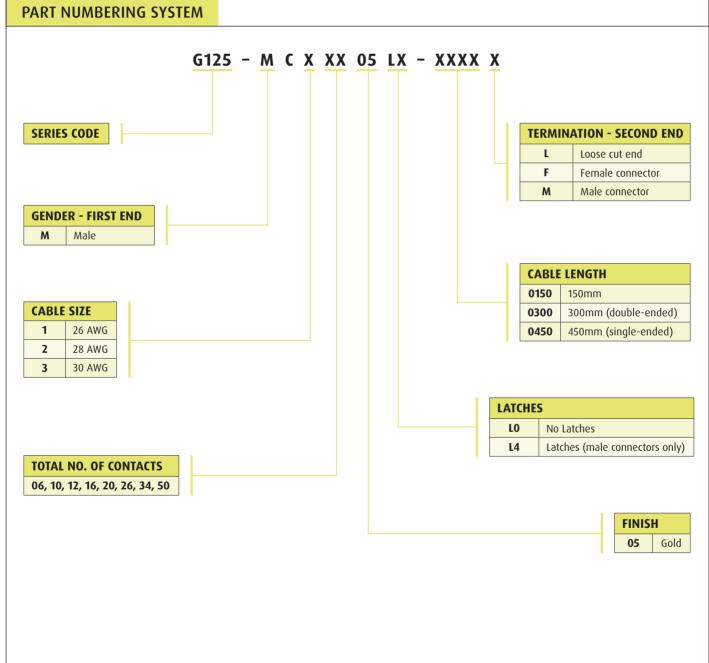
All dimensions in mm.



#### Male Cable Assemblies

- ▶ No. 1 position identified on housing.
- 2A current capacity, resists high vibration and shock.
- **▶** Withstands extremes of temperature: -65°C to +150°C.
- **▶** Back potted for added strain relief.
- ♣ 4-finger Beryllium Copper contact on the female connector.

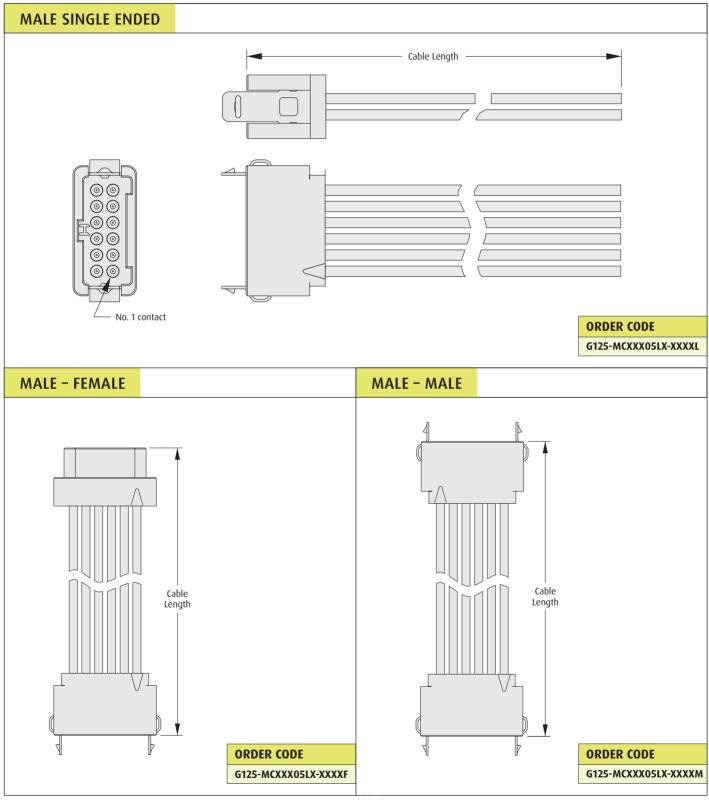






## Male Cable Assemblies

- See previous page for cable length options.
- Cable assemblies are constructed with Contact 1 attached to Contact 1, Contact 2 to Contact 2, etc.

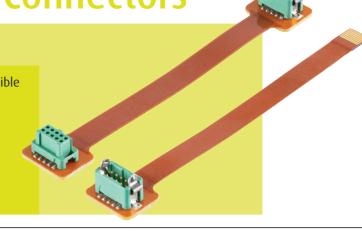


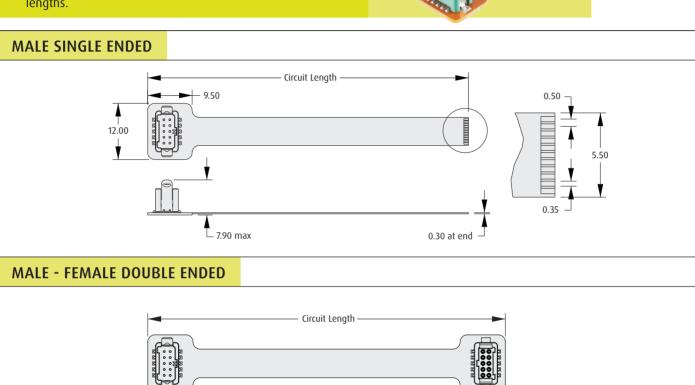
All dimensions in mm.

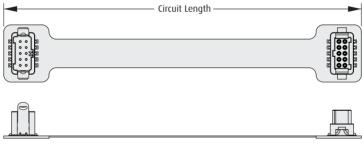


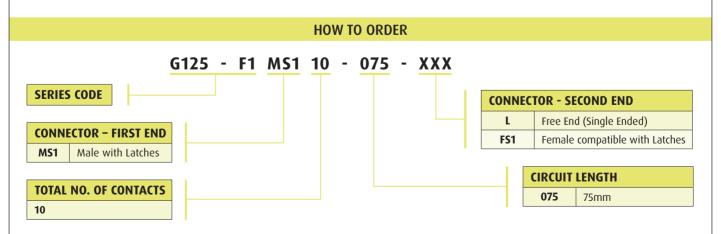
#### **Flexible Circuit Assemblies**

- Surface mount connectors with latches assembled to flexible printed circuit for an alternative to cable connection.
- ▶ Improved bend radius and lower mated height than equivalent cable assemblies.
- ➤ The free end of the single-ended assembly is compatible with 0.5mm pitch FPC connectors.
- ♣ Contact Harwin for alternative connector sizes and cable lengths.









Patent Published All dimensions in mm.

