

Contents

4

Introduction

Gecko-MT: Power/Signal 1.25mm pitch High-Reliability Connectors			
Specifications	6		
Female Connectors	8		
Female Backshells	13		
Male Connectors	14		
Male Backshells	19		
Gecko-SL: Screw-Lok 1.25mm pitch High-Reliability Connectors			
Specifications	20		
Female Connectors & Cable Assemblies	22		
Female Backshells	32		
Male Connectors & Cable Assemblies	33		
Male Backshells	45		
Gecko with Latches: 1.25mm pitch High-Reliability Connectors			
Specifications	47		
Female Connectors & Cable Assemblies	49		
Male Connectors & Cable Assemblies	56		
Tooling	66		

Gecko Connectors Introduction

Gecko is a 1.25mm pitch High-Reliability connector range from Harwin. Improving on the popular 2mm pitch Datamate series, and harnessing the modern technology of micro-machining, this range brings the best of the high-reliability specifications to a smaller size.

Gecko provides a low-profile, dual-row solution for all variations of cable-to-board, board-to-board and cable-to-cable interconnect requirements. With up to 50 contacts per connector, but still capable of 2A per contact, Gecko gives both significant weight and space-saving advantages over Micro-D connections. The Gecko range offers either latching connectors, for maximum weight and space-saving, or Screw-Lok connectors for maximum mating strain relief.

- 2A per contact (all electrically loaded; 2.8A per individual contact)
- 4-finger Patented^{*} contact design to maintain electrical contact through high vibration and shock
- Beryllium Copper Contact for improved temperature range: -65°C to +150°C
- 1,000 Mating cycles durability

* Granted US9017089, Pending GB2501063, Pending EP2642604

Gecko-SL or Latches Gecko-MT

- Strong stainless steel screw fixings for maximum strain relief, or lightweight space-saving robust latches
- Lightweight hoods for additional cable protection and shielding
- Choices of pre-wired contacts or full cable assemblies from stock, for prototyping and full production

- Weight and Space-saving over Micro-D connector products
- Future-proofed Materials Halogen-free, PFOS-free, SVHC-free and RoHS compliant
- Low outgassing properties 0.68% TML, 0.01% CVCM, 0.26 WVR (Water Vapour Recovered)
- All PCB connectors available in Tape and Reel for automation

- Additional power contacts incorporated into the smallest, lightest mixed-layout connector
- Choice of 2 or 4 power contacts rated to 13A each
- Compatible with existing lightweight metal hoods



Gecko Connectors Product Features

Four Finger Beryllium Copper Contact

Unique patented pending high-reliability contact design ensures signal integrity under extremes of bump, vibration and shock. Durable to over 1,000 mating cycles.



No. 1 Position identified, Potting Wall

Housings are clearly marked with identifier for fast visual inspection. Cable connectors feature a rear potting wall adding an extra level of strain relief.



Robust Metal Backshells

Lightweight aluminium hoods / backshells available for all connector sizes from stock. Supplied with tie-bands to attach external braiding for shielded cable assemblies.



Minimal Outgassing

Low outgassing properties from future-proofed plastic; within NASA and ESA recommendations.



Keyway Polarization Points

3 polarizing points on each component prevent mis-mating.



Packaged in Tape & Reel

All connectors for PCB assembly are available packaged in industry standard Tape and Reel format for automated assembly.



Pre-assembled Cable Configurations

Cable connectors supplied in ready-made cable assemblies. Single and double-ended configurations available in standard lengths off-the-shelf, or custom assemblies on request.



Operating Temperature Range

Performance is maintained across the full operating temperature range of -65°C to +150°C.



All dimensions in mm.



Gecko-MT Connectors Specifications

Materials

Housings:

Female contacts:

Male contacts Signal PCB Connector: Signal Crimp: Power (all):

Finish Signal Contacts:

Power Contacts:

Screw-Loks:

Electrical

Current

Signal contacts in isolation: Signal contacts simultaneous: Power contacts simultaneous:

Working voltage

At sea level 1006 mbar: At altitude 44 mbar:

Voltage proof

At sea level 1013 mbar: At altitude 44 mbar:

Contact resistance Initial: After conditioning:

Insulation resistance Initial: After conditioning:

Glass-filled High Temperature Thermoplastic UL94V-0 Beryllium Copper

Phosphor Bronze Brass Beryllium Copper

0.2 - 0.3μm (8 - 12μ") Gold, over 1.5 - 2.0μm (60 - 80μ") Nickel 0.8 - 1.0μm (30 - 40μ") Gold, over 1.5 - 2.5μm (60 - 100μ") Nickel Stainless Steel

Mechanical

Contact durability:1000 operationsMating forces (per contact pair)Insertion force (signal):2.8N maxInsertion force (power):7.0N maxWithdrawal force:0.2N minContact retention in housing:6.0N max

• Environmental

Environmental classification:	65/150/56 days at 93% RH
Operating temperature:	-65°C to +150°C
*Vibration sensitivity:	10Hz to 2000Hz, 1.5mm, 198m/s² (20G) duration 6 hours
*Bump severity:	390m/s² (40G), 4000 ±10 bumps
*Shock severity:	981m/s ² (100G) for 6ms in Z axis 490m/s ² (50G) for 11ms in X & Y axes
*Acceleration severity:	490m/s² (50G)

* Tested with latched connectors.

450V DC or AC peak 250V DC or AC peak

2.8A max (at 25°C)

2.0A max (at 25°C)

10A max

600V DC or AC peak 350V DC or AC peak

20mΩ max 25mΩ max

10G Ω min at 500V DC >1G Ω min at 500V DC

All dimensions in mm.



Gecko-MT Pin Numbering



Gecko-MT Mating Profiles



All dimensions in mm.

www.harwin.com



Female Vertical Throughboard A current rating for signal contacts, 10A for power contacts.

- Stainless steel floating screw fixing to mate with internal screw-loks on male connectors.
- 4-finger Beryllium Copper contact design on both signal and power contacts.
- Positive keyway polarization.





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Female Vertical Throughboard – Reverse Fix

- Reverse fix screw-lok suitable for board-to-cable applications, where the female connector is located on the PCB.
- ✤ 2A current rating for signal contacts, 10A for power contacts.
- 4-finger Beryllium Copper contact design on both signal and power contacts.
- Order nuts for board-mount separately see bottom of page for choice of nut type.



All dimensions in mm.



Female Cable Housings

- Features potting wall for backpotting to give extra security.
- No. 1 position identified on housing.
- Stainless steel floating screw fixing to mate with internal screw-loks on male connectors.
- Available without fixing screws, for use with metal backshells.
- Use with female crimp contacts shown on a following page.







Female Cable Housings – Reverse Fix

- Reverse fix screw-lok, where the male connector has the floating screw.
- Features potting wall for backpotting to give extra security.
- No. 1 position identified on housing.
- Use with female crimp contacts shown on following page.



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Female Crimp Contacts

- 4-finger Beryllium Copper contact design on both signal and power contacts.
- Crimp barrel meets all crimp guidelines and standards.
- Instruction video online at www.harwin.com/harwintv.



Patent Published



12

Female Metal Hood / Backshell

- Supplied as a kit, including 2 metal hood halves, extended fixing screws for female connectors, and short screws to join the two hood halves together.
- Use with G125-2249600-xx-08-xx female crimp housings without fixings - fixings are supplied with these hoods.
- Tie-band can be used to attach external braid, to construct a shielded cable assembly.

HOOD / BACKSHELL



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All dimensions in mm.

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2A current rating for signal contacts, 10A for power contacts.

 Stainless steel screw fixing to mate with floating screw-loks on female connectors, also with board mount thread.
Order bolts for board-mount separately – see bottom of page.

Male Horizontal Throughboard

Polarized housing with 3 keyways.





Male Horizontal Throughboard – Reverse Fix

- Reverse fix screw-lok, where the male connector has the floating screw.
- ✤ 2A current rating for signal contacts, 10A for power contacts.
- Polarized housing with 3 keyways.







Male Cable Housings

- Features potting wall for backpotting to give extra security.
- No. 1 position identified on housing.
- Stainless steel screw fixing to mate with floating screw-loks on female connectors.
- Compatible with metal backshells.
- Use with male crimp contacts shown on a following page.







Male Cable Housings – Reverse Fix

- Reverse fix floating screw-lok suitable for board-to-cable applications, where the female connector is located on the PCB.
- Features potting wall for backpotting to give extra security.
- No. 1 position identified on housing.
- Use with male crimp contacts shown on following page.



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Male Crimp Contacts

- Crimp barrel meets all crimp guidelines and standards.
- Instruction video online at www.harwin.com/harwintv.





Male Metal Hood / Backshell

- Supplied as a kit, including 2 metal hood halves and short screws to join the two hood halves together.
- Use with G125-32496M1-xx-08-xx male crimp housings.
- Tie-band can be used to attach external braid, to construct a shielded cable assembly.



CALCULATION HOOD / BACKSHELL Α B + 16.8 В 0.625 x (Total No. of contacts - 2) C B + 7.8 6.20 D B + 4.3 23.80 - 1.5 A/F HEX Þ \bigcirc Ø 9 60 6.60 700 **BAND-IT TIE** For fixing braid to rear collar **ORDER CODE** (requires Tie Dex II A30199 M80-9470000 Length = 206.8mm Micro Band tool). M80-9480000 Length = 362.0mm **HOW TO ORDER** G125 - 964 XX 00 **TOTAL NO. OF CONTACTS SERIES CODE** 16 Use with G125-32496M1-01-08-01 26 Use with G125-32496M1-02-08-02

All dimensions in mm.

Patent Published



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Gecko Screw-Lok Specifications

: Materials

Housings:

Female contacts:

Male contacts PCB Connector: Crimp: Finish:

Glass-filled High Temperature Thermoplastic UL94V-0 Beryllium Copper

Phosphor Bronze Brass 0.2 - 0.3µm (8 - 12µ") Gold, over 1.5 - 2.0µm (60 - 80µ") Nickel Stainless Steel

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/s² (20G) duration 6 hours
*Bump severity:	390m/s² (40G), 4000 ±10 bumps
*Shock severity:	981m/s² (100G) for 6ms in Z axis 490m/s² (50G) for 11ms in X & Y axes
*Acceleration severity:	490m/s² (50G)

* Tested with latched connectors.

Screw-Loks:

: Electrical

Current

Individual contacts in isolation: 2.8A max (At 25°C) All contacts simultaneously:

Working voltage At sea level 1006 mbar: At altitude 44 mbar:

Voltage proof At sea level 1013 mbar:

Contact resistance Initial: After conditioning:

Insulation resistance Initial: After conditioning:

2.0A max (At 25°C)

450V DC or AC peak 250V DC or AC peak

600V DC or AC peak

20mΩ max 25mΩ max

 $10G\Omega$ min at 500V DC >1G Ω min at 500V DC

Pin Numbering



All dimensions in mm.



Gecko Screw-Lok Mating Profiles



GECKO SCREW-LOK

All dimensions in mm.



Female Throughboard

- 4-finger Beryllium Copper contact.
- Stainless steel screw fixing to mate with applicable male connector.
- Positive keyway polarization features.
- 2A current capacity, resists high vibration and shock.
- Withstands extremes of temperature: -65°C to +150°C.



CALCULATION

B + 12.7

Α

3mm THROUGHBOARD



All dimensions in mm.



Female Throughboard - Reverse Fix

- 4-finger Beryllium Copper contact.
- Stainless steel screw fixing to mate with applicable male connector.
- Reverse fix screw-lok suitable for board-to-cable applications, where the female connector is located on the PCB.
- Order nuts for board-mount separately see bottom of page.



WITHOUT BOARD MOUNT WITH BOARD MOUNT 1 25 4.90 0000000 4.90 No. 1 contact 3.90 No. 1 contact - 3.90 5.25 3.00 5 00 - M7 3.00 Ø0 40 − M2 1.25 Ø0.40 1.25 1 75 **CALCULATION** 1.25 1.25 Α B + 12.7 В 0.625 x (Total No. of contacts - 2) T_{1.25} 0 0 0 Ø0 55 Ø0.55 С B + 7.8 ò2.20 D B + 1.8 Recommended PC Board Pattern Recommended PC Board Pattern **HOW TO ORDER** F V1 XX 05 FX X G125 -**SERIES CODE** PACKAGING R Tape & Reeled **TYPE** Р Loose V1 3mm Throughboard **SCREW-LOK TOTAL NO. OF CONTACTS** F2 Internal Thread 06, 10, 12, 16, 20, 26, 34, 50 F3 With 5mm Board Mount stud Order separately from connector **REQUIRED HARDWARE Hexagonal Board Mount Nut Slotted Board Mount Nut** -Ø4.00 1.60 M2 **ORDER CODE ORDER CODE** 4.00 A/F G125-4500000B G125-4510000B 3.00

All dimensions in mm.



Female Surface Mount

- 4-finger Beryllium Copper contact.
- Stainless steel screw fixing to mate with applicable male connector.
- Positive keyway polarization features.
- **2** A 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.



CALCULATION SURFACE MOUNT Α B + 12.7 В 0.625 x (Total No. of contacts - 2) C B + 7.8 D B + 1.8 4.90 $\odot \odot \odot$ 000 - M2 No. 1 contact - 3.90 - 5.25 0.15 max 2.00 υ Ø3.30 1.20 - 5.80 - Ø0.40 1.25 6.20 Ø3.00 - 1.5 A/F HEX ¥ **Recommended PC Board Pattern HOW TO ORDER** G125 - F S1 XX 05 F1 X PACKAGING Tape & Reeled R Loose Ρ **SERIES CODE FINISH** TYPE 05 Gold **S1** Surface Mount **TOTAL NO. OF CONTACTS** 06, 10, 12, 16, 20, 26, 34, 50

All dimensions in mm.



Female Surface Mount - Reverse Fix

- Stainless steel screw fixing to mate with applicable male connector.
- Reverse fix screw-lok suitable for board-to-cable applications, where the female connector is located on the PCB.
- Order nuts for board-mount separately see bottom of page.
- Available in Tape and Reel Packaging, with Pick and Place cap.



WITHOUT BOARD MOUNT WITH BOARD MOUNT 4.90 1 7 5 1 25 0000000 4 90 No. 1 contact Ø0 40 🗕 No. 1 contact Ø0.40 +3.90 -D -3.90 0.15 25 0.15 max max 1 25 -5.80 1 2 5 -M2 5.00 M7 Ø2 20 CALCULATION 1.20 Α B + 12.7 6.20 1.20 В 0.625 x (Total No. of contacts - 2) 0.70 -0.70 C B + 7.8 D B + 1.8 **Recommended PC Board Pattern** Recommended PC Board Pattern **HOW TO ORDER** G125 -F S1 XX 05 FX X **SERIES CODE** PACKAGING R Tape & Reeled **TYPE** Ρ Loose **S1** Surface Mount **SCREW-LOK TOTAL NO. OF CONTACTS** F2 Internal Thread 06, 10, 12, 16, 20, 26, 34, 50 F3 With 5mm Board Mount stud Order separately from connector **REQUIRED HARDWARE Hexagonal Board Mount Nut Slotted Board Mount Nut** Ø4.00 1.60 M2 **ORDER CODE ORDER CODE** 4.00 A/F G125-4500000B G125-4510000B 3.00

All dimensions in mm.



Female Crimp Housings

- Features 2.5mm potting wall for extra security.
- No. 1 position identified on housing.
- **3** polarizing points on each housing prevent mis-mating.
- Available without fixing screws, for use with metal hoods shown on a following page.
- Use with female crimp contacts and pre-cabled contacts shown on following pages.





Patent Published



GECKO SCREW-LOK

Female Crimp Housings - Reverse Fix

- Features 2.5mm potting wall for extra security.
- Use with female crimp contacts and pre-cabled contacts shown on following pages.
- Stainless steel screw fixing mates to applicable male connector fitted with floating screw-loks.
- Order nuts for panel mount separately see bottom of page.





All dimensions in mm.



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.







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 SINGLE ENDED **FEMALE - FEMALE** – Cable Length - Cable Length TOOLS Contact Insertion/Removal Tool - Z125-902 Female crimp housings and loose contacts shown on previous pages. Instruction sheets available at www.harwin.com/instructions. **HOW TO ORDER** G125 - F WX XXXX X 94 **SERIES CODE CABLE COLOR** 94 White **GENDER - FIRST END TERMINATION - SECOND END** F Female L Loose cut end F Female **CABLE SIZE** W1 26 AWG **CABLE LENGTH** W2 28 AWG 0150 150mm 30 AWG W3 0300 300mm (double-ended) W4 32 AWG 0450 450mm (single-ended)

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All dimensions in mm.

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Female Cable Assemblies

- 4-finger Beryllium Copper contact.
- No.1 position identified on housing.
- Stainless steel screw fixing to mate with applicable male connector.
- Back potted for added strain relief.



PART NUMBERING SYSTEM





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.





Female Metal Hood / Backshell

- Supplied as a kit, including 2 metal hood halves, extended fixing screws for female connectors, and short screws to ioin the two hood halves together.
- Use with G125-224xx9600 female crimp housings without fixings - fixings are supplied with these hoods.
- Tie-band can be used to attach external braid, to construct a shielded cable assembly.

HOOD / BACKSHELL







Male Vertical Throughboard

- Stainless steel screw fixing to mate with applicable female connector.
- Order nuts for board-mount separately see bottom of page.
- 2A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.







Male Vertical Throughboard - Reverse Fix

- Stainless steel screw fixing to mate with applicable female connector.
- No. 1 position identified on housing.



CALCULATION

THROUGHBOARD





TOTAL NO. OF CONTACTS

06, 10, 12, 16, 20, 26, 34, 50

Patent Published



FINISH

Gold

05

Male Horizontal Throughboard

- Stainless steel screw fixing to mate with floating screw-loks on female connectors, also with board mount thread.
- Order bolts for board-mount separately.







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Male Horizontal Throughboard - Reverse Fix

- Stainless steel screw fixing to mate with applicable female connector.
- No. 1 position identified on housing.



CALCULATION THROUGHBOARD Α B + 12.7 В 0.625 x (Total No. of contacts - 2) C B + 7.8 Ø3.00 No. 1 contact M2 0 0 0 0 0 0 5 25 0 0 0 0 0 0 0 0 1.5 A/F 1.25 - 3.30 1.25 - Ø0.40 1.25 4 90 4.90 - 1.25 1.25 ¥. 88888888 9.90 V 0000 0 6 6 6 6 6 6 6 6 0000000 Ø0.55 Recommended PC Board Pattern **HOW TO ORDER** G125 - M H1 XX 05 M3 X **SERIES CODE** PACKAGING Tape & Reeled R **TYPE** Ρ Loose H1 3mm Throughboard **FINISH TOTAL NO. OF CONTACTS** Gold 05 06, 10, 12, 16, 20, 26, 34, 50

GECKO SCREW-LOK

All dimensions in mm.



Male Vertical Surface Mount

- Stainless steel screw fixing to mate with applicable female connector.
- Order nuts for board-mount separately see bottom of page.
- **2** A current capacity, resists high vibration and shock.
- ▶ Withstands extremes of temperature: -65°C to +150°C.





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Male Vertical Surface Mount - Reverse Fix

- Stainless steel screw fixing to mate with applicable female connector.
- Reverse fix screw-lok suitable for board-to-cable applications, where the female connector is located on the PCB.



CALCULATION

SURFACE MOUNT






GECKO SCREW-LOK

Gecko Screw-Lok Connectors

Male Crimp Housing

- Features 2.5mm potting wall for extra security.
- No. 1 position identified on housing.
- **3** polarizing points on each housing prevent mis-mating.
- Use with male crimp contacts and pre-cabled contacts shown on following pages.
- Order nuts for panel mount separately see bottom of page.





All dimensions in mm.



Gecko Connectors

Male Crimp Housing - Reverse Fix

- Features 2.5mm potting wall for extra security.
- Use with male crimp contacts and pre-cabled contacts shown on following pages.
- Stainless steel screw fixing to mate with applicable female connector.
- Reverse fix screw-lok suitable for board-to-cable applications, where the female connector is located on the PCB.







GECKO SCREW-LOK

Gecko Screw-Lok Connectors

Male Crimp Contacts, Dummy Contact

- 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.



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Gecko Screw-Lok Connectors

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.





Patent Published



GECKO SCREW-LOK

Gecko Screw-Lok Connectors

Male Cable Assemblies

- 4-finger Beryllium Copper contact.
- No. 1 position identified on housing.
- Stainless steel screw fixing to mate with applicable male connector.
- Back potted for added strain relief.



PART NUMBERING SYSTEM



All dimensions in mm.



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.





Gecko Screw-Lok Connectors

Male Metal Hood / Backshell

- Supplied as a kit, including 2 metal hood halves and short screws to join the two hood halves together.
- Use with G125-324xx96M1 male crimp housings.
- Tie-band can be used to attach external braid, to construct a shielded cable assembly.



CALCULATION HOOD / BACKSHELL Α B + 16.8 В 0.625 x (Total No. of contacts - 2) C B + 7.8 6.20 D B + 4.3 23.80 - 1.5 A/F HEX \bigcirc Ì Ø 9.60 6.60 700 **BAND-IT TIE** > For fixing braid to rear collar **ORDER CODE** (requires Tie Dex II A30199 M80-9470000 Length = 206.8mm Micro Band tool). M80-9480000 Length = 362.0mm **HOW TO ORDER** G125 - 964 XX 00 **TOTAL NO. OF CONTACTS SERIES CODE** 06, 10, 12, 16, 20, 26, 34, 50 Patent Published





Gecko Screw-Lok Connectors

Throughboard Metal Hood / Backshell

- Use with G125-MV1xx05M2x connectors for EMC shielding on a PCB mounted application.
- Use with G125-324xx96M2 connectors for EMC shielding on a panel mount application.
- Mating female cable connector G125-224xx9600 to be fitted with metal backshell G125-964xxF1 for complete EMC shielded connection.

HOOD / BACKSHELL



CALCULATION





GECKO SCREW-LOK

Gecko with Latches Specifications

Materials

Housings:

Female contacts:

Male contacts PCB Connector: Crimp: Finish: Glass-filled High Temperature Thermoplastic UL94V-0 Beryllium Copper

Phosphor Bronze Brass 0.2 - 0.3µm (8 - 12µ") Gold, over 1.5 - 2.0µm (60 - 80µ") Nickel Copper Alloy

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/s² (20G) duration 6 hours
*Bump severity:	390m/s² (40G), 4000 ±10 bumps
*Shock severity:	981m/s ² (100G) for 6ms in Z axis 490m/s ² (50G) for 11ms in X & Y axes
*Acceleration severity:	490m/s² (50G)

* Tested with latched connectors.

Latches:

Electrical

Current

Individual contacts in isolation: All contacts simultaneously: Flex Circuit Assembly:

Working voltage At sea level 1006 mbar: At altitude 44 mbar:

Voltage proof At sea level 1013 mbar:

Contact resistance Initial: After conditioning:

Insulation resistance Initial:

After conditioning:

2.8A max (At 25°C) 2.0A max (At 25°C) 0.4A max per track (At 25°C)

450V DC or AC peak 250V DC or AC peak

600V DC or AC peak

20mΩ max 25mΩ max

10G Ω min at 500V DC >1G Ω min at 500V DC

Pin Numbering

 FEMALE
 MALE

 Image: Constrained of the second of the seco

All dimensions in mm.



Gecko with Latches Mating Profiles

FEMALE **VERTICAL THROUGHBOARD VERTICAL SMT** CABLE ΠΠ 딴 4 VERTICAL 7.90 max 7.23 THROUGH-7.15 BOARD \bigcirc \square 1 t 98 AB Πſ _ R Z HORIZONTAL THROUGH-9.55 max D D 8.60 8.68 D v BOARD ſ D \sim MALE ΠΠ 5 ۳_ VERTICAL 7.31 8.05 max 7.23 SMT \square \Box 9.00 max 9.15 max CABLE 9.60 max L K, 7 ¥. UU

All dimensions in mm.



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.



GECKO WITH LATCHES

3mm THROUGHBOARD 4.5mm THROUGHBOARD 000000 000000 4.90 4.90 000000 000000 No. 1 contact No. 1 contact 3.90 С 3.90 С 5.25 5.25 3.00 4.50 Ť 1.25 ⊢Ø0.40 ← Ø0.40 1.25 1.25 1 25 -1.25 1.25 **CALCULATION** \bigcirc 0 \bigcirc \bigcirc ó Ó ٩ Α B + 3.8 0 0 0 0 0 0 C 0 0 0 1.25 Ø0.55 min 1.25 Ø0.55 min В 0.625 x (Total No. of contacts - 2) C B + 1.8 **Recommended PC Board Pattern Recommended PC Board Pattern HOW TO ORDER** G125 - F VX XX 05 L0 X PACKAGING Tape & Reeled R **SERIES CODE** Ρ Loose **TYPE FINISH** V1 3mm Throughboard 05 Gold **V2** 4.5mm Throughboard TOTAL NO. OF CONTACTS 06, 10, 12, 16, 20, 26, 34, 50

All dimensions in mm.



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.



CALCULATION

SURFACE MOUNT



Patent Published



GECKO WITH LATCHES

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.



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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.







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 SINGLE ENDED **FEMALE - FEMALE** - Cable Length Cable Length TOOLS Female crimp housing and loose contacts shown on Contact Insertion/Removal Tool - Z125-902 previous pages. Full Cable assemblies shown on following page. Instruction sheets available at www.harwin.com/instructions. **HOW TO ORDER** G125 - F WX XXXX X 94 **SERIES CODE CABLE COLOR** 94 White **GENDER - FIRST END TERMINATION - SECOND END** F Female L Loose cut end F Female **CABLE SIZE** 26 AWG W1 **CABLE LENGTH** W2 28 AWG 0150 150mm 30 AWG W3 0300 300mm (double-ended) W4 32 AWG 0450 450mm (single-ended)

All dimensions in mm.



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.





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.



HARWIN

Male Vertical Throughboard

- Secure fixing to the PCB via retention barbs for through hole.
- Easy-to-release latches require no tooling.
- 2A current capacity, resists high vibration and shock.
- Withstands extremes of temperature: -65°C to +150°C.



CALCULATION

THROUGHBOARD







Male Horizontal Throughboard - Latched

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



THROUGHBOARD LATCH SURFACE MOUNT LATCH -8.00 -8.00-No 1 No. 1 5.50 contact contact $\overline{}$ 5 50 Barbs لح الے 0 Tail Tail Ø0.40 1.25 1.25 Ø0.40 -1.25 - 1.25 2.20 490 4 9 0 6.20 6.20 0000000 10 0 0 0 0 0 0 0 1.25 1.25 1.25 2.00 -000000 1.25 1.25 00 **CALCULATION** 000000 1.90 Ø0.55 0 0 00000 Α B + 4.3 3 15 Ø0 55 3.20 2.00 -В 0.625 x (Total No. of contacts - 2) 1.00 -2 20 SMT Pads B + 5.2 C Recommended PC Board Pattern Recommended PC Board Pattern **HOW TO ORDER** G125 - M HX XX 05 LX X PACKAGING **SERIES CODE** R Tape & Reeled Ρ Loose **TYPE** LATCH H1 3.3mm Throughboard Tail L1 Latch for 1.6mm PCB (use with H1) 4.8mm Throughboard Tail H2 L2 Latch for 2.4mm PCB (use with H2) L3 Surface Mount Latch **TOTAL NO. OF CONTACTS** 06, 10, 12, 16, 20, 26, 34, 50 **FINISH** 05 Gold

All dimensions in mm.





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.



THROUGHBOARD FIXING SURFACE MOUNT FIXING 6.20 6.20 5.50 No. 1 contact No. 1 contact 0 0 0 5 50 Barbs Tail Tail 1.25 Ø0.40 1.25 Ø0.40 1 2 5 1.25 - 2 20 4.90 4 90 1.25 1.25 1.25 2.00 -0 0 00 1.25 1 7 Ø0.55 1.90 3.15 **CALCULATION** 3.20 2.00 B + 4.3 Α SMT Pads 100 2.20 В 0.625 x (Total No. of contacts - 2) Recommended PC Board Pattern Recommended PC Board Pattern **HOW TO ORDER** G125 - M HX XX 05 LX X PACKAGING R Tape & Reeled **SERIES CODE** Loose Ρ **TYPE FIXING** H1 3.3mm Throughboard Tail L5 H2 4.8mm Throughboard Tail Barbs for 1.6mm PCB (use with H1) L6 Barbs for 2.4mm PCB (use with H2) **TOTAL NO. OF CONTACTS** L7 Surface Mount Fixing 06, 10, 12, 16, 20, 26, 34, 50 **FINISH** 05 Gold

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.



THROUGHBOARD LATCH SURFACE MOUNT LATCH Ø0.40 -Ø0 40 Δ ŏ 0 õ 0 4.90 4 90 0 0 0 0 1 1 25 1.25 No. 1 contact No. 1 contact 6.80 6 80 4 90 1 90 υu U -1.25 0.15 max 0.15 max В 5.80 \Box_{Latch} 1.25 5.80 C + 0.60R End pads B + 5.80 Holes 2.50 required required 1.00 ---for latches B + 2 80 for latches 1.90 -6.20 6.20 **CALCULATION** L_1.20 1.20 1.85 B + 3.8 Α 0.70 1.25 -0.70 1.25 В 0.625 x (Total No. of contacts - 2) R C B + 5.2 Recommended PC Board Pattern **Recommended PC Board Pattern HOW TO ORDER** G125 - M S1 XX 05 LX X **SERIES CODE** PACKAGING R Tape & Reeled **TYPE** Ρ Loose **S1** Surface Mount LATCH **TOTAL NO. OF CONTACTS** LO No Latch 06, 10, 12, 16, 20, 26, 34, 50 11 Latch for 1.6mm PCB L2 Latch for 2.4mm PCB **FINISH** L3 Surface Mount Latch 05 Gold

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.



IARWiN



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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.

Patent Published



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.



GECKO WITH LATCHES

PART NUMBERING SYSTEM





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.









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.



MALE SINGLE ENDED



All dimensions in mm.



Gecko Connectors Tooling

- Instruction sheets can be accessed at www.harwin.com/instructions.
- A Gecko Crimping Instruction video is available at www.harwin.com/harwintv.





Gecko Connectors Tooling

> Instruction sheets can be accessed at **www.harwin.com/instructions.**

HEX DRIVE BIT		BALL HEX DRIVER
	d for Gecko Screw-Lok Hex Socket fixings e tooling or similar equipment.	 1.5mm A/F Hex end for Gecko Screw-Lok Hex Socket fixin Ball-shaped end can be used at a wide range of angles.
	ORDER CODE	
SCREWDRIVER	Z9950-00	ORDER CO Z9952-00
SCREWDRIVER		
 For use with Gecko Board mount nuts t 	Z9950-00	Z9952-00 DELATCH TOOL

All dimensions in mm.

