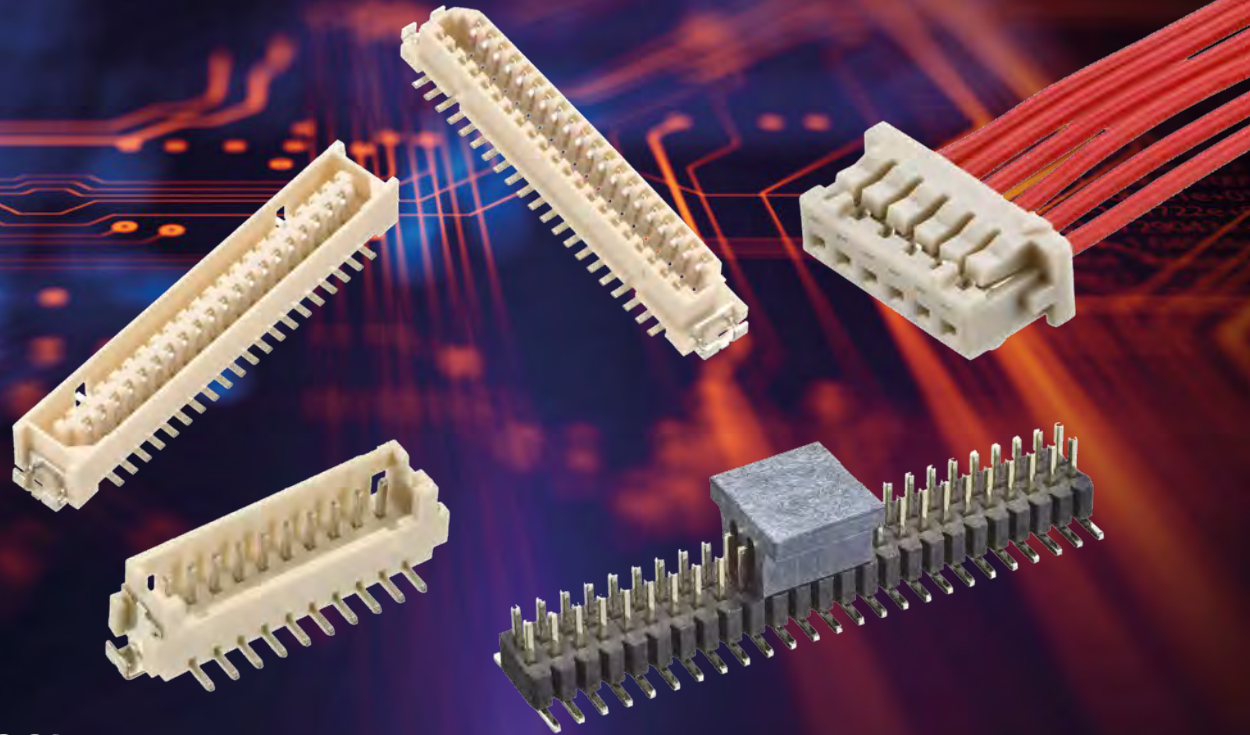


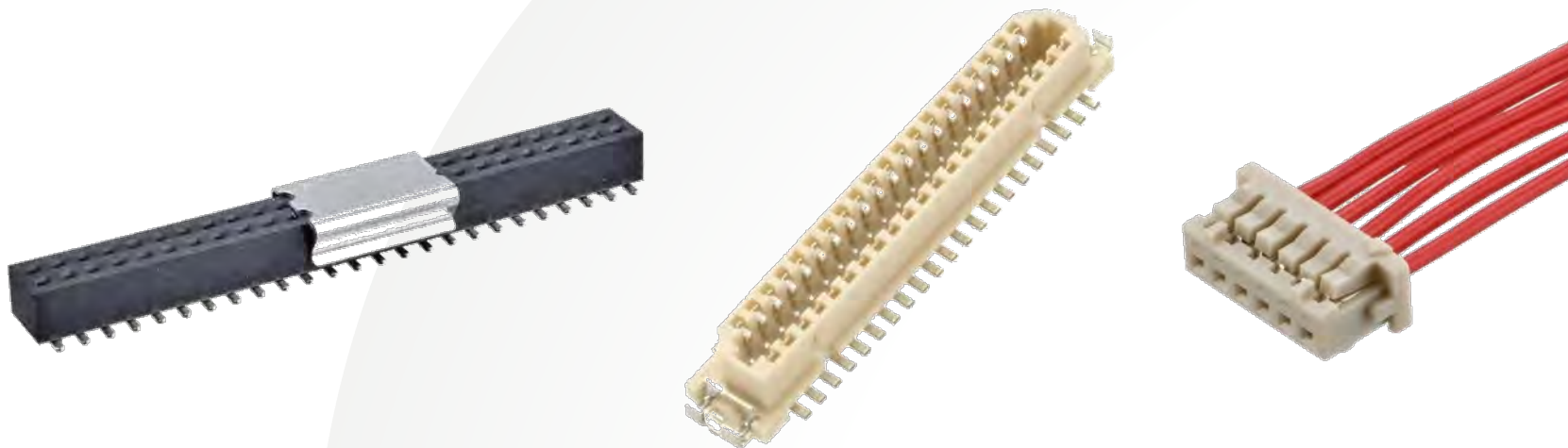
**HARWIN**

**INDESS**

**Fine Pitch Connectors**



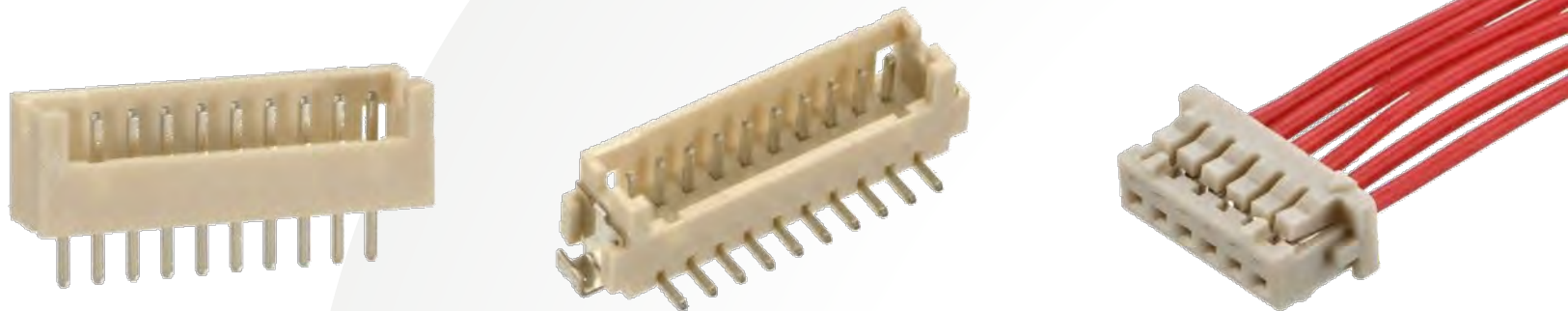
## FINE PITCH CONNECTORS - SMALL, DENSELY POPULATED PCB FLEXIBILITY



Today's hardware and PCB designers are faced with many connector challenges, including smaller applications with increased PCB density, height restrictions and increased functionality requirements.

Harwin's Fine Pitch ranges offer designers and manufacturers what they are looking for: Low cost, small size connectors; design flexibility (board-to-board, cable-to-board); wide range of styles and sizes; auto-assembly friendly.

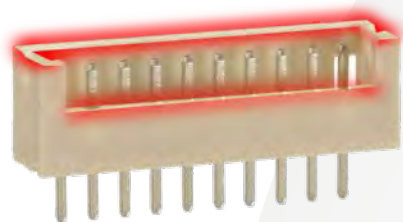
## M30: 1.25MM PITCH - CABLE-TO-BOARD AT FINE PITCH



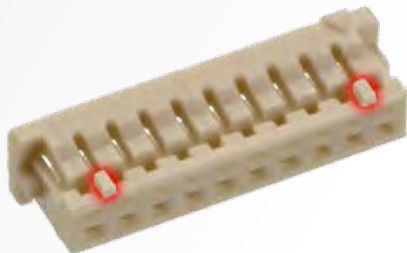
The [M30 range](#) provides a 1.25mm pitch Cable-to-Board solutions, in a Single Row format. Male connectors are available in Vertical orientation, with a choice of PC Throughboard Tail, or Surface Mount. The Surface Mount option has location pegs and Hold-down tags for placement assistance and mechanical strain-relief.

Female connectors are available as cable connectors, with crimp contacts and housings sold separately.

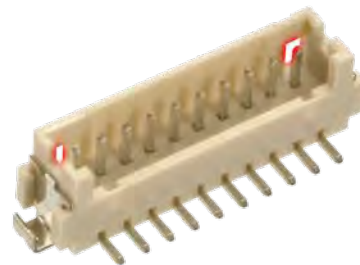
## M30: 1.25MM PITCH - SHROUDED, POLARIZED, LATCHING



Shrouded



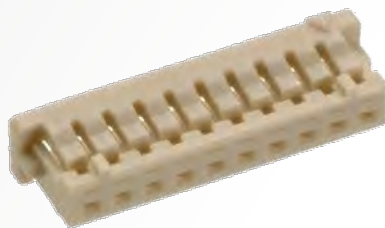
Polarizing



"Bump" Latch

Shrouded housings are used on both male PC Tail and SMT connectors. This protects the male mating pins whilst the connectors are not mated, and also allows for polarization and latching. The polarization features on both male and female connector housings prevent mis-mating. The female crimp housing features "Bump" latches, which latch into windows in the male connector housings. The shape of the "Bump" latch gives increased retention, and makes these connectors suitable for one mating cycle only.

## M30: 1.25MM PITCH – A COMPLETE CABLE CONNECTOR SOLUTION



The M30 range provides a complete cable connector solution. Crimp contacts are available loose (for use with crimp tool [Z30-021](#)) or on a continuous reel, as required in an automated crimping process. In addition, Harwin also offer a selection of individual pre-cabled contacts in a choice of cable sizes and lengths, single and double-ended – search for [M30-9](#) on the Harwin website.

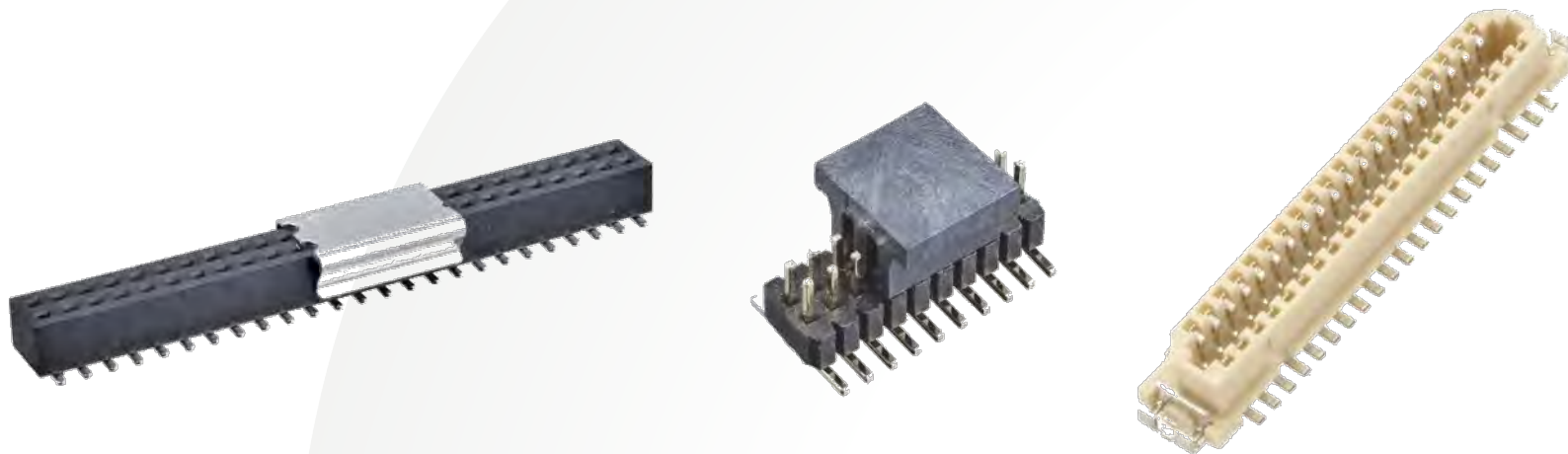
## M30: 1.25MM PITCH - SPECIFICATIONS

|                       |                       |
|-----------------------|-----------------------|
| Current Rating        | <b>1A</b> per contact |
| Insulation Resistance | 500M $\Omega$ max     |
| Temperature Range     | -25°C to +85°C        |

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Product Specifications are given in more detail on individual connector Technical Drawings, and a [Component Specification](#) for the range is also available.

## M40: 1MM PITCH - SURFACE MOUNT BOARD-TO-BOARD, CABLE-TO-BOARD

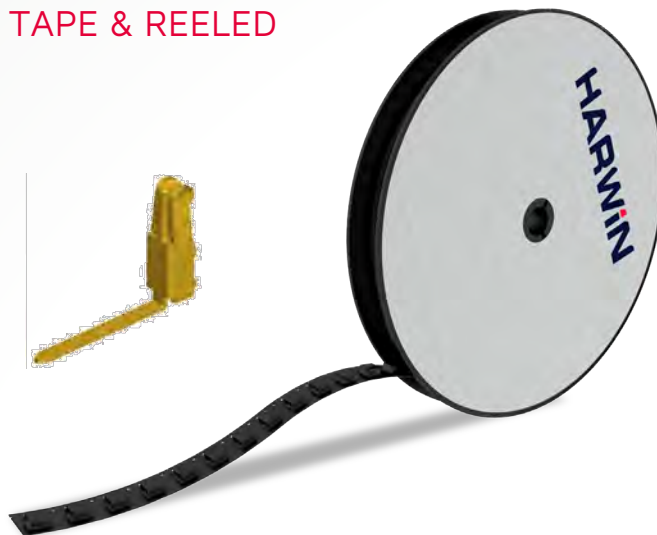
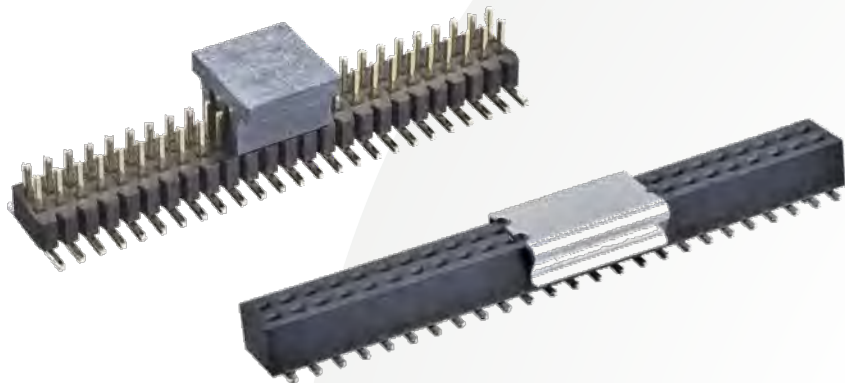


The [M40 range](#) is split into three different mating ranges. All are 1mm pitch, providing a 50% space saving over 2mm pitch connectors and 13% space saving over 1.27mm pitch.

- [M40-310](#) and [M40-320](#) – traditional pin header and socket design;
- [M40-600](#) and [M40-620](#) – fine pitch design with shrouded housings;
- Cable-To-Board – male SMT headers ([M40-301](#), [M40-302](#), [M40-401](#)) and female cable ([M40-110](#), [M40-120](#), [M40-100](#), [M40-9xx](#)).



## M40-310, M40-320: 1MM PITCH – PIN HEADER/SOCKET, TAPE & REELED

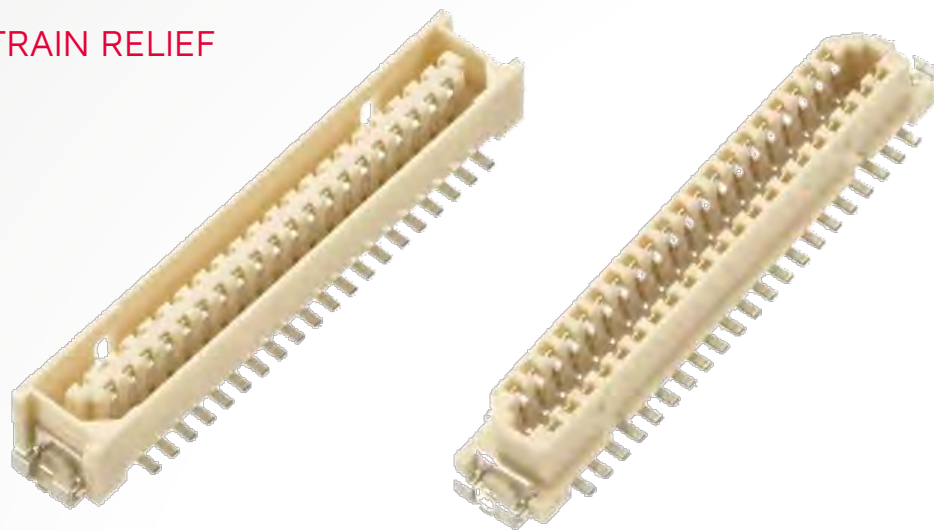


These M40 connectors in Pin Header and Socket style use the same design features as larger pin header connectors, such as the dual-beam socket connector. This socket design gives better durability and reliability with the increased spring functionality.

Both Male and Female connectors are Surface Mount with location pegs, supplied in tape and reel packaging with disposable pick and place caps as standard for full automated processing.



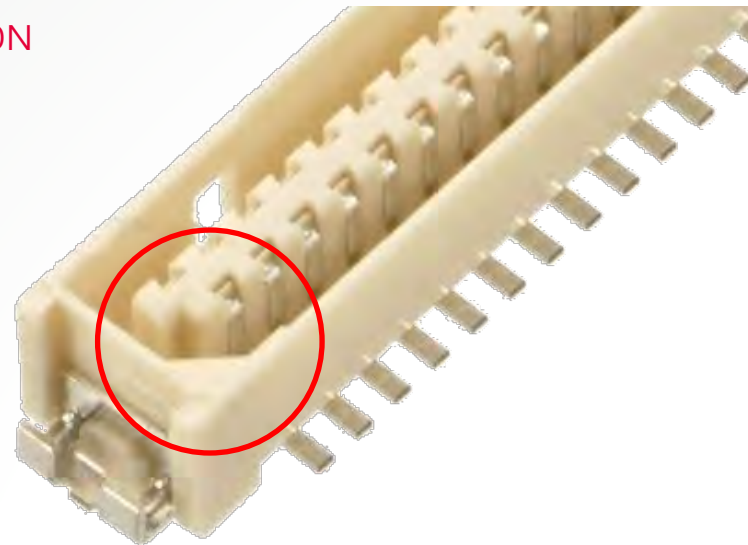
## M40-600, M40-620: 1MM PITCH – SMT + STRAIN RELIEF



The [M40-600](#) and [M40-620](#) connectors use a common style of housing for Fine Pitch. The plug and socket design are based on single points of contact placed in a shrouded housing design for contact protection. The PCB mounting is Surface Mount, with location pegs for correct placement on the board. Hold-down fixings are included, to provide additional strain relief when soldered to the PCB.

- These connectors supplied are in tape and reel packing as standard, fitted with film for vacuum pick and place.

## M40-600, M40-620: 1MM PITCH - FULL POLARIZATION



These mating connectors are fully polarized – the outer shroud has chamfered corners, and the contacts rows are staggered, to provide error-free mating.

## CABLE-TO-BOARD: 1MM PITCH - SMT PIN HEADER AND CABLE SOCKET



The [Cable-to-Board connectors](#) have polarized, shrouded header and socket designs. Male connectors are available in Surface Mount vertical and horizontal options, available in tape and reel packaging with disposable pick and place caps where required for full automated processing.

The female connectors are available with reeled contacts for automated crimping, or pre-cabled contacts in single and double ended options.

## M40: 1MM PITCH - SPECIFICATIONS

|                       |  |
|-----------------------|--|
| Current Rating        | M40-310/320 = <b>1A</b> per contact<br>M40-600/620 = <b>0.5A</b> per contact<br>Cable-to-Board = <b>1A</b> per contact |
| Insulation Resistance | M40-310/320 = 1,000M $\Omega$ min<br>M40-600/620 = 500M $\Omega$ min<br>Cable-to-Board = 100M $\Omega$ min             |
| Temperature Range     | M40-310/320 = -40°C to +105°C<br>M40-600/620 = -20°C to +125°C<br>Cable-to-Board = -25°C to +85°C                      |

Due to the body and connector styles of the mating pairs, the specifications for each range are different. Product Specifications are given in more detail on individual connector Technical Drawings, and a [Component Specification](#) for the range is also available.

## FINE PITCH CONNECTORS - MARKETS



Many applications use 2.54mm and 2mm pitch connectors – these products are now very well established as standard connectors on embedded PCs, motherboards and larger electronics systems.

- Consumer Electronics
- Communications
- Drives and Controls
- Industrial Monitoring
- Portable Computing

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