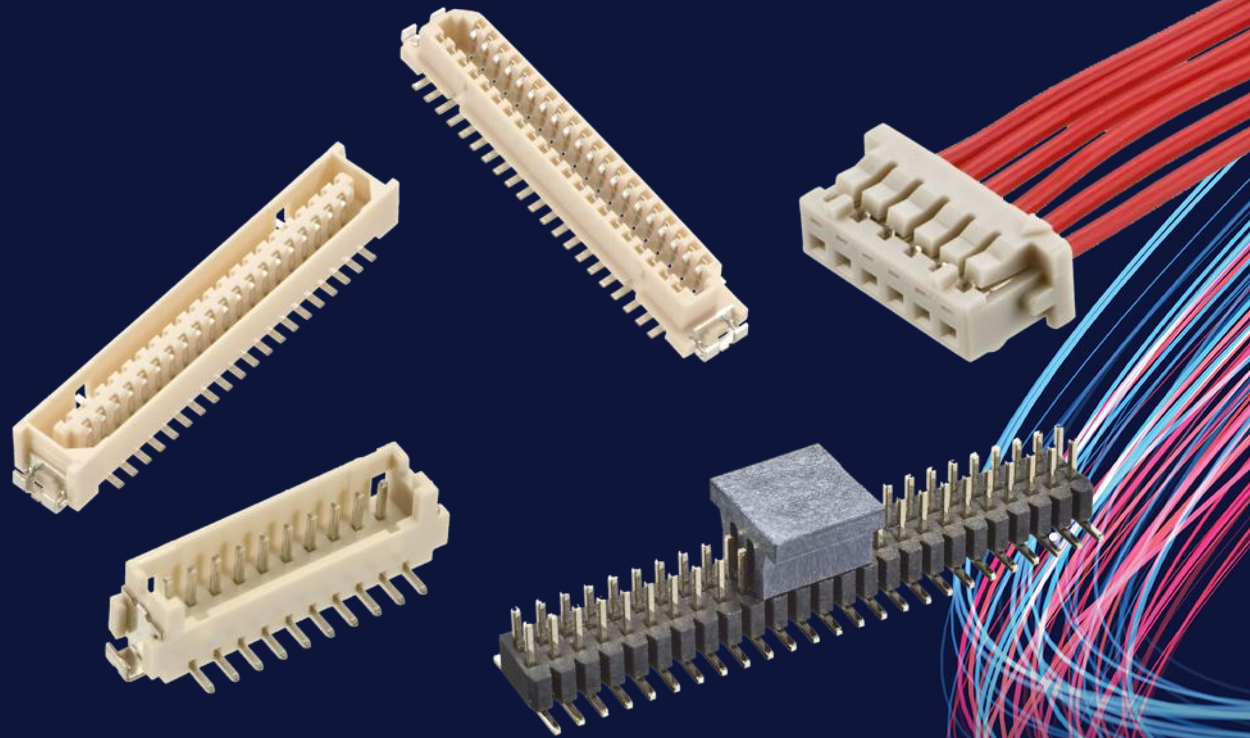


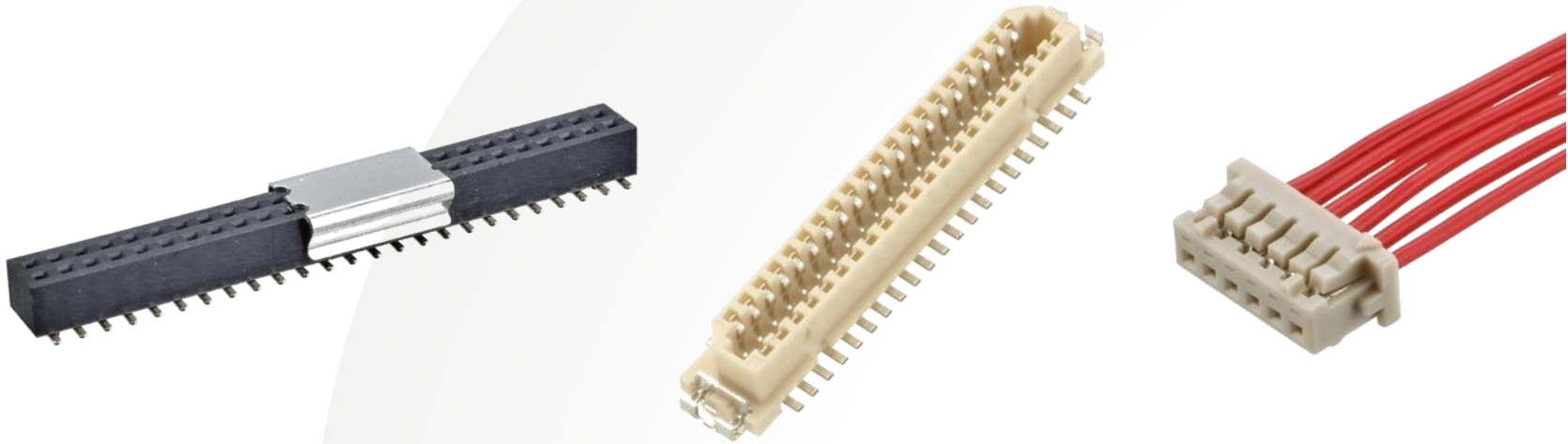
**HARWIN**

**INDESS**

**Fine Pitch Connectors**



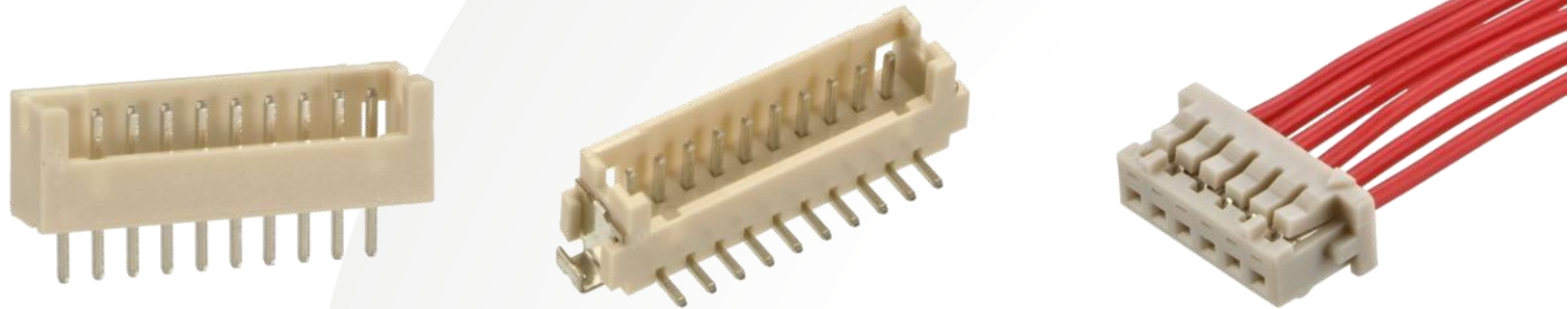
## FINE PITCH CONNECTORS - SMALL, DENSELY POPULATED PCB FLEXIBILITY



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.

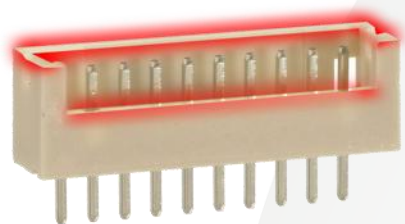
Harwin's Fine Pitch ranges offer designers and manufacturers what they are looking for: Low cost, small size connectors; design flexibility (board-to-board, cable-to-board); wide range of styles and sizes; auto-assembly friendly.

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

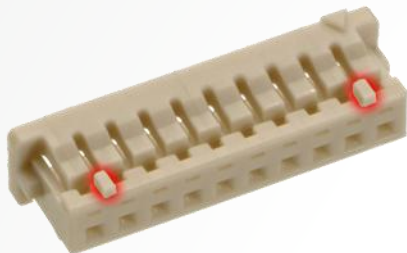


The [M30 range](#) provides a 1.25mm pitch Cable-to-Board solutions, in a Single Row format. Male plug connectors are available in straight orientation, with a choice of PC Throughboard Tail, or Surface Mount. The Surface Mount option has location pegs and Hold-down tags for placement assistance and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

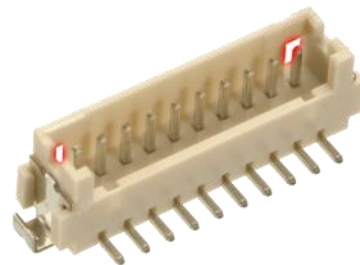
## M30: 1.25MM PITCH - SHROUDED, POLARIZED, LATCHING



Shrouded



Polarizing

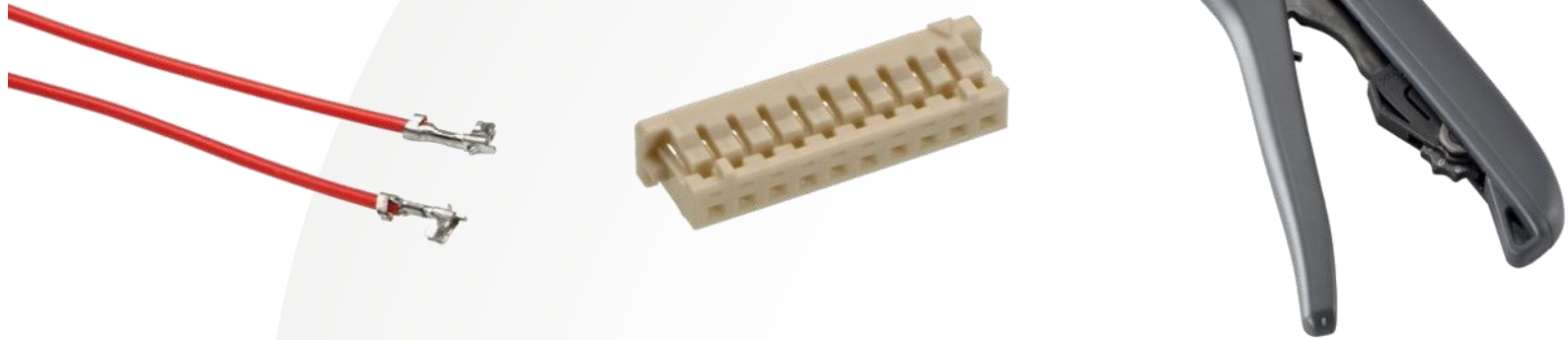


"Bump" Latch

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

INDESS

## 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.

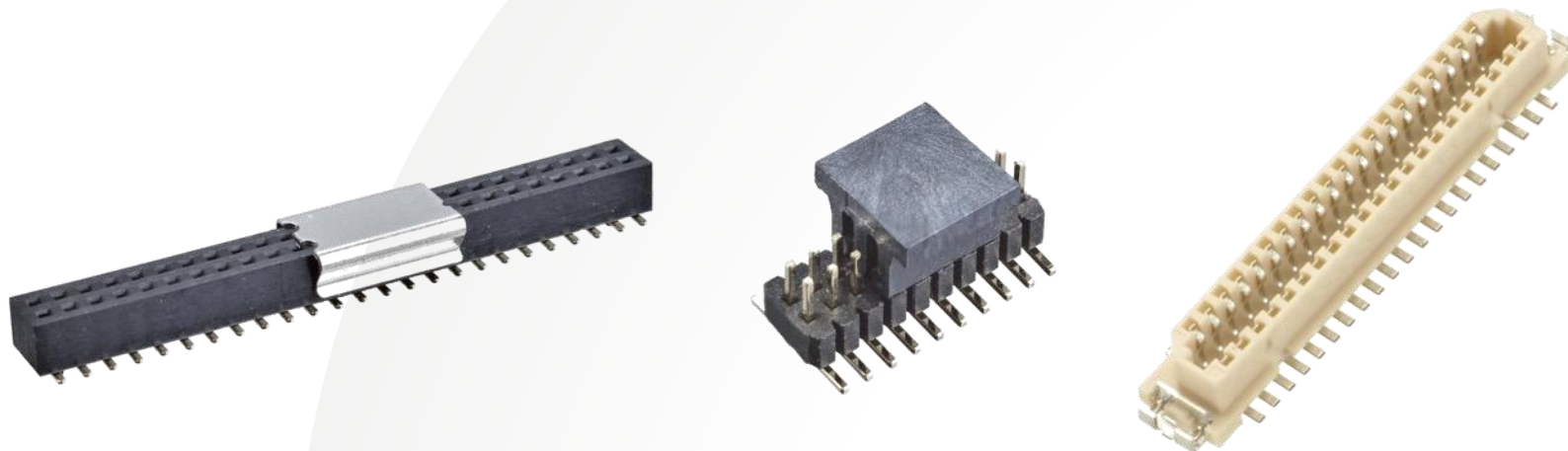
## M30: 1.25MM PITCH - SPECIFICATIONS

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

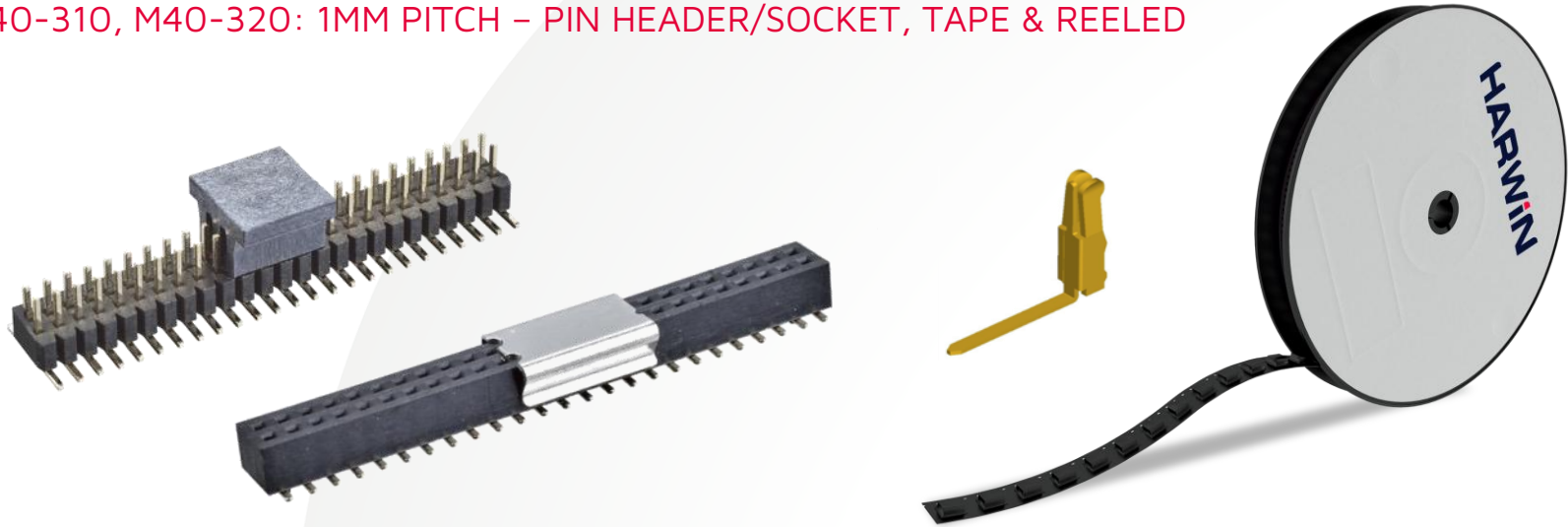


The [M40 range](#) is split into three different mating ranges. All are 1mm pitch, providing a 50% space saving over 2mm pitch connectors and 13% space saving over 1.27mm pitch.

- [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 plug SMT headers ([M40-301](#), [M40-302](#), [M40-401](#)) and female receptacle cable ([M40-110](#), [M40-120](#), [M40-100](#), [M40-9xx](#)).



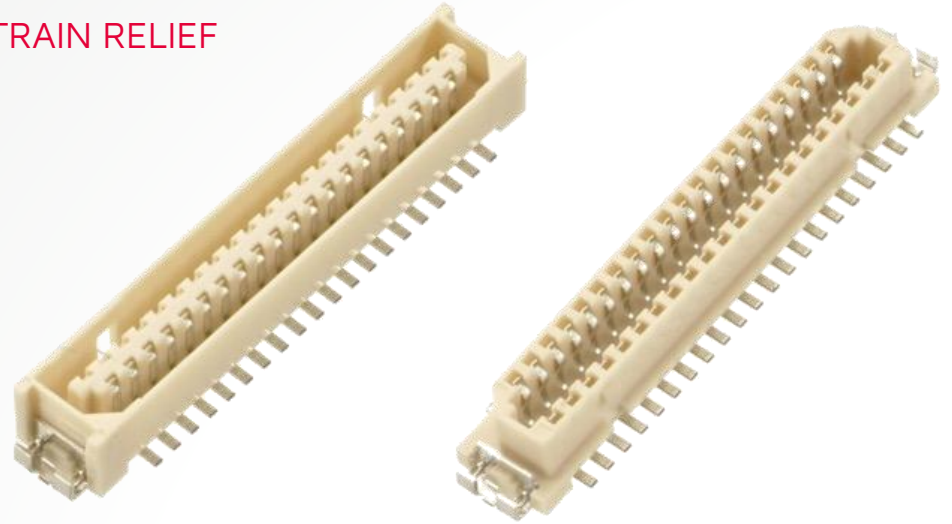
## M40-310, M40-320: 1MM PITCH – PIN HEADER/SOCKET, TAPE & REELED



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 plug and female receptacle 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

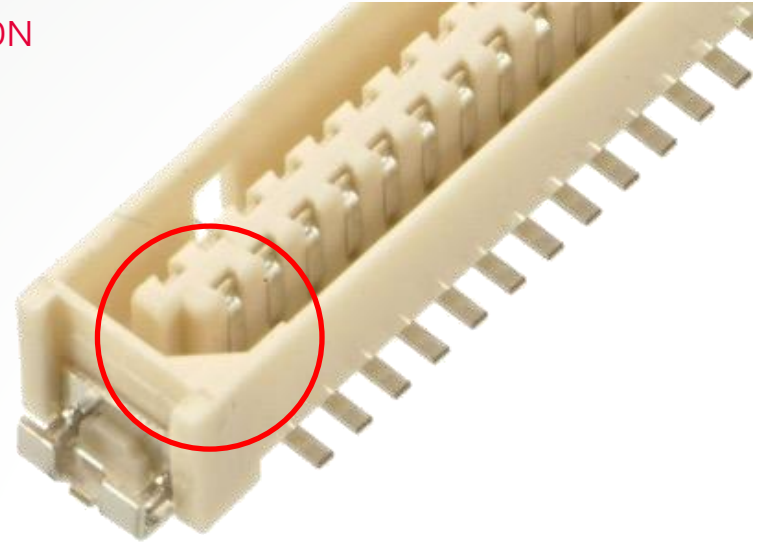


The [M40-600](#) and [M40-620](#) connectors use a common style of housing for Fine Pitch. The plug and socket design are based on single points of contact placed in a shrouded housing design for contact protection. The PCB mounting is Surface Mount, with location pegs for correct placement on the board.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

INDESS

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 plug connectors are available in Surface Mount straight and Right-Angle options, available in tape and reel packaging with disposable pick and place caps where required for full automated processing.

The female receptacle 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 M40-600/620 = <b>0.5A</b> per contact Cable-to-Board = <b>1A</b> per contact
Insulation Resistance	M40-310/320 = 1,000M $\Omega$ min M40-600/620 = 500M $\Omega$ min Cable-to-Board = 100M $\Omega$ min
Temperature Range	M40-310/320 = -40°C to +105°C M40-600/620 = -20°C to +125°C 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 1.25mm and 1mm 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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