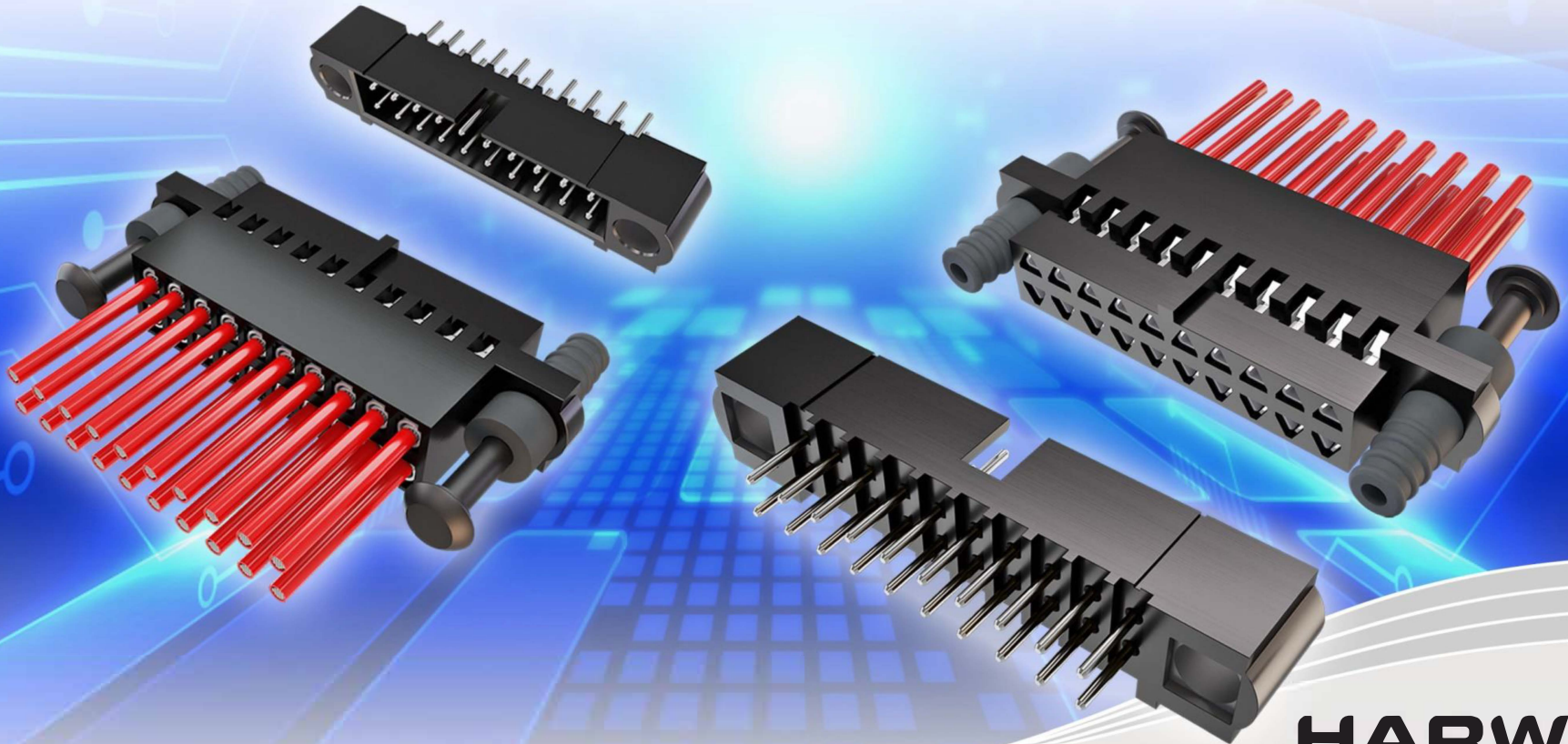


M225 Series Industrial High Performance Connectors

2mm Pitch Connectors for High Vibration and Automated Crimping



HARWIN

M225 Series

Industrial High Performance Connectors

Delivering **high levels of performance** in demanding industrial applications within installed-cost expectations



HARWIN

The M225 series of connectors is an industrial cable-to-board system, with high levels of durability for Industrial applications, resisting shock and vibration. It is a compact system with 2mm pitch pin spacing, and a unique 3-finger female contact style. The connector range will enable customers to achieve higher levels of performance in their demanding applications, within a budget that makes sense in this cost-sensitive market.

M225 Series Connectors

The market **need**



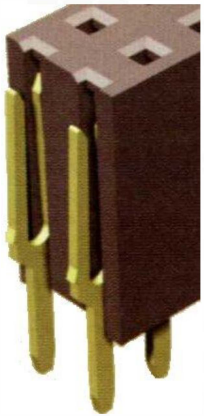
HARWIN

More and more customers in the Industrial sector are finding a need for more reliable / durable components. As their systems get smaller, produce more vibration or become portable, so the demands on the connectors increase.

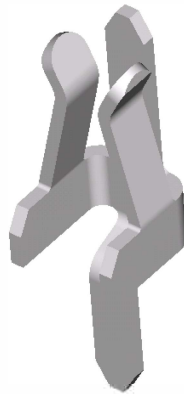
Harwin is addressing this market need with this new connector system offering a reliable / high performance connector system that suits the price expectations of the market

M225 Series Connectors

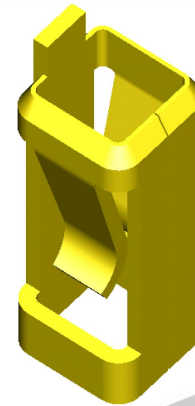
Existing industrial connector **contact systems**



Tuning Fork



Twin Beam



Box
Twin Beam

HARWIN

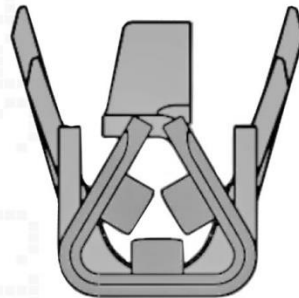
Typical 2.54mm or 2mm industrial connector systems use 2 points of contact, which is adequate for stationary equipment and systems. These contacts are resistant to a certain amount of vibration if it happens to line up with the single-axis orientation of the contact beams – however, they are not so resistant to vibration in the other axis. The current rating is also rather limited, due to only two points of contact.

M225 Series Connectors

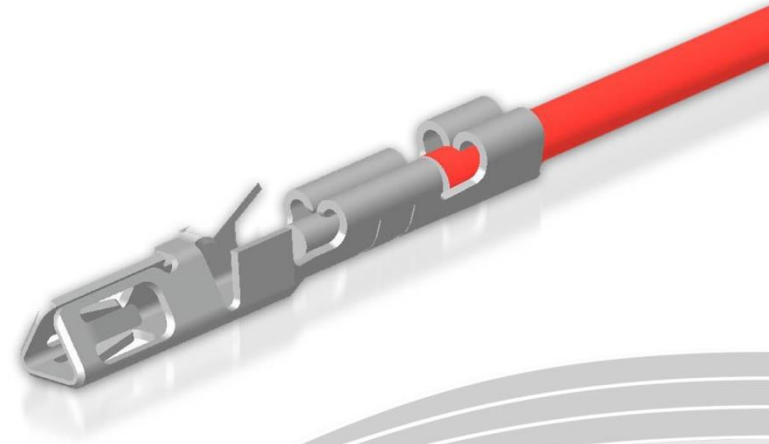
The **heart** of the connector

Features / benefits

- A true three-sided contact
- Resistant to vibration in all directions
- Higher Current
- Lower contact wear



Triple (3) Beam



HARWIN

The heart of the M225 connector system is the 3-fingered Beryllium Copper open crimp contact. The additional contact finger gives all-round connectivity, improving the vibration resistance to any direction. The additional contact also means each beam requires less normal force than a two finger contact (which puts less strain on the beams and decreases wear). The extra surface area results in higher current carrying capacity, and reduced contact resistance.

M225 Series Connectors

Stand-out **performance** characteristics

Pitch	2.00mm , double row
Current Rating	3.3A max (individual contact at 25°C) 3.0A max (all contacts at 25°C)
Vibration	10G (98m/s ²) for 6 hours (10 to 2000Hz)
Shock	100G (981m/s ²) for 6ms
Operating Temperature	-55°C to +125°C

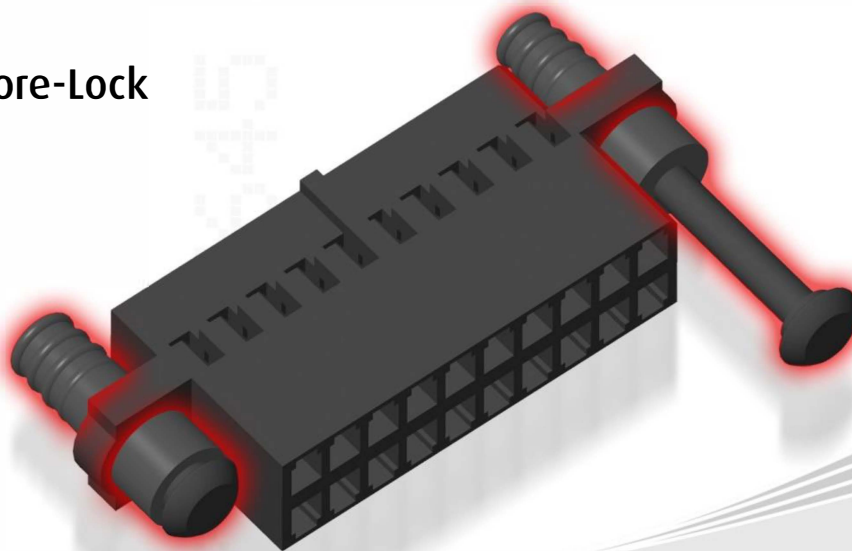
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The temperature range is improved in comparison to conventional pin header and socket ranges, which normally offer only -40°C to +105°C. Comparable 2mm pitch industrial connectors would typically withstand just 2A max per contact.

M225 Series Connectors

What are the **features**?

Mate-before-Lock



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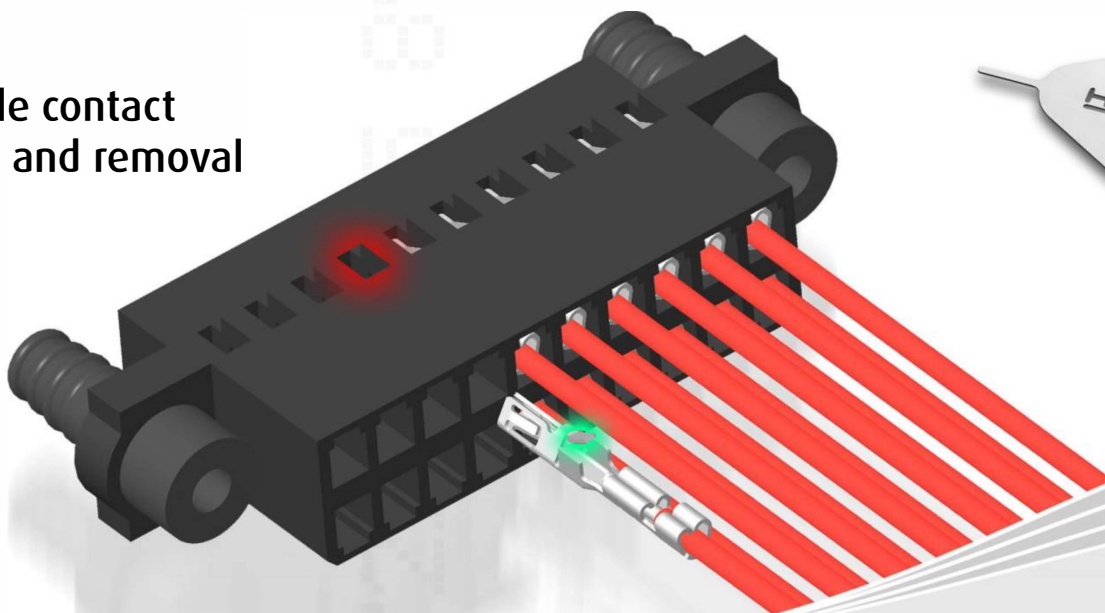
The connectors are secured to each other by a simple push-fit rubber bush and pin arrangement. The female housing (M225-455xx98 series) is supplied with the rubber bush assembled to the connector, and the pins are supplied separately.

Firstly, the housing is cabled up. The connector can then be fully mated to the male connector. Once mated, the pins are then pushed in from the rear, which makes the rubber bush grip inside the male connector housing. To separate, remove the pins first.

M225 Series Connectors

What are the **features**?

Simple contact
Insertion and removal



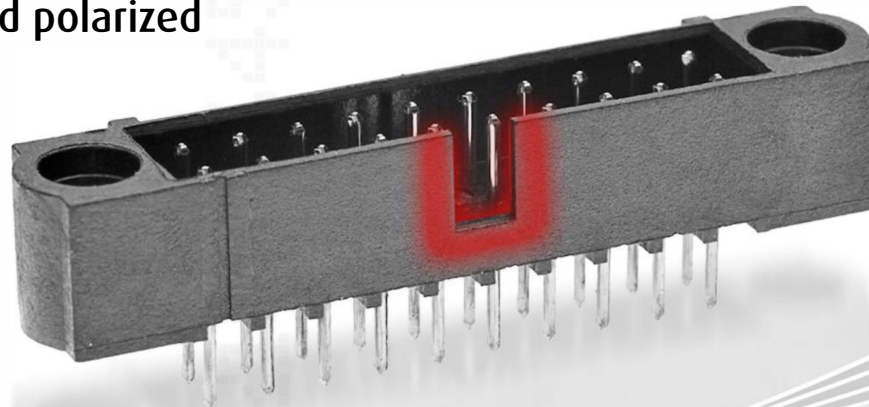
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The crimped contacts are simply pushed into the female connector housing from the rear, and will click into place with a retaining tang. To remove the contact from the housing, a special tool (Z80-258) or a standard precision flat bladed screwdriver can be inserted into the highlighted widow near the front face of the connector. This folds the retaining tang inwards, and the contact can now be pulled out from the back of the housing. Crimp contacts are M225-2530046 (22-24AWG, reeled), M225-2540046 (26-28AWG, reeled), M225-2830046 (22-24AWG, loose) or M225-2840046 (26-28AWG, loose).

M225 Series Connectors

What are the **features**?

Fully shrouded
and polarized



HARWIN

The male connector is a robust design – fully shrouded and polarised. The tin-plated contacts are 0.5mm diameter, and the connector is designed for throughboard mounting to a PCB. The part number for this series is M225-520xx46, and the range is available in total pin counts of 10, 20, 26, 34 or 50.

M225 Series Connectors

Designed for automated crimping



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The female contact is available in reeled format on its carrier strip. The crimp style is an industry standard open crimp (also known as flag or f-type). This design can be used in standard crimp machines for a fully or semi-automated crimping production, keeping process costs down. The only manual step will be to insert the crimps into the housings – which requires no additional tooling.

A hand crimp tool (Z80-255) and loose contacts are also available for low volume, prototyping or pre-production builds.

M225 Series Connectors

Markets



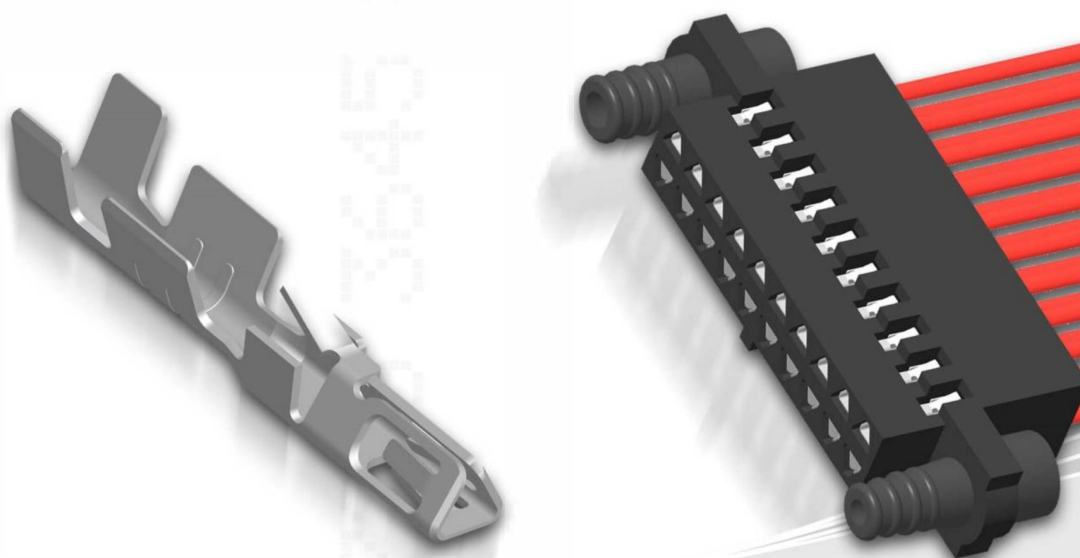
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The M225 Series is designed with the industrial environment in mind. The features which lead to simplicity of use, automated crimping for high volumes, and rugged design in combination with a miniature 2.00mm pitch, lead to many advantages for industrial installations that existing pin header and twin-beam sockets cannot achieve.

- Factory Equipment
- Large-scale Industrial
- Onsite Remotes
- Drives and Controls
- Monitoring Systems

M225 Series Connectors

Delivering high levels of performance in demanding industrial applications within installed-cost expectations



HARWIN

The M225 series of connectors provides the industrial market with a compact 2mm pitch cable-to-board system that resists shock and vibration, achieving higher levels of performance in their demanding applications, within a budget that makes sense in this cost-sensitive market.