



# STATIC AND DYNAMIC CONFORMING BUS BAR CONNECTIONS

In addition to the production of a wide range of bus bars, Mersen also designs and manufactures a large variety of unique conforming connection features for use on our bus bars that can be applied to an array of industrial applications. These highly innovative conforming connectors allow for connectivity of cables to bus bars, electrical/electronic components to bus bars and even bus bar to bus bars where there is a need for mechanical gap tolerances and/or thermal compensation. These conforming connectors can have static or +/-1mm dynamic properties up to three rotational axis (X,Y and Z) and provide a cost effective yet long lasting connection methods. Mersen design engineers can work closely with customers to solve their specific design needs for custom-made conforming connectors.

## Customer Benefits:

- Conformability in connection points where small gaps between connectors exist
- Ease of connectivity where certain degree of dynamic X,Y,Z axis movement is required between connection points
- Increased connection points longevity thanks to added conformability under thermal expansion / contraction conditions

## Examples of conformal connections

	Design Name	Connection Type	Bus Bar Type	Static / Dynamic	Unique Feature	Benefit for users	Typical application examples
	<b>Ball Socket</b>	Bolted	Bus Bar Interface	Static / X, Y & Z	Pivots, Ball & Socket Feature	- Compensates for Angular Mismatch - Moves freely on bus bar, until bolted connection is made	Orbital Interface Connection
	<b>Sliding Plate</b>	Bolted	Small to Med. Size	Dynamic X, Y, & Z	Louwer band technology to keep electrical connection thru Press fit bushings	- Dynamic Motion in Z Axis Possible - Floating Nut Allows for Compensation in X & Y directions, until bolted connection is made	Power Distribution
	<b>Crush Washer</b>	Bolted Thru	Input / Output	Static Z Axis	Highly Conformable	- Makes Bushing Conformal to misalignment in the Z axis - Helps compensate for angularity mismatch between Connections - No soldering required	IGBT/Capacitor Connection
	<b>Dome Washer (Removable)</b>	Bolted Thru	Input / Output	Static Z Axis	Locks / Locates onto bus bar	- Field replaceable - Helps compensate for angularity mismatch between Connections - Deformable in X & Y axis, Conformal to misalignment in the Z axis - No soldering required	IGBT/Capacitor Connection
	<b>Flex Bridge (Eiffel Tower)</b>	Bolted	Input / Output	Dynamic X, Y, & Z	Spring Copper Material	- Dynamic Compensation for misalignment in X, Y, & Z Axis - Design can be modified for different heights, amperages, and connections types - Can be used in High Resonance Applications	Power Distribution
	<b>Conformal Tab</b>	Bolted	Input / Output	Static / X, Y, & Z	Can be soldered on, or fabricated directly into conductor depending on conductor thickness	- Will conform to mating terminals - Floating nut will allow movement in x,y directions	IGBT/Capacitor Connection
	<b>Louwer Band Washer</b>	Contact Washer	Bus Bar Interface	Dynamic Z Axis	To replace washers used by customers to take up gaps in assemblies	- High Current interface between 2 flat conductors - Highly flexible - Dynamic Applications - Compensates for expansion and contraction	Power Distribution
	<b>Flexible Emboss</b>	Bolted Thru	Input / Output	Static Z Axis	Fabricated directly into Conductor.	- Allows emboss to conform more easily than solid emboss - No soldering required	IGBT/Capacitor Connection

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