

A diagram showing two cylindrical metal connectors with a central gap. A blue beam of light passes through the gap, and a series of green triangles radiate from the center, representing contactless connectivity. The background is a blue, water-like texture.

ARISO CONTACTLESS CONNECTIVITY CHANGES THE GAME.



INNOVATIVE TECHNOLOGY CREATES A NEW WORLD OF POSSIBILITIES WHEN TRANSPORTING MATERIALS USING CARRIER SYSTEMS.

Today's manufacturing environments are becoming increasingly complex, as smart systems evolve and the demands of data transfer grow to enable communication throughout the manufacturing process. Coupled with shrinking budgets, factory automation is held to a new standard of efficiency. Whether medical, automotive, or pharmaceutical, optimizing operations within any industry can reduce expenses and increase productivity—but only up to a certain point. Making a game-changing impact on the manufacturing process requires true innovation.

With the introduction of TE Connectivity's ARISO contactless connectivity platform, innovations never before imagined, are now possible—to improve productivity, enable greater flexibility, and reduce the total cost of ownership.

CARRIER SYSTEMS ARE A KEY COMPONENT IN MANUFACTURING.

Carrier Systems are used in factory automation throughout the manufacturing process. Primarily designed for materials handling, a carrier system is any moving container that transports devices, equipment, parts, or tools from one location to another. Typical applications include transporting boxes along a conveyor belt, moving pallets, or picking and packing components using a robotic hand. Carrier Systems can also be used to transport raw materials in industrial or heavy construction environments.

CONTACTLESS CONNECTIVITY REMOVES THE BARRIERS.

With the ARISO platform TE is transforming the world of factory automation in many ways.



We pack a lot of power in a small package:

Our technology offers smaller form factors, enabling integration into miniaturized environments and small machinery. In addition to fewer physical constraints, the ARISO platform provides superior power density, delivering increased electric power relative to its size. TE's couplers are either the same size as those offered by the competition with increased power levels, or smaller products with comparable power levels. This compact powerhouse feature not only enables access to more devices, it also offers access to certain types of devices requiring increased power levels.



We make it easier to get Smart: Carrier systems often require the ability to capture and communicate data, such as tracking a pallet or a part as it moves through the manufacturing process. TE couplers are designed to make the addition of intelligent features easy. Sensors, which capture, store, and communicate data, can be embedded in the couplers themselves. Smart features can also extend the life of an existing product without the need for mechanical modification. For example, there may be two very similar products or components, each requiring different power levels. ARISO couplers can store this information, allowing a single product to automatically apply the appropriate power level.



We can take the heat: A Carrier System includes two couplers, a transmitter, and a receiver. When transferring power from the transmitter to the receiver, a loss of power occurs. For example, 100 watts of power may be transmitted while only 75 watts of power is received, creating a loss of 25%. This power loss generates heat, which can be particularly destructive, causing devices to melt or simply malfunction. ARISO couplers perform efficiently with minimal power loss. Increased efficiency means improved heat management.



We give engineers greater design flexibility: Increased efficiency also means bridging the distance gap between the transmitter and the receiver. As operating distances increase, misalignment—in this case, a good thing—occurs. Misalignment enables freedom of movement not possible with mechanical connectors, which require close physical proximity. With electronic contactless couplers, less precise solutions are possible, making them more adaptable and less expensive. Developing solutions not dependent on proximity is faster and easier with the ARISO platform.

We enable testing on the fly: Testing products and components throughout the manufacturing process is essential to quality control. Yet proper QA takes time and space, typically requiring parts to be sent to a testing area. With ARISO couplers, testing is possible during the actual process or on the fly. Rather than move a part to a dedicated testing area, ARISO sensors can test it as it moves through production, saving time and space. The entire production process is more flexible and more efficient. Because multiple steps occur simultaneously, the ARISO platform shortens production cycles, increasing productivity with greater throughput.

SO, WHAT IS POSSIBLE?

With so many limitations removed, we have only begun to see what is possible. Factory automation and manufacturing may experience improvements unlike any in decades—perhaps in history. Certainly the manufacturing process will be more efficient and flexible. At the least, the process will be smarter; productivity will improve; and total cost of ownership will be reduced.

So much power and imagination lay in future applications of the ARISO platform. So much power lies in what's possible.

EXPERIENCE THE ARISO PLATFORM FOR YOURSELF. ORDER YOUR EVALUATION KIT TODAY.

These evaluation kits give you the freedom to experiment with this technology in your own environment. Integrate TE's Contactless Connectivity technology into current, real-world scenarios of your own or share it with your customers. You never know what possibilities may develop with ARISO contactless connectivity at your fingertips. Contact us today at ARISO@TE.com.

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9-1773465-5 9/14 Original © 2014