

## ATAM CABLE ENTRY CONNECTORS NOW VDE APPROVED

VDE (Verband Deutscher Elektrotechniker) – the highest authority in regulations for electrical technologies – has certified Atam's KA and KB cable entry connectors in compliance with the DIN EN 60529 (VDE 0470) standard. Atam has therefore become Italy's first company to join a restricted club of European companies that have obtained this prestigious certification, thanks to the high quality and reliability of its products, which are globally used by major solenoid valve manufacturers.



Having integrated the CNE line and heavily invested in products and production processes, Atam can now offer a complete range of connectors for solenoid valves, which stand out also for the custom solutions developed with our customers. These connectors are also available in the cable entry version, such as the KA and KB lines, or with moulded cables. They are intended for various fields of application and can be assembled on state-of-the-art production lines for both productivity and product quality check purposes.

The technical synergy between the development and production of encapsulated coils and industrial connectors and a state-of-the-art laboratory allows Atam to simulate the combined suitability of the two products under any condition. This way, the company says it is able to provide its customers with optimal solutions in terms of reliability, quality and affordability.

KA and KB connectors stand out for their strong design and the enclosure's housing, which facilitate faster and easier wiring operations. KA and KB connectors feature a one-piece electrical contact made with automated and high productivity shearing moulds (15,000 workpieces/hour). State-of-the-art machines check the quality of the electric contact of every workpiece. Every finished connector comes with a contact provided with an integrated mechanical protection between the fixing screw and the cable.

Both KA and KB lines include standard connectors and connectors manufactured with electronic control circuits to provide additional functions, such as LED visual indication, protection against overvoltage, rectifiers, etc. The KA-A3 series deserves special attention, as it is equipped with a PWM control circuit designed to activate solenoid valves while optimising energy consumption.

The KA-A3 connector controls the power, and thus the energy provided to the solenoid valve, maximising it when the solenoid valve has to overcome the magnetic and mechanical forces required to position the mobile core inside the valve, then reducing power to a subsequent stage, when full power is no longer necessary. This prevents the solenoid valve from heating up. KA-A3 auto-adjusts the solenoid valve current based on the input voltage so for battery powered applications the load is reduced to prolong battery life.

Besides the two VDE-approved lines, there is an additional series of KA connectors carrying the UL marking, which is required for applications in the North American market. These types of connectors are made with special flame-retardant materials.

Atam's KA and KB connectors are resistant to water and dust (IP65) and, therefore, perfect for pneumatic and hydraulic applications.

**ATAM (UK) Ltd**



## Reduced lead times for cable entry connectors with new control circuit

ATAM has upgraded its cable entry connectors with a new control circuit for solenoid valves, whilst also employing advanced new techniques to dramatically speed up manufacture. Thanks to these improvements, production of the cable entry connectors has been streamlined to achieve an impressive output of 10,000 pieces a day, resulting in significantly reduced customer lead times.



ATAM's cable entry connectors, which can be used in numerous pneumatic and hydraulic applications, incorporate a new control circuit with provides important additional functions. These include a visual LED indication of the correct operation of the solenoid valve, signaling of anomalies and protection against the voltage spikes that can occur when the coil demagnetizes, protecting both the load and the control electronics, thus ensuring a longer life to the entire system.

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**Feature:** DIN connectors

# Getting the most from your DIN connector selection

**I**ndustrial DIN connectors (EN175301-803, previously DIN 43650) are used in a vast array of hydraulic, pneumatic and process valve applications in industries such as rail, off-highway, and medical.

Many users buying and incorporating these connectors into their machine designs may be missing out on valuable opportunities to save both time and money via their product choices. Against the backdrop of today's hyper-competitive markets, there are multiple ways design engineers can extract more value from industrial DIN connectors.

### Issues with manual wiring

When brought in the field wireable type (Forms A, B & C), the connector and cable need to be manually wired. The duration of that process is a clear variable, depending on the skill and speed of the associated operative.

The operative needs to measure and cut the cable length, disassemble the connector, wire the pins, and then re-assemble the connector. This will typically take several minutes, with associated costs directly dependent on the skill and dexterity of the operator, but will run into pounds, not pence.



Example of a pre-assembled connector complete with moulded cable



Example of a field wireable industrial DIN connector

The human element of the manual wiring process is always vulnerable to assembly error and the ramifications can be more than just purely financial. Sub-standard products can have a detrimental effect on your company's reputation, potentially jeopardising customer relationships and opening the door to your competition.

### Advantages of pre-assembled connectors

A solution is to consider a pre-assembled connector, supplied complete with bespoke cable lengths, fully tested and ready to perform.

In addition to time and cost savings, pre-assembled connectors also offer a host of other advantages. With many connectors being used in harsh environments where there may be a high risk of dust or dirt ingress, pre-assembly can help protect the connector components from contamination that might impair performance.

Using pre-assembled connectors also gives the potential for an improved IP rating, from IP65 to IP67, and, in some situations, even IP69K. This offers a greater array of potential uses; IP65 giving protection against, for example, low-pressure water jets, condensation and water spray, and IP67K offering more substantial protection against liq-

uid ingress. IP69K offers an even greater degree of protection, as it was originally developed for road vehicles requiring regular intensive cleaning. These moisture-resistant properties offer opportunities in other areas, including food processing machinery and car wash systems.

Cost savings can also be enjoyed when buying the DIN connector with a moulded cable as a single unit, rather than using a connector and lead sourced from different suppliers.

By removing the potential for human error, pre-assembled connectors result in better product consistency and reliability. Built-in cable clamping allows higher strain performance, without risk of damage. Enhanced safety is also achieved due to a cable with double electrical protection insulation being used as standard, with a comprehensive range of other options also available.

### Connector selector tool

ATAM UK supplies industrial DIN connectors to customers with a wide range of requirements and challenging applications.

To help customers locate the most suitable and efficient connector solution, ATAM has launched an online Selector Tool. By asking just three questions ('What size connector do you need?', 'What is your required cable length?', 'What is your required LED voltage?'), the tool can quickly identify the best combined solution, taking away the guesswork for customers.

**Contact ATAM UK's Sales Director Steve Morecroft ([smorecroft@atam.uk.com](mailto:smorecroft@atam.uk.com)) to get access to the online Selector Tool and ensure you are using the DIN connector solution which will best benefit your requirements.**