

Well-connected

ABB-Entrelec marriage improves connectivity for low-voltage products

Sergio Ruschena

Development of new, innovative products, a worldwide presence and full technical support are factors driving ABB's impressive growth in the low-voltage product market. Now, there is another: The recent incorporation of an internationally renowned company producing connection devices is giving a new boost to ABB's activities in this very competitive market.

In June 2001 ABB acquired Entrelec, a French company specializing in terminal blocks. The complementary nature of the two companies' product ranges has significantly expanded ABB's portfolio of low-voltage products. With this acquisition, ABB is well positioned to increase its share of the low-voltage control and power distribution market.

A wide range of connections

ABB not only offers customers a wider range of connections than most of its competitors, it also lets them choose between three fastening technologies:

- Spring
- Screw clamp, with or without ferrule
- ADO, a superior, exclusive one-step stripping and fastening technology

Another area in which ABB is strong is manufacturing connection devices to

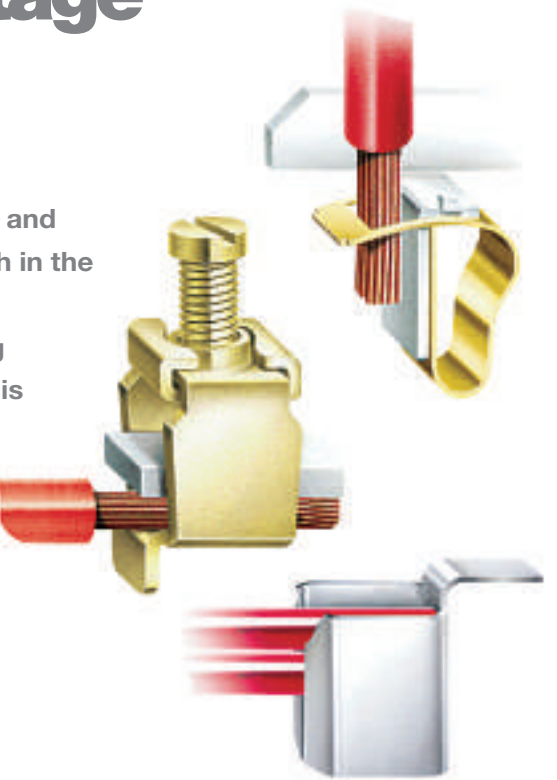
customers' own specifications. More and more OEMs are taking advantage of this service.

All ABB connection devices are IEC, UL and CSA approved. Their dimensions and connection arrangement have been chosen to make them fully interchangeable with other models currently on the market. Replacing older devices with ABB models is, therefore, an easy matter.

Certified quality

Terminal blocks must function perfectly, both electrically and mechanically, and exhibit high geometric precision (ie, be accurate to 0.1 mm). At the same time they have to comply with ever-stricter standards.

Constant innovation and strict production and quality control ensure that ABB connection devices meet all of these requirements. The company has



obtained ISO 9001 certification for its connection activities and is also certified by COFRAC, a French Accreditation Committee.

A strategy based on added value

With its new acquisition, ABB is expanding in a particularly demanding market – one in which customers expect to be able to choose from an extensive product range as well as have the possibility to order personalized devices. ABB

Largest family



ABB offers one of the world's widest ranges of electronic relays and other LV products such as timers, power supplies and I/O modules.

- ABB's electronic relays are used extensively in current and voltage measurement, contact protection, three-phase monitoring, earth-leakage monitoring and motor load monitoring. The range includes safety relays, interface relays and solid-state relays.

- The advantage of switching DC power supplies lies in their high, approximately 85 % efficiency. ABB offers models delivering a wide range of currents at 5, 6, 12, 24 and 48 VDC. They can be fed by a variety of AC and DC sources.

- ABB analog signal converters are used for signal conditioning and isolation. It is possible to convert standard signals (0-10 V, 0-20 mA), thermocouple outputs, voltages up to 600 V or currents up to 20 mA. The supply voltage is 24 VDC or 110-240 VAC.

is also successfully meeting growing market demand for the latter, and has already built up a broad customer base in this area of its business.

The market further expects these products to be totally reliable and still function perfectly after 15 or 20 years of use. Pressure on costs, and therefore prices, is another factor that calls for close control of all company processes.

To gain market share for our products, ABB has developed a strategy based on the added value it can provide for customers.

Special connection devices for PCBs

For printed circuit boards ABB produces miniature multi-pole connectors with all commonly used spacings and employing all connection technologies, including screw, spring, IDC (ADO) and crimp. Edge connectors are recommended for contacts on PCB strips.

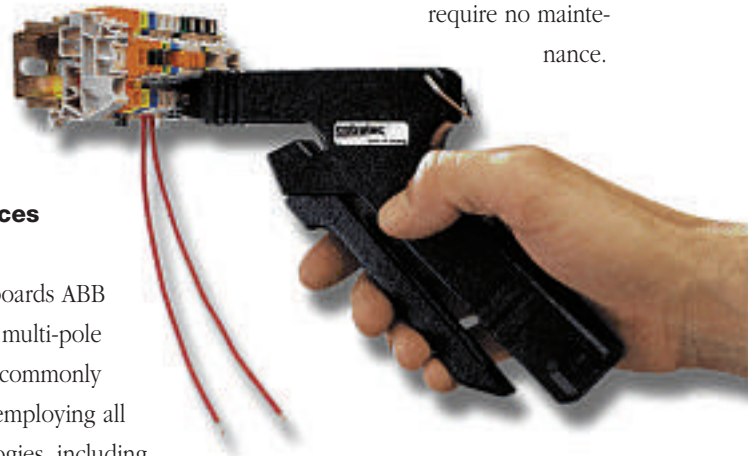
Connection devices from ABB are designed to be compatible with the very latest PCB technologies, such as the re-flow solder process used in attaching surface mount components to various substrates during circuit board production.

The ultimate connection technology

ADO is a superior one-step stripping and fastening technology, exclusive to ABB.

Introduced to the market ten years ago, ADO is used in a wide range of industrial applications and experience with it has been excellent.

Field experience also shows that ADO, for which only a simple hand-tool is required, increases productivity by at least 100%, compared with conventional connections. Reliability is better, too, as the quality of the connection does not depend on the operator having a steady hand. In addition to all this, ADO connections are unaffected by vibration and require no maintenance.

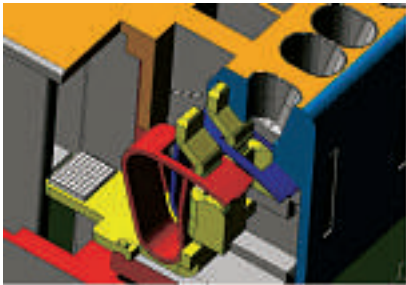


First synergy benefits for low-voltage products

The integration of Entelec spring terminals in ABB contactors is a wish come true for the electrical industry, since it will speed up assembly and maintenance in addition to improving the quality of the connections.

A technical team made up of ABB experts in contactors and terminal blocks is currently working on this project, which is being given a high priority because of the growing number of customers interested in 'fast-connecting' solutions for low-voltage products.

In early 2003, ABB contactors A9 to A16, the relay series N, new DC-operated contactors AL9 to AL16, and auxiliary contact blocks CA5 will all be available with terminals featuring the new spring technology.



It is also planned to integrate spring terminals in other ABB low-voltage products in the near future. Customers will then be able to choose from a broader portfolio of products featuring all the benefits of this new technology.

Automation products also benefit

ABB is also integrating Entelec's Interfast pre-cabling system in its AC31 automation devices to increase flexibility and save assembly and maintenance costs.

With the Interfast system, connection blocks for a whole range of inputs (24 VDC, 230 VAC, analog, etc) as well as different outputs (relay, triac, etc) can be quickly assembled.



And by integrating Interfast in ABB's new 32-channel, fully configurable AC31 extension module (see photo), customers profit from a whole range of features, such as:

- Freedom of configuration to accommodate nearly every type of input and output
- The benefit of ABB's long experience with I/O configuration technology
- Shorter connection times
- Compactness
- Less time needed for start-up and maintenance

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The acquisition of Entelec and integration of its products in new low-voltage products gives ABB a genuine competitive edge in this heavily contested market. Uniting innovative, industry-proven connection technologies with top-quality ABB low-voltage products has created synergies and added value in a way that gives ABB, and its customers, a head start in the race to increase market share.

Extended family

- A further benefit of the marriage with Entelec is the integration of Entelec I/O modules in ABB's S500 I/O family. The new, cost-efficient range has special advantages for applications with Profibus in PLC-driven markets.



- ABB offers low-voltage surge protection technology to counter the effects of lightning strikes. The products range from modular arresters and arrester boxes and cabinets to plug-gable arresters for use in various energy distribution networks with protection levels of less than 1.2 kV and a discharge capability to 100 kA (see photo). Low-current lightning arresters are used to protect equipment connected to phone lines, computer communication links or current loops and video communications.

Author

Sergio Ruschena
 ABB Entelec
 FR-69685 Chassieu
 France
 sergio.ruschena@fr.abb.com
 http://www.abb.com/lowvoltage