

# Material Handling

## ABB's Connection Solutions

**Fast  
Facts**

*Material Handling applications typically comprise of machinery either moving or lifting items. These can be machines such as Conveyor Belts, Stackers, Loaders, Hoppers, Industrial Lift Trucks, and Elevators among others.*

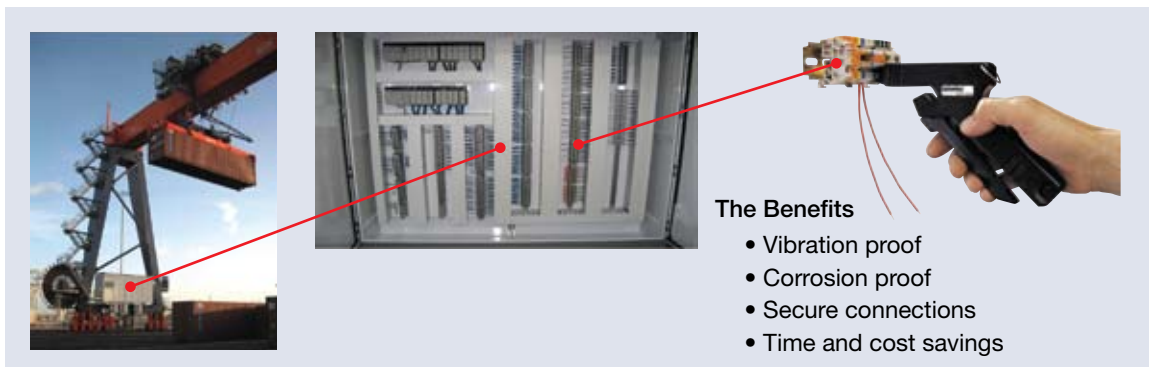


Material Handling is the fourth largest industry in the world and includes manufacturers in the following markets:

- Elevators and Moving Stairways
- Conveyors and Conveying Equipment
- Overhead Traveling Cranes, Hoists, and Monorail Systems
- Industrial Trucks, Tractors, Mobile Straddle Carriers, and Stacker Machinery

Some of the challenges to the Material Handling industry:

- Increase in consumer demand for convenience, quality and affordability
- Improving manufacturing productivity and efficiency to stay competitive in the market place
- Equipment customization due to each Material Handling opportunity requiring its own unique solution
- High vibration environments the equipment is subjected to will create loose wires and require re-torquing of the wire terminations
- Human error in the manufacturing process will cause equipment downtime



**The Benefits**

- Vibration proof
- Corrosion proof
- Secure connections
- Time and cost savings

What are the challenges and solutions specific to Terminal Blocks?

- Finding wire termination devices which can handle constant vibration. This can be achieved using Spring Clamp and ADO technology terminal blocks because constant pressure is applied to terminating wire.
- Decreasing human error during the wiring process. Terminal Blocks Entrelec is the only Insulation Displacement Connection on the market which is NOT operator dependent. The tool does the work.
- Wire sizes used in the field for final installation. Terminal Blocks Entrelec are design to be used with a wide range of wire sizes for both the Spring Clamp and ADO technology.

**Market Applications**

**ABB**

To meet these strenuous demands, ABB offers a complete line of control solutions including Terminal Blocks, Contactors, Circuit Breakers and Switches just to name a few.

Terminal Blocks Entelec, with Spring Clamp and ADO technology (IDC – Insulation Displacement Connection) design are superior to the traditional screw clamp terminal block seen in the industry and offers a wide range of wire size terminations.

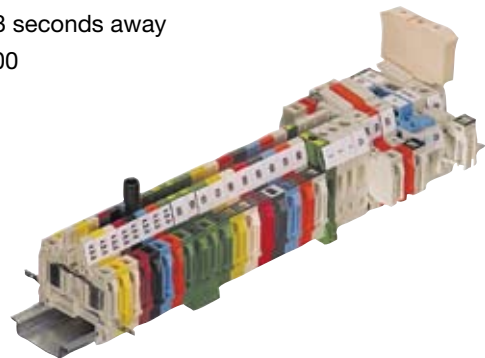
**The Spring Clamp technology offers a standard solution with many features and benefits, some of which are:**

- A vibration resistant connection by keeping constant pressure on the wire termination
- Flexible jumper system – screwless jumpers
- Complete connection range from 16AWG to 2AWG
- Free-hand connection (screwdriver locks the spring open until released)



**The ADO technology style Terminal Block is an advanced solution with many features and benefits some of which are:**

- With no wire stripping, a fast secure connection is just 3 seconds away
- The largest number of tested compatible wire – over 400
- Vibration proof
- Corrosion proof
- Time and Cost Effective



Terminal Blocks Entelec is the only Insulation Displacement Connection on the market which is NOT operator dependent. The tool does the work.

Terminal Blocks Entelec Spring Clamp and ADO technology eliminates numerous wire preparation steps. Thus increasing your productivity and giving you peace of mind knowing that your wires are properly terminated.

**ABB also offers a full line of Printed Circuit Board terminals in either Screw Clamp, Spring Clamp, or ADO System (IDC) connection. A few of the features and benefits are:**

- Various wire entry orientations– parallel, perpendicular, or angled to the printed circuit board
- Spacing from 3.5mm to 7.62mm for fixed and pluggable connectors
- Spacing from 6.35mm to 12.7mm for Power Blocks
- Sockets available in either open or closed ends



*For additional information please refer to the following resources:*

**Connection Products Catalog - LV042**

**Connection Products Shortform Catalog - LV006**

**ADO System (IDC) Catalog - LV009**

**ABB PCB Connections Catalog - LV116**

or visit us at: [www.abb.us/controlproducts](http://www.abb.us/controlproducts) and click “Terminal Blocks”

