Amphenol®

Application Note

IAN-88



RADLOK™

BACKGROUND

Customer manufactures material handling robots for factory inventory management. Each robot has six batteries with 12 jumper cable terminations between the motor controls and batteries. The customer has had a dramatic increase in business resulting in a need to reduce assembly time. In addition there have been issues in the field with battery replacement, vibration and electrical problems.

PROBLEM:

In addition to long assembly time, after prolonged operation, robots began experiencing battery connection failures. The current design uses standard lug nuts with ring terminals. Even though the lug nuts were torqued per manufacturer specifications, they tend to loosen up over time. These factors result in a thermal event which the customer needs to prevent in the future.

SOLUTION:

With its one finger termination operation, and no need for torque wrenches, the RADLOK™ Series proved to meet all the requirements of the customer. This series provided lower temperature rise, by incorporating RADSOK® technology on the socket side. Assembly time was reduced due to RADLOK's tool-free mechanical locking and passed vibration testing. By utilizing RADLOK™, the customer quickly realized cost savings in assembly time and maintenance.

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