



INSIDE THE PANEL

Monthly automation insight at a glance

Variable Frequency Drives (VFDs) in the Automation Industry

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VFDs control motor speed, improve energy efficiency, and protect mechanical systems. In industrial automation, where uptime is everything, the reliability of a VFD directly impacts productivity, maintenance costs, and long-term system performance.



UNDERSTANDING THE LIFESPAN OF A VFD

VFDs are essential for modern automation, but their lifespan depends heavily on environmental conditions, electrical quality, and maintenance practices. Knowing what affects them helps you prevent downtime and extend equipment life. Typically, a VFD can easily run for 10 to 15 years, but its lifespan is entirely dependent on how it's treated. If your drives are failing early, you are losing money on both replacement costs and unexpected downtime. Here are the critical factors that dictate whether your VFD thrives or dies.

KEY FACTORS AFFECTING THE LIFESPAN:

1. Heat & Temperature Stress
2. Electrical Power Disturbances
3. Operating Environment
4. Load characteristics & Motor Conditions

BEST PRACTICES TO MAXIMIZE VFD LIFESPAN

Even though VFDs are solid-state devices, they benefit from periodic checks.

Proper maintenance and monitoring plays an important role in extending the lifespan of a VFD.

FINAL THOUGHTS:

With proper conditions, it is possible for a VFD to exceed 20 years! Poor conditions, however, can reduce the overall lifespan to 3-5 years, especially in harsh environments. A VFD's lifespan isn't just about the drive itself; it's about the ecosystem around it.

Read the full Newsletter on the Craft Automation Blog for more details on the factors that affect the lifespan, what helps, and some best practices to maximize the VFD's lifespan.

[Full VFD Newsletter](#)

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