

# MOTION FEEDBACK IN HARSH ENVIRONMENTS

## *Essential Strategies for Control Engineers*



***Protect your encoders—and your uptime—from dust, moisture, corrosion, and mechanical shock.***

Automation systems don't always operate in clean, climate-controlled spaces. Dust, chemicals, moisture, vibration, and extreme temperatures can wreak havoc on encoders—and with them, your productivity. This guide helps control, electrical, and mechanical engineers understand the key protection techniques keeping encoders—and your systems—working reliably in harsh conditions.

### ***4 Tactics for Surviving Harsh Environments***

1. **Corrosion-Resistant Housings:** Use aluminum with powder-coated finish for general use, or stainless steel for corrosive or salt-rich environments.
2. **Encoder Isolation via Flexible Shafts:** Remote-mount encoders using flexible shafts to keep sensitive electronics clear of washdowns, sprays, and chemical exposure.
3. **Design Against Torsional Wind-Up & Liquid Migration:** Ensure proper cable layout, bend radius, and elevation to prevent moisture ingress and improve encoder lifespan.
4. **Remote Linear Feedback with Draw-Wire Assemblies:** Deploy draw-wire mechanisms paired with encoders to capture accurate linear motion from a protected distance.

### ***Featured Solution: The A58SBS IP69K-Rated Absolute Encoder***

If you're designing for true washdown or high-pressure spray environments, the A58SBS is engineered for the job.

#### ***Why it matters:***

This is not a standard encoder in a sealed box — its purpose-built to handle what the food & beverage, agriculture, packaging, pharma industries throw at it:

- IP69K-rated: Withstands high-pressure, high-temperature washdowns
- Stainless steel housing: Corrosion-resistant for food & pharma use
- Available with EtherNet/IP or Profinet: Plug-and-play with industrial networks
- 58 mm size: Compact, yet rugged
- Single- or multi-turn absolute feedback: Accurate position tracking, even after power loss



*A58SBS IP69K-Rated Encoder*

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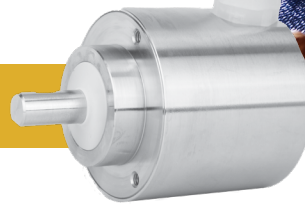


### *Ideal for:*

- Food & beverage processing
- Bottling lines
- Dairy equipment
- Chemical batching systems
- Outdoor ag robotics
- And more



Learn more about the [A58SBS IP69K-Rated Encoder](#)



### *Practical Tips for Engineers*

1. Match housing and connectors to the same IP rating — don't let the cable glands become your failure point.
2. Build with maintenance in mind — flexible mounting options and ruggedized designs reduce service time.
3. Consider magnetic sensing in high-vibration zones — fewer moving parts means better reliability.
4. Don't underestimate connector protection — water ingress often starts there.

### *Need Help with Harsh Environment Applications?*

Our engineers specialize in selecting the right encoder — and mounting method — for your specific environmental conditions. Let's make sure your system stays running, even when the heat and pressure is on.

[Contact our team today!](#)