



## **PENLINK**

# Upgrading Old Motors with Our Encoders: A Retrofitting Guide

This application note provides guidance on retrofitting encoders onto old motors that are currently equipped with analog tachogenerators. By utilizing our reliable and easy-installation encoders in combination with our expertise, this process can be simplified and optimized for better performance and longevity.

# Retrofitting Encoders Onto Old Motors Can Significantly Enhance Performance And Extend Their Operational Life

Retrofitting encoders onto aging motors presents a transformative opportunity to boost performance and extend operational life significantly. By leveraging Penlink's expertise and cutting-edge encoder solutions, the process becomes seamless, ensuring enhanced reliability and durability. Below, we present a comprehensive list of encoder retrofitting options for various motor types, each tailored to maximize efficiency and optimize functionality.

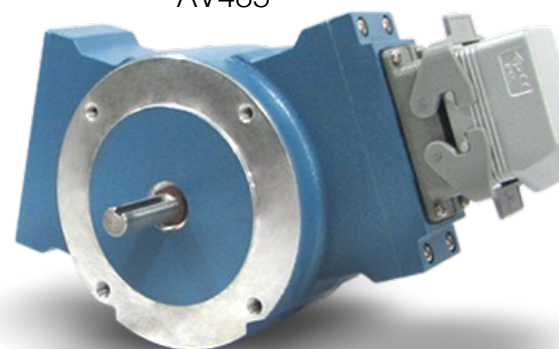
## 01

### Direct Mechanical Replacement

*Solid Shaft Encoders (e.g., Model AV485)*

For motors with analog tachogenerators (BC46, BC42, or RE210 flange styles) mounted on NEMA 56C face adapters, we recommend a direct mechanical replacement approach. Simply mount any solid shaft encoder with a NEMA 56C face, such as our Model AV485. This method allows you to retain the same coupling and mounting bolts, making it an easy and efficient upgrade.

AV485



## 02

### Enhanced Durability

*Modular Encoders (e.g., Model AV125, AV850, AV56, and AV85)*

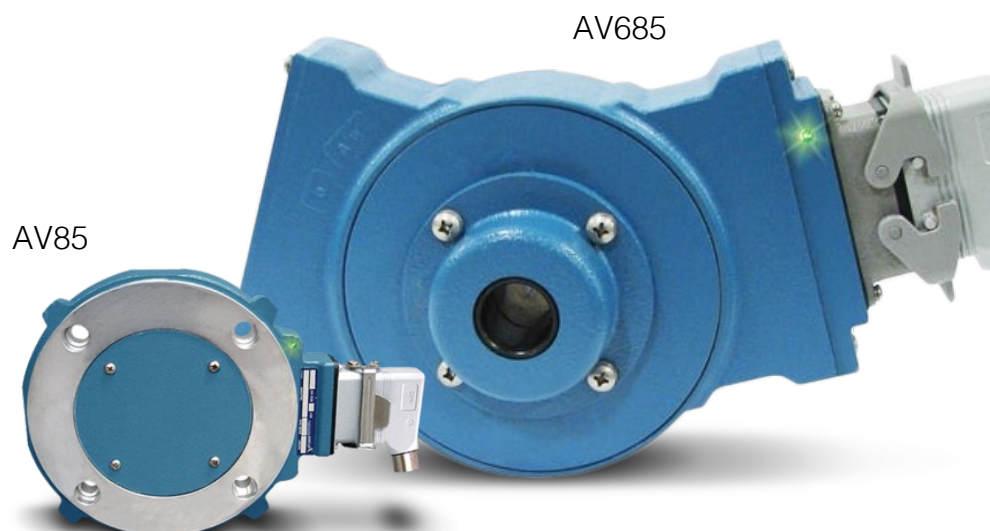
To achieve an even more durable installation, consider removing the flange adapters and couplings from your old motors. Instead, install a modular encoder with no bearings, couplings, or other moving wearing parts. Examples of such encoders are Model AV125, AV850, AV56, and AV85. These modular encoders ensure extended lifespan and increased reliability.

## 03

### Retrofitting Foot Mounted Motors

For foot-mounted motors with analog tachogenerators (BC46/BC42), Penlink's Heavy Mill and Severe Duty (HMD/SD) encoders like Model AV485 are suitable replacements. These encoders have the same shaft size and centers as the tachogenerators, and their mounting base dimensions are identical. No modification to the mounting holes is required.

Foot mounting kits are available to match the footprint of either Classic Encoders or analog tachogenerators. Simply specify the foot mount kit you need with your encoder.





## 04

### Replacing 5PY Analog Tachometers

If your motors are equipped with 5PY analog tachometers, our Model AV44 encoder can be used as a direct replacement. Alternatively, you can opt for a hollow shaft model like Model HS35M by replacing the stub shaft. The AV44's mechanical design enables easy and convenient drop-in replacement, simplifying the retrofitting process.

## 05

### Special Consideration for Motors with High Axial Movement

For motors or shafts equipped with sleeve or roller bearings that permit high axial movement, the analog tachogenerator should be replaced with a severe duty hollow shaft encoder like Model AV685, along with the appropriate stub shaft. The tether mount of the AV685 enables it to move with the axial thrust of the motor, ensuring optimal performance and prolonged encoder life.

Retrofitting encoders onto old motors can significantly enhance their performance and extend their operational life. Penlink, with its deep expertise in encoder solutions, is dedicated to supporting your retrofitting endeavors and ensuring the success of your projects. Should you have any specific requirements or questions, please do not hesitate to contact us for personalized assistance.



Get in touch with us today to start  
your next project!

[WWW.PENLINK.SE](http://WWW.PENLINK.SE)

## Unlock the Full Potential of Your Old Motors with Penlink's Encoder Solutions

At Penlink, we understand the value of optimizing your industrial processes and equipment to stay ahead in a dynamic market. As a leader in providing cutting-edge encoder solutions, we are committed to empowering your business with enhanced performance and extended operational life for your old motors.

Whether you have specific requirements or questions, we are here to provide personalized assistance and tailor-made solutions to meet your unique needs.

Let Penlink be your trusted partner on this journey to unlock the full potential of your old motors. Upgrade to our reliable and durable encoder solutions today and experience the power of enhanced performance and longevity in your operations. Contact us now to explore the possibilities and embark on a path of increased efficiency and success.

### EMAIL

[info@penlink.se](mailto:info@penlink.se)

### PHONE

+46 (0) 8 401 10 10

### HEADQUARTERS

Penlink AB, Vretensborgsvägen 28,  
SE-126 30 Hägersten, Sweden