



Product ID

Image without details



Operating Instructions (Authorized Documentation)

AE ECI 4090S
180 mm Hollow Shaft
Functional Safety

English (en)
09/2026

Find freely available documents for your product at:
www.heidenhain.com/documentation

Product ID

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This document is provided in multiple languages:

1366530

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1 Fundamentals

1.1 About these instructions

These Instructions contain all the information and safety precautions needed for the proper operation of the product according to its intended use.



Further information is available in specific documents, depending on the life-cycle phase of the product and on the target group for the activity.

Further information: "Information based on the document type, the life-cycle phase of the product, and the target group", Page 2

1.2 Notes on reading this document

WARNING

Fatal accidents, personal injury or property damage caused by non-compliance with the documentation!

Failure to comply with the documentation may result in fatal accidents, personal injury or property damage.

- Read the documentation carefully from beginning to end
- Keep the documentation for future reference

2 Safety

2.1 Intended use

The products of this/these series are encoders for position measurement.

The products are intended for use in research facilities, commercial applications, and in an industrial environment.

The products must be used only in accordance with the information based on the life-cycle phase of the product and on the target group.

Further information: "Information based on the document type, the life-cycle phase of the product, and the target group", Page 2

2.2 Improper use

Any use not specified in "Intended use" is considered improper use. The company operating the device is solely liable for any damage resulting from improper use.

2.3 Obligations of the operating company

The company operating the product must provide the personnel with the most current version of all documentation on the product.

2.4 General safety precautions



Mounting and initial configuration must be conducted by a qualified specialist in compliance with local safety regulations.



Encoders and encoder accessories may only be repaired by trained HEIDENHAIN technicians.

WARNING

Fatal accidents, personal injury, or property damage when engaging or disengaging live connecting elements!

Engaging or disengaging connecting elements while the system is under power may result in fatal accidents, personal injury, or property damage.

- Do not engage or disengage any connecting elements while the product is under power.



Encoders and encoder accessories that have contributed to the failure of a safety function in the application must be returned to HEIDENHAIN Traunreut.

3 Declaration of Conformity

The encoder complies with the requirements of the following directives:

EU: 2006/42/EC (valid until 2027-01-19),
(EU) 2023/1230 (valid as of 2027-01-20);
2014/30/EU; 2011/65/EU



4 Information based on the document type, the life-cycle phase of the product, and the target group



The following documents must be read and observed by the stated target groups before mounting, initial configuration, or disposal of the encoder.



Freely available documents are available at www.heidenhain.com/documentation.

Further documents are available upon **Request**.

Installation technician, Designer, Control manufacturer

Document	Document ID	Life-cycle phase of the product/Contents			
Operating Instructions Operating Instructions AE ECI 4090S 180 mm Hollow Shaft Functional Safety	1366530	■ Operation of the unit	✓	✓	✓
Mating Dimensions	Website Search for product ID	■ External dimensions	✓	✓	
Mounting Instructions Mounting Instructions AE ECI 4090 S Functional Safety	1214406	■ Mounting the product	✓	✓	
Product Information Product Information ECI 4090 S - Absolute Rotary Encoder with 180 mm Hollow Shaft and DRIVE-CLiQ Interface for Safety-Related Applica- tions	1214309	■ Specifications ■ Mating Dimensions		✓	✓
Brochure Interfaces of HEIDENHAIN Encoders	1078628	■ Interfaces and measuring methods ■ Electrical connection ■ Interface electronics		✓	✓
Brochure Encoders for Servo Drives	208922	■ Technical features, operating conditions, and mounting information ■ Specifications, mating dimensions ■ Electrical connection ■ Accessory		✓	✓
Brochure Cables and Connectors	1206103	■ Cables and connectors for signal trans- mission between the position measuring system and the subsequent electronics	✓	✓	✓
Technical Information Safety-Related Position Measuring Systems	596632	■ General description of the Safety concept		✓	✓
Product Notes JAE FI Series Connector	576762 Request	■ Additional information	✓	✓	
Specification Specification for Safe Control	579641 Request	■ Implementation requirements for DRIVE- CLiQ Safe			✓
Specification Pin layout	Website Search for product ID	■ Connection points on connecting elements, cables, or terminal blocks	✓	✓	✓
Specification CAD	Website Search for product ID	■ Views ■ Dimensions	✓	✓	
Declaration of Conformity	Website Search for product ID	■ Conformity with applicable directives		✓	✓
Recycling Instructions Rotary encoders	1508280	■ Disposal ■ Recycling			

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