

ABB INDUSTRIAL DRIVES

# HES880 converter modules and filters

Recycling instructions and environmental information



# List of related manuals

Drive manuals and guides	Code (English)
<i>HES880 converter modules and filters recycling instructions and environmental information</i>	<a href="#">3AXD50000181735</a>
<i>HES880 converter modules and filters product manual</i>	<a href="#">3AUA0000127651</a>
<i>Safety instructions for HES880-104</i>	<a href="#">3AXD50000047299</a>

You can find manuals and other product documents in PDF format on the Internet. See section [Document library on the Internet](#) on the inside of the back cover. For manuals not available in the Document library, contact your local ABB representative.

# Recycling instructions and environmental information

## HES880 converter modules and filters

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# 1

## Introduction to the manual

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### What this chapter contains

This chapter describes the contents of the manual. It also contains information on the compatibility and intended audience.

### Applicability

This document covers the environmental information of the following products:

- HES880 converter modules
- HDCL chokes
- HLCL filters.

### Target audience

This document is intended for people who need information on recycling.

### Contents of the manual

The document contains information for treatment facilities in accordance with the EU directive on waste electrical and electronic equipment (WEEE).

This manual contains the following chapters:

- [Product materials](#)
- [Manufacturing and use](#)
- [Product disposal](#)

The WEEE directive is implemented through national regulations and therefore requirements vary in each EU member state.

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Drives are always parts of other machines or equipment and they are covered by the WEEE directive when the end product is covered. Inclusion or exclusion depends on the application of the drive.

The WEEE directive does not apply to drives which are used in large-scale fixed installations, large-scale stationary industrial tools, means of transport for persons and goods, or non-road mobile machinery made available exclusively for professional use.

We recommend to contact local environmental authorities for up-to-date information about national recycling requirements.

## Converter module and filter types

This manual covers all different converter module and filter types of the HES880 product family. The converter module or filter type is marked on the type designation plate of the module or filter. The converter module and filter type is also shown in the rating tables for each converter and filter type. The rating tables are in the *HES880 converter modules and filters product manual*.

## Disclaimer

The information presented in this publication does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequences of its use. Publication thereof does not convey nor imply any license under patent - or other industrial or intellectual - property rights.



## 2

# Product materials

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## Contents of this chapter

This chapter describes the main components and product materials of the HES880 converter modules and filters.

## Materials of converter modules

*The main materials are listed in the tables below.*

HES880-104-0352A-5 HES880-104-0602A-5		
Category	Material	Weight kg
Aluminium parts	Al	< 20
Sheet metal parts	Zn-coated steel	< 2
Busbars	Sn-coated Cu	< 5
Electrical components	Various	< 15
Insulation sheets and supports	Glass-reinforced PE, PA, PP	< 2
Plastic parts	Glass-reinforced PET	< 1
Connectors	Various	< 2
Sealing rings	Various	< 1
Thermal interface material		< 1

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HES880-104-0902A-5		
Category	Material	Weight kg
Aluminium parts	Al	< 25
Sheet metal parts	Zn-coated steel	< 2
Busbars	Sn-coated Cu	< 10
Electrical components	Various	< 15
Insulation sheets and supports	Glass-reinforced PE, PA, PP	< 2
Plastic parts	Glass-reinforced PET	< 1
Connectors	Various	< 5
Sealing rings	Various	< 1
Thermal interface material		< 1

## Materials of filters

### ■ HDCL chokes

The main materials are listed in the tables below.

HES880-HDCL-0320A-5		
Category	Material	Weight kg
Aluminium parts	Al	< 35
Busbars	Sn-coated Cu	< 5
Electrical components	Various	< 50
Insulation sheets and supports	PC, PE	< 1
Connector	Various	< 1
Sealing rings and gaskets	Various	< 1

HES880-HDCL-0602A-5		
Category	Material	Weight kg
Aluminium parts	Al	< 25
Busbars	Sn-coated Cu	< 1
Electrical components	Various	< 100
Insulation sheets and supports	PC, PE	< 1
Connector	Various	< 1

HES880-HDCL-0602A-5		
Category	Material	Weight kg
Sealing rings and gaskets	Various	< 1

HES880-HDCL-0902A-5		
Category	Material	Weight kg
Aluminium parts	Al	< 25
Busbars	Sn-coated Cu	< 1
Electrical components	Various	< 120
Insulation sheets and supports	PA	< 1
Connector	Various	< 2
Sealing rings and gaskets	Various	< 1

## ■ HLCL filters

The main materials are listed in the tables below.

HES880-HLCL-0352A-5+V991		
Category	Material	Weight kg
Aluminium parts	Al	< 25
Sheet metal parts	Zn-coated steel	< 2
Electrical components	Various	< 105
Connector	Various	< 2
Sealing rings and gaskets	Various	< 1
Thermal interface material		< 1

HES880-HLCL-0602A-5+V991		
Category	Material	Weight kg
Aluminium parts	Al	< 35
Sheet metal parts	Zn-coated steel	< 5
Busbars	Sn-coated Cu	< 5

<b>HES880-HLCL-0602A-5+V991</b>		
<b>Category</b>	<b>Material</b>	<b>Weight kg</b>
Electrical components	Various	< 185
Connector	Various	< 2
Sealing rings and gaskets	Various	< 1
Thermal interface material		< 1

<b>HES880-HLCL-0902A-5+V991</b>		
<b>Category</b>	<b>Material</b>	<b>Weight kg</b>
Aluminium parts	Al	< 35
Sheet metal parts	Zn-coated steel	< 5
Busbars	Sn-coated Cu	< 1
Electrical components	Various	< 225
Connector	Various	< 2
Sealing rings and gaskets	Various	< 1
Thermal interface material		< 1

## Package

The product package is made of wooden base and corrugated cardboard.

You can recycle all materials used in the package.

To avoid pollution caused by unnecessary transportation, the factory does not take back used packages. The local ABB companies give instructions on the package recycling when necessary.

ABB recommends package recycling as it preserves raw materials and reduces waste being landfilled.

## Product manuals and sales brochures

To save natural resources and reduce paper waste, all product manuals are available in ABB Library and on the Internet.

# 3

## Manufacturing and use

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### Manufacturing

ABB Oy (Finland) has a company-wide integrated quality, environmental and occupational health & safety management system. The system is certified in accordance with requirements of the international standards ISO 9001 and ISO 14001.

The Integrated Management System applies to all units of the company.

### Use

The use of a drive has several positive environmental impacts, such as:

- Substantial energy savings and reduced operating costs can be reached using a drive. Rather than have an electric motor running continuously at full speed, an electric drive allows the user to slow down or speed up the motor.
  - Process control is optimized. An electric drive enables a process to achieve the right speed and torque while maintaining its accuracy.
  - Need for maintenance is reduced. Being able to vary the speed and torque of an electric motor means there is less wear and tear on the motor and the driven machine.
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# 4

## Product disposal

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### Contents of this chapter

This chapter contains product disposal instructions.

### Disposal

The main parts of the drive can be recycled to preserve natural resources and energy. Product parts and materials should be dismantled and separated.

Generally all metals, such as steel, aluminum, copper and its alloys, and precious metals can be recycled as material. Plastics, rubber, cardboard and other packaging material can be used in energy recovery.

Printed circuit boards and DC capacitors need selective treatment according to IEC 62635 guidelines.

To aid recycling, plastic parts are marked with an appropriate identification code.

Contact your local ABB distributor for further information on environmental aspects. End of life treatment must follow international and national regulations.

ABB recommends that you return HES880 converter modules and filters to ABB for disposal.

### Dismantling

You can dismantle the drive manually or in a shredding machine. The chapter is divided in two sections on basis of the dismantling method.

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## ■ **Manual dismantling**

Sort the parts of the product according to their material contents as follows:

- ferrous metals (plates, screws)
- aluminum (frame, enclosure, busbars)
- copper (busbars)
- plastics
- printed circuit boards
- electrolytic capacitors
- other.

You can recycle metal parts (iron, aluminum and copper) and most of the other materials according to local regulations.

For information on harmful materials, see subsection [ABB list of prohibited and restricted substances](#).

## ■ **Mechanical shredding**

In this method, a whole product is mechanically shredded into small pieces and materials are sorted using dedicated sorting processes.

Remove the harmful material before shredding the drive in the shredding machine. See subsection [ABB list of prohibited and restricted substances](#).

## **ABB list of prohibited and restricted substances**

The purpose of this list is to comply with legislation to avoid chemical substances that may present hazards to the environment or the health.

This document provides information about “Prohibited substances”, substances that must not be used, and “Restricted substances”, substances whose use should be limited within ABB.

Definitions and regulations of hazardous materials differ from country to country and are likely to change when knowledge of materials increases. The materials used in the product are materials typically used in electrical and electronic equipment.

## ■ **Reference list**

1. Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS II).
  2. Regulation No 1907/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH):
    - Annex XIV: List of substances subject to authorization
    - Annex XVII: Restrictions on use of substances in articles
    - SVHC: Candidate list of substances of very high concern for authorization.
  3. Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE).
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## A recycling example

This example complies with typical national regulations valid at the time of publishing this manual.

Materials	Recycling method
Steel	Recycled as material
Aluminum	Recycled as material
Plastics	Energy recovery (incineration)
Printed circuit boards	Recycled as WEEE
Electrolytic capacitors	Recycled as WEEE
Cables	Recycled as material
Ceramics	Landfilled
Other materials	Energy recovery (incineration)

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# Further information

## **Product and service inquiries**

Address any inquiries about the product to your local ABB representative, quoting the type designation and serial number of the unit in question. A listing of ABB sales, support and service contacts can be found by navigating to [abb.com/searchchannels](http://abb.com/searchchannels).

## **Product training**

For information on ABB product training, navigate to [new.abb.com/service/training](http://new.abb.com/service/training).

## **Providing feedback on ABB Drives manuals**

Your comments on our manuals are welcome. Navigate to [new.abb.com/drives/manuals-feedback-form](http://new.abb.com/drives/manuals-feedback-form).

## **Document library on the Internet**

You can find manuals and other product documents in PDF format on the Internet at [abb.com/drives/documents](http://abb.com/drives/documents).



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