

CUSTOMER DOCUMENT

# Spare part packages for ACS5000 drives

## Generic spare part package definition

### What are spare part packages?

Spare part packages contain replacement components for drives. They are stored on-site for immediate availability in case of an incident.

There are two types of spare part packages:

1. Generic
2. Customized

### Generic spare part packages

The following generic spare part packages are predefined parts kits for specific use cases:

#### **Minimum spare part package – commissioning spares**

A low budget parts kit to help with some fault cases.

This package contains parts to be prepared for the eventuality of issues during commissioning. That's why this package is also called "commissioning spares".

#### **Standard spare part package – for unexpected failures**

An emergency on-site parts kit that contains the most common components that are required for a quick problem resolution. This package is for the "two-years spares" sales case.

#### **Extended spare part package – for versatile repair needs**

An emergency on-site parts kit that includes a wide range of components for specialists. This package is for the "five-years spares" sales case and allows for the highest degree of independence from the global ABB spare part stock center.

### Customized spare part packages

These parts kits are defined by specific customer requests. ABB recommends that you start with a generic spare part package and adapt its contents according to needs of the customer.

## Spare part packages: Always available for eventualities

### **Project Phase – Simplicity of choosing spare parts packages**

During the project phase ABB provides for any kind of application spare part packages (project spares) with the best mix of cost and coverage based on experience. Any customization can easily be satisfied if the generic spare part packages do not fit to the customer needs.

### **Operational Phase – Availability of spare part packages**

During the operational phase ABB still provides the option to freely configure spare part packages. Through ABB's global spare part logistic chain, all components are available for immediate shipping in order to support customers to be prepared for any eventualities.

For certain products, the generic spare part packages are visible in myABB and can be freely configured.

## Generic spare parts package content

### Project spares ACS5000 types

#### ACS5000-06x-A01x-E6 and ACS5000-06x-A02x-E6 project spares

Component Type	Total	Minimum Spare Part Package	Standard Spare Part Package	Extended Spare Part Package
IGCT	24	2	3	6
Clamp and NP diode	18	1	2	3
Rectifier diode	36	1	2	3
Main control board	1	1	1	1
Interface Board	4	1	1	1
Current and Voltage Measurement Board	3	1	1	1
Short Circuit Detection Board	6		1	1
High Voltage Divider Board	3		1	1
Voltage adjustment board (double)	3		1	1
Optical Electrical Interface board	1		1	1
Voltage Supervision board	4		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Bus Model module	1	1	1	1
Isolated power supply	7		1	1
High voltage relay	3		1	1
Fan	1-4		1	1
Differential pressure sensor	2		1	1
Current transducer	3	1	2	3
Power supply (10A)	2	1	1	2
Control panel	1		1	1
Door Lock	1	1	1	1
Safety relay	1	1	1	1

**ACS5000-06x-A01x-J6 and ACS5000-06x-A02x-J6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	24	2	3	6
Clamp and NP diode	18	1	2	3
Rectifier diode	36	1	2	3
Main control board	1	1	1	1
Interface Board	4	1	1	1
Current and Voltage Measurement Board	3	1	1	1
Short Circuit Detection Board	6		1	1
High Voltage Divider Board	3		1	1
Voltage adjustment board (double)	3		1	1
Optical Electrical Interface board	1		1	1
Voltage Supervision board	4		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Bus Model module	1	1	1	1
Isolated power supply	7		1	1
High voltage relay	3		1	1
Fan	3-8	1	2	2
Differential pressure sensor	4		1	1
Current transducer	3	1	2	3
Power supply (10A)	2	1	1	2
Control panel	1		1	1
Door Lock	2	1	1	1
Safety relay	1	1	1	1
Surge arrestor	3		1	3
Transformer primary current transducer	6	1	1	2
Transformer protection relay	2			1

**ACS5000-06x-W01x-x6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	24	2	4	6
Clamp diode	6	2	4	6
NP diode	12	2	4	6
Rectifier and protection diode	42	2	4	8
Crowbar thyristor	12	1	2	3
Crowbar board	3	1	1	1
Main control board	1	1	1	1
Interface Board	4	1	1	1
Current and Voltage Measurement Board	3	1	1	1
Current and Voltage Meas. Board LSU	3		1	2
Short Circuit Detection Board	6		1	2
High Voltage Divider Board	3		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	3		1	1
Voltage adjustment board (single)	1		1	1
Optical Electrical Interface board	2		1	1
Voltage Supervision board	4		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	7		1	1
High voltage relay	6		1	1
Cooler controller kit	3		1	1
Cooler blower kit	3		1	1
Current transducer	3	1	1	2
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	3	1	1	1
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1

**ACS5000-06x-W02x-x6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	24	2	4	6
Freewheeling and clamp diode	36	2	4	8
NP diode	12	2	4	6
Rectifier and protection diode	42	2	4	8
Crowbar thyristor	12	1	2	3
Crowbar board	3	1	1	1
Main control board	1	1	1	1
Interface Board	4	1	1	1
Current and Voltage Measurement Board	3	1	1	1
Current and Voltage Meas. Board LSU	3		1	2
Short Circuit Detection Board	6		1	2
gh Voltage Divider Board	3		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	3		1	1
Voltage adjustment board (single)	1		1	1
Optical Electrical Interface board	2		1	1
Voltage Supervision board	4		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	7		1	1
High voltage relay	6		1	1
Cooler controller kit	3		1	1
Cooler blower kit	3		1	1
Current transducer	3	1	1	2
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	3	1	1	1
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1

**ACS5000-06x-W03x-x6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	48	4	8	12
Clamp diode	12	2	4	8
NP diode	24	4	8	12
Rectifier and protection diode	48	4	8	12
Crowbar thyristor	36	2	4	6
Crowbar board	3	1	1	1
Crowbar transformer	36	1	1	2
Main control board	1	1	1	1
Interface Board	4	1	1	1
Current and Voltage Measurement Board	3	1	1	1
Current and Voltage Meas. Board LSU	3		1	2
Short Circuit Detection Board	12	1	2	3
High Voltage Divider Board	3		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	3		1	1
Voltage adjustment board (single)	4		1	1
Optical Electrical Interface board	2		1	1
Voltage Supervision board	4		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	13	1	2	3
High voltage relay	6		1	1
Cooler controller kit	6		1	2
Cooler blower kit	6		1	2
Current transducer	9	1	2	4
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	6	1	2	2
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1

**ACS5000-06x-W04x-x6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	48	4	8	12
Freewheeling and clamp diode	72	4	6	12
NP diode	24	4	8	12
Rectifier and protection diode	48	4	8	12
Crowbar thyristor	36	2	4	6
Crowbar board	3	1	1	1
Crowbar transformer	36	1	1	2
Main control board	1	1	1	1
Interface Board	4	1	1	1
Current and Voltage Measurement Board	3	1	1	1
Current and Voltage Meas. Board LSU	3		1	2
Short Circuit Detection Board	12	1	2	3
High Voltage Divider Board	3		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	3		1	1
Voltage adjustment board (single)	4		1	1
Optical Electrical Interface board	2		1	1
Voltage Supervision board	4		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	13	1	2	3
High voltage relay	6		1	1
Cooler controller kit	6		1	2
Cooler blower kit	6		1	2
Current transducer	9	1	2	4
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	6	1	2	2
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1



**ACS5000-110-W05x-E6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	48	4	8	12
Clamp diode	12	2	4	8
NP diode	24	4	8	12
Rectifier and protection diode	84	4	8	12
Crowbar thyristor	24	2	4	6
Crowbar board	6	1	1	1
Main control board	1	1	1	1
Interface Board	7	1	2	3
Current and Voltage Measurement Board	6	1	2	3
Current and Voltage Meas. Board LSU	6	1	2	3
Short Circuit Detection Board	12	1	2	3
High Voltage Divider Board	6		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	6		1	1
Voltage adjustment board (single)	1		1	1
Optical Electrical Interface board	8		1	1
Voltage Supervision board	1		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	15	1	2	3
High voltage relay 35kV	4		1	1
High voltage relay	12	1	2	3
Cooler controller kit	6		1	2
Cooler blower kit	6		1	2
Current transducer	3	1	1	2
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	6	1	2	2
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1

**ACS5000-138-W05x-E6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	48	4	8	12
Clamp diode	12	2	4	8
NP diode	24	4	8	12
Rectifier and protection diode	84	4	8	12
Crowbar thyristor	24	2	4	6
Crowbar board	6	1	1	1
Main control board	1	1	1	1
Interface Board	7	1	2	3
Current and Voltage Measurement Board	6	1	2	3
Current and Voltage Meas. Board LSU	6	1	2	3
Short Circuit Detection Board	12	1	2	3
High Voltage Divider Board	6		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	6		1	1
Voltage adjustment board (single)	1		1	1
Optical Electrical Interface board	8		1	1
Voltage Supervision board	1		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	15	1	2	3
High voltage relay 35kV	4		1	1
High voltage relay	12	1	2	3
Cooler controller kit	6		1	2
Cooler blower kit	6		1	2
Current transducer	3	1	1	2
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	6	1	2	2
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1

**ACS5000-110-W06x-E6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	48	4	8	12
Freewheeling & NP & Clamp diode	96	6	10	14
Rectifier and protection diode	84	4	8	12
Crowbar thyristor	24	2	4	6
Crowbar board	6	1	1	1
Main control board	1	1	1	1
Interface Board	7	1	2	3
Current and Voltage Measurement Board	6	1	2	3
Current and Voltage Meas. Board LSU	6	1	2	3
Short Circuit Detection Board	12	1	2	3
High Voltage Divider Board	6		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	6		1	1
Voltage adjustment board (single)	1		1	1
Optical Electrical Interface board	8		1	1
Voltage Supervision board	1		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	15	1	2	3
High voltage relay 35kV	4		1	1
High voltage relay	12	1	2	3
Cooler controller kit	6		1	2
Cooler blower kit	6		1	2
Current transducer	3	1	1	2
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	6	1	2	2
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1

**ACS5000-138-W06x-E6 project spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IGCT	48	4	8	12
Freewheeling & clamp diode	72	4	6	12
NP diode	24	4	8	12
Rectifier and protection diode	84	4	8	12
Crowbar thyristor	24	2	4	6
Crowbar board	6	1	1	1
Main control board	1	1	1	1
Interface Board	7	1	2	3
Current and Voltage Measurement Board	6	1	2	3
Current and Voltage Meas. Board LSU	6	1	2	3
Short Circuit Detection Board	12	1	2	3
High Voltage Divider Board	6		1	1
High Voltage Divider Board for LSU	6		1	1
Voltage adjustment board (double)	6		1	1
Voltage adjustment board (single)	1		1	1
Optical Electrical Interface board	8		1	1
Voltage Supervision board	1		1	1
IO Digital Input module	3	1	1	1
IO Digital Output module (24VDC)	1	1	1	1
IO Digital Output module (230VAC/DC)	2	1	1	1
IO Analog Input module	1	1	1	1
IO Bus Model module	2	1	1	1
Isolated power supply	15	1	2	3
High voltage relay 35kV	4		1	1
High voltage relay	12	1	2	3
Cooler controller kit	6		1	2
Cooler blower kit	6		1	2
Current transducer	3	1	1	2
Power supply (5A)	1	1	1	2
Power supply (10A)	1	1	1	2
Control panel	1		1	1
Door Lock	6	1	2	2
Safety relay	1	1	1	1
Pressure sensor	2		1	1
Conductivity sensor	1		1	1
Temperature sensor	1		1	1
Mechanical kit (Sealing, Gaskets, O-rings, Teflon tape, Victaulic coupling)	n.a.	1	1	1
Deionizer bottle with resin	1	1	1	1
Fine filter & cartridge	1	1	1	1
Mechanical pump seal	2		1	1
Pump-motor combination	1 or 2			1

**ACS5000 SBU Project Spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
Main control board	1	1	1	1
IO Digital Input module	3-5	1	1	1
IO Digital Output module 24VDC	2-3	1	1	1
IO Digital Output module up to 230VAC/DC	1	1	1	1
IO Bus Model module	1	1	1	1
Power supply (10A)	2	1	1	2
Control panel	1		1	1

**ACS5000 EXU Project Spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
DCS800	1			1
DDCS board COM-81	1	1	1	1
Overtoltage protection board	1		1	1
Earth-fault supervision	0 or 1		1	1
DC/DC converter	0 or 1		1	1
Overtoltage Thyristor	0 or 6	1	3	
Line Fuses (Frame D4)	0 or 3	3	3	3
Semiconductor Fuses (Frame D5)	0 or 6	3	3	

**ACS5000 Option +CEO0001 Project Spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IO Digital Input module	2			
IO Digital Output module	1			
IO Bus Model module	1			
IO Analog Input module	1	1	1	1
IO Analog Output module	1	1	1	1

**ACS5000 Option +CEO0002 Project Spares**

<b>Component Type</b>	<b>Total</b>	<b>Minimum Spare Part Package</b>	<b>Standard Spare Part Package</b>	<b>Extended Spare Part Package</b>
IO Digital Input module	2			
IO Digital Output module	1			
IO Bus Model module	1			
IO Analog Input module	1	1	1	1
IO Analog Output module	1	1	1	1
IO Analog Input module for RTD	2	1	1	1



For more information please contact:

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**ABB Switzerland Ltd**  
Medium Voltage Drives  
Global Service Center CH  
Austrasse  
5300 Turgi, Switzerland

E-Mail: [mvdrides.spares@ch.abb.com](mailto:mvdrides.spares@ch.abb.com)  
[abb.com/drives](http://abb.com/drives)