

# ABB industrial drives

## ACS800, single drives, 0.55 to 5600 kW



### ABB industrial drives

ABB industrial drives are designed for industrial applications, and especially for applications in process industries such as the pulp & paper, metals, mining, cement, power, chemical, and oil & gas. The key features of these drives are programmability and configurability, which makes adaptation to different applications easy. Marine variants are also available.

### ACS800 single drives

The single drive configuration contains a rectifier, reactor, DC link and an inverter in one single AC drive unit. The single drives are complete AC drives which are available as wall-mounted, free-standing and cabinet-built constructions. The degree of protection is at least IP21, and higher protection classes are available as an option.

### Highlights

- High flexibility
- Programmability
- Everything inside
- Wide range of configurations and options. Taylor made configurations for cabinet-built drives through ABB's application engineering
- Application programs for different industrial segments
- Liquid-cooled variant provides added benefits when availability of space and cooling air is limited

### Voltage and power range

- 3-phase 230 V: 0.55 to 200 kW
- 3-phase 400 V: 1.1 to 2800 kW
- 3-phase 500 V: 1.5 to 3360 kW
- 3-phase 690 V: 5.5 to 5600 kW

### Applications

- Pumps and fans
- Cranes and winches
- Winders
- Conveyors
- Extruders and compressors
- Test benches
- Processing lines and roller tables
- Presses
- Mixers
- Thrusters and propulsion

### Options

- Application programs
- EMC, du/dt and sine filters
- Fieldbuses and I/O extensions
- PC tools



# Technical data



## ACS800 single drives

### Wall-mounted drives, ACS800-01,

- Power range 0.55 to 200 kW (230 to 690 V)
- IP21 as standard, IP55 as option
- Marine type approved design available

### Wall-mounted regenerative drives, ACS800-11

- Power range 5.5 to 110 kW (230 to 690 V)
- IP21 as standard

### Wall-mounted low harmonic drives, ACS800-31

- Power range 5.5 to 110 kW (230 to 690 V)
- IP21 as standard

### Free-standing drives, ACS800-02

- Power range 45 to 560 kW (230 to 690 V)
- IP21 as standard
- Enclosure extension with fuses and main switch optional

### Cabinet-built drives, ACS800-07

- Power range 45 to 2800 kW (380 to 690 V)
- IP21 as standard, IP22, IP42, IP54 and IP54R as options

### Cabinet-built liquid-cooled drives, ACS800-07LC

- Power range 200 to 5600 kW (380 to 690 V)
- IP42 as standard, IP54 as option
- Marine type approved design available

### Cabinet-built regenerative drives, ACS800-17

- Power range 45 to 2500 kW (380 to 690 V)
- IP21 as standard, IP22, IP42, IP54 and IP54R as options

### Cabinet-built low harmonic drives, ACS800-37

- Power range 45 to 2700 kW (380 to 690 V)
- IP21 as standard, IP22, IP42, IP54 and IP54R as options



#### ABB Oy

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## Mains connection

<b>Voltage and power range</b>	3-phase, $U_{2IN} = 208$ to 240 V, $\pm 10\%$ , except -07, -07LC, -17, -37 3-phase, $U_{3IN} = 380$ to 415 V, $\pm 10\%$ 3-phase, $U_{5IN} = 380$ to 500 V, $\pm 10\%$ 3-phase, $U_{7IN} = 525$ to 690 V, $\pm 10\%$
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<b>Frequency</b>	48 to 63 Hz
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<b>Power factor</b>	$\cos\phi_1 = 0.98$ (fundamental) $\cos\phi = 0.93\dots 0.95$ (total)
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### Power factor ACS800-11 / -31/ -17/ -37

$\cos\phi_1 = 1$ (fundamental) $\cos\phi = 0.99$ (total)
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### Efficiency (at nominal power)

ACS800-0x	98%
ACS800-1x/3x	97%

## Motors connection

<b>Frequency</b>	0... $\pm 300$ Hz (0... $\pm 120$ Hz with optional du/dt filters)
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<b>Field weakening point</b>	8...300 Hz
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<b>Motor control</b>	ABB's Direct Torque Control (DTC)
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## Environmental limits

### Ambient temperature

<b>Transport</b>	-40...+70 °C
<b>Storage</b>	-40...+70 °C
<b>Operation</b>	-15...+50 °C, no frost allowed 40...50 °C at reduced output current (1% / 1 °C)

### ACS800-07LC

0...+55 °C, no frost allowed +45...55 °C at reduced output current (0.5% / 1 °C)
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### Cooling method

Dry clean air Direct liquid-cooling (ACS800-07LC) +48 °C max converter circuit, fresh water +42 °C...+48 °C at reduced output current
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## Product compliance

CE, UL, CSA, C-Tick, GOST R

## EMC according to EN 61800-3 /A11 (2000), EN 61800-3 (2004)

2<sup>nd</sup> environment, unrestricted distribution, category C3 - standard in -07 (frame size nxR8i), -07LC, -17, and -37 (frame size R7i - nxR8i), option in the others.

1<sup>st</sup> environment, restricted distribution, category C2 as option up to 1000 A input current.

For more information see technical catalogue  
ABB industrial drives, ACS800, single drives (3AFE68375126).

### Find your nearest contact at



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