

Mains connection

Voltage and power range 3-phase, 380 to 480 V, +10%/-15% from 0.75 up to 11 kW

Frequency 50 Hz $\pm 5\%$

Motor connection

Voltage 0 to U_N , 3-phase

Frequency 0 to 599 Hz

Motor control Scalar and vector control

Product compliance

CE

Low Voltage Directive 2014/34/EU, EN 61800-5-1: 2007

Machinery Directive 2006/42/EC, EN 61800-5-2: 2007

EMC Directive 2014/30/EU, EN 61800-3: 2004 + A1: 2012

RoHS directive 2011/65/EU

Quality assurance system ISO 9001

Environmental system ISO 14001

Waste electrical and electronic equipment directive (WEEE) 2002/96/

EC RoHS directive 2011/65/EU

TÜV certification for functional safety pending

EMC according to EN 61800-3: 2004 + A1: 2012

ACS480 cabinet-mounted drive with built-in C2 category filter as standard

Environmental limits

Ambient temperature

Transportation and storage -40 to +70 °C

Operation -10 to +50 °C no derating required, no frost allowed
+50 °C - +60 °C with derating

Cooling method

Air-cooled Dry clean air

Altitude

0 to 1,000 m Without derating

1,000 to 4,000 m With derating of 1%/100 m

Relative humidity 5 to 95%, no condensation allowed

Degree of protection IP20

Functional safety

Safe torque off according to EN/IEC 61800-5-2:
IEC 61508 ed2: SIL 3, IEC 61511: SIL 3, IEC 62061: SIL CL 3, EN ISO 13849-1: PL e

Contamination levels No conductive dust allowed

Storage IEC 60721-3-1, Class 1C2 (chemical gases), Class 1S2 (solid particles)*

Transportation IEC 60721-3-2, Class 2C2 (chemical gases), Class 2S2 (solid particles)*

Operation IEC 60721-3-3, Class 3C2 (chemical gases), Class 3S2 (solid particles)*

* C = chemically active substances

S = mechanically active substances

Dimensions

Dimensions, weights and space requirements

Drive mechanical size

IP20

	H		W		D		Drive net weight	
	mm	in	mm	in	mm	in	kg	lb
R1	223.00	8.78	73.00	2.87	207.2	8.16	1.8	3.9
R2	223.00	8.78	96.70	3.81	207.2	8.16	2.4	5.2
R3	223.00	8.78	171.50	6.75	207.2	8.16	3.6	7.8

* Front height of the drive with clamp

ACS480 design has been optimized for cabinet mounting:

- ACS480 has uniform height and depth across the full power range
- ACS480 can be mounted side-by-side



3-phase, $U_N = 400 \text{ V}$ (380 V-480 V). The power ratings are valid at nominal voltage 400 V.

Nominal ratings			Light-overload use		Type designation	Frame size
P_N kW	I_N A	$I_{\max}$ A	P_{Ld} kW	I_{Ld} A		
0.75	2.6	3.2	0.75	2.5	ACS480-04-02A7-4	R1
1.1	3.3	4.7	1.1	3.1	ACS480-04-03A4-4	R1
1.5	4	5.9	1.5	3.8	ACS480-04-04A1-4	R1
2.2	5.6	7.2	2.2	5.3	ACS480-04-05A7-4	R1
3	7.2	10.1	3	6.8	ACS480-04-07A3-4	R1
4	9.4	13.0	4	8.9	ACS480-04-09A5-4	R1
5.5	12.6	16.9	5.5	12	ACS480-04-12A7-4	R2
7.5	17	22.7	7.5	16.2	ACS480-04-018A-4	R3
11	25	30.6	11	23.8	ACS480-04-026A-4	R3

Nominal ratings

I_N Rated current available continuously without overloadability at 50 °C.

P_N Typical motor power in no-overload use.

Maximum output current

$I_{\max}$ Maximum output current. Available for 2 seconds at start, then as long as allowed by drive temperature.

Light-overload use

I_{Ld} Continuous current allowing 110% I_{Ld} for 1 minute every 10 minutes at 50 °C.

P_{Ld} Typical motor power in light-overload use.

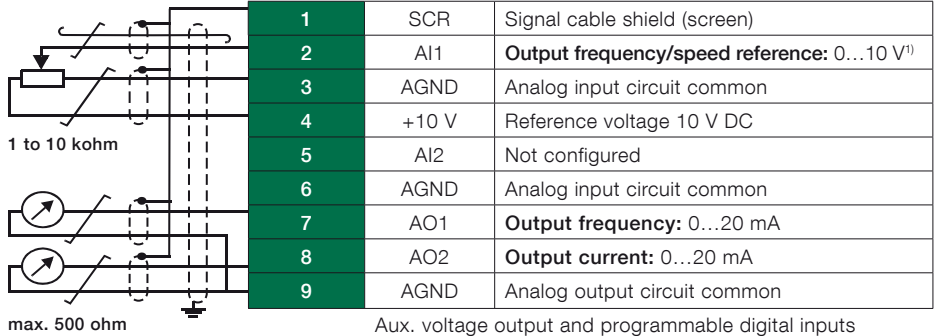
The ratings apply at 50 °C ambient temperatures.

The ACS480 drive offers a wide range of standard interfaces. In addition, the drive has one slot that can be used for extensions including fieldbus adapters.

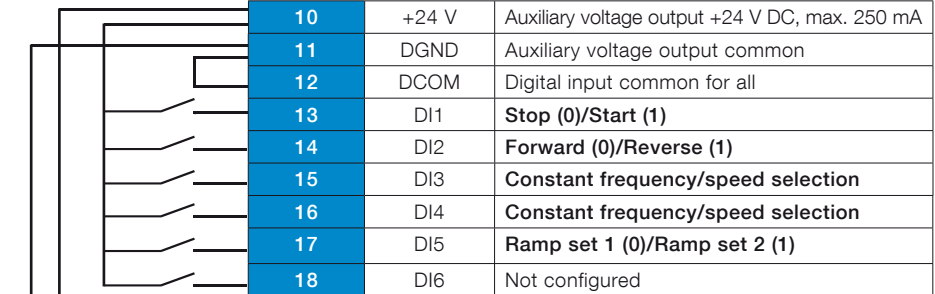
Default I/O connections

Default I/O connections of the ABB Standard macro are shown below.

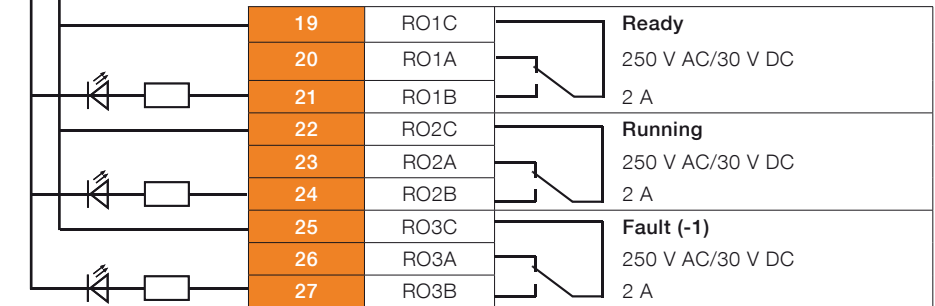
Reference voltage and analog inputs and outputs.



Aux. voltage output and programmable digital inputs



Relay outputs



EIA-485 Modbus RTU

29	B+	Embedded Modbus RTU (EIA-485)
30	A-	
31	DGND	
S100	TERM&BIAS	Serial data link termination switch

Safe torque off

34	SGND	Safe torque off. Factory connection. Both circuits must be closed for the drive to start. See chapter The Safe torque off function in the Hardware manual of the drive.
35	IN1	
36	IN2	
37	OUT1	

42	+24 V	
43	DGND	
44	DCOM	

