

Drive^{IT} Low Voltage AC Drives

The ACH range - for heating and ventilation

The ACH range of frequency converters bring high performance AC motor control to any centrifugal application. The range is one of the most extensive on the market, from 2.2 kW right up to 500 kW.

Configured for the demands of all pump and fan applications and providing a cost effective solution, the ACH HVAC drive offers a range of dedicated features.

Features

- Easy to use
- Detachable keypad
- Plain English text for easy set-up
- Integral chokes for lower harmonics
- Hand off/auto macro
- Independent PID loop, for greater system stability
- Mains loss ride through, keeping the motor running during mains power fluctuations
- PFC macro allowing optimum control of up to four pump motors for booster pump applications
- Automatic start (flying start), enabling the drive to start fans or pumps smoothly that are already spinning, without shock loads or drive trips
- Includes integral filtering for EMC compliance to First Environment, restricted distribution
- Flux optimisation (automatic energy optimisation) reduces the energy drawn at light loads, increasing energy savings

Technical Features

Standard protection functions

Overcurrent, short circuit, earth fault, input phase loss, output phase loss, motor overload (I^2t), over-voltage, undervoltage, overtemperature, motor stall.

Environmental limits

Ambient temperature: 0 - 40°C, up to 50°C with derating



Enclosure

IP22 is suitable for panel mounting or for mounting in an electrical switch room, free from moisture and conductive dust particles

IP54 is suitable for wall or floor mounting in areas where moisture or conductive particles could be present.

Motor connection

Voltage: 3-phase, from 0 to applied incoming supply voltage

Frequency: 0-300 Hz

Speed demand signals

0-10 V DC

4/20 mA

0/20 mA

Standard control connection

3 programmable differential analogue inputs:

1 voltage signal,

2 current signals

6 programmable digital inputs

2 programmable analogue outputs: current signal

3 programmable relay outputs

Fieldbus options

LonWorks

Profibus

Modbus+

Johnson Controls N2; others available on request

Technical Data

ACH wall mounted HVAC Drive IP54 for 380-415, 50/60Hz three phase							
Rated output Normal duty							
Pump-Fan (kW)	Current IN sq (A)	Frame Size	Type ACH	H	W	D	WT
				(mm)	(mm)	(mm)	(kg)
3	7.6	R2	ACH-4-5003-12-54	420	220	292	14
4	11	R2	ACH-4-5004-12-54	420	220	292	14
5.5	15	R2	ACH-4-5005-12-54	420	220	292	14
7.5	18	R3	ACH-4-5007-13-54	420	260	298	17.5
11	24	R3	ACH-4-5011-13-54	420	260	298	17.5
15	32	R4	ACH-4-5015-14-54	526	306	310	25
18.5	41	R4	ACH-4-5015-14-54	526	306	310	25
22	47	R5	ACH-4-5022-15-54	526	306	310	25
30	62	R5	ACH-4-5030-15-54	715	306	360	35
37	76	R5	ACH-4-5037-15-54	715	306	360	35
45	89	R6	ACH-4-5045-16-54	715	306	360	35
55	112	R6	ACH-4-5055-16-54	715	306	432	50
75	147	R7	ACH-4-5075-17-22	2080	830	644	280
90	178	R7	ACH-4-5075-17-54E	2080	830	644	280
110	200	R8	ACH-4-5110-78-54	2080	830	644	280

ACH wall mounted HVAC Drive IP22 for 380-415, 50/60Hz three phase							
Rated output Normal duty							
Pump-Fan (kW)	Current IN sq (A)	Frame Size	Type ACH	H	W	D	WT
				(mm)	(mm)	(mm)	(kg)
3	7.6	R2	ACH-4-2003-12-22	420	220	292	14
4	11	R2	ACH-4-2004-12-22	420	220	292	14
5.5	15	R2	ACH-4-2005-12-22	420	220	292	14
7.5	18	R3	ACH-4-2007-13-22	420	260	298	17.5
11	24	R3	ACH-4-2007-13-22	420	260	298	17.5
15	32	R4	ACH-4-2015-13-22	526	306	310	25
18.5	41	R4	ACH-4-2015-13-22E	526	306	310	25
22	47	R4	ACH-4-2018-14-22	526	306	310	25
30	62	R5	ACH-4-2022-14-22	715	306	360	35
37	76	R5	ACH-4-2030-14-22	715	306	360	35
45	89	R5	ACH-4-2037-15-22	715	306	360	35
55	112	R6	ACH-4-2045-16-22	715	306	432	50
75	147	R7	ACH-4-2075-17-22	860	480	428	88
90	178	R7	ACH-4-2075-17-22E	860	480	428	88
110	200	R7	ACH-4-2090-17-22	860	480	428	88

For drives above 110 kW available, contact ABB for information

- Fast ex-stock delivery
- Dedicated technical support line
- After sales support line
- Eligible for Enhanced Capital Allowances
- Supply, installation and commissioning service available
- Product training/maintenance contracts available
- IP55 weather proof enclosures available

IP54 drives from 75kW to 110kW come as floor standing cubicle, complete with door locked isolator input fuses, front door mounted keypad and RFI filters. Rated output current of the ACH must be higher than or equal to the rated motor current to achieve the rated motor power given in the table.

ACH drives are suitable for controlling the speed of centrifugal pumps and fans and are not suitable for constant torque applications.



CE marked to the Low Voltage and EMC directives



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