

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ABB

D3G146-AB06-10 42003741

EC CENTRIFUGAL COOLING FAN

Used with the applicable ABB drive cooling / ebm-papst EC fans configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: ebm-papst D3G146-AB06-10, item 55630-5-9980 ENU, approved 7 May 2020, pp. 1 to 5; ABB long-life fan mapping technical note 3AUA0000216096 Rev. F

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Nominal data

Type	D3G146-AB06-10	
Motor	M3G074-DF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	1950
Power consumption	W	230
Current draw	A	2.0
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	45.6	33	09 Power consumption P_{ed}	kW	0.18
02 Measurement category		A		09 Air flow q_v	m ³ /h	640
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	412
04 Efficiency grade N		56.6	44	10 Speed (rpm) n	min ⁻¹	2720
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = $1 + p_s / 100\,000\text{ Pa}$

LU-176973



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Technical description

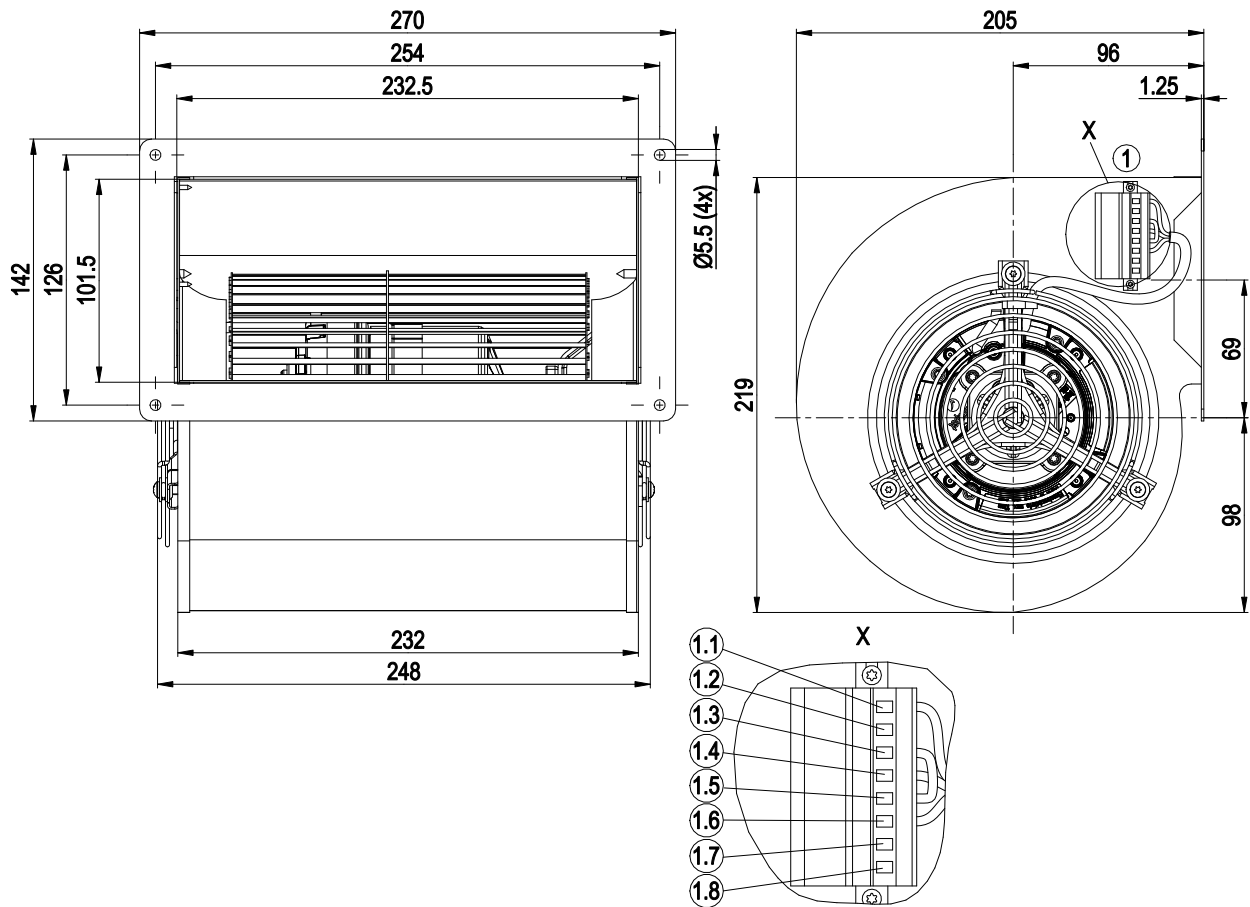
Weight	3.1 kg
Size	146 mm
Motor size	74
Rotor surface	Unpainted
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Guard grille material	Steel, galvanized and coated with white-aluminum plastic (RAL 9006)
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1+
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing
Technical features	- Power limiter - Soft start - Thermal overload protection for motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Plug
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1



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Product drawing

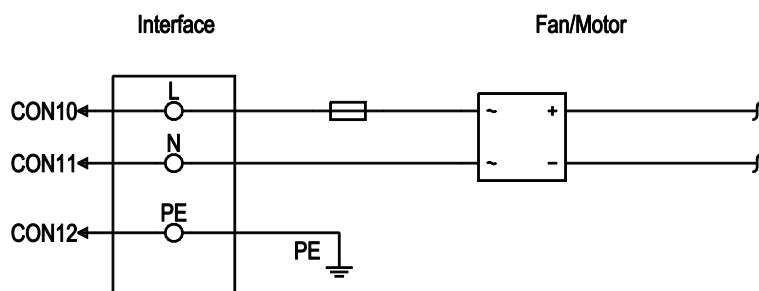


1	8-pole connector housing WAGO 231-608/019-000
1.1	N (blue)
1.2	not used
1.3	Jumper
1.4	PE (green/yellow)
1.5	Jumper
1.6	L (black)
1.7	not used
1.8	not used

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Connection diagram

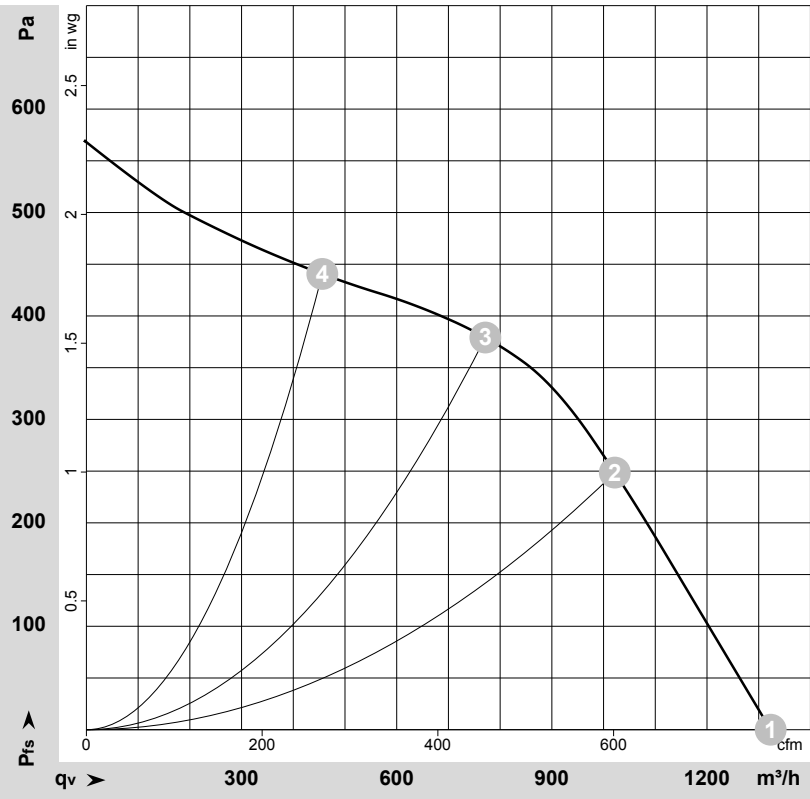


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection

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Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-176973-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P _{ed}	I	LpA _{in}	LwA _{in}	q _v	p _{fs}	q _v	p _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m³/h	Pa	cfm	in. wg
1	230	50	1950	230	2.00	65	77	1325	0	780	0.00
2	230	50	2370	230	2.00	63	75	1020	250	600	1.00
3	230	50	2635	204	1.71	64	74	770	380	455	1.53
4	230	50	2825	153	1.33	65	75	455	440	270	1.77

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_v = Air flow · p_{fs} = Pressure increase

