EC centrifugal fan

D3G160-BD05-10 ebmpapst Datasheet
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Nominal data

Type	**D3G160-BD05-10**
Motor	**M3G074-DF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed (rpm)	min^{-1}	2240
Power input	W	430
Current draw	A	2.0
Min. back pressure	Pa	250
Max. ambient temperature	°C	50

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	43.5	35.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		52.1	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.43
09 Air flow q_v	m^3/h	1060
09 Pressure increase p_{fs}	Pa	582
10 Speed (rpm) n	min^{-1}	2800
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-170229

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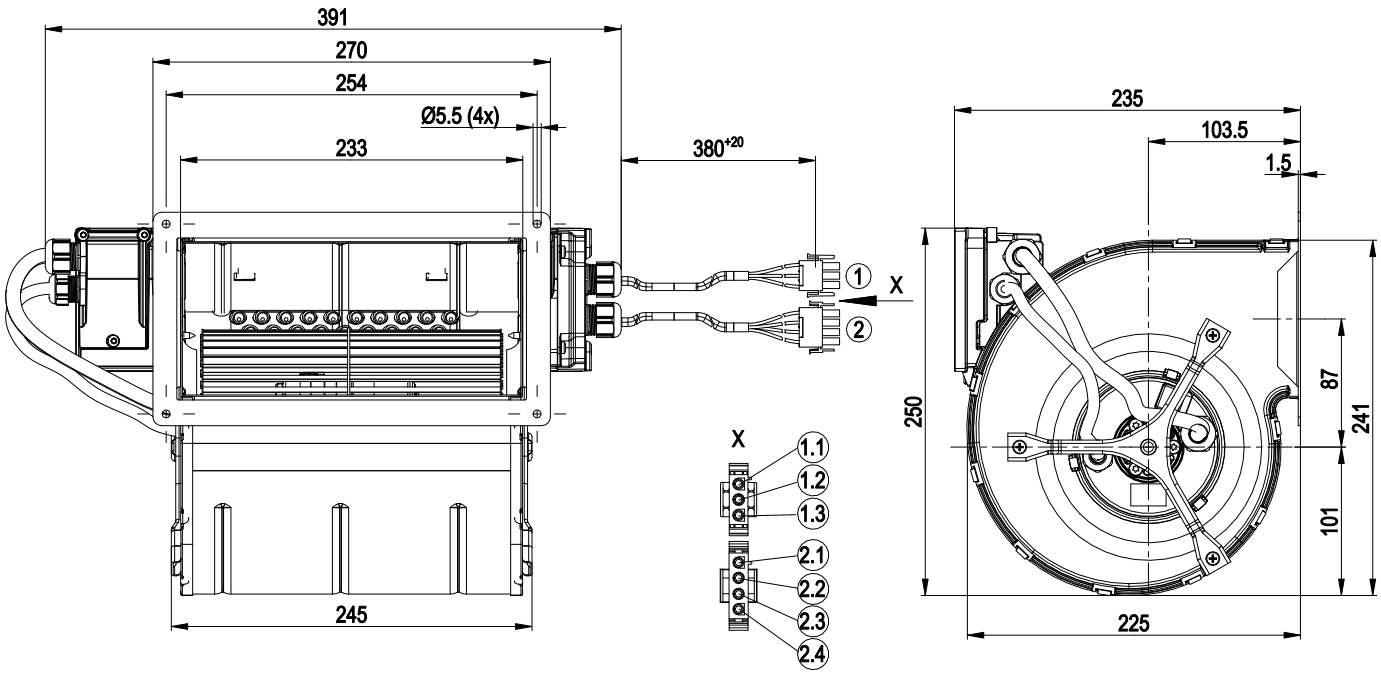
Technical features

Mass	6.5 kg
Size	160 mm
Surface of rotor	Galvanised
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Motor suspension	Motor anti-vibration mounted on one side via brackets
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H0 - dry environment
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Fault output (open collector) - Integrated PID controller - Output limit - Motor current limit - PFC, active - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

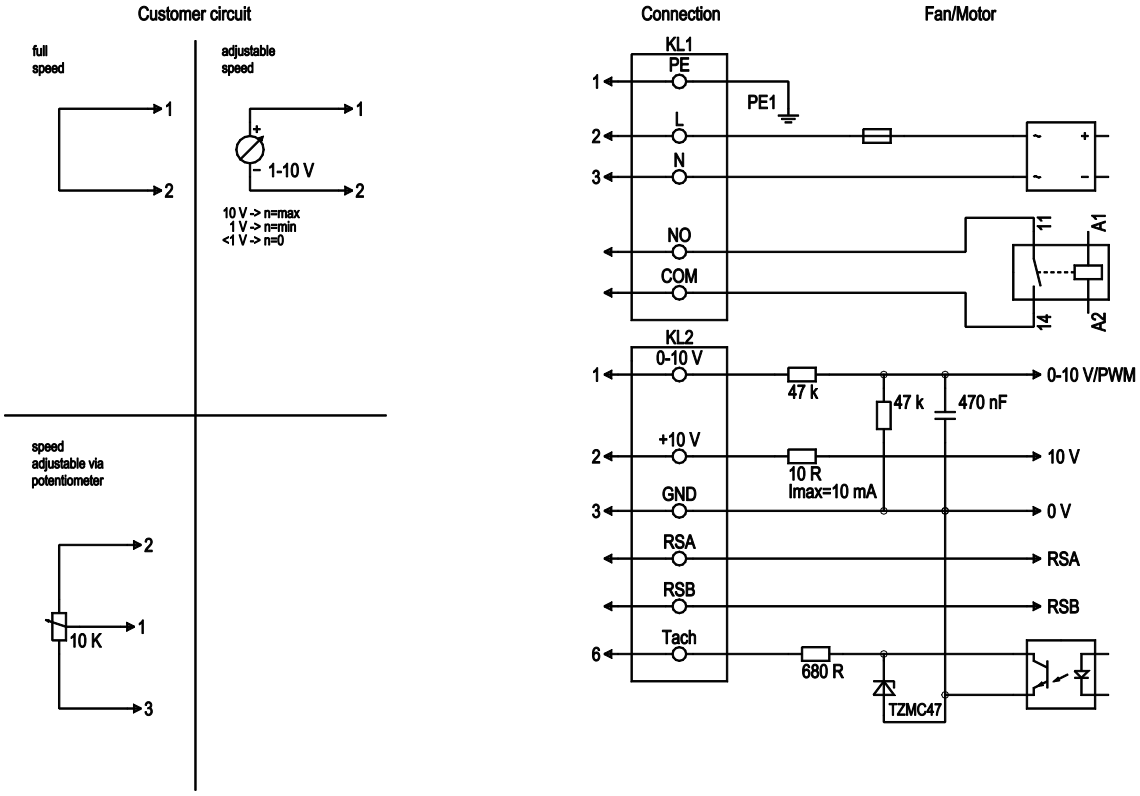
EC centrifugal fan

Product drawing



1	Connection line PVC AWG20, connector housing 3-pole tyco 1241809-2, 3x plug pin tyco 350218-1
1.1	PE (green/yellow)
1.2	N (blue)
1.3	L (black)
2	Connection line PVC AWG22, tyco 4-pole connector housing 926298-6, 4x tyco plug pin 926885-1 crimped
2.1	+10 V (red)
2.2	GND (blue)
2.3	0-10 V PWM (yellow)
2.4	Fan good / fan bad (white)

Connection screen



No.	Conn.	Designation	Function / assignment
KL1	1	PE	Protective earth
KL1	2	L	Power supply, phase, 50/60 Hz
KL1	3	N	Power supply, neutral conductor, 50/60 Hz
KL1	4	NO	not used
KL1	5	COM	not used
KL2	1	0-10 V	Analogue input (set value), 0-10 V, Ri=100 kΩ, parametrisable curve, SELV
KL2	2	+10 V	Fixed voltage output 10 VDC, SELV
KL2	3	GND	Signal ground for control interface, SELV
KL2	4	RSA	not used
KL2	5	RSB	not used
KL2	6	Tach	Fan Good/Bad output, Fan Bad=Low, electrically isolated, Isink max. 10 mA

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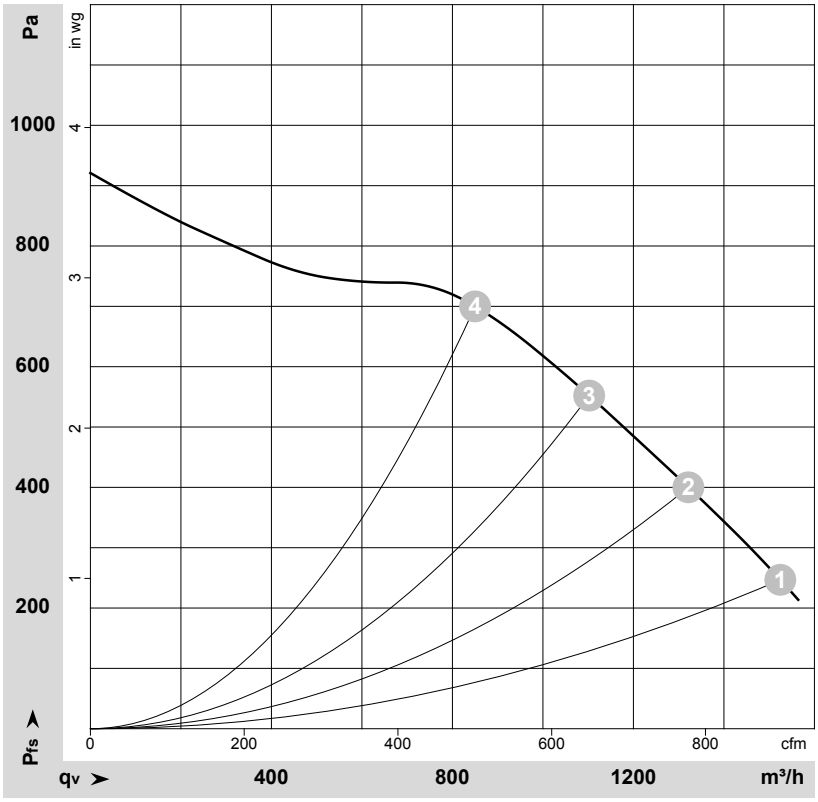
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-170229-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	2240	430	2.00	1525	250	900	1.00
2	230	50	2465	430	2.00	1320	400	780	1.61
3	230	50	2745	430	2.00	1100	550	650	2.21
4	230	50	3030	430	2.00	850	700	500	2.81

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase