D2E160-GL19-20

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

D2E160-GL19-20 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**D2E160-GL19-20**	
Motor	**M2E074-HA**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Method of obtaining data		ml
Valid for approval/standard		CE
Speed (rpm)	min^{-1}	1850
Power consumption	W	450
Current draw	A	2
Capacitor	µF	10
Capacitor voltage	VDB	400
Capacitor standard		S2 (CE)
Min. back pressure	Pa	215
Min. back pressure	inH2O	0.86
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40
Starting current	A	2.25

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.4	34.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.3
09 Air flow q_v	m^3/h	765
09 Pressure increase p_{fs}	Pa	485
10 Speed (rpm) n	min^{-1}	2570
11 Specific ratio*		1.01

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_{fs} / 100 000 Pa

LU-160583

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Technical description

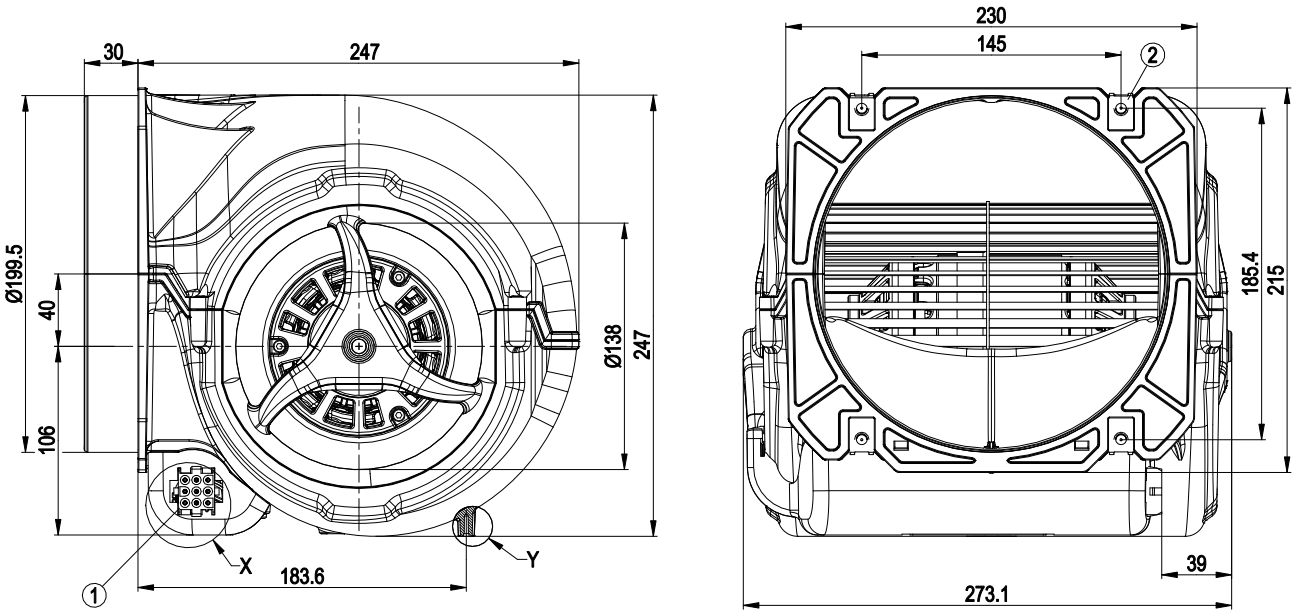
Weight	6.9 kg
Fan size	160 mm
Rotor surface	Partly cast in aluminum
Terminal box material	PP plastic
Impeller material	Sheet steel, galvanized
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
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
Speed levels	5
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Via terminal box, capacitor integrated and connected; With plug
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S2
Conformity with standards	EN 60335-1; CE

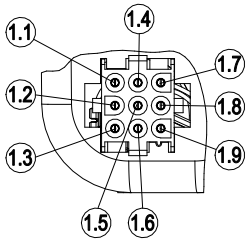
AC centrifugal fan

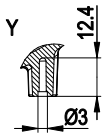
forward-curved, dual-intake

with housing (flange)

Product drawing







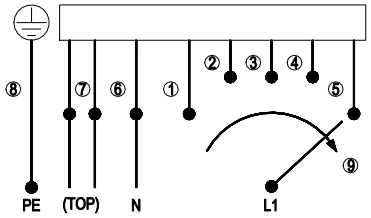
1	Coded plug system: 9-pole connector housing Tyco 927231-5, 9x plug pin Tyco 926886-1
1.1	PE (green/yellow)
1.2	N (blue)
1.3	TW (yellow)
1.4	TW (yellow)
1.5	Step 5 (max.), black
1.6	Step 4 orange
1.7	Step 3 gray
1.8	Step 2 red
1.9	Step 1 (min.), white
2	4 x sheet metal nut for thread EN ISO 1478-ST4.8 (screw length at least 14.5 mm plus thickness of mounting material)

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Connection diagram



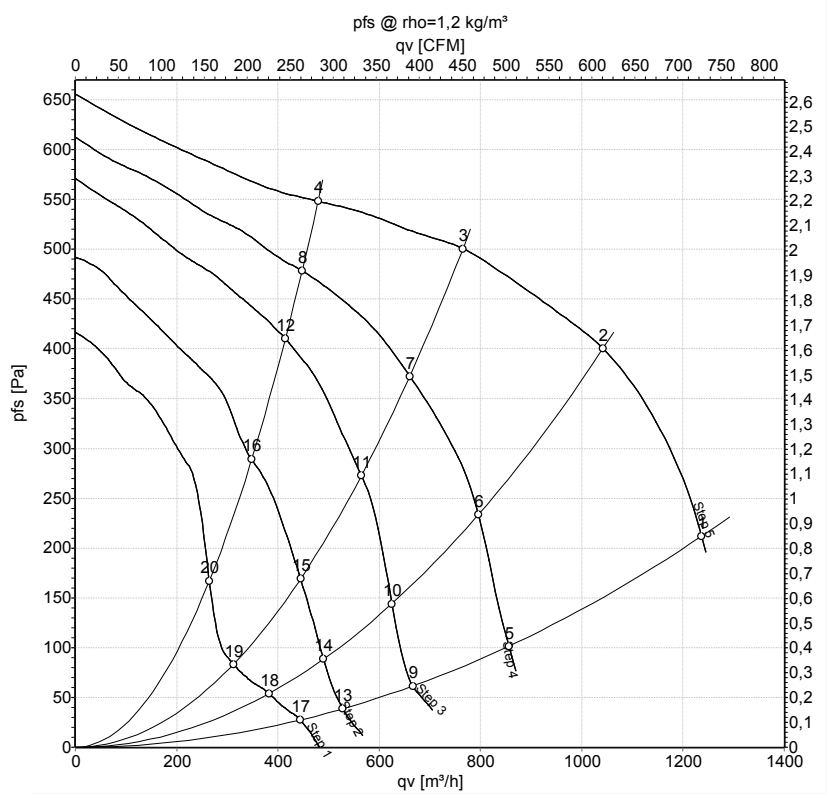
1	Step 1 (min.), white	2	Step 2 red	3	Step 3 gray
4	Step 4 orange	5	Step 5 (max.), black	6	N blue
7	2x yellow (TOP)	8	green/yellow (PE)	9	Speed increasing

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

Curves: Air performance 50 Hz



Measurement: LU-160583-1
Measurement: LU-161412-1
Measurement: LU-161514-1
Measurement: LU-161515-1
Measurement: LU-161516-1

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

	Stage	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	1	230	50	1850	450	2.00	1235	215	730	0.86
2	1	230	50	2310	367	1.61	1040	400	615	1.61
3	1	230	50	2565	301	1.37	765	500	450	2.01
4	1	230	50	2705	253	1.21	480	550	280	2.21
5	1	230	50	1245	358	1.57	855	87	505	0.35
6	1	230	50	1815	317	1.42	795	244	470	0.98
7	1	230	50	2240	265	1.24	660	373	390	1.50
8	1	230	50	2525	209	1.06	450	478	265	1.92
9	1	230	50	1050	315	1.39	665	59	390	0.24
10	1	230	50	1405	297	1.32	625	143	370	0.57
11	1	230	50	1920	264	1.21	565	273	335	1.10
12	1	230	50	2340	210	1.03	415	410	245	1.65
13	1	230	50	840	278	1.23	530	39	310	0.16
14	1	230	50	1090	271	1.20	490	88	290	0.35
15	1	230	50	1480	258	1.15	445	169	260	0.68
16	1	230	50	1980	222	1.03	350	288	205	1.16
17	1	230	50	715	255	1.13	445	29	260	0.12
18	1	230	50	910	250	1.11	380	55	225	0.22
19	1	230	50	1100	246	1.10	310	83	185	0.33
20	1	230	50	1475	230	1.04	265	165	155	0.66

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase