

AC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.ebmpapst.com

www.ebmpapst.com

Limited partnership · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	D2D160-CE02-17						
Motor	M2D074-LA						
Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	230	400	400	400
Wiring		Δ	Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	60	50	60	60
Method of obtaining data		ml	ml	ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE	CE	CE
Speed (rpm)	min ⁻¹	2700	2960	3050	2700	3050	2960
Power consumption	W	700	1055	950	700	950	1055
Current draw	A	1.9	2.82	2.6	1.1	1.5	1.63
Min. back pressure	Pa	400	500	580	400	580	500
Min. back pressure	in. wg	1.61	2.01	2.33	1.61	2.33	2.01
Min. ambient temperature	°C	-25	-25	-25	-25	-25	-25
Max. ambient temperature	°C	90	40	55	90	55	40
Starting current	A	9.25	9.6	9.6	5.34	5.54	5.54

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}	%	40.2	35.4	09 Power consumption P_e	kW	0.44
02 Measurement category		A		09 Air flow q_v	m ³ /h	1135
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	566
04 Efficiency grade N		48.8	44	10 Speed (rpm) n	min ⁻¹	2835
05 Variable speed drive		No		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 = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-203802



AC centrifugal fan

forward-curved, dual-intake
with housing (without flange)

Technical description

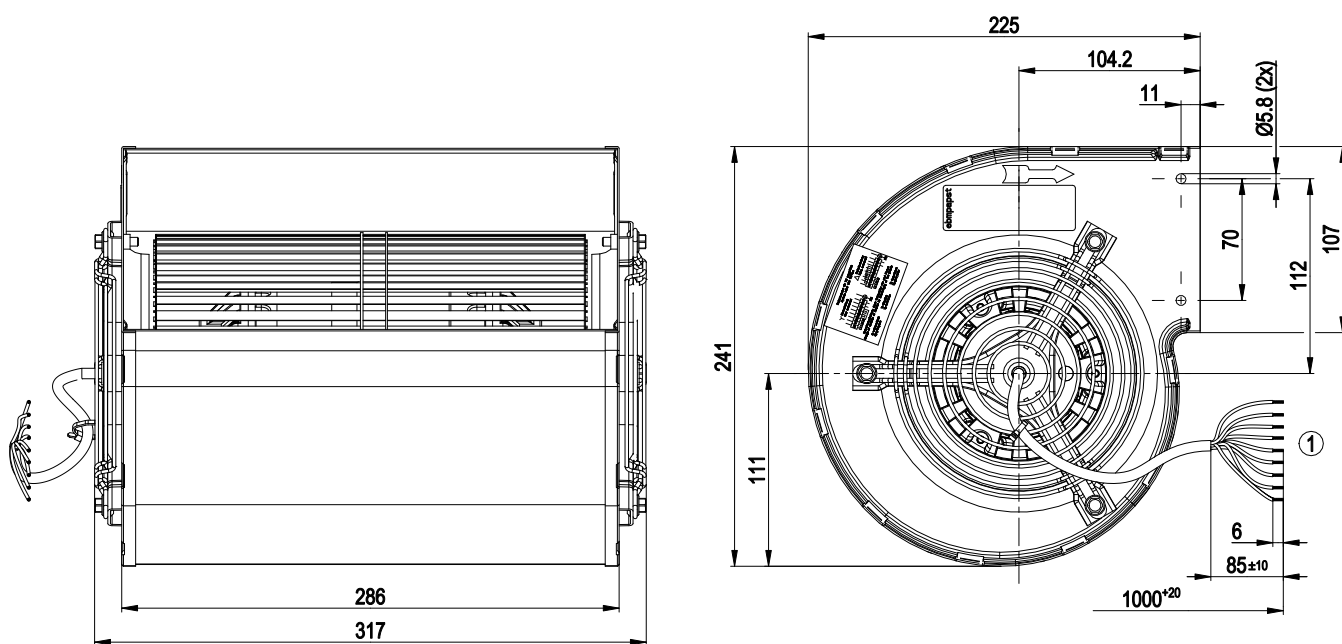
Weight	10.21 kg
Size	160 mm
Motor size	74
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Guard grille material	Steel, coated with white-aluminum plastic (RAL 9006)
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP00
Insulation class	"F"
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	CSA C22.2 No. 100; UL 1004-1



AC centrifugal fan

forward-curved, dual-intake
with housing (without flange)

Product drawing

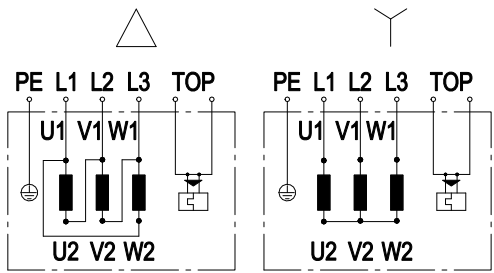


1	Cable PFA AWG20 (green/yellow AWG18)
	9x splice

AC centrifugal fan

forward-curved, dual-intake
with housing (without flange)

Connection diagram



Note: Change of rotation direction by reversing two phases

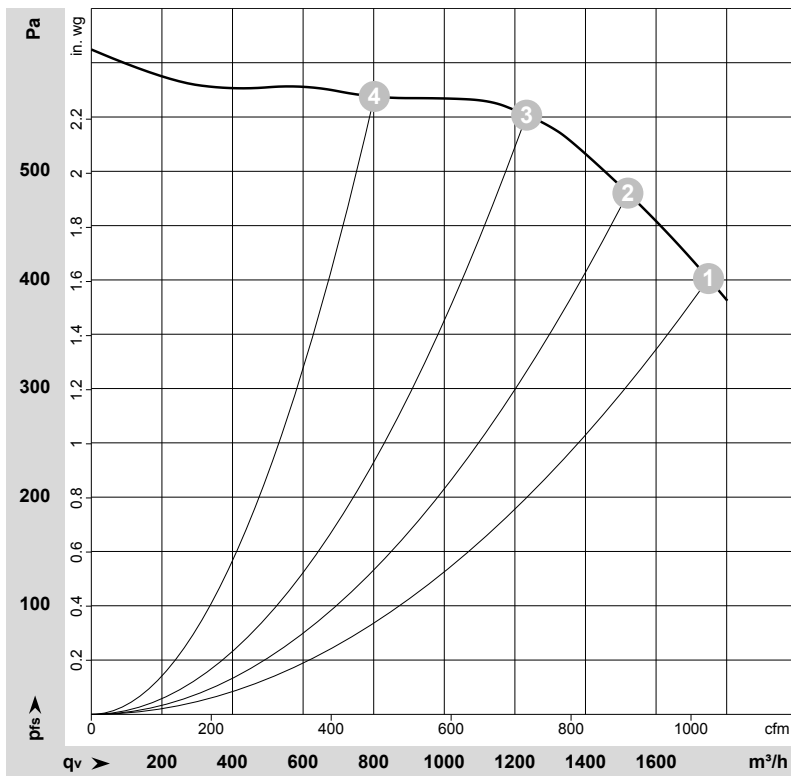
Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2x gray
PE	green/yellow				



AC centrifugal fan

forward-curved, dual-intake
with housing (without flange)

Curves: Air performance 50 Hz



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

Measurement: LU-203802-1

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

	Wired	U	f	n	P _e	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	Y	400	50	2700	700	1.10	69	81	1750	400	1030	1.61
2	Y	400	50	2760	597	1.05	68	80	1520	480	895	1.93
3	Y	400	50	2815	479	0.90	67	79	1235	550	725	2.21
4	Y	400	50	2870	352	0.74	68	79	800	565	470	2.27

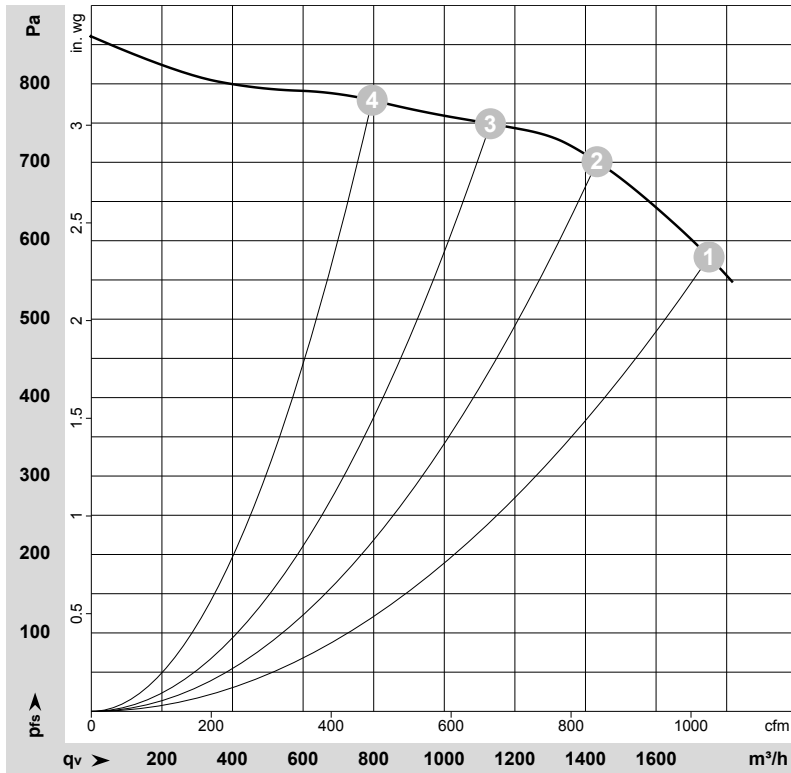
Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_v = Air flow · p_{fs} = Pressure increase



AC centrifugal fan

forward-curved, dual-intake
with housing (without flange)

Curves: Air performance 60 Hz



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

Measurement: LU-203859-1

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

	Wired	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	in. wg
1	Y	400	60	3050	950	1.50	1750	580	1030	2.33
2	Y	400	60	3175	782	1.26	1435	700	845	2.81
3	Y	400	60	3275	637	1.05	1130	750	665	3.01
4	Y	400	60	3340	523	0.88	795	780	470	3.13

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

