AC axial fan

sickled blades (S series), single inlet

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**A4D315-AS30-12**
Motor	**M4D068-DF**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	460
Connection		Y	Y	Y
Frequency	Hz	50	60	60
Type of data definition		ml	ml	ml
Valid for approval / standard		CE	CE	CE
Speed (rpm)	min^{-1}	1350	1480	1550
Power input	W	110	146	162
Current draw	A	0.25	0.25	0.26
Max. back pressure	Pa	70	90	90
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	70	70	65

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

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Technical features

Mass	2.0 kg
Size	315 mm
Surface of rotor	Coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F2-2
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
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	CSA C22.2 No.100; UL 1004-1

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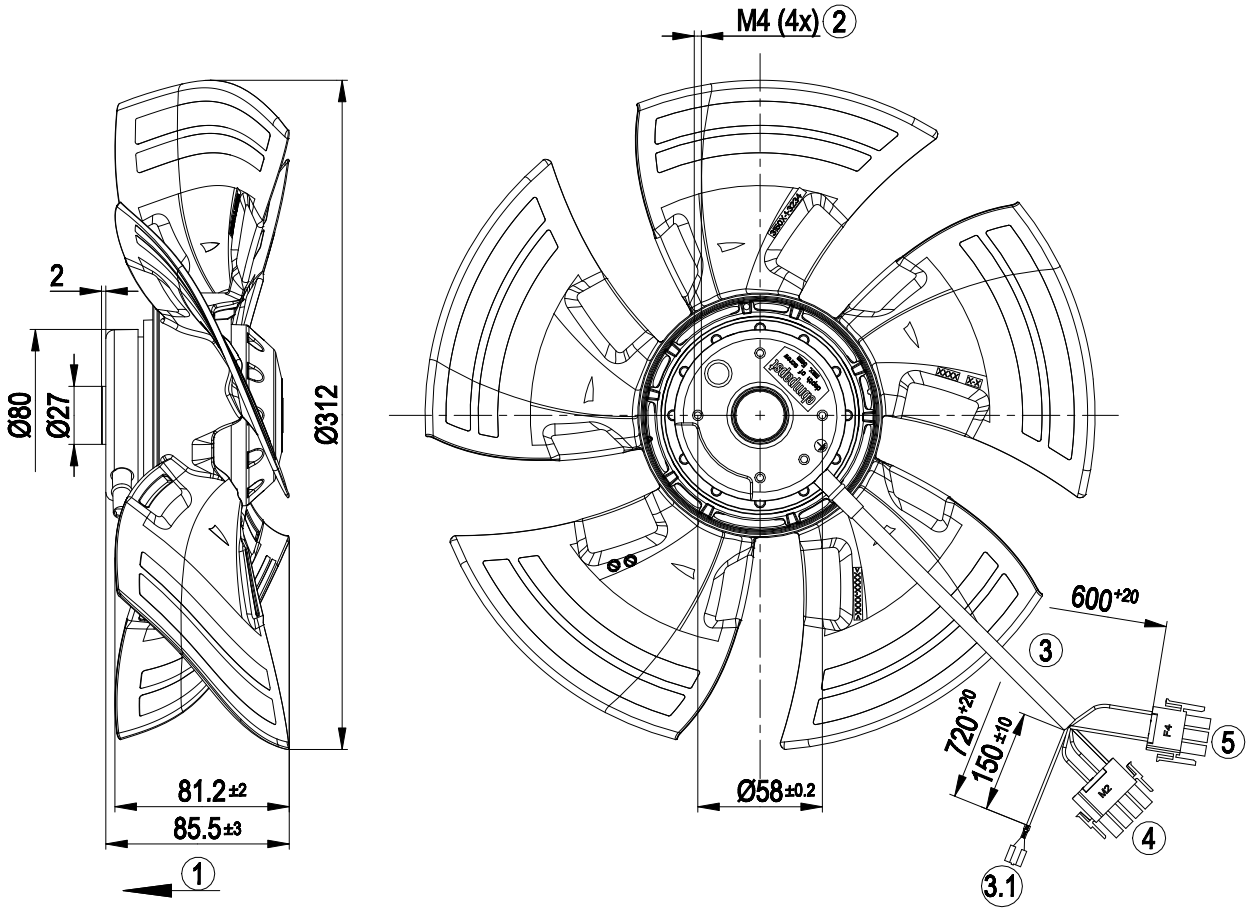
Product drawing



1	Direction of air flow "V"
2	Thread reach max. 5 mm
3	Connection line PFA AWG20 (green/yellow AWG18)
3.1	Threaded pin 6.3x0.8 (PE)
4	Connector housing 4-pole tyco 350779-4
4.1	not used
4.2	brown
4.3	blue
4.4	black
5	Connector housing 3-pole Tyco 350766-4
5.1	grey (TOP)
5.2	not used
5.3	grey (TOP)

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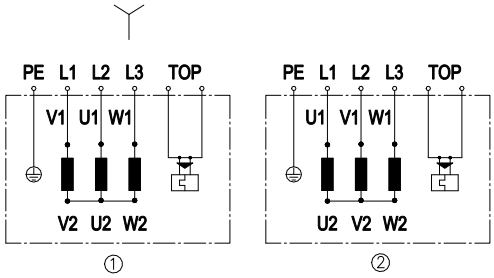
Connection screen



Change direction of rotation by reversing two phases

	Three-phase motor
Y	Star connection
1	Anti-clockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	= U1 = black
L2	= V1 = blue
L3	= W1 = brown
PE	green/yellow
TOP	2x grey

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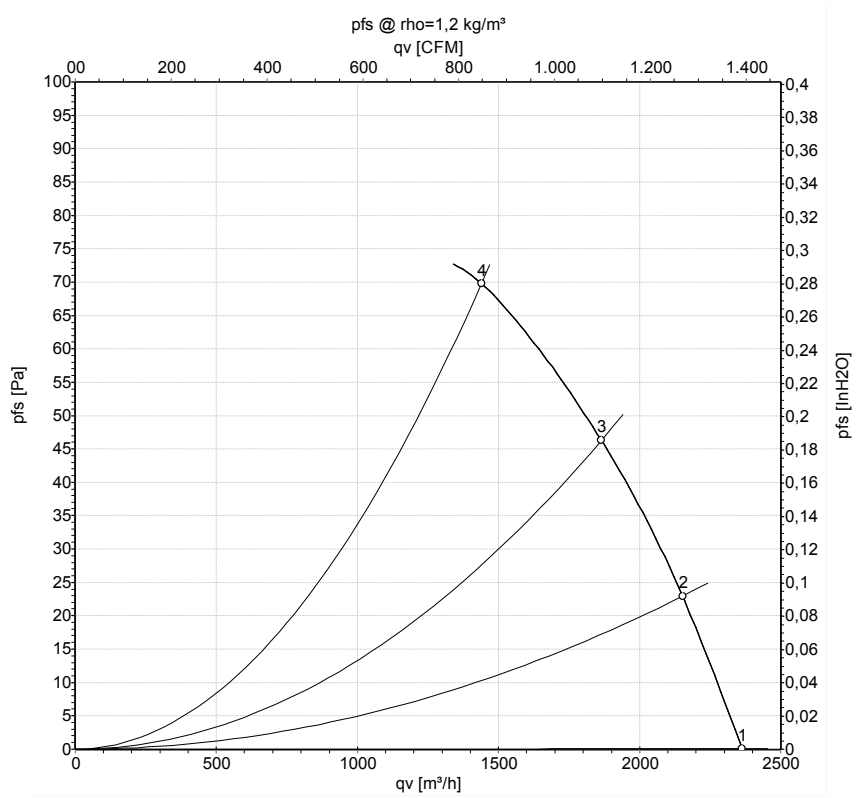
Charts: Air flow 50 Hz



Measurement: LU-160005-1

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

	Conn.	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)	m^3/h	Pa	cfm	inH2O
1	Y	400	50	1390	90	0.24	57	64	2365	0	1390	0.00
2	Y	400	50	1380	96	0.24	55	61	2150	23	1265	0.09
3	Y	400	50	1365	101	0.24	52	59	1865	46	1100	0.18
4	Y	400	50	1350	110	0.25	51	59	1440	70	845	0.28

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
q_V = Air flow · p_{fs} = Pressure increase

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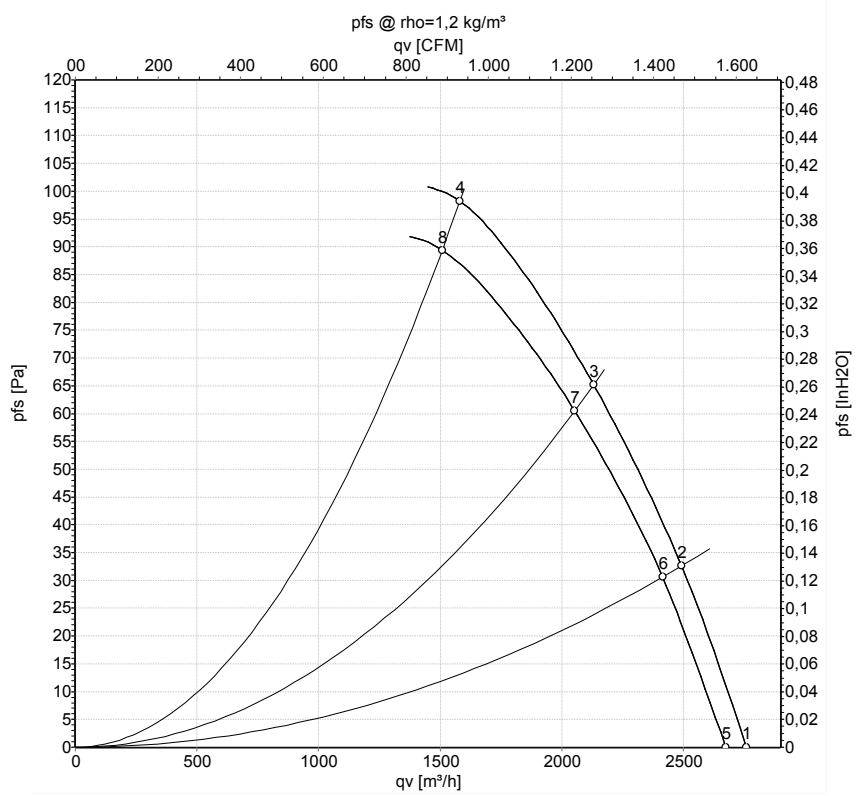
Charts: Air flow 60 Hz



Measurement: LU-160176-1
Measurement: LU-160168-1

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

	Conn.	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)	m^3/h	Pa	cfm	inH2O
1	Y	460	60	1620	129	0.24	61	67	2760	0	1625	0.00
2	Y	460	60	1605	137	0.24	59	65	2495	33	1465	0.13
3	Y	460	60	1585	148	0.25	55	62	2130	65	1255	0.26
4	Y	460	60	1550	162	0.26	56	64	1580	99	930	0.40
5	Y	400	60	1575	116	0.22	60	66	2675	0	1575	0.00
6	Y	400	60	1550	125	0.23	58	64	2415	30	1420	0.12
7	Y	400	60	1525	133	0.24	54	61	2055	60	1210	0.24
8	Y	400	60	1480	146	0.25	53	61	1510	90	890	0.36

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
q_V = Air flow · p_{fs} = Pressure increase