EC axial fan - ESM

sickle-shaped blades (S series)

ESM fan housing

W1G250-EB17-14 ebmpapst Datasheet
sales@fansco.com
www.fansco.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	**W1G250-EB17-14**
Motor	**M1G055-BI**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1700
Power consumption	W	35
Current draw	A	0.28
Max. back pressure	Pa	50
Max. back pressure	in. wg	0.2
Min. ambient temperature	°C	-30
Max. ambient temperature	°C	50

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

EC axial fan - ESM

sickle-shaped blades (S series)

ESM fan housing

Technical description

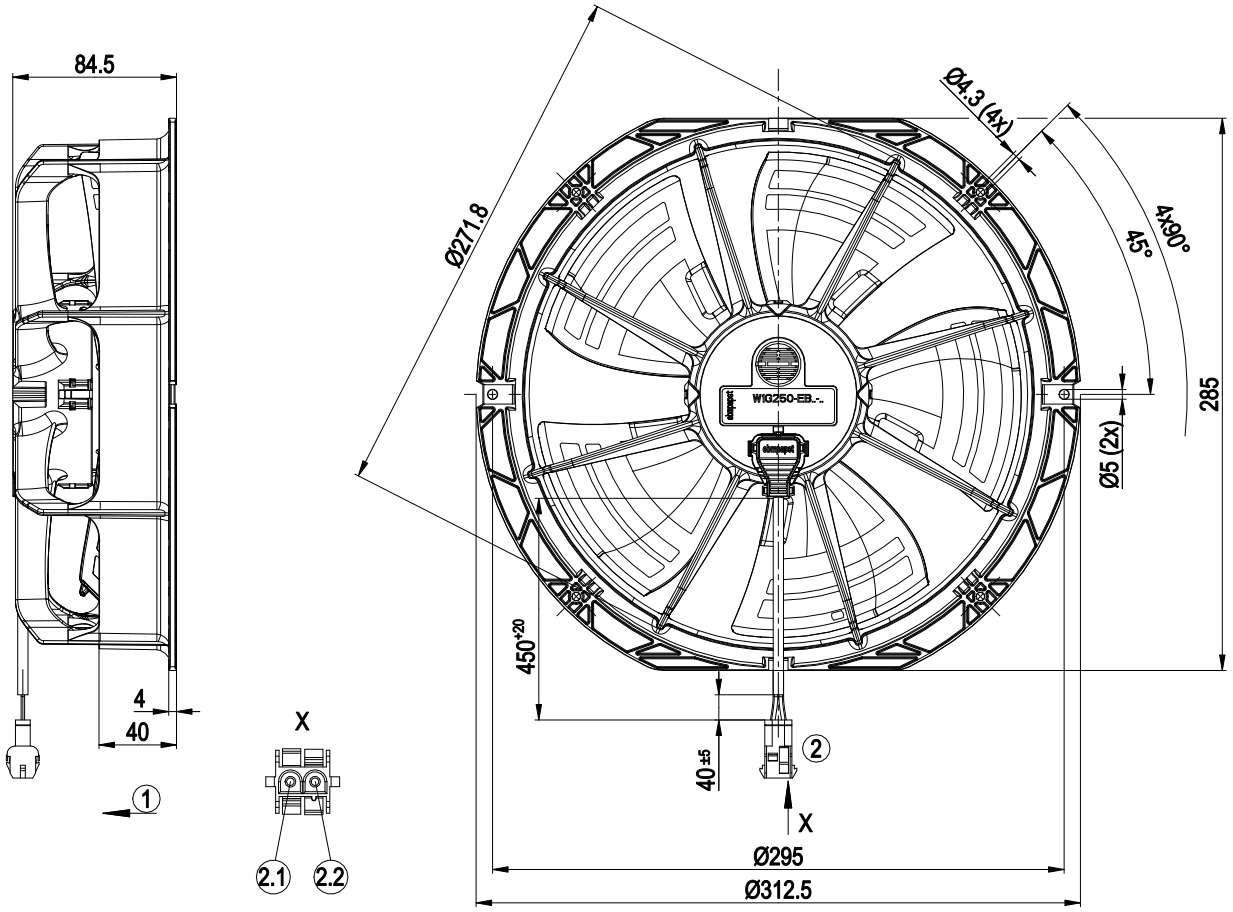
Weight	1 kg
Size	250 mm
Motor size	55
Impeller material	PA plastic
Fan housing material	PP plastic
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1+
Max. 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
Mode	S1
Motor bearing	Ball bearing
Technical features	- Speed setting input (230 V) - ESM+ expandable with plug-in module - Soft start - Thermal overload protection for motor
Electrical hookup	Connector with cable
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Lateral
Protection class	II
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-3

EC axial fan - ESM

sickle-shaped blades (S series)

ESM fan housing

Product drawing



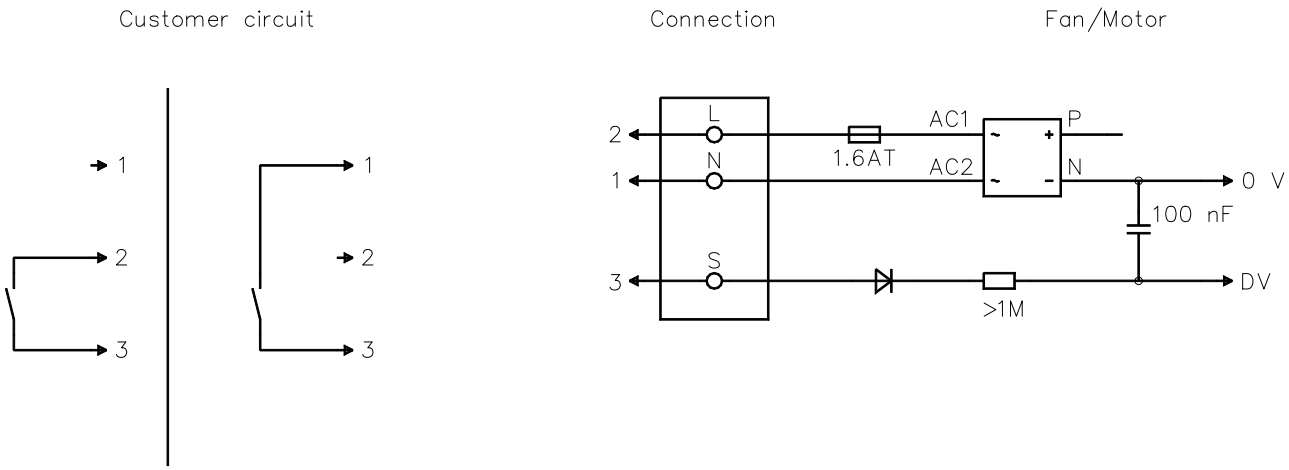
1	Airflow direction "V"
2	Cable PVC AWG18
	2-pole connector housing TE 3-480699-0
	2x socket TE 350536-1
2.1	L (black)
2.2	N (blue)

EC axial fan - ESM

sickle-shaped blades (S series)

ESM fan housing

Connection diagram



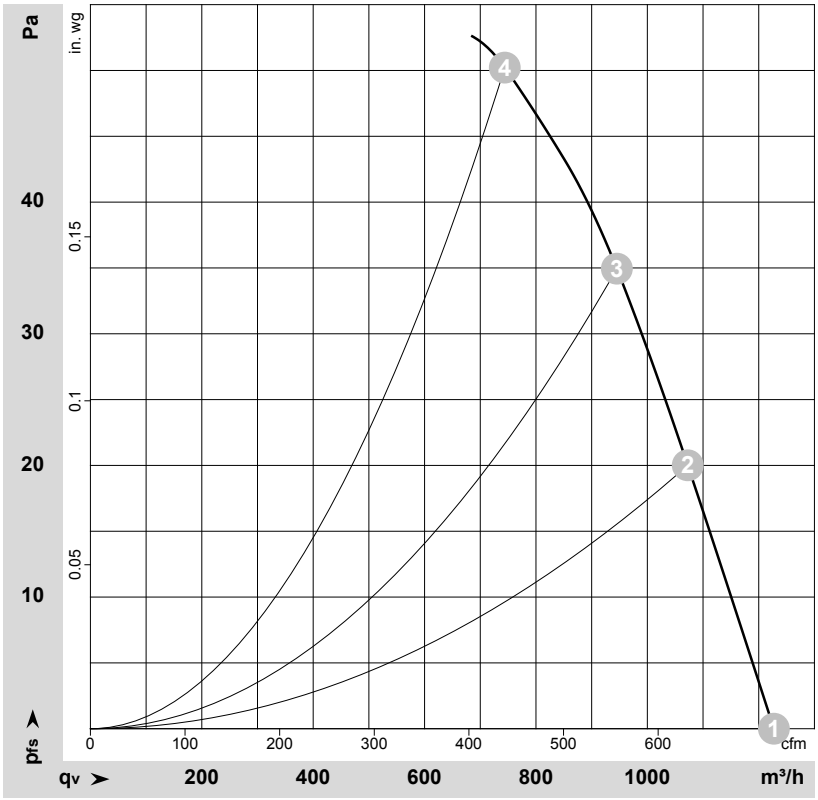
No.	Conn.	Designation	Color	Function/assignment
1	N		blue	Neutral conductor
2	L		black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
3	S		brown	Speed selection: switch open speed 1 (fast), switch closed speed 2 (slow)

EC axial fan - ESM

sickle-shaped blades (S series)

ESM fan housing

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-183252-1

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	Wired	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)	m^3/h	Pa	cfm	in. wg
1	1	1~	230	50	1700	31	0.25	57	65	1225	0	720	0.00
2	1	1~	230	50	1685	32	0.26	56	64	1075	20	630	0.08
3	1	1~	230	50	1650	33	0.27	55	63	945	35	555	0.14
4	1	1~	230	50	1600	35	0.28	56	64	750	50	440	0.20

Wired = Wiring · 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