8317083844
VBS0310XSPGZ

EC centrifugal fan

backward-curved, single-intake

8317083844 VBS0310XSPGZ
ebmpapst Datesheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**8317083844**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1995
Power consumption	W	239
Current draw	A	1.04
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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

Data according to Commission Regulation (EU) 327/2015 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	57.8	45
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		82.4	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.24
09 Air flow q_v	m^3/h	1471
09 Pressure increase p_{fs}	Pa	338
10 Speed (rpm) n	min^{-1}	1993
11 Specific ratio*		1.00

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-15828

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Technical description

Weight	5.4 kg
Size	310 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
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	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display: reversible voltage output 0 V / +15 V - Integrated PID controller - Motor current limitation - PFC, active - RS-485 ebmBUS - Soft start - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Plug
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 113; CCC; EAC;UL 1004-3;

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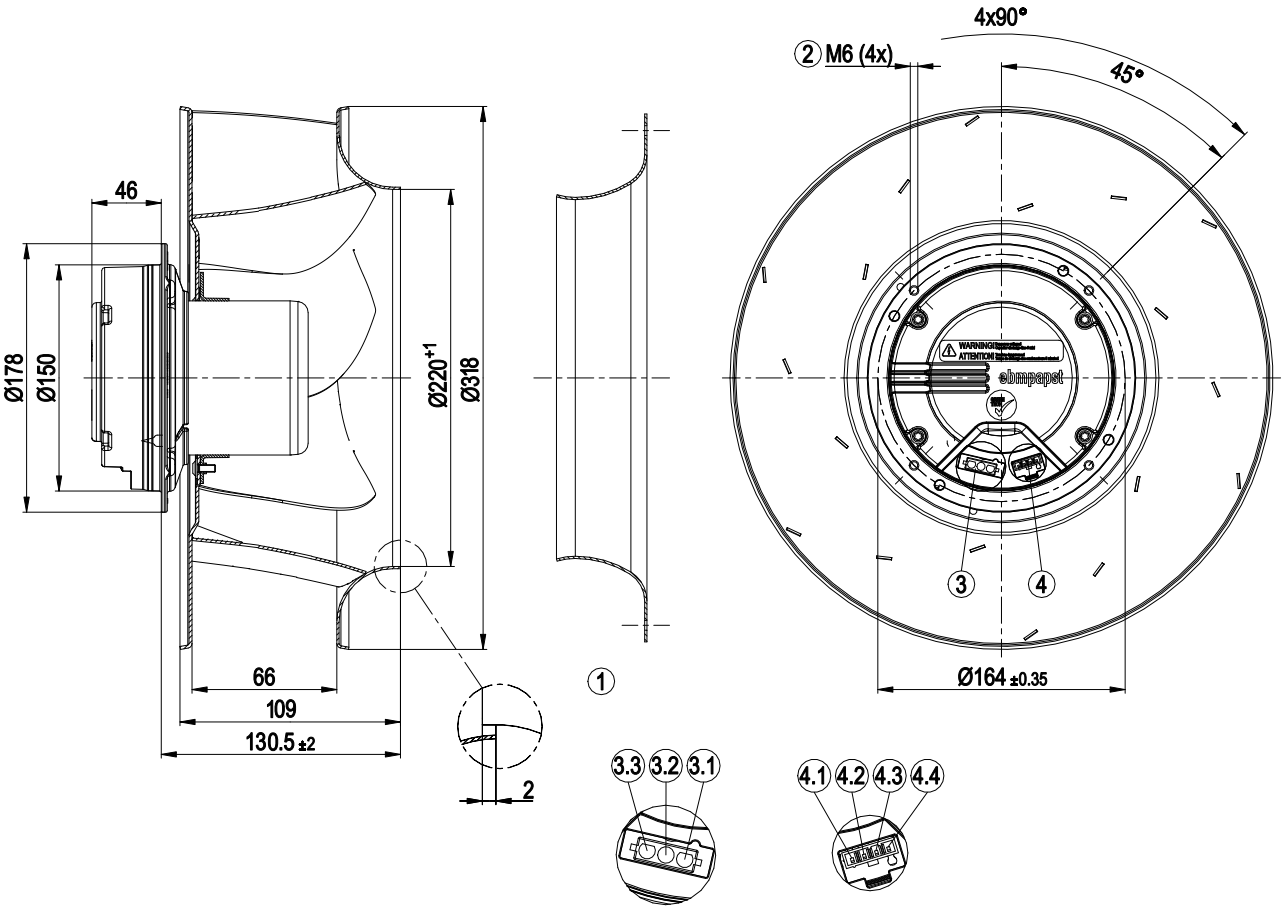
Product drawing



1	Accessory part: inlet ring A1404-2-40 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	3-pole header Lonco C63502-3A, mating connector with sockets not included in scope of delivery
3.1	L
3.2	N
3.3	PE
4	4-pole header Molex 39-30-2040, mating connector with sockets not included in scope of delivery
4.1	RSB
4.2	RSA
4.3	+15 V; in case of fault: 0 V
4.4	0 V; in case of fault: +15 V

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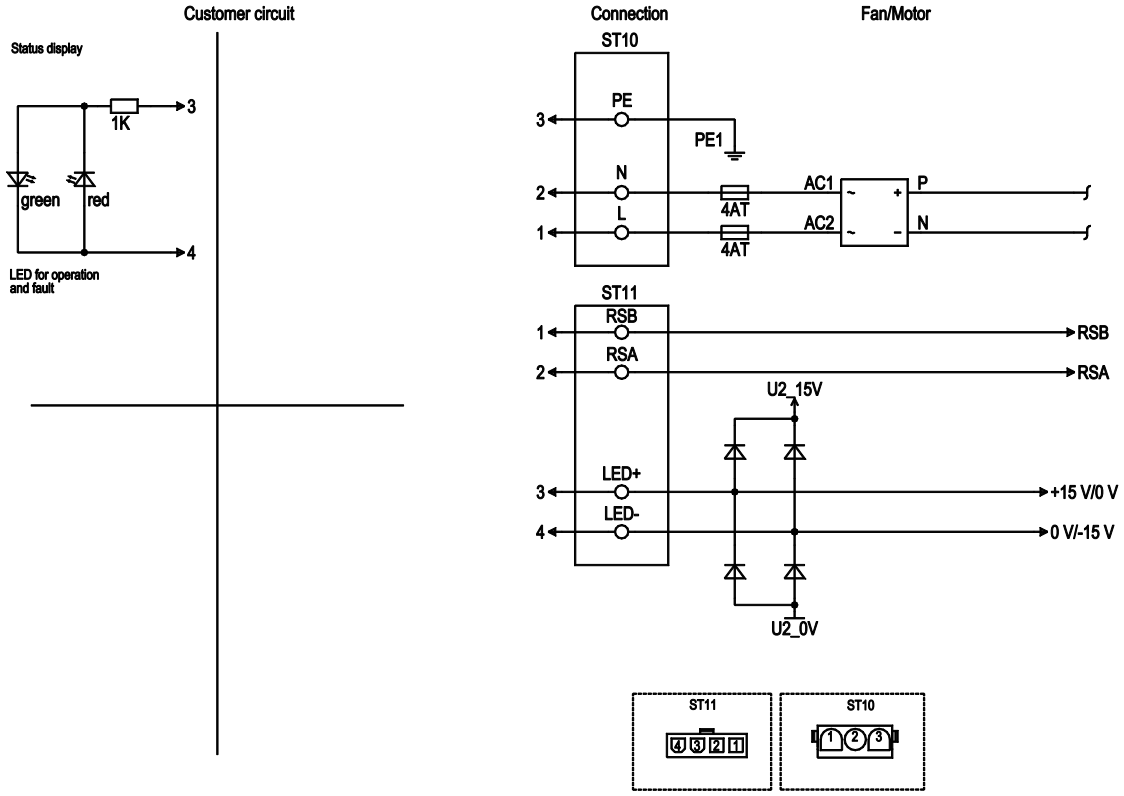
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
10	1	L		Power supply, phase, 50/60 Hz
10	2	N		Power supply, neutral conductor, 50/60 Hz
10	3	PE		Protective earth
11	1	RSB		RS-485 interface for ebmBus, RSB; SELV
11	2	RSA		RS-485 interface for ebmBus, RSA; SELV
11	3	LED +		Voltage output 15 V (+15%/-10%), max. 30 mA, power supply for external devices (e.g. status display for LED), SELV
11	4	LED -		Reference ground for control interface, SELV

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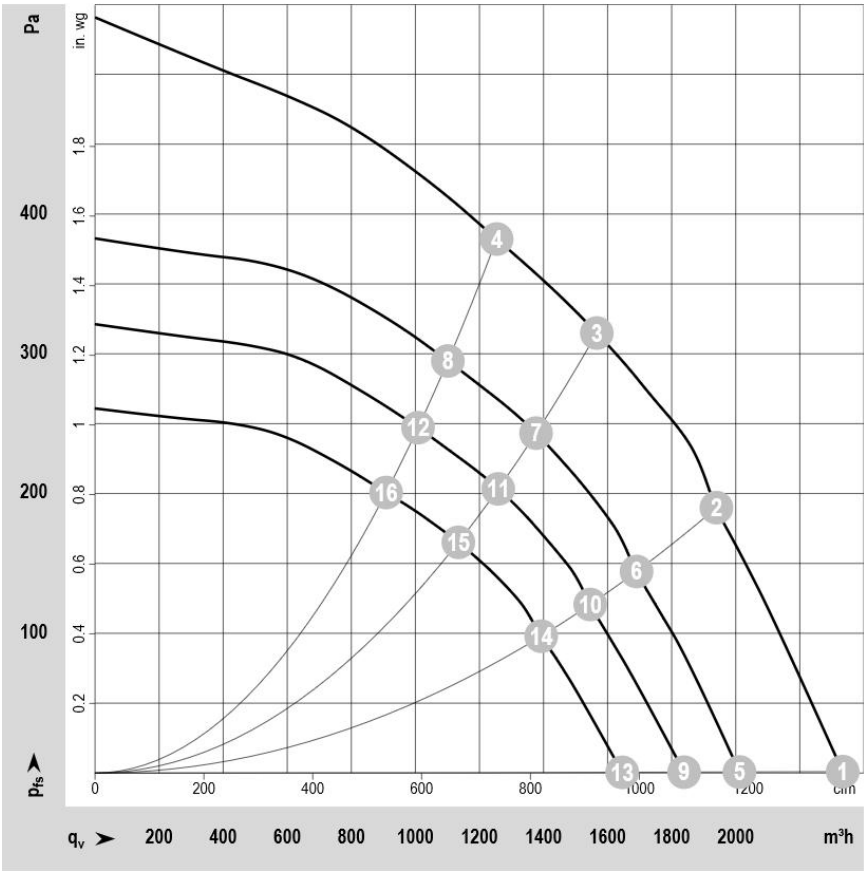
Curves: Air performance 50 Hz



ρ = 1 . 2 kg/m³ ± 2 %

Measurement: LU-15828

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_{ed}	I	q_V	p_{fs}	LpA_{out}	LwA_{out}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	dB(A)	dB(A)
1	1~	230	50	2029	172	0.76	2336	0	70	82
2	1~	230	50	1997	225	0.99	1938	189	65	77
3	1~	230	50	1995	239	1.04	1564	315	62	73
4	1~	230	50	1994	236	1.03	1252	383	63	74
5	1~	230	50	1752	115	0.52	2103	0	67	79
6	1~	230	50	1752	156	0.69	1687	145	62	74
7	1~	230	50	1751	166	0.73	1372	225	59	70
8	1~	230	50	1751	232	0.73	1100	295	59	70
9	1~	230	50	1606	93	0.42	1839	0	66	78
10	1~	230	50	1606	122	0.54	1550	119	63	76
11	1~	230	50	1606	131	0.58	1250	205	62	76
12	1~	230	50	1606	130	0.58	1005	248	62	76
13	1~	230	50	1452	71	0.33	1647	0	62	75
14	1~	230	50	1452	93	0.42	1391	98	59	70
15	1~	230	50	1452	100	0.44	1127	167	58	68
16	1~	230	50	1451	99	0.45	907	201	58	66

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