W3G385-BV44-01

EC axial fan

with brushless DC motor

Automotive

W3G385-BV44-01 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W3G385-BV44-01**	
Motor	**M3G084-BF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Type of data definition		fa
Speed	min^{-1}	2600
Power input	W	250
Current draw	A	9.6
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	95/110
Starting current	A	12

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

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	44.9	26.1	30.1
Efficiency grade N		54.8	36	40
Power input P_e	kW	0.27		
Air flow q_v	m³/h	2110		
Pressure increase p_{fs}	Pa	186		
Speed n	min^{-1}	2340		

Data definition with optimum efficiency. LU-141094
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

ebmpapst

EC axial fan

with brushless DC motor

Automotive

Technical features

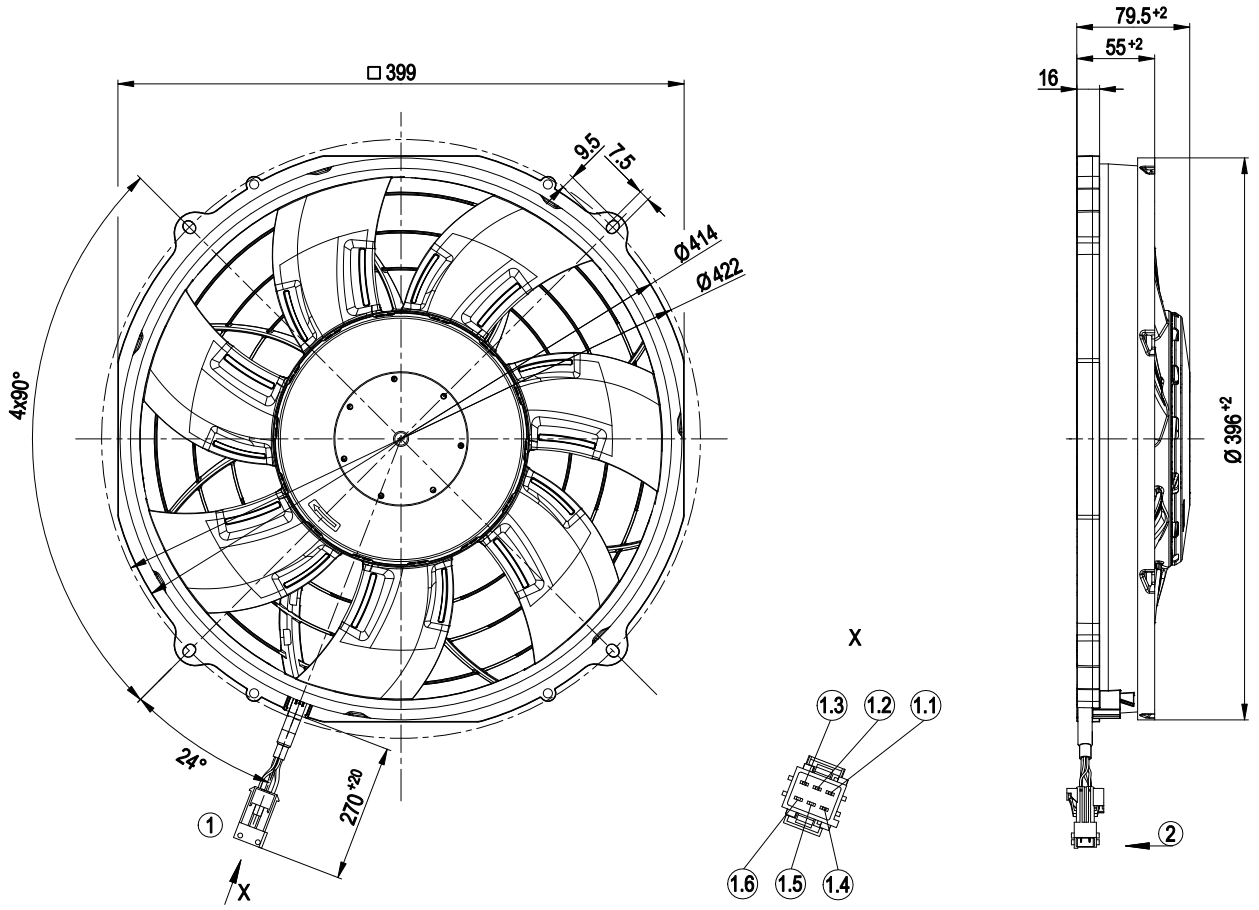
Mass	2.7 kg
Size	385 mm
Material of impeller	PA plastic
Material of wall ring	PA plastic
Number of blades	7
Direction of air flow	"V"
Balance quality according to DIN ISO 1940-1	G 10
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 24 KM; (motor); electronics IP 6K9K
Insulation class	"B"
Humidity class	F4-1
Note ambient temperature	Over +95° C with power derating
Max. permissible ambient motor temp. (transp./ storage)	+110 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancies	40,000 h (typical)
Technical features	- Lowering input - Fault output (high-side switch max. 30 mA) - INVLIN (control input, inverse linear) - Output limit -Load dump (58 V) - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Overvoltage detection - Over-temperature protected electronics - Line undervoltage detection
EMC directives	ECE R10 Rev.3
Electrical leads	With plug; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Lateral
Approval	E1; EAC

EC axial fan

with brushless DC motor

Automotive

Product drawing



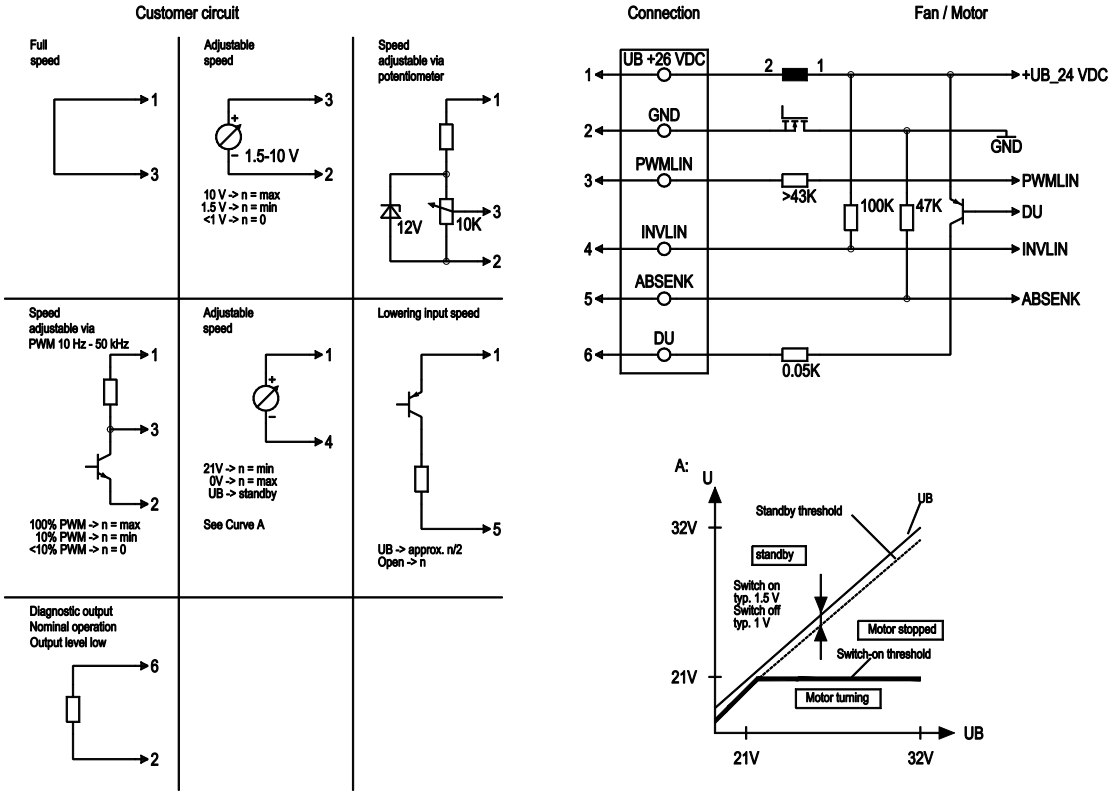
1	Connection line with plug Tyco Junior Power Timer 1-962349-1, 6-pole, coded
	Connection line (460 mm) with mating connector part no. 02002-4-1021 not included in scope of delivery
1.1	+ UB (black)
1.2	GND (brown)
1.3	PWMLIN (yellow)
1.4	INVLIN (orange)
1.5	ABSENK (blue)
1.6	Diagnostic output (white)
2	Direction of air flow "V"

EC axial fan

with brushless DC motor

Automotive

Connection screen



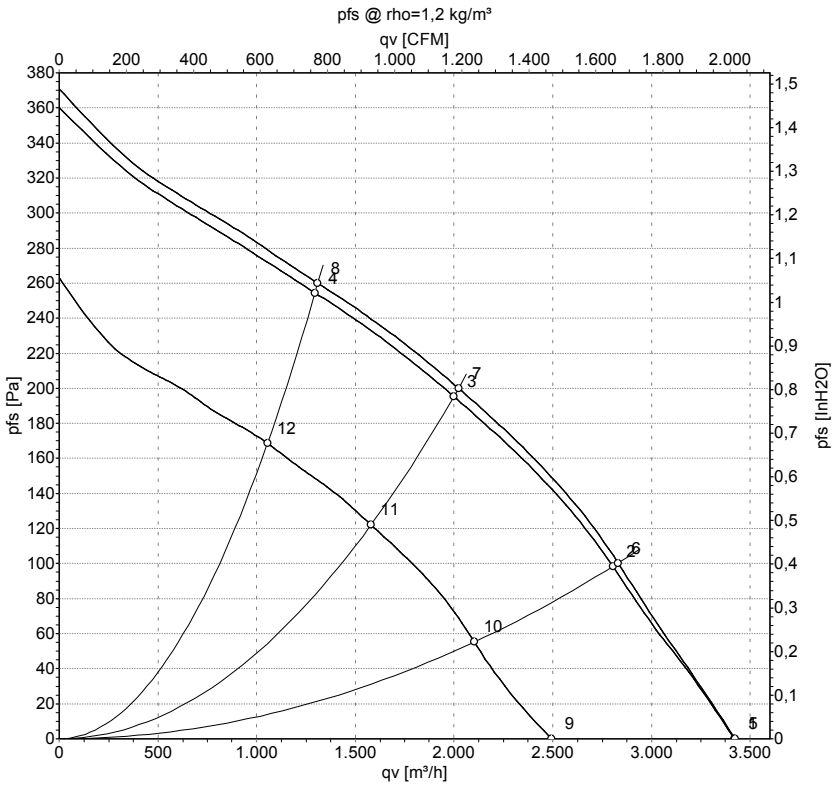
No.	Conn.	Designation	Function / assignment
	1	UB +26 VDC	Power supply 26 VDC
	2	GND	Power supply GND, reference ground
	3	PWMLIN	Analogue voltage control input 0 -10 V or PWM
	4	INVLIN	Control input, inverse linear
	5	ABSENK	Lowering input
	6	DU	Diagnostic output

EC axial fan

with brushless DC motor

Automotive

Charts: Air flow



Measurement: LU-141102
Measurement: LU-141094
Measurement: LU-141100

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

	U	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	32	2600	260	8.01			3425	0
2	32	2470	263	8.23			2805	99
3	32	2305	264	8.24			2000	195
4	32	2190	265	8.27			1295	254
5	26	2600	250	9.60	76	84	3425	0
6	26	2505	272	10.47	74	83	2830	100
7	26	2325	273	10.48	73	81	2020	200
8	26	2215	274	10.54	74	82	1310	260
9	16	1900	101	6.29			2495	0
10	16	1865	113	7.09			2105	55
11	16	1830	130	8.14			1580	122
12	16	1790	143	8.89			1055	169

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow · p_{fs} = Pressure increase