W3G385-BV44-01

EC axial fan

with brushless DC motor

Automotive



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W3G385-BV44-01**	
Motor	**M3G084-BF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2600
Power consumption	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 = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	44.9	30.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.8	40
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.27
09 Air flow q_v	m³/h	2110
09 Pressure increase p_{fs}	Pa	186
10 Speed (rpm) n	min^{-1}	2340
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-141094

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Technical description

Weight	2.7 kg
Fan size	385 mm
Impeller material	PA plastic
Fan housing material	PA plastic
Number of blades	7
Airflow direction	"V"
Balancing grade according to DIN ISO 1940-1	G 10
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP24 KM; (motor); electronics IP6K9K
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F4-1
Ambient temperature note	Over +95 °C with power derating
Max. permitted ambient temp. for motor (transport/storage)	+110 °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; (sealed)
Life expectancy	40,000 h (typical)
Technical features	- Lowering input - Fault output (high-side switch max. 30 mA) - INVLIN (inverse linear control input) - Power limiter - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Overvoltage detection - Thermal overload protection for electronics - Line undervoltage detection
EMC regulations	ECE R10 Rev. 3
Electrical hookup	With plug; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Approval	E1; EAC

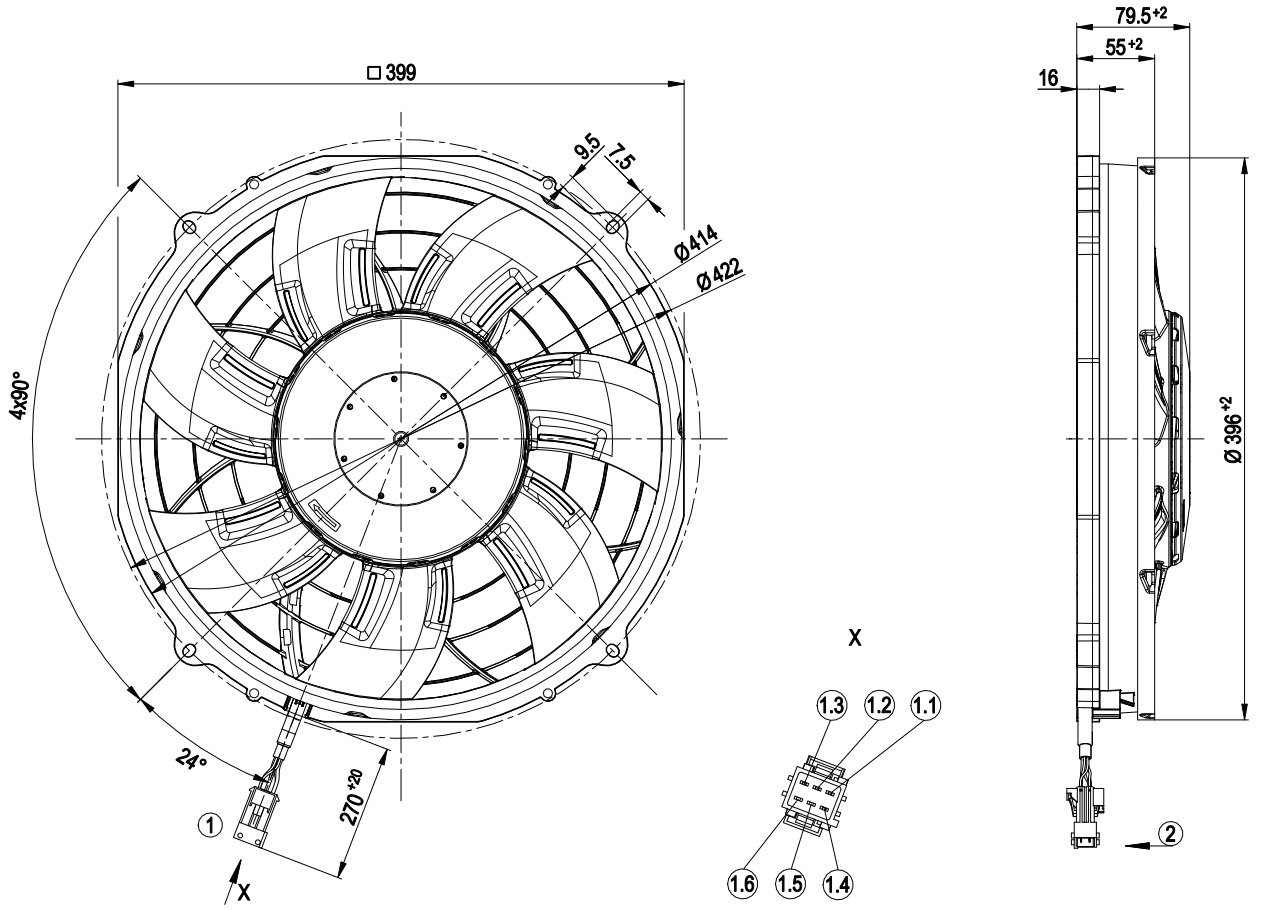
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Product drawing



1	Cable with 6-pole coded plug tyco Junior Power Timer 1-962349-1
	cable (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"

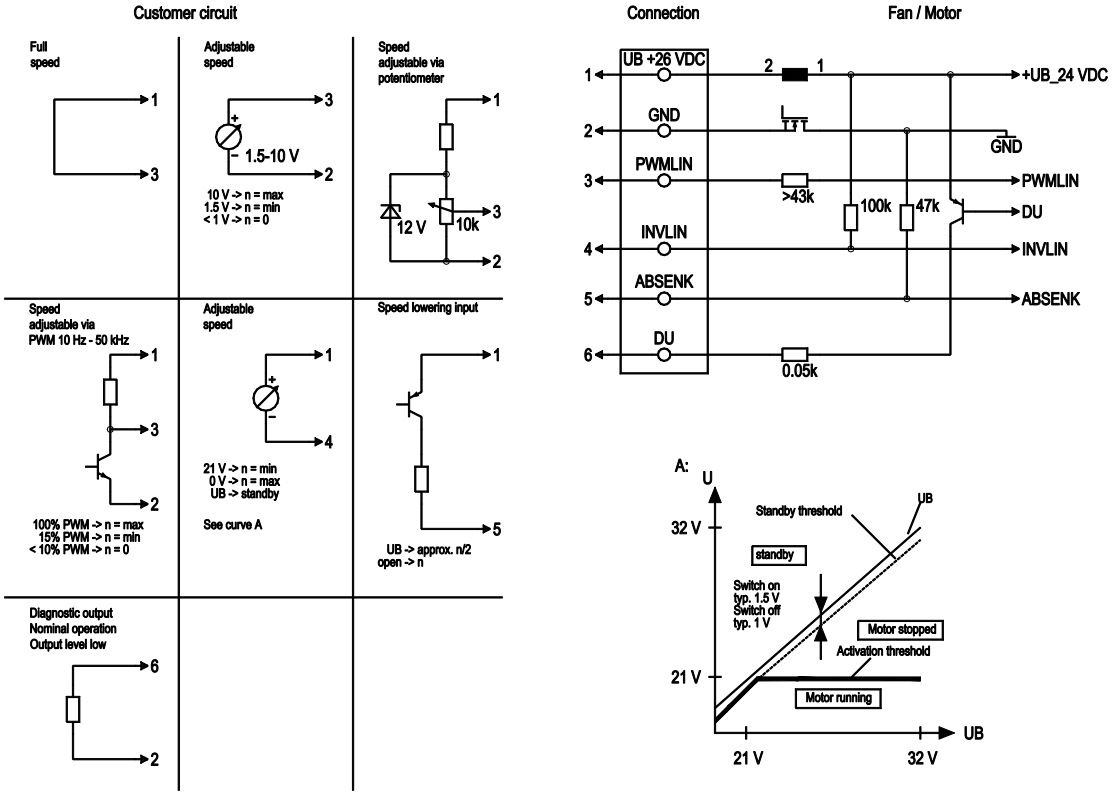
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Connection diagram



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

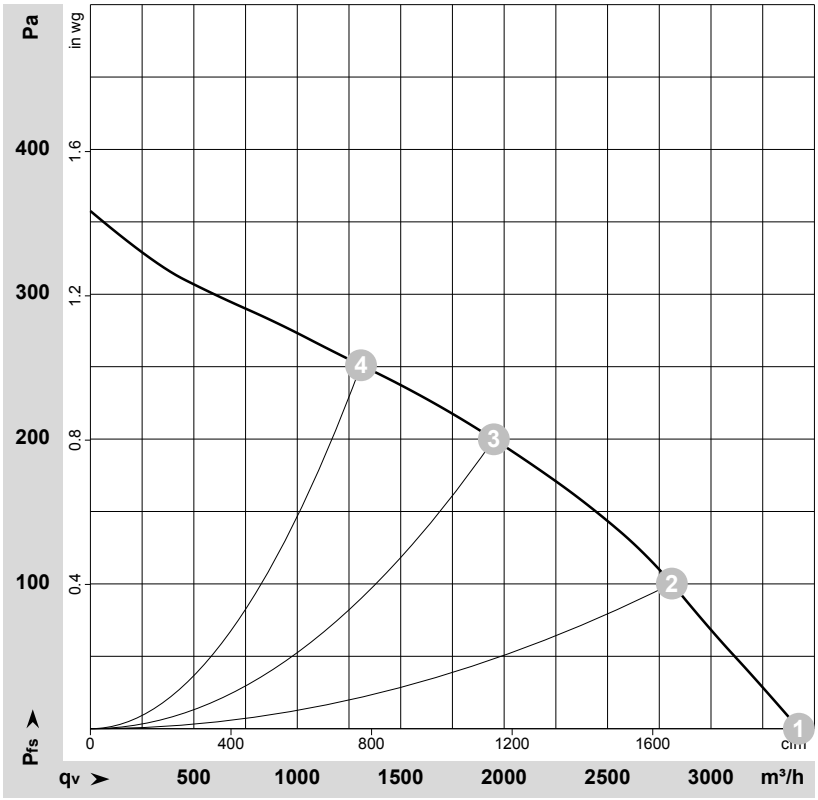
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-141094-1

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

	U	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	26	2600	250	9.60	76	84	3425	0	2015	0.00
2	26	2495	273	10.47	74	83	2810	100	1655	0.40
3	26	2315	273	10.50	73	81	1950	200	1150	0.80
4	26	2215	274	10.54	74	82	1310	250	770	1.00

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side · qv = Air flow
p_{fs} = Pressure increase

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