W3G385-CT53-61

EC axial fan

Automotive

W3G385-CT53-61 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**W3G385-CT53-61**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	13
Nominal voltage range	VDC	9 .. 16
Type of data definition		fa
Speed	min-1	3100
Power input	W	445
Current draw	A	34
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70/105

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}	%	43.4	28	32
Efficiency grade N		51.4	36	40
Power input P_e	kW	0.54		
Air flow q_v	m³/h	2710		
Pressure increase p_{fs}	Pa	284		
Speed n	min-1	2930		

Data definition with optimum efficiency. LU-141921
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	3.1 kg
Size	385 mm
Material of blades	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 66 / 69 K
Insulation class	"B"
Humidity class	F4-1
Note ambient temperature	Over +70° C with power derating
Max. permissible ambient motor temp. (transp./ storage)	+105 °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	- Fault output (high-side switch max. 30 mA) - 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

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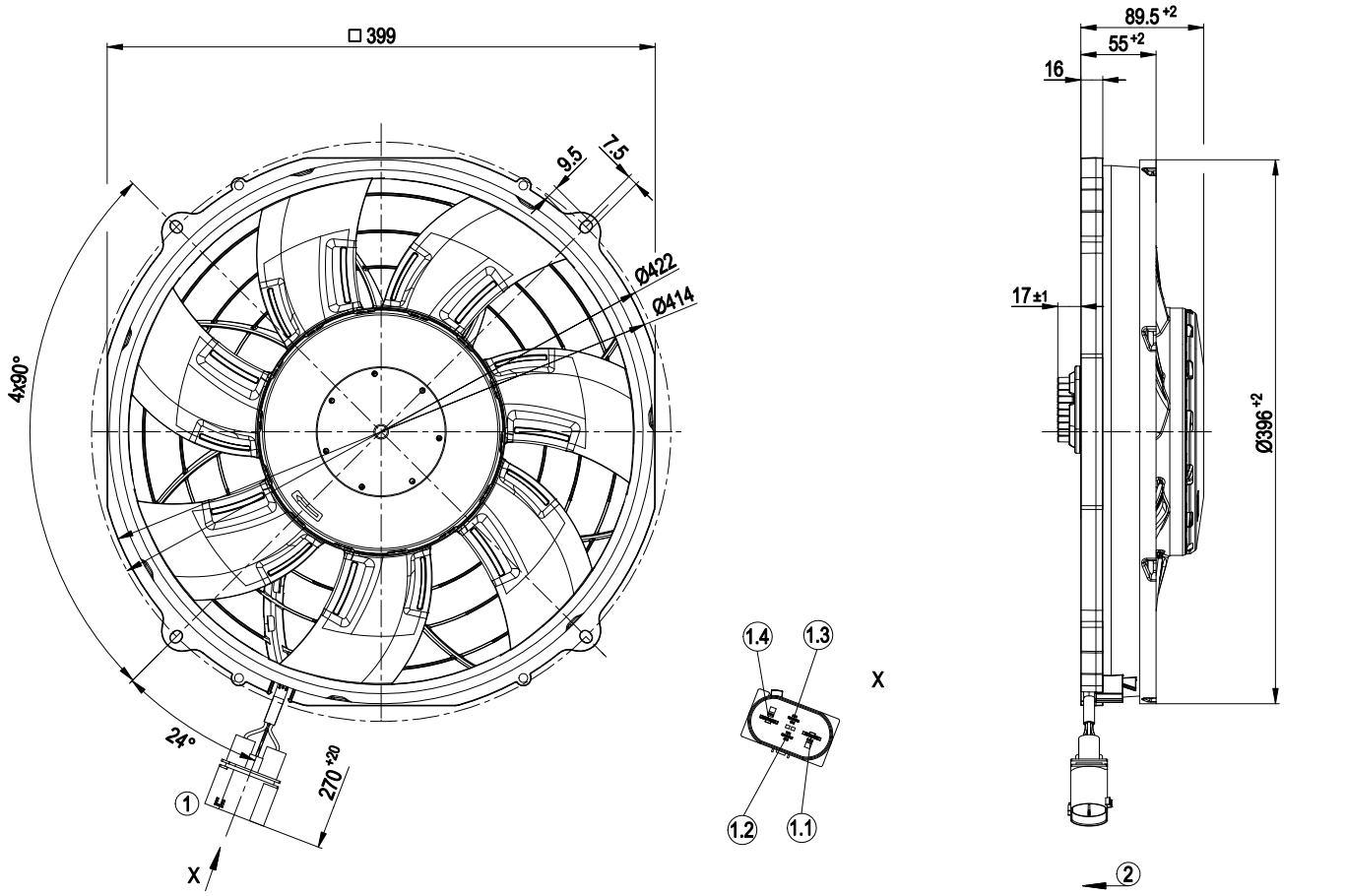
Product drawing



1	Connection line with plug FCI 30531001, 4-pole, coded, mating connector FCI 60411901/30432101 (not included in scope of delivery)
1.1	+UB (black)
1.2	Diagnostic output (white)
1.3	PWM/LIN (yellow)
1.4	GND (brown)
2	Direction of air flow "V"

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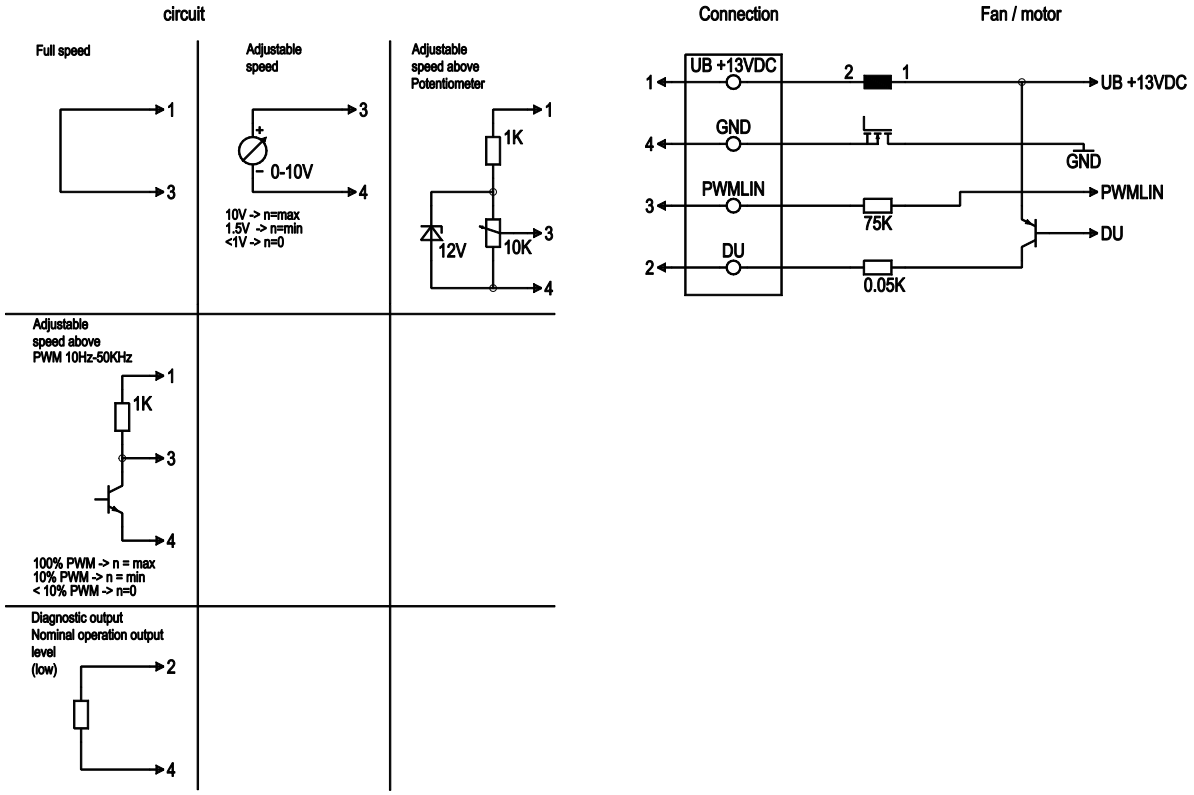
Connection screen



No.	Conn.	Designation	Function / assignment
	1	UB +13 VDC	Power supply 13 VDC
	2	DU	Diagnostic output
	3	PWMLIN	Analogue voltage control input 0 -10 V or PWM
	4	GND	Power supply GND, reference ground

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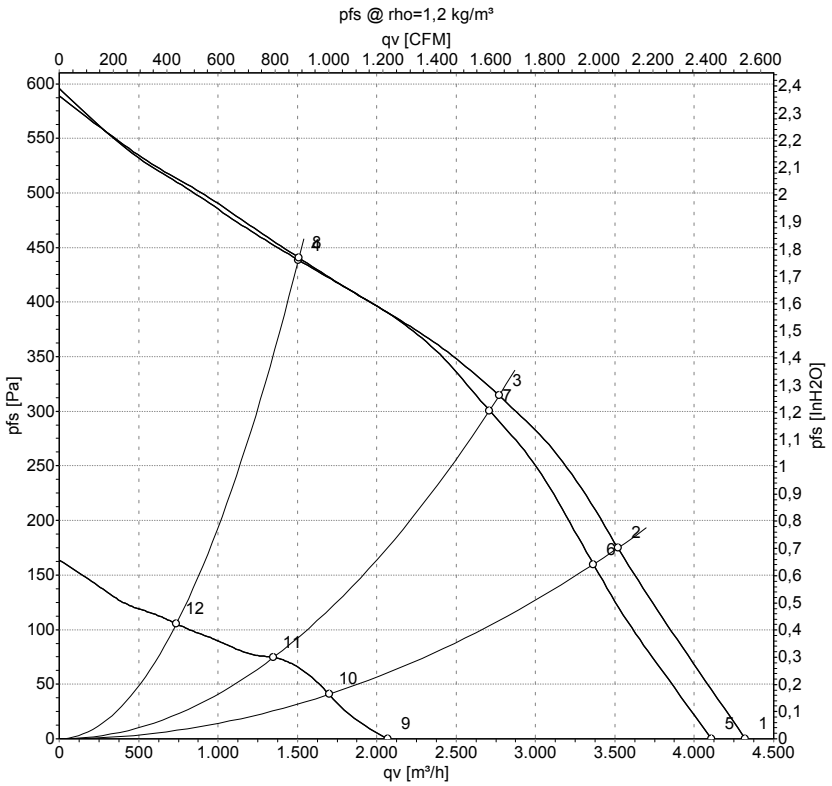
Charts: Air flow



Measurement: LU-141926
Measurement: LU-141921
Measurement: LU-141927

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	16	3255	517	32.33			4320	0
2	16	3165	565	35.41			3520	174
3	16	3000	586	36.82			2770	315
4	16	2815	590	36.29			1510	440
5	13	3100	445	34.00	81	89	4110	0
6	13	3000	487	37.64	80	89	3365	160
7	13	2930	544	41.85	78	87	2710	300
8	13	2815	590	45.55	81	89	1510	440
9	9	1560	62	11.78			2070	0
10	9	1520	81	15.03			1700	41
11	9	1490	66	12.49			1350	75
12	9	1380	82	13.04			740	105

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