W3G385-CT53-61

EC axial fan

with brushless DC motor

Automotive



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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 (rpm)	min^{-1}	3100
Power input	W	445
Current draw	A	34
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70
- with power derating up to	°C	105

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

Data in accordance with ecodesign regulation EU 327/2011 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	43.4	32
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.4	40
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.54
09 Air flow q_v	m³/h	2710
09 Pressure increase p_{fs}	Pa	284
10 Speed (rpm) n	min^{-1}	2930
11 Specific ratio*		1.00

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

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

LU-141921

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Technical features

Mass	3.1 kg
Size	385 mm
Motor size	84
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	Motor IP24 KM, electronics IP6K9K (mating connector fitted)
Insulation class	"B"
Humidity (F) / environmental protection class (H)	H4
Max. permissible ambient motor temp. (transp./ storage)	+105 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensation drainage 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 connection	Connector with connection line; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Lateral
Approval	R10; EAC
Remark	Type approval number – 057918

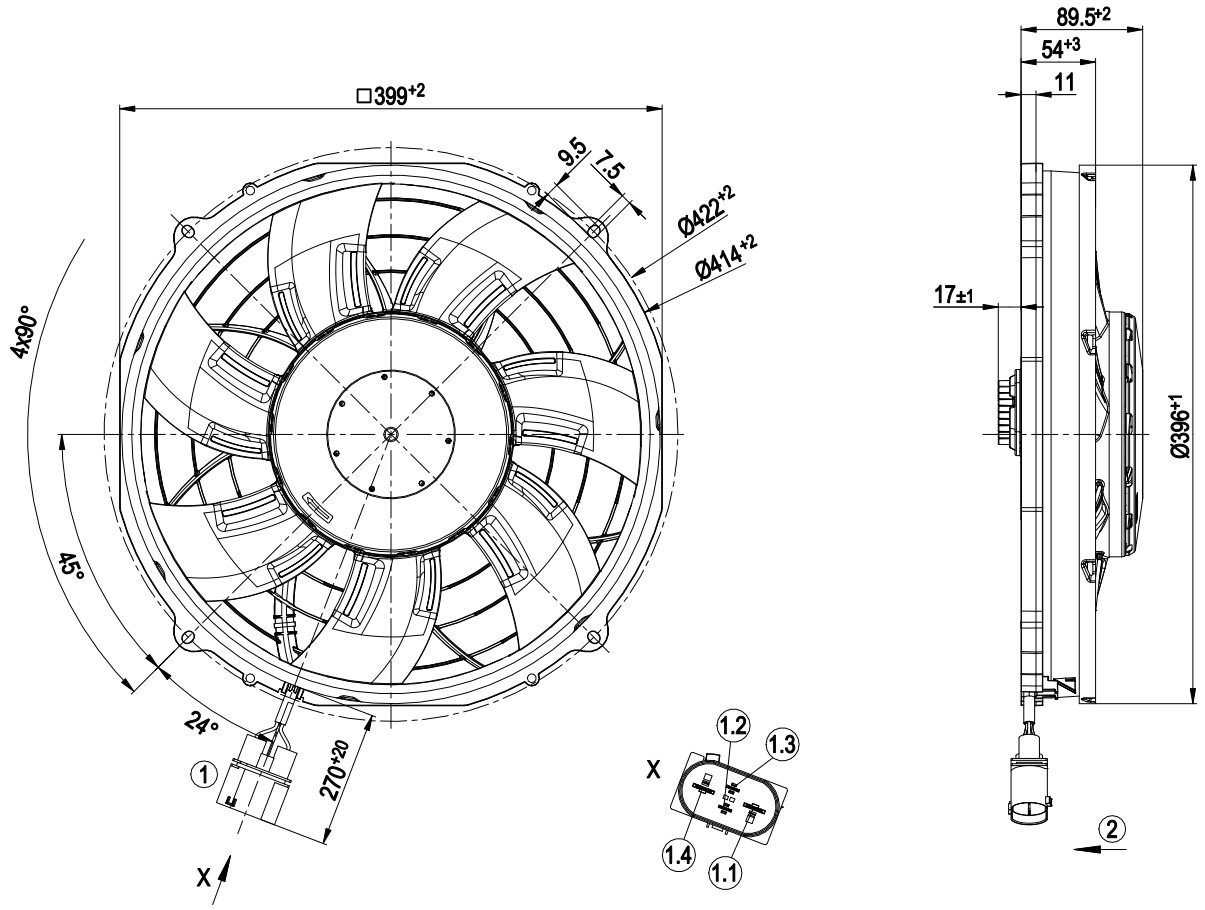
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Product drawing



1	Connection line FLRYW 2x 6.0 mm², 2x 1.0 mm²
	4-pole connector housing Amphenol F353200, 2x flat connector FCI 60170261, 2x flat connector TE 964310-1, 2x seal FCI 60993308, 2x seal TE 1394511-1
1.1	+ UB
1.2	Diagnostic output
1.3	PWM/LIN
1.4	GND
	4-pole mating connector Amphenol F004200, 2x flat connector FCI 60170261, 2x flat connector TE 927831-1, 2x seal FCI 60993308, 2x seal TE 1394511-1
2	Direction of air flow "V"

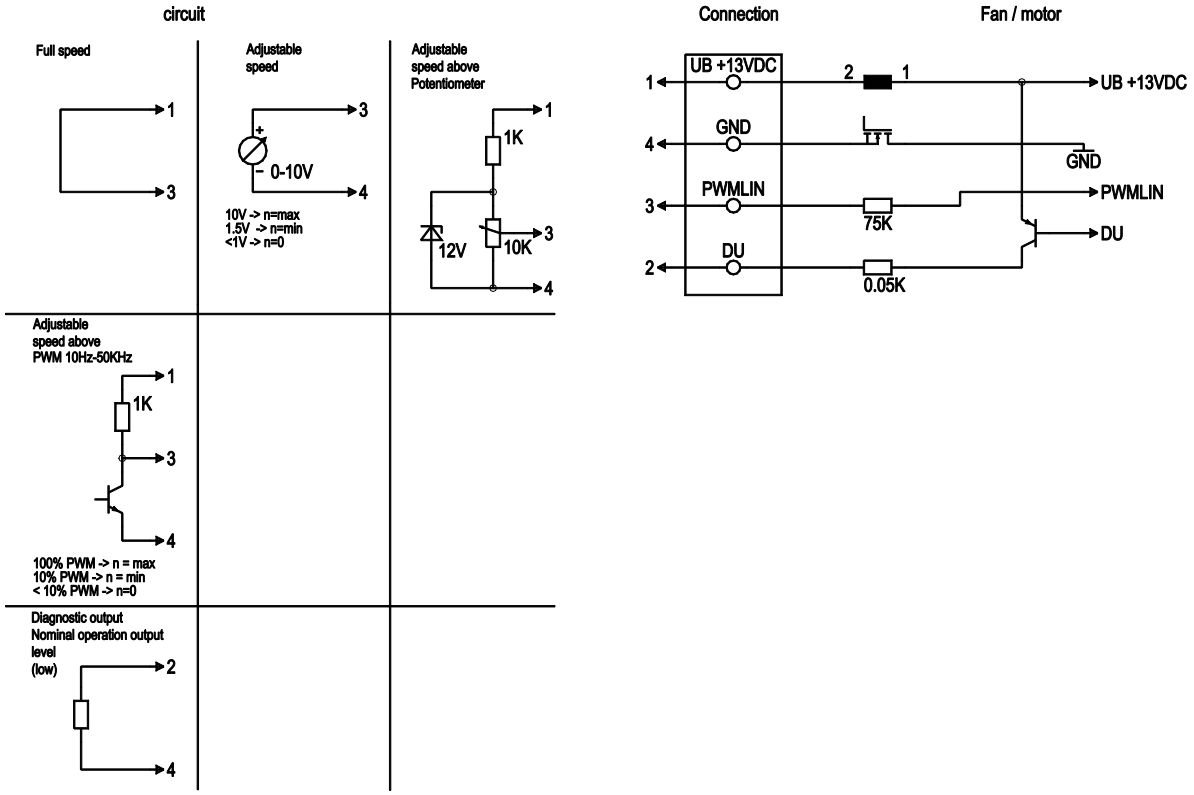
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Connection screen



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

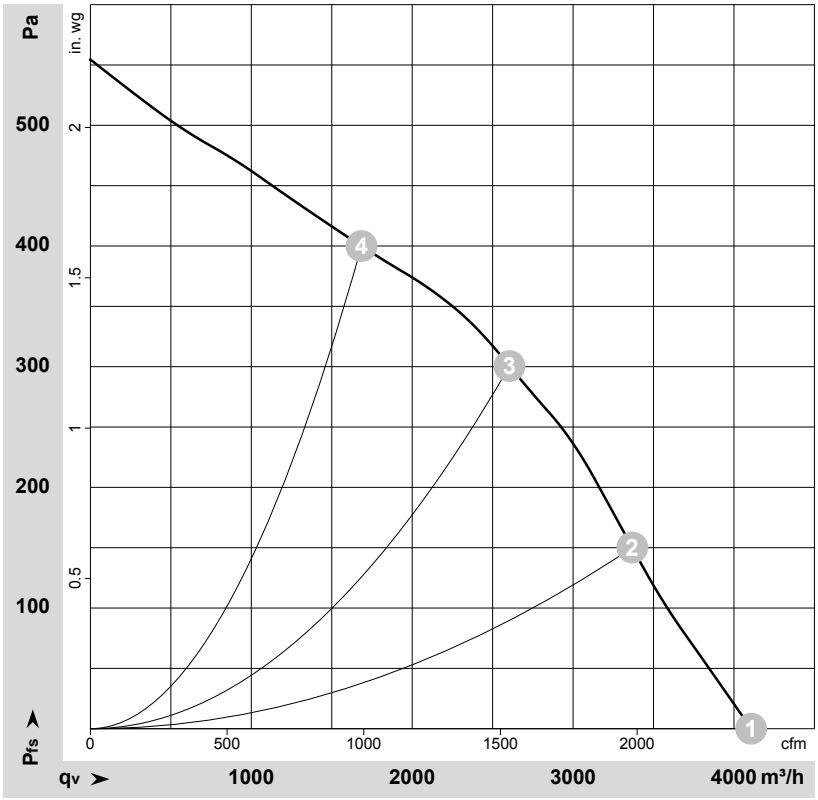
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Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-141921-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	13	3100	445	34.00	81	89	4105	0	2415	0.00
2	13	3000	487	37.62	80	89	3370	150	1980	0.60
3	13	2935	556	42.64	78	87	2605	300	1535	1.20
4	13	2840	591	45.51	80	88	1685	400	990	1.61

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

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