W3G385-CT65-21

EC axial fan

with brushless DC motor

Automotive



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Nominal data

Type	**W3G385-CT65-21**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3300
Power consumption	W	525
Current draw	A	20
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85/110

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

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	44.6	32.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		52.3	40
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.61
09 Air flow q_v	m³/h	2705
09 Pressure increase p_{fs}	Pa	329
10 Speed (rpm) n	min^{-1}	3065
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-141959

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Technical description

Weight	3.1 kg
Size	385 mm
Motor size	84
Blade 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	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H4
Ambient temperature note	Over +85 °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	- Fault output (high-side switch max. 30 mA) - 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	Connector with cable; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Approval	EAC; E1
Comment	Type approval number – 036716

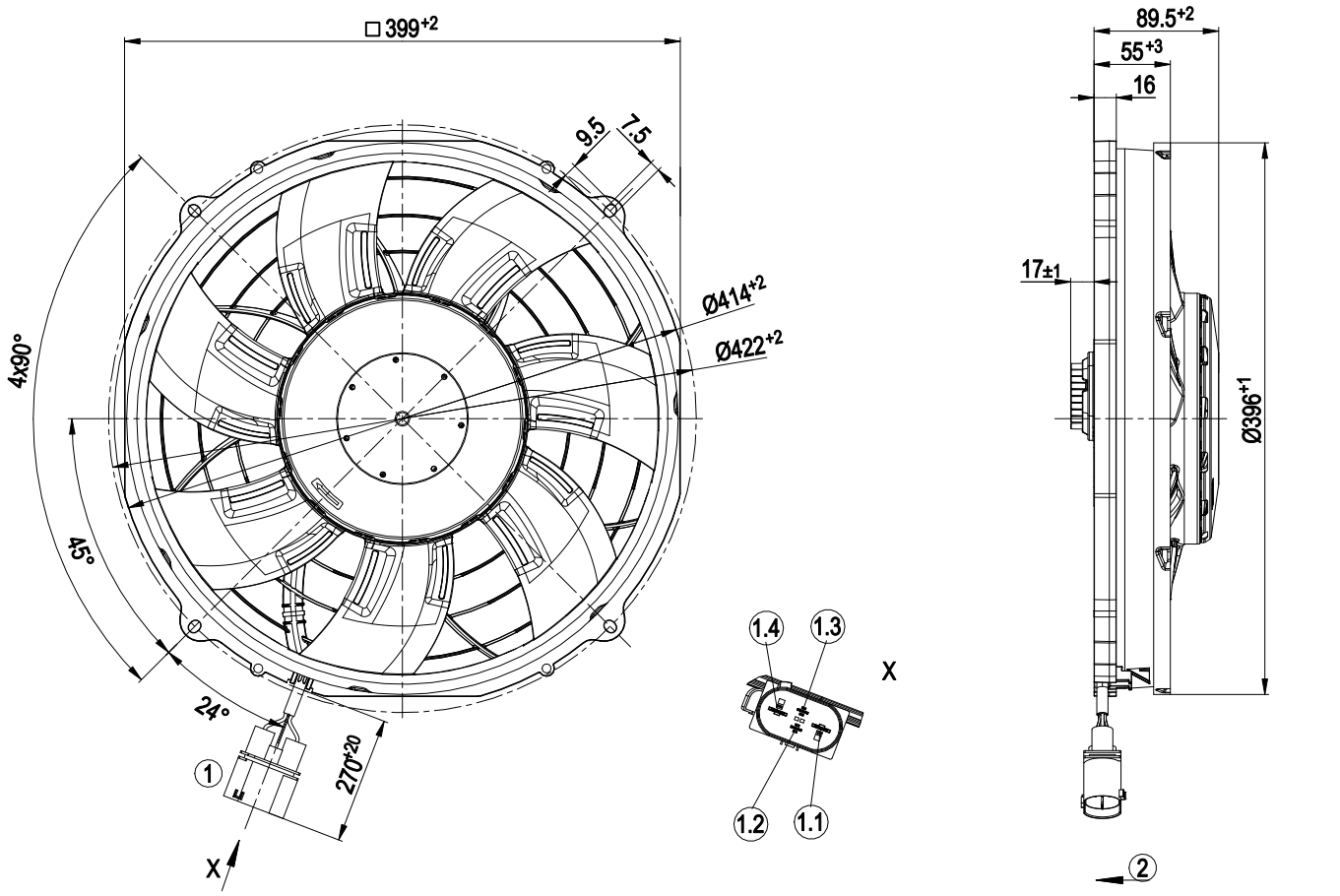
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Product drawing



1	Cable FLRYW 2x 6.0 mm², 2x 1.0 mm²
	4-pole connector housing Amphenol F353200, 2x flat plug FCI 60170261, 2x flat plug 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 plug FCI 60170261, 2x flat plug TE 927831-1, 2x seal FCI 60993308, 2x seal TE 1394511-1
2	Airflow direction "V"

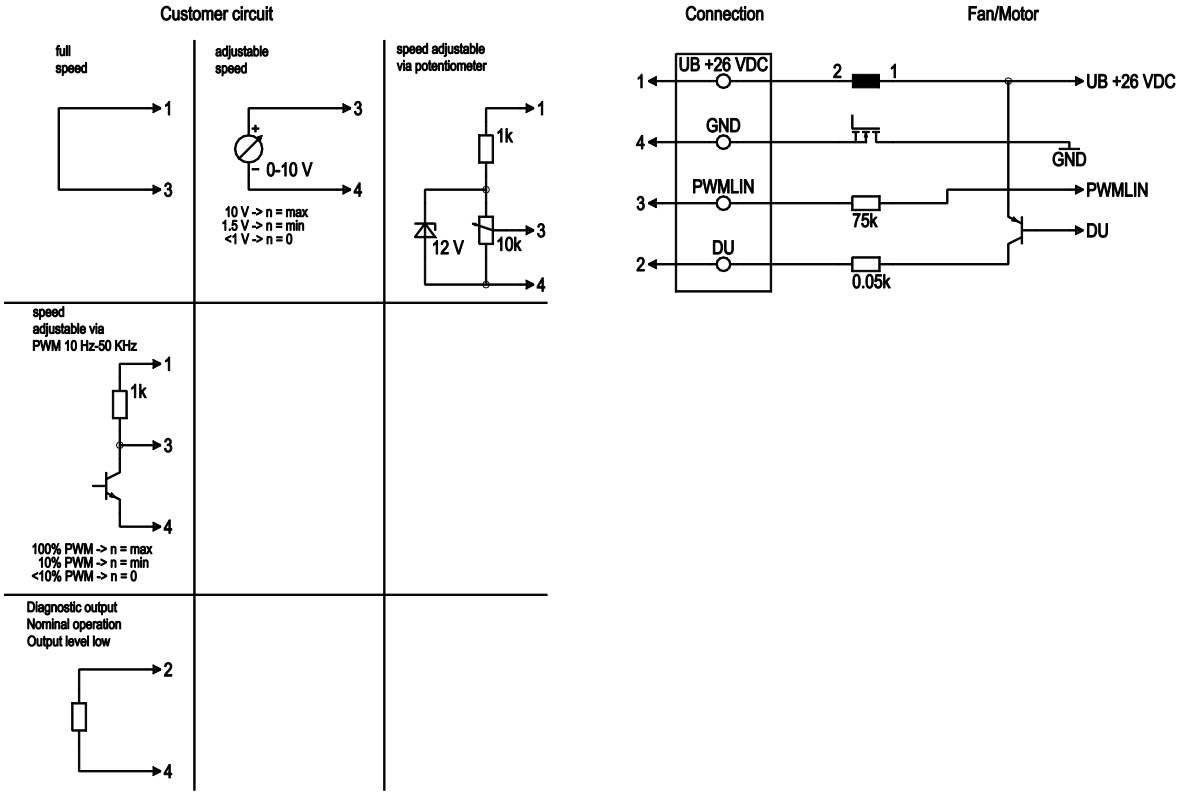
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Connection diagram



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

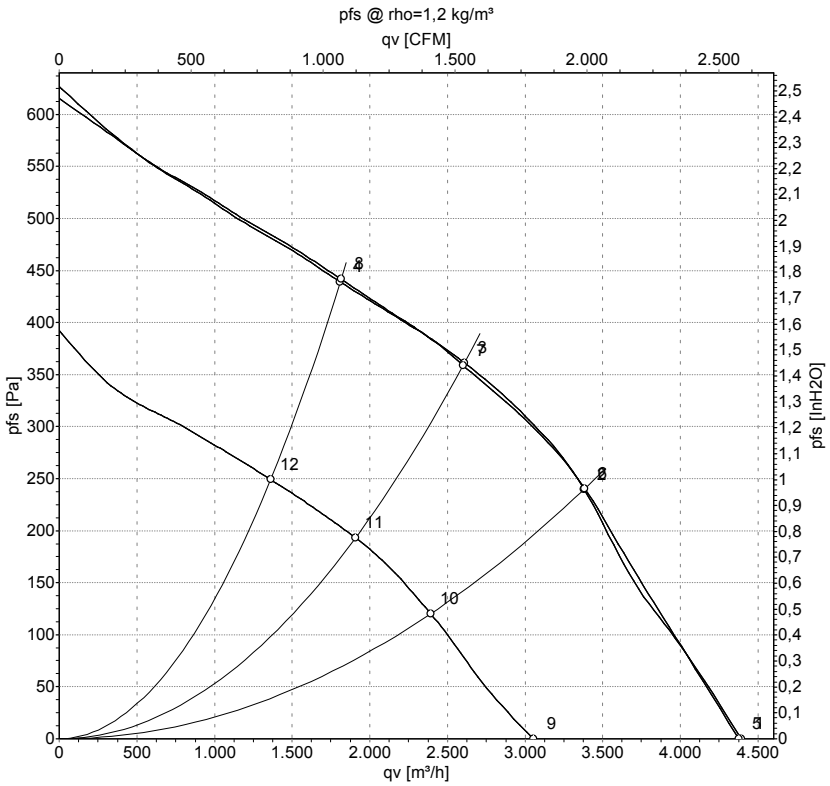
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Curves: Air performance



Measurement: LU-141915-1
Measurement: LU-141959-1
Measurement: LU-141916-1

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}	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	32	3300	525	17.00			4390	0	2585	0.00
2	32	3180	615	19.40			3380	244	1990	0.98
3	32	3050	610	19.82			2610	360	1535	1.45
4	32	2920	610	20.05			1810	440	1065	1.77
5	26	3300	525	20.00	83	90	4390	0	2585	0.00
6	26	3180	615	23.68	81	89	3380	240	1990	0.96
7	26	3050	610	23.45	80	88	2600	360	1530	1.45
8	26	2920	610	23.59	80	88	1810	440	1065	1.77
9	16	2325	183	11.42			3055	0	1795	0.00
10	16	2255	212	13.30			2395	120	1410	0.48
11	16	2230	234	14.68			1905	193	1120	0.77
12	16	2205	253	15.82			1360	249	800	1.00

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

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