

W3G385-CT65-21

# EC axial fan

with brushless DC motor

Automotive



W3G385-CT65-21 ebmpapst Datasheet

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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 <sup>-1</sup>	3300
Power consumption	W	525
Current draw	A	20
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85
-with power derating to	°C	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 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	44.7	32.3	09 Power consumption $P_e$	kW	0.61
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	2705
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	329
04 Efficiency grade N		52.4	40	10 Speed (rpm) n	min <sup>-1</sup>	3065
05 Variable speed drive		Yes		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 =  $1 + p_s / 100\,000\text{ Pa}$

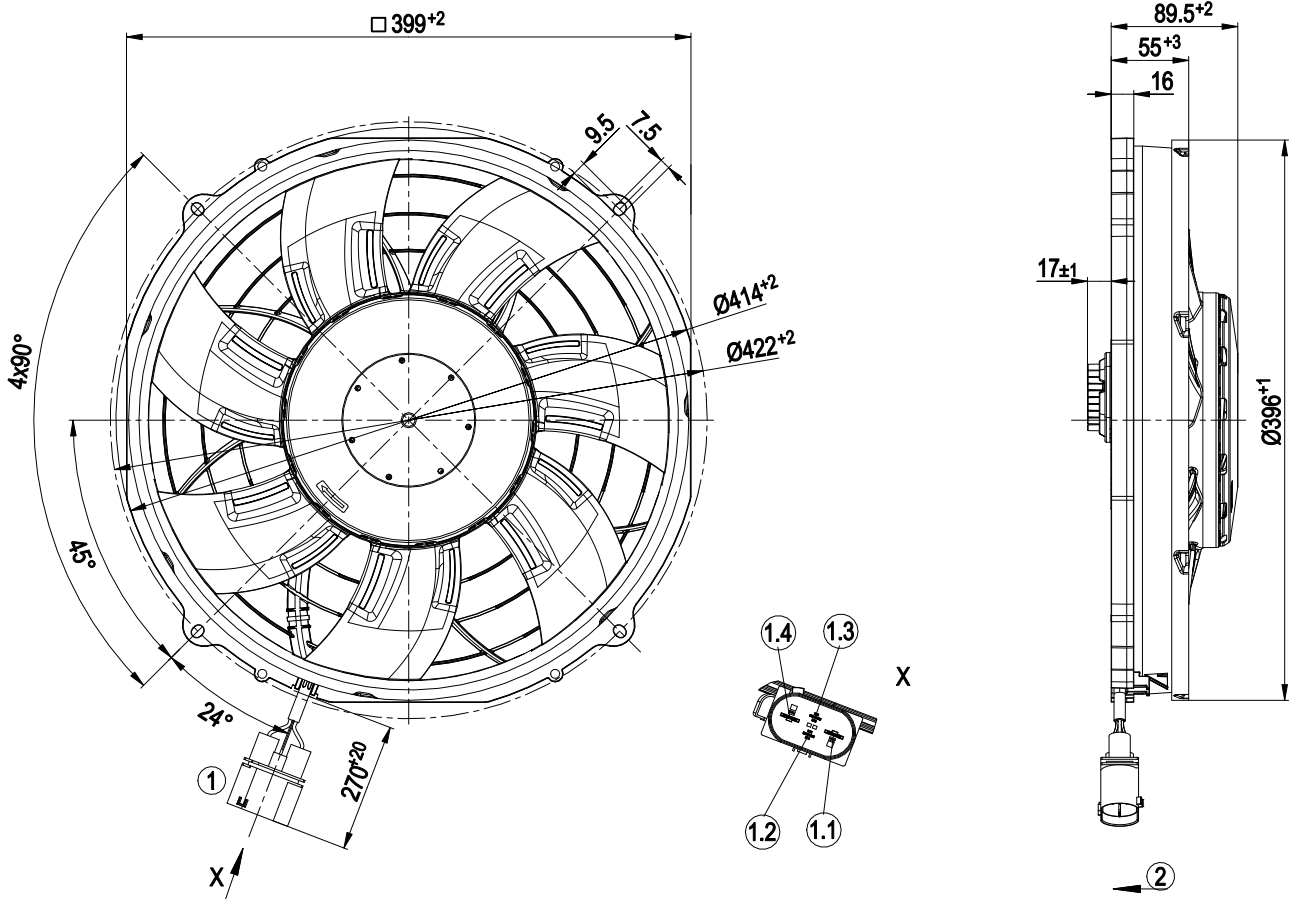
LU-141959



## Technical description

Weight	3.2 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 21940-11	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	<ul style="list-style-type: none"> <li>- Fault output (high-side switch max. 30 mA)</li> <li>- Power limiter</li> <li>- Load dump (58 V)</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Temperature derating</li> <li>- Overvoltage detection</li> <li>- Thermal overload protection for electronics</li> <li>- Line undervoltage detection</li> </ul>
EMC regulations	According to ECE R10 Rev. 5
Electrical hookup	Connector with cable; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Approval	E1; EAC
Comment	Type approval number – 058899

Product drawing



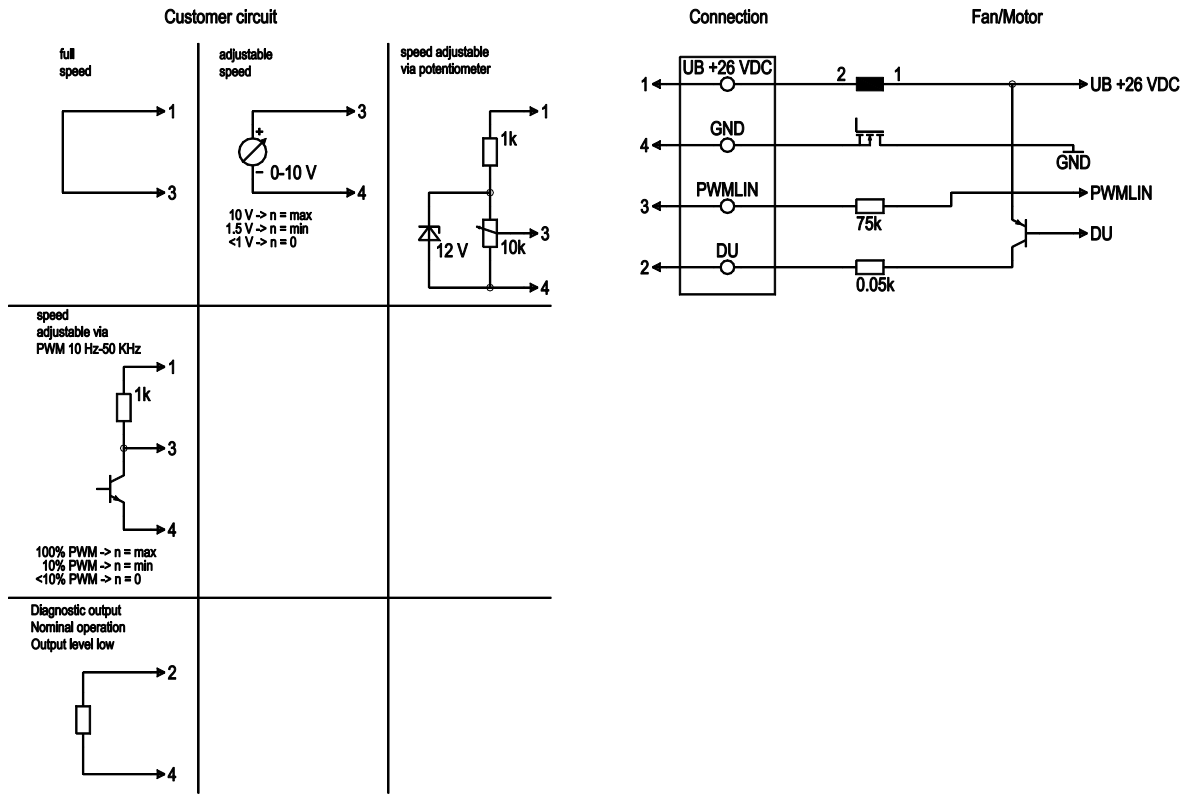
1	Cable FLRYW 2x 6.0 mm <sup>2</sup> , 2x 1.0 mm <sup>2</sup>
	4-pole connector housing Amphenol F353200, 2x flat plug FCI 60170261, 2x flat plug TE 964310-1, 2x seal FCI 60993308, 2x seal TE 1394511-1
1.1	+ UB
1.2	Diagnostic output
1.3	PWM/LIN
1.4	GND
	4-pole mating connector Amphenol F004200, 2x flat 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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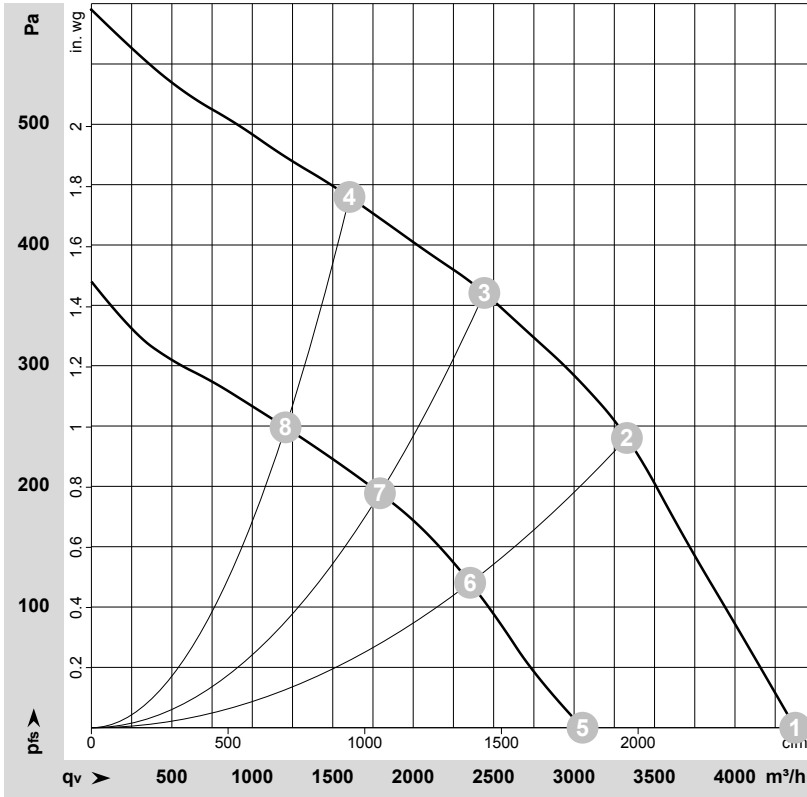
## Connection diagram



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



## Curves: Air performance



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

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 ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	26-32	3300	525	20.00*	83	90	4375	0	2575	0.00
2	26-32	3170	618	23.80*	81	88	3330	240	1960	0.96
3	26-32	3030	610	23.40*	80	88	2440	360	1435	1.45
4	26-32	2900	613	23.60*	82	89	1605	440	945	1.77
5	16	2325	183	11.42			3055	0	1795	0.00
6	16	2255	215	13.44			2355	120	1385	0.48
7	16	2220	237	14.88			1795	194	1055	0.78
8	16	2200	258	16.15			1205	249	710	1.00

U = Voltage · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · \* = Current measured at nominal voltage · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

