W3G385-CT65-81

EC axial fan

with brushless DC motor

for rail applications

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Nominal data

Type	**W3G385-CT65-81**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3140
Power consumption	W	450
Current draw	A	17.7
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

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 UL94 V0
Fan housing material	PA plastic UL94 V0
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	H3
Max. permitted ambient temp. for motor (transport/storage)	+85 °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 - Set value input Lin 0-10 VDC / PWM (1.4 V corresponds to V=min, 10 V corresponds to V=max) - Temperature derating - Overvoltage detection - Thermal overload protection for electronics
EMC regulations	According to EN 50121-3-2
Electrical hookup	Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Protection class	III
Conformity with standards	EN 45545-2, HL3: 2013; EN 50155: 2008; EN 61373, Cat. 1B: 2010
Approval	EAC

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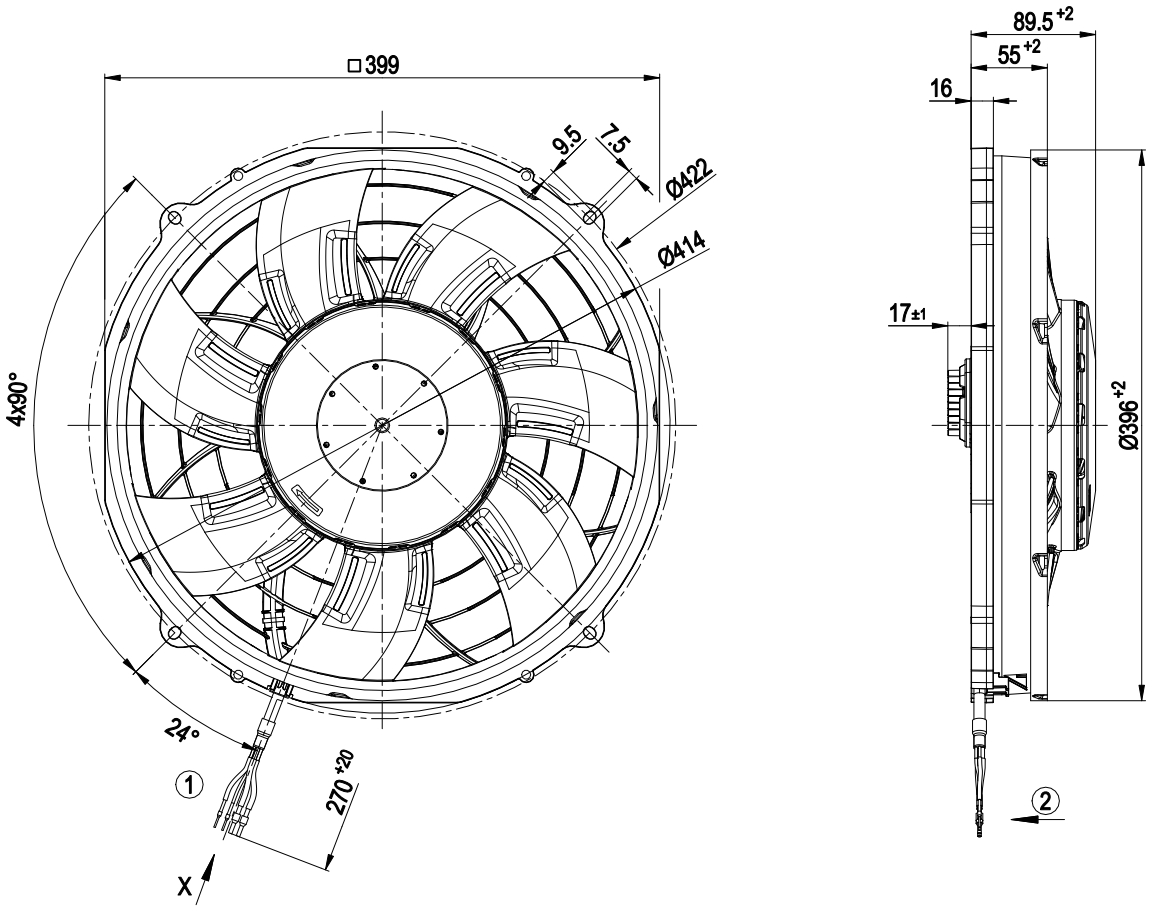
Product drawing



1	Cable halogen-free, BETAtrans® 3 GKW 6 mm², 2x crimped ferrules (brown, black), BETAtrans® 3 GKW 1 mm², 2x crimped ferrules (yellow, white)
2	Direction of air flow "V"

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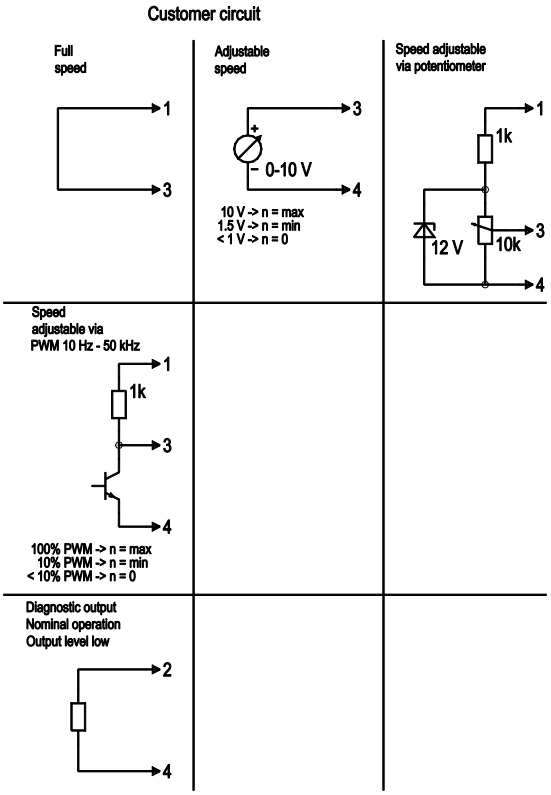
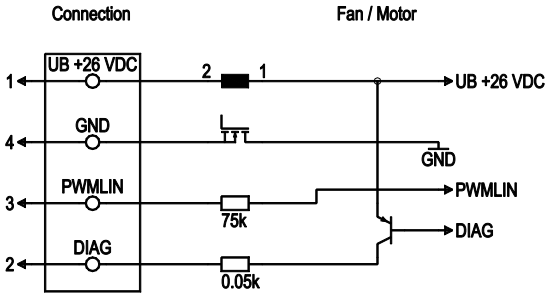
Connection diagram





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

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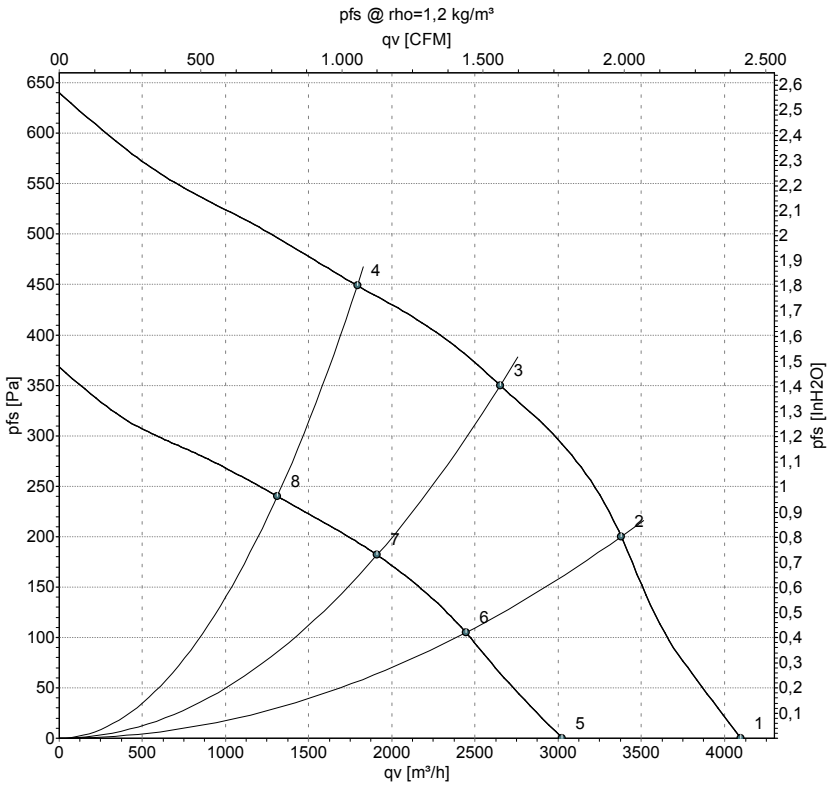
Curves: Air performance



Measurement: LU-157492-1
Measurement: LU-157558-1

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	26-32	3140	450	17.70*	81	88	4095	0	2410	0.00
2	26-32	3125	562	22.60*	81	88	3380	200	1990	0.80
3	26-32	3060	622	25.20*	80	88	2650	350	1560	1.41
4	26-32	2960	649	26.30*	82	89	1790	450	1055	1.81
5	16	2335	189	11.34	73	81	3025	0	1780	0.00
6	16	2270	214	12.96	72	80	2445	106	1440	0.43
7	16	2220	231	14.12	72	80	1910	182	1125	0.73
8	16	2165	247	15.19	74	81	1310	240	770	0.96

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · * = Current measured at nominal voltage · 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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