W3G385-CT53-47

CARRIER TRANSICOLD INDUSTRIES

54-00687-00

EC axial fan

with brushless DC motor

Automotive



ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**W3G385-CT53-47**
Motor	**M3G084-CF**

Nominal voltage	VDC	13
Nominal voltage range	VDC	9 .. 16
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3100
Power consumption	W	445
Current draw	A	34
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70
-with power derating to	°C	105

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

EC axial fan

with brushless DC motor
Automotive

Technical description

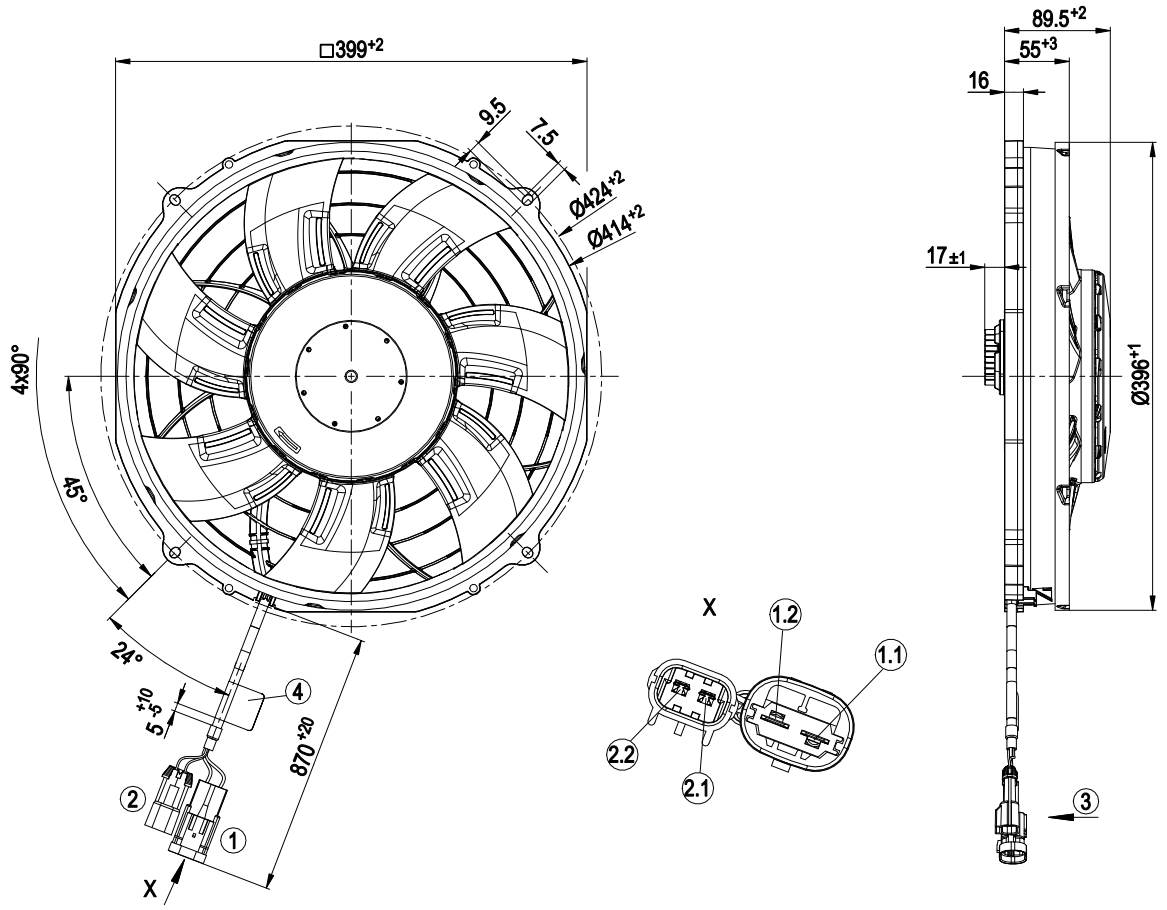
Weight	3.1 kg
Size	385 mm
Motor size	84
Impeller material	PA plastic
Fan housing material	PA plastic
Number of blades	7
Airflow direction	V
Balancing grade according to DIN ISO 21940-11	G 10
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H4
Max. permitted ambient temp. for motor (transport/storage)	+80 °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	- Load dump protection - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Thermal overload protection for electronics - Line undervoltage detection - Reverse polarity protection
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
Protection class assignment	III; Requires supply with safety extra-low voltage SELV. This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Approval	E1
Comment	Type approval number – 057918

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan

with brushless DC motor
Automotive

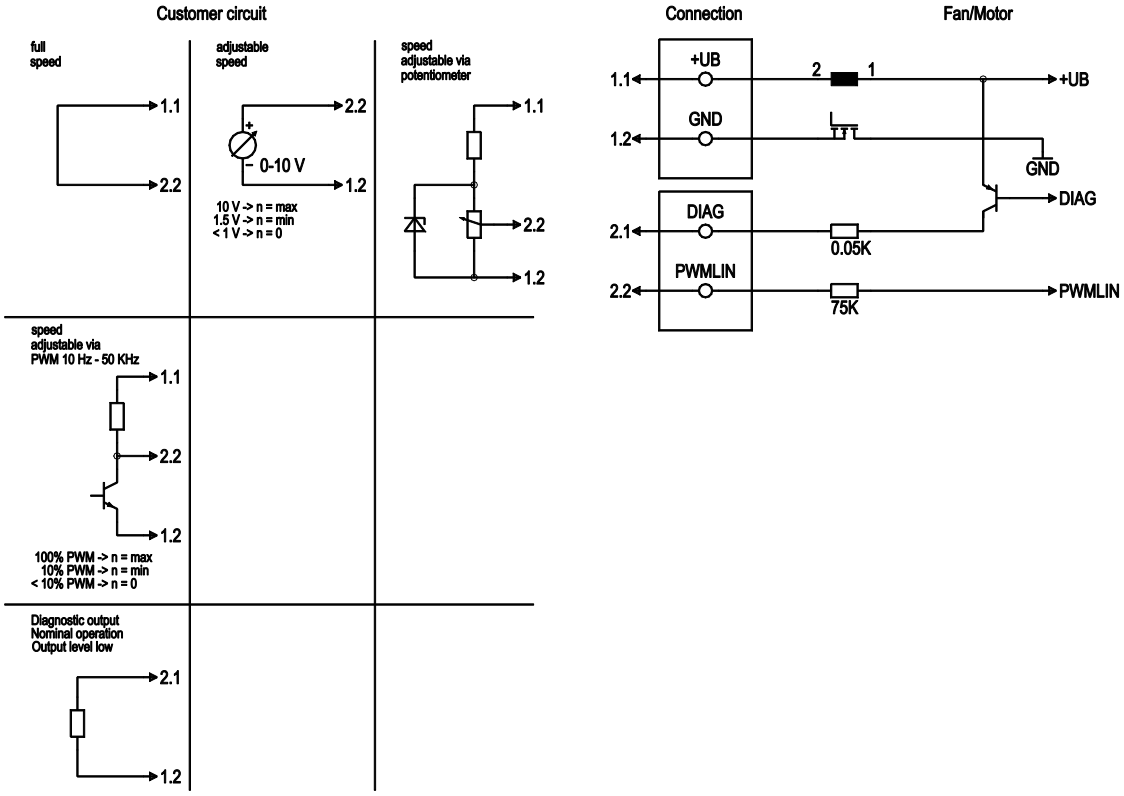
Product drawing



1	Cable FLRYW 2x 6.0 mm²
	2-pole connector housing TE1544334-1, 2x flat plug TE 1544332-1, 2x seal TE 1544316-1
1.1	+ UB (white)
1.2	GND (green)
	2-pole mating connector TE 1544317-1, 2x flat plug TE 1544227-1, 2x seal TE 1544316-1
2	Cable FLRYW 2x 1.0 mm²
	2-pole connector housing Aptiv 15300002, 2x flat plug Aptiv 12048159, 2x seal Aptiv 12089444, locking cover Aptiv 15300014
2.1	PWM/LIN (yellow)
2.2	Diagnostic output (white)
	2-pole mating connector Aptiv 15300027, 2x flat plug Aptiv 12077411, 2x seal Aptiv 12089444, locking cover Aptiv 15300014
3	Airflow direction "V"
4	Rating label

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

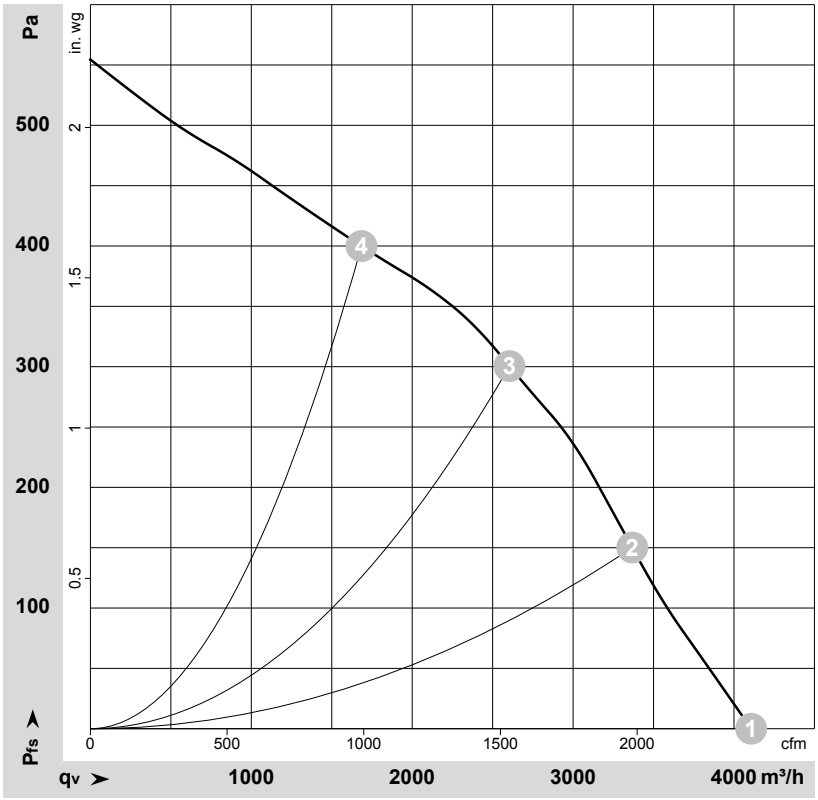
Connection diagram



No.	Conn.	Designation	Function/assignment
	1.1	+UB	Power supply
	1.2	GND	Power supply GND, reference ground
	2.1	DIAG	Diagnostic output
	2.2	PWM/LIN	Analog voltage control input 0-10 V or PWM

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-141921-1

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	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 = 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

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com