W3G300-CT72-90

EC axial fan

sickled blades (S series), single inlet

with full round nozzle, for railway applications

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Nominal data

Type	**W3G300-CT72-90**
Motor	**M3G074-CF**

Nominal voltage	VDC	80
Nominal voltage range	VDC	56 .. 100
Type of data definition		ml
Speed (rpm)	min^{-1}	1530
Power input	W	77
Current draw	A	0.96
Max. back pressure	Pa	70
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60

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

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Technical features

Mass	4.3 kg
Size	300 mm
Motor size	74
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Plastic PA, round sheet-metal plate coated in black
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	A
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP44
Insulation class	"B"
Humidity (F) / environmental protection class (H)	H3
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Run monitoring - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Reverse polarity protection
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 15085-1, CPC3: 2007; EN 50155: 2008; EN 61373, Cat. 1B: 2010; CE
Approval	EAC
Remark	A prerequisite for operation is a Class 1 vehicle electrical system architecture according to EN 50533; if mains potential (e.g. 230 VAC) is passed through the alarm relay, the reinforced insulation property of the SELV signal wires will be lost and they will then only have basic insulation The SELV property (reinforced insulation) is not lost when voltages of up to 110 VDC are passed through the alarm relay.

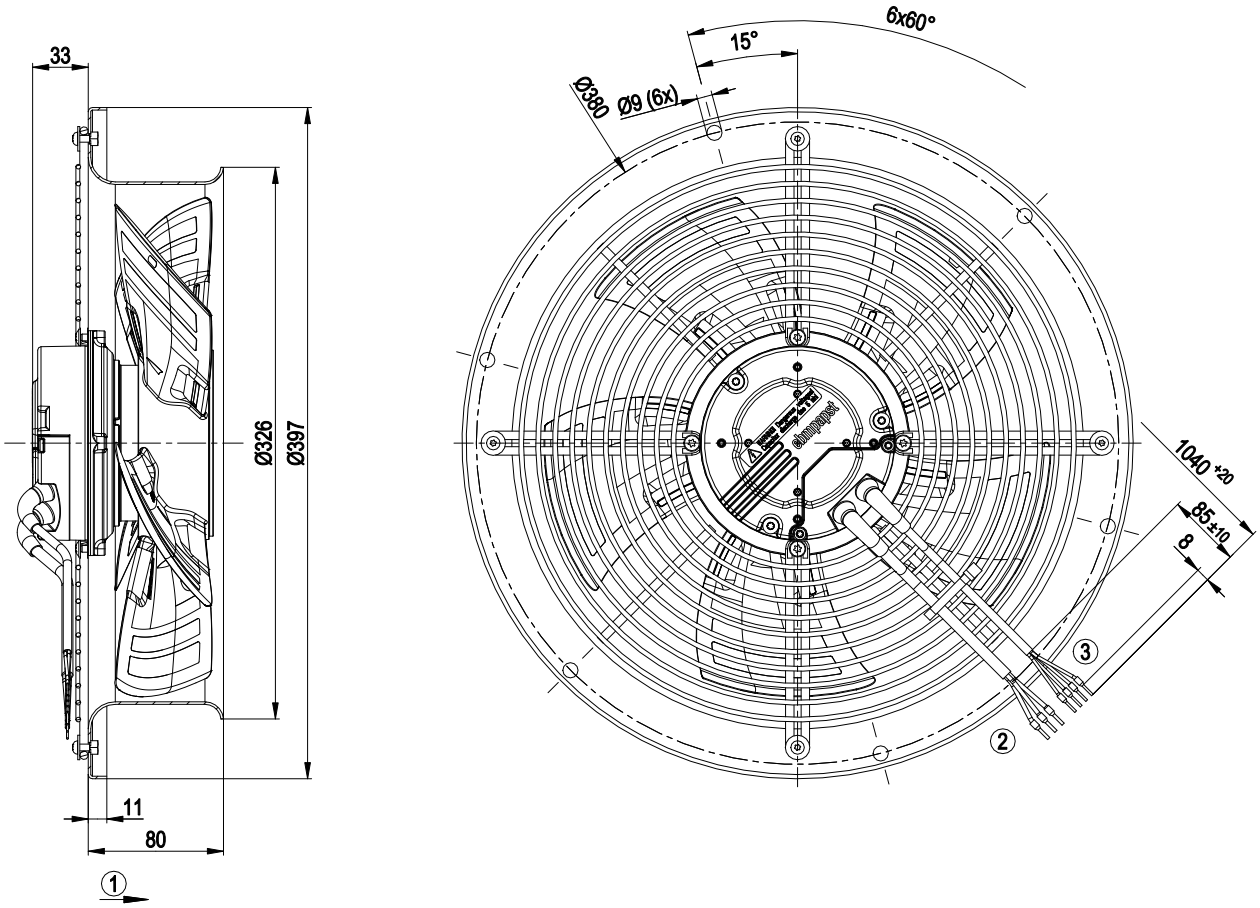
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Product drawing



1	Direction of air flow "A"
2	Connection line, halogen-free, railway application EN 45545, 3x 0.33 mm²
	3x core-end sleeve
3	Connection line, halogen-free, railway application EN 45545, 5G 1.0 mm²
	5x core-end sleeve

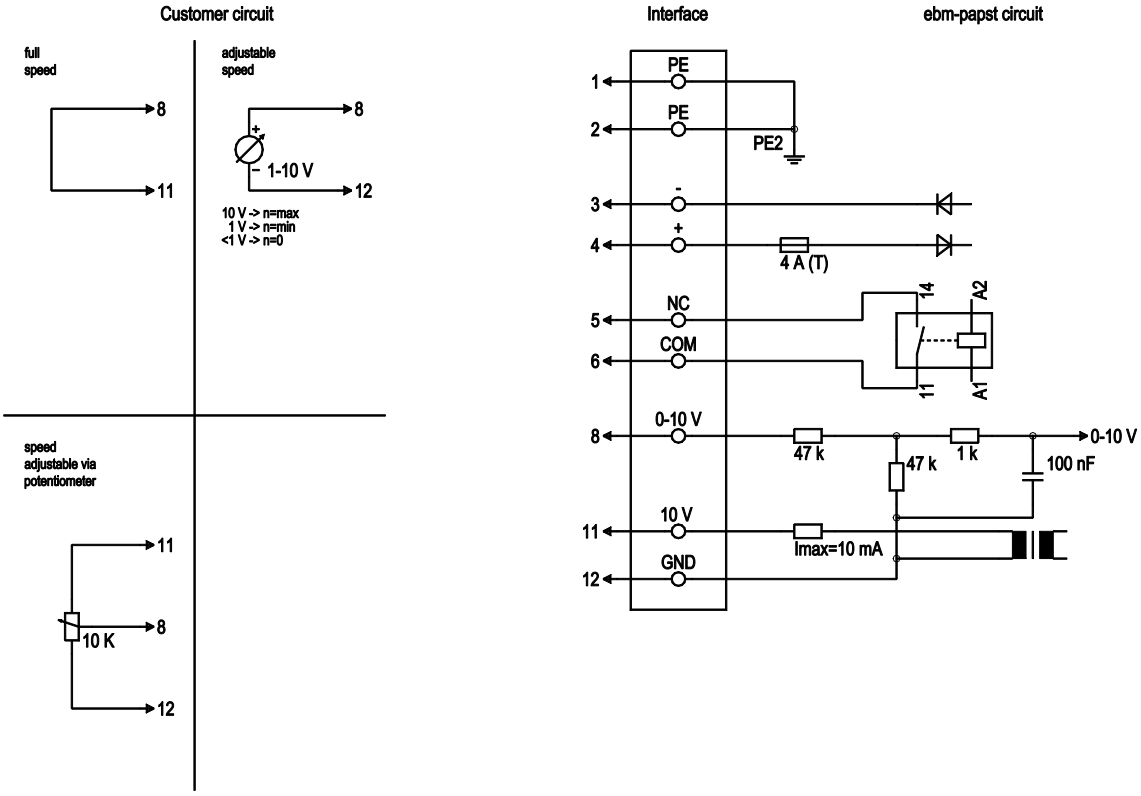
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	-	blue	Power supply, GND
1	4	+	red	Power supply
1	5	NC	white 2	Floating status contact (0.3 A - 110 VDC, 1A - 60 VDC, 3A - 30 VDC), closed at n>= 100 rpm, break for failure
1	6	COM	white 1	Floating status contact, closed at n>= 100 rpm, break for failure
2	8	0-10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kΩ; SELV
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer); SELV
2	12	GND	blue	Reference earth for control interface; SELV

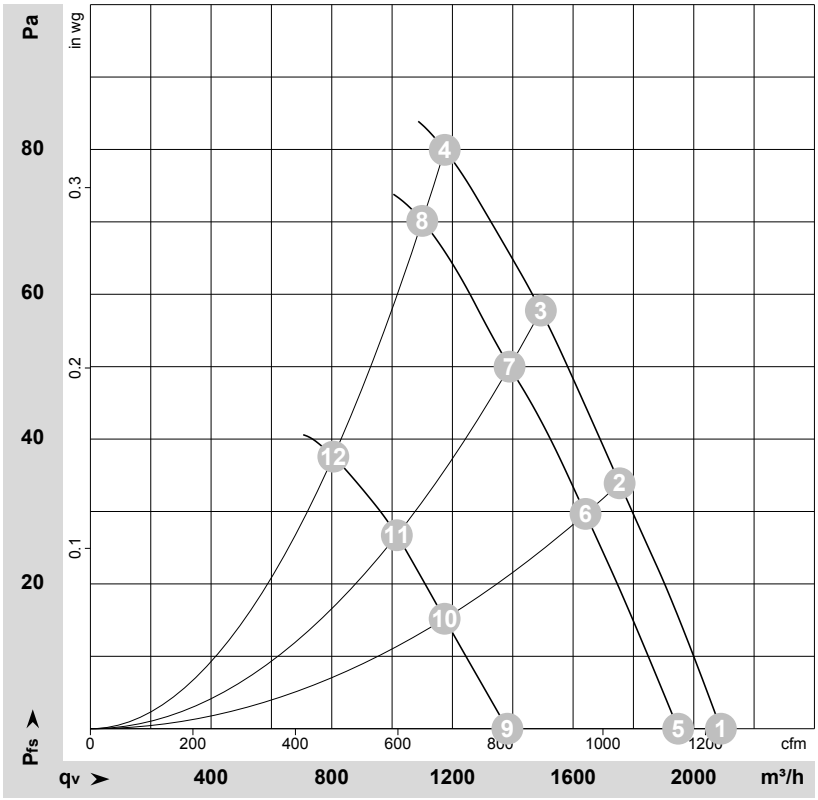
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Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-166499-1
Measurement: LU-166345-1
Measurement: LU-166498-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	100	1720	73	0.73	2090	0	1230	0.00
2	100	1695	80	0.80	1755	34	1030	0.14
3	100	1675	85	0.85	1495	58	880	0.23
4	100	1645	90	0.90	1175	80	690	0.32
5	80	1605	60	0.75	1950	0	1145	0.00
6	80	1580	66	0.82	1640	30	965	0.12
7	80	1565	69	0.86	1390	50	820	0.20
8	80	1530	77	0.96	1100	70	645	0.28
9	56	1155	24	0.43	1380	0	815	0.00
10	56	1145	26	0.46	1175	15	690	0.06
11	56	1135	27	0.49	1015	27	600	0.11
12	56	1120	29	0.53	805	38	475	0.15

U = Supply voltage · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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