W3G450-CA35-73

EC axial fan

sickle-shaped blades (S series)

Fan housing with guard grille

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Nominal data

Type	**W3G450-CA35-73**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1380
Power consumption	W	525
Current draw	A	3.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	35.2	31.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.4	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.5
09 Air flow q_v	m^3/h	4210
09 Pressure increase p_{fs}	Pa	137
10 Speed (rpm) n	min^{-1}	1395
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

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Technical description

Weight	10.5 kg
Size	450 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Sheet steel, painted black
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - PFC, passive - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-3 + 60730-1

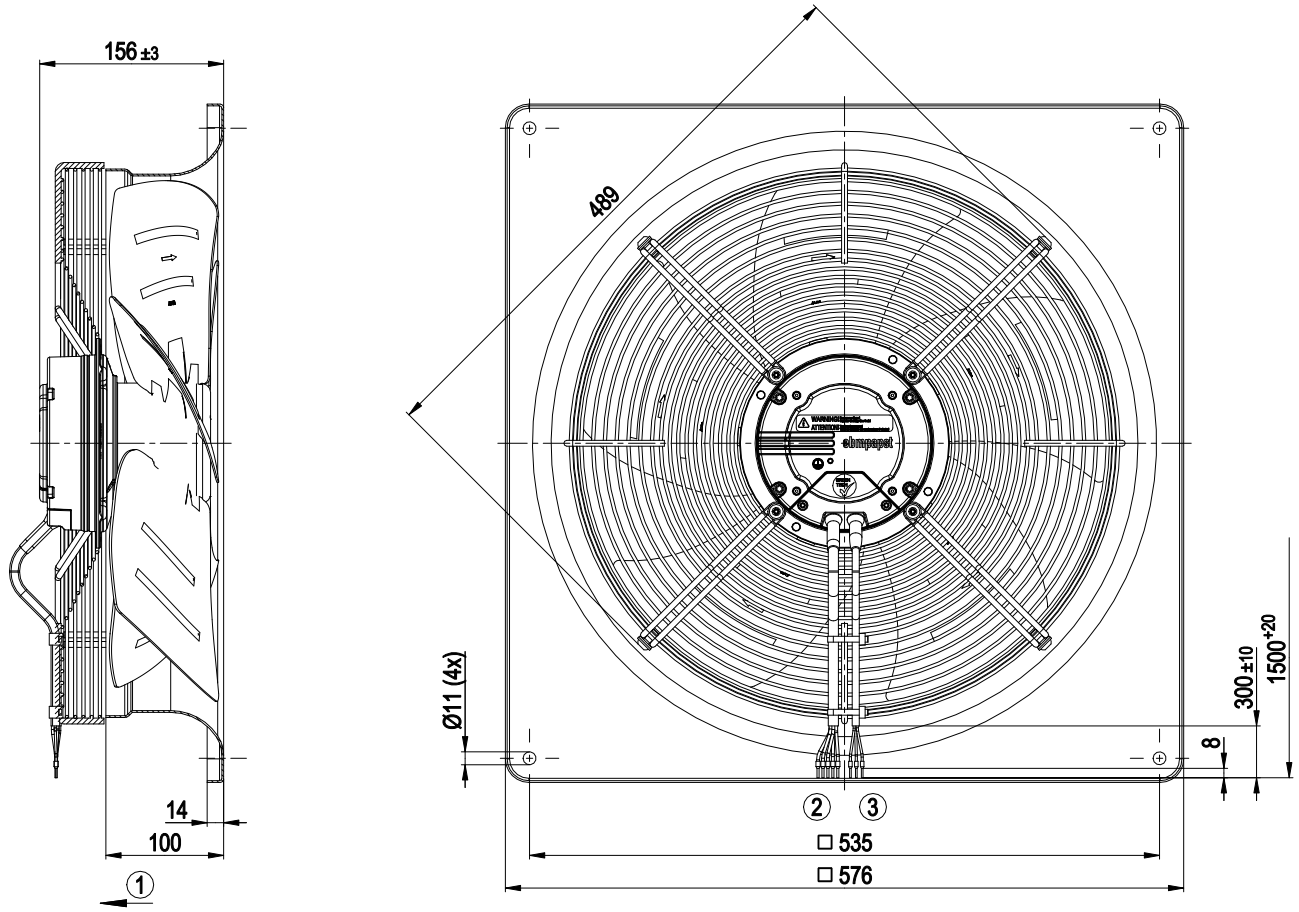
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Product drawing



1	Airflow direction "V"
2	Cable PVC AWG18
	5x wire-end ferrule
3	Cable PVC AWG22
	3x wire-end ferrule

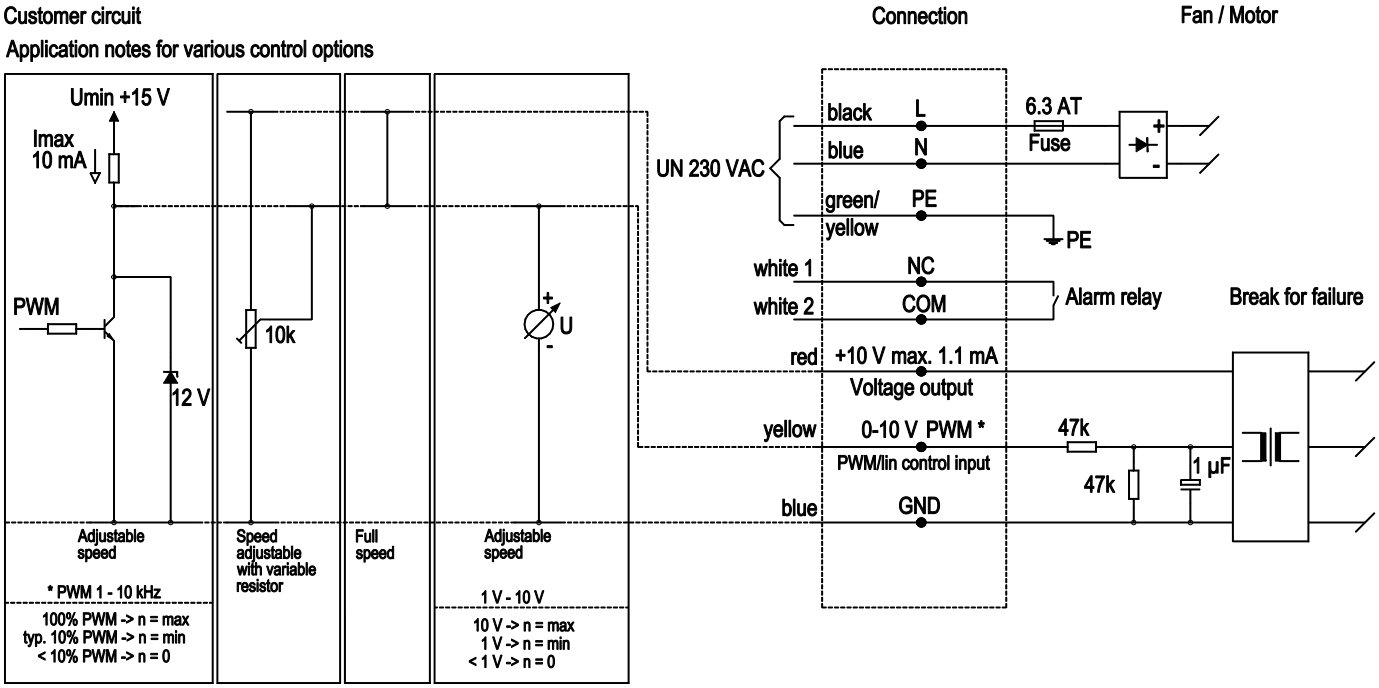
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Connection diagram



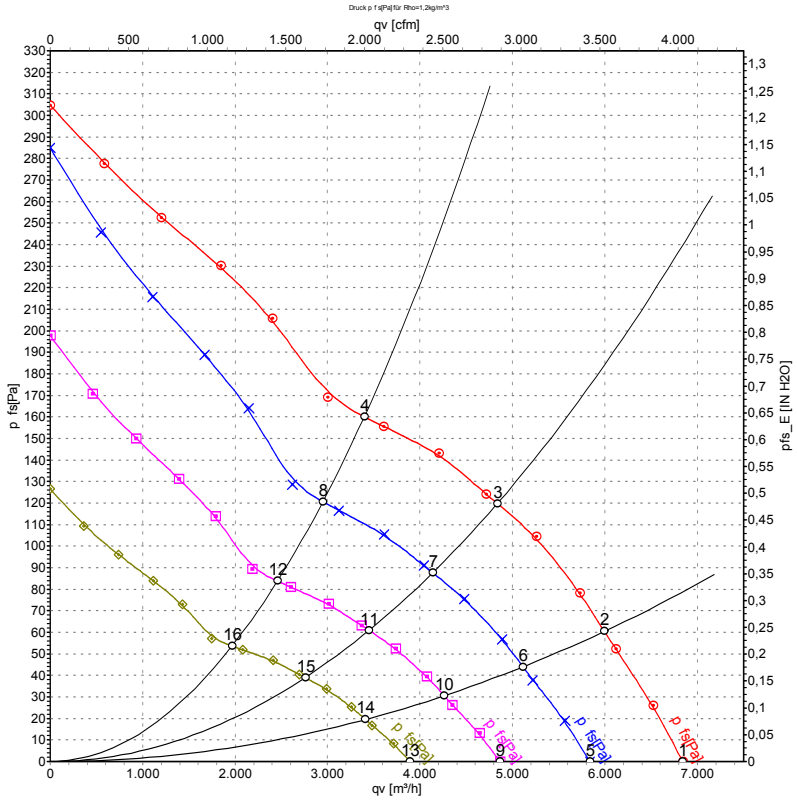
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Curves: Air performance 50 Hz



Measurement: LU-69735-1

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	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	230	50	1400	398	2.53	6845	0	4030	0.00
2	230	50	1400	452	2.87	5995	60	3530	0.24
3	230	50	1400	498	3.17	4840	120	2850	0.48
4	230	50	1380	525	3.30	3400	160	2000	0.64
5	230	50	1200	247	1.57	5840	0	3435	0.00
6	230	50	1200	280	1.78	5115	44	3010	0.18
7	230	50	1200	312	1.98	4140	88	2435	0.35
8	230	50	1200	338	2.15	2950	121	1735	0.49
9	230	50	1000	143	0.91	4865	0	2865	0.00
10	230	50	1000	162	1.03	4260	30	2510	0.12
11	230	50	1000	181	1.15	3450	61	2030	0.24
12	230	50	1000	196	1.24	2460	84	1445	0.34
13	230	50	800	73	0.47	3890	0	2290	0.00
14	230	50	800	83	0.53	3410	20	2005	0.08
15	230	50	800	92	0.59	2760	39	1625	0.16
16	230	50	800	100	0.64	1965	54	1160	0.22

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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