

8300100235
VMA0630CTTLS

EC axial panel fan - AxiEco

with guard grille

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	8300100235	
Motor	E15031-55	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min ⁻¹	1820
Power consumption	W	3400
Current draw	A	5.2
Max. back pressure	Pa	650
Max. back pressure	in. wg	2.61
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60

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

Data according to Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	51.9	36.9	09 Power consumption P_{ed}	kW	3.22
02 Measurement category		A		09 Air flow q_v	m ³ /h	11945
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	480
04 Efficiency grade N		55	40	10 Speed (rpm) n	min ⁻¹	1825
05 Variable speed drive		Yes		11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

* Specific ratio = $1 + p_g / 100\,000\text{ Pa}$

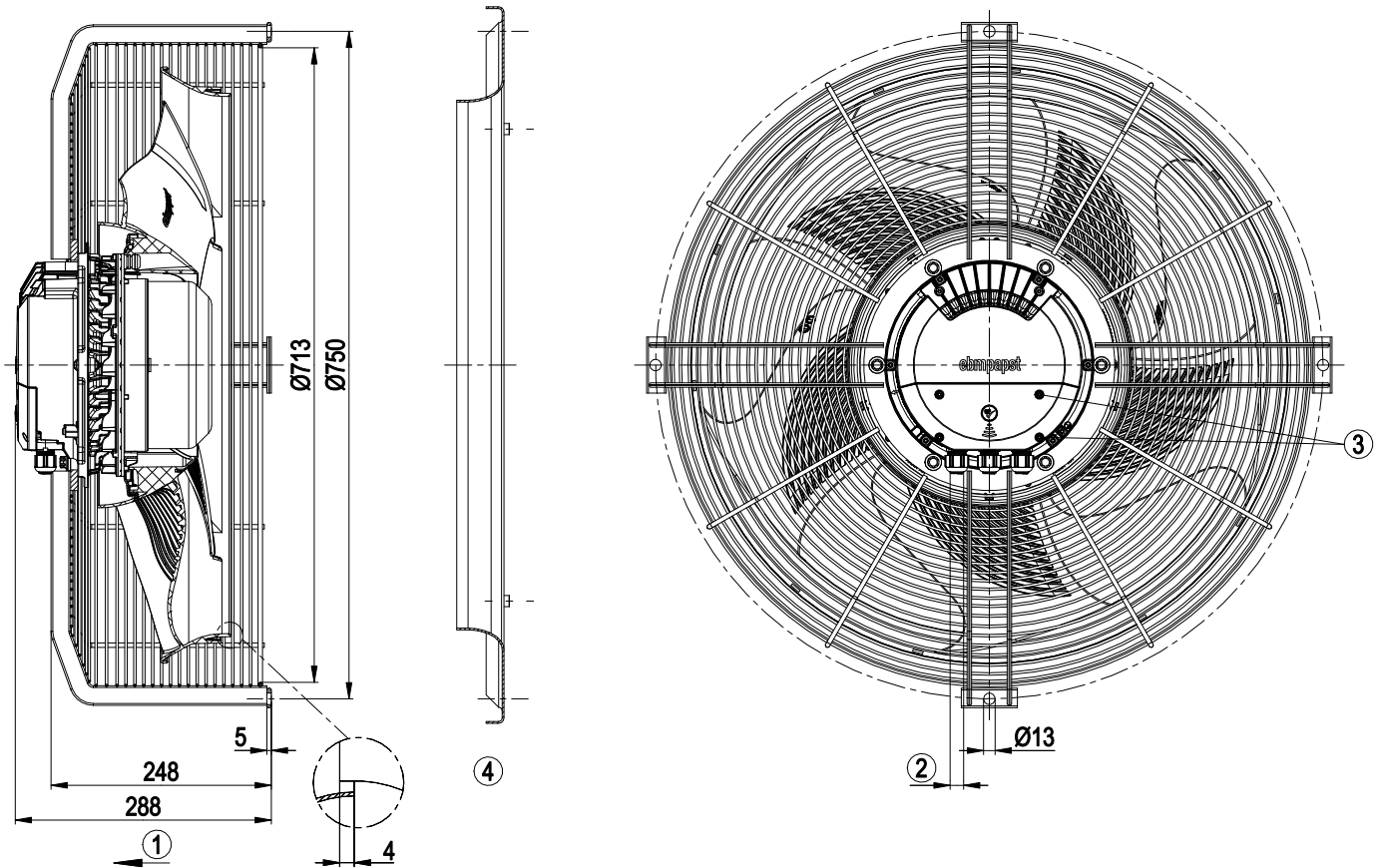
LU-219599

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

Technical description

Weight	28.5 kg
Size	630 mm
Motor size	150
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted gray
Impeller material	PP plastic, PP ring plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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	- Operation and alarm display with LED - External 15-50 VDC input (parameterization) - Alarm relay - Integrated PI controller - Configurable inputs/outputs (I/O) - MODBUS V6.3 - Motor current limitation - RS-485 MODBUS-RTU - Soft start - Voltage output 3.3-24 VDC, Pmax = 800 mW - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
Power Factor Correction (PFC)	Passive (through low-capacitance DC link)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Electronic motor protection
Protection class assignment	I; If a protective earth is connected. The built-in component has several local protection class assignments. The final protection class is determined by the intended installation.
Conformity with standards	EN 61800-5-1; CE; UKCA
Approval	EAC; UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1

Product drawing



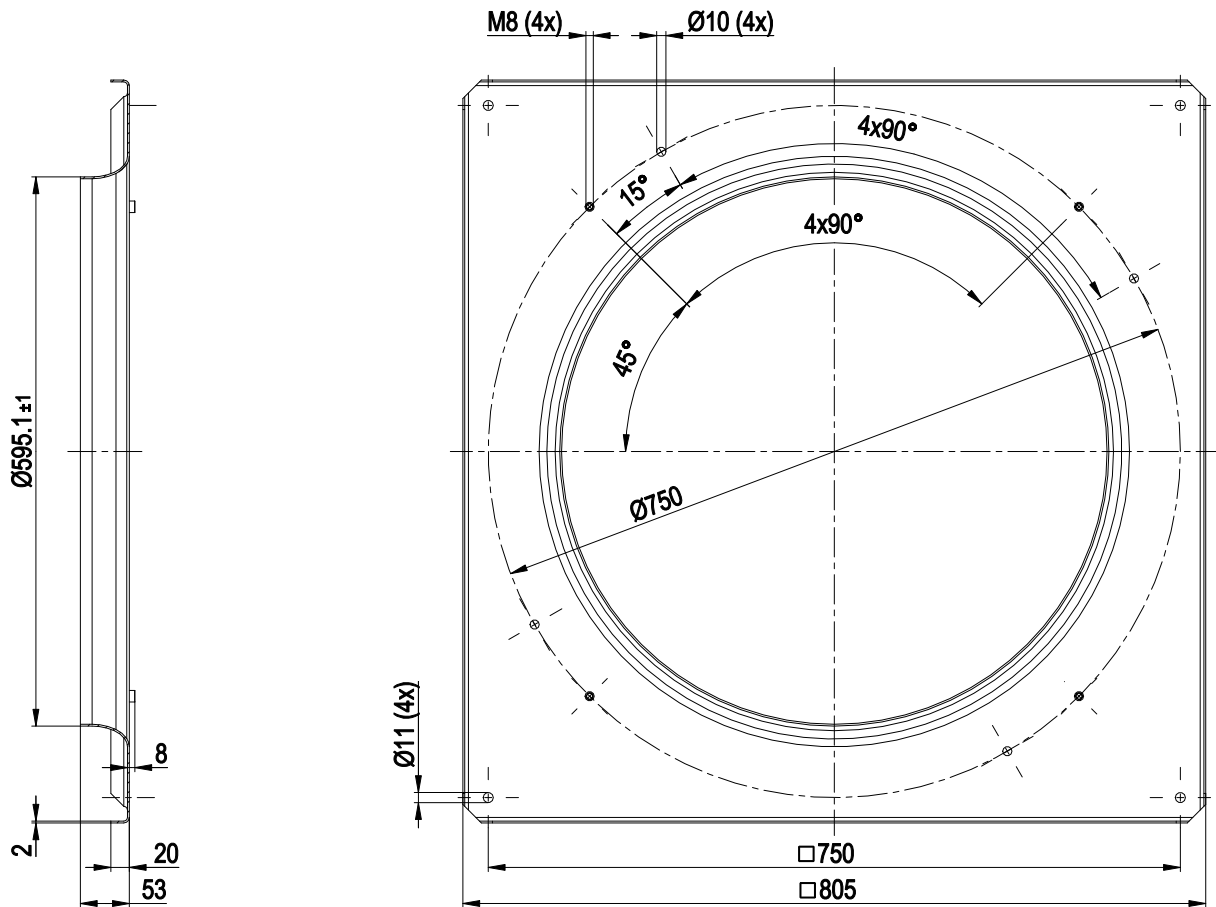
1	Airflow direction "V"
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm (The tightening torque is designed for PVC cables. If the cable materials are different, the tightening torque may have to be adjusted)
3	Tightening torque 1.5 ± 0.2 Nm
4	Accessory part: Inlet ring 60630-2-4013 not included in scope of delivery

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Accessory part

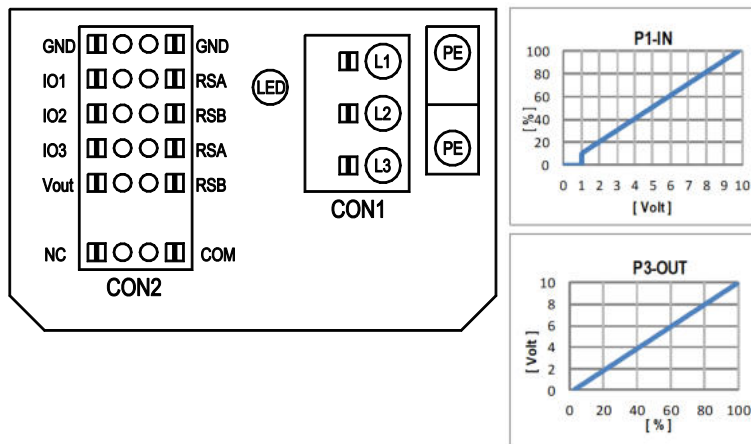


Inlet ring 60630-2-4013

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Connection diagram



No.	Conn.	Designation	Function/assignment
	CON1	L1, L2, L3	Power supply, phase, see nameplate for voltage range
	PE	PE	Protective earth
	CON2	RSA	RS485 interface for MODBUS, RSA; SELV
	CON2	RSB	RS485 interface for MODBUS, RSB; SELV
	CON2	GND	Reference ground for control interface, SELV
	CON2	IO1	Function parameterizable (see "Optional interface functions" table) Factory setting: Digital input - high active, function: Disable input, SELV - inactive: Pin open or applied voltage < 1.5 VDC - active: applied voltage 3.5-50 VDC Reset function: Triggering of error reset on change of state from "enabled" to "disabled"
	CON2	IO2	Function parameterizable (see "Optional interface functions" table) Factory setting: Analog input 0-10 V/PWM, Ri=100 kΩ, function: Set value Characteristic curve parameterizable (see input characteristic curve P1-IN), SELV
	CON2	IO3	Function parameterizable (see "Optional interface functions" table) Factory setting: Analog output 0-10 V, max. 5 mA, function: Actual speed Characteristic curve parametrizable (see output characteristic curve P3-OUT), SELV
	CON2	Vout	Voltage output 3.3-24 VDC ±5%, Pmax=800 mW, voltage parameterizable Factory setting: 10 VDC short-circuit-proof, supply for external devices, SELV alternatively: 15-50 VDC input for parameterization via MODBUS without line voltage
	CON2	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA, reinforced insulation on supply side and on control interface side
	CON2	NC	Status relay, floating status contact, break for failure
		LED	green: status = good, ready for operation orange: status = warning red: status = failure
		P1-IN	Input characteristic curve
		P3-OUT	Output characteristic curve

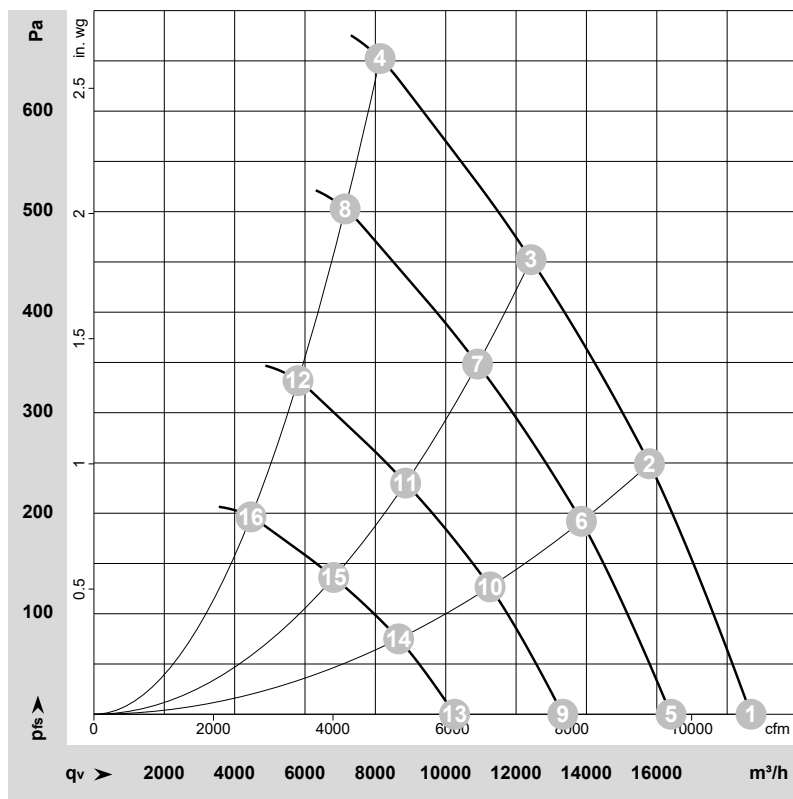
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Terminal/plug assignment

configurable option		For further information and additional functions see EC Control Software, Fan-Set-App, or MODBUS Parameter Specification V6.3		configurable IO functions: normal / inverse	MODBUS Register for IO mode configuration	electrical specification	CON2 configurable IO mode	OUTPUT															
								D101 [...] source: set value	D147 [...] source: sensor value	D104 [...] switch: parameter set: #1 / #2	D12E [...] switch: control function: heating (pos.) / cooling (neg.)	D148 [...] switch: direction of rotation: cw / ccw	D16C [...] switch: set value source	D16A [...] switch: fan enable / disable	(selected directly via IO mode)	(selected directly via IO mode)	D130 [0] signal: fan modulation level %	D130 [1] signal: actual speed	D130 [2] signal: system modulation level %	D130 [5] signal: remote control output 0-10V	D00C [1] pulse input for auto-addressing	D130 [4] pulse output for auto-addressing	
IO1	Din1 (active high): digital input	Ain1 0-10V/PWM: analog input	active: applied voltage 3.5-50VDC, SELV not active: pin open or applied voltage < 1.5VDC	D158 [0]																			
				D158 [2]																			
				D158 [5]																			
				D158 [6]																			
IO2	Din2 (active high): digital input	Ain2 0-10V/PWM: analog input	active: applied voltage 3.5-50VDC, SELV not active: pin open or applied voltage < 1.5VDC	D159 [0]																			
				D159 [2]																			
				D159 [3]																			
				D15A [0]																			
IO3	Din3 (active high): digital input	PWMIn3: digital input, idle level high	active: applied voltage 3.5-50VDC, SELV not active: pin open or applied voltage < 1.5VDC	D15A [1]																			
				D15A [7]																			
				D15A [8]																			
				D15A [4]																			
IO4	Din4 (active low): digital input, idle level low	Aout3 0-10V: analog output	active: pin open or applied voltage 3.5-50VDC not active: applied voltage < 1.5VDC, SELV 40Hz - 10kHz, characteristics parameterizable active: applied voltage 3.5-50VDC not active: pin open or applied voltage < 1.5VDC, SELV function parameterizable, max. 5mA max output frequency 300Hz, SELV 0-10V/max. 5mA max output frequency 300Hz, SELV 0-10V/max. 5mA max output frequency 300Hz, SELV	D15A [5]																			
				D15A [6]																			
				D15A [6]																			
				D15A [6]																			
RSA	RS485 bus connection,		MODBUS RTU, specification V6.3, SELV																				
RSB																							
Vout	voltage output	alternatively: Input auxiliary power supply for parameterization via RS485/MODBUS RTU without line voltage	voltage parameterizable 3.3..24VDC +/- 5%, Pmax=800mW, short-circuit-proof, supply for external devices, SELV 15...50VDC	D16E [...]																			

Curves: Air performance 50 Hz



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

Measurement: LU-219599-1
Date: 2022-03-10
Nozzle: 60630-2-4013

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

	Wired	U	f	n	P _e	I	LpA _{in}	LwA _{in}	LwA _{out}	LwA	q _v	P _{fs}	q _v	P _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	dB	m³/h	Pa	cfm	in. wg
1	3~	400	50	1820	2097	3.28	81	88	92	93	18680	0	10995	0.00
2	3~	400	50	1820	2747	4.24	76	84	88	89	15790	250	9295	1.00
3	3~	400	50	1820	3183	4.89	75	83	88	89	12425	450	7315	1.81
4	3~	400	50	1820	3400	5.20	82	89	93	95	8135	650	4785	2.61
5	3~	400	50	1600	1420	2.22	78	85	89	90	16405	0	9655	0.00
6	3~	400	50	1600	1857	2.87	73	80	85	86	13860	192	8155	0.77
7	3~	400	50	1600	2152	3.30	72	79	85	86	10905	349	6420	1.40
8	3~	400	50	1600	2294	3.52	79	86	90	92	7140	506	4205	2.03
9	3~	400	50	1300	762	1.19	72	80	83	85	13330	0	7845	0.00
10	3~	400	50	1300	996	1.54	68	75	79	81	11260	127	6630	0.51
11	3~	400	50	1300	1154	1.77	67	74	80	81	8860	230	5215	0.92
12	3~	400	50	1300	1230	1.89	74	81	85	86	5800	334	3415	1.34
13	3~	400	50	1000	347	0.54	66	73	77	78	10250	0	6035	0.00
14	3~	400	50	1000	453	0.70	61	69	73	74	8660	75	5100	0.30
15	3~	400	50	1000	525	0.81	60	68	73	74	6815	136	4010	0.55
16	3~	400	50	1000	560	0.86	67	74	78	80	4465	197	2625	0.79

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_v = Air flow · P_{fs} = Pressure increase