EC axial fan - AxiBlade

sickled blades (S series)

Wall ring with streamer

W3G910-MV12-03 ebmpapst Datasheet
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www.fansco.com

Nominal data

Type	**W3G910-MV12-03**
Motor	**M3G150-NA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed (rpm)	min^{-1}	1070
Power input	W	3080
Current draw	A	4.7
Max. back pressure	Pa	280
Min. ambient temperature	°C	-25
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

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	60.9	36.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		64.2	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	2.97
09 Air flow q_v	m^3/h	24695
09 Pressure increase p_{fs}	Pa	251
10 Speed (rpm) n	min^{-1}	1065
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-180424

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Technical features

Mass	63 kg
Size	910 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, painted grey
Material of impeller	PP plastic
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Streamer material	PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Material of inner diffuser including lid	PP plastic
Number of blades	5
Blade angle	0°
Direction of air flow	"V"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H2
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
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display via LED - External 15-50 VDC input (parametrisation) - Alarm relay - Integrated PI controller - Configurable inputs/outputs (I/O) - MODBUS V6 - Motor current limit - RFID - ISO 15693 compatible - RS485 MODBUS RTU - Soft start - Maximum EEPROM write cycles 100,000 - Voltage output 3.3-24 VDC, Pmax = 800 mW - Control interface with SELV potential safely disconnected from the mains - Excess temperature protection for electronics/motor - Undervoltage/phase failure detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730

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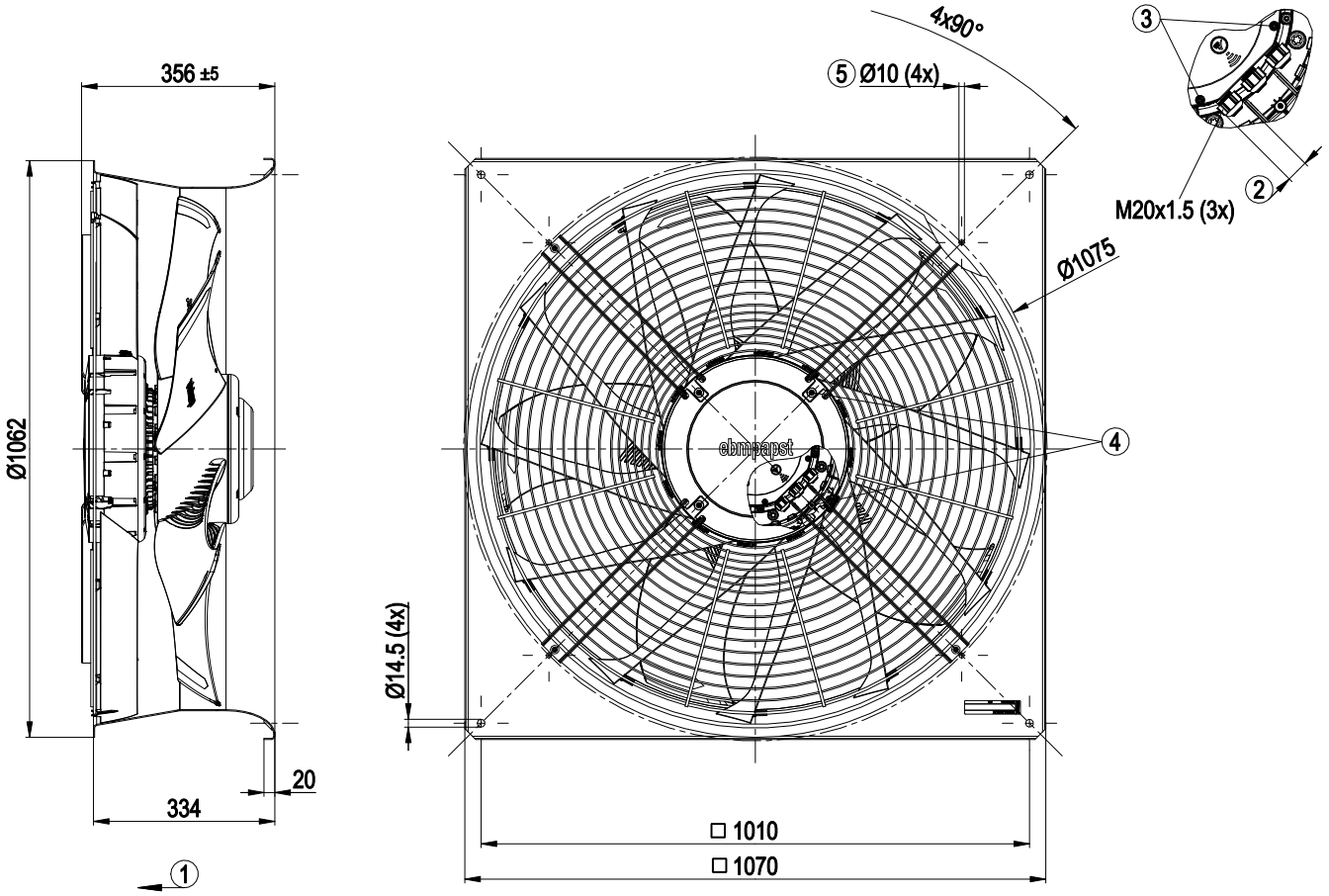
Product drawing



1	Direction of air flow "V"
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5±0.4 Nm
3	Tightening torque 1.8±0.3 Nm
4	Tightening torque 4.0±0.6 Nm
5	Mounting holes for FlowGrid

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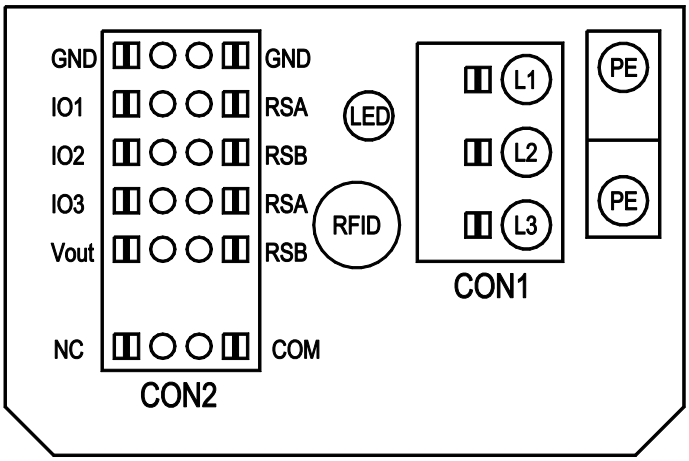
Connection screen



No.	Conn.	Designation	Function / assignment
CON1	-	L1, L2, L3	Mains connection, power supply, safety class 1
PE	-	PE	Earth connection, PE connection
CON2	-	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
CON2	-	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
CON2	-	GND	GND reference earth for control interface, SELV
CON2	-	IO1	IN2: Digital input - positive logic (factory setting: Enable) function parametrizable, SELV - normal: Pin open or applied voltage < 1.5 VDC - inverse: applied voltage 3.5-50 VDC
CON2	-	IO2	IN1: Analogue input 0-10 V 0-10 V, Ri=100 K, parametrizable as set value or actual value (factory setting: set value) characteristic curve parametrizable, SELV
CON2	-	IO3	OUT1: Analogue output 0-10 V 0-10 V, max 5 mA, function parametrizable (factory setting: modulation level) max. output frequency 300 Hz, SELV
CON2	-	V out	Voltage output 3.3-24 VDC +/-5%, Pmax=800 mW, voltage parametrisable (factory setting: 10 VDC) short-circuit-proof, supply for external devices, SELV alternatively: 15-50 VDC input for parametrisation via Modbus without mains power
CON2	-	COM	Status relay, floating status contact; common connection, nominal voltage 250 VAC; max 2 A (AC1): min 10 mA; Reinforced insulation as per EN60335-1, EN61800-5-1, UL60730-1
CON2	-	NC	Status relay, floating status contact, break for failure

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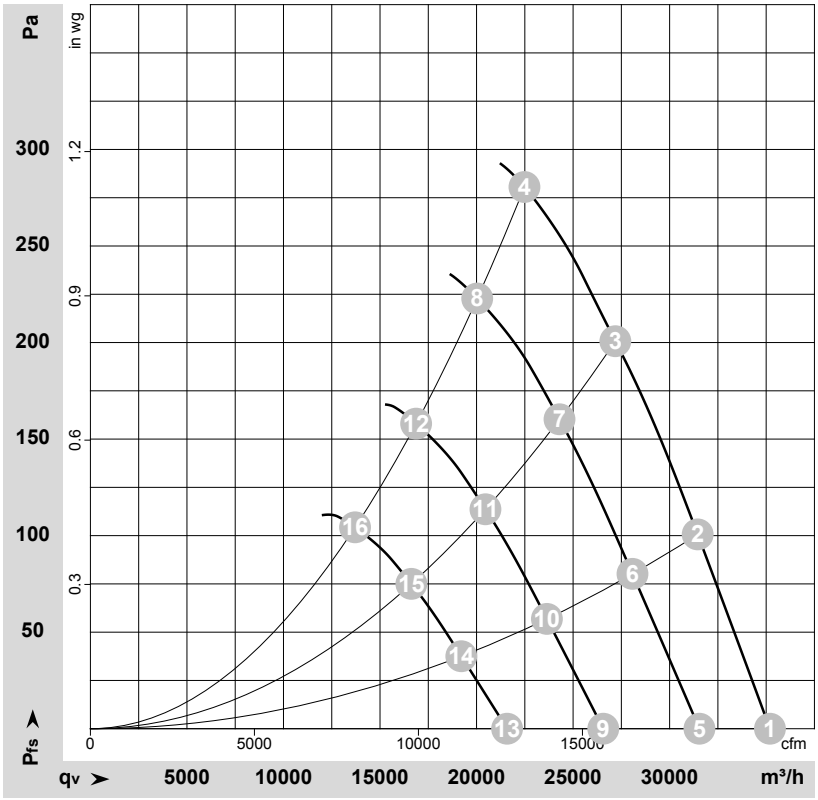
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-180424-1

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	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	400	50	1070	1941	3.04	74	83	83	35195	0	20715	0.00
2	400	50	1070	2429	3.76	72	81	81	31455	100	18515	0.40
3	400	50	1070	2811	4.33	74	82	82	27190	200	16005	0.80
4	400	50	1070	3080	4.70	82	90	91	22480	280	13230	1.12
5	400	50	950	1397	2.19	72	80	80	31545	0	18565	0.00
6	400	50	950	1724	2.67	69	78	78	28075	81	16525	0.33
7	400	50	950	2006	3.09	71	80	79	24295	160	14300	0.64
8	400	50	950	2180	3.35	79	87	88	20035	223	11790	0.90
9	400	50	800	834	1.31	67	76	76	26565	0	15635	0.00
10	400	50	800	1029	1.60	65	74	74	23645	57	13915	0.23
11	400	50	800	1198	1.85	67	75	75	20460	114	12040	0.46
12	400	50	800	1302	2.00	75	82	84	16870	158	9930	0.63
13	400	50	650	447	0.70	62	70	71	21580	0	12705	0.00
14	400	50	650	552	0.86	60	69	69	19210	38	11305	0.15
15	400	50	650	643	0.99	62	70	70	16625	75	9785	0.30
16	400	50	650	698	1.07	70	77	78	13705	104	8070	0.42

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase