W3GZ50-CK07-55

EC axial fan

sickled blades (S series)

with full round nozzle, for agricultural ventilation

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
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**W3GZ50-CK07-55**
Motor	**M3G150-NA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	520-580
Power input	W	1495
Current draw	A	6.5
Max. back pressure	Pa	75
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 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	40.6	34.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		45.8	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	1.49
09 Air flow q_v	m^3/h	28335
09 Pressure increase p_{fs}	Pa	75
10 Speed (rpm) n	min^{-1}	525
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-176865

EC axial fan

sickled blades (S series)

with full round nozzle, for agricultural ventilation

Technical features

Mass	60 kg
Size	1250 mm
Motor size	150
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Die-cast aluminium, coated in black
Material of mounting ring	Steel, coated in black plastic (RAL 9005)
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Number of blades	3
Blade angle	0°
Direction of air flow	A
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2+A
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 top; rotor on bottom on request
Condensation drainage holes	On the stator side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Tach output - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - External release input - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical connection	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

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

sickled blades (S series)

with full round nozzle, for agricultural ventilation

Approval	CSA C22.2 no. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

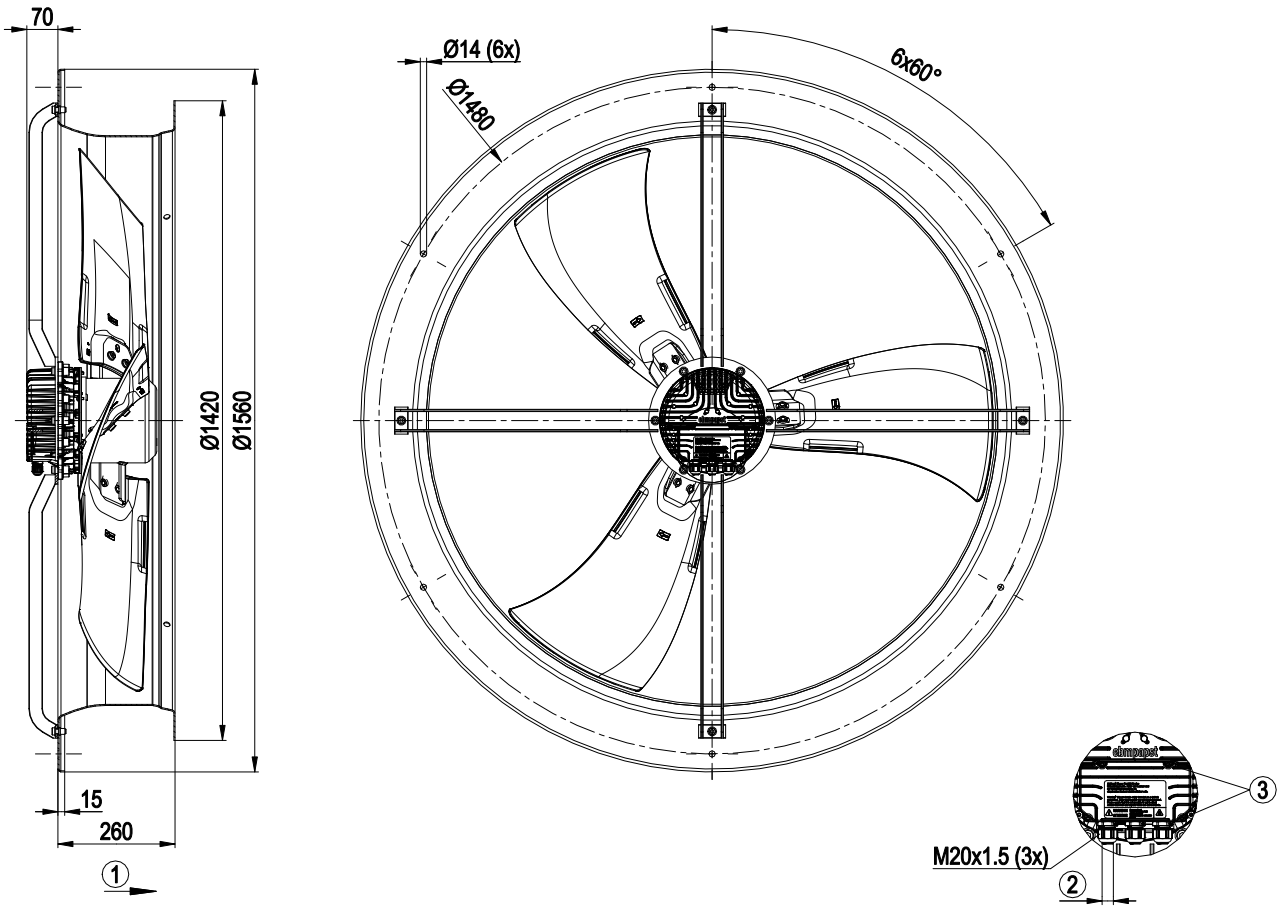
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan

sickled blades (S series)

with full round nozzle, for agricultural ventilation

Product drawing



1	Direction of air flow "A"
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4±0.6 Nm
3	Tightening torque 3.5±0.5 Nm

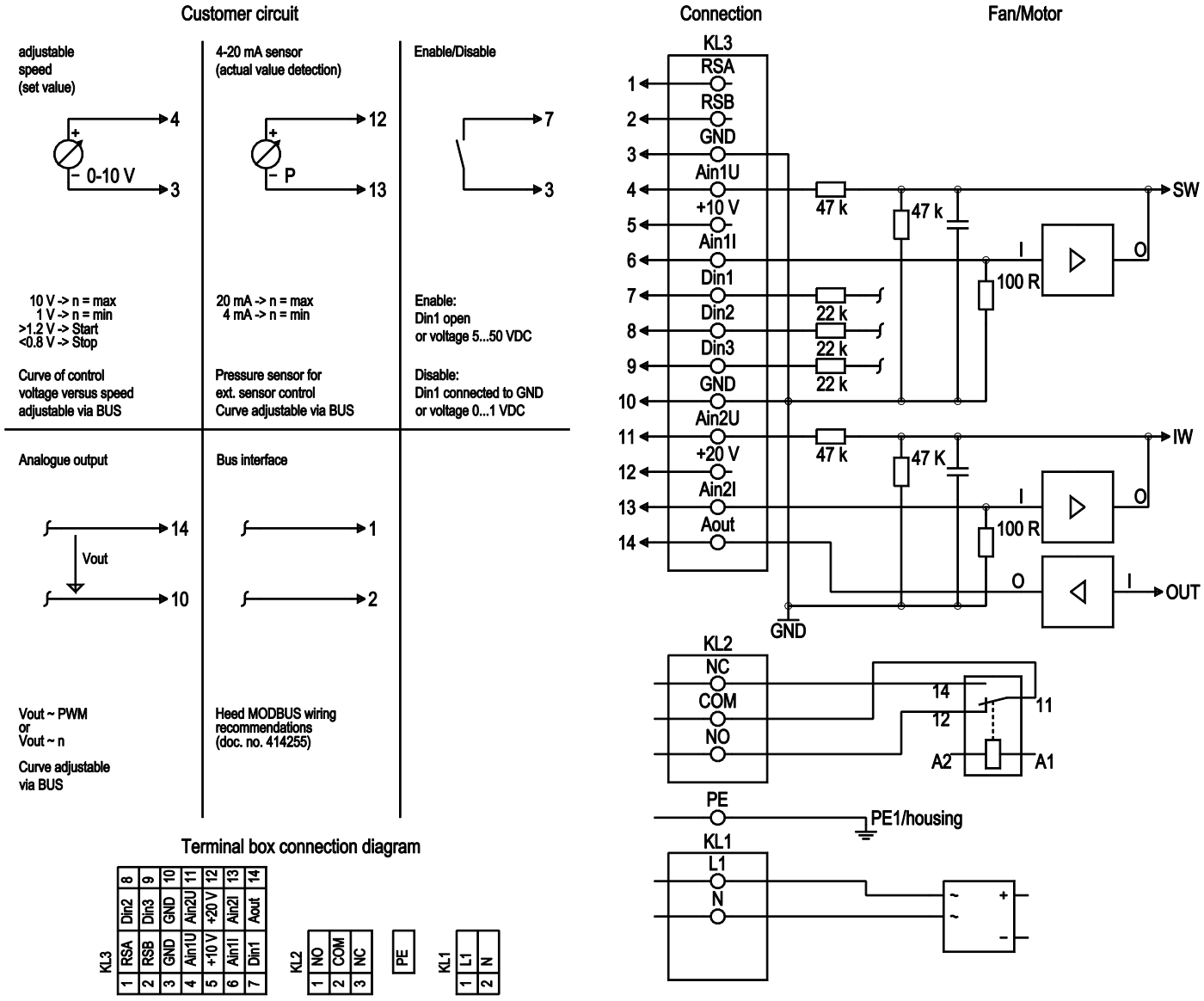
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan

sickled blades (S series)

with full round nozzle, for agricultural ventilation

Connection screen



No.	Conn.	Designation	Function / assignment
KL1	1	L1	Mains connection, power supply; see technical data for nominal voltage range
KL1	2	N	Mains connection, power supply; see technical data for nominal voltage range
PE		PE	Earth connection, PE connection
KL2	1	NO	Status relay, floating status contact, make for failure
KL2	2	COM	Status relay, floating status contact, changeover contact, common connection, contact rating 250 VAC/ max. 2 A (AC1)/min. 10 mA
KL2	3	NC	Status relay, floating status contact, break for failure
KL3	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL3	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL3	3	GND	Reference earth for control interface; SELV
KL3	4	Ain1 U	Analogue input 1, set value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only for use as alternative to input Ain1; SELV

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

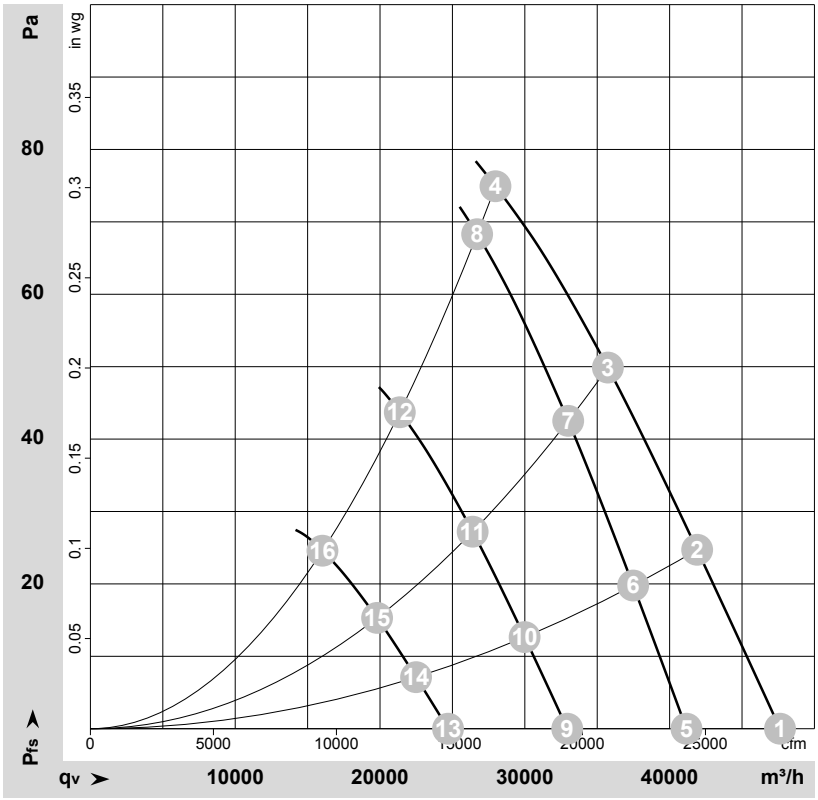
No.	Conn.	Designation	Function / assignment
KL3	5	+ 10 V	Fixed voltage output 10 VDC, +10 V +/-3%, max. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer); SELV
KL3	6	Ain1 I	Analogue input 1, set value: 4-20 mA; Ri = 100 Ω, parametrisable curve, only for use as alternative to input Ain1 U; SELV
KL3	7	Din1	Digital input 1: Enabling of electronics, Enabling: Pin open or applied voltage 5-50 VDC Disabling: Bridge to GND or applied voltage <1 VDC Reset function: Triggers software reset after a level change to <1 VDC; SELV
KL3	8	Din2	Digital input 2: Parameter set 1/2 switching, depending on EEPROM setting, the valid/used parameter set can be selected via the bus or via the digital input DIN2. Parameter set 1: Pin open or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage <1 VDC; SELV
KL3	9	Din3	Digital input 3: Controller function of integrated controller, depending on EEPROM setting, the controller function of the integrated controller can be selected via the bus or the digital input Din 3 normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage <1 VDC; SELV
KL3	10	GND	Signal ground for control interface, SELV
KL3	11	Ain2 U	Analogue input 2, actual value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain2; SELV
KL3	12	+ 20 V	Fixed voltage output 20 VDC, +20 V +25/-10%, max. 50 mA, short-circuit-proof, power supply for ext. devices (e.g. sensors); SELV Alternatively: +24 VDC input for parametrisation without mains power
KL3	13	Ain2 I	Analogue input 2, actual value: 4-20 mA, Ri = 100 Ω, parametrisable curve, only for use as alternative to input Ain2 U; SELV
KL3	14	Aout	Analogue output 0-10 VDC, max. 5 mA, output of the current motor level control coefficient / motor speed parametrisable curve; SELV

EC axial fan

sickled blades (S series)

with full round nozzle, for agricultural ventilation

Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-176865-1

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

	Conn.	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	in. wg
1	1~	230	50	580	1495	6.50	64	72	73	47625	0	28030	0.00
2	1~	230	50	560	1495	6.50	64	72	72	41900	25	24665	0.10
3	1~	230	50	540	1495	6.50	65	73	72	35735	50	21035	0.20
4	1~	230	50	520	1495	6.50	66	74	74	27975	75	16465	0.30
5	1~	230	50	500	965	4.19	61	69	69	41160	0	24225	0.00
6	1~	230	50	500	1060	4.61	61	69	69	37485	20	22060	0.08
7	1~	230	50	500	1166	5.06	63	71	70	32995	43	19420	0.17
8	1~	230	50	500	1303	5.66	65	73	73	26705	69	15720	0.28
9	1~	230	50	400	494	2.15	55	63	63	32930	0	19380	0.00
10	1~	230	50	400	543	2.36	55	64	63	29985	13	17650	0.05
11	1~	230	50	400	597	2.59	57	65	64	26395	27	15535	0.11
12	1~	230	50	400	667	2.90	60	68	67	21365	44	12575	0.18
13	1~	230	50	300	208	0.91	48	56	56	24695	0	14535	0.00
14	1~	230	50	300	229	0.99	48	56	56	22490	7	13235	0.03
15	1~	230	50	300	252	1.09	50	58	57	19800	15	11655	0.06
16	1~	230	50	300	281	1.22	52	60	60	16025	25	9430	0.10

Conn. = Connection · 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

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