S3G800-BS39-61

TRANE

EC axial fan - HyBlade

sickled blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S3G800-BS39-61**
Motor	**M3G150-FF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1020
Power input	W	1950
Current draw	A	3.0
Max. back pressure	Pa	80
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	70

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}	%	42.2	35.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		46.3	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	2.28
09 Air flow q_v	m^3/h	17150
09 Pressure increase p_{fs}	Pa	191
10 Speed (rpm) n	min^{-1}	1025
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-200297

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Technical features

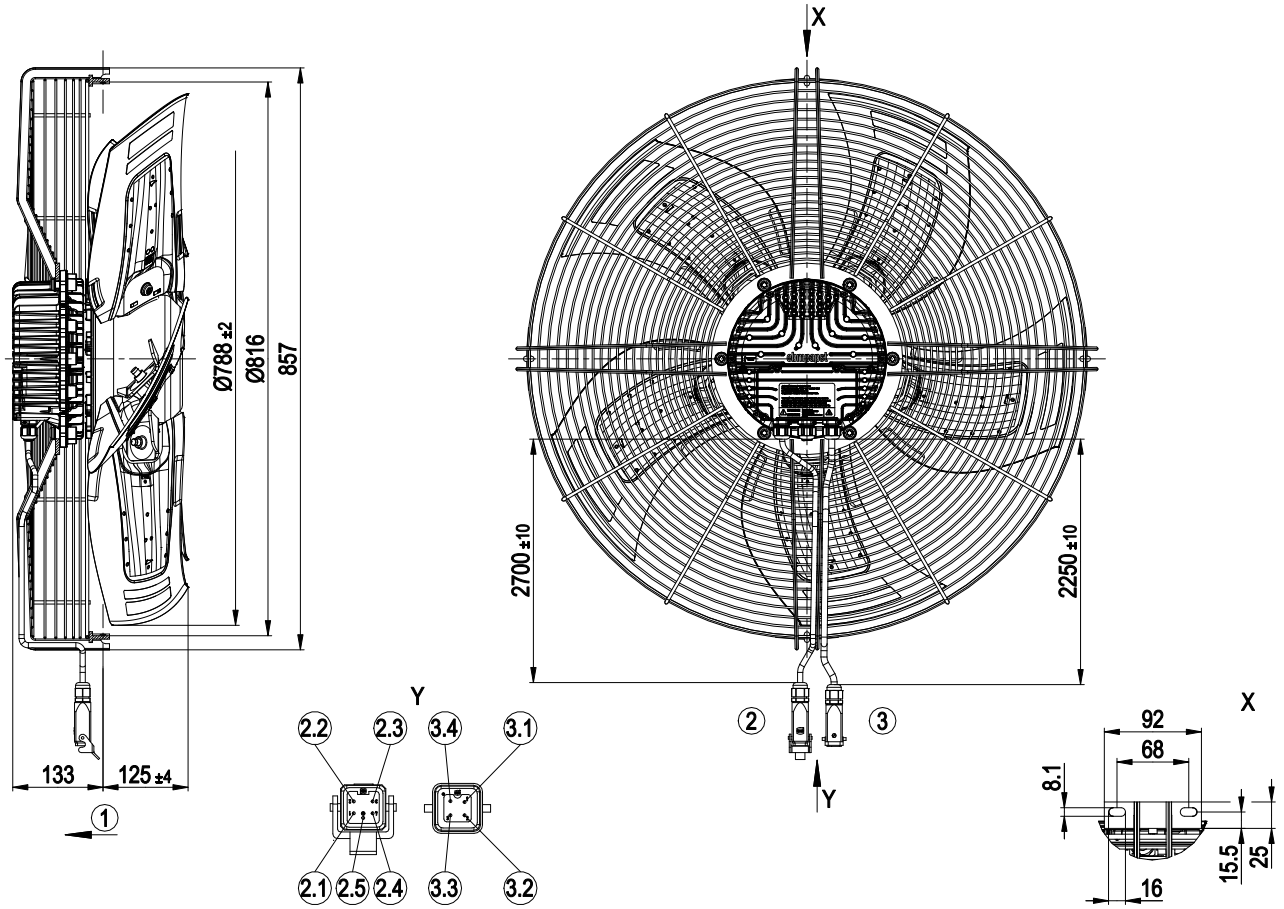
Mass	30 kg
Size	800 mm
Motor size	150
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	0°
Direction of air flow	V
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP55
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
Condensation drainage holes	Rotor-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 - Operation and alarm display - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - External release input - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start -Maximum EEPROM write cycles 100,000 - 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	Connector with connection line
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	EAC

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Product drawing



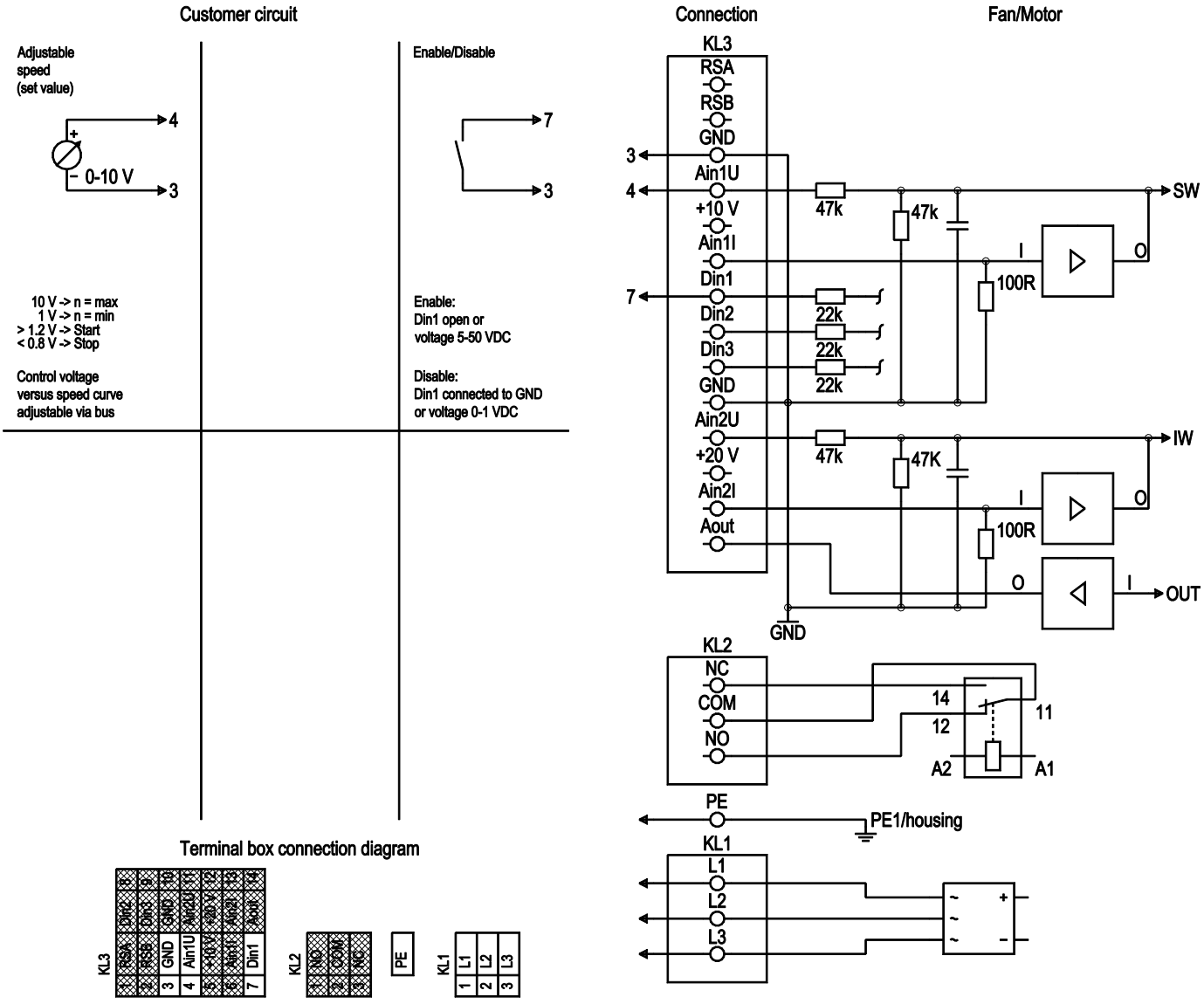
1	Direction of air flow "V"
2	Connection line Ölflex Heat 105 MC 4G 1.0 mm²
	Connector housing WESTEC 7803.6231.1, 5-pole pin insert WESTEC 7204.6102.4
2.1	not used
2.2	Din 1
2.3	Ain 1 U
2.4	GND
2.5	not used
3	Connection line Ölflex Heat 105 MC 4G 1.5 mm²
	Connector housing WESTEC 7803.6227.1, 4-pole pin insert WESTEC 7203.6101.0
3.1	L1
3.2	L2
3.3	L3
3.4	PE

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Connection screen



grey shaded => not brought out via leads

No.	Conn.	Designation	Function / assignment
KL 1	1	L1	Mains connection, power supply, phase, see type plate for voltage range
KL 1	2	L2	Mains connection, power supply, phase, see type plate for voltage range
KL 1	3	L3	Mains connection, power supply, phase, see type plate for voltage range
PE		PE	Earth connection, PE connection
KL 2	1	NO	Status relay, floating status contact, make for failure
KL 2	2	COM	Status relay, floating status contact, changeover contact, common connection, contact rating, max. 250 VAC/2 A (AC1)/min. 10 mA
KL 2	3	NC	Status relay, floating status contact, break for failure
KL 3	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL 3	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL 3	3 / 10	GND	Signal ground for control interface, SELV

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No.	Conn.	Designation	Function / assignment
KL 3	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
KL 3	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
KL 3	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
KL 3	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
KL 3	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
KL 3	9	Din3	Digital input 3: Controller function of integrated controller; depending on EEPROM setting, normal / inverse can be selected for the controller function of the integrated controller via the bus or the digital input Normal: Pin open or applied voltage 5-50 VDC Inverse: bridge to GND or applied voltage <1 VDC; SELV
KL 3	11	Ain2 U	Analogue input 2, actual value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain2; SELV
KL 3	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
KL 3	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
KL 3	14	Aout	Analogue output 0-10 V, max. 5 mA, output of current motor level control coefficient; parametrisable curve; SELV

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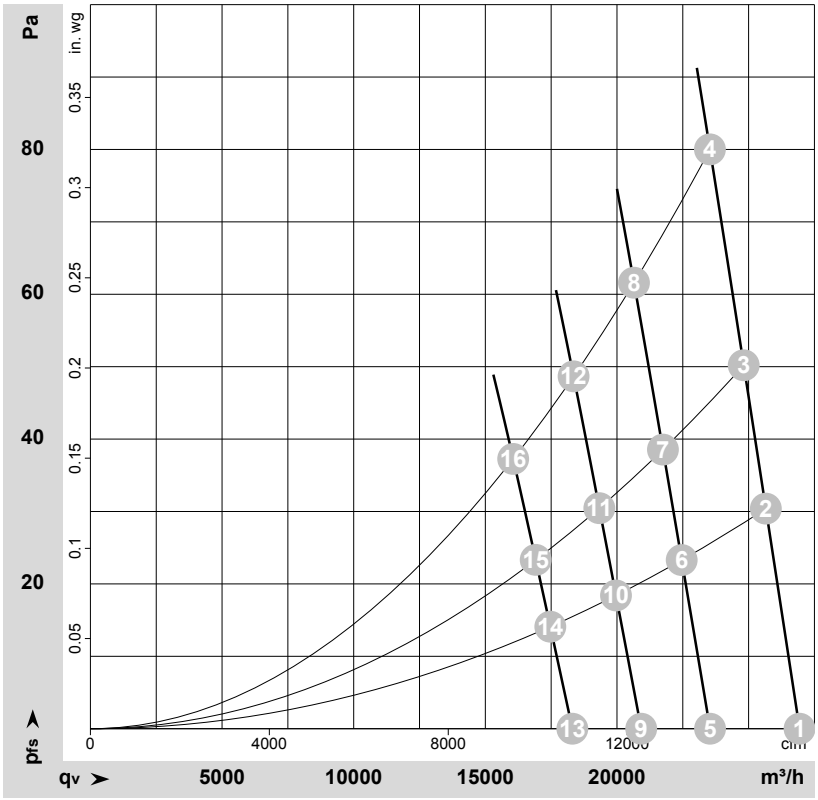
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-163024-1

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	3~	400	50	1020	1694	2.64	68	76	76	26935	0	15855	0.00
2	3~	400	50	1020	1803	2.80	68	75	76	25655	30	15100	0.12
3	3~	400	50	1020	1875	2.91	68	75	75	24815	50	14605	0.20
4	3~	400	50	1020	1950	3.00	68	75	75	23530	80	13850	0.32
5	3~	400	50	900	1130	1.76	65	72	73	23535	0	13850	0.00
6	3~	400	50	900	1210	1.88	65	72	72	22460	23	13220	0.09
7	3~	400	50	900	1263	1.96	65	72	72	21745	39	12800	0.16
8	3~	400	50	900	1340	2.07	65	72	72	20645	62	12150	0.25
9	3~	400	50	800	794	1.24	62	69	70	20920	0	12315	0.00
10	3~	400	50	800	850	1.32	62	69	69	19965	18	11750	0.07
11	3~	400	50	800	887	1.37	62	69	69	19330	31	11375	0.12
12	3~	400	50	800	941	1.46	62	69	69	18350	49	10800	0.20
13	3~	400	50	700	532	0.83	59	66	67	18305	0	10775	0.00
14	3~	400	50	700	569	0.88	59	66	66	17470	14	10280	0.06
15	3~	400	50	700	594	0.92	59	66	66	16915	24	9955	0.10
16	3~	400	50	700	631	0.98	59	66	65	16060	37	9450	0.15

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

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