R3G630-AE25-01

EC centrifugal fan

backward curved, single inlet

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Nominal data

Type	**R3G630-AE25-01**
Motor	**M3G150-IF**

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}	1200
Power input	W	2340
Current draw	A	3.6
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 according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	62.4	55.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		69.1	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	2.32
09 Air flow q_v	m^3/h	7685
09 Pressure increase p_{fs}	Pa	642
10 Speed (rpm) n	min^{-1}	1205
11 Specific ratio*		1.01

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-176077

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Technical features

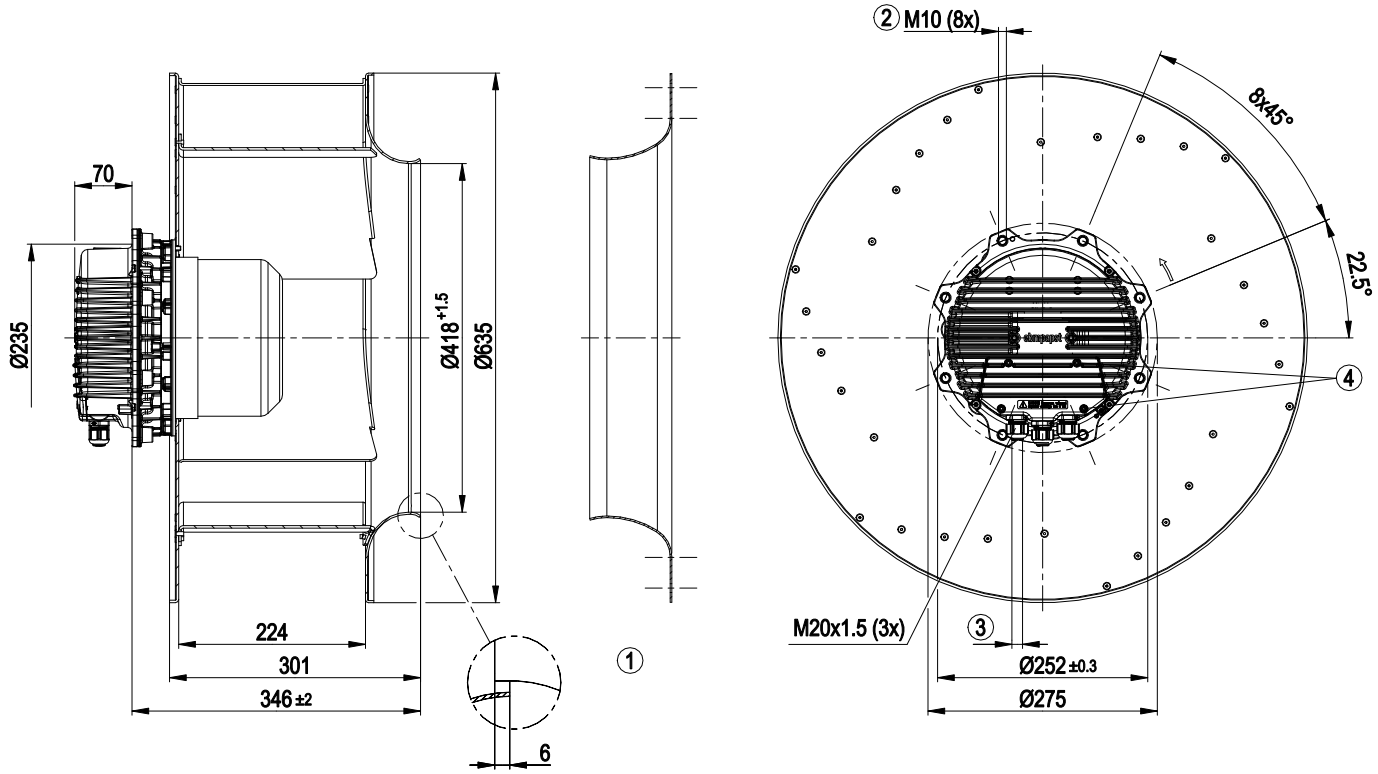
Mass	28.6 kg
Size	630 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H1
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	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - 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, 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
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used devices with a total rated power greater than 1 kW
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	UL 1004-7 + 60730; EAC; C22.2 Nr.77 + CAN/CSA-E60730-1

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Product drawing



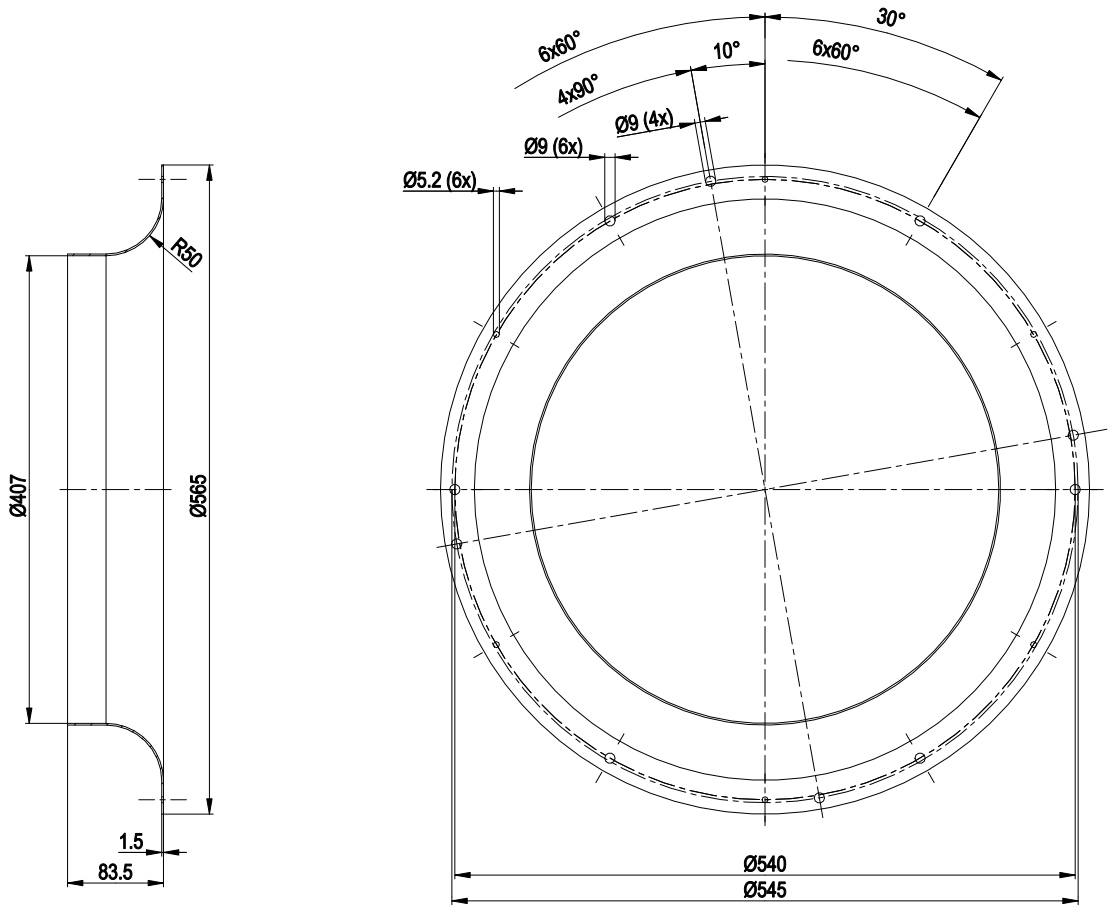
1	Accessory part: Inlet nozzle 54482-2-4013 not included in scope of delivery
2	Thread reach max. 25 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4±0.6 Nm
4	Tightening torque 3.5±0.5 Nm

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Accessory part



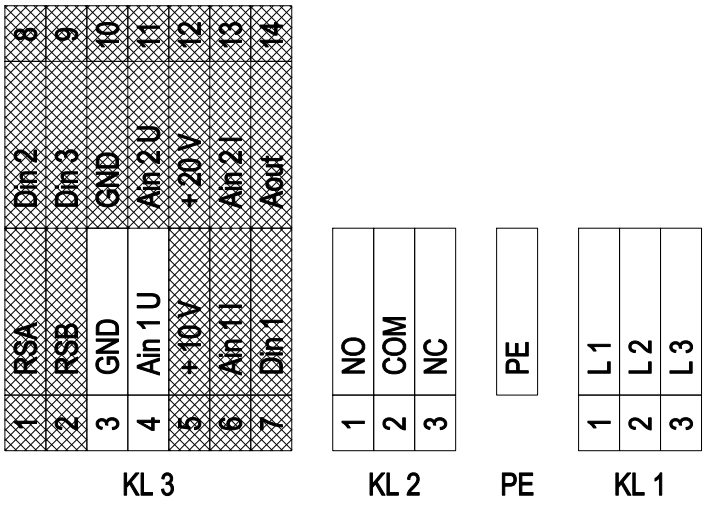
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Connection screen



grey shaded => not brought out via leads

No.	Conn.	Designation	Colour	Function / assignment
1	KL1	L1	black	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
1	KL1	L2	black	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
1	KL1	L3	black	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
1	PE	PE	green/yellow	Earth connection, PE connection
2	KL2	NO	orange	Status relay, floating status contact; normally open; make for failure
2	KL2	COM	black	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
2	KL2	NC	yellow	Status relay, floating status contact; break for failure
	KL3	RSA		Bus connection RS485; RSA; MODBUS RTU
	KL3	RSB		Bus connection RS485; RSB; MODBUS RTU
2	KL3	GND	blue	Signal ground for control interface
2	KL3	Ain1 U	red	Analogue input 1 (set value); 0-10 V; Ri= 100 kΩ; parametrisable curves; only usable as alternative to input Ain1 I
	KL3	+ 10 V		Fixed voltage output 10 VDC; + 10 V +/-3%; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)
	KL3	Ain1 I		Analogue input 1 (set value); 4-20 mA; Ri= 100 Ω; parametrisable curves; only usable as alternative to input Ain1 U
	KL3	Din1		Digital input 1: enabling of electronics; enabling: open pin or applied voltage 5 to 50 VDC; disabling: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to <1 V
	KL3	Din2		Digital input 2: parameter set switch 1/2; according to EEPROM setting, the valid/used parameter set is selectable per BUS or per digital input DIN2. Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC
	KL3	Din3		Digital input 3: Control characteristic of the integrated controller; according to EEPROM setting, the control characteristic of the integrated controller is normally/inversely selectable per BUS or per digital input; normal: open pin or applied voltage 5 to 50 VDC (control deviation = actual sensor value - set value) inverse: bridge to GND or applied voltage < 1 VDC (control deviation = set value - actual sensor value)
	KL3	Ain2 U		Analogue input 2; actual sensor value 0-10 V; Ri= 100 kΩ; parametrisable curve; only usable as alternative to input Ain2 I
	KL3	+ 20 V		Fixed voltage output 20 VDC; + 20V +25/-10%; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)

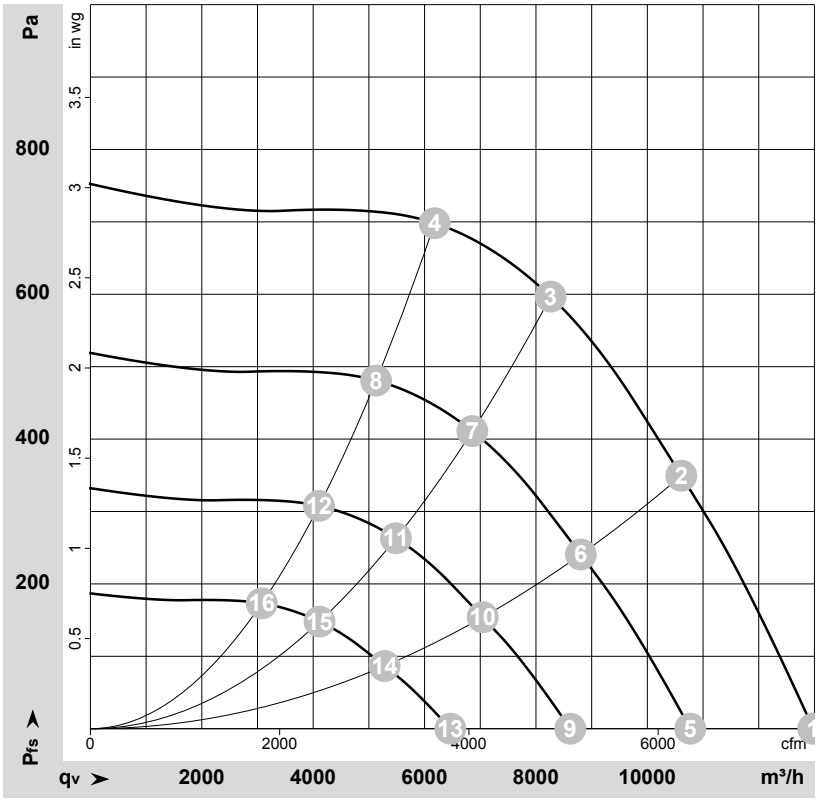
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No.	Conn.	Designation	Colour	Function / assignment
	KL3	Ain2 I		Analogue input 2; actual sensor value 4-20 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain2 U
	KL3	Aout		Analogue output 0-10 V; max. 5 mA; output of the actual motor control factor (output voltage of electronics)/ of the actual motor speed. Parametrisable curve.

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-176077-1

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	1200	1697	2.63	76	85	90	12980	0	7640	0.00
2	400	50	1200	2126	3.26	73	81	87	10610	350	6245	1.41
3	400	50	1200	2340	3.60	71	79	84	8265	600	4865	2.41
4	400	50	1200	2167	3.33	71	79	84	6180	700	3640	2.81
5	400	50	1000	970	1.50	71	80	85	10770	0	6340	0.00
6	400	50	1000	1215	1.87	68	77	83	8805	241	5180	0.97
7	400	50	1000	1335	2.05	66	74	80	6860	411	4035	1.65
8	400	50	1000	1238	1.90	66	74	79	5130	485	3020	1.95
9	400	50	800	496	0.77	66	75	80	8615	0	5070	0.00
10	400	50	800	622	0.96	62	71	77	7045	154	4145	0.62
11	400	50	800	684	1.05	60	68	74	5485	263	3230	1.06
12	400	50	800	634	0.97	61	69	74	4105	310	2415	1.24
13	400	50	600	209	0.32	58	67	73	6465	0	3805	0.00
14	400	50	600	262	0.40	55	64	70	5285	87	3110	0.35
15	400	50	600	288	0.44	53	61	67	4115	148	2420	0.59
16	400	50	600	267	0.41	53	61	66	3080	175	1810	0.70

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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